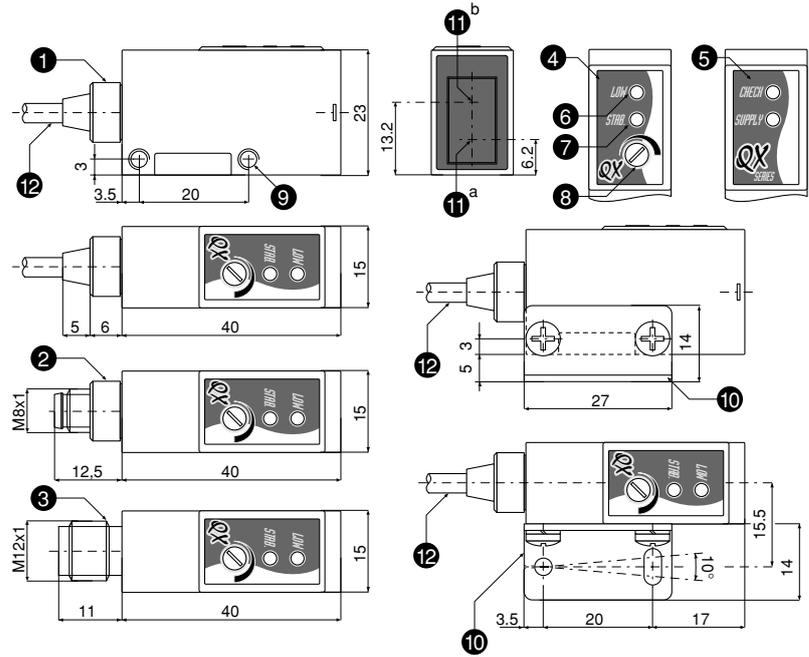


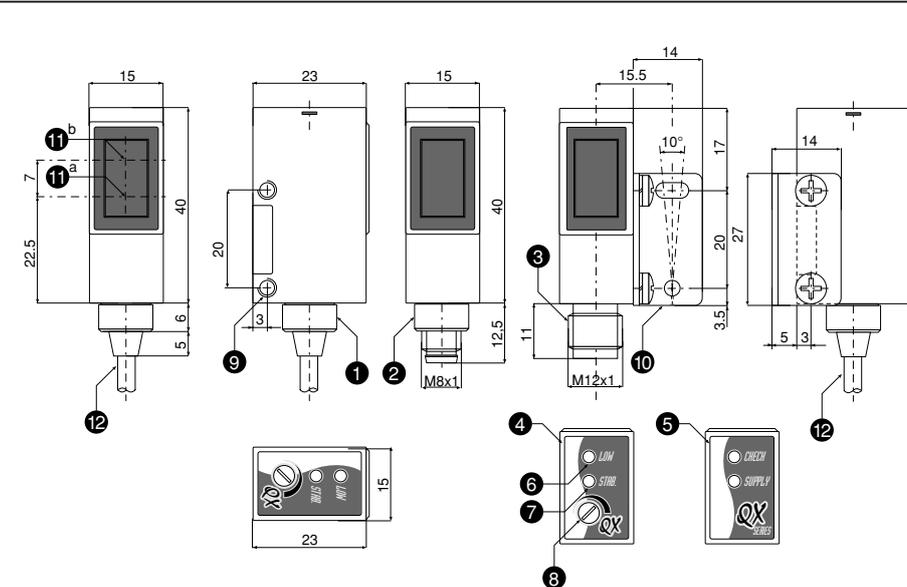

SERIE
QX

Miniature photoelectric sensors with higher performances - DC

- ◆ Wide range of models: diffuse, diffuse with sensitivity adj., retro-reflective, polarized light and through-beam detection
- ◆ Housing with small dimensions (15x23x40mm)
- ◆ Axial and right angle optics
- ◆ 2 LED indicators (threshold and signal margin)
- ◆ Visible red light in retro-reflective, polarized and through-beam models
- ◆ Long distances capability
- ◆ Precision beam
- ◆ Fast response time (0,75-0,5ms)
- ◆ NPN-PNP selectable output
- ◆ High output current (>300mA)
- ◆ 3 different output cable: axial, M8 and new
- ◆ IP65 protection degree
- ◆ Complete protection againsts electrical damage


DIMENSIONAL DRAWING

Key

- | | |
|--|---|
| <ul style="list-style-type: none"> 1 Axial cable exit 2 M8 plug cable exit 3 M12 plug cable exit 4 Receiver, retro-reflective, diffuse models functional panel 5 Emitter with check functional panel 6 Red LED (low margin signal QX*)
Red LED (check QXX) 7 Green LED (stability QX*)
Green LED (supply QXX) | <ul style="list-style-type: none"> 8 Sensitivity adjustment trimmer (1 turn) 9 Holes for M3 screws 10 Bracket ST70 and screws (included) 11 Optical axis position
(a: QX3, QXC, QXP - b: QXE, QXR) 12 Cable 4x0,14 mm², Ø3,75mm, PVC, 2m <p>Connectors CD serie</p> <p>Accessories ST serie</p> |
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|---|

Miniature housing

New QX series offers very small standard housing for all applications where extremely reduced dimensions are required. Available with axial and right angle optics suitable for any installation need.

High performance

Although small dimensions, QX series allows high performances and thanks to its very popular housing it has become top on the market.

The fastest in response time

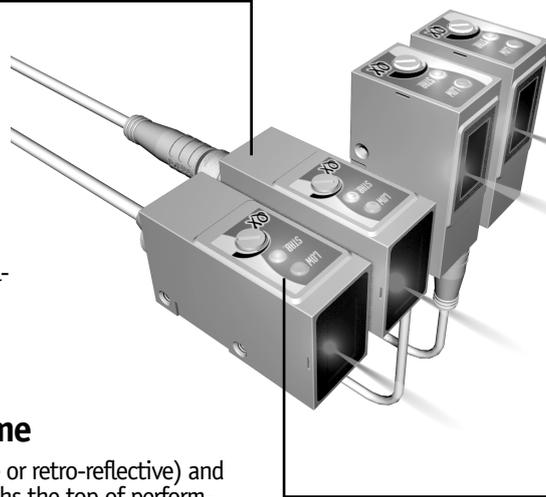
With only 0,5ms response time (diffuse or retro-reflective) and 0,75ms (through-beam), QX series reaches the top of performances in this kind of sensor (2-4 times faster than the other series).

3 different types of output cable: axial, M8 and M12

For a safewiring and the easiest maintenance, on all models of the QX series is also available the miniature M8 threaded plug-in exit and the new M12 plug-in cable exit.

Costs reduced

The output can be selected both in NPN-PNP mode, reducing the number of models and stocking costs. The output current is very high (300mA) maintaining both over-load and short circuit protections.



Red light visible and long distance capability

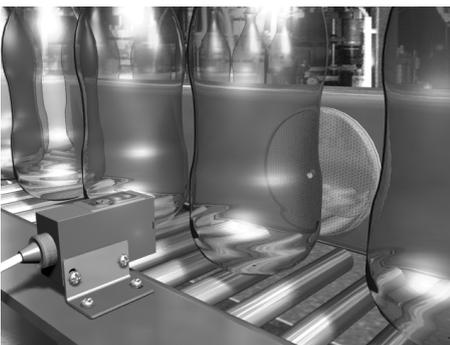
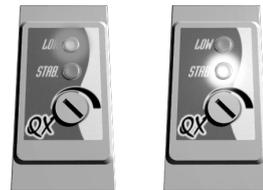
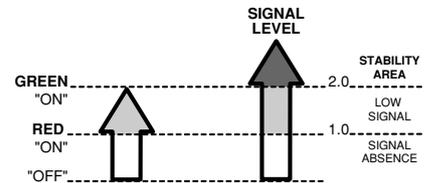
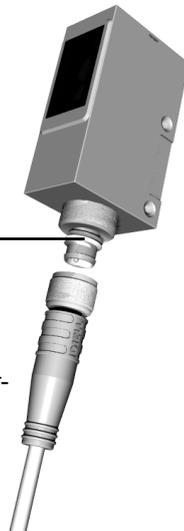
Available in retro-reflective and through-beam models.

The most precise beam

The QX series is able to perform the most precise detection for this kind of sensor; thanks to reduced beam can detect very small objects (Ø2mm) without using accessories. This characteristic allows also the possibility to detect through slits.

Easy installation

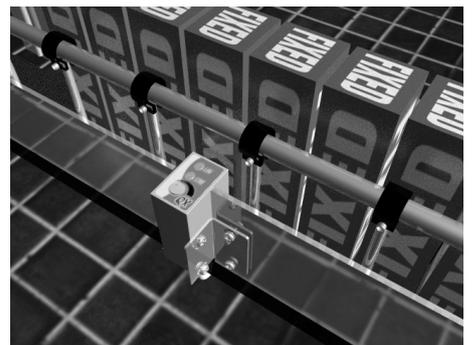
The QX series is quick to install thanks to double alignment LED (indicating threshold and signal margin) and red light in retro-reflective and through-beam models.



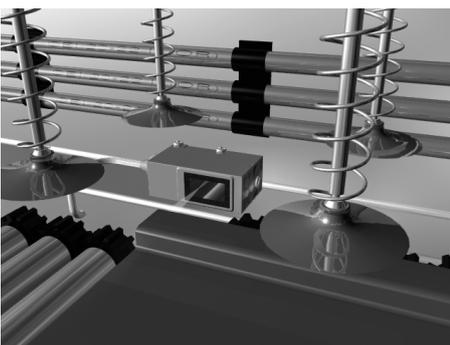
QXP/*0-1* on transparent bottles.

Applications

It is possible to support any kind of installation also when it is available only narrow space.



QX3/*0-2* on fast moving close packages.



QXX-QXR/*0-2* detecting a thin object in a narrow space.



QXX-QXR/*0-1* on a stack of thin tiles using side detection.

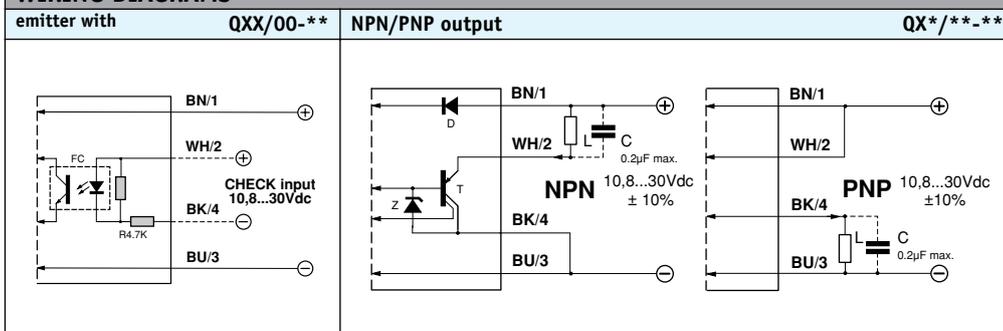
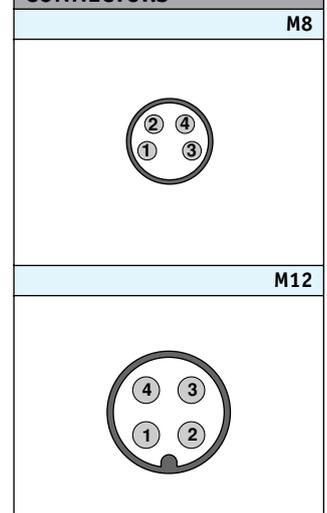
ORDERING SYSTEM

		Q X 3 / 0 0 - 1 A					
serie	miniature photoelectric sensor	QX					diffuse - retro-reflective - through-beam
model	diffuse reflection 300mm	3					
	retro-reflective 4m	C					
	emitter with check	X					
	receiver 8m	R					
	polarised retro-reflective 2,5m	P					
output state	emitter	0					
	NO output state	A			A		cable exit
	NC output state	C			F		axial cable exit
					E		M8 plug cable exit
							M12 plug cable exit
					1		housing
					2		axial optics
							right angle optics

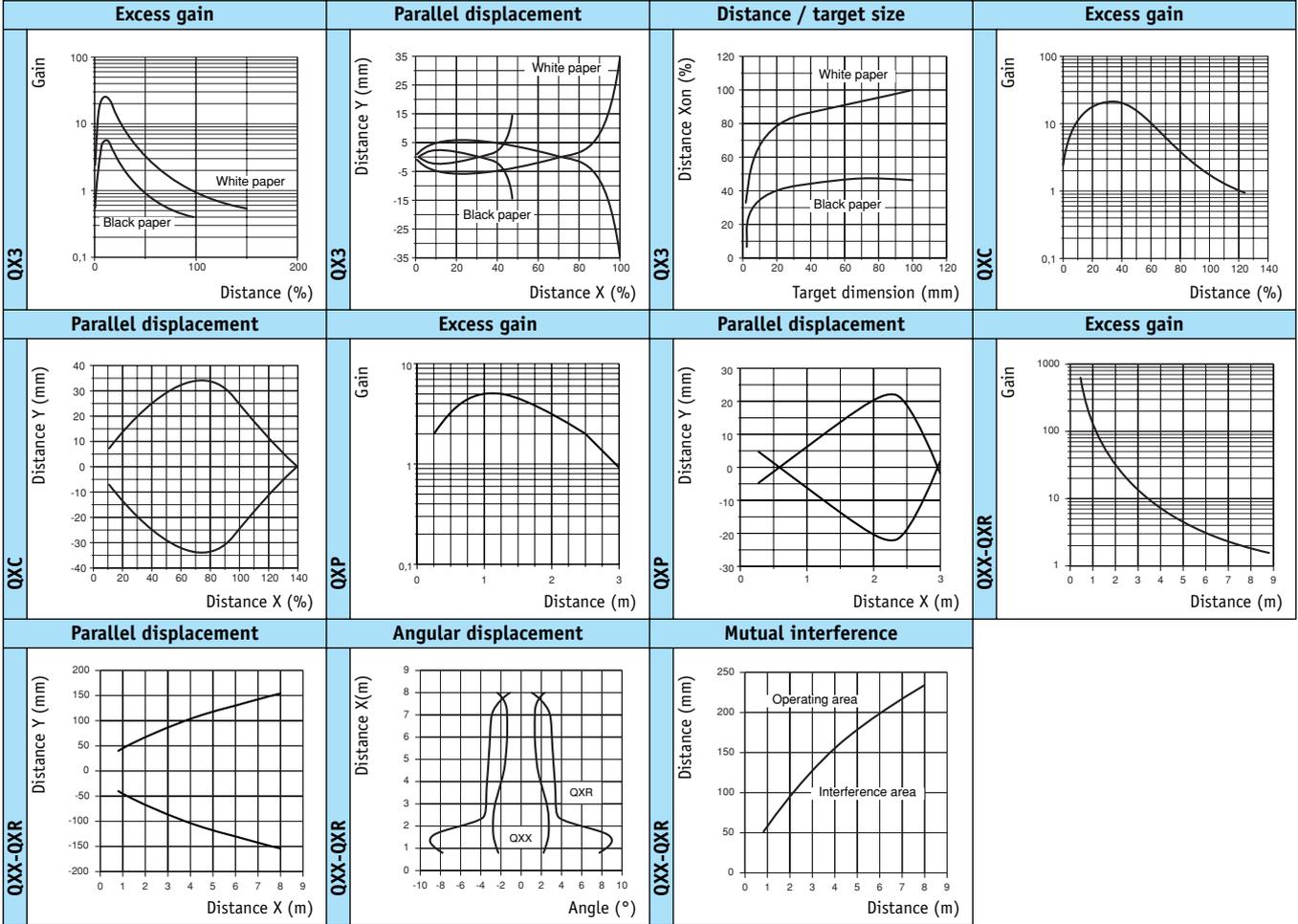
SPECIFICATIONS

Model	QX3/*0-**	QXC/*0-**	QXP/*0-**	QXX/*0-** and QXR/*0-**
Type	diffuse reflection	retro-reflective	polarized retro-reflective	through-beam
Nominal sensing distance (Sn)	300mm ⁽¹⁾	4m ⁽²⁾	2,5m ⁽²⁾	8m
Emission	infrared (880nm)	red (660nm)		
Minimum detectable object	see Characteristic curves			2mm
Tolerance	+15/-5% Sn			see Sr (glossary)
Differential travel				10%
Repeat accuracy				5%
Operating voltage				10,8 - 30 Vdc
Ripple				10 % max.
No-load supply current	20mA			20mA (em.), 5mA (rec.)
Check voltage	-			10,8 - 30Vdc (QXX)
Load current				300 mA
Leakage current				100µA max. at 30Vdc
Voltage drop				1,2V max. I _L =100mA
Output type				NPN/PNP selectable - NO or NC
Switching frequency	750Hz (Tr=0,5ms)			500Hz (Tr=0,75ms)
Time delay before availability				200 ms
Supply electrical protections				polarity reversal, transient
Output electrical protections				short circuit (autoreset)
Temperature range				-25°...+70°C (without freeze)
Interference to external light				3000 lux (incandescent lamp), 10000 lux (sunlight)
Protection degree (DIN 40 050)				IEC IP65
LED indicators				see Dimensional drawing
Housing material				ABS (glass fiber reinforced)
Lenses material				acrylic
Weight (approx.)				70g (single)

(1) with 100x100mm white matt paper; (2) with standard reflector Ø80mm (RL110 supplied separately).

WIRING DIAGRAMS

CONNECTORS


CHARACTERISTIC CURVES



2.1