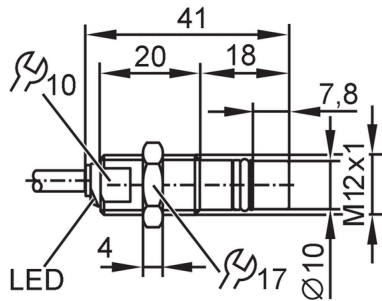


MFH213



Cylinder sensor

MFH3002BBPKG/B/AM/500/0,21M



Product characteristics		
Electrical design	PNP	
Output function	normally open	
Sensing range	[mm]	1.8
Housing	Threaded type	
Dimensions	[mm]	M12 x 1 / L = 41
Application		
Special feature	Full-metal housing	
Application	Detects ferrous metals; Hydraulic cylinder	
Min. burst pressure	2000 bar	200 MPa
Pressure rating	500 bar	50 MPa
Electrical data		
Operating voltage	[V]	10...36 DC
Current consumption	[mA]	< 23
Protection class	III	
Reverse polarity protection	yes	
Outputs		
Electrical design	PNP	
Output function	normally open	
Max. voltage drop switching output DC	[V]	1.6
Max. leakage current	[mA]	0.1
Permanent current rating of switching output DC	[mA]	200
Switching frequency DC	[Hz]	1000
Short-circuit protection	yes	
Overload protection	yes	
Monitoring range		
Sensing range	[mm]	1.8
Accuracy / deviations		
Hysteresis	[% of Sr]	< 15
Switch-point drift	[% of Sr]	10
Repeatability	[% of Sr]	10

MFH213



Cylinder sensor

MFB3002BBPKG/B/AM/500/0,21M

Operating conditions		
Pressure peak	1000 bar	100 MPa
Ambient temperature [°C]	-25...85	
Protection	IP 65; IP 67	
Tests / approvals		
EMC	Automotive area	
	Noise emission and noise interference: ECE R10	E1 type approval
	radiation according to ECE R10_ESA_1m	>10 db limits, depending on distance
	noise immunity according to DIN ISO 11452-2	30 V/m
	bulk current injection (BCI) acc. DIN ISO 11452-4	60 mA
	conducted interference in 24 V networks to ISO 7637-2: 2004 (pulse 1 to 4)	
	pulse	1 2a 2b 3a 3b 4
	Severity level	III III III III III
	Failure criterion	C B C A A C
	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
	DIN ISO 11452-5	100 V/m
Vibration resistance	EN 60068-2-6 Fc	20 g 50 sweep cycles per frequency; 1 octave per minute in 3 axes / 10...3000 Hz -20...50 °C
Shock resistance	EN 60068-2-27 Ea	100 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes / -40...85 °C
Continuous shock resistance	EN 60068-2-27 Ea	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes / -20...50 °C
MTTF [years]	1934	
Mechanical data		
Weight [g]	30.8	
Housing	Threaded type	
Mounting	flush mountable	
Dimensions [mm]	M12 x 1 / L = 41	
Thread designation	M12 x 1	
Material	housing: stainless steel; O-ring: FPM; supporting ring: PTFE	
Min. pressure cycles	10 million	
Tightening torque [Nm]	< 25	
Full-metal housing	yes	
Displays / operating elements		
Display	Switching status	1 x LED, yellow
Accessories		
Items supplied	lock nuts: 1 x M12	

MFH213



Cylinder sensor

MFB3002BBPKG/B/AM/500/0,21M

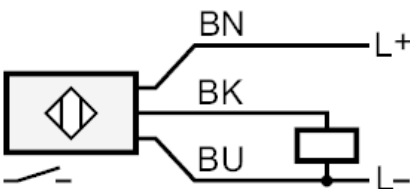
Remarks

Pack quantity 1 pcs.

Electrical connection

Cable: 0.21 m, PUR

Connection



Diagrams and graphs

