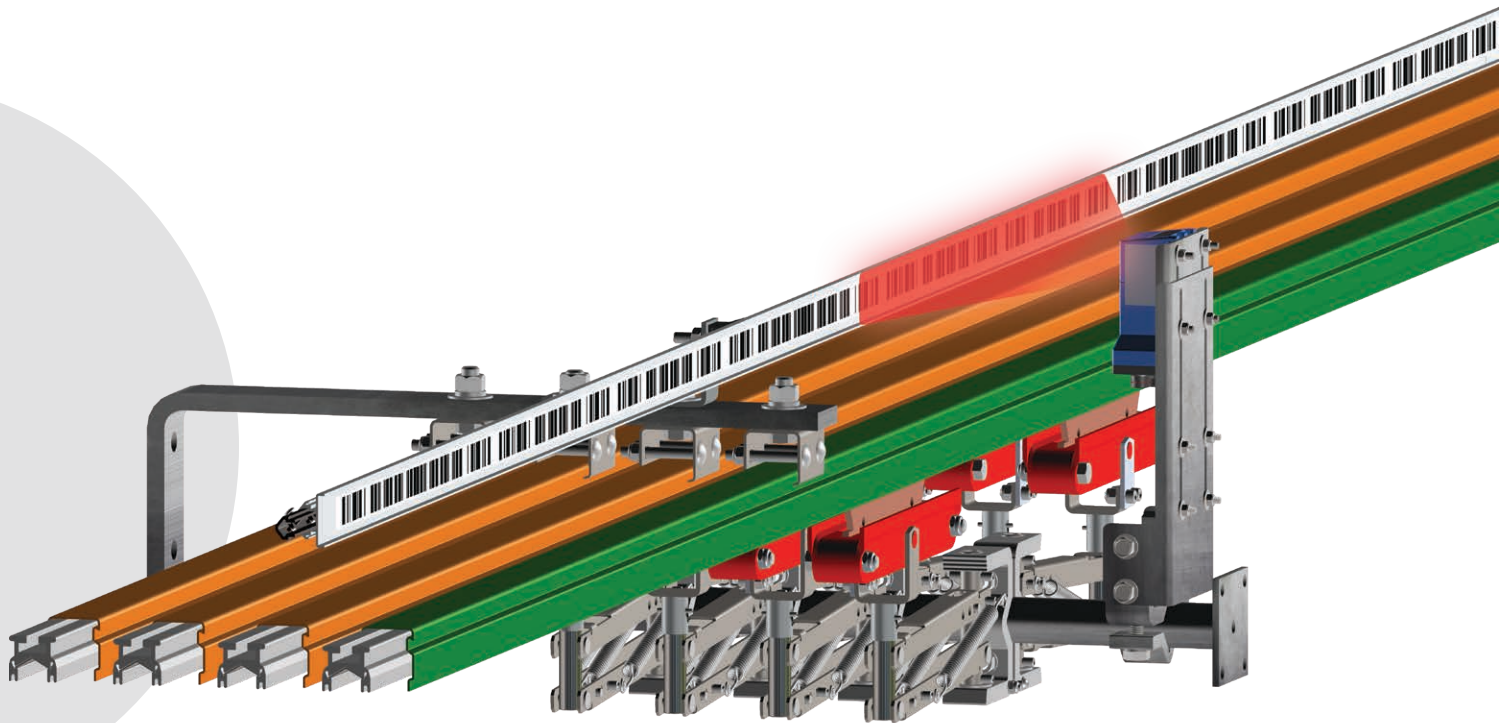


Optical Positioning Systems



CONDUCTIX
wampfler

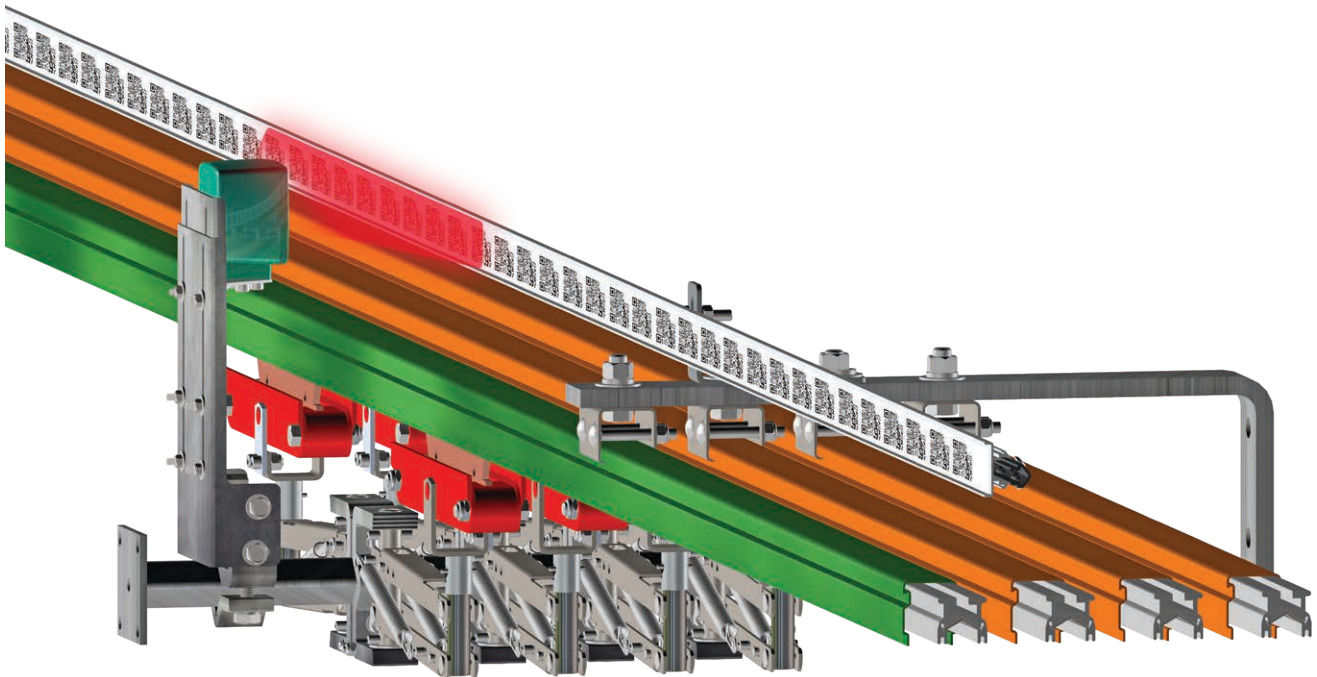
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System Overview

The **Optical Positioning Systems (OPS)** by Conductix-Wampfler provides a quick, easy, and complete solution to determine the position of equipment running along a fixed rail. Our positioning solution, combined with a control package, facilitates increased equipment usage and efficiency. The OPS is an “absolute” positioning system which means that the equipment never has to be homed or taught its location. This type of positioning system ensures trouble-free operation no matter what interruptions might occur at the work site. The optical camera provided with the OPS reads code tape to provide high positional accuracy.

Our solution is ruggedly designed for demanding industrial environments. The OPS tape rail mounts to the conductor rail brackets to help optimize the overall system footprint. Our sensors work with EtherNet/IP, PROFINET controls along with a PROFIsafe SIL 3 rated solution. The sensor bracket mounts to the conductor bar tow arm with an adjustable arm to take the hassle out of aligning the sensor to the code tape. Our system utilizes an extruded aluminum profile that holds the tape and allows for support distances of up to 10 feet. The rail is available in 10 foot or 3 meter lengths to ensure our positioning system can match up with conductor bar support spacing. We designed the system for quick installation by utilizing Safe-Lec 2 hangers to click in the tape rail and tool-free splices that utilize push pins.



Specification Data Sheet

The following data form must be filled out in order for the festoon system to be designed and perform properly.

Request Date	_____	Sales Person	_____
Company	_____	Contact	_____
	_____	Title	_____
	_____	Tel	_____
	_____	Fax	_____
Company Type	_____	E-mail	_____

Application

New Installation Retrofit Extension

System Length: _____ Feet Meters

Conductor Bar System: Safe-Lec 2 Hevi-Bar II

Other (explain) _____

Insulators: Yes No

Environmental Data

System Location: Indoors Outdoors Both

Ambient Temperature Range: Min. _____ Max. _____ °F °C

Radiant Heat? Yes No If yes, average Temperature: _____ °F °C

Mechanical Data

Number of vehicles: _____

Does system include curves: Yes No If Yes, Radius: _____ feet meters

Angle: _____ °

Vehicle Speed: _____ ft/min m/min

Desired Position Resolution: _____ mm

Communication Protocol: Profinet Ethernet I/P ProfiSAFE

Starting Position: Start at 0 (Default) Custom _____

Positioning Hardware

Tape Rail

The Tape Rail is an aluminum extrusion upon which the code tape is affixed. The Tape Rail clicks into the hanger to provide a simple and robust way to add positioning to any conductor bar system. The rails come in either 10 foot or 3 meter lengths to match conductor bar spacing requirements.

Part No.	Length
XA-589509B	10 ft
XA-589509	3 M



Splice Kit

The Splice Kit is used to connect rail sections together. They come in packs of five that include splice joint and push rivets.

Part No.	Item
XA-588810	Splice Joint - Pack of 5



Expansion Kits

Our expansion kits have a Teflon-coated surface to ensure error free operation over the life of the system. Expansion kit includes the rivets and a special tape rail with no holes on the travel side for extended wear performance.

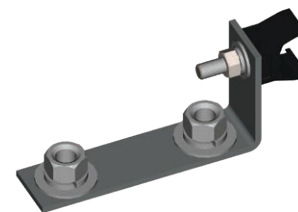
Part No.	Length
XA-590555	10 ft
XA-590556	3 M



Hanger Kits

Hangers allow for a quick click in of the tape rail for quick mounting. Hanger kit includes the hanger and bracket, hanger kits utilize bolts on existing conductor bar.

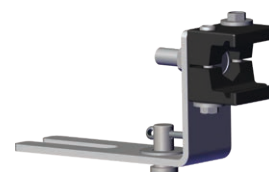
Part No.	System Type	Material
XA-589244	Safe-Lec 2 - 1.69" Centers	Plastic
XA-590215	Safe-Lec 2 - 1.69" Centers	Steel
XA-590071	Hevi-Bar II - 3.0" Centers	Plastic
XA-590217	Hevi-Bar II - 3.0" Centers	Steel



Anchor Kits

Anchors are used on every system to fix the rail for controlled expansion. The number and location will depend on the system layout. Anchor kit includes the anchor and bracket, anchor kits utilize bolts on existing conductor bar.

Part No.	System Type	Material
XA-590121	Safe-Lec 2 - 1.69" Centers	Plastic
XA-590214	Safe-Lec 2 - 1.69" Centers	Steel (Stainless Hardware)
XA-590069	Hevi-Bar II - 3.0" Centers	Plastic
XA-590216	Hevi-Bar II - 3.0" Centers	Steel (Stainless Hardware)

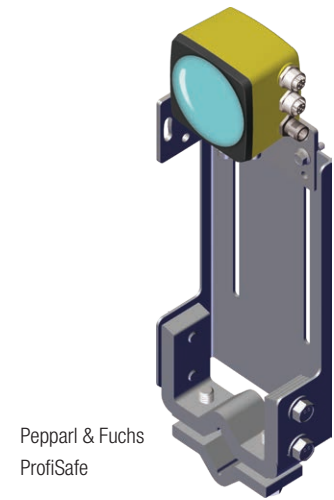
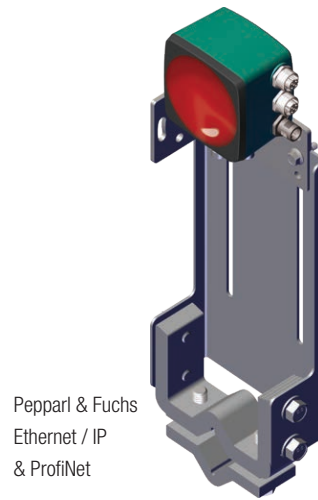
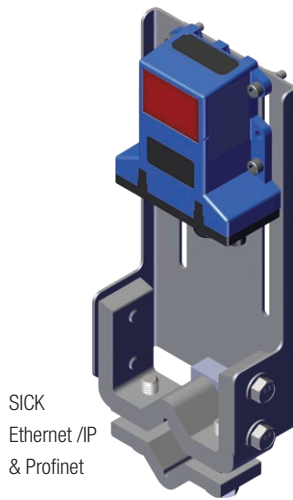


Sensors and Code Tape

Sensor Kits

Our positioning system works with several different positioning code technologies, including bar code, QR code, and multi color QR code. Additionally, we offer sensors that are set up for specific industrial automation protocols including Ethernet/IP, PROFINET, and PROFSafe. Our sensor kits include the sensor, cable, and adjustable bracket for mounting to a 1" to arm

Bar Type	Sick Ethernet / IP	Sick ProfiNet	Pepperl & Fuchs Ethernet / IP	Pepperl & Fuchs ProfiNet	Pepperl & Fuchs ProfiSafe
Safe-Lec 2	XA-589704	XA-589703	XA-589714	XA-589713	XA-589712
Hevi-Bar II & Safe-Lec 2 Insulated	XA-589693	XA-589702	XA-589708	XA-589710	XA-589711



Tape Kits

All positioning systems are "absolute," so they must be ordered with the correct starting and stopping distance for easy installation.

Tape Length	Sick	Pepperl & Fuchs	Pepperl & Fuchs / Safe
0 - 20 Meters	XA-587310	XA-590492	XA-590515
20 - 40 Meters	XA-587310B	XA-590492B	XA-590515B
40 - 60 Meters	XA-587310C	XA-590492C	XA-590515C
60 - 80 Meters	XA-587310D	XA-590492D	XA-590515D
80 - 100 Meters	XA-587310E	XA-590492E	XA-590515E
100 - 120 Meters	XA-587310F	XA-590492F	XA-590515F
120 - 140 Meters	XA-587310G	XA-590492G	XA-590515G
140 - 160 Meters	XA-587310H	XA-590492H	XA-590515H
160 - 180 Meters	XA-587310J	XA-590492J	XA-590515J
180 - 200 Meters	XA-587310K	XA-590492K	XA-590515K
200 - 220 Meters	XA-587310L	XA-590492L	XA-590515L
220 - 240 Meters	XA-587310M	XA-590492M	XA-590515M
240 - 260 Meters	XA-587310N	XA-590492N	XA-590515N
260 - 280 Meters	XA-587310P	XA-590492P	XA-590515P

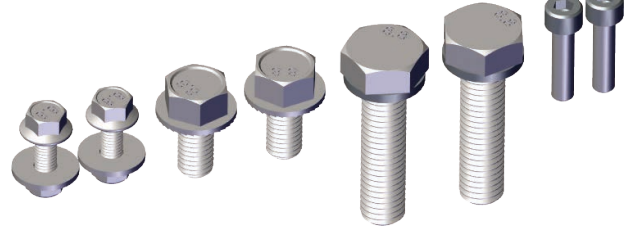
Spare Parts & Components

All quoted systems come with a spare parts kit for the sensor kits and for the tape rail and mounting.
Sensor tape kits include two each of the associated hardware from the sensor kit.

Sensor Spare Parts

Part Number	Description
XA- 591366	Sick sensor spare part kit
XA-591366B	Extended Sick sensor spare part kit
XA-591366C	Pepperl Fuchs sensor spare part kit

XA-591366B shown

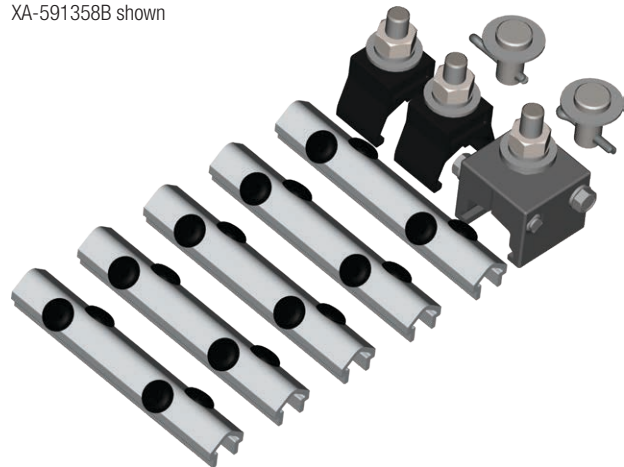


Rail Spare Parts

Spare parts kits include two spare hangers, one spare anchor, and two each of the hardware components

Part Number	Description
XA-591358	Positioning PS spare parts kit
XA-591358B	Positioning SST spare parts kit

XA-591358B shown



Technical Specifications

	Barcode	QR Code	Safety QR Code
Resolution	1.0 mm	0.2 mm	0.2 mm non safe 124 mm safe *
Light Source	Red LED	Red LED	Blue & Red LED
Maximum System Length	10,000 m	10,000 m	100,000 m
Maximum Speed	10 m/s	8 m/s	8 m/s
Reading Distance	100 mm ± 20 mm	100 mm ± 50 mm	100 mm ± 30 mm
Code Width	30 mm	25 mm	25 mm
Rail Material	Aluminum	Aluminum	Aluminum

* As mounted - can be reduced with alternate mounting

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