

# SMART VECTOR<sup>®</sup> LIGHTING SYSTEM



*The Smart Vector system has two multi-function "Smart" pods.*

Combining the conventional with the revolutionary, Federal Signal developed the Smart Vector<sup>®</sup> emergency lighting system.

Using the same V-shape design as the Vision<sup>®</sup> system (Product Bulletin #3116), the Smart Vector system provides maximum warning light efficiency to all sides of your emergency response vehicle. The unique shape allows light from multiple sources to be visible at the 45° and 90° angles found at intersections. The special shape of the domes improves light transmission (brightness).

Each Smart Vector system consists of five modular pods and two state-of-the-art microprocessor based "Smart" pods. The Smart pods can perform any primary or secondary warning function (both Smart pods perform the same function). The other five pods come from the factory with user-specified or preselected options.

## SMART PODS

Each Smart pod contains a parabolic reflector, 50-watt halogen bulb, and a 12-volt stepper motor. The combination of electronics and stepper

motor allow the rotator assembly to perform multiple functions. Primary lighting functions include: rotating (95, 120, or 175 flashes per minute), oscillating (front, side, or rear), and flashing (front or rear). The primary function may be changed to meet future requirements.

In addition to primary warning functions, the Smart pods can also be set for secondary lighting functions. Secondary functions include: takedown lights, work lights, alley lights, and jog right and left.

## MAINTENANCE

The modular design and the use of options with individual motors enable the user to easily service the Smart Vector system, minimizing downtime. Removal of two Torx head screws allows easy access to the individual light pods. Standard 795, 796, and H1 bulbs are used for quick replacement.

## EASY TO INSTALL

The Smart Vector lighting system can be installed in any vehicle with a 12-volt negative ground electrical system. The lighting system

## QUICK REFERENCE

### FEATURES

- Patented V-shape design for maximum light warning efficiency.
- Two "Smart" pods allow selection of several "on command" primary and secondary light patterns.
- Individual light pods permit superior aerodynamic performance and light transmission.
- Variety of options available, including built-on SignalMaster™, flashing lights, and intersection clearing lights.

### APPLICATIONS

- Emergency services vehicles

### APPROVALS

- All rotating lights meet SAE J845
- All lightbar flashing lights meet SAE J595
- Cal steady burn light meets CAC Class B
- Brake/turn/tail lights meet SAE J186

### REPLACEMENT PARTS

Bulb, rotator	Z8440A265A-01
Bulb, flasher	Z8548A028A
Bulb, alley, takedown, TCL	Z8107A119A
Bulb, ICL	Z8440A265A-01
Dome, red	Z8572001A-01
Dome, amber	Z8572001A-02
Dome, blue	Z8572001A-03

### RELATED PRODUCTS

PA400SS Siren/Light Control Bulletin #5104
SmartSiren <sup>®</sup> Siren/Light Control Bulletin #5113
SW400 Switch Controls Bulletin #5116

comes equipped with hook-on or permanent mounting feet. Specify your mounting needs when ordering.

## SIMPLE TO OPERATE

With the use of a standard control head, such as Federal Signal's model SW400SSJ (pictured below), the Smart Vector system can be operated with ease and efficiency. Also, Federal's SmartSiren® siren and light control combines a full-featured siren with warning light control in a single, compact control head.



SW400SSJ

## COLOR CUSTOMIZATION

The seven individual domes allow you to create a light system that complements your entire fleet of response vehicles. Pod domes and inserts are available in a variety of colors and are easily removed and replaced. Two Torx head screws are used to secure the domes in place. Colored dome inserts snap into molded tabs and are held in place with the dome.

When ordering, specify dome colors for the seven pods. For a two-color dome, order a clear dome and colored inserts for the front and the rear of the dome. Available colors include: red, blue, amber, and green. Colored front inserts with alley light cutout are available for use with the alley light option.

## SIGNALMASTER™ DIRECTIONAL LIGHT

Federal's SignalMaster, an optional rear-facing directional light, provides an extra measure of safety. Using sequentially flashing lights to build patterns, oncoming motorists can be warned of emergency situations. Directional signals include: left, right, center-out, and flashing warn. Vector models with the "VCS" prefix include an eight-lamp halogen SignalMaster built onto the system. Models with the "VCL" prefix include an eight-lamp LED SignalMaster.



A separate control unit is required to operate the SignalMaster system, and different models are available depending on features desired. All SignalMaster controls offer LED displays that emulate the active pattern.



SMC1 standard control



SMC5 deluxe control

Model **SMC1** has a three-position slide-switch and a pushbutton. The slide-switch is used to select directional patterns, and the pushbutton activates the flashing warning. Model **SMC3** provides the same features and functions as the SMC1 and adds a second pushbutton to use with auxiliary warning lights. Model **SMC5** is the deluxe controller offering all the functionality of the SMC3 and adding two more pushbuttons. The additional buttons control a fast/slow speed option and a low power mode.

## DIMENSIONS

<i>Model</i>	<i>Description</i>	<i>Height</i>		<i>Width</i>		<i>Depth</i>		<i>Ship. Weight</i>	
		<i>in.</i>	<i>cm.</i>	<i>in.</i>	<i>cm.</i>	<i>in.</i>	<i>cm.</i>	<i>lbs.</i>	<i>kg.</i>
SV4400	Smart Vector, 7-Pod, Modular	5.9	15.0	28.0	71.1	44.0	111.8	53.0	23.8
SVL4400	Smart Vector, 7-Pod, Modular w/ SML8	5.9	15.0	28.0	71.1	44.0	111.8	59.0	26.5
SVS4400	Smart Vector, 7-Pod, Modular w/ SML8	5.9	15.0	28.0	71.1	44.0	111.8	59.0	26.5
SV4800	Smart Vector, 7-Pod, Modular	5.9	15.0	28.0	71.1	47.8	121.4	54.0	24.3
SVL4800	Smart Vector, 7-Pod, Modular w/ SML8	5.9	15.0	28.0	71.1	47.8	121.4	60.0	27.0
SVS4800	Smart Vector, 7-Pod, Modular w/ SML8	5.9	15.0	28.0	71.1	47.8	121.4	60.0	27.0
SV6000	Smart Vector, 7-Pod, Modular	5.9	15.0	32.0	81.3	60.0	152.4	57.0	25.6

## LIGHTING SPECIFICATIONS

<i>Model</i>	<i>Description</i>	<i>Lamp Type</i>	<i>Total Watts</i>	<i>Current Draw</i>	<i>Flash Rate</i>	<i>Features that may be installed in same pod as selected option</i>
-	Smart pod	795	50	3.9	-	None
V-ROT-A	Vector, Standard Rotator (95 FPM)	H1	55	4.3	95	(1) of: rear flasher or work light
V-MED-A	Vector, Medium Rotator (120 FPM)	H1	55	4.3	120	(1) of: rear flasher or work light
V-FAST-A	Vector, Fast Rotator (175 FPM)	H1	55	4.3	175	(1) of: rear flasher or work light
V-OSC-A	Vector, Oscillating (Front) oscillates with a 60° range centered at 30° to the front of the vehicle	H	55	4.3	160	(1) of: rear flasher or work light
V-OSCR-A	Vector, Oscillating (Right) oscillates with a 60° range centered at 30° to the right of the vehicle	H	55	4.3	160	(1) of: rear flasher or work light
V-OSCL-A	Vector, Oscillating (Left) oscillates with a 60° range centered at 30° to the left of the vehicle	H	55	4.3	160	(1) of: rear flasher or work light
V-OSCRR-A	Vector, Oscillating (Rear) oscillates with a 60° range centered at 30° to the rear of the vehicle	H	55	4.3	160	does not allow for additional options in pod
V-ICL-A	Vector, Intersection Clearing (Front) oscillates to the front of the vehicle with a 110° range	H	55	4.3	120	(1) of: rear flasher or work light
V-ICLF-A	Vector, Intersection Clearing (Fast, Front) oscillates to the front of the vehicle with a 110° range	H	55	4.3	190	(1) of: rear flasher or work light
V-ICLFL-A	Vector, Intersection Clearing (Fast, Left) oscillates to the left of the vehicle with a 110° range	H	55	4.3	190	(1) of: rear flasher or work light
V-ICLFR-A	Vector, Intersection Clearing (Fast, Right) oscillates to the right of the vehicle with a 110° range	H	55	4.3	190	(1) of: rear flasher or work light
V-FF-A	Vector, Front Flash	H	35	2.7	90	rear TCL or alley lts. & (1) of: rear flasher or work light
V-RF-A	Vector, Rear Flash	H	35	2.7	90	front TCL, OSC., ROT or alley lts. & (1) of: front flasher, takedown or Cal. steady burn
V-AL-A	Vector, Alley Lights	H	50	3.9	-	takedown, steady burn, front flasher & rear flasher, or work light
V-TD-A	Vector, Takedown Lights	H	50	3.9	-	rear TCL or alley lts. & (1) of: rear flasher or work light
V-CAL-A	Vector, Steady Red Light	H	50	3.9	-	rear TCL or alley lts. & (1) of: rear flasher or work light
V-WORK-A	Vector, Work Light	H	50	3.9	-	front TCL, OSC., ROT or alley lts. & (1) of: front flasher or work light
V-MIR-A	Vector, Mirror/Divider	-	-	-	-	Generally mounted with rotator. Can choose (1) of: rear flasher, takedown, or Cal. steady burn
V-TCLF-A	Vector, Meteor Traffic Clearing (Front)	H	50	3.9	-	(1) of: rear flasher or work light

## How To ORDER

1. Choose Vector system – Specify All Options or PreSelect. VCS models include halogen SignalMaster, and VCL models include LED SignalMaster (purchase controller separately).

### Specify All Options

#### Base System

SV4400	44" Smart Vector
SVL4400	44" Smart Vector with SMLED8
SVS4400	44" Smart Vector with SML8
SV4800	48" Smart Vector
SVL4800	48" Smart Vector with SMLED8
SVS4800	48" Smart Vector with SML8
SV6000	60" Smart Vector

#### Factory Installed Options (specify pod no.)

V-ROT-A	(1) 95 FPM rotator
V-MED-A	(1) 120 FPM rotator
V-FAST-A	(1) 175 FPM rotator
V-OSC-A	(1) oscillator, front
V-OSCR-A	(1) oscillator, right
V-OSCL-A	(1) oscillator, left
V-OSCRR-A	(1) oscillator, rear
V-ICLF-A	(1) intersection clearing light, center
V-ICLFL-A	(1) intersection clearing light, left
V-ICLFR-A	(1) intersection clearing light, right
V-TCLF-A	(1) traffic clearing light, front
V-TCLFRR-A	(1) traffic clearing light, rear
V-FF-A	Front flashing lights (pair)
V-RF-A	Rear flashing lights (pair)
V-AL-A	Alley lights (pair)
V-TD-A	(1) Takedown/work light, front
V-WORK-A	(1) Takedown/work light, rear
V-CAL-A	(1) California steady burn
V-MIR-A	(1) mirror

### PreSelect (order by model number)

PRESELECT SYSTEMS	OPTIONS INCLUDED						
	POD 1	POD 2	POD 3	POD 4	POD 5	POD 6	POD 7
<b>48" Models</b>							
SV4801	95 FPM	SMART	95 FPM	175 FPM	95 FPM	SMART	95 FPM
<b>SVS4801</b>	95 FPM	SMART	95 FPM	175 FPM	95 FPM	SMART	95 FPM
SV4810	95 FPM	SMART	175 FPM	OSC	175 FPM	SMART	95 FPM
<b>SVS4810</b>	95 FPM	SMART	175 FPM	OSC	175 FPM	SMART	95 FPM
SV4811	95 FPM	SMART	175 FPM	TD	175 FPM	SMART	95 FPM
<b>SVS4811</b>	95 FPM	SMART	175 FPM	TD	175 FPM	SMART	95 FPM
SV4814	95 FPM	SMART	175 FPM	TCLF	175 FPM	SMART	95 FPM
<b>SVS4814</b>	95 FPM	SMART	175 FPM	TCLF	175 FPM	SMART	95 FPM
<b>SVL4815</b>	95 FPM	SMART	175 FPM	175 FPM	175 FPM	SMART	95 FPM
SV4817	95 FPM	SMART	175 FPM	175 FPM	175 FPM	SMART	95 FPM
<b>SVS4817</b>	95 FPM	SMART	175 FPM	175 FPM	175 FPM	SMART	95 FPM
SV4819	95 / RF	SMART	175 FPM	175 FPM	175 FPM	SMART	95 / RF
<b>SVS4819</b>	95 / RF	SMART	175 FPM	175 FPM	175 FPM	SMART	95 / RF
SV4882	95 FPM	SMART	175 FPM	CAL	175 FPM	SMART	95 FPM
<b>SVS4882</b>	95 FPM	SMART	175 FPM	CAL	175 FPM	SMART	95 FPM
SV4883	95 / RF	SMART	175 FPM	AL/CAL/AL	175 FPM	SMART	95 / RF
<b>SVS4883</b>	95 / RF	SMART	175 FPM	AL/CAL/AL	175 FPM	SMART	95 / RF
<b>60" Model</b>							
SV6001	95 FPM	SMART	95 FPM	175 FPM	95 FPM	SMART	95 FPM

2. Specify mount feet.

**VM-SB** Hook-on mount kit

**VMPK** Permanent mount kit

3. Specify hook kit (used with hook-on mount feet), purchase separately. Specify vehicle make and model when ordering.

4. Specify pod dome colors for each dome (see diagram)

**V-R** Red dome

**V-B** Blue dome

**V-A** Amber dome

**V-C** Clear dome

**V-G** Green dome

5. If necessary, order half-dome inserts (purchase separately). Specify color when ordering (red, blue, amber, green, CIE blue).

**VFI-SB-color** Front insert

**VRI-color** Rear insert

**VIAL-color** Front insert with left alley cutout

**VIAR-color** Front insert with right alley cutout

6. If necessary, order controls (purchase separately).

**SMC1** Standard SignalMaster control

**SMC3** SignalMaster control with options

**SMC5** Deluxe SignalMaster control

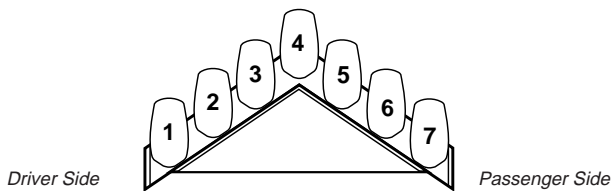
**SS2000SS-SB** SmartSiren® light/siren control

**SS2000SM-SB** SmartSiren with SignalMaster control

**PA400SS** Electronic siren with light control

**SW400SSJ** Seven-switch control module with slide and "jog" switches

POD NUMBERING DIAGRAM



**FEDERAL SIGNAL CORPORATION**  
Emergency Products

An ISO 9001 Certified Supplier  
2645 Federal Signal Drive, University Park, IL 60466-3195  
Tel.: (800) 264-3578 • Fax: (800) 682-8022  
Web: www.fedsig.com