

MQ2003

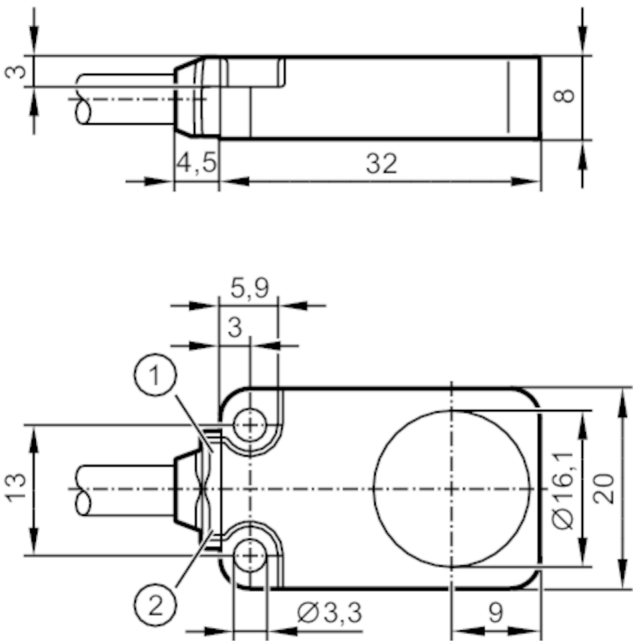


Magnetic sensor

MQ23005BFRKG/B/AM/IO/WFI/ZH

phase-out article

Alternative articles: IQW200
When selecting an alternative article and accessories please note that technical data may differ!



- 1 LED green
- 2 LED yellow



Product characteristics	
Electrical design	PNP/NPN; (parameterisable)
Output function	normally open / normally closed; (parameterisable)
Sensing range [mm]	5
Communication interface	IO-Link
Housing	rectangular
Dimensions [mm]	20 x 8 x 32
Application	
Special feature	anti-spatter
Media	ferrous only
Electrical data	
Operating voltage [V]	10...30 DC
Rated insulation voltage [V]	60
Current consumption [mA]	< 30
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	< 0.3
Outputs	
Electrical design	PNP/NPN; (parameterisable)



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Output function	normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC [V]		2.5
Max. leakage current [mA]		0.1
Permanent current rating of switching output DC [mA]		100
Short-time current rating of switching output [mA]		100
Switching frequency DC [Hz]		200
Notes on switching frequency [Hz]	suppression of extraneous fields: 10	
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes

Detection zone		
Sensing range [mm]		5
Real sensing range Sr [mm]		5 ± 10 %
Operating distance [mm]		0...4.05

Accuracy / deviations		
Correction factor		steel: 1
Hysteresis [% of Sr]		< 10
Switch point drift [% of Sr]		-10...20
Repeatability [% of Sr]		10

Software / programming		
Parameter setting options	hysteresis / window; switch-off delay; Switch-on and switch-off delay; switch-on operations; Teach function	

Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	Smart Sensor: Identification and diagnosis; Multi-channel, two setpoint switching sensor, type 0 Generic Profiled Sensor; Teach Channel	
SIO mode	yes	
Required master port type	A	
Min. process cycle time [ms]	9.6	
IO-Link process data (cyclical)	function	bit length
	process value	16
	device status	4
	binary switching information	4
IO-Link functions (acyclical)	application specific tag; operating hours counter; switching cycles counter	
Supported DeviceIDs	Type of operation	DeviceID
	default	829
Note	For further information please see the IODD PDF file under "Downloads"	

Operating conditions		
Ambient temperature [°C]		-25...80

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Storage temperature	[°C]	-30...85
Protection		IP 65; IP 67

Tests / approvals

EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-6 HF conducted	10 V
	EN 55011	class B
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / 50 sweep cycles, 1 octave per minute, in 3 axes
Shock resistance	EN 60068-2-27 Ea	100 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes
Continuous shock resistance	EN 60068-2-27	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes
MTTF	[years]	1976
UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	power supply	Limited Voltage/Current
	UL Approval no.	C011
	File number UL	E174191

Mechanical data

Weight	[g]	81.7
Housing		rectangular
Mounting		flush mountable
Dimensions	[mm]	20 x 8 x 32
Materials		diecast zinc anti-spatter; LED window: TPU; potting: PUR

Displays / operating elements

Display	Display operation	1 x LED, green
	switching status	1 x LED, yellow

Remarks

Pack quantity		1 pcs.
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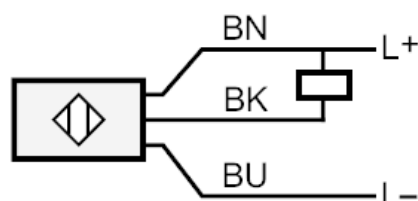
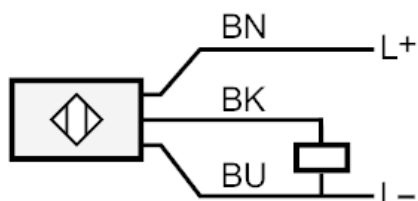
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Electrical connection

Cable: 2 m, PUR, Ø 4.9 mm; flame-retardant (IEC 60332-2, UL: FT2); 3 x 0.34 mm² / resistant to welding sparks

Connection



BK	Core colours
BN	black OUT / IO-Link
BU	brown
	blue