



Micro Detectors

Italian Sensors Technology



Cubic Miniaturized Photoelectric Sensor QM



Photoelectric Sensors
Catalogue

Cod. CAT3EQM1375401

Datasheet - QM - english - Ed.01/2014





Products

QM
cubic

Series QM

Cubic



QM download area

www.microdetectors.com<http://www.microdetectors.com/ita/prodotti/dettaglioiserie.aspx?idserie=110>

market sectors and applications

wood industry
logistics and automated warehouses
packaging industry
automotive industry
industrial automation
bottling industry



features

Cubic miniaturized photoelectric high-performance sensors with long sensing distance

2 kHz maximum switching frequency

Available with cable and M8 plug exit or with M8-M12 pig-tail

Wide range of models: diffuse reflection with short, medium and long sensing distance, polarized, reflective for transparent objects, through-beam and background suppression

Selectable LO/DO output state

Complete protection against electrical damages

Completely filled with resin (except background suppression models)

Background suppression with mechanical adjustment

approvals



protection degree

IP67





Products

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Miniature cubic photoelectric sensor QM

A wide range of QM series' sensors is available: direct diffuse, reflective, polarized, for detecting transparent objects, background suppression and through-beam, high-intensity infrared and red light emission for an easy alignment. They can be adjusted with a trimmer for better sensitivity and have a switching frequency up to 2 kHz for a more precise reading.

QM sensors are also available with NPN or PNP, NO/NC selectable output and either cable or M8 plug or M8/M12 pig-tail. QM sensors have an IP67 protection degree and are completely resin-filled, except background suppression models with mechanical adjustment. A wide range of mounting brackets is also available.

pack content

Installation manual (english + italian) : CAT8BFG1260501 (QM*S model).

Product packed in bag.

further commercial and technical documents available

High resolution photos

Data sheet:

- miniature cubic photoelectric sensor QMRG for the detection of transparent objects
(italian:CAT3EQM1260001, english: CAT3EQM1260001 and spanish:CAT3EQM1260001)

customization already tested

QMRG/0*-*LP - Model for the detection of transparent objects up to 600 mm

minimum order quantity

1 piece

QM R 8 / 0 P - 0 A VE 80

QM	Miniaturized cubic photoelectric sensor 12.8x21x31.2 mm
R	RED emission
I	Infrared emission
B	Direct diffuse with sens. adj. 100 mm (R)
7	Direct diffuse with sens. adj. 400 mm (R - IR)
8	Direct diffuse with sens. adj. 1,000 mm (R)
9	Direct diffuse with sens. adj. 1,500 mm (IR)
N	5 m polarized with sensitive adjustment
C	7 m reflective with sensitive adjustment
G	0.05...1.5 m (R) or 0.05...1.0 m (IR) for transparent objects with adjustment
L	0.4...4 m for transparent objects with adjustment
HD	20 m (R) or 30 m (IR) emitter + receiver kit with adjustment
H	Emitter with adjustment ⁽¹⁾
D	20 m (R) or 30 m (IR) receiver without adjustment ⁽¹⁾
S	30...200 mm (R) or 30...400 mm (IR) background suppression
0	Emitter without check, LO/DO selectable
0	Emitter
P	PNP output
N	NPN output
0	Plastic housing
A	2 m cable exit
F	M8 4 pin plug cable exit
	Standard model
VE	M12 pig-tail output ⁽¹⁾
VF	M8 3 pin pig tail output ⁽¹⁾
VG	M8 4 pin pig tail output ⁽¹⁾
80	20 cm cable length (pig-tail models) ⁽¹⁾
	Standard model

⁽¹⁾ These products may have limitations in terms of delivery or on the quantities to be ordered



Products

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available models

function	distance	emission	adjustment	output type	housing	Models		
						PNP + NO/NC	NPN + NO/NC	
Direct diffuse	100 mm	Red	yes	cable	plastic	QMRB/0P-0A	QMRB/0N-0A	
				M8 connector		QMRB/0P-0F	QMRB/0N-0F	
	400 mm	Red		cable		QMR7/0P-0A	QMR7/07-0A	
				M8 connector		QMR7/0P-0F	QMR7/0N-0F	
	1,000 mm	Red		cable		QMI7/0P-0A	QMI7/07-0A	
				M8 connector		QMI7/0P-0F	QMI7/0N-0F	
	1,500 mm	IR		cable		QMR8/0P-0A	QMR8/0N-0A	
				M8 connector		QMR8/0P-0F	QMR8/0N-0F	
	Polarized	5 m		Red		cable	QMI9/0P-0A	QMI9/0N-0A
						M8 connector	QMI9/0P-0F	QMI9/0N-0F
	Retroreflection	7 m		IR		cable	QMRN/0P-0A	QMRN/0N-0A
						M8 connector	QMRN/0P-0F	QMRN/0N-0F
For transparent objects	0.05 - 1.5 m	Red	cable	QMIG/0P-0A	QMIG/0N-0A			
			M8 connector	QMIG/0P-0F	QMIG/0N-0F			
	0.05 - 1.0 m	IR	cable	QMIG/0P-0A	QMIG/0N-0A			
			M8 connector	QMIG/0P-0F	QMIG/0N-0F			
	0.4 - 4 m	Red	cable	QMRL/0P-0A	QMRL/0N-0A			
			M8 connector	QMRL/0P-0F	QMRL/0N-0F			
Emitter	20 m	Red	cable	QMRH/00-0A				
Receiver			M8 connector	QMRH/00-0F				
Emitter + Receiver	30 m	IR	cable	QMRD/0P-0A	QMRD/0N-0A			
Emitter			M8 connector	QMRD/0P-0F	QMRD/0N-0F			
Receiver	30 m	IR	cable	QMRHD/0P-0A	QMRHD/0N-0A			
Emitter + Receiver			M8 connector	QMRHD/0P-0F	QMRHD/0N-0F			
Background suppression	30 - 200 mm	Red	cable	QMIH/00-0A				
			M8 connector	QMIH/00-0F				
	30 - 400 mm	IR	cable	QMID/0P-0A	QMID/0N-0A			
			M8 connector	QMID/0P-0F	QMID/0N-0F			
	30 - 200 mm	Red	cable	QMIHD/0P-0A	QMIHD/0N-0A			
			M8 connector	QMIHD/0P-0F	QMIHD/0N-0F			
30 - 400 mm	IR	cable	QMRS/0P-0A	QMRS/0N-0A				
		M8 connector	QMRS/0P-0F	QMRS/0N-0F				
30 - 200 mm	Red	cable	QMIS/0P-0A	QMIS/0N-0A				
		M8 connector	QMIS/0P-0F	QMIS/0N-0F				

technical specifications (direct diffuse models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

			
models	QMRB/0*-0*	QMR7/0*-0*	QMR8/0*-0*
			
nominal sensing distance S_n	100 mm ⁽¹⁾	400 mm ⁽¹⁾	1,000 mm ⁽²⁾
minimum working distance	-		
sensitivity adjustment	yes		
emission	red (630 nm)		
differential travel	≤ 10%		
repeat accuracy	5%		
light-dark selection	yes		
U_e operating voltage	10 ... 30 Vdc		
ripple	≤ 10%		
no-load supply current	≤ 10 μ A		
load current	≤ 100 mA		
supply current	≤ 30 mA		
output voltage drop U_d	2 V max @ 100 mA		
maximum load current	≤ 100 mA		
output type	PNP or NPN NO or NC		
switching frequency f	1 kHz	2 kHz	1 kHz
time delay before availability	≤ 100 ms		
supply electrical protections	polarity reversal, over voltage pulses		
output electrical protection	short circuit (auto reset), over voltage pulses		
operative temperature range	- 25 ...+ 70° C (without freeze)		
thermal drift	- 30 ...+ 80° C		
LED indicators	yellow (LO/DO output state) green (Excess gain)		
interference external light	10.000 Lux (sunlight) 3.000 Lux (incandescence lamp)		
protection degree	IP67 (EN60529) ⁽³⁾		
housing material	PA66		
optic material	PMMA		
tightening torque	1 Nm ⁽⁴⁾		
weight (approx)	52 g cable, 10 g M8 plug		

⁽¹⁾ White target *Kodak* 90% 200 x 200 mm ⁽²⁾ White target *Kodak* 90% 400 x 400 mm

⁽³⁾ Protection guaranteed only with plug cable well mounted

⁽⁴⁾ Screws, nuts and mounting brackets are not included with the sensor (accessories)







Products

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technical specifications (direct diffuse models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

	 	
models	QM7/0*-0*	QM9/0*-0*
	 	
nominal sensing distance S_n	400 mm ⁽¹⁾	1,500 mm ⁽²⁾
minimum working distance	-	
sensitivity adjustment	yes	
emission	Infrared (850 nm)	
differential travel	≤ 10%	
repeat accuracy	5%	
light-dark selection	yes	
U_e operating voltage	10 ... 30 Vdc	
ripple	≤ 10%	
no-load supply current	≤ 45 mA	
load current	≤ 100 mA	
leakage current	≤ 10 μA	
output voltage drop U_d	2 V max @ 100 mA	
maximum load current	≤ 100 mA	
output type	PNP or NPN NO or NC	
switching frequency f	2 kHz	1 kHz
time delay before availability	≤ 100 ms	
supply electrical protections	polarity reversal, over voltage pulses	
output electrical protection	short circuit (auto reset) , over voltage pulses	
operative temperature range	- 25 ... + 70° C (without freeze)	
thermal drift	- 30 ... + 80° C	
LED indicators	yellow (output state LO/DO) green (Excess gain)	
interference external light	10,000 lux sunlight	
protection degree	3,000 lux incandescent lamp (EN60529) ⁽³⁾	
housing material	PA66	
optic material	PMMA	
tightening torque	1 Nm ⁽⁴⁾	
weight (approx)	52 g cable, 10 g M8 plug	

⁽¹⁾ White target *Kodak* 90% 200 x 200 mm ⁽²⁾ White target *Kodak* 90% 400 x 400 mm

⁽³⁾ Protection guaranteed only with plug cable well mounted

⁽⁴⁾ Screws, nuts and mounting brackets are not included with the sensor (accessories)

technical specifications (background suppression models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

		
models	QMRS/0*-0*	QMIS/0*-0*
		
nominal sensing distance S_n	30...200 mm ⁽¹⁾	30...400 mm ⁽¹⁾
minimum working distance	5 mm	
sensitivity adjustment	yes (4 turns)	
emission	red (630 nm)	infrared (850 nm)
differential travel	≤ 10%	
repeat accuracy	5%	
light-dark selection	yes	
U_e operating voltage	10 ... 30 Vdc	
ripple	≤ 10%	
no-load supply current	≤ 30 mA	≤ 45 mA
load current	≤ 100 mA	
leakage current	≤ 10 μA	
output voltage drop U_d	2 V max @ 100 mA	
maximum load current	≤ 100 mA	
output type	PNP or NPN NO or NC	
switching frequency f	1 kHz	
time delay before availability	≤ 100 ms	
supply electrical protections	polarity reversal, over voltage pulses	
output electrical protection	short circuit (auto reset), over voltage pulses	
operative temperature range	- 25 ...+ 70° C (without freeze)	
thermal drift	- 30 ...+ 80° C	
LED indicators	Yellow (output state LO/DO)	
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp	
protection degree	IP67 (EN60529) ⁽²⁾	
housing material	PA66	
optic material	PMMA	
tightening torque	1 Nm ⁽³⁾	
weight (approx)	52 g cable, 10 g M8 plug	

⁽¹⁾ White target *Kodak* 90% 200 x 200 mm ⁽²⁾ White target *Kodak* 90% 400 x 400 mm

⁽³⁾ Protection guaranteed only with plug cable well mounted

⁽⁴⁾ Screws, nuts and mounting brackets are not included with the sensor (accessories)



Products

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technical specifications (models for transparent objects)



according to IEC EN 60947-5-2 and IEC EN 60947-5-7

models	QMRG/0*-0*	QMIG/0*-0*	QMRL/0*-0*
nominal sensing distance S_n	1,5 m	1 m	4 m
minimum working distance	0.05 m		
sensitivity adjustment	yes		
emission	red (630 nm)	infrared (850 nm)	red (630 nm)
differential travel	$\leq 10\%$		
repeat accuracy	5%		
light-dark selection	yes		
U_e operating voltage	10 ... 30 Vdc		
ripple	$\leq 10\%$		
no-load supply current	≤ 30 mA	≤ 45 mA	≤ 30 mA
load current	≤ 100 mA		
leakage current	≤ 10 μ A		
output voltage drop U_d	2 V max @ 100 mA		
maximum load current	≤ 100 mA		
output type	PNP or NPN NO or NC		
switching frequency f	2 kHz		
time delay before availability	≤ 100 ms		
supply electrical protections	polarity reversal, over voltage pulses		
output electrical protection	short circuit (auto reset), over voltage pulses		
operative temperature range	- 25 ...+ 70° C (without freeze)		
thermal drift	- 30 ...+ 80° C		
LED indicators	yellow (output state LO/DO)		
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp		
protection degree	IP67 (EN60529) ⁽⁵⁾		
housing material	PA66		
optic material	PMMA		
tightening torque	1 Nm ⁽⁶⁾		
weight (approx)	52 g cable, 10 g M8 plug		

⁽³⁾ With RL 110 reflector EG = 2⁽⁴⁾ With RL 110 reflector EG = 2, use RL113G and RL116⁽⁶⁾ Screws, nuts and mounting brackets are not included with the sensor (accessories)⁽⁵⁾ Protection guaranteed only with plug cable well mounted⁽⁷⁾ Not included in model QMRG/**-**

technical specifications (polarized models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

	
models	QMRN/0*-0*
	
nominal sensing distance Sn	5 m ⁽¹⁾
minimum working distance	0.02 m @ RL 110
sensitivity adjustment	yes
emission	red (630 nm)
differential travel	≤ 10%
repeat accuracy	5%
light-dark selection	yes
Ue operating voltage	10 ... 30 Vdc
ripple	≤ 10%
no-load supply current	≤ 30 mA
load current	≤ 100 mA
leakage current	≤ 10 µA
output voltage drop Ud	2 V max @ 100 mA
maximum load current	≤ 100 mA
output type	PNP or NPN NO or NC
switching frequency f	2 kHz
time delay before availability	≤ 100 ms
supply electrical protections	polarity reversal, over voltage pulses
output electrical protection	short circuit (auto reset), over voltage pulses
operative temperature range	- 25 ...+ 70° C (without freeze)
thermal drift	- 30 ...+ 80° C
LED indicators	yellow (output state LO/DO) green (Excess gain)
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp
protection degree	IP67 (EN60529) ⁽⁵⁾
housing material	PA66
optic material	PMMA
tightening torque	1 Nm ⁽⁶⁾
weight (approx)	52 g cable, 10 g M8 plug

⁽³⁾ With RL 110 reflector EG = 2

⁽⁵⁾ Protection guaranteed only with plug cable well mounted

⁽⁶⁾ Screws, nuts and mounting brackets are not included with the sensor (accessories)

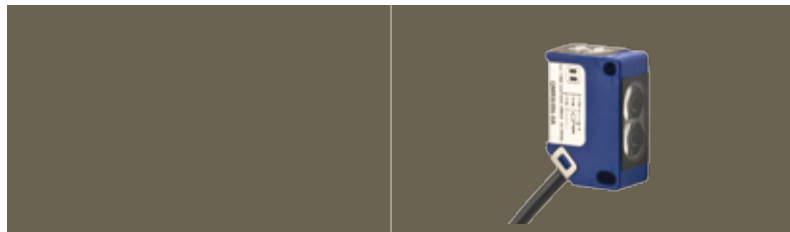


Products

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technical specifications (retroreflection models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7



models

QMIC/0*-0*







nominal sensing distance S_n	7 m ⁽¹⁾
minimum working distance	0.02 m @ RL 110
sensitivity adjustment	yes
emission	infrared (850 nm)
differential travel	≤ 10%
repeat accuracy	5%
light-dark selection	yes
U_e operating voltage	10 ... 30 Vdc
ripple	≤ 10%
no-load supply current	≤ 45 mA
load current	≤ 100 mA
leakage current	≤ 10 μA
output voltage drop U_d	2 V max @ 100 mA
maximum load current	≤ 100 mA
output type	PNP or NPN NO or NC
switching frequency f	2 kHz
time delay before availability	≤ 100 ms
supply electrical protections	polarity reversal, over voltage pulses
output electrical protection	short circuit (auto reset) , over voltage pulses
operative temperature range	- 25 ...+ 70° C (without freeze)
thermal drift	- 30 ...+ 80° C
LED indicators	yellow (output state LO/DO) green (Excess gain)
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp
protection degree	IP67 (EN60529) ⁽⁵⁾
housing material	PA66
optic material	PMMA
tightening torque	1 Nm ⁽⁶⁾
weight (approx)	52 g cable, 10 g M8 plug

⁽⁵⁾ Protection guaranteed only with plug cable well mounted

⁽⁶⁾ Screws, nuts and mounting brackets are not included with the sensor (accessories)

technical specifications (through beam models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

		
models	QMRH/0*-0*	QMRD/0*-0*
		
nominal sensing distance S_n	20 m ⁽¹⁾	
minimum working distance	-	
sensitivity adjustment	yes	-
emission	red (630 nm)	
differential travel	$\leq 10\%$	
repeat accuracy	5%	
light-dark selection	yes	
U_e operating voltage	10 ... 30 Vdc	
ripple	$\leq 10\%$	
no-load supply current	≤ 30 mA	
load current	≤ 100 mA	
leakage current	≤ 10 μ A	
output voltage drop U_d	2 V max @ 100 mA	
maximum load current	≤ 100 mA	
output type	PNP or NPN NO or NC	
switching frequency f	2 kHz	
time delay before availability	≤ 100 ms	
supply electrical protections	polarity reversal, over voltage pulses	
output electrical protection	short circuit (auto reset) , over voltage pulses	
operative temperature range	- 25 ...+ 70° C (without freeze)	
thermal drift	- 30 ...+ 80° C	
LED indicators	yellow (output state LO/DO) green (Excess gain)	
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp	
protection degree	IP67 (EN60529) ⁽⁵⁾	
housing material	PA66	
optic material	PMMA	
tightening torque	1 Nm ⁽⁶⁾	
weight (approx)	52 g cable, 10 g M8 plug	

⁽⁵⁾ Protection guaranteed only with plug cable well mounted

⁽⁶⁾ Screws, nuts and mounting brackets are not included with the sensor (accessories)







Products

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specifiche (through beam models)

in accordo con IEC EN 60947-5-2 e IEC EN 60947-5-7

		
models	QMIH/0*-0*	QMID/0*-0*
		
nominal sensing distance S_n	30 m ⁽¹⁾	
minimum working distance	-	
sensitivity adjustment	yes	-
emission	infrared (850 nm)	
differential travel	≤ 10%	
repeat accuracy	5%	
light-dark selection	yes	
U_e operating voltage	10 ... 30 Vdc	
ripple	≤ 10%	
no-load supply current	≤ 45 mA	
load current	≤ 100 mA	
leakage current	≤ 10 μA	
output voltage drop U_d	2 V max @ 100 mA	
maximum load current	≤ 100 mA	
output type	PNP or NPN NO or NC	
switching frequency f	2 kHz	
time delay before availability	≤ 100 ms	
supply electrical protections	polarity reversal, over voltage pulses	
output electrical protection	short circuit (auto reset) , over voltage pulses	
operative temperature range	- 25 ... + 70° C (without freeze)	
thermal drift	- 30 ... + 80° C	
LED indicators	yellow (output state LO/DO) green (Excess gain)	
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp	
protection degree	IP67 (EN60529) ⁽⁵⁾	
housing material	PA66	
optic material	PMMA	
tightening torque	1 Nm ⁽⁶⁾	
weight (approx)	52 g cable, 10 g M8 plug	

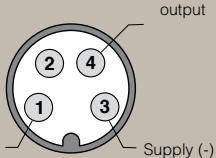
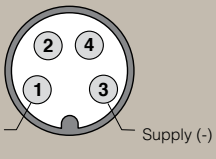
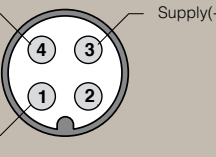
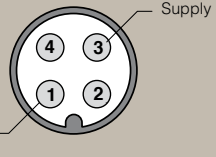
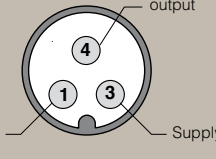
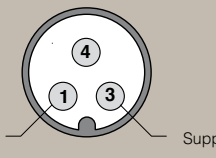
⁽¹⁾ White target *Kodak* 90% 200 x 200 mm ⁽²⁾ White target *Kodak* 90% 400 x 400 mm ⁽³⁾ With RL 110 reflector EG = 2

⁽⁴⁾ With RL 110 reflector EG = 2, use RL113G and RL116 ⁽⁵⁾ Protection guaranteed only with plug cable well mounted

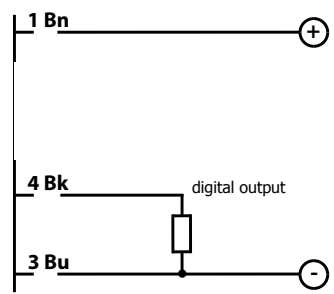
⁽⁶⁾ Screws, nuts and mounting brackets are not included with the sensor (accessories) ⁽⁷⁾ Not included in model QMRG/**-**

- BN brown
- BU blue
- BK black
- WH white

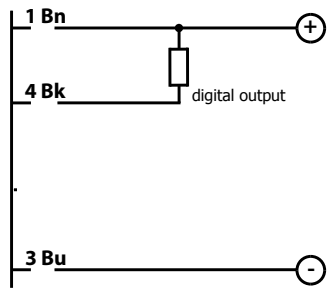
electrical diagrams of connections

	M8 - 4 pin
	<p>QMR*/0*-0F & QMR*/0*-0AVG80</p> <p>QMI*/0*-0F & QMI*/0*-0AVG80</p>
	<p>QMRH/0*-0F & QMRH/0*-0AVG80</p> <p>QMIH/0*-0F & QMIH/0*-0AVG80</p>
	<p>QMR*/0*-0F & QMR*/0*-0AVG80</p> <p>QMI*/0*-0F & QMI*/0*-0AVG80</p>
	<p>QMRH/0*-0F & QMRH/0*-0AVG80</p> <p>QMIH/0*-0F & QMIH/0*-0AVG80</p>
	<p>QMR*/0*-0F & QMR*/0*-0AVG80</p> <p>QMI*/0*-0F & QMI*/0*-0AVG80</p>
	<p>QMRH/0*-0F & QMRH/0*-0AVG80</p> <p>QMIH/0*-0F & QMIH/0*-0AVG80</p>

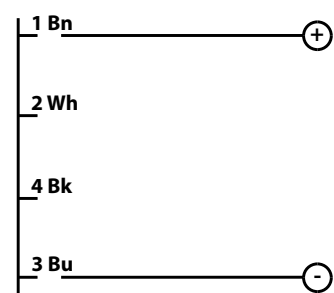
Background suppression, polarized, retroreflection, for transparent, diffuse reflection and receiver with PNP output



Background suppression, polarized, retroreflection, for transparent, diffuse reflection and receiver with NPN output



Emitter



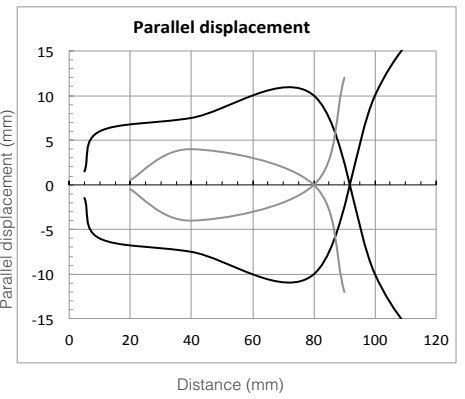
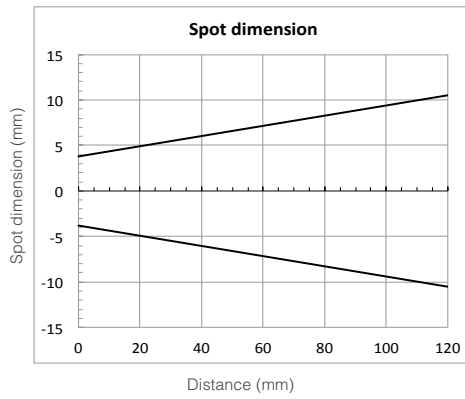
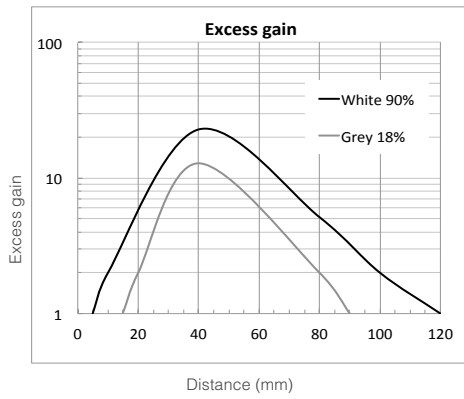


Products

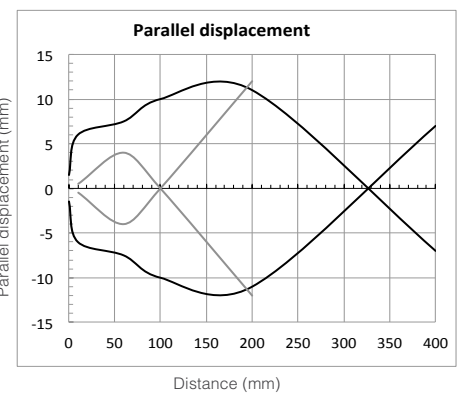
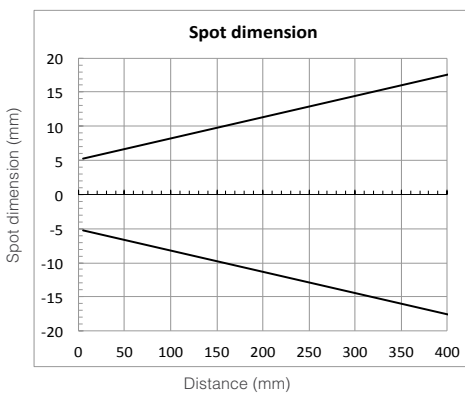
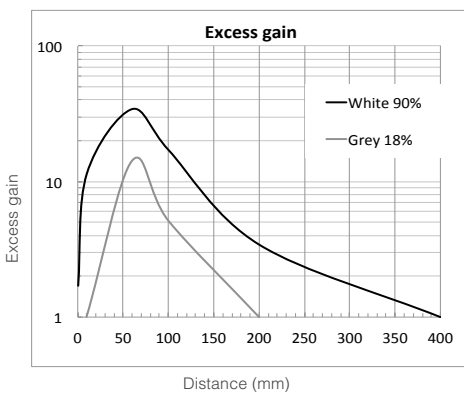
QM
cubic

response diagrams

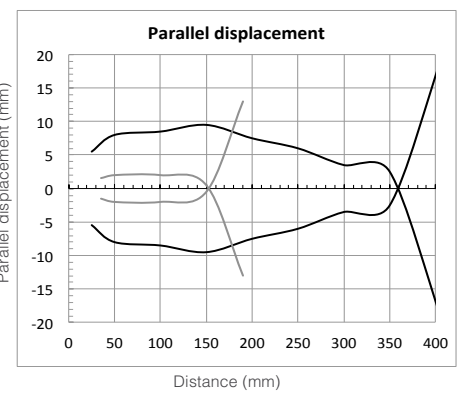
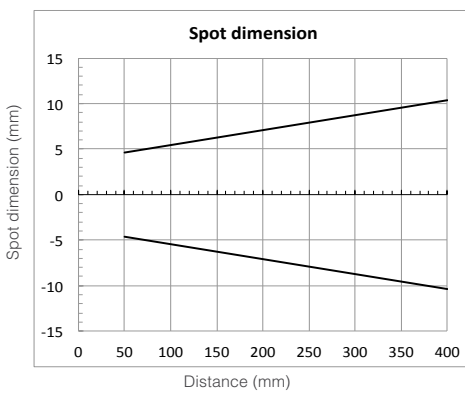
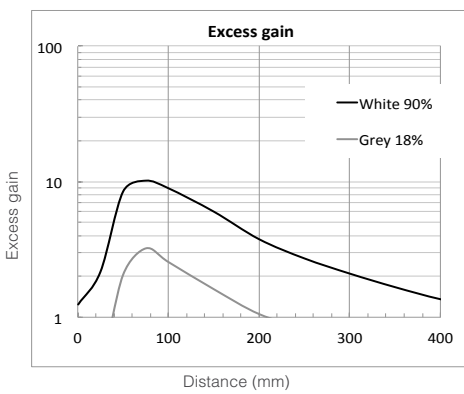
QMRB/0*-0***



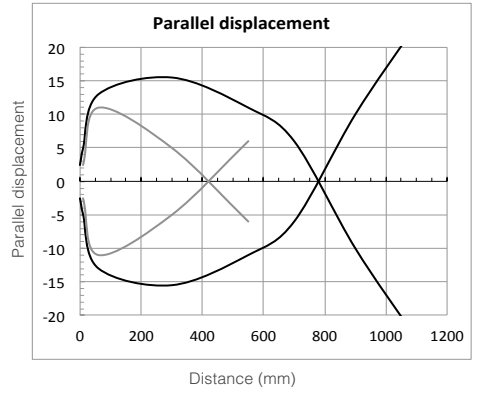
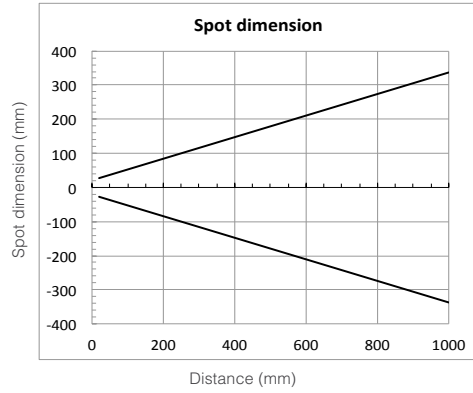
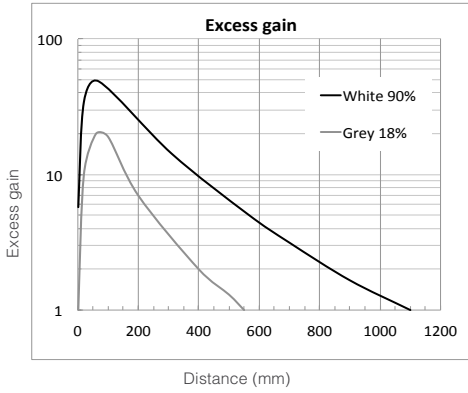
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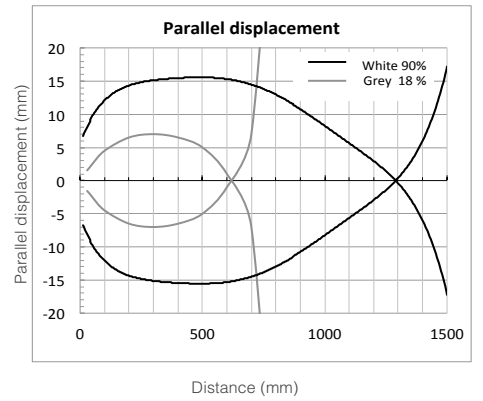
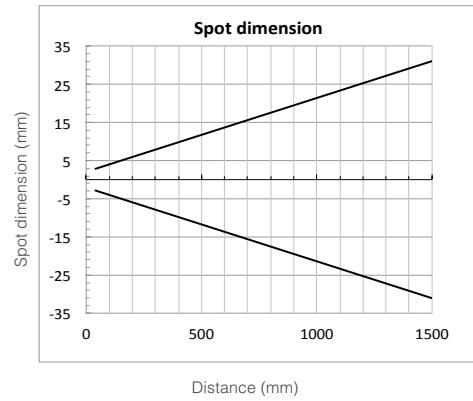
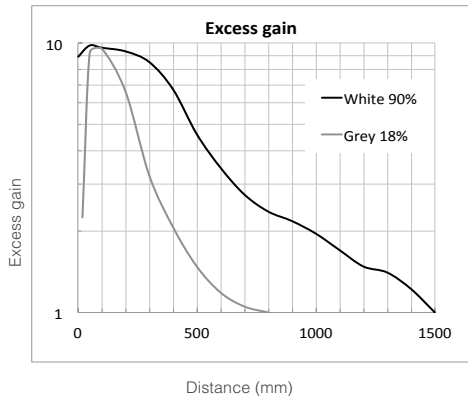
QMI7/0*-0***



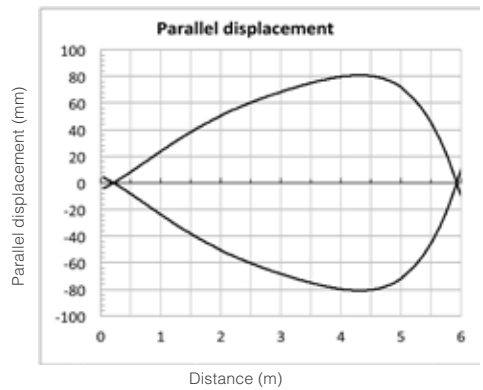
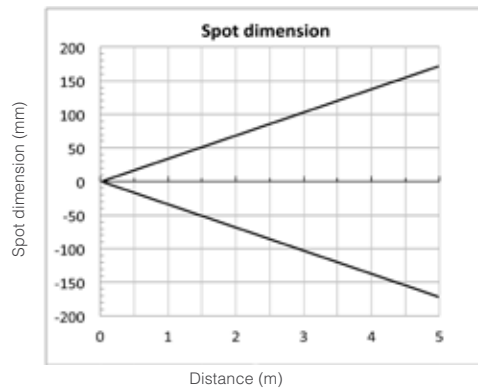
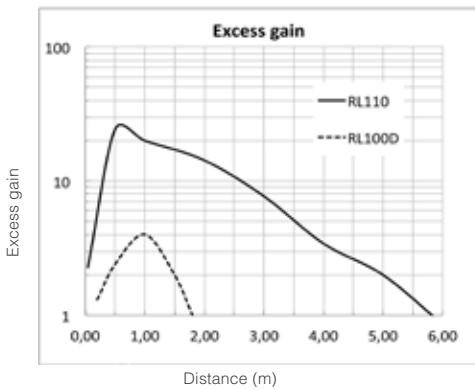
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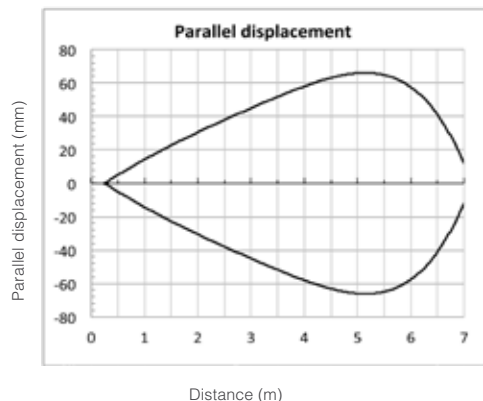
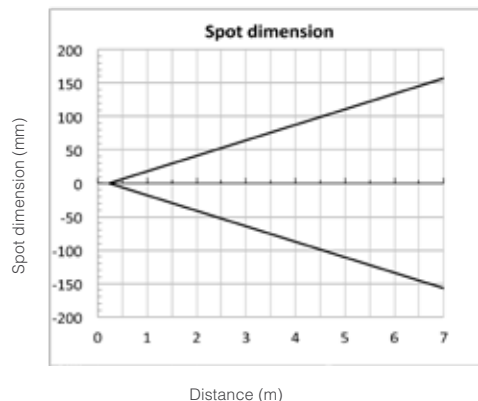
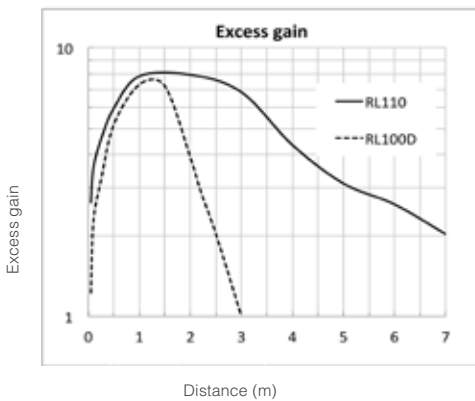
QMI9/0*-0***



QMRN0*-0***



QMIC/0*-0***

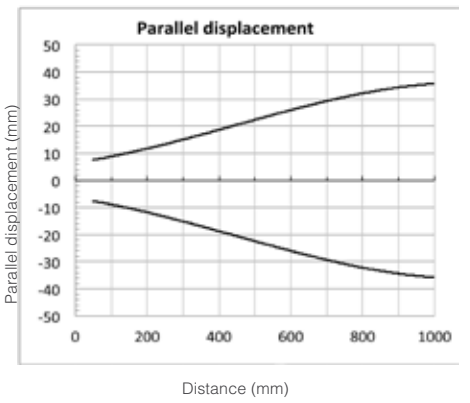
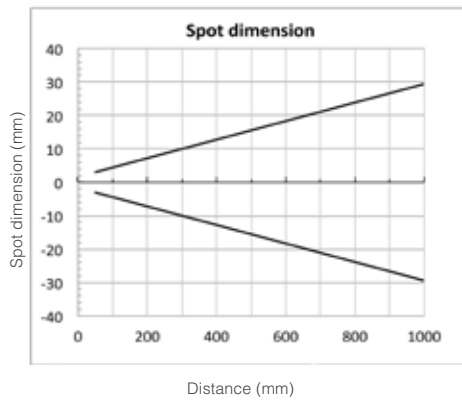
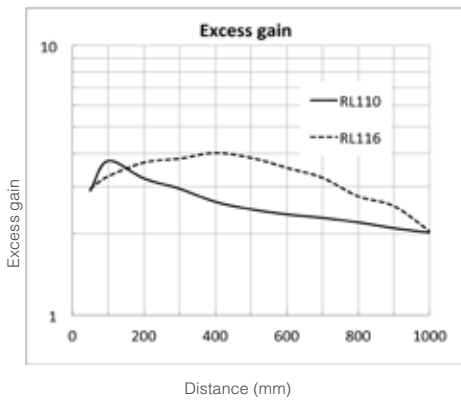




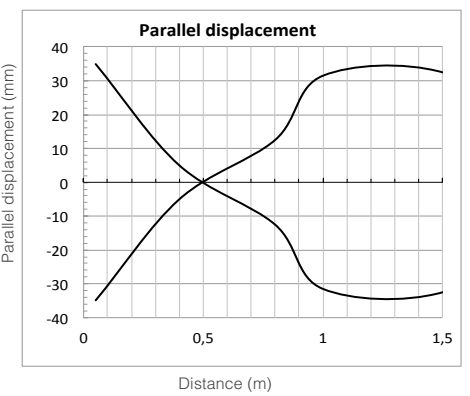
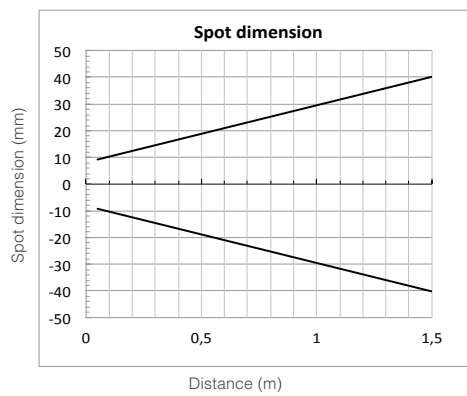
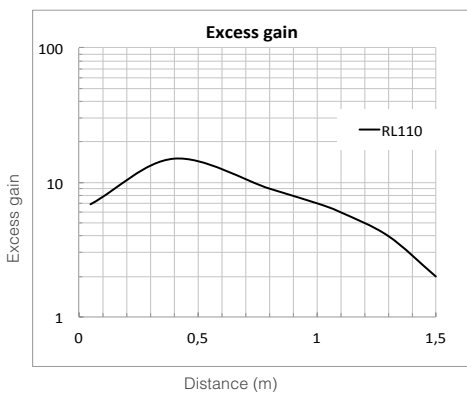
Products

QM
cubic

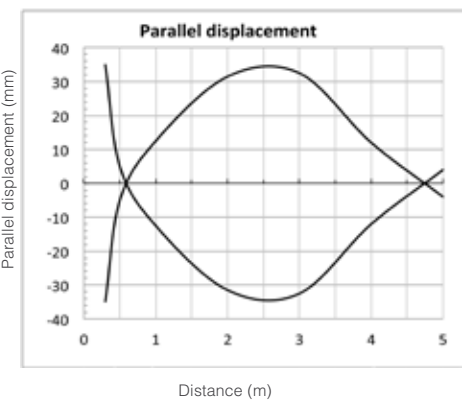
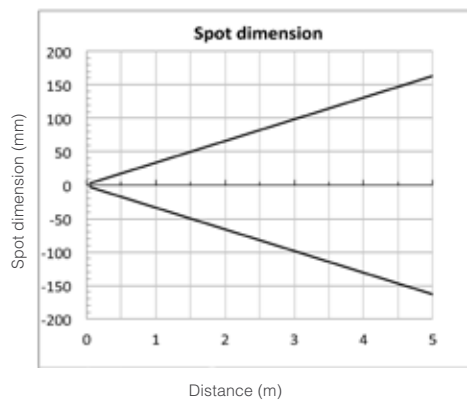
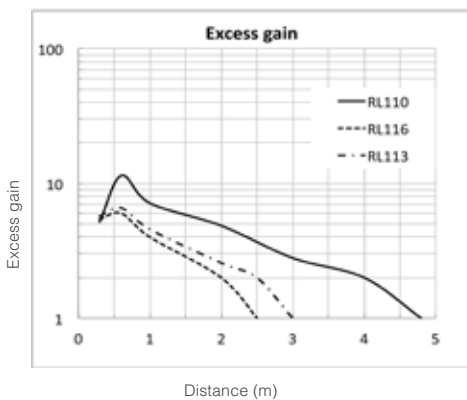
QMIG/0⁻⁰***

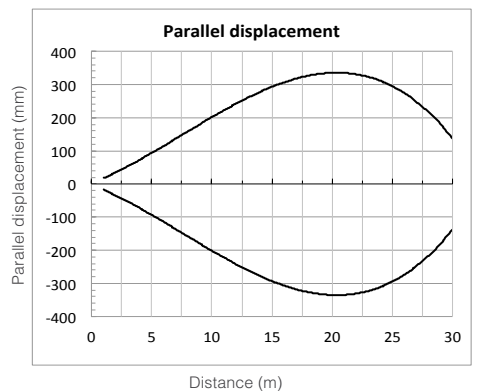
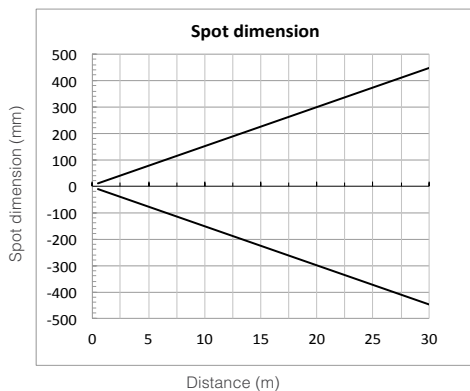
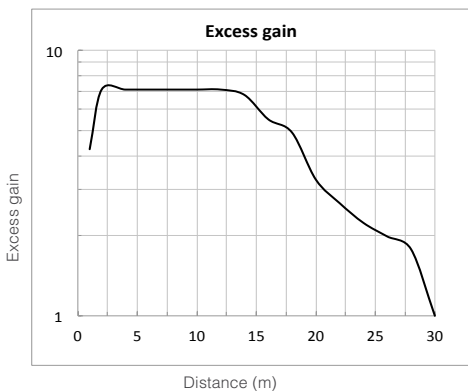
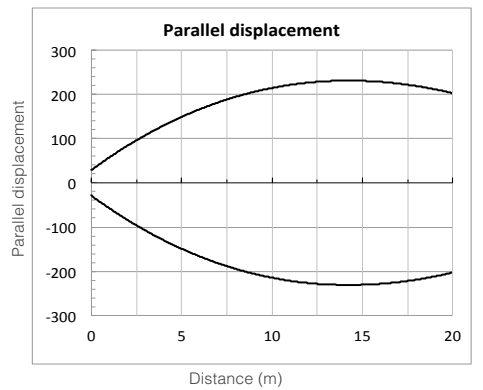
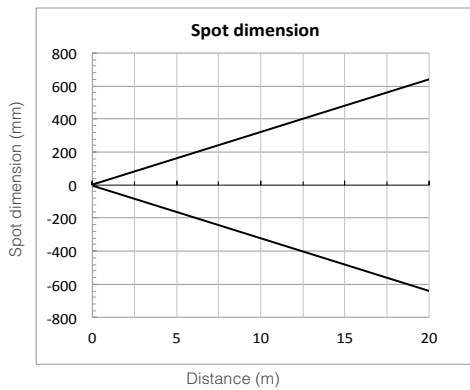
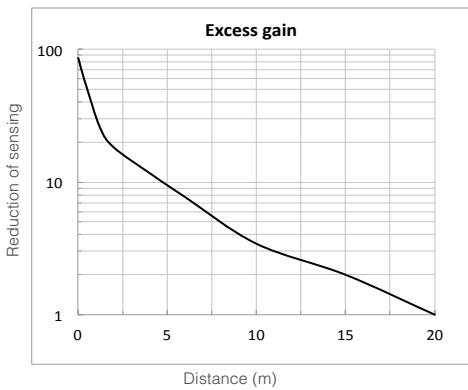
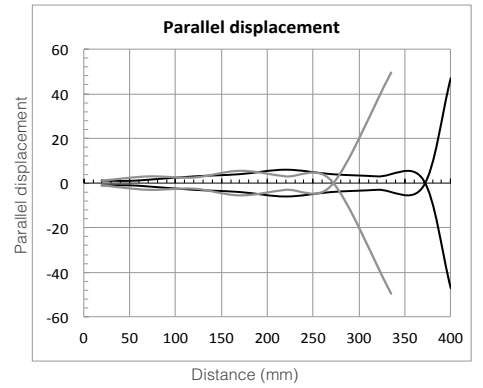
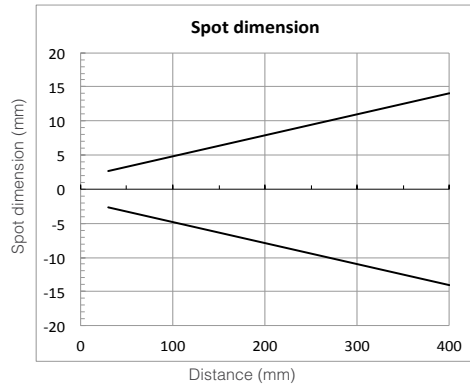
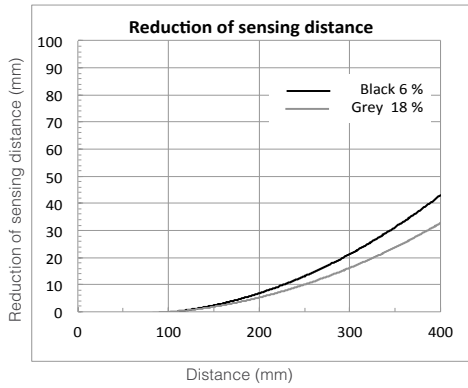
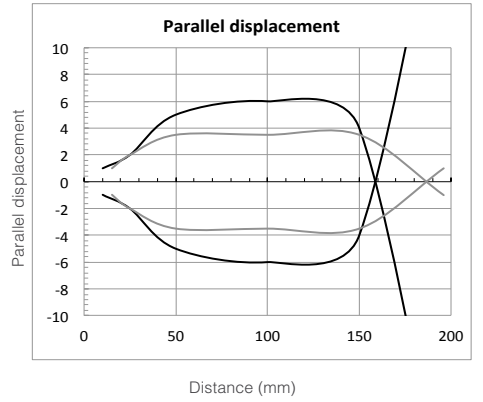
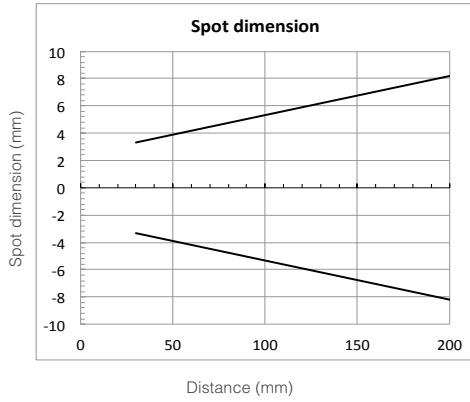
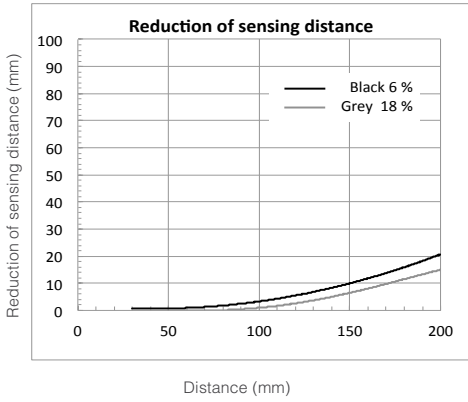


QMRG/0⁻⁰***



QMRL/0⁻⁰***







Products

QM
cubic

dimensions

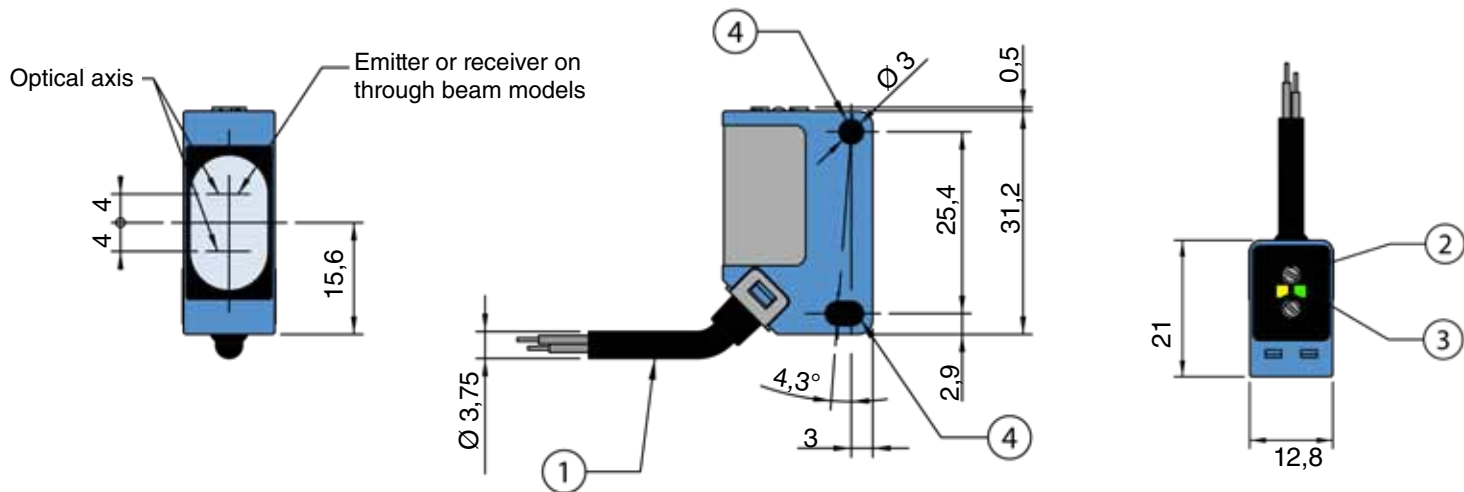
① Cable exit

② Trimmer

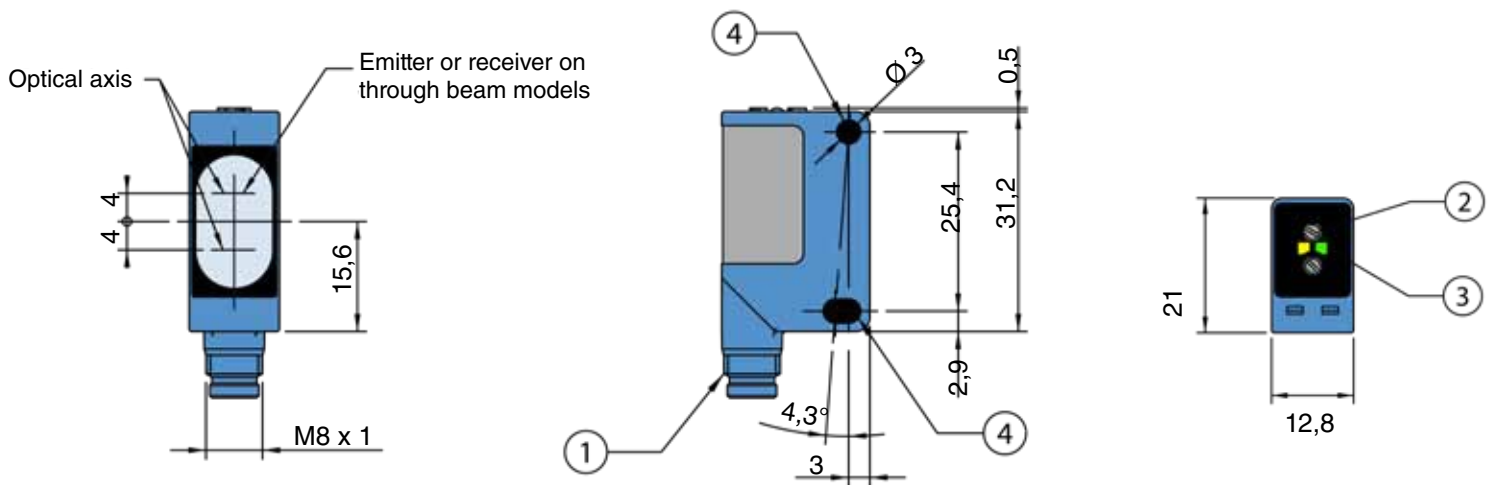
③ Led

④ Mounting holes

Cable exit QM

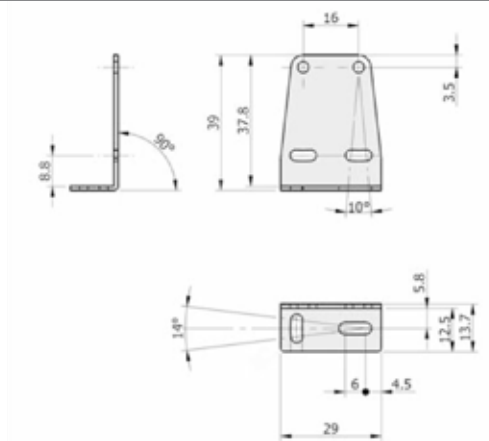


Connector exit QM

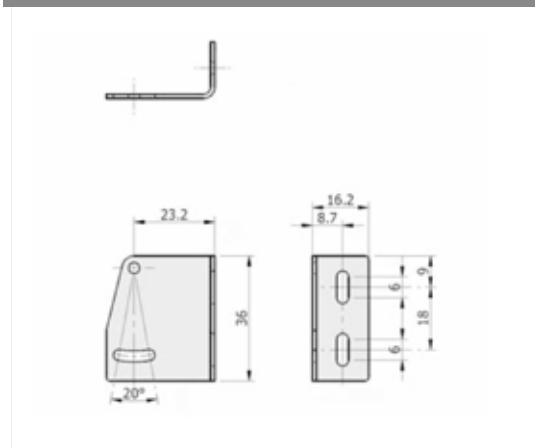


model	description
ST 101	L vertical mounting bracket
ST 102	L side mounting bracket
ST 103	vertical mounting bracket with protective cover
ST 104	horizontal mounting bracket with protective cover
STQM0	vertical and horizontal shutters
STQMS	screws - nuts - lockwashers

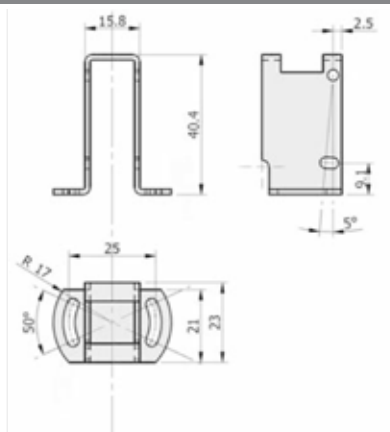
ST 101



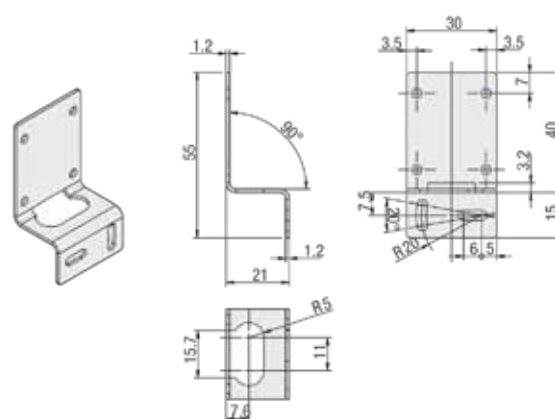
ST 102



ST 103⁽¹⁾



ST 104⁽¹⁾



STQM0



Vertical and horizontal diaphragms (0.5 - 1.2)
Packing units 2

Dia.	0,5	1	2
Sn (EG=1)	1,5 m	2 m	4,5 m
Sn (EG=2)	1 m	1,5 m	4 m
Min Ø	0,8 mm	1,5 mm	2,5 mm

STQMS⁽²⁾



20 Cross-slotted screw M3x20
20 Hexagon nuts M3
20 Lockwashers Ø3

⁽¹⁾ Can be used only for cable or pig-tail exit models

⁽²⁾ Components not present in standard sensors packaging



Catalogue
Photoelectric sensors



CAT3EQM1375401 QM CUBIC MINIATURIZED PHOTOELECTRIC SENSOR QM ENG ED.01/2014

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