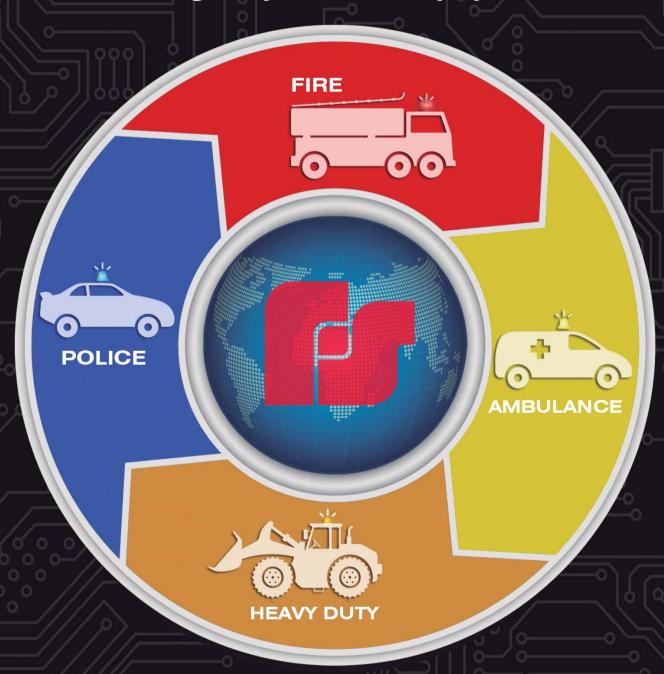


PRODUCT GUIDE

Emergency Service Equipment



INTEGRATED SOLUTIONS PROVIDER







WHO ARE WE?

Federal Signal Vama (FSV) belongs to the **Federal Signal Corporation (FSC)**, and it is part of the Public Safety Systems division.

FSC is a worldwide leader in the market of Emergency Warning Systems (EWS) with experience in providing solutions for emergency services, rapid response and risk reduction with more than 100 years in the market.

FSV is responsible to serve the EWS in the European markets.

FSV offers specific and integrated solutions for Police, Ambulance, Fire, Rescue and Service vehicles. Our large range of products and services together with our engineering and manufacturing flexibility ensure we are able to customize the solution expected by each customer.

FSV leading engineering and manufacturing capabilities have resulted in the most dependable emergency warning equipment available in Europe.

Innovative engineering and skilled workmanship have earned FSV a reputation for quality and performance appreciated by the customers we serve throughout Europe.



OUR MISSION

Providing Products and Services to Protect People and Our Planet.

OUR VALUES

We operate with the highest principles and deliver results through customer focus, innovation, continuous improvement, teamwork and investing in our people.







WHERE ARE WE?



European central office

- Vilassar de Dalt - Barcelona (Spain)

Production plants in Europe

- Vilassar de Dalt Barcelona (Spain)
- Bytom (Polonia)

Comercial office (Central administration)

- Madrid (Spain)

MAIN PRODUCTION FACILITIES

Production area: 7.500 m²



Electronics

In our electronic workshop we produce siren amplifiers, controllers, strobe power supplies, electronic circuits, LED signs, LED boards, etc.

Machinery:

- SMD Surface mounting technology
 (Pick and Place) for printed circuit boards.
- Conformal coating machine



Mechanics

In our mechanical workshop we produce lightbar mounting kits, metallic supports, tubes for divider shields, wirings, etc.

Machinery:

- Tube folding machine
- Punching



Molding and Transformations

In our molding and transformation workshop we produce transport kits. We produce molds, prototypes, dividing shields, etc.

Machinery:

- CNC cutting machine 5 axis
- Thermo conforming machine



Lightbars

About 60 people work in two shifts in our lightbar workshop with a manufacturing capacity of 30,000 lightbars/year.

Machinery:

- Wire cutting and crimping machine



Vehicle installations

We install our products and accessories requested by our customers. We also offer services like car painting, marking, etc.

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ABOUT THE PRODUCT GUIDE

- Products are classified according to their categories (main warning lights, supplemental warning lights, internal warning lighs, area lighting, sirens & audible warning, controllers, data recording system and accessories).
- Within each category, products are grouped in families or Series.
- NEW indicates a new entry in the Product Guide.
- For each product the Reference number (#), model and description are shown. Product reference numbers are the same as those used in our business system. Please order the product by its corresponding reference number.
- Lightbar options cannot be bought separately from the lightbar.
- For a proper and safe installation and operation, remember to read all installation manuals carefully.
- * Provided information about price, product, dimensions, features and specifications could be subject to change without notice.

NEWS 2016











Sales conditions

- (1) AGREEMENT AND LIMITATIONS. The agreement between Seller and Buyer (the "sales contract") with respect to the sale of goods (the "goods") described on the other side hereof shall consist of the terms appearing hereon and on the other side hereof together with any additions or revisions of such terms mutually agreed to in writing by Seller and Buyer. Seller objects to and shall not be bound by any additional or different terms, whether printed or otherwise, in Buyer's purchase order or in any other communication from Buyer to Seller unless specifically agreed to by Seller in writing. Except as expressly stated in the sales contract, no reference to Buyer's purchase order or other communication from Buyer shall be deemed to incorporate by reference any terms appearing therein. The sales contract shall be for the benefit of Seller and Buyer and not for the benefit of any other person. Prior courses of dealing, trade usage and verbal agreements not reduced to a writing signed by Seller, to the extent they modify, add to, detract from, supplant or explain the sales contract, shall not be binding on Seller.
- (2) TERMINATION OR MODIFICATION. The sales contract may be modified or terminated only upon Seller's written consent except that stenographic and clerical errors are subject to correction by Seller or upon Seller's written consent. If Seller shall declare or consent to a termination of the sales contract, in whole or in part, Buyer, in the absence of contrary written agreement signed by Seller, shall pay termination charges based upon expenses and costs incurred in the production of the goods or in the performance of the services to the date such termination is accepted by Seller including, but not limited to, expenses of disposing of materials on hand or on order from suppliers and the losses resulting from such disposition, plus a reasonable profit. Notwithstanding the foregoing any goods substantially completed or services performed on or prior to such termination shall be accepted and paid for in full by Buyer.
- (3) PRICE AND PAYMENT. Prices are subject to increase by Seller based on Seller's prices in effect at the time of shipment in all instances where specified shipment date is later than 30 days from date of order. Unless otherwise specified in the sales contract or Seller's applicable price list, prices are EXWORKS. Seller's point of shipment, and the terms of payment are NET 30 days from the date of invoice. If the sales contract is for more than one unit of goods, the goods may be shipped in a single lot or in several lots at the discretion of Seller. In such event each such shipment shall be paid separately and Buyer shall be responsible for all transportation charges. Seller may require full or partial payment or payment guarantee in advance of shipment whenever, in its opinion, the financial condition of Buyer so warrants. Payment by credit card may be subject to a service charge.
- (4) PAST DUE INTEREST. Amounts not paid when due shall be subject to past due interest at the rate of 18% per year or the highest rate permitted by law, whichever is less. (5) RISK OF LOSS. The risk of loss or the goods or any part thereof shall pass to the buyer upon delivery thereof by Seller to the carrier. Buyer shall have sole responsibility
- (5) RISK OF LOSS. The risk of loss or the goods or any part thereof shall pass to the buyer upon delivery thereof by Seller to the carrier. Buyer shall have sole responsibility for processing and collection of any claim of loss against the carrier.
- **(6) TAXES.** Prices do not include taxes. Buyer shall pay Seller, in addition to the price of the goods, any applicable excise, sales, use or other tax (irrespective of how it is designated) imposed upon the sale, production, delivery or use of the goods ordered to the extent required or not forbidden by law to be collected by Seller from Buyer, whether or not so collected at the time of the sale, unless valid exemption certificates acceptable to the taxing authorities are furnished to Seller before the date of invoice.
- (7) **DELIVERY.** Promises of delivery from stock are subject to prior sale. Delivery dates are not guaranteed but are estimated on the basis of immediate receipt by Seller of all information to be furnished by Buyer and the absence of delays, direct or indirect, resulting from or contributed to by circumstances beyond Seller's reasonable control. Seller shall in good faith endeavour to meet estimated delivery dates but shall not be liable to Buyer for any damages as a result of any delay caused or contributed to by circumstances beyond Seller's reasonable control.
- (8) DEDUCTIONS AND RETURNS. A Return Material Authorization (RMA) must be obtained before returning merchandise for credit. Returns are subject to 20% or more restocking charges unless otherwise agreed upon at the time RMA is issued. All returns are subject to inspection of merchandise and any defects in the units will be charged back to the Buyer at the cost of parts and labour. Credit deductions will not be honoured unless covered by a credit memorandum. Goods shipped to the Buyer may be returned to Seller for credit only upon the Seller's prior written consent (such consent to be in the sole discretion of Seller) and upon terms specified by Seller, including prevailing restocking, freight, and handling charges. Buyer assumes all risk of loss for such returned goods until actual receipt thereof by Seller. Seller representatives are not authorized to accept, returned goods or to grant allowances or adjustments with respect to Buyer's account. We don't accept returns of special products developed under customer requirements, as well as lightbars or prisoner transport kits. Federal Signal Vama only accepts product returns shown at product guide, general price list or spare parts list, and for a period of 2 years starting from the product manufacturing date.
- (9) INSPECTION. Buyer shall inspect the goods immediately upon the receipt thereof. All claims for any alleged defect in Seller's performance under this sales contract, capable of discovery upon reasonable inspection, must be fully set forth in writing and received by Seller within thirty days of Buyer's receipt of the goods. Failure to make any such claim within said thirty-day period shall constitute a waiver of such claim and an irrevocable acceptance of the goods by Buyer.
- (10) LIMITED WARRANTY. Federal Signal Vama, S.A.U warrants each new product to be free of defects in material and labor cost, under normal use and service, for a period of two years from the manufacturing date unless different enterprise communication supports (product bulletins, product quides, price lists, email communications, etc.) stated otherwise. All products have been subjected to abuse, misuse, extraordinary work conditions, inadequate maintenance or installation, or its use, maintenance or installation are different from user's manual are excluded of this warranty. Lamps, flash tubes, or batteries are not covered under warranty as well. During this warranty period, the obligation of Federal is limited to repairing or replacing, as Federal may elect, any part or parts of such product which after examination by Federal discloses to be defective in material and/or workmanship. The customer will return by RMA the defective part for analysis and verification in a period of one month maximum. Federal reserves the right to charge the product and transport if the defective parts after examination by Federal don't discloses to be defective in material and/or workmanship, or in the case of not receiving the defective product part for analysis when this product has been replaced in warranty. Only in case of reparation o substitution of any product part is impossible, or when the product can't recover its function or former quality through the reparation or substitution, Federal Signal Vama S.A.U. could refund the purchase price paid for its distributors or professional customers to them. Except for specific circumstances, reparations under this warranty have to be done by Federal Signal Vama S.A.U.'s authorised Service Centres. If this reparation can't be done at authorised Federal Signal Vama S.A.U Service Centres and the product has to be repaired in other place, the distributor or professional customer has to paid all Federal Signal Vama S.A.U or SAT personnel's travel expenses and living allowances. This warranty covers all expenses relating to assembly and disassembly, and labour of the defective part, according to current price list communicated by Federal Signal Vama S.A.U. If distributor or professional customer decides to send to Federal Signal Vama S.A.U. in order to repair it, this warranty covers shipment expenses of the repaired or substituted part by regular shipment from Federal Signal Vama S.A.U. to the distributor or professional customer. Shipment expenses of supposedly defective part from distributor or professional customer to Federal Signal Vama S.A.U. have to be paid by distributor or professional customer. Repaired or substituted parts have got a (3) three months warranty or they have got the remaining warranty time from the part applied, if this is greater. Federal Signal Vama S.A.U. not offers any other warranty, whether explicit or implicit, including (but not limited) any implicit warranty for a commercial or suitable specific purpose. Under any circumstance Federal Signal Vama S.A.U. has to be responsible for possible benefit losses or direct damages resulting from defective material or manufacturing products. This commercial warranty is applicable without prejudice to current customer protection or legal warranties laws.
- (11) PATENTS. Seller shall hold Buyer harmless, to the extent herein provided, against any rightful claim of any third person stating that the goods, under the same conditions as they left the factory, infringe any United States and/or European Union patent. However, if the Seller followed Buyer's instructions in that respect, the Buyer shall hold Seller harmless from any claim arising from the compliance with such instructions. Seller's acceptance in this paragraph to hold Buyer harmless shall not apply to any infringement consisting of the use of goods manufactured by Seller as a part of any combination with goods manufactured by Buyer or others. In the event of any claim of infringement in respect of any goods manufactured by Seller and the subsequent prohibition of use, Seller, if unable within a reasonable time to secure for Buyer the right to continue using such goods, either by suspension of the injunction, by providing for Buyer a license, or through other ways, shall either replace such goods with non-infringing goods or modify such goods so that they become non-infringing or accept the return of the prohibited goods and refund the purchase price paid by Buyer less allowance for any period of effective use. Except as in this paragraph provided, Seller makes no warranty that the goods will be delivered free of the rightful claim of any third person by way of infringement or the like and Buyer's remedies will be limited to those provided in this paragraph.
- (12) ASSIGNMENT AND DELEGATION. No right or interest in this sales contract shall be assigned by Buyer without Seller's prior written consent, and no delegation of any obligation owed, or of the performance of any obligation, by Buyer shall be made without Seller's prior written consent. Any attempted assignment or delegation shall be void and totally ineffective for all purposes unless made in conformity with this paragraph 9, 10 and 11 hereof, and if effective shall be subject to all limitations of this sales contract.
- (13) SEVERABILITY. If any term, clause or provision contained in the sales contract is declared or held invalid by a court of competent jurisdiction, such declaration or holding shall not affect the validity of any other term, clause or provision herein contained.
- (14) INSTALLATION. Installation shall be provided and shall be paid for by Buyer unless otherwise specifically stated on the sales contract.
- (15) GOVERNING LAW AND LIMITATIONS. The formation and performance of the sales contract shall be governed by the laws of Spain.
- Any action for breach of the sales contract or any covenant or warranty contained herein must be commenced within the term of one year after breach of agreement has occurred.
- (16) MINIMUM ORDER. With the aim to increase our customer service level and efficiency, we will establish a minimum customer order amount of 75 €. We would not be able to manage orders below that amount. Do not hesitate to contact our customer service for further information.

MAIN WARNING LIGHTS

Lightbars	6
Mini lightbars	.24
LED beacons.	30
Strobe beacons	34
Halogen beacons	35





SOLARIS



Configurable lightbars.

Low profile lightbar with ROC Solaris technology and foldable led sign specially designed for applications where the signal through a text message or voice is essential.

Two levels of light allow multiple combinations of lights and colours, thereby optimizing the internal capacity of the lightbar without losing any option for auxiliary signalling.

It is equipped with one or two powerful foldable Led signs for front and/or rear legend.

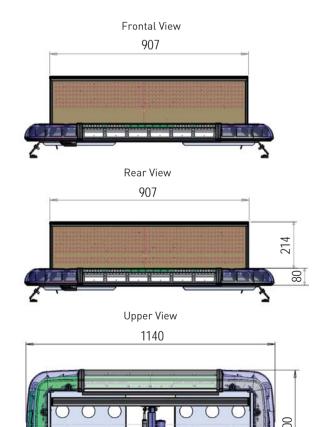
The lightbar being Can Bus controlled, it can activated multiple programmable functions just by pressing a single button on the keypad.

Traffic Storm Series (priority lights in blue or amber) is approved for the European Regulation R65 and is according to European Directive 2004/10/EC on Electromagnetic Compatibility.

Voltage:	12V
Standby consumption:	0,3Amp
Main warning lights, total average consumption:	3,2A in flash, 0,5A in cruise light
Front modules (white light), average consumption:	1A for module
Lateral modules (white light), average consumption:	0,5A for module
Supplementary modules (amber ligth), average consumption:	1A for module
Lighted sign, average consumption:	0,4A for module
Complete rear and front foldable LED sign. LED Panel: 630 LEDs. SignalMaster: 288 LEDs	3,2A for panel + 1A SignalMaster



Option 360° camera TRAFFIC VIEW



Traffic Storm dimensions (mm)



TRAFFIC STORM Series

REF.	MOD.	DESCRIPTION
		Options - Priority lights
	TF-SL	44" Basic lightbar, (20) Solaris modules of (3) LEDs, blue light or amber, wiring harness, UN R65 approved class 2
		* Mounting is not kit included in price and must ordered separately
		Options - Lateral Section - Alley light
	TF-FL	(4) Solaris modules of (3) LEDs, white light
	TEFE	Options - Front & Center Section - Lower Level
	TF-FF	(2) Solaris modules of (6) LEDs, white light, steady burn and/or flashing.
	TF-LE TF-LP	(2) Solaris modules of (6) LEDs, blue light, priority lights extension.
	TF-LP	(2) Solaris modules of (6) LEDs, red light, flashing (2) Solaris modules of (6) LEDs, white light, lighted sign without text*
	11 -01	* The text message must be ordered separately.
		Options - Rear & Center Section - Lower Level
	TF-FPT	(2) Solaris modules of (6) LEDs, white light, steady burn and/or flashing.
	TF-LE	(2) Solaris modules of (6) LEDs, blue light, priority lights extension.
	TF-A/SM	(2) Solaris modules of (6) LEDs, amber light, flashing or SignalMaster (directional lighting system).
	TF-CI	(2) Solaris modules of (6) LEDs, white light, lighted sign without text
	TEIDC	Options - Front & Center Section - Upper Level
	TF-LP-S	(2) LED modules, red light, flashing Options - Rear & Center Section - Upper Level
	TF-A/SM-S	(2) LED modules, amber light, flashing or SignalMaster (directional lighting system).
		Options - Traffic View
	TF-TV	(1) Traffic View 360° camera
4520137		3D Joystick: Traffic View camera control. Multi protocol support. Could be integrated into Atenea System
4520093-0	2	10" Monitor for Traffic View camera images display. Could be integrated into Atenea System
) 1020070 0	_	(*) Foldable LED sign incompatible option
		Options Foldable LED Sign * Please contact with our sales department for Traffic Sotrm without foldable led sign availability
	TF-CLF	(1) LSG900, foldable LED Sign, red light, 200 programmable messages from the user with normal and/or mirror view and
	II OLI	scrolling.
	TF-CLP	(1) LSG900, foldable LED Sign, red light, rear signalisation, integrated SignalMaster (directional lighting system), 200
		programmable messages from the user with normal view and scrolling. (1) Front LED Sign, red light, front and rear signalisation, 200 programmable messages from the user with normal and/or
	TF-CLF/P	mirror view(front) and scrolling.
		(*) Traffic View camera incompatible option
		Mount Accessories
	TF-CT	Roof connector, 19-ways (obligatory)
8234176	TF-FP	Permanent mounting kit (recommended)
	TF-FB	Metal mounting kits on bars (models and prices available, consult).
		Control head
	BCT3000	Control head for Traffic Storm series ¹
		10 buttons for emergency and auxiliary systems.
		Delayed public address. Voice player/recorder (1 message) ²
		TCAN BUS technology with LCD screen. Voice and text messages can be previewed
		Volume control for public address and voice player.
		SignalMaster control. USB connection.
		1 Contact our sales department for available models.
		2 BCT3000 enables to pre-programm diferent voice messages. For further information, contact our sales department.
		AS320 DIG CAN BUS siren amplifier
2020268	AS320DIG 12V	/ 100W siren amplifierfor BCT3000. Features:
		Horn-ring connection.
		Radio repeat. Relay output (10A) for auxiliary lights sinchronized with priority lights.
		Realy output (1A) for tachograph.
2020270	AC220DIO 0 11	Please contact your Sales Dept. for availability and models. Only can be installed with BCT3000 control head.
2020270	AS320DIG 24V	/ 100W siren amplifierfor BCT3000. Features: Horn-ring connection.
		Radio repeat.
		Relay output (10A) for auxiliary lights sinchronized with priority lights.
		Realy output (1A) for tachograph.
		Please contact your Sales Dept. for availability and models. Only can be installed with BCT3000 control head. Public address
8235984	AS320-PA CB	Public address Public address kit with remote control. Volume and microfone functions control (for control head BCT3000)
0233704	MOUZU-I A CD	
		Programming Accessories "SmartSign 2 Message Editor, for editing and downloading messages from PC.
2025473	S2ME	Only available for LSG900 programmable LED sign in Traffic Storm lightbars series."
		(*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY Sistem from Atenea Integrated
		Vehicle Solutions. For more information see ATENEA Catalogue.



VISTA Series SOLARIS

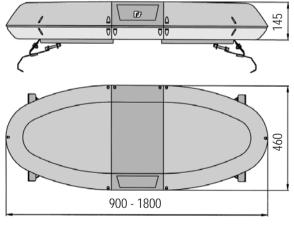
Lightbars with a modern design and two light levels (upper and lower level) and an extreme broad range of set-up options for visual and acoustic emergency signalling.

Priority lights are available with three different technologies for various applications:

The **Vista Solaris** series stands out for its Solaris Led priority lights, whose light emission is made by module assembly composed of 3 leds of 3 watts and a semiparabolic reflector of metallized polycarbonate, all arranged around the perimeter of a horizontal plate of ROC technology print circuit, which eliminates the conventional wiring inside the lightbar.

It also has a wide range of lighting and acoustic options, like Takedown and Alley lights, LED steady burn and/or flashing modules, auxiliary lights, SmartSign programmable LED signs, LED SignalMasters, Integrated control systems, siren amplifiers, and 100W loudspeakers.





Vista Series dimensions (mm).

Voltage:	12 or 24 V
Dimensions:	900 - 1800 x 460 x 145 mm
Available lengths:	36" (900 mm) - without speaker 44" (1100 mm), 53" (1350 mm) 62" (1600 mm), 71" (1800 mm)
LED colours:	blue, amber, red, green



Specify All Options System X01-X03 36' (900 mm) Lightbar, all-light, wiring harness X11-X13 44' (1100 mm) Lightbar, all-light, wiring harness X21-X23 53' (1350 mm) Lightbar, all-light, wiring harness X31-X33 62' (1600 mm) Lightbar, all-light, wiring harness X14-X34 71' (1800 mm) Lightbar, all-light, wiring harness X12-X14 44' (1100 mm) Lightbar, speaker, wiring harness X12-X14 44' (1100 mm) Lightbar, speaker, wiring harness X22-X24 53' (1350 mm) Lightbar, speaker, wiring harness X32-X34 62' (1600 mm) Lightbar, speaker, wiring harness X42-X44 71' (1800 mm) Lightbar, speaker, wiring harness X52-X54 (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (3) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (3) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (3) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (3) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (3) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (3) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (3) LEDs lighted opal sign, on centr	_		
X01-X03 36° (900 mm) Lightbar, all-light, wiring harness X11-X13 44° (1100 mm) Lightbar, all-light, wiring harness X21-X23 53° (1350 mm) Lightbar, all-light, wiring harness X31-X33 62′ (1600 mm) Lightbar, all-light, wiring harness X31-X34 71° (1800 mm) Lightbar, all-light, wiring harness X12-X14 44′ (1100 mm) Lightbar, speaker, wiring harness X12-X14 44′ (1100 mm) Lightbar, speaker, wiring harness X22-X24 53° (1350 mm) Lightbar, speaker, wiring harness X22-X24 53° (1460 mm) Lightbar, speaker, wiring harness X32-X34 62′ (1600 mm) Lightbar, speaker, wiring harness X42-X44 71′ (1800 mm) Lightbar, speaker, wiring harness '(Mounting it included in price. Hook-on brackets purchased separately) Options - Priority lights - Upper Level Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-ClO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (2) Lighted opal sign, on central module, 1300mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (1) Lights lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (3) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (4) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (5) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (5) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (6) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (6) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (3) LEDs lighted opal sign, on central module, 1100mm light	REF.	MOD.	DESCRIPTION
X11-X13			Specify All Options System
X21-X23 53" (1350 mm) Lightbar, all-light, wiring harness X31-X33 62" (1600 mm) Lightbar, all-light, wiring harness X41-X43 71" (1800 mm) Lightbar, all-light, wiring harness X12-X14 44" (100 mm) Lightbar, speaker, wiring harness X22-X24 53" (1350 mm) Lightbar, speaker, wiring harness X22-X24 62" (1600 mm) Lightbar, speaker, wiring harness X32-X34 62" (1600 mm) Lightbar, speaker, wiring harness X42-X44 71" (1800 mm) Lightbar, speaker, wiring harness 'Mounting kit included in price. Hook-on brackets purchased separately) Options - Priority lights - Upper Level Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-ClO/2 (2) Lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (2) Lighted opal sign, on central module, 1100mm lightbars X-ClO/1 (1) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (1) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (3) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (4) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (5) LEDS lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (5) LEDS lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (6) LEDS lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (2) LEDS lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (3) LEDS lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (4) LEDS lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (5) LEDS lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (X01-X03	36" (900 mm) Lightbar, all-light, wiring harness
X31-X33 62" (1600 mm) Lightbar, all-light, wiring harness X41-X43 71" (1800 mm) Lightbar, all-light, wiring harness X12-X14 44" (1100 mm) Lightbar, speaker, wiring harness X22-X24 53" (1350 mm) Lightbar, speaker, wiring harness X32-X34 62" (1600 mm) Lightbar, speaker, wiring harness X42-X44 71" (1800 mm) Lightbar, speaker, wiring harness "(Mounting kit included in price. Hook-on brackets purchased separately) Options - Priority lights - Upper Level Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central module, 3100mm lightbars X-CIO/1 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (2) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (3) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (4) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (5) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (5) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (5) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (6) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (7) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (7) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (7) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (7) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (7) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (7) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (7) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (7) LEDs lighted opal sign, on central module, 1300mm lightbars X-CIO/2 (8) LEDs lighted opal sign, on central module, 1300mm ligh		X11-X13	44" (1100 mm) Lightbar, all-light, wiring harness
X41-X43 71* (1800 mm) Lightbar, all-light, wiring harness X12-X14 44* (1100 mm) Lightbar, speaker, wiring harness X22-X24 53* (1350 mm) Lightbar, speaker, wiring harness X32-X34 62* (1600 mm) Lightbar, speaker, wiring harness X42-X44 71* (1800 mm) Lightbar, speaker, wiring harness *(Mounting kit included in price. Hook-on brackets purchased separately) *Options - Priority lights - Upper Level *Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light **Options - Center Section - Upper Level X-ClO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-ClO/2 (2) Lighted opal sign, on central modules, 1300mm lightbars X-ClO/1 (1) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (3) Lights opal sign, on central modules, 1300mm lightbars X-ClO/2 (4) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (5) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (6) LEDs lighted opal sign, on central modules, 1300mm lightbars X-ClO/2 (7) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). **Options - Center Section - Upper Level As300 DIG CAN 100W siren amplifier, international tones (wall, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads **Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens **The function for each Solaris module must be especified when the lightbar and control head are ordered. **Please contact your Sales Dept. for availability of configurations and versions.		X21-X23	53" (1350 mm) Lightbar, all-light, wiring harness
X12-X14 44* (1100 mm) Lightbar, speaker, wiring harness X22-X24 53* (1350 mm) Lightbar, speaker, wiring harness X32-X34 62* (1600 mm) Lightbar, speaker, wiring harness X42-X44 71* (1800 mm) Lightbar, speaker, wiring harness *(Mounting kit included in price. Hook-on brackets purchased separately) Options - Priority lights - Upper Level Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central modules, 1300mm lightbars X-CIO/1 (1) LEDs lighted opal sign, on central modules, 1300mm lightbars X-CIO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adheslve message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens ** The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.		X31-X33	62" (1600 mm) Lightbar, all-light, wiring harness
X22-X24 53" (1350 mm) Lightbar, speaker, wiring harness X32-X34 62" (1600 mm) Lightbar, speaker, wiring harness X42-X44 71" (1800 mm) Lightbar, speaker, wiring harness "(Mounting kit included in price. Hook-on brackets purchased separately) Options - Priority lights - Upper Level Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central module, 1100mm lightbars X-CIO/1 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-CIO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "The function for each Solaris module must be especified when the lightbar and control head are ordered. "Please contact your Sales Dept. for availability of configurations and versions.		X41-X43	71" (1800 mm) Lightbar, all-light, wiring harness
X32-X34 62" (1600 mm) Lightbar, speaker, wiring harness *(Mounting kit included in price. Hook-on brackets purchased separately) Options - Priority lights - Upper Level Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central module, 1100mm lightbars X-CIOL/1 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "The function for each Solaris module must be especified when the lightbar and control head are ordered. "Please contact your Sales Dept. for availability of configurations and versions.		X12-X14	44" (1100 mm) Lightbar, speaker, wiring harness
X42-X44 71" (1800 mm) Lightbar, speaker, wiring harness "(Mounting kit included in price. Hook-on brackets purchased separately) Options - Priority lights - Upper Level Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central modules, 1300mm lightbars X-CIO/1 (1) LEDs lighted opal sign, on central modules, 1300mm lightbars X-CIO/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "The function for each Solaris module must be especified when the lightbar and control head are ordered. "Please contact your Sales Dept. for availability of configurations and versions.		X22-X24	53" (1350 mm) Lightbar, speaker, wiring harness
*(Mounting kit included in price. Hook-on brackets purchased separately) Options - Priority lights - Upper Level Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central modules, 1300mm lightbars X-CIOL/1 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central module, 300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. BUS Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens ** The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.		X32-X34	62" (1600 mm) Lightbar, speaker, wiring harness
Options - Priority lights - Upper Level Solaris LEDs X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central modules, 1300mm lightbars X-CIOL/1 (1) LEDs lighted opal sign, on central modules, 1300mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "The function for each Solaris module must be especified when the lightbar and control head are ordered. "Please contact your Sales Dept. for availability of configurations and versions.		X42-X44	71" (1800 mm) Lightbar, speaker, wiring harness
X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central modules, 1300mm lightbars X-CIOL/1 (1) LEDs lighted opal sign, on central modules, 1300mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "The function for each Solaris module must be especified when the lightbar and control head are ordered. "The function for each Solaris module must be especified when the lightbar and control head are ordered. "The function for each Solaris module must be especified when the lightbar and control head are ordered. "The function for each Solaris module must be especified when the lightbar and control head are ordered. "The function for each Solaris module must be especified when the lightbar and control head are ordered. "The function for each Solaris module must be especified when the lightbar and control head are ordered. "The function for each Solaris module must be especified when the lightbar and control head are ordered. "The function for each Solaris module must be especified when the lightbar and control head are ordered.			*(Mounting kit included in price. Hook-on brackets purchased separately)
X-SL (26) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved), ambar or red light Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central modules, 1300mm lightbars X-CIOL/1 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "The function for each Solaris module must be especified when the lightbar and control head are ordered. "Please contact your Sales Dept. for availability of configurations and versions.			Options - Priority lights - Upper Level
Options - Center Section - Upper Level X-CIO/1 (1) Lighted opal sign, on central module, 1100mm lightbars X-CIO/2 (2) Lighted opal sign, on central modules, 1300mm lightbars X-CIOL/1 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "The function for each Solaris module must be especified when the lightbar and control head are ordered. "Please contact your Sales Dept. for availability of configurations and versions.			Solaris LEDs
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X-CIO/2 (2) Lighted opal sign, on central modules, 1300mm lightbars X-CIOL/1 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "The function for each Solaris module must be especified when the lightbar and control head are ordered. "The function for each Solaris module must be especified when the lightbar and control head are ordered. "The function for each Solaris module must be especified when the lightbar and control head are ordered. "Please contact your Sales Dept. for availability of configurations and versions.			Options - Center Section - Upper Level
X-CIOL/1 (1) LEDs lighted opal sign, on central module, 1100mm lightbars X-CIOL/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. BUS Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "The function for each Solaris module must be especified when the lightbar and control head are ordered. "Please contact your Sales Dept. for availability of configurations and versions.		X-CIO/1	(1) Lighted opal sign, on central module, 1100mm lightbars
X-CIOL/2 (2) LEDs lighted opal sign, on central modules, 1300mm lightbars X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "* The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.		X-CIO/2	(2) Lighted opal sign, on central modules, 1300mm lightbars
X-AD (1) Adhesive message for lighted sign (front or rear) X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "* The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.		X-CIOL/1	(1) LEDs lighted opal sign, on central module, 1100mm lightbars
X-VB (1) Installation of VisiBeam in a Vista Series lightbar. (Light not included). Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "* The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.		X-CIOL/2	(2) LEDs lighted opal sign, on central modules, 1300mm lightbars
Options - Center Section - Upper Level AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "* The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.		X-AD	(1) Adhesive message for lighted sign (front or rear)
AS320 DIG CAN 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500-CB Series control heads Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "* The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.		X-VB	(1) Installation of VisiBeam in a Vista Series lightbar. (Light not included).
Options - Secondary Lights - Lower Level (specify colour) X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "* The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.			Options - Center Section - Upper Level
X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "* The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.			
X-SLE (1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light X-FPL (2) Work lights, w/ lens "* The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.			Options - Secondary Lights - Lower Level (specify colour)
X-FPL (2) Work lights, w/ lens "* The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions.		X-SLE	
 ** The function for each Solaris module must be especified when the lightbar and control head are ordered. ** Please contact your Sales Dept. for availability of configurations and versions. 		X-FPL	
Public address			"* The function for each Solaris module must be especified when the lightbar and control head are ordered.
			Public address
35984 AS320-PA CB Public address kit with remote control. Volume and microfone functions control (for control head BCT2000)	8235984	AS320-PA CB	Public address kit with remote control. Volume and microfone functions control (for control head BCT2000)

CAN BUS Control Head

		CAN BUS Control Head
BCT2004-01	BCT2004	BCT2000 Series control head, 4 control keys.
BCT2006-X	X BCT2006	BCT2000 Series control head. 6 control keys.
BCT2010-XX	K BCT2010	BCT2000 Series control head. 10 control keys.
BCT2015-X	K BCT2015	BCT2000 Series control head. 15 control keys.
BCT2021-XX	K BCT2021	BCT2000 Series control head. 21 control keys.
8216160XX	BCT500CB	BCT500 Series control head. 13 control keys (public address included)
		* Please contact your Sales Dept. for availability.
		Converter CAN BUS - ANALOG
2006036		Inputs box to convert a CAN BUS lightbar in an analog system (the fuctions are activated through positive cable)
Mount Accessories		Mount Accessories
8234144	X-FP	Permanent mounting kit
8234137		Hook-on mounting bracket (hook-on not included)
	X-FB	Metal mounting kits on bars (contact our sales department for available models)
	X/CT-23	Roof connector, 23- ways (*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY Sistem from Atenea Integrated Vehicle Solutions. For more information see ATENEA Catalogue.



VALOR Series



Valor lightbar is the first and only non-linear, low profile LED lightbar. A lightbar that increases visibility, optimizes performance, and reduces risk to any emergency situation. SPECTRALUX $^{\text{TM}}$ provides a fully programmable range of color combinations for optimum warning capability to flood light performance.

- SAFETY AT THE CRITICAL ANGLES

Valor V-shape was engineered to outperform at 45-degree and 90-degree angles, critical for intersection clearing.

- LEDs SOLARIS LIGHTS

Solaris LED reflector design to significantly maximize the LED light source for full light coverage.

- SPECTRALUX™ MULTICOLOR LED TECHNOLOGY

Provides the ability for a LED light head to change color. LEDs can change between red, blue, amber or white.

- ROC TECHNOLOGY

Lineal circuit board-to-board connection which reduce the number of electrical connections in a lightbar.

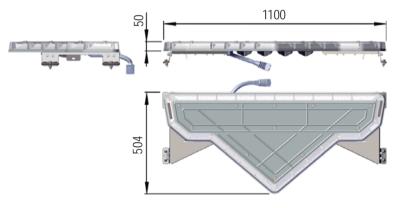
- UNIQUE DESIGN

Valor lightbar design is FEDERAL SIGNAL use exclusively due to European Union Community Design registration 001925753-0001.

- TWO LEVEL LIGHTS

New mounting brackets system allows to install white TAKE DOWNS and ALLEY lights in a second level that do not interfere with the main lights.





Valor lightbar dimensions in mm.

Voltage:	11,5Vdc to 14,5Vdc - Typical: 13,8Vdc
Temperature of use:	-40°C to 65°C
Current draw:	(at 13,8Vdc) Standby mode: 250mA (no lights connected) Steady mode: add 1000mA by module R65 mod: add 300mA by module = 3A, the complete R65
LED colour:	blue, amber, red and white
Technology:	SOLARIS SPECTRALUX
Lens colour:	Clear
Dimensions:	VALR44 - 1110 mm x 50 mm x 504 mm
Weight (without mounting brackets):	11,6 kgs.
Weight (with mounting brackets):	16 kgs.



8234204

8234205

VALR-FT

VALR-FP

A-CT19

MOD. **DESCRIPTION** REFPreselected models: Valor Series Lightbar 44", composed by: * Main lights: 24 Blue LEDs Solaris modules * Secondary lights: - 2 white TAKE DOWN LEDs Solaris modules VALR44-2674993E Color configuration by module: 12 blue modules 4 blue and white modules - 2 white ALLEY LIGHTS LEDs Solaris modules 8 blue and amber modules 8 amber rear LEDs Solaris modules (Signalmaster function) * 19 ways roof connector Valor Series Lightbar 44", composed by: * Main lights: 10 Blue LEDs Solaris modules (left) and 10 Red VALR44-2675002E Color configuration by module: * 10 blue modules * 10 red modules LEDs Solaris modules (right) * Secondary lights: - 2 white TAKE DOWN LEDs Solaris modules - 2 white ALLEY LIGHTS LEDs Solaris modules 2 white modules * 1 blue and white module * 1 red and white module * 19 ways roof connector Valor Series Lightbar 44", composed by: * Main lights: 24 Blue LEDs Solaris modules * Secondary lights: - 6 white TAKE DOWN LEDs Solaris modules VALR44-2633966E Color configuration by module: 10 blue modules 4 blue and white modules 6 blue and amber modules - 2 white ALLEY LIGHTS LEDs Solaris modules 4 blue, red and white modules - 4 red front LEDs Solaris modules (stop function) - 6 amber LEDs Solaris modules in the rear (Signalmaster function) Cruise light * 19ways roof connector VALR44-PMM Color configuration by module: * 10 blue modules Valor Series Lightbar 44", composed by: * Main lights: 12 Blue LEDs Solaris modules * Secondary lights: - 2 white TAKE DOWNS LEDs Solaris modules - 2 white ALLEY LIGHTS LEDs Solaris modules 4 red modules 2 white modules 6 amber modules - 4 red front LEDs Solaris modules (stop function) 2 blue and white modules - 6 amber rear LEDs Solaris modules (Signalmaster function) * Cruise light * 19 ways roof connector * Prewired for auxiliary lights on mounting kit (auxiliary lights sold separately) Valor Series Lightbar 44", composed by: * Main lights: 12 Blue LEDs Solaris modules VALR44-PL Color configuration by module: * Secondary lights: - 2 white TAKE DOWNS LEDs Solaris modules 10 blue modules 4 red modules 2 white modules - 2 white ALLEY LIGHTS LEDs Solaris modules 6 amber modules - 4 red front LEDs Solaris modules (stop function) 2 blue and white modules - 6 amber rear LEDs Solaris modules (Signalmaster function) Cruise light * 19 ways roof connector Valor Series Lightbar 44", composed by: * Main lights: 24 Blue LEDs Solaris modules * Secondary lights: - 2 white TAKE DOWN LEDs Solaris modules - 2 white ALLEY LIGHTS LEDs Solaris modules VALR44-0001E Color configuration by module: 24 blue modules 4 blue/white modules 2 blue/red modules 2 red rear LEDs Solaris modules * Controlled with the control head BCT500CB-GR * 19 ways roof connector **Auxiliary lights for mounting kits** (2) Impaxx, Solaris LEDs lights in white, clear dome, without flasher, multitension 10-30v, to be installed in mounting IMPAXX-FF-WH brackets as Take Down light (2) Impaxx, Solaris LEDs lights in white, clear dome, without flasher, multitension 10-30v, to be installed in mounting IMPAXX-FL-WH brackets as Alley light Converter ANALOG-CANBUS 8235978-06 CANBUS Control box for Valor 8235631 Mini connection box MF8-TF8 **Control heads** BCT2015-12 BCT2015 15-Button control box, for Valor Series BCT2021-12 BCT2021 21-Button control box, for Valor Series 8216160GR BCT500CB-GR Control box for VALR44-0001E valor lightbar 100W Siren amplifier 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 2020269 AS320DIG CAN BUS 12V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included 100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 2020271 AS320-24DIG CAN BUS 24V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included **Public address** 8235984 Public address kit with remote control. Volume and microfone functions control (for control head BCT2000)

Mounting Options

19 ways roof connector for Valor

Hook-on mounting kit (hook-on not included)

Vehicle Solutions. For more information see ATENEA Catalogue.

(*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY Sistem from Atenea Integrated

Permanent mounting kit



ARJENT Series



Federal Signal Vama presents **ARJENT Solaris** Series, a low profile LED aerodynamic design lightbar, equipped with the most advanced LED technology, the Solaris technology, inspired by the sun's rays providing exceptional wide angle of coverage.

- 360° LIGHT BEAM DISTRIBUTION

Its advanced optical design and the elliptical shape of Arjent provide 360° coverage and significantly greater off-axis warning than traditional linear lightbars eliminating dark sports.

- SOLARIS TECHNOLOGY

Optical System with parabolic reflector composed by 3 Last generation LEDs.

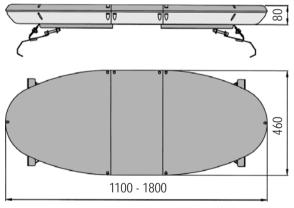
- ROC TECHNOLOGY (Reliable Onboard Circuitry)

ROC technology eliminates 85% of potential failure points in the lightbar, reducing repair costs and increasing the hours your emergency vehicles stay on the road. ROC incorporates a printed circuit board in one assembly to reduce the amount of electrical connections found in a typical lightbar.

- CANBUS

Communication systems between lightbar, siren (AS-320) and the controller head (BCT500 or BCT2000). This system minimizes wiring installation and allows customizing the lightbar without removing it of the vehicle.





Arjent Series dimensions (mm).

Voltage:	10-30V
Operating temperature:	-20 to +50° C
Current draw (average) per module in flash mode:	0.4 Amp (12V) / 0.25 Amp (24V)
Current draw (avergage) per module in cruise light mode:	0.05 Amp (12V) / 0.03 Amp (24V)
Current draw per module in steady burn:	0.4A (12V) / 0.25A (24V)
Colours of LEDS:	Amber, Blue and Red
Colours of lenses:	Base: Clear / Cover: Amber, Blue and Red
Dimensions:	1100 - 1800 x 460 x 80 mm
Weight:	According to model



ARJENT Series

	REF.	MOD.	DESCRIPTION
			Specify All Options System
		AJ11-AJ13	44" (1100 mm) Lightbar, all-light, wiring harness
		AJ21-AJ23	53" (1350 mm) Lightbar, all-light, wiring harness
		AJ31-AJ33	62" (1600 mm) Lightbar, all-light, wiring harness
		AJ41-AJ43	71" (1800 mm) Lightbar, all-light, wiring harness
			* Mounting is not kit included in price and must ordered separately
			Priority Lights
			LEDs Solaris
		AJ-SL	(16) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved) amber (UN R65 approved) or red light.
			Options - Secondary Lights - Lower Level (specify colour)
Ø)	AJ-SL 2C	(1) modules of (3) high LEDs Solaris with parabolic reflector, bicolour
	/	AJ-SLE	(1) modules of (3) high-intensity LEDs with parabolic reflector, blue, ambar, red and white light
			* The function for each Solaris module must be especified when the lightbar and control head are ordered.
			** Please contact your Sales Dept. for availability of configurations and versions.
			Acoustic options - Center Section - Upper Level
	2020240	AS320-12DIG	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V.
	2020269	CAN BUS	Compatible only with BCT2000 and BCT500CB Series control heads
	2020271		100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 24V.
	2020271	CAN BUS	Compatible only with BCT2000 and BCT500CB Series control heads
			Public address
	8235984	AS320-PA CB	Public address kit with remote control. Volume and microfone functions control (for control head BCT2000)
			CAN BUS Control Head
$\widehat{\mathcal{U}}$	BCT2004-01		BCT2000 Series control head. 4 control keys.
	BCT2006-XX		BCT2000 Series control head. 6 control keys.
	BCT2010-XX		BCT2000 Series control head. 10 control keys.
	BCT2015-XX		BCT2000 Series control head. 15 control keys.
	BCT2021-XX		BCT2000 Series control head. 21 control keys.
	8216160XX	BCT500CB	BCT500 Series control head. 13 control keys (public address included)
			* Please contact your Sales Dept. for availability.
			Mayort Appropriate
		AJ-FB	Mount Accessories Integrated search light for Arjent Series lightbar 12V
		AJ-FB-24	Integrated search light for Arjent Series lightbar 24V
		AJ-FB-24 AJ-FP	Permanent mounting kit
	8234137	AJ-11	Hook-on mounting bracket (hook-on not included)
		AJ-FB	Metal mounting kits on bars (contact our sales department for available models)
		A-CT19	Roof connector, 19-ways
		7. 0117	Tool connector, 17 ways
			Converter CAN BUS - ANALOG
	2006036		Inputs box to convert a CAN BUS lightbar in an analog system (the fuctions are activated through positive cable)
			(*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY Sistem from Atenea Integrated Vehicle
			Solutions. For more information see ATENEA Catalogue.



SOLARIS

LEGEND Series

The **Legend** model stands out for a popular, low-profile lightbar. This lightbar system is made of 3rd generation Solaris LEDs and integrates the ROC (Reliable Onboard Circuitry) technology, which eliminates approximately 85% of the potential failure points in a typical lightbar. The optimized Solaris LED lights maximize the warning signals at 360°.

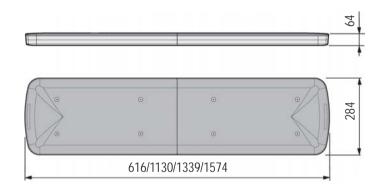
All Legend lightbars contain an advanced micro-processor which provides three modes of operation, a library of flash patterns, adjustable Alley and Takedown lights, front/rear cut-off, dimming, and intersection warning.

Legend can be easy reconfigured in minutes, right on the vehicle, without removing and rewiring individual light modules. ROC boards are also individually labelled to make the reconfiguration easy.

Legend can be configured with secondary warning lights: Takedown and Alley lights, and Solaris SignalMasters*.



Legend Series dimensions (mm).



* SignalMaster 8-modules on 1100 lightbar. SignalMaster 11-modules on 1340 lightbar.

Voltage:	10-30V
Dimensions:	24", 45", 53", 61", 70" (616, 1130, 1339, 1547, 1753 x 284 x 64 mm)
Solaris LEDs colours:	blue, amber, red, green, clear



LEGEND Series

REF.	MOD.	DESCRIPTION
		Specify All Options System
	LGD-B45"	45" (1130 mm) Legend Lightbar, wiring harness
	LGD-B53"	53" (1339 mm) Legend Lightbar, wiring harness
	LGD-B61"	61" (1547 mm) Legend Lightbar, wiring harness
	LGD-B70"	70" (1753 mm) Legend Lightbar, wiring harness
	200 070	* Mounting is not kit included in price and must ordered separately
		Priority Lights
	LGD-SL	(16) modules of (3) high-intensity LEDs with parabolic reflector, blue (UN 65 approved) amber (UN 65 Approved) or red light (UN 65 approved)
		Lighting Options
	LGD-SL 2C	(1) modules of (3) high LEDs Solaris with parabolic reflector, bicolour
	LGD-SL	(1) modules of (3) high-intensity LEDs with parabolic reflector, blue, amber, red and white light
	LGD-3L	(1) modules of (3) high-intensity LEDS with parabolic reflector, blue, amber, red and write light
		* The function for each Solaris module in the lower level must be especified when the lightbar is ordered. ** Please contact your Sales Dept. for availability of configurations and versions.
		100W Siren amplifier
2020269	AS320DIG CAN BUS	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible with with BCT2000 and BCT500CB control heads series.
2020271	AS320-24DIG CAN BUS	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 24V. Compatible with with BCT2000 and BCT500CB control heads series.
		Public address
8235984	AS320-PA CB	Public address kit with remote control. Volume and microfone functions control (for control head BCT2000)
		Control Heads
BCT2004-01	BCT2004	BCT2000 Series control head. 4 control keys.
BCT2006-XX	(BCT2006	BCT2000 Series control head. 6 control keys
BCT2010-XX	(BCT2010	BCT2000 Series control head. 10 control keys
BCT2015-XX	(BCT2015	BCT2000 Series control head. 15 control keys
BCT2021-XX		BCT2000 Series control head. 21 control keys
8216160XX	BCT500CB	BCT500 Series control head. 13 control keys (public address included)
		* Please contact your Sales Dept. for availability.
		Mounting options
	LGD-FB	Integrated search light for Legend Series lightbar 12V*
	LGD-FB-24	Integrated search light for Legend Series lightbar 24V*
8234174	LGD/FP	Permanent mounting kit
	AJ-FB	Metal mounting kits on bars (contact our sales department for available models)
	A-CT19	Roof connector, 19-ways
		(*) The inclusion of integrated search light al Legend lightbar doesn't allow to install auxiliary lights below this integrated search light.
		Converter CAN BUS - ANALOG
2006036		Inputs box to convert a CAN BUS lightbar in an analog system (the fuctions are activated through positive cable)
		(*) All Federal Signal Vama CAN BUS lightbars are compatible with FEDEMERGENCY Sistem from Atenea Integrated
		Vehicle Solutions. For more information see ATENEA Catalogue.



PHOENIX Series



Revolutionary compact and versatile lightbar, designed for high-priority, complementary and acoustic signalling. The smoothed design of the lateral lenses provides better aerodynamics and watertightness.

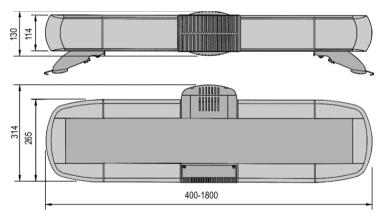
- Phoenix ROC Solaris series is formed by a high-efficiency PC board with integrated microprocessor, 15 high-luminosity LED diodes of the latest generation, placed on the multivoltage (10-30V) PC board and a parabolic reflector that maximises the luminosity of the LEDs.
- Phoenix Strobe series has high-power strobe lights and power supply integrated in the lightbar. Available with directional and omnidirectional strobes
- Phoenix Halogen series is made of highluminosity and efficiency independent or synchronised rotating halogen lights.

These three types provide an extremely wide range of set-up options to meet the most demanding needs and requirements.

Lighting options: Takedown and Alley lights, Solaris LED modules, additional halogen or strobe units, SmartSign programmable LED sign, and SignalMasters with Solaris LED or halogen modules.

Acoustic options: 30 W compact sirens, 100W speakers, siren amplifiers and Integrated Control Systems.





Phoenix Series dimensions (mm).

Voltage	12 or 24 V
Dimensions:	400 - 1800 x 265 x 114 mm (without speaker) 400 - 1800 x 314 x 130 mm (with speaker)
Available lengths:	400 mm Mini lightbar 800, 900, 1000, 1800 mm"
Solaris LED colours:	blue, amber, red, white
Speaker colours:	white or black



REF	F. MOD.	DESCRIPTION
		ROC Solaris Series
		Mini lightbars - Standard lengths: 400mm - 700mm
	MPXS-2S1N	Basic Minilightbar, standard length, (2) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness
	MPXS-2S2N	Basic Minilightbar, standard length, (4) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness * Mounting is not kit included in price and must ordered separately
		Specify All Options System - Standard lengths: 800mm - 1200mm
	PXS-2S1N	Basic lightbar, standard length, (2) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness
	PXS-2S2N	Basic lightbar, standard length, (4) rings of (15) high-intensity LEDs in (2) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness
	PXS-4S1N	Basic lightbar, standard length, (4) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness
	PXS-4S2N	Basic lightbar, standard length, (8) rings of (15) high-intensity LEDs in (2) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red (UN 65 approved) light, bitension, wiring harness
		* Mounting is not kit included in price and must ordered separately ** Bicolour LEDs heads avaiilable soon, Ask for prices and availability.
		PHOENIX Strobe Series
		Specify All Options System - Standard lengths: 500mm - 1200mm
	PXE-CHL	Basic lightbar, standard length, (2) 360° Strobe heads, w/ basic power supply, wiring harness. Economic version. UN R65 approved
	PXE-HL	Basic lightbar, standard length, (2) 360° Strobe heads, w/ power supply, wiring harness. UN R65 approved
	PXE-HL4	Basic lightbar, standard length, (4) Directional strobe heads, w/ power supply, wiring harness. UN R65 approved
		* Mounting is not kit included in price and must ordered separately
		Lighting Options
	PXE-R2	(2) Extra belt-driven rotators, H1 lamp 12V
	PXE-R2-24	(2) Extra belt-driven rotators, H1 lamp 24V
	PXE-CD81	(2) Directional strobe heads, w/ power supply
	PXE-CD82	(2) Directional strobe heads, w/o power supply
	PXE-FA702-2E	S (2) Directional strobe heads, with FA702 power supply
		PHOENIX Halogen Series
		Specify All Options System - Standard lengths: 500mm - 1200mm
	PXH-Mini	400mm Lightbar, (1) Belt-driven rotators, wiring harness. UN R65 approved 12V
	PXH-Mini-24	400mm Lightbar, (1) Belt-driven rotators, wiring harness. UN R65 approved 24V
	PXH-Mini-2	400mm Lightbar, (2) Belt-driven rotators, wiring harness. UN R65 approved 12V
	PXH2	Basic lightbar, standard length, (2) Belt-driven rotators, mirrors, (1) cruise light, wiring harness. UN R65 approved 12V
	PXH2-24	Basic lightbar, standard length, (2) Belt-driven rotators, mirrors, (1) cruise light, wiring harness. UN R65 approved 24V
	PXH4-S	Basic lightbar, standard length, (4) Synchronized belt-driven rotators, (1) cruise light, wiring harness. UN R65 approved 12V
	PXH4-S-24	Basic lightbar, standard length, (4) Synchronized belt-driven rotators, (1) cruise light, wiring harness. UN R65 approved 24V
		* Mounting is not kit included in price and must ordered separately
		Lighting Options
	PXH-R2	(2) Extra belt-driven rotators, H1 lamp
	PXE-R2-24	(2) Extra belt-driven rotators, H1 lamp 24V
	PXH-CD81	(2) Directional strobe heads, w/ power supply
	PXE-CD82	(2) Directional strobe heads, w/o power supply
	PXE-FA/02-2E	S (2) Directional strobe heads, with FA702 power supply



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REF.	MOD.	DESCRIPTION
		Options for PHOENIX Solaris, Strobe and Halogen Series
		Supplement for lengths
	PX-SUPL/P1	Supplement for lengths between 1300 and 1600 mm
	PX-SUPL/P2	Supplement for special lenghts (longer than 1600 mm)
	PX-SUP-SEP	Supplement separators various colors (1 per color)
		Lighting Options
	PX-FF	(2) Front or rear lights, H1 lamp
	PX-LP/FF	(2) LED modules Sputnik (red light) and takedown light (H3 lamp)
	PX-FL	(2) Fixed alley lights, H1 lamp
	PX-FPI	(2) Front or rear flashing lights, H1 lamp
	PX-BTT/LED	(2) Brake/Tail/Turn lights LED
	PX-LF SLR	(2) modules of (3) high-intensity LEDs with parabolic reflector, steady burn mode, blue, amber, red or white lights
	PX-LI SLR	(2) modules of (3) high-intensity LEDs with parabolic reflector, flashing mode, blue, amber, red or white lights
	PX-VB	(1) Visibeam installed upon a Phoenix Series lightbar. Installation included
		Acoustic Options
	PX-AL/100N	(1) 100W Speaker, installed
	PX-SC35	(1) Integrated 35W Compact Siren with 16 available tones
	PX-SC35-FG	(1) Integrated 35W Compact Siren with special tones for Germany (approved) and France.
	PX-AS250	(1) 100W Siren amplifier (AS250), 3 tones, w/o P.A., splash-proof, installed in lightbar. Speaker not included
		Signs Options
	PX-CI1	(1) Front or rear lighted sign, optional message
	PX-CI2	(1) Front and rear lighted sign, optional message
	PX-AD	(2) Adhesive messages for lighted sign
	PX-CIO	(1) Front and rear lighted opal sign, optional message
	PX-CL71	(1) LED Sign, (1) or (2) fixed messages
	PX-CL72	(1) LED Sign, (3) or (4) fixed messages
	PC-CIL1-12	(1) Front or rear LEDs lighted sign, optional message, 12V
	PC-CIL1-24	(1) Front or rear LEDs lighted sign, optional message, 24V
	PX-CIL2-12	(1) Front and rear LEDs lighted sign, optional message, 12V
	PX-CIL2-24	(1) Front and rear LEDs lighted sign, optional message, 24V
	PX-CIOL1-12	(1) Front and rear LEDs lighted opal sign, optional message, 12V
	PX-CIOL1-24	(1) Front and rear LEDs lighted opal sign, optional message, 24V
	PX-LSG700	SmartSign LED sign, 200 programmable messages, 575x195x185mm (LCD700 control head and SmartSign Message Editor not included in price)
		SignalMaster
	PX-H6	SignalMaster, directional lighting system, (6) halogen lamps, w/o controller, amber
	PX-H8	SignalMaster, directional lighting system, (8) halogen lamps, w/o controller, amber
	PX-H6KS	SignalMaster, directional lighting system, (6) halogen lights, w/ controller, amber
	PX-H8KS	SignalMaster, directional lighting system, (8) halogen lights, w/ controller, amber
	PX-SL6 SLR	SignalMaster Solaris, directional lighting system, (6) modules of (3) high-intensity LEDs with parabolic reflector, w/o controller, specify colour red, amber or blue
	SLR-A	SignalMaster Solaris, directional lighting system, (8) modules of (3) high-intensity LEDs with parabolic reflector, w/o controller, specify colour red, amber or blue
	PX-SL6KS SLR	SignalMaster Solaris, directional lighting system, (6) modules of (3) high-intensity LEDs with parabolic reflector, with controller, specify colour red, amber or blue
	PX-SL8KS SLR	SignalMaster Solaris, directional lighting system, (8) modules of (3) high-intensity LEDs with parabolic reflector, with controller, specify colour red, amber or blue
		** (Control purchased separately. See Signalmaster controllers or Integrated Control Systems)
000400	DV ED /D *	Mount Accesories
	PX-FP/PA	Permanent mounting bracket, high
	PX-FP/PB	Permanent mounting bracket, low
8234104		Hook-on mounting kit (hook-on not included)
8234150	PX-FMG	Magnetic mounting kit MINIPhoenix

PX-CT23

Roof connector, 23-ways





4000/3000/2000 Series

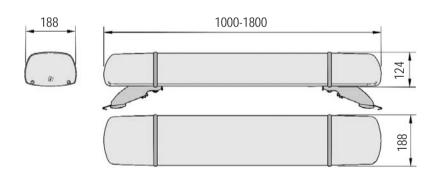
The 4000/3000/2000 Series have a compact, reliable design that combines the features of a high-quality lightbar with low-cost requirements.

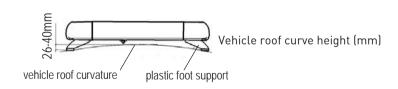
- The 4000 Solaris series stands out for its 24 latest-generation Solaris LED priority lights with advanced optical design, high intensity and reduced consumption.
- The 3000 Strobe series has two, four or six high-power omnidirectional strobe lights. The power supply is integrated in the lightbar.
- The **2000 Halogen** series is made of highluminosity single or synchronised rotating halogen priority lights.

The 4000/3000/2000 series come with secondary lighting options including Takedown and Alley lights, Solaris LED modules, additional halogen or strobe units, illuminated signs, SignalMasters, and Brake, turn, tail lights.



4000 Solaris, 3000 and 2000 Series dimensions (mm).





Voltage: 12 or 24 V

Dimensions: 600 - 1800 x 188 x 124 mm
Mini lightbar: 463mm Solaris, 363mm rotators

Solaris LED colours: blue, amber, red



4000/3000/2000 Series

REF.	REF. MOD. DESCRIPTION							
		Mini lightbars - Standard lengths: 463mm - 700mm						
	MP4-2S1N	Basic Minilightbar, standard length, (2) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness						
	MP4-2S2N	Basic Minilightbar, standard length, (2) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness						
	MP4-4S1N	Basic Minilightbar, maximum 700 mm, (4) rings of (15) high-intensity LEDs in (1) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness						
	MP4-4S2N	Basic Minilightbar, maximum 700 mm, (4) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness						
		Specify All Options System - Standard lengths: 800mm - 1300mm						
	P4-2S1N	Basic lightbar, standard length, (2) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness						
	P4-2S2N	Basic lightbar, standard length, (2) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness						
	P4-4S1N	Basic lightbar, standard length, (4) rings of (15) high-intensity LEDs in (1) level with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness						
	P4-4S2N	Basic lightbar, standard length, (4) rings of (15) high-intensity LEDs in (2) levels with parabolic reflector, blue (UN 65 approved), amber (UN 65 approved) or red light, multivoltage, wiring harness						
		3000 Series						
		Specify All Options System - Standard lengths : 1000mm - 1300mm						
	P3000M	600 mm minilightbar, (2) 360° strobe heads, wiring harness. UN R65 approved						
	P3000	(2) 360° Strobe heads, w/ power supply, wiring harness. UN R65 approved						
	P3000/4E	(4) 360° Strobe heads, w/ power supply, wiring harness.						
		2000 Series						
	DOGGOM	Specify All Options System - Standard lengths : 1000mm - 1300mm						
	P2000M	363 mm minilightbar, (2) belt-driven rotators, wiring harness. UN R65 approved						
	P2000	(2) Belt-driven rotators, wiring harness. UN R65 approved , 12V						
	P2000-24	(2) Belt-driven rotators, wiring harness. UN R65 approved , 24V (4) Belt-driven rotators, wiring harness. UN R65 approved , 12V						
	P2000/4R SY							
	P2000/4R 5Y-24	4 (4) Belt-driven rotators, wiring harness. UN R65 approved , 24V						
		Options for 4000 Solaris, 3000 and 2000 Series						
		Supplement for lenghts						
	A-SUPL/A1	Supplement for lenghts between 1400 and 1600 mm						
	A-SUPL/A2	Supplement for lenghts between 1700 and 1800 mm						
	A-SUP-SEP	Supplement separators various colors (1 per color)						
		**(Flat mount kit included in price. Other mounts purchased separately)						
		Lighting Options						
	A-R1 - 12/24V	(1) Rotator central section, H1 halogen lamp						
	A-FA702-2ES	(2) Directional strobe heads, with FA702 power supply						
	A-FF	(2) Takedown lights, H1 halogen lamp						
	A-FL	(2) Alley lights, H3 halogen lamp						
	A-WL	(2) Rear work light, H1 halogen lamp						
	A-SML1/A-I	(2) SML1, halogen lights, w/ flasher, amber						
	A-SML1/R-I	(2) SML1, halogen lights, w/ flasher, red						
	A-SML1/A	(2) SML1, halogen lights, w/o flasher, amber						
	A-SML1/R	(2) SML1, halogen lights, w/o flasher, red						
	A-LF SLR	(2) modules of (3) high-intensity LEDs with parabolic reflector, steady burn mode, blue, amber, red or white lights						
	A-LI SLR	(2) modules of (3) high-intensity LEDs with parabolic reflector, flashing mode, blue, amber, red or white lights						
	A-BTT/LED	(2) Brake/Tail/Turn lights LED						
	A-ESP	(2) Mirrors						



4000/3000/2000 Series

REF.	MOD.	DESCRIPTION					
KEI .	MOD.	- DESCRIPTION					
		Lighted Signs					
	A-CIO-12	(1) Lighted opal sign w optional message, 12V					
	A-CIO-24 (1) Lighted opal sign w optional message, 24V						
	CIL1-A-12	(1) LEDs lighted opal sign w optional message, 12V					
	CIL1-A-24	(1) LEDs lighted opal sign w optional message, 24V					
	A-AD	(2) Adhesive messages for lighted sign					
		SignalMaster					
	A-SL6 SLR	SignalMaster Solaris, directional lighting system, (6) modules of (3) high-intensity LEDs with parabolic reflector, w/o controller, specify colour red, amber or blue					
	A-SL8 SLR	SignalMaster Solaris, directional lighting system, (8) modules of (3) high-intensity LEDs with parabolic reflector, w/o controller, specify colour red, amber or blue					
	A-SL6KS SLR	SignalMaster Solaris, directional lighting system, (6) modules of (3) high-intensity LEDs with parabolic reflector, with controller, specify colour red, amber or blue					
	A-SL8KS SLR	SignalMaster Solaris, directional lighting system, (8) modules of (3) high-intensity LEDs with parabolic reflector, with controller, specify colour red, amber or blue					
		**(Control purchased separately. See Signalmaster controllers or Integrated Control Systems ICS)					
		Mount Accesories					
8234087	A-FP/PA	Permanent mounting bracket, low					
8234105	A-FP/PB	Permanent mounting bracket, high					
8234104	A-FT	Hook-on mounting kit (hook-on not included)					
8234148	8 A-FMG Magnetic mount, 4000/3000/2000 minilightbars Series						

8234087 A-FP/PA	Permanent mounting bracket, low
8234105 A-FP/PB	Permanent mounting bracket, high
8234104 A-FT	Hook-on mounting kit (hook-on not included)
8234148 A-FMG	Magnetic mount, 4000/3000/2000 minilightbars Series
8234150 A-FMG-12I	Magnetic mount, 4000/3000/2000 minilightbars Series with 12 magnets
8399AA061 MCH	Cigarette plug
A-CT19	Roof connector, 23-ways
A-CT23	Roof connector, 19-ways





MINI LEGEND SOLARIS.

Federal Signal Vama develops and introduces the new, low-profile **Legend Solaris 24" Mini lightbar**. It provides a 360-degree coverage and superior off-axis warning and increased up-time for your fleet. On the other hand, Legend Solaris 24" Mini lightbar offers, in minimum space, technological advantages thanks to its special design:

- 360° DEGREE COVERAGE

Solaris technology and ROC design provides exceptional 360 degree coverage, which results in the elimination of any dark spots and superior off-axis warning around the lightbar.

- ROC TECHNOLOGY (Reliable Onboard Circuitry)

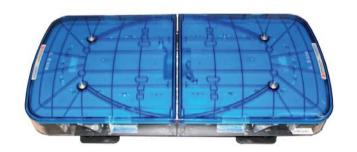
ROC technology eliminates 85% of potential failure points in the lightbar, reducing repair costs and increasing the hours your emergency vehicles stay on the road. ROC incorporates a printed circuit board in one assembly to reduce the amount of electrical connections found in a typical lightbar.

- INCREASED SECURITY

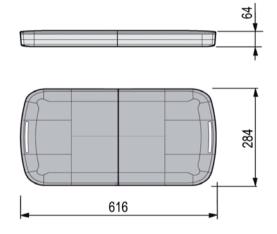
Better grip, stability and security to the vehicle on the road due to its less aerodynamic drag.

- COST SAVINGS

Less fuel consumption thanks to its low-profile and improved aerodynamics. Furthermore, ROC technology reduces repairing costs and it allows more vehicle rotation on the road.



Mini-Legend Solaris dimensions (mm).



Voltage:	12/24 V
Operating temperature:	-20°C to 50°C
Average consumption (flashing mode):	3.5 Amp (12V) / 2.5 Amp (24V)
LEDs colours:	Blue, amber and red
Lens colours:	Blue, amber and red
Dimensions:	616 x 284 x 64 mm
Weight:	7.500 g



MINI LIGHTBARS

REF. MOD. DESCRIPTION

Legend 24" mini-lightbar (616 mm), 18 Solaris modules LED lights, non configurable, no CANBUS.

Magnetic mount

2059193	LGD24 PP FM Legend Solaris Series lightbar, 616 mm, amber-amber, magnetic mount, cigarette plug, bitension, R65 class 1 approval.
2059154	LGD24 BB FM Legend Solaris Series lightbar, 616 mm, blue-blue, magnetic mount, cigarette plug, bitension R65 class 1 and class 2 approval.
2059191	LGD24 RR FM Legend Solaris Series lightbar, 616 mm, red-red, magnetic mount, cigarette plug, bitension R65 class 1 and class 2 approval.
2059195	LGD24 RB FM Legend Solaris Series lightbar, 616 mm, red-blue, magnetic mount, cigarette plug, bitension.
2059197	LGD24 RP FM Legend Solaris Series lightbar, 616 mm, red-amber, magnetic mount, cigarette plug, bitension.
2059199	LGD24 BP FM Legend Solaris Series lightbar, 616 mm, blue-amber, magnetic mount, cigarette plug, bitension.

 $^{^{\}ast}$ Maximum speed for this model on the roof of the vehicle 200 km/h

Permanent mount

2059194	LGD24 PP FP Legend Solaris Series lightbar, 616 mm, amber-amber, wiring harness, permanent mount, bitension, R65 class 1 approval.
2059155	LGD24 BB FP Legend Solaris Series lightbar, 616 mm, blue-blue, wiring harness, permanent mount, bitension, R65 class 1 and class 2 approval.
2059192	LGD24 RR FP Legend Solaris Series lightbar, 616 mm, red-red, wiring harness, permanent mount, bitension R65 class 1 and class 2 approval.
2059196	LGD24 RB FP Legend Solaris Series lightbar, 616 mm, red-blue, wiring harness, permanent mount, bitension.
2059198	LGD24 RP FP Legend Solaris Series lightbar, 616 mm, red-amber, wiring harness, permanent mount, bitension.
2059200	LGD24 BP FP Legend Solaris Series lightbar, 616 mm, blue-amber, wiring harness, permanent mount, bitension.



Road Safety Arrow Foldable LED panel

Federal Signal Vama presents Road Safety Arrow, a foldable LEDs panel, high-tech, great lighting and designed to provide big visibility, even in fast roads, with vehicles getting closer at a high speed.

Due to its excellent LED light lighting, Road Safety Arrow range has been designed both to help to control traffic when the emergency vehicle is parked, and also when the situation requires to alert and manage traffic from long distances.

- EASY INSTALLATION

All models have a roof standard connector and CANBUS technology, which minimizes vehicle installation.

- FAST PANEL OPENING AND CLOSING SYSTEM

Fast opening/closing system, lasting just 25 seconds to be completely opened / closed.

- SIGNALMASTER

When approaching at operation or at emergency zone, a Signalmaster function reinforces security around perimeter vehicle, adding an excellent light coverage to the LED panel.

- ALERT SOUND SYSTEM WHEN OPENING AND CLOSING THE PANEL

To alert the worker from any panel movement, avoiding risks and increasing security.

- VEHICLE BATTERY CONTROL SYSTEM

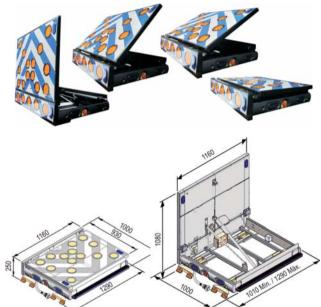
It exists 3 battery states. In the last state, a short whistling sound is emitted every 30 seconds, to warn about the low battery level available.

- EMERGENCY SYSTEM TO OPEN/CLOSE THE PANEL

It incorporates 2 emergency opening / closing buttons, in case the panel should be suddenly interrupted. If necessary it also provides a manual opening system.

- MODERN AND ERGONOMIC DESIGN

Its high quality workmanship and appearance, together with the simetric lights and Microled Advance arrangement, makes Road Safety Road have an attractive design and assures that can be seen efficiently both during the day and at night.



Road Safety Arrow dimensions in mm.

- EXCEPTIONAL LIGHTING

As Road Safety Arrow is compound of 19 lights made of 21 LED lights + 10 Microled Advance along the panel, is one of the most illuminated arrow warning systems that currently exists in the market, clearly magnifying the vehicle's presence (up to 3 Km distance), and therefore, increases security and reduces risk.

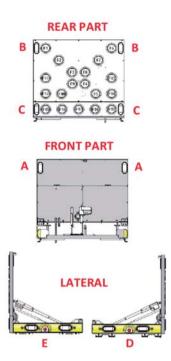
12V
-20°C to 50°C
8.7 Amp. / 5.7 AMp.
7.5 Amp
Blue or amber
Amber
white - red, white - blue or red - yellow
25 seg.
25 seg.
64 kg without brackets 77,2 Kg with brackets





ROAD SAFETY ARROW PRESELECTED MODELS:

	INTEGRATED IN ROAD SAFETY ARROW				OPTIONAL		
ROAD SAFETY	FOLDABLE PANEL			PANEL BASE		PANEL	PANEL BASE
ARROW references:	Right and left arrow, cross	2 vertical Microleds in front part (A)	2 vertical Microleds in rear part (B)	2 vertical Microleds in rear part (C)	4 horizontal Microleds in lateral part (D)	Reflective stripes in rear part	LED Solaris 11SL CB Signalmaster in front part
2025489-02							
2025489-02-SM							
2025489-01							
2025489-01-SM							
2025489BW-02						00	
2025489BW-02-SM						00	
2025489BW-01						00	
2025489BW-01-SM						00	
2025489RW-02							
2025489RW-02-SM							
2025489RW-01							
2025489RW-01-SM							
2025489RY-01-SM							



REF. MO	OD.	DESCRIPTION
		Preselected Models
2025489-02		RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights.
2025489-02-SM		RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With 11 LEDs CANBUS Signalmaster.
2025489-01		RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights.
2025489-01-SM		RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With 11 blue LEDs CANBUS Signalmaster.
2025489BW-02		RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With rear blue/white reflective stripes.
2025489BW-02-SN	M	RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With 11 LEDs CANBUS Signalmaster. With rear blue/white reflective stripes
2025489BW-01		RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With rear blue/white reflective stripes
2025489BW-01-SN	M	RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With 11 blue LEDs CANBUS Signalmaster. With blue/white reflective stripes
2025489RW-02		RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With rear red/white reflective stripes.
2025489RW-02-SN	M	RSA- Foldable panel with amber arrow and cross LED lights, amber front and rear directional LED lights, amber lateral directional LED lights. With 11 LEDs CANBUS Signalmaster. With rear red/white reflective stripes
2025489RW-01		RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With rear red/white reflective stripes
2025489RW-01-SN	M	RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With 11 blue LEDs CANBUS Signalmaster. With red/white reflective stripes
2025489RY-01-SM	1	RSA- Foldable panel with amber arrow and cross LED lights, blue front and rear directional LED lights, blue lateral directional LED lights. With 11 blue LEDs CANBUS Signalmaster. With red/yellow reflective stripes
		Control Head
BCT2009-SA01		BCT2000 Series control head, 9 control keys.
8216160SA01		BCT500CB Series, 13 control keys, (with public address)
		Permanent mounting kit
8234192		RSA Permanent mounting kit



IWS modules Integrated Warning System

IWS Integrated Warning System for emergency vehicles, a powerful light solution with several last generation Solaris LED modules distributed all over vehicle perimeter, providing an exceptional 360° degrees coverage around this vehicle at any emergency situation.

- SOLARIS TECHNOLOGY

Composed by modules of 3 latest-generation Solaris LEDs with parabolic reflector, high intensity and low consumption.

- COMPACT

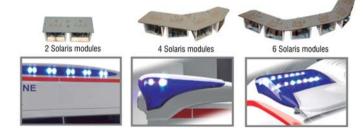
Its compact low profile design allows installation in limited spaces.

- LONG LIFE

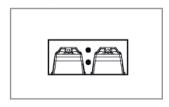
Federal Signal Vama's LED technology guarantees a long warning light life, helps to reduce maintenance costs. and increases vehicle rotation.

- EVERY NEED SOLUTIONS

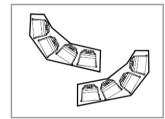
Easy to install and with a wide range of solutions: day/ night mode, cruise light, multivoltage references, blue, amber, red or white LEDs, with or without flasher, etc.



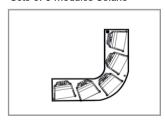
Sets of 2 modules Solaris



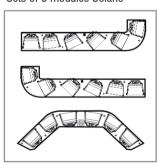
Sets of 4 modules Solaris



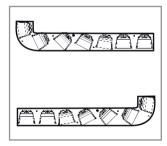
Sets of 5 modules Solaris



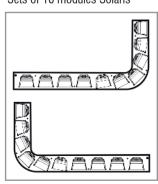
Sets of 6 modules Solaris



Sets of 7 modules Solaris



Sets of 10 modules Solaris





REF.	MOD.	DESCRIPTION	
		Sets of 2 modules Solaris	mm dimension
8299895B		Set of 2x3LED modules in blue and bitension with cruise lights and day/night functions.	132x58x40
3277073B 3299844B		6 Sets of 2x3LED modules in blue and bitension with cruise lights and day/night functions.	132x58x40
8235975W		Set of 2x3LED modules in white and 12v.	132x58x40
8299895R		Set of 2x3LED modules in red and bitension with cruise lights and day/night functions.	132x58x40
8299936A		Set of 2x3LED modules in amber and bitension with cruise lights.	132x58x40
8299936R		Set of 2x3LED modules in red and bitension with cruise lights.	132x58x40
527770011		Sets of 4 modules Solaris	TO ENGON TO
8299849B		Set of 4x3LED modules in blue and bitension (rear-right # front-left) with cruise lights and day/night functions.	159x203,40x40
8299849A		Set of 4x3LED modules in amber and bitension (rear-right # front-left) with cruise lights and day/night functions.	159x203,40x40
8299849R		Set of 4x3LED modules in red and bitension (rear-right # front-left) with cruise lights and day/night functions.	159x203,40x40
8299850B		Set of 4x3LED modules in blue and bitension (rear-left # front-right) with cruise lights and day/night functions.	159x203,40x40
8299850A		Set of 4x3LED modules in amber and bitension (rear-left # front-right) with cruise lights and day/night functions.	159x203,40x40
8299850R		Set of 4x3LED modules in red and bitension (rear-left # front-right) with cruise lights and day/night functions. Sets of 5 modules Solaris	159x203,40x40
8299816B		Set of 5x3LED modules in blue and 12v. 90° shape	206x206x40
8299935A		Set of 5x3LED modules in amber and 12v. 90° shape	206x206x40
8299935R		Set of 5x3LED modules in red and 12v. 90° shape	206x206x40
027770011		Sets of 6 modules Solaris	200//200//10
8299821B		Set of 6x3LED modules in blue and bitension (rear-left # front-right) with cruise lights and day/night functions.	390x96x40
8299822B		Set of 6x3LED modules in blue and bitension (rear-right # front-left) with cruise lights and day/night functions.	390x96x40
8299815BBIT		Set of 6x3LED modules in blue and bitension. "U" shape Sets of 7 modules Solaris	393,42x124,34x40
8299843B		Set of 7x3LED modules in blue and bitension (rear-right # front-left) with cruise lights and day/night functions.	458x96x40
8299842B		Set of 7x3LED modules in blue and bitension (rear-left # front-right) with cruise lights and day/night functions.	458x96x40
		Sets of 10 modules Solaris	
8299825B		Set of 10x3LED modules in blue and bitension (rear-right # front-left) with cruise lights and day/night functions.	489x249x40
8299826B		Set of 10x3LED modules in blue and bitension (rear-left # front-right) with cruise lights and day/night functions.	489x249x40
		Rectangular board with 8 LEDs	
8299938B		Rectangular module with 8 LEDs in blue, bitension with cruise light and day/night function.	145x80x30
8299938A		Rectangular module with 8 LEDs in amber, bitension with cruise light and day/night function.	145x80x30
8299938R		Rectangular module with 8 LEDs in red, bitension with cruise light and day/night function.	145x80x30
		Mount Accesories	
2006035	MLP-F4	External flasher for 4 lights, (8) flash patterns (flash UN R65 included), multivoltage	
2006030	MLP-F8	External flasher for 8 lights, (8) flash patterns (flash UN R65 included), multivoltage	
		(*) For A R65 regulations in these emergency lights, they must be approved together with the lenses and the type of vehicle installation.	

E LED BEACONS



LM500-D Series



LM500-D Series combines technology warning light and siren Solaris compact LEDs manufactured in ABS with fiberglass and aluminum.

Optical system composed of a microprocessor integrated electronic circuit, 15 high intensity LEDs and a parabolic reflector maximizes light intensity of LEDs and avoids the appearance of black shadows.

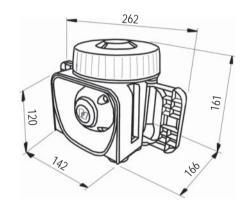
His acoustic system consisting of a 30W speaker, with programmed wail tone, with a cigarette lighter socket 3 positions.

A wire mesh filter prevents the ingress of solid particles by the broadcaster of the siren, a drainage system prevents the accumulation of water in the membrane and a rubber gasket prevents water ingress into the electronic circuitry.

LM500-D Solaris, has a magnet system with a set of 4 magnets with silicone anti-scratch protection and 4 cups.

Available in blue, amber or red LED.

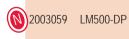




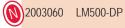
LM500-D Solaris Series dimensions (mm).

Voltage:	12 V
Light current consumption:	0.6 Amp
Siren current consumption:	3 Amp
Siren output power:	30W
Siren output voltage:	23 V
Operating temperature:	-20°C to 50°C
Weight:	2.28 kg

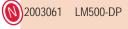
REF.	MOD.	DESCRIPTION



Solaris LED warning light blue with integrated 30W siren. Cigarette plug w/ 3 positions for light and siren control, programmable tone, 12V. UN R65 Approval T Category



Solaris LED warning light amber with integrated 30W siren. Cigarette plug w/ 3 positions for light and siren control, programmable tone, 12V. UN R65 Approval T Category



Solaris LED warning light red with integrated 30W siren. Cigarette plug w/ 3 positions for light and siren control, programmable tone, 12V. UN R65 Approval T Category

- * Maximum speed for this model on the roof of the vehicle 200 km/h.
- ** For other tones, please contact with the Sales Department.
- *** Magnetic mounting models produced for a temporary use on the roof of the vehicle.



LM800 / LP800 Series

New LP/LM800 SOLARIS warning lights, with Solaris LED reflector technology of Federal Signal Vama provide excellent results as priority lights on emergency and undercover vehicles. It can be installed either permanently (LP models) and temporally using strong magnets and suction cups (LM model). Other features are:

360° LIGHT BEAM DISTRIBUTION

Solaris technology and its special spreader lens maximizes light beam distribution through 360° around vehicle, avoiding dark spots.

- EVERY NEED SOLUTIONS

Beacon lights with 1 or 2 levels of 15 Solaris LED rings with blue, amber or red lights, permanent mount for emergency vehicles, or magnetic mount for undercover ones, etc.

- HIGH STRENGTH HOUSING

Durable shockproof polycarbonate lens with reinforced polyamide base. With IP protection IPX9K.

- SYNCRONIZABLE

LP800 Series could be synchronized with other Federal Signal Vama vehicle priority lights (LP400).



UU	LP800

	LM800	LP800
Voltage:	12-24V	12-24V
Operating temperature:	-20°C to +50°C	-20°C to +50°C
Current draw (average):	1 A (blue and red) 0.6 A (amber)	1 Amp (blue and red) 0.6 Amp (amber)
LED colours:	Blue, red and amber	Blue, red and amber
Lens colours:	Blue, amber or red	Blue, amber, red or clear
Dimensions:	140 mm (diam - dome) 164 mm (diam - base) 120 mm (height)	140 mm (diam - dome) 164 mm (diam - base) 95 mm (height)
Weight:	1200 gr (1 level) 1300 gr (2 levels)	590 g (1 level) 700 g (2 levels)

REF.	MOD.	DESCRIPTION
		Magnetic mounting (*)
2003039	TIMBUL SOLARIS	(1) level, (2) flash patterns, light amber, amber lens, magnetic mount and cigarette lighter plug, dual voltage. R65 Class 1 (flash mode) approved.
2003040	LIMBUU SOIAHS	(1) level, (2) flash patterns, blue light, blue lens, magnetic mount and cigarette lighter plug, dual voltage. R65 Class 1 (flash mode) approved.
2003041	LM800 Solaris	(1) level, (2) flash patterns, red light, red lens, magnetic mount and cigarette lighter plug, dual voltage.
2003043		(2) levels, (2) flash patterns, light amber, amber lens, day / night, magnetic mount and cigarette lighter plug, dual voltage. R65 Class 2 (flash mode) approved.
2003044		(2) levels, (2) flash patterns, blue light, blue lens, day / night, magnetic mounting and cigarette lighter plug, dual voltage. R65 Class 2 (flash mode) approved.
2003042	LM800 Solaris	(2) levels, (2) flash patterns, red light, red lens, magnetic mount and cigarette lighter plug, dual voltage. (*) Maximum speed for magnetic mount model on the roof of the vehicle to 200km / h. (**) Magnetic mounting models produced for a temporary use on the roof of the vehicle.
		Permanent mount
2003034	LP800 Solaris	(1) level, (8) flash patterns, light amber, amber lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 1 (flash mode) approved.
2003026	I PXIIII Shiaric	(1) level, (8) flash patterns, blue light, blue lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 1 (flash mode) approved.
2003035	LP800 Solaris	(1) level, (8) flash patterns, red light, red lens, day / night and cruise light, permanent mount, dual voltage.
2003036		(2) levels, (8) flash patterns, light amber, amber lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 2 (flash mode) approved.
2003038	LP800 Solaris	(2) levels, blue light-amber, clear lens, permanent mount, dual voltage. R65 Class 1 (flash mode) approved.
2003027	LP800 Solaris	(2) levels, (8) flash patterns, blue light, blue lens, day / night and cruise light, permanent mount, dual voltage. R65 Class 2 (flash mode) and Class 1 (rotative mode) approved.
2003037	LP800 Solaris	(2) levels, (8) flash patterns, red light, red lens, day / night and cruise light, permanent mount, dual voltage.
		Accesory
8232795		DIN base for LP800



LM400 / LP400 Series

New low profile LED beacons, which feature high luminosity, compact and aerodynamic design.

The Solaris Technology is formed by a high-efficiency PC board with integrated microprocessor, 15 high-luminosity LED diodes of the latest generation, integrated on the PC board and a parabolic reflector that maximises LEDs luminosity.

The LM400 Solaris model features a magnetic mounting kit with 2 magnets (with anti-scratch silicone) and 2 suction cups. It includes a cigarette lighter plug for easy power source connection.

This LED beacon is ideal for undercover police vehicles.

The LP400 Solaris is fitted out with a permanent mount and a rubber gasket improve for perfect adaptation to the roof.

The LP400 enables to connect two lights synchronized.

Available colours in blue, red, amber and green.





LP400

	LM400	LP400
Voltage:	12V or 10-30V	12V or 10-30V
Operating temperature:	-20°C to +50°C	-20°C to +50°C
Current draw (average) in rotator mode:	1 Amp (blue, red and green) 0.6 Amp (amber)	1 Amp (blue, red and green) 0.6 Amp (amber)
Current draw (average) in flashing mode:	1 A (blue, red and green) 0.6 A (amber)	1 A (blue and red) 0.6 A (amber)
Light technology:	Solaris	Solaris
LED colours:	Blue, red, amber, green	Blue, red and amber
Lens colours:	Blue or clear	Blue, clear or red
Dimensions:	140 mm (diam - dome) 147 mm (diam - base) 80 mm (height)	140 mm (diam - dome) 147 mm (diam - base) 60 mm (height)
Weight:	616 g	395 g

REF.	MOD.	DESCRIPTION
		Magnetic mounting:
2002389	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 12V, R-65 approved.
2002392	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs latest generation, high luminosity, amber LEDs, clear lens, magnetic mounting and cigarette lighter plug, 12V, R-65 approved.
2002391	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, red LEDs, clear lens, magnetic mounting and cigarette lighter plug, 12V, R-65 approved.
2002401	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, red LEDs, red lens, magnetic mounting and cigarette lighter plug, 12V.
2002397	LM400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, green LEDs, clear lens, magnetic mounting and cigarette lighter plug, 12V.
2003017	LM400SL	LED beacon, (2) flash pattern (rotator/flash), (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R-65 approved.
2003018	LM400SL	LED beacon, (2) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, amber LEDs, amber lens, magnetic mountingand cigarette lighter plug, 10-30V, R-65 approved.
2003020	LM400SL	LED beacon, (2) levels of light intensity (day/night), (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R65 class 2 approved.
2003053	LM400SL	LED beacon, (8) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting, 10-30V, R-65 approved.
2003024	LM401SL	LED beacon, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, magnetic mounting and cigarette lighter plug, 10-30V, R65 approved, with selector for 360° or 180°. * Maximum speed for magnetic mount model on the roof of the vehicle to 200km / h. ** Magnetic mounting models produced for a temporary use on the roof of the vehicle. Permanent mount:
2002390	LP400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue LEDs, permanent mount, 12V, R-65 approved.
2002393	LP400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, amber LEDs, clear lens, permanent mount, 12V, R-65 approved.
2002394	LP400SL	LED beacon, (1) flash pattern, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, red LEDs, clear lens, permanent mount, 12V, R-65 approved.
2003016	LP400SL	LED beacon, (8) flash patterns, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, blue LEDs, blue lens, permanent mount, 10-30V, R-65 approved.
2003019	LP400SL	LED beacon, (8) flash pattern and rotating effect, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, amber LEDs, amber lens, permanent mount, 10-30V, R-65 approved.
2003029	LP400SL	LED beacon, (2) levels of light intensity (day/night), (1) parabolic reflector with 15 LEDs, latest generation, high luminosity, blue LEDs, permanent mount, 10-30V, R65 class 2 approved.
2003030	LP400SL	LED beacon, (8) flash patterns, (1) parabolic reflector with 15 LEDs, latest generation, high luminosity and cruise light, red LEDs, red lens, permanent mount, 10-30V, R-65 approved.

TRIDENT II Series

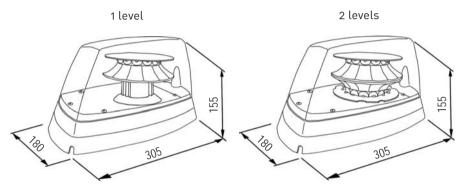


Federal Signal Vama presents the new **Trident II Solaris** beacon family including high-performance, durable also a quick & easy installation beacons for effective hazard warning and search lights.

The Trident II Solaris models are suitable for priority warning, or they can be combined with lightbars to increase the emergency lighting efficiency. The lens is manufactured in durable shockproof polycarbonate and the base is made from reinforced polyamide.

The Trident II Solaris family consists of Solaris LED and search lights.

The Solaris technology means born under the ultimate influence of sun. Solaris provides an exceptional light beam with superior off-axis warning and eliminates any dark spots.



Trident II Solaris dimensions (mm).



Voltage:	10-30 V
Operating temperature:	-20°C to 50°C
Average consumption:	Blue or red with 1 level 1 Amp (12V) Amber with 1 level: 0.6 Amp
Leds colours:	Blue, amber, red
Lenses colours:	Blue, amber, red
Dimensiones:	180 x 305 x 155 mm
Weight:	1100 g (2 levels)

REF.	MOD.	DESCRIPTION
		Trident II Solaris
2010476	TRIDENT II SL	(1) level, 15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, blue LEDs, permanent mount, multivoltage. R65 Approved
2010475	TRIDENT II SL	(1) level, 15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, amber LEDs, permanent mount, multivoltage.
2010474	TRIDENT II SL	(1) level, 15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, red LEDs, permanent mount, multivoltage.
2010499	TRIDENT II SL	(2) level, 15+15 high-intensity LEDs with parabolic reflector, (2) levels of light intensity (day/night) and cruise light, blue LEDs, permanent mount, multivoltage. R65 Approved Class 2
2010501	TRIDENT II SL	(2) level, 15+15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, amber LEDs, permanent mount, multivoltage.
2010500	TRIDENT II SL	(2) level, 15+15 high-intensity LEDs with parabolic reflector, high intensity and cruise light, red LEDs, permanent mount, multivoltage.
		* Base mouting kit for Trident II must ordered (see accessories).
		Trident II Search Light
2010538	TRIDENT II FB	55W search light, home position feature, permanent mount, 12V (remote control head must be ordered separately)
2010600	TRIDENT-FB LEDS	S TRIDENT II LED search light, permanent mount, 12V (remote control head must be ordered separately)
		* Base mouting kit for Trident II Adaptation must be requested (see accessories)
8216151	MC-TRIDENT II FB	Remote control head with spiral cable, 12V

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2010546 Base mouting kit for Trident II

STROBE BEACONS

LE106 Series

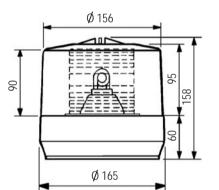
This series stands out for its high-efficiency strobe warning lights with Xenon lamps and bivoltage power supplies with a flash frequency of 120 fpm.

The beacon has a double lens system for light dispersion, colour and protection. The inner Fresnel lens distributes the light. The outer lens in different colours protects the unit and serves as waterproof cover.

The **LE106 series** consists of the following models:

- LE106DCH: Strobe beacon with lamp failure detection, low intensity, synchronised function option, optional cruise light and permanent mount.
- LE106CH/MAG: Strobe beacon with magnetic mount, suction pads and cigarette plug.
- LE106HE: Best value strobe beacon with permanent mount.

It is possible to install these beacons either on surface or on a DIN tube with connector.



LE106 Series dimensions (mm).



BD-106 Base adapter



M-106 Adapter base joint, slopy surfaces (angles up to 4°).



Voltage:	Bitension (12 / 24 V)
Average consumption:	12V: 2.3 Amp 24V: 1.4 Amp
Strobe lamp:	35 W
Dimensions:	165 (diameter) x 158 mm
Weight:	800 g



AD-015 Adapter base joint, slopy surfaces (angles up to 4°).



JB-015 Adapter base joint, curved surfaces.

REF.	MOD.	DESCRIPTION
2002349	LE-106HE	Strobe beacon, double lens, permanent mount, blue, bitension. UN R65 approved
2002350	LE-106HE	Strobe beacon, double lens, permanent mount, amber, bitension. UN R65 approved
2002388	LE-106HE	Strobe beacon, double lens, permanent mount, red, bitension
2002314	LE-106DCH	Strobe beacon, double lens, 15J, failure detection, synchro, w/ power supply, permanent mount, blue, bitension. UN R65 approved
2002319	LE-106DCH	Strobe beacon, double lens, 15J, failure detection, synchro, w/ power supply, permanent mount, amber, bitension. UN R65 approved
2002312	LE-106CH	Strobe beacon, double lens, 15J, w/ power supply, permanent mount, blue, bitension. UN R65 approved
2002311	LE-106CH	Strobe beacon, double lens, 15J, w/ power supply, permanent mount, amber, bitension. UN R65 approved
2002337	LE-106CH/MA	G Strobe beacon, double lens, 15J, w/ power supply, magnetic mount, blue, bitension. UN R65 approved
2002338	LE-106CH/MA	G Strobe beacon, double lens, 15J, w/ power supply, magnetic mount, red, bitension

Mount Accesories

8232386	BD-106	DIN 14620 Mount kit, LE-106
9133996	AI-106	Adaptor ring for roof inclination, LE-106DCH
8232387	BD-015	Base adapter, DIN pipe mount ISO4148, LR-015 and LE-106HE
9133980	JB-015	Adapter base joint for LR-015 and LE-106HE
9133981	M-106	Adapter base joint for LR-015 and LE-106HE on slopy surfaces (angles up to 4°)
9133997	AD-015	Adapter base joint for LR-015 and LE-106HE on slopy surfaces (angles up to 4°)
9133924	M-106	Adapter base joint for LE-106DCH

HALOGEN BEACONS



LR015 Series

Rotating beacon with silent belt-driven transmission. The carefully developed design means that the vibrations caused by the motor are isolated, enabling the low noise level of the **LR015** to be attained. A round rubber joint is assembled between the base and the vehicle for ensuring the correct adaptation of the unit with the curves in the vehicle.

It is possible to install this beacon either on surface or on a DIN tube with connector.

BD-015 Base adapter



Voltage:	12 or 24 V
Halogen lamp:	H1 of 55 W (12 V) our 70 W (24 V)
Average consumption:	4.6 Amp (12 V), 2.3 Amp (24 V)
Dimensions:	O 165 x 153 mm
Weight:	900 g



M-106 Adapter base joint, slopy surfaces (angles up to 4°).



AD-015 Adapter base joint, slopy surfaces (angles up to 4°).



JB-015 Adapter base joint, curved surfaces.

REF.	MOD.	DESCRIPTION
2001319	LR-015	150 FPM Belt-driven rotator beacon, 150mm, 55W halogen lamp, permanent mount, blue, 12V. UN R65 approved
2001321	LR-015	150 FPM Belt-driven rotator beacon, 150mm, 70W halogen lamp, permanent mount, blue, 24V. UN R65 approved
2001318	LR-015	150 RPM Belt-driven rotator beacon, 150mm, 55W halogen lamp, permanent mount, amber, 12V. UN R65 approved
2001320	LR-015	150 FPM Belt-driven rotator beacon, 150mm, 70W halogen lamp, permanent mount, amber, 24V. UN R65 approved
		Mount Accesories
8232387	BD-015	Base adapter, DIN pipe mount ISO4148, LR-015 and LE-106HE
9133980	JB-015	Adapter base ring for LR-015 and LE-106HE on slopy surfaces (angles up to 4°)
9133981	M-106	Adapter base joint for LR-015 and LE-106HE on slopy surfaces (angles up to 4°)
9133997	AD-015	Adapter base joint for LR-015 and LE-106HE



SUPPLEMENTAL WARNING LIGHTS

Directional LEDs lights	38
Vehicle headlight mount	49
Directional warning lights	51
► LED signs	53





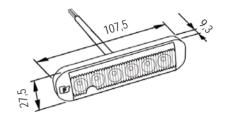
NANOLED Series

Federal Signal Vama introduces the new **Nanoled series**, the new and revolutionary ultra compact warning lights comprising of 6 LEDs. Thanks to its small size, light weight, easy installation and great light intensity, the Nanoled series break with standard products existing in the market, revealing a versatile installation and increasing security in emergency situations.

Nanoled series incorporate 6 multivoltage LED lights (10-30V), providing higher light intensity and improving energy efficiency. Its LED lights assure a long operational life, reducing maintenance costs and increasing vehicle's life.

Its range includes single colour and dual colour lights, both available with a variety of flash patterns, to correctly satisfy the different market needs.





Nanoled dimensions in mm.

- EXTREMELY COMPACT

Especially designed to be lighter and more compact than ever.

- THE HIGHEST INTENSITY

The 6 LED lights included in the Nanoled series improve energy efficiency and light intensity, providing more security in vehicles when there is an emergency situation.

- SINGLE COLOUR OR DUAL COLOUR LIGHTS

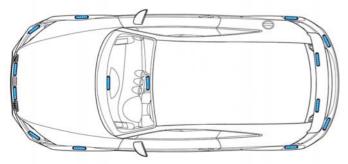
Its range includes single colour (same colour for all 6 LEDs) or dual colour lights (3 LEDs in each colour).

- LONG OPERATIONAL LIFE

Federal Signal Vama's LED technology guarantees a long operational life for this supplemental warning light, reducing maintenance costs and vehicle's life.

- EASY AND VERSATILE INSTALLATION

Thanks to its reduced dimensions, weight and mounting accessories availability, its installation is very easy.



Several installation possibilities

- SOLUTION FOR ANY MARKET NEEDS

As a result of having several light colours and due to its versatility, Nanoled series lights can be integrated in the grill, inside or outside the vehicle, in the trunk or in the vehicle's rear part.

- WATER PROTECTION

Follow protection certification IPX9K IPX6.

- CONNECTION SIMPLICITY

Nanoled's installation only requires one cable and its installation is made from vehicle's outside part.

- SYNCHRONIZABLE

Nanoled series allows simultaneous or alternative synchronization up to 12 lights.

Voltage:	Multivoltaje (10-30V).
Number of LEDs:	6 (single colour or dual colour).
Consumption 12V:	Flash pattern: 0.75 Amp.
Consumption 24V:	Flash pattern: 0.45 Amp.
Flash pattern (single colour):	7
Flash pattern (dual colour):	16
Operating temperature:	-40 to 80°C.
Dimensions (with bezel):	107,5 x 27,5 x 9,3mm.
Dimensions (without bezel):	104 x 24 x 9,3 mm.
Weight:	42 gr.



NANOLED Series

REF.	MOD.	
2010718	Nanoled	Nanoled, LED directional light, amber/amber, clear lens, w/o flasher, multivoltage 10-30V. UN R65 class 1 approved.
2010709	Nanoled	Nanoled, LED directional light, amber/amber, clear lens, w/o flasher, multivoltage 10-30V. UN R65 class 2approved.
2010712	Nanoled	Nanoled, LED directional light, white/amber, clear lens, w/o flasher, multivoltage 10-30V.
2010710	Nanoled	Nanoled, LED directional light, blue/amber, clear lens, w/o flasher, multivoltage 10-30V.
2010705	Nanoled	Nanoled, LED directional light, blue /blue, clear lens, w/o flasher, multivoltage 10-30V. UN R65 class 1 approved.
2010707	Nanoled	Nanoled, LED directional light, blue /blue, clear lens, w/o flasher, multivoltage 10-30V. UN R65 class 2 approved.
2010713	Nanoled	Nanoled, LED directional light, blue/white, clear lens, w/o flasher, multivoltage 10-30V.
2010708	Nanoled	Nanoled, LED directional light, blue/red, clear lens, w/o flasher, multivoltage 10-30V.
2010717	Nanoled	Nanoled, LED directional light, red/red, clear lens, w/o flasher, multivoltage 10-30V. UN R65 class 1 approved.
2010711	Nanoled	Nanoled, LED directional light, red/red, clear lens, w/o flasher, multivoltage 10-30V. UN R65 class 2 approved.
2010723	Nanoled	Nanoled, LED directional light, amber/red, clear lens, w/o flasher, multivoltage 10-30V.
2010714	Nanoled	Nanoled, LED directional light, red/white, clear lens, w/o flasher, multivoltage 10-30V.
2010706	Nanoled	Nanoled, LED directional light, white/white, clear lens, w/o flasher, multivoltage 10-30V.
		Area lighting Nanoled
2010727	Nanoled	Nanoled, directional area LED light white-white/clear lens, no flasher, multivoltage
		Mount Accesories
2010721	Nanoled	Cromed Bezel (optional)
8232851	Nanoled	Simple "L" mounting accessory
8232852	Nanoled	Double "L" horizontal mounting accessory
8232853	Nanoled	Double "L" vertical mounting accessory
8232854	Nanoled	Swivelling mounting module accessory
8232863	Nanoled	Grille support for VW Crafter
8232864	Nanoled	Grille support for Renault Master
8232865	Nanoled	Right Grille support for Sprinter
8232866	Nanoled	Left Grille support for Mercedes Sprinter
8232868	Nanoled	Grille support for Mercedes Vito
8232870	Nanoled	3 Racks grille support for VW T6



(*) All models include a black bezel.



Nanoled lights installed in vehicle

MICROLED PLUS Series

MicroLed Plus is an ultra-compact high intensity LED light inspired on MicroLed Sputnik. Its new design incorporates the latest technological advances and provides improved high-luminosity, high dissipation capacity and watertightness. Jointed with the external flasher MLP-F4 MicroLED Plus complies with the European Regulation R65, category X.

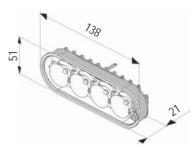
The MicroLed Plus, formed by 4 3W Sputnik LEDs is a steady burn light, which can be connected to different FSV products, like controllers ICS, siren-amplifiers, Intelli flashers, FA3 flashers, etc. Its small size makes this light the flattest on the market, facilitating the installation on any surfaces. The external flasher MLP offers connection up to 4 or 8 MicroLeds Plus, 8 flash patterns and 2 channels. This flasher unit could be controlled by external switches.

The MicroLed Plus and the MLP-4F/MLP-8F flasher are multivoltage models, which provide the greater versatility.

2 mounting kits and different colour versions are available.







MicroLed Plus dimensions (mm).

Voltage:	Multivoltage (10-30 V)
Average consumption (Flashing mode):	1.6 Amp (12 V) 0.8 Amp (24 V)
Dimensions:	138 x 51 x 21 mm

REF.	MOD.	DESCRIPTION
		Spreader lens models
2010419	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, blue light, blue lens, w/o flasher, cruise light, multivoltage. UN R65 approved
2010420	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, blue light, clear lens, w/o flasher, cruise light, multivoltage. UN R65 approved
2010421	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, white light, amber lens, w/o flasher, cruise light, multivoltage. UN R65 approved
2010422	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, amber light, clear lens, w/o flasher, cruise light, multivoltage
2010423	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, red light, red lens, w/o flasher, cruise light, multivoltage
2010424	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, red light, clear lens, w/o flasher, cruise light, multivoltage
2010520	MicroLed Plus	MicroLed Plus interior or scene light with two light intensity (high and low), white light, clear spreader lens, multivoltage
		Smooth lens models
2010427	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, blue light, blue lens, w/o flasher, cruise light, multivoltage
2010428	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, blue light, clear lens, w/o flasher, cruise light, multivoltage
2010425	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, white light, amber lens, w/o flasher, cruise light, multivoltage
2010426	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, amber light, clear lens, w/o flasher, cruise light, multivoltage
2010429	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, red light, red lens, w/o flasher, cruise light, multivoltage
2010430	MicroLed Plus	MicroLed Plus, Sputnik LED directional light, red light, clear lens, w/o flasher, cruise light, multivoltage
2010521	MicroLed Plus	MicroLed Plus interior or scene light, white light, clear smooth lens, multivoltage
		MicroLED Plus-V - vertical mount
2010433	MicroLed Plus-V	MicroLed Plus-V, Sputnik LED directional light, blue light, blue lens, w/o flasher, cruise light, multivoltage. UN R65 approved
2010434	MicroLed Plus-V	MicroLed Plus-V, Sputnik LED directional light, blue light, clear lens, w/o flasher, cruise light, multivoltage. UN R65 approved
2010431	MicroLed Plus-V	MicroLed Plus-V, Sputnik LED directional light, white light, amber lens, w/o flasher, cruise light, multivoltage. UN R65 approved
2010432	MicroLed Plus-V	MicroLed Plus-V, Sputnik LED directional light, amber light, clear lens, w/o flasher, cruise light, multivoltage
2010435	MicroLed Plus-V	MicroLed Plus-V, Sputnik LED directional light, red light, red lens, w/o flasher, cruise light, multivoltage
2010436	MicroLed Plus-V	MicroLed Plus-V, Sputnik LED directional light, red light, clear lens, w/o flasher, cruise light, multivoltage



MICROLED PLUS Series

DESCRIPTION REF. MOD. **Installation Accesories** 2006035 MLP-F4 External flasher for MicroLed Plus, (8) flash patterns (UN R65 flash included), multivoltage External flasher for (8) lights, (8) flash patterns (UN R65 flash included), multivoltage 2006030 MLP-F8 Mount Accesories (Choose one kit when order) MLP-SUP Surface mount kit, (1) joint, MicroLed Plus 2010437 MLP-EMP Flush mount kit, (1) joint, MicroLed Plus 2010438 81522023 Set square, 4 Microled Plus, Seat Altea XL 81522024 Fixation platen, 1 Microled Plus Set square, 2 Microled Plus, Renault Megane V.09 81522241 81522242 Set square, 4 Microled Plus, Renault Megane Scenic V.09 81522285 Set square, 4 Microled Plus, Renault Expert V.09



81522023 Set square, 4 Microled Plus, Seat Altea XL



81522241 Set square, 2 Microled Plus, Renault Megane V.09

81522024 Fixation platen, 1 Microled Plus



81522242 Set square, 4 Microled Plus, Renault Megane Scenic V.09



81522285 Set square, 4 Microled Plus, Renault Expert V.09







MICROLED PLUS R65 CLASE 2 Series

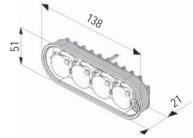
Comply the European regulation R65, "X" category and class 2 (day/night selection).

See specifications MicroLed Plus.

Voltage:	Multivoltage (10-30 V)
Average consumption (Flashing mode):	1.6 Amp (12 V) 0.8 Amp (24 V)
Dimensions:	138 x 51 x 21 mm

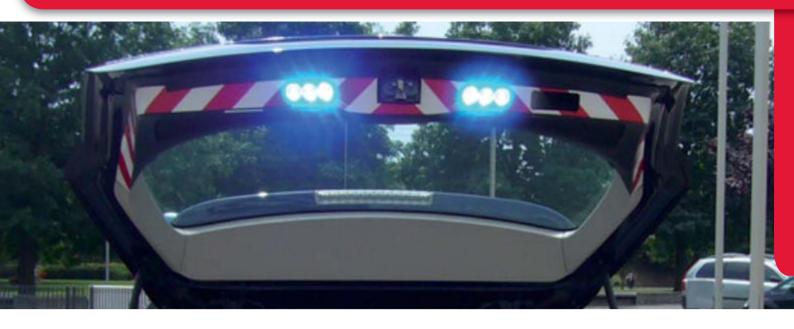






MicroLed Plus R65 clase 2 dimensions (mm).

REF.	MOD.	DESCRIPTION
		Horizontal Installation
2010511	MicroLed Plus CL2	(2) levels of light intensity (day/night), cruise light, blue light, blue spreader lens, UN R65 approved class 2, multivoltage
2010512	MicroLed Plus CL2	(2) levels of light intensity (day/night), cruise light, blue light, clear spreader lens, UN R65 approved class 2, multivoltage
		Flasher R65 Class 2
2006031	MLP-F8 CL2	Flasher, 8 MicroLed Plus C2 lights, multivoltage
		Mount Accesories
2010437	MLP-SUP	Surface mount kit, (1) joint, MicroLed Plus
2010438	MLP-EMP	Flush mount kit, (1) joint, MicroLed Plus
81522023	}	Set square, 4 Microled Plus, Seat Altea XL
81522024		Fixation platen, 1 Microled Plus
81522241		Set square, 2 Microled Plus, Renault Megane V.09
81522242	2	Set square, 4 Microled Plus, Renault Megane Scenic V.09
81522285	j	Set square, 4 Microled Plus, Renault Expert V.09



MICROLED Advance Series

Microled Advance supplemental warning LED light offers additional security on emergency situations, and could be installed in almost every place of all emergency vehicle types: rear deck, rearview mirrors, grilles, bumpers, etc. Its main features are:



- HIGH INTENSITY

An ultimate technology LED lights and lenses provide efficient distribution of warning power. Microled Advance offers maximum optical performance with minimal amperage draw.

- LONG LIFE

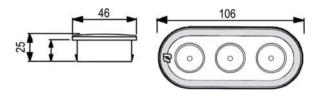
Federal Signal Vama's LED technology guarantees a long warning light life, helps to reduce maintenance costs, and increases vehicle rotation.

- EVERY NEED SOLUTIONS

Easy to install and with a wide range of solutions: multivoltage references, blue, amber, red or clear lenses, with or without flasher, etc.

- WATERPROOF HOUSING

High density silicone rear sealed, avoiding dust and / or water penetration inside the circuit board. IP protection grade IP9K.



MicroLed Advance dimensions (mm).

	W/0 FLASHER	WITH FLASHER	R65
Voltage:	Multivoltage (10-30V)	Multivoltage (10-30V)	Multivoltage (10-30V)
Number of LEDs:	3 x 2 W	3 x 2 W	3 x 2 W
Average consumption:	0.2 Amp (Ref. 2010589, 0.4A)	0.4 Amp	0.4 Amp
Average consumption (flashing mode):	0.2 Amp	0.4 Amp (blue, white and green) 0.2 Amp (amber, red)	0.4 Amp (blue, amber) 0.3 Amp (red)
Flash patterns:	8 or steady burn	8 + steady burn	R65 + 7 + steady burn
Weight:	80 g	80 g	80 g
Dimensions:	106 x 46 x 25 mm	106 x 46 x 25 mm	106 x 46 x 25 mm



MICROLED Advance Series

REF.	MOD.	DESCRIPTION
		Spread R65 lens
2010595	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, white light, amber spread lens, multivoltage
	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, blue spread lens, multivoltage
2010597	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear spread lens, multivoltage
2010598	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear spread lens, multivoltage
2010599	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, red spread lens, multivoltage
		Smooth long w/o flocker
2010504	MicroLed Advance	Smooth lens w/o flasher Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, clear smooth lens, w/o flasher, multivoltage
		Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, clear smooth lens, w/o flasher, multivoltage
2010589	MicroLed Advance	multivoltage*
2010585	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear smooth lens, w/o flasher, multivoltage
2010586	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear smooth lens, w/o flasher, multivoltage
2010587	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, green light, clear smooth lens, w/o flasher, multivoltage
2010636	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, white light, clear smooth lens, w/o flasher, multivoltage
		* An external flasher is needed
		Smooth and fresnel V15 lens w/ flasher
2010573	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, amber smooth lens, w/flaser, multivoltage
	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, amber Fresnel V15 lens, w/flasher, multivoltage
2010574	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, clear smooth lens, w/flasher, multivoltage
	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, amber light, clear Fresnel V15 lens, w/flasher,
		multivoltage
20105/0	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, blue smooth lens, w/flasher, multivoltage
2010578	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, blue Fresnel V15 lens, w/flasher, multivoltage
2010571	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear smoot lens, w/flasher, multivoltage
2010579	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, blue light, clear Fresnel V15 lens, w/flasher, multivoltage
2010576	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear smooth lens, w/flasher, multivoltage
2010583	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, clear Fresnel V15 lens, w/flasher, multivoltage
2010575	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, red smooth lens, w/flasher, multivoltage
2010582	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, red light, red Fresnel V15 lens, w/flasher, multivoltage
2010577	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, green light, clear smooth lens, w/flasher, mutivoltage
2010572	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, white light, clear smooth lens, w/flasher, multivoltage
2010590	MicroLed Advance	Microled Advance LED directional light, master/slave, 3 LEDs of 2W, white light, clear Fresnel V15 lens, w/flasher, multivoltage
		Installation Accesories
2006035	MLP-F4	External flasher for (4) lights, (8) flash patterns (UN R65 flash included), multivoltage
2006030		External flasher for (8) lights, (8) flash patterns (UN R65 flash included), multivoltage
		Mount Accesories*
2010230		Surface mount kit, (2) joints, (surface mount)
2010231		Flush mount kit, (2) joints, (flush mount)
2010279		L Bracket for permanent mounting
81523056		Fixation platen, 1 Microled Advance**
		* Choose a mounting kit when ordering.
		** Should be folded by the installer.

IMPAXX Series MPAX.

The Impaxx LED lights Series provide, with the Solaris exclusive technology from Federal Signal Vama, an excellent luminosity on emergency situations, intersections, etc. It has several flash patterns synchronized with other Impaxx lights. Furthermore, Impaxx Series has more advantages:

- EASY, VERSATILE INSTALLATION

Specially designed to be quickly mounted, with a minimum manipulation. Thanks to its compact dimensions, it could be installed on every part of the vehicle. All models are multivoltage (10-30 V).

- COST SAVINGS

Less installations costs. High reliability and durability provide low maintenance costs.

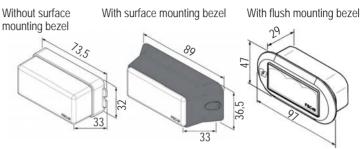
- WATERPROOF HOUSING

Resistant to weather conditions. With IP protection IP6K9K.

- LOW AMP DRAW AND LONG LIFE

Optimizes vehicle battery performance.





Impaxx dimensions (mm).

Voltage:	10-30 V
Average consumption:	0.4 Amp (12V), 0.25 Amp (24V) R65: 0.6 Amp (12V), 0.4 Amp (24V)
Flash patterns:	23
Weight:	140 g
Dimensions:	89 x 33 x 36.5 mm

REF.	MOD.	DESCRIPTION
		Spreader lens models R65 homologated*
IPX320-BH	IMPAXX	Impaxx, blue LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX322-BH	IMPAXX	Impaxx, blue LED and blue lens, with integrated flasher, multivoltage 10-30V.
IPX320-AH	IMPAXX	Impaxx, amber LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX322-AH	IMPAXX	Impaxx, amber LED and amber lens, with integrated flasher, multivoltage 10-30V.
		Spreader lens*
IPX300-A	IMPAXX	Amber LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX300-B	IMPAXX	Blue LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX300-G	IMPAXX	Green LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX300-R	IMPAXX	Red LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX300-W	IMPAXX	White LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX302-A	IMPAXX	Amber LED and amber lens, with integrated flasher, multivoltage 10-30V.
IPX302-B	IMPAXX	Blue LED and blue lens, with integrated flasher, multivoltage 10-30V.
IPX302-R	IMPAXX	Red LED and red lens, with integrated flasher, multivoltage 10-30V.
		Smooth lens*
IPX310-A	IMPAXX	Amber LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX310-B	IMPAXX	Blue LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX310-R	IMPAXX	Red LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX310-W	IMPAXX	White LED and clear lens, with integrated flasher, multivoltage 10-30V.
IPX312-A	IMPAXX	Amber LED and amber lens, with integrated flasher, multivoltage 10-30V.
IPX312-B	IMPAXX	Blue LED and blue lens, with integrated flasher, multivoltage 10-30V.
IPX312-R	IMPAXX	Red LED and red lens, with integrated flasher, multivoltage 10-30V.
		Mount Accesory
IPXM-1	IMPAXX	Chrome bezel for surface mounting.
2010653	IMPAXX	Ruber bezel for built-in mounting
81523427	IMPAXX	Mounting plate "L"
		* Mounting black bezel included on all models.

LD116 Advance Series

Federal Signal Vama presents the upgraded version of LEDs compact lights for **LD116 Advance Series**, the most modular light of our lights especially designed for emergency vehicles.

- HIGH INTENSITY

Latest generation Advance Technology LEDs, provides light output and longest lifetime.

- A SOLUTION FOR EVERY NEED

The wide range of mounting kits makes this compact light very flexible, offering solutions all over the vehicle perimeter.

- APPROVALS

According to R65 and R10 European Regulations.

- WATERPROOF HOUSING

High-density silicone rear sealed avoiding dust and/or water penetration inside the circuit board IP9K Approved.

- LONG LIFE

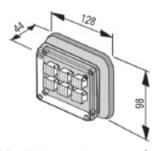
Federal Signal Vama's LED technology guarantees a long warning light life, helps to reduce maintenance costs, and increases vehicle rotation.

Operating voltage:	Multivoltage (10–30V)
Operating temperature:	-20° / +50°
Dimensions:	109x79x22,5 mm

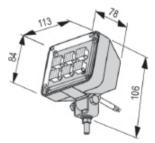








LD116 Advance dimensions (mm)
Surface mounting kit.



LD116 Advance dimensions (mm) Swivel mounting kit.

REF.	MOD.	DESCRIPTION
2010674CR	LD116 ADV	Directional Advance LED light, amber LED, amber lens, w/flasher and cruise light, multivoltage, R65 Class 1 approved.
2010673CR	LD116 ADV	Directional Advance LED light, blue LED, blue lens, w/flasher and cruise light, multivoltage, R65 Class 1 approved.
2010675CR	LD116 ADV	Directional Advance LED light, red LED, red lens, w/flasher and cruise light, multivoltage, R65 Class 1 approved.
		Accesories
2010263	LD116-SB	Surface mounting kit, black colour
2010262	LD116-SC	Surface mounting kit, chrome colour
2010264	LD116-SWB	Swivel mounting kit, black colour
		Optional Accessories
9022209		Wiring harness 3x0,75 (sold in meter, the lenght required has to mentioned in the order)
8216090	SW-521	Swith 2 positions ON-OFF with key protector

QUADRAFLARE Advance

Federal Signal Vama introduces new, large **Quadraflare Advance** LED lights, specially designed for emergency vehicles, such as ambulance and fire fighting vehicles.

- HIGH INTENSITY

An ultimate technology LED lights and lenses provide efficient distribution of warning power. Quadraflare Advance offers maximum optical performance with minimal amperage draw.

- EVERY NEED SOLUTIONS

Available in blue, amber, red, white or green lights, multivoltage, R65 approved (Class 1 and Class 2) and with or without flasher (8 flashing modes).

- SYNCRONIZED

Quadraflare Advance without flasher could be synchronized with other Federal Signal Vama vehicle products (MLP, Intelli-Flash intermittent relays, ICS2000 Series intelligent controllers.

- APPROVED

QL64MB Quadraflare

Quadraflare Advance satisfy UN R65 and UN R10 approvals from United Nations Economic Comission for Europe. (UNECE). With IP protection IPX9K.



Voltage:	Multivoltage (10 - 30 V)	
Average consumption:	1 Amp (12 V, fixed mode) 0.5 Amp (12 V, flash mode) 0.1 Amp (12 V & 24 V, cruise light mode)	
LEDs colours:	Blue, amber, red, green, white	
Lens colours:	Blue, amber, red, green, clear	
Dimensions:	Light: 167 x 38 x 107 mm Mounting kit: 211 x 48 x 132 mm	

- INCREASED SECURITY

New Negative Temperature Coefficient (NTC) regulates light intensity, evoiding heat disfunction on supplemental warning light.

REF.	MOD.	DESCRIPTION
		Quadraflare Advance WITHOUT flasher
2010617	Quadraflare Advance	Directional Advance LED light, blue LEDs, clear lens, w/o flasher, multivoltage. R65 Class 2 approved.
2010618	Quadraflare Advance	Directional Advance LED light, blue LEDs, blue lens, w/o flasher, multivoltage. R65 Class 2 approved.
2010619	Quadraflare Advance	Directional Advance LED light, amber LEDs, amber lens, w/o flasher, multivoltage. R65 Class 1 approved.
2010620	Quadraflare Advance	Directional Advance LED light, amber LEDs, clear lens, w/o flasher, multivoltage. R65 Class 1 approved.
2010623	Quadraflare Advance	Directional Advance LED light, red LEDs, red lens, w/o flasher, multi-voltage. R65 Class 2 approved.
2010624	Quadraflare Advance	Directional Advance LED light, red LEDs, clear lens, w/o flasher, multivoltage. R65 Class 2 approved.
2010461-01	Quadraflare Advance	Directional Advance LED light, white LEDs, clear lens, w/o flasher, multivoltage.
		Installation Accessories for references without flasher
2006035	MLP-F4	External flasher (4) lights, (8) flash patterns, multivoltage.
2006030	MLP-F8	External flasher (8) lights, (8) flash patterns, multivoltage.
		Quadraflare Advance WITH flasher
2010610	Quadraflare Advance	Directional Advance LED light, blue LEDs, blue lens, w/flasher, multi-voltage. R65 Class 2 approved.
2010609	Quadraflare Advance	Directional Advance LED light, blue LEDs, clear lens, w/flasher, multi-voltage. R65 Class 2 approved.
2010611	Quadraflare Advance	Directional Advance LED light, amber LEDs, amber lens, w/flasher, multi-voltage. R65 Class 1 approved.
2010612	Quadraflare Advance	Directional Advance LED light, amber LEDs, clear lens, w/flasher, multi-voltage. R65 Class 1 approved.
2010616	Quadraflare Advance	Directional Advance LED light, red LEDs, clear lens, w/flasher, multi-voltage. R65 Class 2 approved.
2010615	Quadraflare Advance	Directional Advance LED light, red LEDs, red lens, w/flasher, multi-voltage. R65 Class 2 approved.
2010607	Quadraflare Advance	Directional Advance LED light, white LEDs, clear lens, w/flasher, multi-voltage.
		Installation Accessories (Choose (1) Mounting kit when ordering)
QL64MC	Quadraflare	Surface mounting kit with chrome ring and gasket

Surface mounting kit with black ring and gasket

Motorcycle Kit LD400 / LD410

Solaris and CO400 Solaris

Federal Signal Vama presents its new LD400 and CO400 series, a priority warning LED kit for police motorcycles R-65 approved.

The LD400 Solaris consist on 2 front low profile light heads which distribute the light beam at a horizontal angel of 120 degrees. The revolutionary reflector optical design provides a powerful lighting.

The light source of the **CO400 Solaris** telescopic pole is formed by the brand-new Solaris system.

- EASY MAINTAINANCE AND INSTALLATION

There is no need for an external power supply, and all necessary electrical connections are provided.

- WATERPROOF HOUSING AND CONNECTOR

IPX9K approved for LD400 LED lights.

- LIGHTNESS AND SHOCK RESISTANT

Thanks to its polycarbonate reflector and lenses and fiberglass support.

- LOW AMP DRAW AND LONG LIFE

LED technology assures long warning light life, and helps to reduce vehicle maintenance costs.







	LD400	LD410	CO400 Solaris
Voltage:	12V	12V	12V
Average consumption in flashing mode:	blue: 0,25A amber and red: 0.25Amp	blue: 0.20Amp	blue and red: 1 Amp amber: 0.6 Amp
N° of LED diodes:	5 LEDs Solaris	4 LEDs Solaris 1 LED Solaris	Omnidirectional parabolic reflector with 15 LEDs
Weight:	220 g	220 g	1580 g (CO400) 1240 g (CO421)
Dimensions (without mounting brackets):	90 x 50 x 150 mm	90 x 50 x 150 mm	140 x 650 - 1515 mm (3-section pole) 140 x 550 - 760 mm (2-section pole)

REF.	MOD.	DESCRIPTION
		LD400 - LD410 SOLARIS Front Light with flasher integrated
2010630	LD400-D Solaris	Solaris LED directional light (right side), (5) LEDs, blue light, blue lens, cruise light, swivel mount, 12V. UN R65 approved Class 1
2010631	LD400-I Solaris	Solaris LED directional light (left side), (5) LEDs, blue light, blue lens, cruise light, swivel mount, 12V. UN R65 approved Class 1
2010644	LD400-D Solaris	Solaris LED directional light (right side), (5) LEDs, red light, red lens, cruise light, swivel mount, 12V
2010645	LD400-I Solaris	Solaris LED directional light (left side), (5) LEDs, red light, red lens, cruise light, swivel mount, 12V
2010642	LD400-D Solaris	Solaris LED directional light (right side), (5) LEDs, amber light, amber lens, cruise light, swivel mount, 12V
2010643	LD400-I Solaris	Solaris LED directional light (left side), (5) LEDs, amber light, amber lens, cruise light, swivel mount, 12V
2010632	LD410-D Solaris	UN ROS approved Class i
2010633	LD410-I Solaris	Solaris LED directional light (left side), (4) LEDs blue light and (1) LED red light "Stop Light" function, swivel mount, 12V. UN R65 approved Class 1
		CO400 SOLARIS Telescopic Mast with flasher integrated
2005388	CO400 Solaris	Omnidirectional Solaris LED head, telescopic pole mount in (3) sections, (15) LEDs, blue light, blue spreader lens, cruise light, 12V. UN R65 approved
2005389	CO400 Solaris	Omnidirectional Solaris LED head, telescopic pole mount in (3) sections, (15) LEDs, amber light, amber spreader lens, cruise light, 12V. UN R65 approved
2005390	CO400 Solaris	Omnidirectional Solaris LED head, telescopic pole mount in (3) sections, (15) LEDs, red light, red spreader lens, cruise light, 12V. UN R65 approved
2005430	CO421 Solaris	Omnidirectional Solaris LED head, telescopic pole mount in (2) sections, (15) LEDs, blue light, blue spreader lens, cruise light, 12V. UN R65 approved
		MC300 Series
4004233-01	MC300	Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light and continuous siren
4004352	MC300/A	Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light, continuous siren and power limiter
		Mount Accesories
8216098	BA-6	Kit silent blocks telescopic pole, only available for poles in 3 sections.
82441524-03	BLD400-CBLDO	Adapter wiring from LD350/LD360 to LD400/LD410
82441589	82441589	Motorbike wiring kit (LD410- CO400, SCS1000-D and control head)
82441588	82441588	Motorbike wiring kit (LD400- CO400, SCS1000-D and control head)

VEHICLE HEADLIGHT MOUNT

IN-LINE CORNER LED

The **In-Line Corner LED** feature a "plug-and-play" system for faster and easier setup.

Supported by 19 flash pattern selected by user offering synchronizing multiple units, flashing simultaneously or alternatively to produce effective warning patterns between back and front of the vehicle.

The assembly includes (2) head lights, in-line flasher, gasket and mounting kit for install.

All elements can be ordered separately to create assemblies following customers needs.



Technical specificacions

Voltage:	12/24V		
Average consuption:	1,2A at 12V // 0,7A at 24V		
Temperature	-40°C to 80°C		
LED	3W by LED (9 units each head)		
Dimensions	Head	Flasher	
Lenth		142 mm.	
Width	Base - 39 mm (diameter) Bulb - 25 mm (diameter)	25 mm.	
Height	Base & bulb - 46 mm (diameter) Base - 7mm (diameter) Bulb - 25 mm (diameter)	15 mm.	
Weight	450 grs.		

Flash Patterns

0	Random (default)	10	Double (all)
1	Single (split)	11	Quad (all)
2	Double (split)	12	Quint (all)
3	Quad (split)	13	Mega (all)
4	Quint (split)	14	Ultra (all)
5	Mega (split)	15	Single-Quad (all)
6	Ultra (split)	16	Single H/L (all)
7	Single-Quad (split)	17	Steady 2 (all)
8	Single H/L (split)	18	Steady 4 (all)
9	Single (all)		

(Split = head (1) alternate head (2); All = all LEDS on)

REF. MOD. DESCRIPTION

COMPLETE SYSTEM KITS

416200-22 CORNER LED Amber/amber, (2) LED heads with in-line flasher, gasket and mounting kit, bitension

416200-33 CORNER LED Blue/Blue, (2) LED heads with in-line flasher, gasket and mounting kit, bitension

416200-44 CORNER LED Red/Red, (2) LED heads with in-line flasher, gasket and mounting kit, bitension

416200-55 CORNER LED Clear/Clear, (2) LED heads with in-line flasher, gasket and mounting kit, bitension

* With flasher included

OPTIONS

416205	In-line flasher with cable and connectors
416201-02	Amber, (1) LED flasher head
416201-03	Blue, (1) LED flasher head
416201-04	Red, (1) LED flasher head
416201-05	Clear, (1) LED flasher head

^{*} Original vehicle lights manipulation could affect vehicle's homologation

VEHICLE HEADLIGHT MOUNT

CS1 CORNER STROBE

Xenon strobe lamps for flush mounting in vehicle optics.

The **CS1 Corner Strobes** do not interfere with onboard vehicle lights.



Voltage:	30 x 31 x 58 mm
Average consumption:	2.8 Amps (2 x CS1 by 12V) 1.7 Amps (2 x CS1 by 24V)
Lamp power:	35W

REF.	MOD.	DESCRIPTION
5001047	CS1-C	Corner Strobe, strobe tube, 18" pigtail, clear
5001072	CS1-B	Corner Strobe, strobe tube, 18" pigtail, blue
CS1-A	CS1-A	Corner Strobe, strobe tube, 18" pigtail, amber

^{* (}Combined w/ FSV Power Supply)

^{**} Original vehicle lights manipulation could affect vehicle's homologation.

DIRECTIONAL WARNING LIGHTS

SIGNALMASTER SOLARIS



Federal Signal Vama presents the new ultra-low profile **SignalMaster Solaris** directional warning light. It offers an excellent results as an emergency light, thanks to its several flash patterns with different functions (day / night effect, fast / slow, scroll) to satisfy all needs. Its main features are:



- HIGH INTENSITY

The built-in Solaris technology onto SignalMaster directional warning light has exponentially increased light intensity compared to similar products on the market.

- EVERY NEED SOLUTIONS

SignalMaster Solaris has got 4 different flash patterns (right, left, centre-out sequences and middle-out flashing mode), and day / night*, slow / fast* and scroll function with a non-stop effect on a CAN BUS version.

- ULTRA-LOW PROFILE

Its low profile gives it less aerodynamic drag with less fuel consumption and better vehicle tire grip, for an increased security. Further more, it has an attractive design without losing any functionality and it allows easier installation in any vehicle.

- WATERPROOF HOUSING

Highly prepared to fight against most adverse weather conditions, thanks to its IP protection IPX9K.

* Features available on analogical version with SMC5 multifunction controller.

Voltage:	10-30 V
Average consumption:	0.3 Amps each LED modules (12V) 10V 30V SMLED 6/8: 2.6 Amp 1.3 Amp SMLED 6/8 KS: 2.6 Amp 1.3 Amp SMLED 8/11 CB:1.8 Amp 1.3 Amp
Dimensions:	6-modules: 800 x 32 x 68 mm 8-modules: 1070 x 32 x 68 mm 8-CB modules: 800 x 32 x 68 mm 11-CB modules: 1070 x 32 x 68 mm
Weight:	6-modules: 705 g 8/11-modules: 940/995 g

SignalMaster GEN I





SignalMaster Solaris



DIRECTIONAL WARNING LIGHTS

255		DECODIONAL
REF.	MOD.	DESCRIPTION
		Analogical SignalMaster
2010560	SMLED6 SL CT	Directional lighting system, (6) Solaris LED modules, roof connector, amber, multivoltage
2010561	SMLED8 SL CT	Directional lighting system, (8) Solaris LED modules, roof connector, amber, multivoltage
		<u>Installation accesories</u>
82441451		Analogical SMLED wiring, roof connector, 5M
82441445		Analogical SMLED wiring, roof connector, 10M
2010601	SMLED6 SL CM	Directional lighting system, (6) Solaris LED modules, 15M wiring harness included, amber, multivoltage (1)
2010602	SMLED8 SL CM	Directional lighting system, (8) Solaris LED modules, 15M wiring harness included, amber, multivoltage (1) Control Heads for analogical SignalMaster
ICS2009ST-12	ICS2009	Control system with 4 more outputs fully protected against polarity reversal, overloading and short-circuits. Control head with 9 backlight keys included, 12/24V.
		KS SignalMaster
2010562	SMLED6-KS CM	Directional lighting system, (6) Solaris LED modules, KS control head, 20cm wiring harness included, waterproof connector, amber, bitension
2010563	SMLED8-KS CM	Directional lighting system, (8) Solaris LED modules, KS control head, 20cm wiring harness included, waterproof connector, amber, bitension
		<u>Installation accesories</u>
82441446		SMLED KS/CB wiring, wiring harness, 5M
82441447		SMLED KS/CB wiring, wiring harness, 10M
82441476		SMLED KS/CB wiring, wiring harness, 15M
00405/0	ON II ED / 1/0 OT	
2010568	SMLED6-KS CT	Directional lighting system, (6) Solaris LED modules, KS control head, roof connector, amber, bitension
2010569	SMLED8-KS CT	Directional lighting system, (8) Solaris LED modules, KS control head, roof connector, amber, bitension
82441453		Installation accesories SMLED KS wiring, roof connector, 10M
02441433		Siviled R3 willing, foot connection, folio
		CANBUS SignalMaster (2)
2010564	SMLED8-CB SL	Directional lighting system, (8) continuous LED mode, CAN BUS, amber, multivoltage
2010565	SMLED11-CB SL	
		<u>Installation accesories</u>
82441446		SMLED KS/CB wiring, wiring harness, 5M
82441447		SMLED KS/CB wiring, wiring harness, 10M
82441476		SMLED KS/CB wiring, wiring harness, 15M
		(1) Without waterproof connector.
		(2) CANBUS SignalMaster must be controlled with a CANBUS control head BCT2000 or BCT500CB.
		Accesory
8234188		Kit Silent Blocks SMLED SL Solaris
		NOTE: All the models must be acquired by its correspondent wiring connection (except 2010601 and 2010602 references).

LSG900 Series

The **LSG900** sign is a programmable LED sign, for up to 200 fully programmable messages. The message length is up to eight lines of ten characters. This new LED sign has a SignalMaster integrated in the lower level.

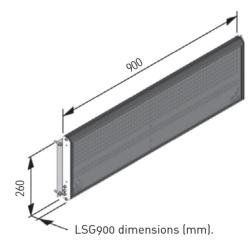
The sign is controlled through the LCD900 control head, with LCD screen and keys of silicone. It allows, through a simple menu system, select and preview the message before it appears on the LED sign.

With Smartsign Message Editor software you can edit and download 200 messages to the control head. Allows programming of letters, numbers and symbols (arrow, filled square, etc.).. It also has an extensive library of most common messages in different countries.

Silent block kit for LSG900

8234178





Voltage:	12 V
Number of programmable messages:	200
Number of lines by message:	8
Number of characters in display:	10
Character size:	125 x 85 mm
Matrix size:	21 x 15 LEDs
LED colour:	red / amber
LED:	SMD
Radiation angle:	+15°
Dimensions:	LED Sign: 900 x 260 x40 mm Control head: 200 x 60 x33 mm
Weight:	Led Sign: 4 Kg Control head: 250 gr

REF.	MOD.	DESCRIPTION
		LSG900
2025446	LSG900	LSG900 LED sign for external mounting. Vertical mounting system, 200 Programmable messages, Red LEDs and Signalmaster function.
2025486	LSG900	LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Amber LEDs.
2025519	LSG900	LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Amber LEDs and Signalmaster function.
8216136-0	1 LCD900	Control head w/ LCD back-lit screen to display messages for LCD900, 200 Programmable messages.
2025336	SSME	SmartSign Message Editor, for editing and downloading SmartSign programmable LED sign messages from PC.
		SWEDISH CHARACTERS LSG900
2025507-0	1 LSG900	LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Amber LEDs and Signalmaster function. SWEDISH CHARACTERS
2025508-0	1 LSG900	LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Amber LEDs. SWEDISH CHARACTERS
2025509-0	1 LSG900	LSG900 LED sign for external mounting. Waterproof housing. Vertical mounting system, 200 Programmable messages, Red LEDs and Signalmaster function. SWEDISH CHARACTERS
2025509-0	2 LSG900	LSG900 LED sign for external mounting. Vertical mounting system, 200 Programmable messages , Red LEDs. SWEDISH CHARACTERS
BCT3009-0	03 BCT3009-0	3 Control head w/ LCD back-lit screen to display messages for SWEDISH CHARACTERS LCD900, 200 Programmable messages.
2025473	S2ME	SmartSign Message Editor 2, for editing and downloading SmartSign programmable LED sign messages from PC.
		Accesory

SMARTSIGN

The **LSG700** sign is a foldable and programmable LED sign, with capacity for 200 totally programmable messages. The length of messages is up to eight lines with ten characters.

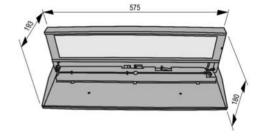
It is controlled through LCD702 control head, with LCD screen and selection keys. It allows, through a simple menu system, to select and previsualize the message before it appears in the LED sign.

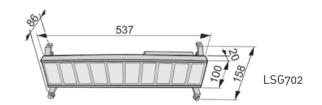
Through the SmartSign Message Editor PC software, it is easy to edit and unload the 200 messages to the control head. It allows to program letters, numbers and symbols (arrows, square, etc.). In addition, it has a wide library of the most usual messages in different countries.

Voltage:	12 V
Number of programmable messages:	200
Number of lines by message:	8
Number of characters in display:	10
Character size:	75 x 44 mm
Matrix size:	7 x 5 LEDs
LED colour:	red
LED diameter:	5 mm
Radiation angle:	15°
Dimensions:	Screen size: 506 x 86 mm Control head: 50 x 12 mm
Weight:	Sign: 2850 g Control head: 140 g









SmartSign dimensions (mm).

REF.	MOD.	DESCRIPTION
2025310	LSG700	(1) Programmable LED sign, 575x195x185 mm, in metal flip up undercover case. 200 Programmable messages by SmartSign Message Editor. LCD700 Control head w/ LCD back-lit screen to display messages. **(SmartSign Message Editor and LCD700 control head purchased separately)
2025377	LSG702	(1) Programmable LED sign, 575x195x185 mm, fixed mountig kit with (2) "L" brackets in the upper level and (2) suction pad in the lower level, 200 Programmable messages by SmartSign message Editor, LCD700 control head w/LCD back-lit screen to display messages
8216112XX	X LCD700	LCD700 Control head w/ LCD back-lit screen to display messages.
2025336	SSME	SmartSign Message Editor, for editing and downloading SmartSign programmable LED sign messages from PC.

INTERNAL WARNING LIGHTS

Internal lights.....56



INTERNAL LIGHTS



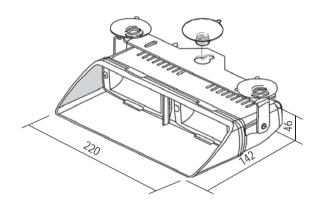
VIPER S2 DUAL SOLARIS

Internal LED Warning Light with Solaris LED technology. Thanks to the Solaris LED technology Viper S2 offers a superior off-axis reflection, forming an impressive block of illumination. Two inboard side reflectors mirror high intensity LED light to the side producing wide-angle off-axis warning. Viper S2 delivers effective compact, lightweight warning light and offers versatile mounting. It can be mounted almost anywhere the emergency vehicle. It includes a surface mounting bracket and suction cups. It also comes equipped with a snap-on flash guard (no screws required). Wire harness lengths is 2,7 m long and includes a cigarette plug.

Viper S2 lights are available in dual head configuration. The Dual has up to 25 flash patterns that are selected by an easy to reach push button switch.

Voltage:	12V
Average consumption:	2.2 Amp blue, amber, red
Operating Temperature:	-20°C to +50°C
Dimensions:	220 x 46 x 142 mm
Weight	440g





Viper S2 DUAL dimensions (mm).

REF.	MOD.	DESCRIPTION
		VIPER S2 DUAL Solaris
2010592	VIPER S2 DUAL	VIPER S2 DUAL Solaris, blue/blue LED and smooth clear lens, 25 flash patterns, cigarette plug, windshield mount, 12V.
2010593	VIPER S2 DUAL	VIPER S2 DUAL Solaris, blue/red LED and smooth clear lens, 25 flash patterns, cigarette plug, windshield mount, 12V.
2010591	VIPER S2 DUAL	VIPER S2 DUAL Solaris, amber/amber LED and smooth clear lens, 25 flash patterns, cigarette plug, windshield mount, 12V.

VIPER S2 DUAL Solaris Synchronizable

329001-34 VIPER S2 DUAL

VIPER S2 DUAL Solaris, blue/red LED and smooth clear lens, 25 flash patterns, synchronizable with other lights, windshield mount, 12V.

INTERNAL LIGHTS



VIPER S2 SOLARIS



The new **VIPER S2 LED** lights provide, with the Solaris exclusive technology from Federal Signal Vama, the ideal solution for camouflaged vehicles or reinforce the lighting on emergency vehicles. Viper S2 Solaris is windshield mount. Main advantages are:

- HIGH INTENSITY

Thanks to LED Solaris technology, its spread lens and special light inclination. Molded scalloped facets at the rear of the reflector direct LED light forward to form an impressive block of illumination. Two inboard side reflectors mirror high intensity LED light to the side producing wide-angle off-axis warning. Combined, the Viper S2 delivers the most effective compact, lightweight warning light available.

- USER FRIENDLY

Plug & Play connection, through cigarette plug with a 2,7 m cable. Flash patterns could be changed just pushing a button.

- EASY, VERSATILE INSTALLATION

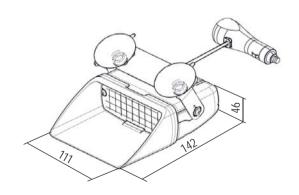
Specially designed to be quickly mounted, with a minimum manipulation. Thanks to its compact dimensions, it could be installed on every part of the vehicle.

- LOW AMP DRAW AND LONG LIFE

Optimizes vehicle battery performance.

Voltage:	12V
Average consumption:	1Amp blue and red 0.75 Amp amber
Operating temperature:	-20°C to +50°C
Dimensions:	111 x 46 x 142 mm
Weight:	300g





Viper S2 Solaris dimensions (mm).

REF.	MOD.	DESCRIPTION
2010549	VIPER S2 Solaris	VIPER S2 SINGLE Solaris, blue LED and spreader clear lens, 5 flash patterns, cigarette plug, windshield mount, 12V, R65 approval.
2010548	VIPER S2 Solaris	VIPER S2 SINGLE Solaris, amber LED and spreader clear lens, 5 flash patterns, cigarette plug, windshield mount, 12V, R65 approval.
2010550	VIPER S2 Solaris	VIPER S2 SINGLE Solaris, red LED and spreader clear lens, 5 flash patterns, cigarette plug, windshield mount, 12V.



AREA LIGHTING

Search lights	60
Scene lights	61
Worklights	63



SEARCH LIGHTS



VISIBEAM Series

Search light with remote control and high focusing precision. It may be adjusted vertically, 35° below and 105° above the horizontal plane and has a 360° rotation option.

- **Visibeam** includes a remote control unit which is compact and easy to use. It is connected to the light via a telephone type cable. An indicator light on the control reminds the user that the spotlight is on.
- The Wireless Visibeam is a combination of wireless remote control and powerful halogen searchlight. The ergonomically designed controller operates at over 30 m and fits comfortably in the palm of the hand. It includes a belt clip for easy storage on an operator's belt or vehicle's sun visor.



VISIBEAM

VISIBEAM

Voltage:	12 or 24 V	
Average consumption:	55W: 4.2 Amp 65W (24 V): 2.7 Amp 100W: 7.8 Amp	
Candelas:	55W: 80000 65W: 90000 100W: 125000	
Dimensions:	165 x 165 x 165 mm	
Weight:	900g	

VISIBEAM WIRELESS

Voltage:	12 or 24 V
Average consumption:	100W: 7.8 Amp 65W (24 V): 2.7 Amp
Candelas:	65W: 90000 100W: 125000
Dimensions: Permanent mount: Magnetic mount:	165 x 165 x 165 mm 165 x 165 x 175 mm
Weight:	900g

REF.	MOD.	DESCRIPTION
		WIRELESS VISIBEAM® SEARCH LIGHT
620200A	VB12PM-W	100W Spotlight, wireless control head, permanent mount, 12V
620201A	VB12MG-W	100W Spotlight, wireless control head, magnetic mount, 12V
620202A	VB24PM-W	65W Spotlight, wireless control head, permanent mount, 24V
		VISIBEAM®, SEARCH LIGHT
2101081A	620102	55W Spotlight, remote control head, permanent mount, 12V
2101089A	620104	65W Spotlight, remote control head, permanent mount, 24V
2101082A	620122	100W Spotlight, remote control head, permanent mount, 12V

SCENE LIGHTS

LED FD340/LD GHSCENE

LEDs light for Scene lighting equipped with two 3W LED lamps adjustable horizontally and vertically.

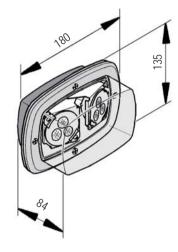
Flush mounting system for greater integration into the vehicle.

LED GHScene includes a chrome trim.

Available in 12V and 24V.

Voltage:	12 or 24 V
Average consumption:	0.5 Amp (12V)
Power:	2 x 3W
Dimensions:	135 x 180 x 84 mm
Weight:	533 g





LED FD340/LD GHSCENE dimensions (mm).

REF.	MOD.	DESCRIPTION
2005445	GHSCENE LED	Rectangular directional Scene LED light, 180 x 135mm, (2) 3W LED lamps, flush mount, chrome flange, clear, 12V
2005446	GHSCENE-24 LED	Rectangular directional Scene LED light, 180 x 135mm, (2) 3W LED lamps, flush mount, chrome flange, clear, 24V

SCENE LIGHTS



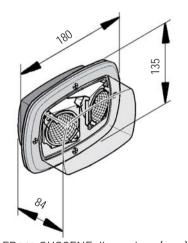
FD340 GHSCENE

Rectangular Directional halogen light with two adjustable 20 W lamps which allows the user to focus light vertically and horizontally for maximum effectiveness.

Each light comes complete with a chrome ring.

Voltage:	12 or 24 V
Average consumption:	3.5 Amp (12V)
Power:	2 x 20W
Dimensions:	135 x 180 x 84 mm
Weight:	500 g





FD340 GHSCENE dimensions (mm).

REF. MOD.	DESCRIPTION
2005232 GHSCENE	Rectangular directional Scene light, 180 x 135mm, (2) 20W halogen lamps, flush mount, chrome flange, clear, 12V
2005282 GHSCENE-24	Rectangular directional Scene light, 180 x 135mm, (2) 20W halogen lamps, flush mount, chrome flange, clear, 24V

WORKLIGHTS

LEDS Worklights

Federal Signal Vama **LED worklights** are specially designed for Heavy Duty applications (heavy vehicles, platforms, excavators, tractors, etc.), and can be installed on all types of vehicles. Additionally, its special focus design creates **an excellent light distribution** to operate whether on close (flood light or wide (spot light) areas. Furthermore, thanks to die-cast aluminum housing with polycarbonate lens and stainless steel mounting hardware, these worklights are shock resistant and are prepared for working in a high-vibration environments.







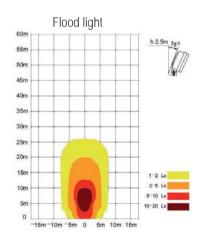
Spot permanent light

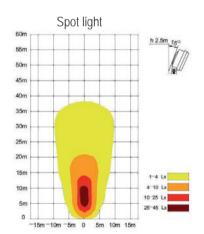
Voltage:	10-30V
Amperage:	1.00Amp (12V) / 0.5Amp (24V)
Power:	18W
Light output:	1350 Lumens
Viewing angle:	120° (flood light), 30° (spot light)
Certifications:	IP67 against dust and water

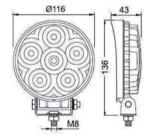


Flood magnetic light

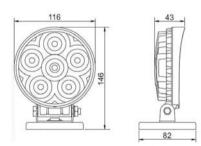
Spot magnetic







Permanent light dimensions (mm)



Magnetic light dimensions (mm)

REF. MOD.	DESCRIPTION
	Led Work lights, permanent mount
2010639A	Round worklight, LED, flood, permanent mount, multivoltage
2010659A	Round worklight, LED, spot, permanent mount, multivoltage
	Led Work lights, magnetic mount
2010638A	Round worklight, LED, flood, magnetic mount, multivoltage
2010660A	Round worklight, LED, spot, magnetic mount, multivoltage

^{*} All references above have 1 year warranty minimum (parts & labour). For more information, please refer to the price list (Sales conditions-Limited warranty) or contact our sales department.

^{**} Magnetic mounting models produced for a temporary use on the roof of the vehicle.



SIRENS & AUDIBLE WARNING

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INTEGRATED CONTROL SYSTEMS

ICS2010

ICS2010 is an integrated control system incorporating GEP500, an electronic power management system, and a control head BCT500.

Enables control of all acoustic and luminous emergency signalling devices on the vehicle from a single console (10 relays for light control), including SignalMaster directional warning lights.

All connectors to the GEP500 electronic manager incorporate a LED status lamp with easy-to-replace protective fuses.

One novelty available with the BCT500 control head is a high-speed recording function which makes it possible to load different operating programs. Comes with illuminated silicon keypad and for large fleets special character sets can be supplied.



BCT500:

Voltage:	12 V
Keypad:	Silicone with conductive tracks
Number of keys:	13
Keypad lighting:	LED backlighting
Communication bus:	RS485
Dimensions:	150 x 43 x 35 mm
Weight:	140 g

GEP500:

Voltage:	12 V
Output power speaker:	100 W (1 speaker with 11 ohm)
Output relays:	10 x 10 Amp
Auxiliary function:	1 x 0.75 Amp (Tachograph optional)
SignalMaster Control:	6-modules: 6 x 2.5 Amp 8-modules: 8 x 2.5 Amp
Dimensions:	60 x 140 x 190 mm
Weight:	1800 g

REF.	MOD.	DESCRIPTION
		ICS2010 integrated control system includes:
2020192	GEP500	Electronic power management. Integrate the systems for the control of the luminous and acoustic devices of emergency. 100W sirena amplifier s/16 programs, porgramable, SignalMaster controler, 10 relays
8216103	BCT500-STD	Control head. Enables the control of all functions assigned to the GEP500 through 13 backlit keys, PTT for public address and volume control. Standard model: wail, yelp and hi-lo. * Other models, please contact with Sales Dpt.

ELECTRONIC SIREN AMPLIFIERS

AS400 Series

The AS400 Series brings together priority lights, auxiliary lights and siren in just one control unit. The siren is compact and easily installed. Made of black aluminium for easy and unobtrusive vehicle installation (trunk or under seat).

The control head is in black nylon and includes a microphone with public address. The keypad is in translucent silicon, with built-in illumination for easier use in poor lighting conditions. These materials make the control head totally robust and water-resistant.

The volume control and on/off switch are located in the intermediate connection box.

Two basic models are available:

AS-422 siren amplifier with two light outputs.

AS-422/6S siren amplifier with six light outputs and two multi-function keys for light control.

AS-425

Voltage:	12 or 24 V
Output power speaker:	100 W
Light outputs:	2 x 10 Amp
Auxiliary outputs:	1 x 10 Amp
Outputs for external relais:	1 x 1 Amp
Dimensions:	Siren: 215 x 135 x 54 mm Control head: 25 x 50 x 105 mm
Weight:	Siren: 1500 g
Control head:	Number of keys: 10
Horn ring connection Lamp failure connection Radio connection	



AS-422

Voltage:	12 or 24 V
Output power speaker:	100 W
Light outputs:	2 x 10 Amp
Auxiliary output:	1 x 10 Amp
Dimensions:	Siren: 65 x 130 x 165 mm Control head: 25 x 50 x 105 mm
Weight:	Siren: 1500 g
Control head:	Number of keys: 10
Horn ring connection Lamp failure connection Radio connection	

AS-422/6S

Voltage:	12 or 24 V
Output power speaker:	100 W
Light outputs:	2 x 10 Amp
Auxiliary outputs:	6 x 10 Amp
Dimensions:	Siren: 215 x 135 x 54 mm Control head: 25 x 50 x 105 mm
Weight:	Siren: 1500 g
Control head:	Number of keys: 10
Horn ring connection Lamp failure connection Radio connection	

REF.	MOD.	DESCRIPTION
		Sirens w/ public address (P.A.)
2020155	AS-422	100W Siren amplifier, (3) tones, remote control, P.A., (2) light control outputs w/ relays, wiring harness, 12V
2020156	AS-422-24	100W Siren amplifier, (3) tones, remote control, P.A., (2) light control outputs w/ relays, wiring harness, 24V
2020141	AS-422/6S	100W Siren amplifier, (3) tones, remote control, P.A., (8) light control outputs w/ relays, wiring harness, 12V
2020162	AS-422/6S-24	100W Siren amplifier, (3) tones, remote control, P.A., (8) light control outputs w/ relays, wiring harness, 24V
2020099	AS-425	100W Siren amplifier, (3) tones, remote control, P.A., (4) light control outputs w/ relays, lamp failure detection, wiring harness, 12V
2020103	AS-425-24	100W Siren amplifier, (3) tones, remote control, P.A., (4) light control outputs w/ relays, lamp failure detection, wiring harness, 24V

ELECTRONIC SIREN AMPLIFIERS

AS300 Series

The AS-300 Series comes in 5 different models specially designed for each application: AS-320DIG, AS-324 and AS-380.

All models include a siren amplifier in black anodized aluminium for unobtrusive on-board installation. The AS300 siren amplifier includes a kit for fast and easy mounting.

- AS-320DIG includes a small and compact remote control for controlling lights, siren and public address with volume control. Also includes an alternative switch-operated control system.
- AS-324 has a switch-operated control system only.
- AS-380 delivers 400W power via a slave amplifier. Includes remote control pad.





Voltage:	12 or 24 V
Output power speaker:	100 W
Light output:	1 x 10 Amp
Auxiliary output:	1 x 1 Amp
Dimensions:	Siren: 170 x 135 x 55 mm Control head: 115 x 42 x 35 mm
Weight:	Siren: 1300 g
Radioconnection Horn ring connection	
Lamp failure connection	

	REF.	MOD.	DESCRIPTION
			Sirens w/ public address (P.A.)
	2020256	AS-320DIG	100W Siren amplifier, (3) tones, remote control, P.A., (1) light output, (1) auxiliar output, wiring harness, 12V
	2020257	AS-320-24DIG	100W Siren amplifier, (3) tones, remote control, (2) lights outputs, (1) auxiliar output, wiring harness, 24V
	2020236	AS-380M	100W + 100W Siren amplifier, (4) tones, remote control, P.A., wiring harness, 12V
	2020237	AS-380S	Amplifier for installation along with model AS-380M. Together offer a maximum power of 400W.
			100W Siren amplifier
	2020269	AS320DIG CAN BUS	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 12V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included
	2020271	AS320-24DIG CAN BUS	100W siren amplifier, international tones (wail, yelp, hi-lo), 1 auxiliary output programmed with Priority lights, wiring, 24V. Compatible only with BCT2000 and BCT500CB Series control heads. P.A not included
			Public address
	8235984	AS320-PA CB	Public address kit with remote control. Volume and microfone functions control (for control head BCT3000)
Ξ,			Sirens w/o public address (P.A.)
	2020188	AS-324	100W Siren amplifier, (2) tones, remote control, w/o P.A., (2) lights outputs, (1) auxiliar outputs, wiring harness, 12V
	2020183	AS-324-24	100W Siren amplifier, (2) tones, remote control, w/o P.A., (2) lights outputs, (1) auxiliar outputs, wiring harness, 24V

ELECTRONIC SIREN AMPLIFIERS

FEDHORN System

The FEDHORN system is an electronic sirens system with horn sound.

- HORN SOUND

Two synchronized sirens connected to two 100W speakers reproduce the sound of horn by electronic technology.

- EASY INSTALLATION

Compact and modular system with an easy fitting into the vehicle, taking advantage of every space inside it.

- EASY MAINTENANCE

Elimination of maintenance cost associated to oil compressor and air membranes systems due to use of a fully electronic system.

- FLEXIBILITY

Specific configuration for different countries.

- PUBLIC ADDRESS OPTION

Remote microphone connection.

- DAY/NIGHT

An internal sound damping assure a sound reduction during the night.

- CANBUS

Communication System between lights. and controller head. This system minimizes wiring installation and allows controlling all the elements by a single remote control.





FEDHORN siren system

Output power with 13.5V:

Current Draw:

t Draw:	12V	24V
power with 13.5V: with one 11 ohm speaker: with two 11 ohm speaker:	100 W 180 W	100 W 180 W

(optional)

mar are ar eran opeanor.		
Intensity with one 11 ohm speaker: with two 11 ohm speakers:		
Ounut voltage:	60V	60V

Frequencies (depending on siren version) 600-1350 Hz

WAIL	12 cycles per minute
YELP	180 cycles per minute
BITONAL	450 - 600Hz
Harmonic distortion	0,87% (35 W, 100 Hz)
Passing band +/- 3 dB	90 Hz - 28,000 Hz
Radio signal level	2,5 V maximum

Intensity of auxiliary outputs

intensity of auxitiary outputs		
	Lights relay	10 A maximum
	Auxiliary relay	1 A maximum
Operating temperatures		-30°C - +50°C
	Shipping weight	1300 gr (each siren)
	Amplifier dimensions	55 x 135 x 170 mm

J		Amplifier dimensions 55 x 135 x 170 mm
REF.	MOD.	DESCRIPTION
KC FEDHORN-12 (*))	2x100W Sirens System (master/Slave) with horn sound, international tones (wail, help, hi-lo), 1 auxiliary output programmed with priority lights, wiring, 12V. Compatible only with BCT2000 Series.
KC FEDHORN-24 (*))	2x100W Sirens System (master/Slave) with horn sound, international tones (wail, help, hi-lo), 1 auxiliary output programmed with priority lights, wiring, 24V. Compatible only with BCT2000 Series.
		Public address
8235984	AS320-PA CE	B Public address kit with remote control. Volume and microfone functions control (for control head BCT3000)
		Speakers (two units are necessary)
2021047	AL-252N	100W Speaker, round horn, neodymium driver, metal L- bracket (1)
2021004	AL-257N	100W Speaker, rectangular horn, driver housing, exterior protector, white
ES100C	ES100	ES100 100W Compact Speaker, w/o bail bracket compact, small size
		Mount Accessories
ESB-U	MNT-ES100	Speaker mounting kit ES100
		CANBUS Control Box
BCT2010-09	BCT2009	BCT2000 Series control box with 10 keys to control: Priority lights, Cruise light, Day/night mode, Take down lights, Rear lights, Alley lights and tacograph. Siren with wail, stand/land and FEDHORN tones, Manual mode and Radio.
BCT2015-19	BCT2015	BCT2000 Sereies control box with 15 keys to control: Priority lights, Cruise lights, Day/night mode, Take down lights, Alley lights and Signalmaster. Siren with wail, yalp, bitonal, FEDHORN tones, high/low intensity, Manual model and Radio.
		Connectors kit for CANBUS Control Head
8299753		Connectors kits for Control HEAD (It is necessary when there is no lightbars on the system)

(*) Must be specified when ordering, which international tones are desired

E ELECTRONIC SIREN AMPLIFIERS

AS200 Series

The AS-250 Series is totally water-resistant thanks to its extruded casing and connector assembly with Santoprene sheath for full weather insulation of electrical connections. This electronic siren is made of extruded black anodized aluminium. The AS-250 Series is controlled by using external switches.

Also available (optional): shock-absorbent silent block for use in conditions subject to intense vibration.



Voltage:	12 V
Output power speaker:	100 W
Auxiliary output:	1 x 1 Amp
Dimensions:	180 x 86 x 60 mm
Weight:	600 g
Horn ring connection	

REF.	MOD.	DESCRIPTION	
		Sirens w/o public address (P.A.)	
2020147	AS-250	100W Siren amplifier, (3) tones, w/o P.A, (1) auxiliary output, waterproof, w/o wiring harness, 12V	

Mount Accessories

8232445

KT/BLOK-FA/AS Kit, silent block, FA-535D, FA-706E, FA-540/E, FA-540/E HL, FA-706 and AS-250

INTEGRATED SIRENS

PA300MSC

The **PA300** electronic siren delivers exceptional performance and durability thanks to its integrated circuits and silicon transistors.

This siren offers multiple features such as peak-and-hold and TAP II, which enables the driver to change the siren tone via the vehicle's horn ring or any remotely mounted switch. The public address includes a system to remove interference that provides high-quality voice reproduction.

One version (PA300MSC-PTY) includes a Priority tone for clearing traffic from intersections.



Voltage:	12 or 24 V
Output power speaker:	100 W
Dimensions:	194 x 156 x 59 mm
Weight:	2900 g

REF.	MOD.	DESCRIPTION
		Sirens w/ public address (P.A.)
2020085	PA300MSC	100W Siren amplifier, (4) tones, P.A., 12V
2020086	PA300-24MSC	200W Siren amplifier, (4) tones, P.A., 24V
		SIREN Accessories Mount Accesories
8216117	AV-D/N	
8216117 2006021	AV-D/N SF-20A	Mount Accesories

LOUDSPEAKERS

AL-252N

This speaker is equipped with 100 W Neodymium motor, 11 Ohms impedance. The round ABS diffuser is designed for better sound propagation and includes a black anodized L-bracket for mounting.

The Neodymium loudspeaker motor is lighter and smaller than ferrite models.



Power:	100 W
Ohm:	11
Driver:	Neodymium
Dimensions:	150 x 135 mm

AL-257N

AL-257 is a white 100 W high-performance loudspeaker, 11 Ohms impedance. Its rectangular ABS diffuser with easy-to-replace motor stands out for its durability and reliability.

It includes a flat base for mounting on vehicle roofs.



Power:	100 W
Ohm:	11
Driver:	Neodymium
Dimensions:	210 x 223 x 155 mm (Hight incl. mounting kit: 180 mm)

REF.	MOD.	DESCRIPTION	
2021047	AL-252N	100W Speaker, round horn, neodymium driver, metal L- bracket (1)	
2021004	AL-257N	100W Speaker, 11 Ohms, ABS rectangular horn, exchangeable neodymium driver, exterior protector, high performance, white	
		(1) We have a large rage of mounting brackets for undercover vehicles. Please check availability with our sales dapartment	

COMPACT LOUDSPEAKERS

SOUNDSTAR ALS1000

The **ALS1000** compact loudspeaker is made of ABS with glass fibre and injected aluminium. This speaker features modern, compact design and fully compatible with other 30 W sirens.

A mesh filter prevents solid particles from entering the siren, while a rubber seal joint prevents water from entering the electronic circuits. It is equipped with drainage system to prevent water accumulation on the membrane.

ALS1000 is the perfect complement to the SCS1000 compact siren. Installed together they deliver 60 W of power.



Power:	30 W
Ohm:	6
Driver:	Neodymium or Ferrit
Dimensions:	135 x 110 x 113 mm
Weight:	1150 g

ES100

The **DynaMax** offers a unique design which enables to install the speaker in many locations on ambulance cars. It can be mounted easily behind the grille or flush between bumper and hose tray of a large apparatus.



Power:	100 W
Ohm:	11
Dimensions:	140 x 150 x 69 mm
Weight:	2500 g

AS124

AS124 Series speaker uses advanced housing material and field replaceable neodymium drivers to provide effective, high quality sound at an affordable price.

The housing is made of black polyethylene terephtalate, which made the speaker very lightweight, robust and water-resistant.

It includes a mounting kit for easy vehicle installation.



Power:	100 W
Ohm:	11
Driver:	Neodymium
Dimensions:	196 x 119 x 145 mm
Weight:	2900 g

	REF.	MOD.	DESCRIPTION
			Ferrite Driver
			Territe Driver
	2020278	ALS1000-D	30W Compact speaker, 6 Ohms, ferrite driver, reduced dimensions, 12V, black colour
	2020278-BL	ALS1000-DBL	30W Compact speaker, 6 Ohms, ferrite driver, reduced dimensions, 12V, white colour
			Neodymium Driver
	2020278N	ALS1000DN	30W Compact speaker, 6 Ohms, neodymium driver, reduced dimensions, 12V, black colour
	750501	AS124	High output 100W Speaker, 11 Ohm, neodymium driver, mount hardware
	ES100C	ES100	ES100 100W Compact Speaker, w/o bail bracket compact, small size
			Mount Accesories
_	ESB-U	MNT-ES100	ES100 mounting kit
N)	8299306	SCS1000-BLOCK	Kit, silent block for SCS1000 and ALS1000
N	8299911	8299911	Watter-proof connectrors for ALS1000-D

COMPACT SIRENS

SOUNDSTAR Series

The SCS1000 compact siren is a powerful acoustic signalling system with built-in amplifier and loudspeaker in a single unit.

It is built of ABS with glass fibre and injected aluminium. The SCS1000 siren includes 16 preprogrammed tones which are easy to select using the microswitches conveniently located on the back of the siren. The fuse is included also in the back. A mesh filter prevents solid particles from entering the siren, while a drainage system prevents the accumulation of water on the membrane. A rubber seal joint prevents water from entering the electronic circuits. It includes a vehicle mount system valid for motorcycles or priority vehicles. Siren control is by external switches.

Soundstar is available as Standard or Neodymium versions.

Accessories include ALS1000 (30 W compact loudspeaker), SCS1000-PA (Public address kit) and SCS1000-SBLOCK (anti-vibration kit).



Voltage:	12 V
Power:	30 W + 30 W (with ALS1000)
Max. Consumed intensity:	3 Amp (1 speaker) 6 Amp (2 speaker)
Acoustic pressure to 2 m, 13.8V, two tones (1 speaker):	112.4 dBA
Acoustic pressure to 3.5 m, 12V, two tones (2 speaker):	112.3 dBA
Ohm:	6
Dimensions:	Siren: 135 x 110 x 113 mm Public address: 115 x 42 x 35 mm
Weight:	Siren: 1185 g Public address kit: 60g

REF.	MOD.	DESCRIPTION
		Ferrite Driver
2020277	SCS1000-D	30W Compact Siren, ferrite driver, 32 selectable tones, w/ mounting hardware, w/o wiring harness, 12V, black colour (connectors NOT included. See accesories)
2020277-BL	SCS1000-DBL	30W Compact Siren, ferrite driver, 32 selectable tones, w/ mounting hardware, w/o wiring harness, 12V, white colour (connectors NOT included. See accesories)
		Neodymium Driver
2020277N	SCS1000-DN	30W Compact Siren, neodydium driver, 32 selectable tones, w/ mounting hardware, w/o wiring harness, 12V, black colour (connectors NOT included. See accesories)
		Mount Accesories
8216113	SCS1000-PA	Public address kit, w/ volume and microphone functions control.
8299306	SCS1000-BLOCK	Silent block kit, SCS1000-D and ALS1000-D
8299910	8299910	Sealed connector for SCS1000-D
82441589	82441589	Motorcycle complete wiring harness (LD410, CO400, SCS1000-D)
82441588	82441588	Motorcycle complete wiring harness (LD400, CO400, SCS1000-D)
82441605	82441605	Wiring to adapt SCS1000 to SCS1000-D
		MC300 Series
4004233-01	MC300	Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light and continuous siren
4004352	MC300/A	Motorcycle Control allows to control all the functions of lights and siren of the 400 Solaris Series: priority warning lights (LD400 Solaris and CO400 Solaris, "Stop Light" function, cruise light, continuous siren and power limiter

COMPACT SIRENS



ASX700 Series

Federal Signal Vama presents one of the most compact sirens in the market, regarding its weight and dimensions, ASX700 series, which it also produces a clean and powerful sound. It meets R10 European Regulation, it is bitension, protected against water and dust and due to its different models, ASX700 is a product highly adaptable to any market need.

Wide product range available for every need, following different countries and application regulations. Consult at the end of this document the different models available.



Due to the siren reduced dimensions, it can be installed in all type of police, fire and ambulance vehicles.

- EASY TO INSTALL

ASX700 series installation only requires one cable, which is already provided with waterproof connectors. Therefore, its installation is very simple.

- HERMETIC, WATERPROOF AND DUST RESISTANT

Both the siren and the speaker are prepared to be placed in any position regardless of weather conditions. Siren has IP66 and IP69K protection grade, speaker has IP66 and connector has IP67.

- SOLUTION FOR ANY MARKET NEED

Thanks to the different siren available models according to both its technology and tones, plus the 2 different wiring sizes, ASX700 Series is suitable for all markets and needs.

- HIGH EFFICIENCY

Especially designed to operate at a constant temperature, made to avoid overheating.

Siren

Voltage:	10 – 30V
Output power:	140 W (max.)
Auxiliary lights output:	1 x 5 A
Auxiliary output:	1 x 1 A
Frequence and tone:	According to selected tone
Dimensions:	96 mm x 29 mm x 86 mm
Weight:	450 gr
Operating temperature:	-30°C to 65°C



- NEODYMIUM MOTOR

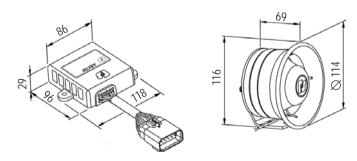
The speaker has a Neodymium motor, which offers higher acoustic pressure (117 dB) than other market products. This increases siren product life and raises its efficiency.

- IMPACT-RESISTANT CASE

Its structure is made of polycarbonate and it is reinforced with UV protection, achieving to dispel the heat and avoid color loss due to the long sun exposures.

- EUROPEAN REGULATION COMPLIANCE

The siren meets R10 European Regulation.



Siren and speaker dimensions in mm.

Speaker

Coil impedance:	4 Ohms
Maximum output power:	70W
Acoustic pressure (dB) at 2m:	1 speaker: 117 dB 2 speakers: 120 dB
Operating temperature:	-20°C to 50°C
Dimensions:	116 mm x 69 mm x 114 mm diameter
Weight:	1.080 gr

COMPACT SIRENS

REF.	MOD.	DESCRIPTION
		Sirens without public address
2020286	ASX700	70 W Siren amplifier, analogic system, day / night function, claxon, without auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL)
2020286AH	ASX700	70 W Siren amplifier, analogic system, day / night function, claxon, without auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn
2020287	ASX710	70 W Siren amplifier, analogic system, day / night function, claxon, (2) auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL)
2020287AH	ASX710	70 W Siren amplifier, analogic system, day / night function, claxon, (2) auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn
2020288	ASX800	70 W Siren amplifier, CANBUS system, day / night function, claxon, without auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL)
2020288AH	ASX800	70 W Siren amplifier, CANBUS system, day / night function, claxon, without auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn
2020289	ASX810	70 W Siren amplifier, CANBUS system, day / night function, claxon, (2) auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone (WAIL, YELP, BITONAL)
2020289AH	ASX810	70 W Siren amplifier, CANBUS system, day / night function, claxon, (2) auxiliary outputs, waterproof connectors, mutivoltage 10- 30V.Standard tone - Airhorn
		Mount Accesories
82441700	ASX700 - 800 - 810	1 Meter wiring, waterproof connnectors, for ASX700, ASX800 and ASX810 siren models
82441701	ASX700 - 800 - 810	4 Meter wiring, waterproof connnectors, for ASX700, ASX800 and ASX810 siren models
82441702	ASX710	1 Meter wiring, waterproof connnectors, for ASX710 siren model
82441703	ASX710	4 Meter wiring, waterproof connnectors, for ASX710 siren model
		Speakers
2021069	AL-ALX	70W Compact speaker, 4 Ohms, neodymium driver, reduced dimmensions, 117dB, 12V, black colour, mount bracket included . * Do not connect only 1 speaker to 24V.



CONTROLLERS

G0112 Series	78
ICS2009 Series	80
Direct wire converter	80
GEP2006PW Series	80



CONTROLERS

G0112 Series

Federal Signal Vama offers one of the most configurable control systems of the market, specially designed either for emergency or commercial vehicles. It allows total vehicle control through a CAN BUS touch screen, easily adaptable to different user needings.

- INTUITIVE AND USER FRIENDLY TOUCH SCREEN

Specially designed for intensive usage and with fast Access keys for each application. With a wide view angle of vision, backlighted and gloves use compatible keys, audio and vibration feedback, etc.

- CONFIGURABLE

User configurable touch screen with special keys personalisation from a PC.

- WIDE RANGE OF SOLUTIONS

GO112 could control not only light and acoustic systems but heating and air conditioning systems, stretcher platform control, temperature, alarms, etc.

- SYNCHRONIZED

Easily synchronized with the emergency vehicle in case of touchscreen replacement.

- FAST INSTALLATION

1 cable direct connection, with no fuses nor relays and adaptable foot mounting. Plug and play touch screen replacement.

- ENERGY SAVINGS

Automatic energy management for a better performance. Stand by function and adjustable brightness by user.







Flat switch panel

- BLACK BOX

Black box built-in integration to gather key data during emergency situations.

- WATERPROOF CENTRAL UNIT

IP66 protection against water and dust.

- AUTOMATIC FAILURE DETECTION

Their efficient wiring connections, reduced to the minimum, reduce each potential failure. However, system could automatically detect each control problem.

CENTRAL UNIT	S	М	L	XL
Outputs +	10	20	30	40
Outputs -	10	14	20	28
Inputs +/-	8	14	20	28
Analog inputs	3	3	3	3
CAN inputs	1	1	1	1

REF.	DESCRIPTIO	

Consoles

Touch Screen Console for back wall mounting, white color

- Fully configurable - USB port - Keys with audio and vibration feedback 2004103 - Brightness control - Wide view angle (130°) - Size and colors keys configurable	 Dimensions: 148 x 113 x 28 mm Screen dimensions: 4.5" Weight: 205 g Operating voltage: 9-30 V 4m CANBUS wiring included
--	---

	Touch Screen Console by foot mounting, black colour		
2004104	 Fully configurable - USB port Keys with audio and vibration feedback Brightness control Wide view angle (130°) Size and colors keys configurable 	 Dimensions: 128 x 94 x 28mm Screen dimensions: 4.5" Weight: 185 gr. (without foot) Operating voltage: 9-30 V 4m CANBUS wiring included 	

Flat Switch Panel

- Plug @ play 100% GO-112 compatible
- Vertical and Horizontal positioning
- Colors and pictograms for each key
- Keys with audio and tactile effect
- Pilot lamp functions
·

- Available in 4,6 or 9 keys version
- Back-lit
- Cancell all/Power key - Quiescent current (0mA)
- Washable

²⁰⁰⁴¹¹⁴ FSD-4 Flat switch panel with 4 keys 2004113 FSD-6 Flat switch panel with 6 keys Flat switch panel with 9 keys

^{*} Please, consult with the sales department the sales conditions in your country.

CONTROLLERS

REF.	MOD.	DESCRIPTION	
		Central Unit	
		Central Unit "S"	
2004105		- 10 self protected outputs (+15A each one) - 10 negative outputs (-1.7A each one) - 8 opto-isolated inputs (+/-) - 3 analog inputs - CAN - J1939 - IP66 protection - Power Management - Automotive connectors	- Black box included - Dimensions: 254 x 161 x 58 mm - Weight: 1.119 g - Operating voltage: 9-30 V 23 positions wiring connector included 35 positions wiring connector included *All inputs and outputs all configurable by customer needs
2004106		Central Unit "M" - 20 self protected outputs (+15A each one) - 20 negative outputs (-1.7A each one) - 14 opto-isolated inputs (+/-) - 3 analog inputs - CAN - J1939 - IP66 protection - Power Management - Automotive connectors Central Unit "L"	 Black box included Dimensions: 254 x 161 x 58 mm Weight: 1.142 g Operating voltage: 9-30 V 23 positions wiring connector included 35 positions wiring connector included *All inputs and outputs all configurable by customer needs
2004107		- 30 self protected outputs (+15A each one) - 20 negative outputs (-1.7A each one) - 20 opto-isolated inputs (+/-) - 3 analog inputs - CAN - J1939 - IP66 protection - Power Management - Automotive connectors	- Black box included - Dimensions: 254 x 290 x 58 mm - Weight: 2.052 g - Operating voltage: 9-30 V 23 positions wiring connector included 35 positions wiring connector included *All inputs and outputs all configurable by customer needs
2004108		Central Unit "XL" - 40 self protected outputs (+15A each one) - 28 negative outputs (-1.7A each one) - 28 opto-isolated inputs (+/-) - 3 analog inputs - CAN - J1939 - IP66 protection - Power Management - Automotive connectors Accessories Unitherm-HD interface (complementary system	- Black box included - Dimensions: 254 x 290 x 58 mm - Weight: 2.075 g - Operating voltage: 9-30 V 23 positions wiring connector included 35 positions wiring connector included *All inputs and outputs all configurable by customer needs
2004109		- Controllable from the touch screen - Sensor included - Compatible with most of the heating / cooling systems - Fan control in PWM mode	- Dimensions: 105 x 45 x 92 mm - Weight: 270 g - Operating voltage: 9-30 V - Static outputs CANBUS wiring included
2004110		Speed Filter (Configuration and management - Software for GO112 system - Data transmision by USB cable (NOT included) - 1 configuration kit - 2 licences ID-Fan (Bidirectional Fan Controller)	software)
2004111		 Bi-directional ventilator control Controlled by touch screen console 2 configurable inputs (+/-) 2 self-protected 2X6,5A outputs Protection IP65 	- Fan control in PWM mode - Automatic time delay at reversal - Dimensions: 94 x 73 x 26 mm - Weight: 75 - Operating voltage: 10-28 V

CONTROLLERS

ICS2009 Series

ICS2009 Series consists of an electronic power supply manager and a control head.

Electronic power supply modules are small and compact. The control module is powered by just 2 cables. Installation is quicker than for a conventional system and the outputs are fully protected against polarity reversal, overloading and short-circuits.

Control heads stand out due to their compact, ergonomic design. Safe and easy to handle, they are fitted with a backlit keypad. Logos and keys can be personalised by the user, thanks to adhesive labels with a wide range of symbols.



Direct wire converter

CAN BUS system power manager can manage, through an analogic control head, any CAN BUS emergency vehicle light in a simple way.



GEP2006PW Series

GEP2006PW Series, an analogic system power manager from Federal Signal Vama can manage, through a CAN BUS control head, any analogical emergency vehicle light in a simple way.

This power manager could be controlled by following control heads, depending on final user needings:

- BCT2004-10: 4-buttons control head for R65 main warning lights, front and rear lights, lighted sign, etc.
- BCT2006-10: 6-buttons control head for above functions and, furthermore, cruise light, etc.



GEP2006PW

REF.	MOD.	DESCRIPTION
		ICS2009 Series
ICS2009ST-12	ICS2009	Intelligent CanBus control system with SignalMaster control, (4) more outputs, fully protected against polarity, reversal, overloading and short-circuits. Control head with (9) backlit-keys, 12V/24V
		CAN BUS converter - ANALOG
2006036		Inputs box to convert a CAN BUS lightbar in an analog system (the fuctions are activated through positive cable)
		Analogical controllers
2020283PW-02	GEP2006	Control box to convert analogical lightbars to CAN BUS communication, 4 outputs, 12V
2020283PW-03	GEP2006	Control box to convert analogical lightbars to CAN BUS communication, 6 outputs, 12V
		Control heads
BCT2004-10	BCT2004	BCT2004-10, CANBUS control head for GEP2006PW 4S with 4 backlight keys. With two mounting systems: swivel or permanent mount. Control of 4 analogic outputs.
BCT2006-10	BCT2006	BCT2006-10, CANBUS control head for GEP2006PW 6S with 6 backlight keys. With two mounting systems: swivel or permanent mount. Control of 6 analogic outputs.
82441626		Connection kit between BCT CAN BUS control head and GEP2006PW intelligent power manager.

GPS AND ANALOGIC LIGHTBAR DATA RECORDING SYSTEM

Black box with GPS.....82



DATA RECORDING SYSTEM



Black box with GPS

GPS and analogic lightbar data recording system

Federal Signal Vama presents new black box with GPS, with a geolocation system for every emergency or service vehicle, providing lightbar, siren, sign, etc. status while is on duty. Thanks to its compact dimensions it could be installed in several vehicle places.

- REDUCTION OF ACCIDENT RISKS

Decrease of related insurance policy fees thanks to lightbar and siren events recorded on emergency situations.

- FLEET COST REDUCTION AND FLEET MANAGEMENT

Improves global operations efficiency: longer-lasting product life, fleets and routes optimisation, accident decreasing.

- EASY TO USE

Once installed, black box data could be downloaded easily through Ethernet and/or USB socket, and could be analysed afterwards.

- COMPACT

Especially designed to occupy a minimum space inside vehicle for an easy installation.





Practical and intuitive management software, allowing to manage the data according each user, and submit it on several reports.



- ANALYSIS SOFTWARE

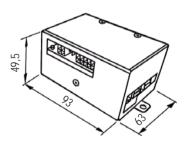
With "Route Converter" software program, very intuitive, providing vehicle position through black box GPS, and lightbar, siren, etc. status.

- HIGH DATA STORAGE

Internal data storage up to 6GB, capable of storing data continuously during 30 days.

- SECURE

With password to dowload all data from the vehicle.



Black box dimensions in mm.

Voltage:	12-24V
Nº analog outputs:	1
Nº analog inputs:	5
Operating System:	Linux
Dimensions:	114 mm x 63 mm x 49,5 mm
Weight:	185 gr

REF. MOD. DESCRIPTION



Black box with GPS, analog, 12-24V, Spanish/English software included.

ACCESSORIES

Airel	84
Gun-locks	.86
Rechargeable flashlights	.87
Reading lamps	.89
Control units	.90
Back-up alarms	91
Lighting accessories	.92
Stinger	.93





Illuminated Thermal and infrared Identification System







AIREL

Illuminated Thermal and infrared Identification System

AIREL is a patented Identification System utilizing illuminated/thermal/infrared numbers that gives aerial and ground units the ability to establish quick visual identification of Public Safety, Military and Industrial vehicles.

It is made with an electroluminescent material that provides years of illumination and identification.





Perfect vehicle identification in low ambient light, with its thermal and infrared lighting.



- QUICK INDENTIFICATION

Enables vehicles to be identified in low light conditions by airborne helicopters with a powerful illumination.

- EASY INSTALATION

Industrial Strength adhesive backing 3M.

- ENERGY EFFICIENT

Powerful illumination provided by a Screen printing process that utilizes phosphors and silver as conductive layers that are electrically powered by an inverter.

- WEATHERPROOF

Highly advanced embedded circuitry.

- STEALTH MODE

Thermal/infrared identification by using an additional power supply allowing units on the field operate on undercover operations.

- ELECTROLUMINISCENCE

Proven in military uses.

REF.	MOD.	DESCRIPTION
		Illuminated numbers
9010287		AIREL Nr 0, 50CM, BLUE
9010288		AIREL Nr 1, 50CM, BLUE
9010289		AIREL Nr 2, 50CM, BLUE
9010290		AIREL Nr 3, 50CM, BLUE
9010291		AIREL Nr 4, 50CM, BLUE
9010292		AIREL Nr 5, 50CM, BLUE
9010293		AIREL Nr 6, 50CM, BLUE
9010294		AIREL Nr 7, 50CM, BLUE
9010295		AIREL Nr 8, 50CM, BLUE
9010296		AIREL Nr 9, 50CM, BLUE
		Mounting pod (one per number)
9010297		AIREL Black pod (one per number)
9010298		AIREL White pod (one per number)
		Inverter
9010299		AIREL Inverter (for use with one or two numbers)
9010300		AIREL Inverter (for use with three numbers)
		Infrared/Thermal Power supply (Optional)
9010301		AIREL Power supply for Infrared/Thermal mode

AMK Series

The safety gun-locks offer a protection system when the weapon is not in use and prevent access by nonauthorised personnel, thus avoiding the risk of accidents.

There are different standard models available, with electromagnetic unblocking, by means of key or a combination of both.











AMK-50

AMK-90

AMK-100

AMK-150

REF.	MOD.	DESCRIPTION
1204001	AMK-50	Safety Gun-Lock fitted w/ electromagnetic lock, adjustable to different guns, cavity dimensions:min: 58 x 43 mm, max: 58x 78 mm
1204008	AMK-90	Safety Gun-Lock fitted w/ electromagnetic lock, cavity dimensions: 47 x 70 mm
1204006	AMK-100	Safety Gun-Lock fitted both w/ electromagnetic and manual (key) lock, cavity dimensions: 47 x 70 mm
1204023	AMK-150	Safety Gun-Lock fitted both w/ electromagnetic and manual (key) lock, cavity dimensions: 29 x 56 mm
		(*) Opcional the Gun-Lock can be installed over the Divider Shield
		Accessories
1204017	TA-210	Timer for Gun-lock, electromagnetic
8216091	SW-523	OFF-ON Push button, illuminated w/ protection
9133436	ACUAL	Rifle stock support

P RECHARGEABLE FLASHLIGHTS

L500 Series

L500 series stands out for robust, reliable and rechargeable flashlights for professional use. L500 series flashlights are watertight and shock-resistant thanks to their aluminium and polyamide construction, with high-luminosity halogen lamps providing adjustable beam spread and a rubber optics guard ensuring shock absorption in the event of knocks and falls.

Operating with nickel metal hydride batteries, they offer durability without memory effect of conventional battery performance.

The L500 series comes in different versions: standard, flashing mode, LED, with normal or fast charger.

The new versions are Full LEDs and are available with (20) white light luminosity LED or with strobe flashing mode.

Available accessories: light-spreader cones, lights-spreader paddle "STOP/ARROW SIGN", metal bracket for storage of cones and paddles, multiple charger for 5 flashlights, etc.

* Charger sold separately.



REF.	MOD.	DESCRIPTION
		LED flashlights
2101153	L-550C/S	Rechargeable LED capacitors flashlight, 1 LED diode, (2) light levels, adjustable focus, w/out charger, multivoltage 10-30V.
		LED flashlights
2102018	L-500RFLED/BL/S	Rechargeable LED flashlight, 3 LED diodes flashlight, (20) white high luminosity LED, (2) light levels, adjustable focus, fast charge time, w/out charger, 12V
2102019	L-500RFLED/S	Rechargeable LED flashlight, 3 LED diodes flashlight, (2) light levels and strobe flashing, adjustable focus, fast charge time, w/out charger, 12V
2101117	L-500LED/S	Rechargeable flashlight w/ 6V 10W halogen lamp, (20) high luminosity LED (10 LED red colour and 10 LED amber colour), (1) light level, standard charge time, adjustable focus, w/out charger, 12V
2101120	L-500RLED/S	Rechargeable flashlight w/ 6V 10W halogen lamp, (20) high luminosity LED (10 LED red colour and 10 LED amber colour), (1) light level, fast charge time, w/out charger unit, adjustable focus, 12V
2101120-01	I L-500RLED/BL/S	Rechargeable flashlight w/ 6V 10W halogen lamp, (20) white high luminosity LED, (1) light level, fast charge time, adjustable focus, w/out charger, 12V
		Flashing mode flashlights
2101110	L-500I/S	Rechargeable flashlight w/ 6V 10W halogen lamp, (1) light level, flashing, standard charge time, adjustable focus, w/out charger, 12V
		Standard flashlights
2101096	L-500/S	Rechargeable flashlight w/ 6V 10W halogen lamp, (2) light levels, standard fast charge time, adjustable focus, w/out charger, 12V
2101123	L-500R/S	Rechargeable flashlight w/ 6V 10W halogen lamp, (2) light levels, fast charge time, adjustable focus, w/out charger, 12V

Voltage:	12 V
Halogen lamp:	Bi-pin G4 6V 10W (standard charge) Bi-pin G4 6V 8W (fast charge)
Amber/red LEDs:	10 LEDs GEN I
White LEDs:	20 LEDs GEN II
Rechargeable battery:	Niquel-MetalHidruro 6V 3.5 Ah (standard charge) Niquel-MetalHidruro 6V 2.5 Ah (fast charge)
Charge time:	30 hours (standard charge) 2.5 hours (fast charge)
Battery life:	Amber/red LEDs: 24h White LEDs: 6-12h Flashing mode: 2h 40' High intensity: 2h Low intensity: 2h 40' High intensity 3 LEDs: 2h 30' Low intensity 3 LEDs: 3h 40' Flashing mode 3 LEDs: 2h

	REF.	MOD.	DESCRIPTION
	KEF.	мор.	DESCRIPTION
			Accessories
			Flashlight Charger * Charger sold separately
	2101094REC	CL-510	Standard flashlight charger for L500 Series flashlights, 12V
	2101121REC	CL-510R	Fast flashlight charger for L500R Series flashlights, 12V
	2101098	CM-510	Multiple charger, (5) L500 Series flashlights, 220V
	2102013	AL-500/400	Adapter, 12VDC/220V AC, for CL510 and CL510R flashlight charger
	2101154REC	CL-550	Capacitors flashlight charger for L550C Series, multivoltage 10-30V
			Light-Spreader
	9151270	DL-500	Light-spreader cone for L500 series flashlight, (fluorescent yellow colour)
	9151270-01	DL-500	Light-spreader cone for L500 sereis flashlight, (fluorescent red colour)
	9151270-02	DL-500	Light-spreader cone for L500 series flashlight, white (Recomended the use with L500LED flashLight series for signaling traffic)
	2101099	DL-500/2C	Light-spreader cone for L500 series flashlight, amber/red speading-Lens.
	2101100	DL-500/3C	Light-spreader cone for L500 series flashlight series, white/ amber/red speading-Lens.
	2101101	DL-500/3C	Light-spreader cone for L500 series flashlight, white/ green/red speading-Lens.
			Paddles
	1005066	PD-500	Luminous paddle for L500 series flashlight w/ 'Stop' and Arrows Signs.
			Sopport for light-spreader and paddle
	8299018	SCO-500/400	Metal bracket for flashlight cone, black
	8136813	SPD-500/400	Luminous paddle metal bracket, Series L500

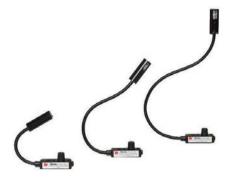
READING LAMPS

LITTLITE

Sleek, low profile gooseneck lamps efficiently produce light in a concentrated area and can be aimed exactly where you need it.

Littlite is designed to meet the most demanding needs. The bright white light is perfect for reading maps, etc.

Littlite is available with halogen lamp or as LED version.



Voltage:	12 V
Consumed intensity:	Hallogen: 0.5 Amp LED: 0.1 Amp
Dimensions: Gooseneck length:	18 x 76 x 25 mm Depending on model

REF.	MOD.	DESCRIPTION
		LED
LF12ES-LED	LF12ES-LED	12" Littlite Model, LED Lamp, metal Bracket, 12V, on/off switch control, 30cm gooseneck
LF18ES-LED	LF18ES-LED	18" Littlite Model, LED Lamp, metal Bracket, 12V, on/off switch control, 45cm gooseneck
2101131-01	LEC-35	LED lamp reading, with flange, on/off switch control, 35cm gooseneck
2101130-01	LEC-50	LED lamp reading, with flange, on/off switch control, 50cm gooseneck
		HALOGEN
5001048	LF12ER	12" Littlite Model, Halogen Lamp, metal Bracket, 12V, Rheostat control, 30cm gooseneck
5001153	LF18ERB	18" Littlite Model, Halogen Lamp, metal Bracket, 12V, wires from base, Rheostat control, 45cm gooseneck * All references above have 1 year warranty minimum (parts & labour). For more information, please refer to the price list (Sales conditions-Limited warranty) or contact our sales department.

SW Series

The **SW Series** of switches is made in black plastic for unobtrusive installation in vehicles or on motorcycles. They include illuminated function displays and protective rubber cases ensuring water-resistance in wet conditions.



REF.	MOD.	DESCRIPTION
8216090	SW-521	ON-OFF Switch, illuminated w/ protection
8216089	SW-522	ON-OFF-ON Conmuter, illuminated w/ protection
8216091	SW-523	OFF-ON Push button, illuminated w/ protection
		Mounts Accesories
8150748	BM-SW2	Metal base (2) SW Series switches
0100740	DIVI-3VVZ	
8150749	BM-SW3	Metal base (3) SW Series switches

Megaphones

Available are 2 types of megaphones. Both work with batteries.

A12SA

Power:	16 W
Batteries:	8 x "AA"
Dimensions:	267 x 257 x 185 m
Weght:	1800 g



REF.	MOD.	DESCRIPTION
2020118	A12SA	Voice gun megaphone, 16W output, aproximate range 400 meters, (batteries not included)

BACK-UP ALARMS

Back-up alarms

Federal Signal **back-up alarms** are dependable, affordable alarms ideal for use on utility, construction and other specialty vehicles. Each of the models features a glass reinforced nylon housing for long-lasting durability that can be steam cleaned.

The EVACUATOR (Plus) models are available with dual- or single-function feature. The dual-function feature allow users to choose from a 'pulse' tone, which is intermittent signal used for back-up warning, or a 'constant-on' tone, which is a solid signal that can be used to signal motion such as a truck-platform lifting or moving outriggers. Single-function models only have the 'pulse' tone.



252

This small device can alert the other vehicles in the reversing maneuver, intermittent beeping.





EVACUATOR frontal

EVACUATOR rear

Voltage:	210333/210335 - 9-48 VDC 210339 - 12-24VDC
Current Draw (at 12vdc):	210339 - 0.02 Amp 210333/210335 - 0.17 Amp
Sound Output:	210333 - 107dB 210335 - 112dB 210339 - 97dB
Dimensions:	73 x 73 x 62mm
Ship Weight:	0.3 kg - 210504 : 0.9kg

REF.	MOD.	DESCRIPTION
2020107	252SSG	Alarm, 97 dB, 12-48V
210339	210339SSG	97 dB, Single function, 12-24V
210333	210333SSG	Evacuator Plus, 12-48V, output 107 dBA
210335	210335SSG	Evacuator Plus, 12-48V, output 112 dBA

Flashers and relays

Available is a wide range of flashers for LED and halogen lights. There are different models, like for flashing mode, simultaneous flashing, alternated flashing, etc.



	REF.	MOD.	DESCRIPTION
	650201	INTELLI-F	Intelli-Flash, (8) flash patterns, (2) outputs - 6Amp, 12V
	9019034	FHL2	95 FPM, (2) 10 amp loads w/ high-beam override
	RI-V12	RI-FSV12	Vama Flashing relay, alternate & simultaneous, (2) wholes (2) lamps, 55W 12V
	RI-V24	RI-FSV24	Vama Flashing relay, alternate & simultaneous, (2) wholes (2) lamps, 55W 24V
	2006021	SF-20A	Speaker failure detection sensor, 12V
	2006024	SF-20A-24	Speaker failure detection sensor, 24V
	2006022	SF-20L	Lamp failure detection sensor, 12V

STINGER

Stinger spike system is designed for tire deflation devices. The Stinger spike system comes ready to use. Simply pull/slide the Stinger system across the rode. It will automatically open and expand.

The spikes automatically rocks toward the tire, pointing the spikes directly at the tread, allowing the full length of the spike to be used for penetration. The hollow spikes control the tire deflation rate, preventing a blowout and sudden loss of control.





REF. MOD. DESCRIPTION

Spike System includes 40 feet of rope with handle, spike replacement kit, spike insertion tool, and hard storage case

Spike System

90210	Spike system, 2010 Metro, 10'			
90200	Spike system, 2015 Trooper, 15.5'			
90225	Spike system, 2025 Defender, 25'			
93200	Spike system, 3015 XL, 15.5' with 2.1" spikes			
	Training Systems (unit with out spikes plus training manual and video)			
90035	Training Unit, 15.5' with case			
	Accessories and Kits			
90502	Pursuit prevention device, Rat Trap II, pocket-size 1/4" diameter spikes			
50035	Spike insertion tools			
90025	Spike section, single subassembly, Series 2000			
90026	Replacement spike kit, Series 2000, 10 spikes, tip guards and sleeves			
90027	Replacement spike kit, Rat Trap II, 4 spikes			
90031	Case, 2010 Metro and 2015 Trooper			
90041	Case, 2025 Defender			
90400	Rope and handle			
93026	Replacement spike kit, Series XL, (10) spikes, tip guards, and sleeves			









Risk Reduction: Priority Signaling



Increasing number of vehicles, slow, difficult and heavy traffic, driver distraction caused by radios, cell phones, conversations with other passengers, etc, hinder the work of emergency vehicles when they need to use its right of way, or indicate their presence at any time.

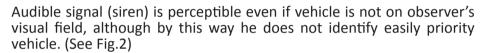
To ensure own and other citizens safety, emergency professionals should equip their vehicles with effective optical and acoustic signalling.



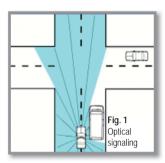
Optics and Acoustics Signs

In most European countries, priority vehicles must be identified by warning blue lights and sirens.

Optical signal (priority lights) is only visible with no obstacles between it and the observer. Once perceived by this observer, emergency vehicle identification is safe and immediate. (See Fig.1)



Both systems are complementary and their combination ensures accurate identification, early enough to get a quick and safely passageway.







Light Sources and European Regulation

In Europe, warning lights must comply with R65 Regulation from Geneva Accords, which regulate flash frequency, intensity, colour, temperature, sealing, etc.

Lights regulations can be grouped into three categories: rotating (halogen lamp rotating beam), strobe (gas discharge lamp xenon) and LED diodes (light emitting diodes). Three technologies are used on emergency vehicles signalisation.

R65 Regulation allows an emergency vehicle to be equipped with two warning lights, or even more, synchronized in two groups.



Siren Sounds and Regulation

In Europe does not exist in a common regulation for sirens use on emergency vehicles.

Several regulations cover different sound pressure in dB, harmonic frequencies and sound patterns. FEDERAL SIGNAL VAMA has got different versions available, approved in all European countries, which accurately reproduce different required sounds.

The obtained signal is amplified by the speaker, in order to reach different sound pressures.





Non-regulated priority lights

Nowadays, directional lights have been used to enhance other vehicle priority lights.

Some countries have regulations for this kind of lights, including blue colour, halogen, flashing strobe xenon or LEDs lights.



Traffic Signalling for stopped or slow vehicles

As important as optical and acoustics of a vehicle, traffic signals for a perfect identification of stopped or slow vehicles became an important part of emergency warning lights.

Blue lights help in this case, but rear-facing amber lights are more effective. These could be halogen, strobes, LED lights or directional warning lights (SignalMaster).



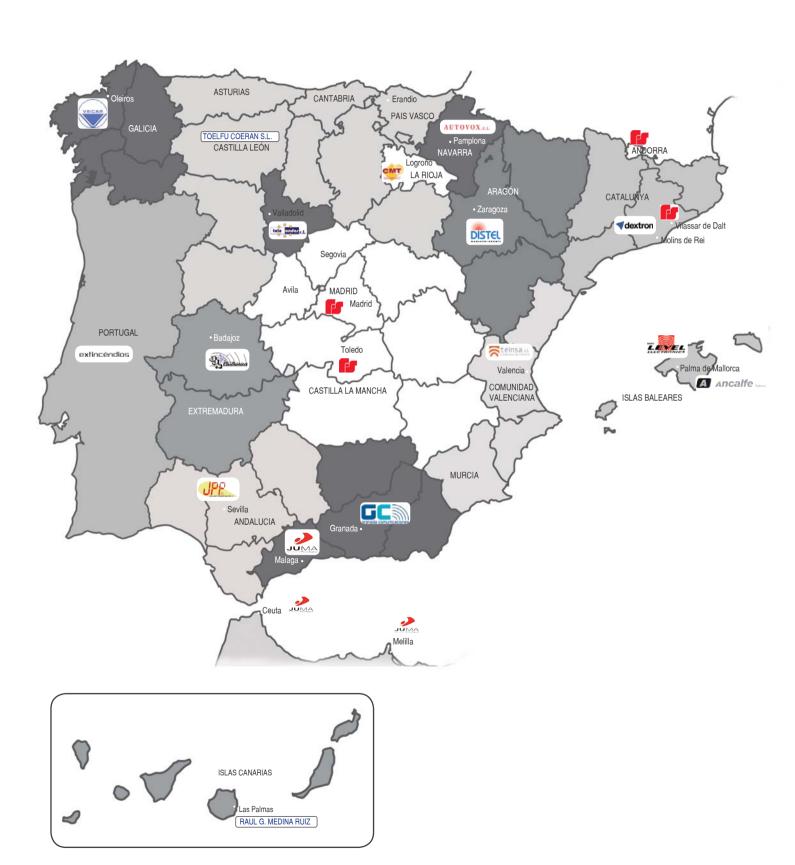
Other supplemental warning lights

According to their different functions, emergency vehicles could use auxiliary lights to make emergency situations more comfortable, safe and effective.

These lights emit white light whose beam could be concentrated or diffused. According to their function, they can be safety lights, work lights, side lights, etc.



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ANDALUCIA



JPP ELECTRONICA 1, S.L.

Polig. Ind. Autopista c/ Secoya C, nave 8 41020 Sevilla Phone: 95 452 01 66 Fax: 95 425 88 63 email:comercial@jppelectronica.com www.jppelectronica.com



GRANADA COMUNICACIONES 2012 SLU Carretera Sierra Nevada Km. 6 18191 Pinos Genil - Granada Phone: 958 48 91 11 Fax: 958 48 67 36 email:granadacom@gmail.com www.granadacomunicaciones.es

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Camino Condesa-Edif. Siglo XXI Bjos. s/n 29640 Fuengirola, Málaga Phone: 902 10 33 43 Fax: 952 47 17 96 email:hola@juma.es www.iuma.es

ARAGON



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Johannes Kepler, 10 (Polg.Ind.Molino del Pilar) 50015 Zaragoza Phone: 976 73 73 75 Fax: 976 73 72 66 email:distel@distelradio.es www.distelradio.es

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COMUNIDAD VALENCIANA MURCIA



TEINSA S. L.

Poligono Ind. Virgen de la Salud Calle 5 parcela 48A 46950 Xirivella, Valencia Phone: 902 20 57 50 Fax: 96 313 47 37 email:comercial@teinsa.es www.teinsa.es

CASTILLA LA MANCHA



FEDERAL SIGNAL VAMA,S.A.

Avda. Baviera, 13 28028 Madrid Phone: 91 355 22 00 Fax: 91 355 35 61 email:marketing@vama.es www.fedsigvama.com

CASTILLA LEON (Valladolid)



TELEONDAS, S.L.

c/ Alicante, 2 47012 Valladolid Phone: 983 29 07 01 Fax: 983 39 83 29 email:teleondas@teleondas.es

CATALUNYA



DEXTRON, S.A.
Polig. Ind. El Plà, 56-58
c/ Miquel Torello i Pages, nave 4
08750 Molins de Rei, Barcelona
Phone: 93 333 41 04
Fax: 93 440 69 03 email:dextron@dextron.net www.dextron.net

CATALUNYA ANDORRA



FEDERAL SIGNAL VAMA, S.A.

c/ Dr. Ferran, 7 08339 Vilassar de Dalt, Barcelona Phone: 93 741 79 00 Fax: 93 750 78 23 email:marketing@vama.es www.fedsigvama.com

EXTREMADURA



J.J.N. ELECTRONICA

Calle de los Transportes, nave 11
Polígono Ind. Reina Sofía
06800 Merida
Phone: 924 30 00 04
Fax: 924 30 35 51 email:jjn@jjnelectronica.es www.jjnelectronica.es

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15165 Bergondo, A Coruña
Phone: 981 63 10 00
Fax: 981 63 11 04

email:veicar@veicar.com www.veicar.com

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07009 Palma de Mallorca
Phone: 971 430 767
Fax: 971 760 019 email:recepcion@talleresancalfe.com www.talleresancalfe.com

ISLAS CANARIAS



RAUL G. MEDINA RUIZ

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35012 Las Palmas - Schamann Gran Canaria Phone: 928 20 95 64 Fax: 928 20 95 64 email:vama.canarias@telefonica.net

LA RIOJA



C.M.T COMUNICACIONES MÓVILES TERRESTRES,SL

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MADRID **CASTILLA LEON**



FEDERAL SIGNAL VAMA, S.A.

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BULGARIA



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SELVIT BULGARIA LTD
Town Byala 7100, Bulgaria
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Phone: +359 887 325 581
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INSTEL-PROMET d.o.o.

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CZECH REPUBLIC



PROGRES SERVIS SIBRINA spol.s.r.o.

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DENMARK



AUTOTEC Aps
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4600 Koge
Phone: +45 56 16 19 20
Fax: +45 56 16 19 29
email:info@autotec.dk www.autotec.dk

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AVESTARK OÜ

AVESTAR OU Kalmistu tee 30B 11216 Tallinn Phone: +372 6771 000 Fax: +372 6771 009 email:sven.kabun@avestark.ee www.avestark.ee

FINLAND



SARCO OY

Niittyläntie 3 00620 Helsinki Phone: +358 9 77 71 500 Fax: +358 9 75 71 942 email:sarco@sarco.fi www.sarco.fi

ABKATÎ ROTOMAN Oy

ABKATY ROTOMAN OY

Hankasuontie 5 00390 Helsinki Phone: +358 9 5486230 Fax: +358 9 5485226 email:info@rotoman.fi www.rotoman.fi

FRANCE



SIRAC Sarl

14 à 30 Rue de Mantes 92711 Colombes Cedex Plone: +33 14 78 68 777 Fax: +33 14 78 46 012 email:info@sirac.fr www.sirac.fr

GERMANY



RAUWERS GmbH

HAUWENS GMBH Bahnhofstrasse 1 57610 Altenkirchen - Germany Phone: +49 2681 950 98 90 Fax: +49 2681 950 98 91 email:info@rauwers-gmbh.de www.rauwers-gmbh.de

GREECE



LANCIA JEEP HELLAS

LANGIA JEEP RELLAS Kifissias Av. 240-242 15231 Halandri Phone: +30 2106700248 Fax: +30 2106700489 email:abouras@lancia-jeep.gr www.lancia-ieep.gr

HUNGARY



SCORPIO Ltd. Pomázi út 15. 1037 Budapest Phone: +36 1 320 21 00 Fax: +36 1 349 75 71 email:info@scorpio.hu

www.scorpio.hu

ICELAND



RADIONAF EHF Smidjuvegur 52 200 Kópavogi Phone: +354 567 21 00 Fax: +354 567 21 16 email:radiraf@radioraf.is

www.radioraf.is

IRELAND



ANDERCO SAFETY Ltd. 52, Eastgate drive Little Island, Cork Phone: +353 21 43 55 355 Fax: +353 21 43 51 632 email:info@anderco.ie www.anderco.ie

ISRAEL



GAL-OR Ltd 3, Shoncino St 67216 Tel Aviv Phone: +972 3 76 10 000 Fax: +972 3 56 28 736 email:puka@gal-or.net

www.gal-or.net

ITALY



SIRTEL S.R.L Via Taranto 87 A/10 74015 Martina Franca (Taranto) Phone: +39 080 48 34 959 Fax: +39 080 43 04 011 email:info@sirtel.biz www.sirtel.biz

B.M. SERVIZI s.r.I. Via per Cantalupo 3, 21040 Origgio (Varese) Phone: +39 02 96731674 Fax: +39 02 96734018 email: info@bmservizi.it www.bmservizi.it

LITHUANIA



IKSADOS GTC UAB "IKSADOS" GTC Savanoriu pr. 219 02300 Vilnius Phone: +370 5 205 88 91 Fax: +370 52 64 29 99 email:info@iksadosgtc.lt www.iksadosgtc.lt

LUXEMBURG



RAUWERS CONTROLE S.A.
Rue Navez 78 -86
B1000 Brussels
Phone: +32 22 40 09 00
Fax: +32 22 16 05 25
email;jbijsterbosch@rauwers.be www.rauwers.be

NETHERLANDS



ABIOM

Bijsterhuizen 22-18 6604 LD Wijchen Phone: 024 3734422 Fax: 024 378 48 88 email:Info@Abiom.nl www.abiom.nl

WIEGEL BV 's Gravendamseweg 53, 2215 TC Voorhout Phone: +31 252 24 00 60 Fax: +31 252 24 00 66 email:r.vantol@wiegel.nl www.wiegel.nl

NORWAY



SIMARUD ELECTRONIC AS

Regnbueveien 8 1405 Langhus Phone: +47 64 91 80 80 Fax: +47 64 91 80 90 email:se@simarud.no www.simarud.no



ROSENDHAL AS

Postboks 18 Kokstad 5863 Bergen - Norway Phone: +55 11 23 50 Fax: +55 11 23 51 email:firma@rosendahl.no

POLAND



FEDERAL SIGNAL VAMA oddział w Polsce.
Bytom Industriał Park, Hall C3
AT UL. Siemianowicka 98 Bytom (Poland)
Phone: +48 32 789 53 40
Fax: +48 32 789 53 41
Mobile: +48 607 420190
e-mail: nszczenapk@wama.es e-mail: pszczepanek@vama.es www.fedsigvama.com



TRANSMED

Ul. M. Rodziewiczowny 25 05-270 marki 05-270 marki Phone: +48 22 77 14 165 Fax: +48 22 77 14 619 email:transmed@federal.pl www.federal.pl

ROMANIA



Intersofex INTERSOFEX S.R.L.

Panduri 71, sector 5 050656 Bucuresti Phone: +40 21 41 08 359 Fax: +40 21 41 04 012 email:office@intersofex.ro www.intersofex.ro

SERBIA

STEVCEVIC CO. STEVCEVIC CO.

Bulevar despota Stefana 204 B 11060 Beograd, Srbija Phone: +381 11 329 16 26 Fax: +381 11 275 96 49 email:marijana@stevcevic.rs www.stevcevic.rs

SLOVAKIA



SELVIT s.r.o. Ulica Tichá 15A 010 01 Zilina Phone: +421 41 56 89 416 Fax: +421 41 50 06 106 email:selvi@selvit.sk

SLOVENIA



IVL D.O.O. Brest 29a, IG 1292 Ljubljana Phone: +386 12 86 26 27 Fax: +386 12 86 31 55 email.info@ivl.si

SWEDEN

SAFE4U

SAFE4U Security Of Sweden AB Warfvingesväg 30 112 51 Stockholm Sweden Phone: +46(0)8 410 700 88 www.safe4u.se

HBA FORDONSTEKNIK AB

Fagelviksvagen 18-20 145-53 Norsborg Phone: +46 8 88 09 00 Fax: +46 8 97 67 47 email:info@hba.nu www.hba.nu

SWITZERLAND



MARTY SYSTEMTECHNIK AG

Gewerbestrasse 2 8212 Neuhausen Phone: +41 52 670 13 70 Fax: +41 52 670 13 71 email:info@martyag.com www.martyag.com

UNITED KINGDOM



ANDERCO SAFETY Ltd.

ANDERCU SAFEIY Ltd.
52, Eastgate drive
Little Island, Cork
Phone: +353 21 43 55 355
Fax: +353 21 43 51 632
email:info@anderco.ie www.anderco.ie

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FEDERAL SIGNAL VAMA S.A. - HEADQUARTERS Doctor Ferran 7, 08339 Vilassar de Dalt, Spain Phone: +34 93 741 79 00 - Fax: +34 93 750 78 23 e-mail: marketing@vama.es - www.fedsigvama.com

FEDERAL SIGNAL VAMA S.A. - oddzial w Polsce Oddzial W Polsce - Bytom Industrial Park, Hall C3 AT UL. Siemianowicka 98 Bytom (Poland) Phone: +48 32 789 53 40 - Fax: +48 32 789 53 41 Mobile: +48 607 420190 e-mail: pszczepanek@vama.es www.fedsigvama.com Federal Signal Vama S.A. Madrid Office Avda. Baviera, 13 28028 Madrid, Spain Phone: +34 91 355 22 00 Fax: +34 91 355 35 61 e-mail: commadrid@vama.es www.fedsigvama.com

SALES REPRESENTATIVE

Mr. Alessandro Stefani Mobile: +39 348 30 48 540 Phone: +39 040 63 38 54 Fax: +39 040 63 38 54 e-mail: astefani@fsvama.it www.fedsigvama.com

Mr. Tomasz Kalicinski Mobile: +48 602 39 33 73 Phone: +48 32 789 53 40 Fax: +48 32 789 53 41 e-mail: tkalicinski@fedsigvama.pl www.fedsigvama.com

Sr. Piotr Cholewinski Mobile: +48 607 80 8 458 e-mail: piotrc@fedsigvama.pl www.fedsigvama.com

Sr. Phil Frost Mobile: +44 (0) 797 11 60 128 e-mail: phil.frost@btinternet.com www.fedsigvama.com