

Miniature Photoelectric Switches QX



Miniature high performance photoelectric sensor 11-30VDC

- Small dimensions (15x33x40mm miniature housing)
- Sensitivity adjustment
- Horizontal and vertical mounting models
- Two LEDs indicating threshold and signal margin
- Visible red light beam in retro-reflective and through-beam models
- Long distance capability ■ Fast response time (0.75-0.5ms)
- Precision beam to detect very small objects
- High output current (>300mA) with short circuit and overload protection
- UL and CUL approved



Options and ordering codes

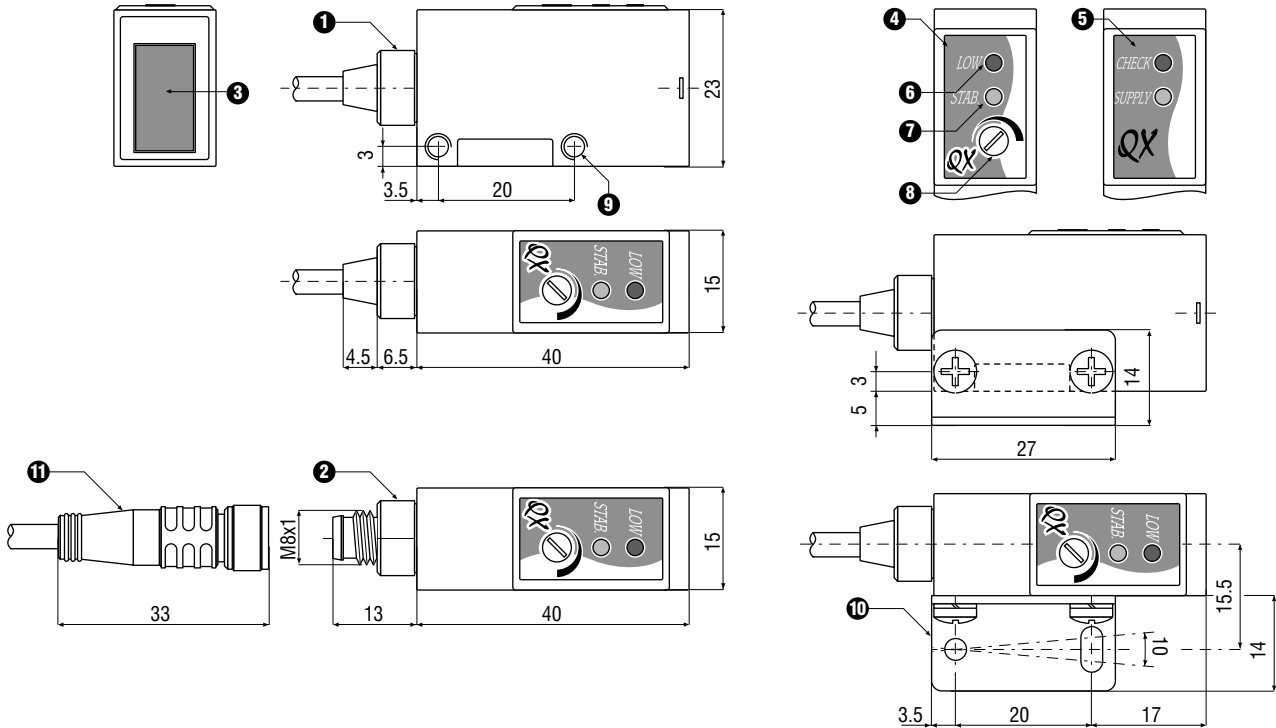
	QX	3	/	A	0	-	1	A	
Diffuse reflection 300mm		3						A	Cable exit, 2m
Retro-reflective 4m		C						F	M8 plug exit
Polarized retro-reflective 2.5m		P						E	M12 plug exit
Transmitter (through beam)		X							
Receiver 8m (through beam)		R							
Normally open (NO)				A			1		Horizontal
Normally closed (NC)				C			2		Vertical
Transmitter				0					
Also available									
								QX3/A0-2AD6	Diffuse, 100mm
								QX3/A0-2ED6	Diffuse, 100mm

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%			
Repeatability	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	300mA			
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° to +70°C (without freeze)			
Interference to external light	3000 lux (incandescent lamp), 10000 lux (sunlight)			
Protection degree	(DIN 40 050) IEC IP65			
Housing material	ABS (glass fiber reinforced)			
Lenses material	acrylic			
Weight (approx.)	70g			70gx2

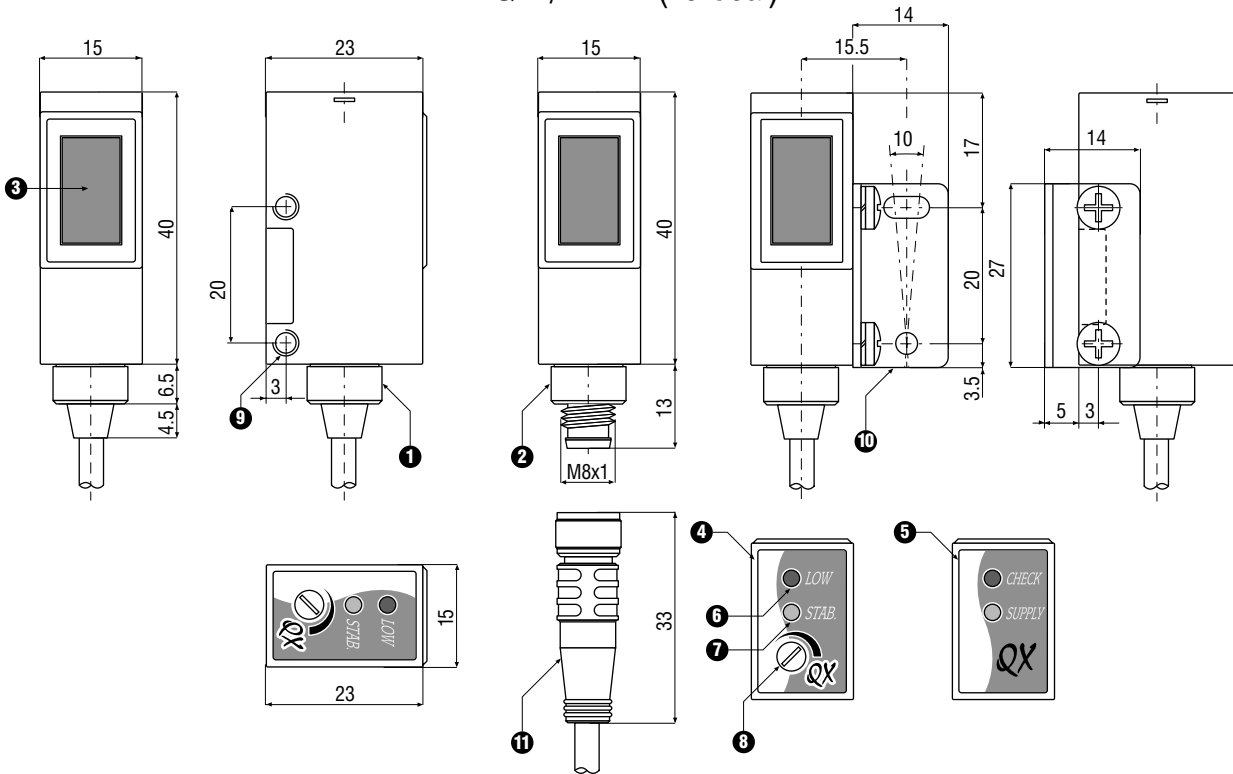
(1) with 100x100mm white matt paper; (2) with standard reflector Ø80mm (RL110 supplied separately).

Dimensions mm

QX*/-1* (horizontal)**



QX*/-2* (vertical)**



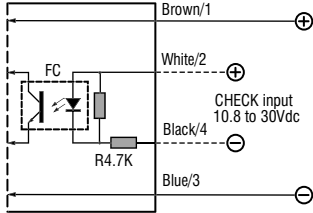
- 1 Axial cable exit type A (QX/*0-*A)
- 2 Threaded plug in cable exit type F (QX/*0-*F)
- 3 Optical lens
- 4 Receiver, retro-reflective, diffuse types panel
- 5 Transmitter with check panel
- 6 Red LED indicating LOW margin signal (CHECK function on transmitter)

- 7 GREEN LED indicating stability (supply presence on transmitter)
- 8 Sensitivity 1 turn trimmer
- 9 Holes for M3 screws
- 10 Bracket type ST61 and mounting screws (included)

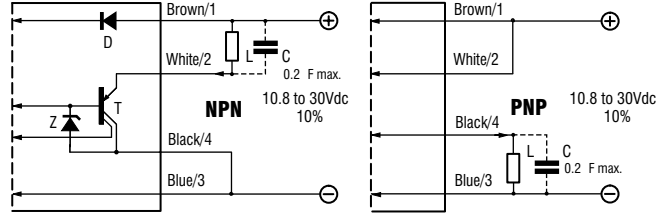
- 11 Plug in connector (supplied separately)
 CD08/OB-020A1 (2m)
 CD08/OB-050A1 (5m)
 Cable \varnothing 3.75mm, 3m, 0.14mm², PVC
 Reflectors (supplied separately)
 see RL data sheet

Wiring connections

Emitters QXX/00-**



NPN/PNP output QX*/**_***



Connectors



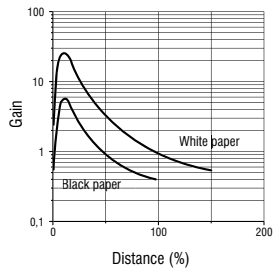
M8



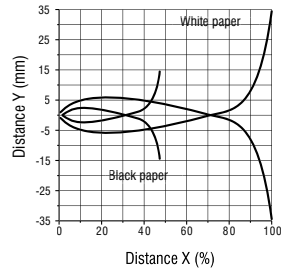
M12

Characteristic curves

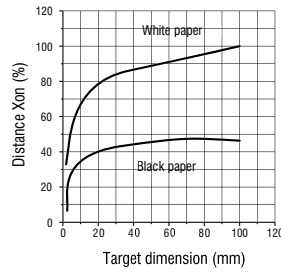
QX3 excess gain



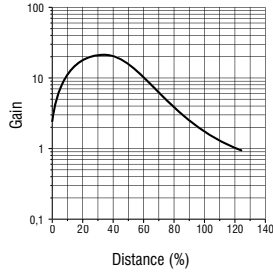
QX3 parallel displacement



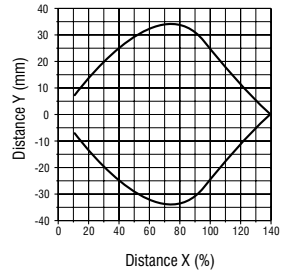
QX3 distance/target size



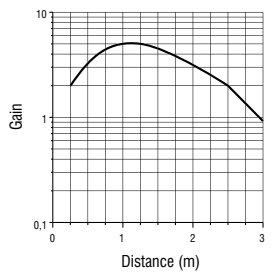
QXC excess gain



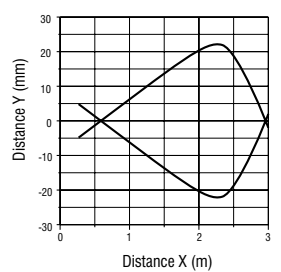
QXC parallel displacement



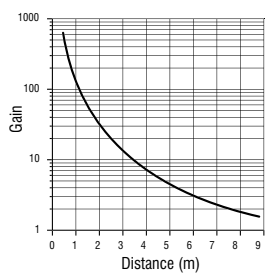
QXP excess gain



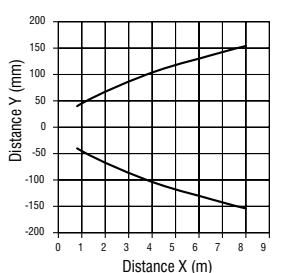
QXP parallel displacement



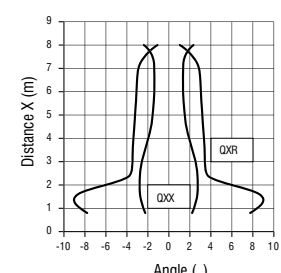
QXX-QXR excess gain



QXX-QXR parallel displacement



QXX-QXR angular displacement



QXX-QXR mutual interference

