



# UQ1 series

Cubic Ultrasonic Sensor with M18 head



Cubic Ultrasonic Sensor  
with M18 head

## features

- Models with digital and analog output
- Models with IO-Link output
- Working area adjusting by Teach-in button
- Complete protection against electrical damages
- Plastic housing, M12 plug exit



## web contents



- Application notes
- Photos
- Catalogue / Manuals



## code description

UQ 1 A / G 4 - 0 E IO

series	<b>UQ</b>	M18 Ultrasonic Cubic Sensor
function	<b>1</b>	Standard housing
nominal sensing distance Sn	<b>A</b>	40...300 mm
	<b>C</b>	60...800 mm
	<b>D</b>	80...1.200 mm
adjustment	<b>G</b>	Adjustment by Teach-In button
output	<b>4</b>	NPN - NO/NC digital output + 4 ... 20 mA current analogue output
	<b>6</b>	PNP - NO/NC digital output + 4 ... 20 mA current analogue output
	<b>7</b>	PNP - NO/NC digital output + 0 ... 10 V voltage analogue output
	<b>9</b>	NPN - NO/NC digital output + 0 ... 10 V voltage analogue output
housing materials	<b>P</b>	IO-Link output
cable exit / connector	<b>0</b>	Plastic housing
	<b>E</b>	M12 plug cable exit
IO-Link	<b>IO</b>	IO-Link models



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## available models

digital + analog mixed outputs

output	distance (mm)	adjusting	PNP + 4...20 mA	NPN + 4...20 mA	PNP + 0...10 V	NPN + 0...10 V
direct diffuse	300	yes	UQ1A/G6-0E	UQ1A/G4-0E	UQ1A/G7-0E	UQ1A/G9-0E
	800		UQ1C/G6-0E	UQ1C/G4-0E	UQ1C/G7-0E	UQ1C/G9-0E
	1.200		UQ1D/G6-0E	UQ1D/G4-0E	UQ1D/G7-0E	UQ1D/G9-0E

## available models

single digital output (IO-Link models)

output	distance (mm)	adjusting	IO-Link
direct diffuse	300	yes	UQ1A/GP-0EIO
	800		UQ1C/GP-0EIO
	1.200		UQ1D/GP-0EIO



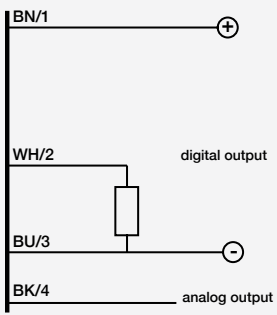
	UQ1A	UQ1C	UQ1D
nominal sensing distance	300 mm <sup>(1)</sup>	800 mm <sup>(2)</sup>	1.200 mm <sup>(2)</sup>
minimum sensing distance	40 mm	60 mm	80 mm
sensing range	40...300 mm	60...800 mm	80...1.200 mm
beam angle	7° ± 2°	8° ± 2°	
switching frequency	8 Hz	5 Hz	3 Hz
hysteresis	1%		
repeatability	1%		
linearity error	< 1 %		
temperature range	- 20°...+70° C		
temperature compensation	●		
temperature drift of Sr	± 5%		
operating voltage	10...30 V		
max. ripple content	5%		
leakage current	≤ 10 µA @ 30 Vcc		
output voltage drop	≤ 2,2 V (@ IL = 100mA)		
no-load supply current	≤ 35 mA		
output current (digital output)	100 mA		
response time analogue output	≤ 400 ms		
power on delay (digital output)	≤ 400 ms		
short-circuit protection	● (autoreset)		
induction protection	●		
voltage reversal protection	●		
EMC	conforming to EMC Directive, according to EN 60947-5-2		
weight	30 g		
LEDs	green: echo - yellow: output		
protection degree	IP67 (EN 60529)		
housing material	PBT or PA12		
active head material	epoxy glass resin		
storage temperature	- 30°C...+ 80°		

(1) Metallic target 100 x 100 mm (2) Metallic target 200 x 200

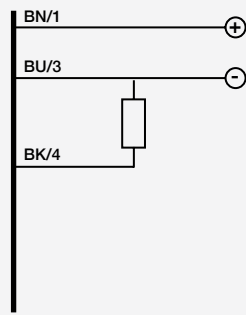


## electrical diagrams of the connections

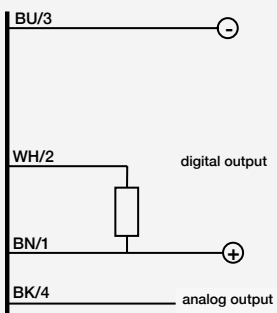
### PNP NO/NC models + analog output



### IO-Link output models

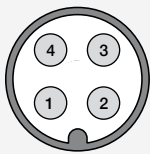


### NPN NO/NC models + analog output



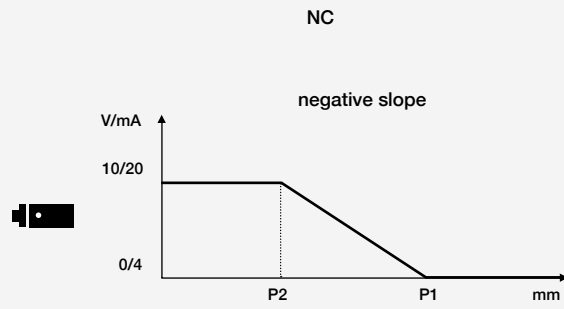
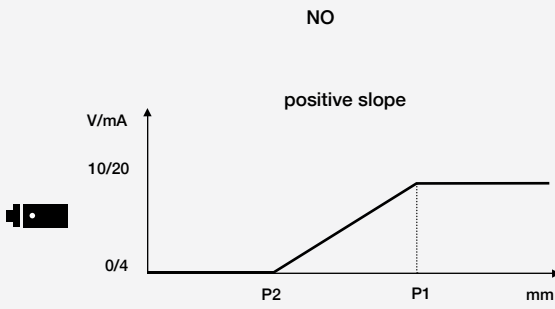
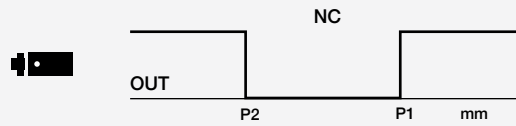
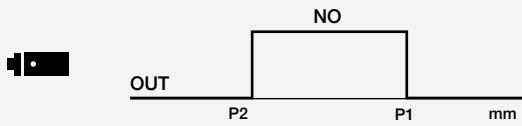
## connectors

### M12



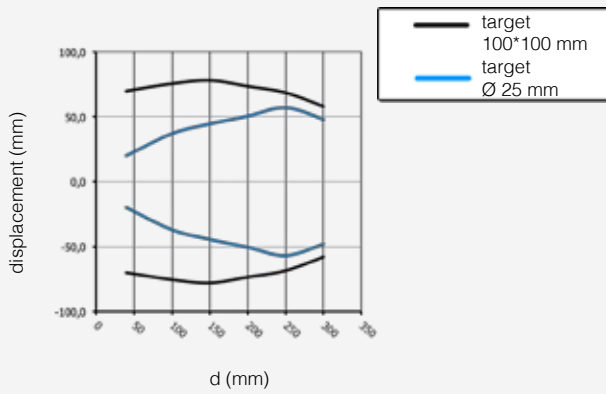


UQ1\*/\*\*-\*\*

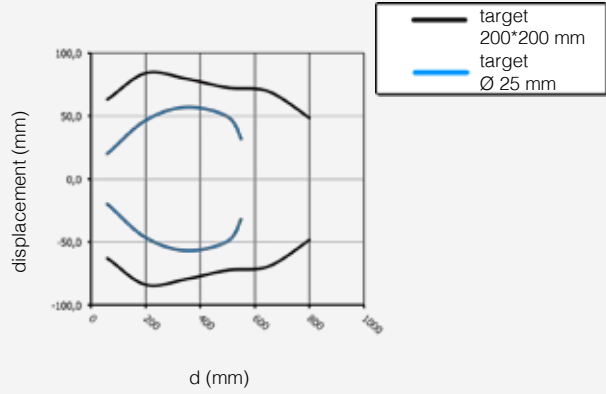


response diagrams

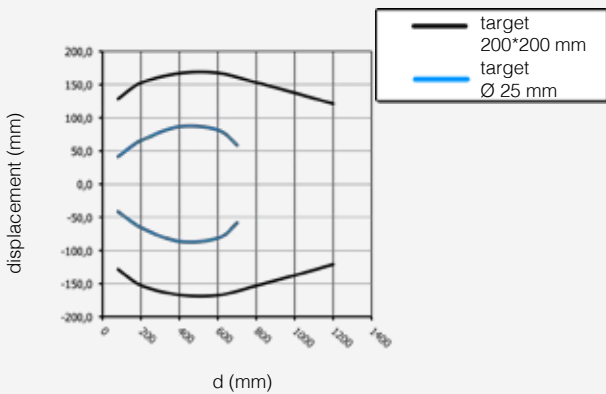
UQ1A/\*\*-\*\*-\*\* parallel displacement



UQ1C/\*\*-\*\*-\*\* parallel displacement



UQ1D/\*\*-\*\*-\*\* parallel displacement

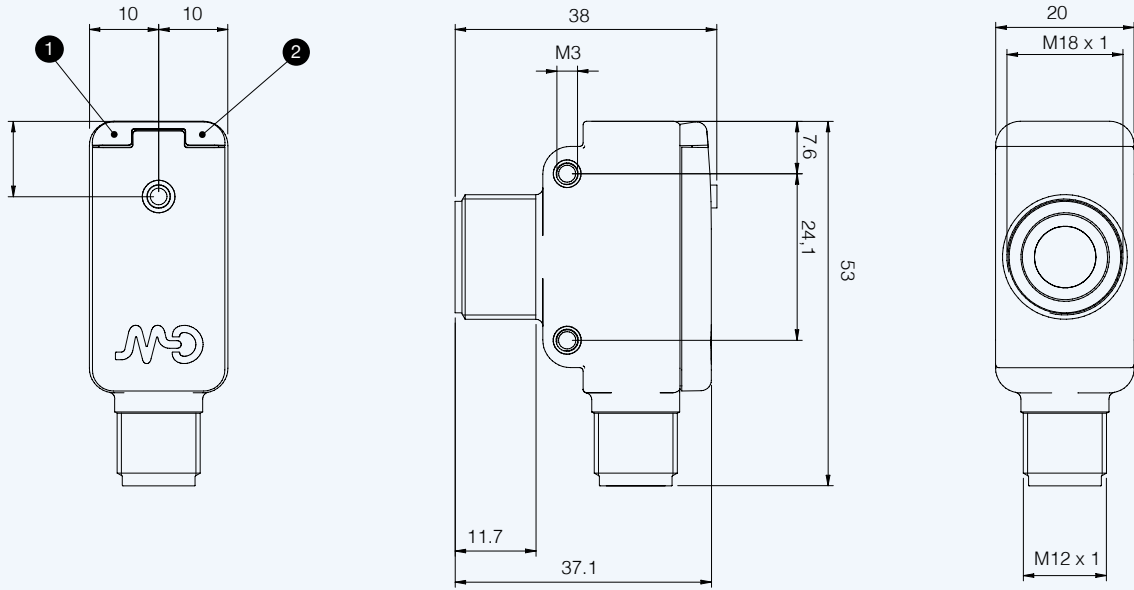




## dimensions (mm)

Cubic Ultrasonic Sensor  
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UQ1\*/\*\* - \*\*

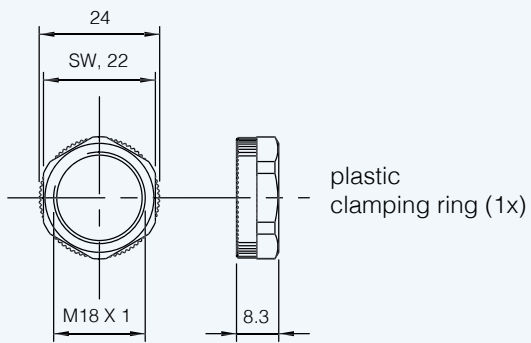


1 green LED

2 yellow LED

## dimensions (mm)

included accessories



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