



FlexChain

THE FLEXIBLE AND EFFICIENT DETECTION SYSTEM
IN A CASCADE

Switching automation light grid

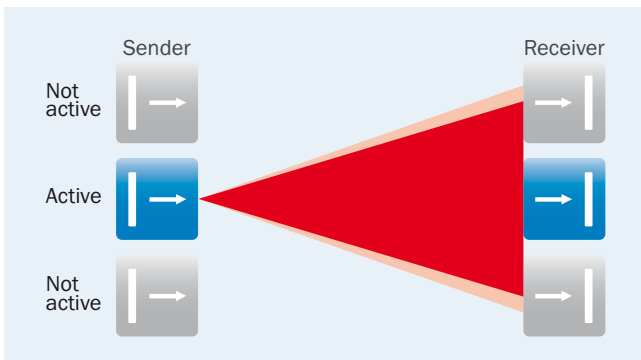
SICK
Sensor Intelligence.

FlexChain is a cascadable sensor system comprising a central evaluation unit and up to 60 sensors wired in series. The system supports sensors operating on different principles. Thanks to its simplicity and intelligence, it combines the advantages of photoelectric sensors and light grids.



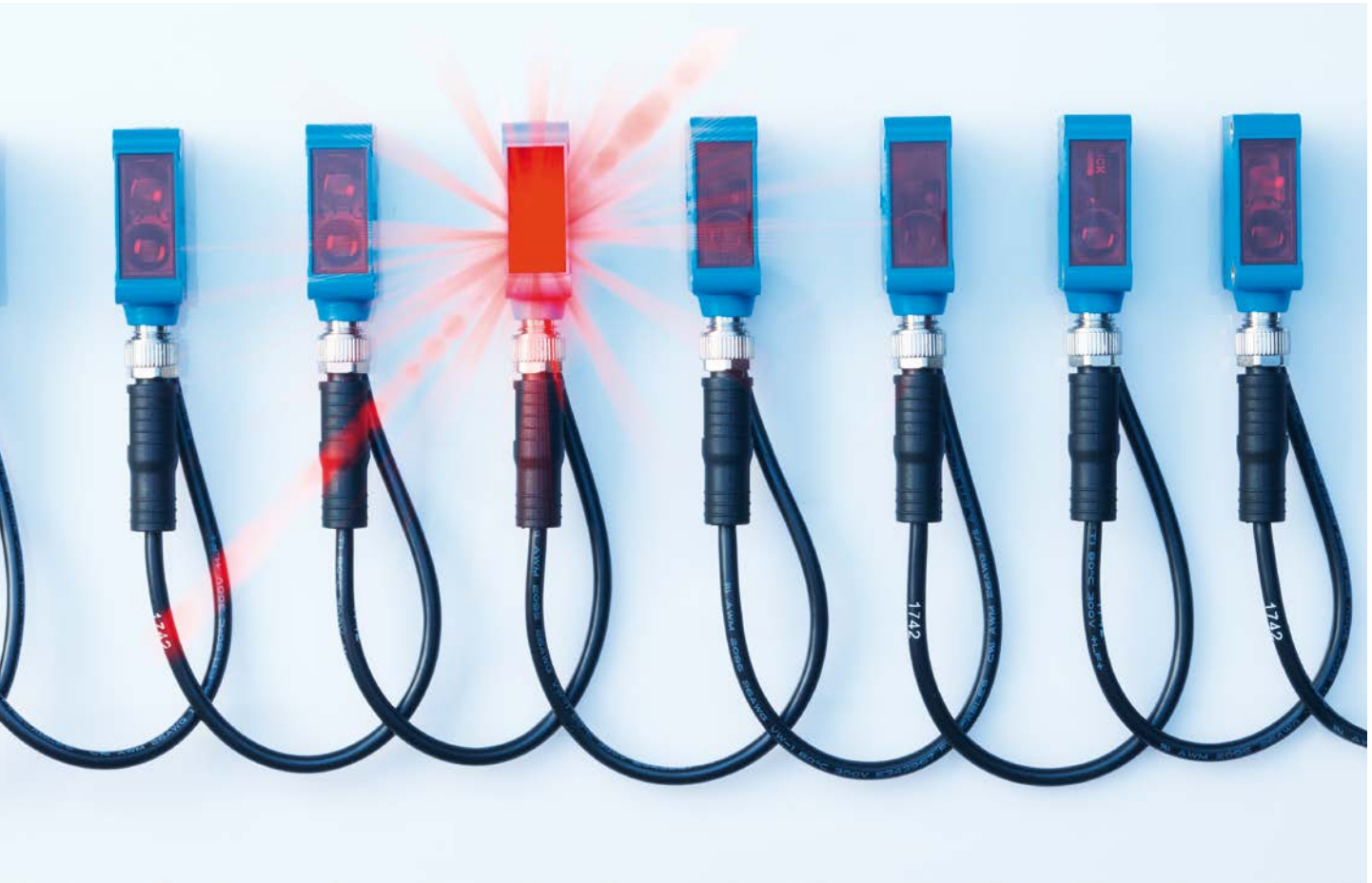
Designed to reduce installation and implementation costs

FlexChain simplifies the installation process, thereby substantially reducing costs. The cascading principle ensures significantly easier and faster installation. The sensor itself can be ordered with various cable lengths. This eliminates the need, in many cases, for an extra cable and the associated costs. Up to 60 sensors can be connected to a single evaluation unit.



Maximum reliability thanks to light grid technology

FlexChain operates similarly to a light grid. Regardless of the arrangement of the sensors and their distances from one another, FlexChain achieves an unconditionally high measurement and detection certainty. A sequential and fast cycling of the individual beams prevents mutual interference and overlapping of sensor signals even when the sensors are mounted very closely. This prevents erroneous measurement data and output signals and ensures reliable detection at all times.



FlexChain will impress you with its simplicity

FlexChain can be put into operation immediately via the 2-button display of the evaluation unit. With the press of a button all connected sensors are automatically identified, addressed and taught in. The evaluation unit now forwards sensor and system information to the controller via a serial interface. Application-specific logic can also be configured in the evaluation unit itself. The SICK software tool enables the system to be individually and easily parameterized via USB.



Detailed diagnostics for maximum availability

FlexChain offers a range of diagnostic options, for example to read out sensor information, the degree of contamination of each of the sensors, or the current communication behavior within the system. Specifically, this means that if something is not functioning correctly, you will be informed in real time of the nature of the fault and its location. Possible faults are detected early, which enables failures and downtimes to be efficiently prevented.






System features


Number of connectable sensors	Max. 60 (30/port)
Max. total cable length	40 m/port
Max. individual sensor-to-sensor or sensor-to-host cable length	30 m
System response time	1 ms to 37.5 ms (depending on the number of connected sensors)
Parameterization interface	USB connection for easy configuration of the FlexChain system using SOPAS ET
Functions	Sensor parameterization, definition of zones, measuring functions, logic functions, interface parameterization, diagnostic data

Ordering information

Sensors

Figure	Sensor principle	Length of cable	Type of light	Sensing range max.	Type	Part no.
	Photoelectric proximity sensor	0.15 m	Visible red light	250 mm	GTB6-CC011K00	1098784
		0.5 m	Visible red light	250 mm	GTB6-CA011K00	1091601
		1.5 m	Visible red light	250 mm	GTB6-CB011K00	1092299
	Photoelectric retro-reflective sensor	0.15 m	Visible red light	6 m	GL6-CC011K00	1098785
		0.5 m	Visible red light	6 m	GL6-CA011K00	1091602
		1.5 m	Visible red light	6 m	GL6-CB011K00	1091603
	Through-beam photoelectric sensor	0.15 m	Infrared light	15 m	GSE6-CC021K00	1098786
		0.5 m	Infrared light	15 m	GSE6-CA021K00	1091605
		1.5 m	Infrared light	15 m	GSE6-CB021K00	1091604

Host

Figure	Description	Serial interface	Binary interface	Type	Part no.
	Standard I/O	IO-Link	1 x Out + 2 x InOut	FC1A-AZ2A1A	1091608
	Advanced I/O	IO-Link	1 x Out + 5 x InOut	FC1A-BZ2A1A	1091609
	RS-485	RS-485/IO-Link	1 x Out + 1 x InOut	FC1A-CZ2A1A	1091610
	CAN	CANopen/IO-Link	1 x Out + 1 x InOut	FC1A-DZ2A1A	1091611

For more information, visit: www.sick.com/FlexChain