CE
0102

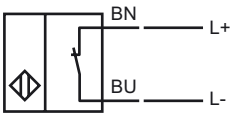
Model Number

MBN5-V3-N

Features

- **Basic series**
- **NAMUR**
- **Sensing range 20 mm based on DM 15-06 magnet**

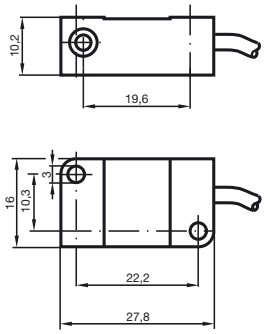
Connection



Accessories

DM15-06
Permanent magnet for magnetic field sensors

Dimensions



Technical Data

General specifications		
Switching element function		NAMUR, NO
Rated operating distance	s_n	20 mm
Installation		embeddable in non-magnetic metal
Output polarity		NAMUR
Assured operating distance	s_a	15 mm
Switch induction		3.5 ... 5.5 mT
Nominal ratings		
Nominal voltage	U_o	8 V
Switching frequency	f	0 ... 3 Hz
Reverse polarity protected		reverse polarity protected
Current consumption		
Magnet detected		≥ 2.5 mA
Magnet not detected		≤ 1 mA
Ambient conditions		
Ambient temperature		-25 ... 75 °C (-13 ... 167 °F)
Mechanical specifications		
Connection type		cable PVC , 110 mm
Core cross-section		0.14 mm^2
Housing material		PBT
Sensing face		PBT
Protection degree		IP67
General information		
Use in the hazardous area		see instruction manuals
Category		2G; 3G
Compliance with standards and directives		
Standard conformity		
NAMUR		EN 60947-5-6:2000 IEC 60947-5-6:1999
Electromagnetic compatibility		NE 21:2007
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
Approvals and certificates		
CCC approval		Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

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PEPPERL+FUCHS SENSING YOUR NEEDS

ATEX 2G

Instruction	**Manual electrical apparatus for hazardous areas**
Device category 2G	for use in hazardous areas with gas, vapour and mist
Directive conformity	94/9/EG
Standard conformity	EN 60079-0:2006, EN 60079-11:2007 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions
CE symbol	CE 0102
Ex-identification	Ex II 2G Ex ia IIC T6
EC-Type Examination Certificate	TÜV 07 ATEX 553668 X
Appropriate type	MBN5-V3-N
Effective internal capacitance C_i	≤ 300 nF ; a cable length of 10 m is considered.
Effective internal inductance L_i	≤ 10 µH ; a cable length of 10 m is considered.
General	The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The EC-Type Examination Certificate has to be observed. The special conditions must be adhered to! Directive 94/9/EG and hence also EC-Type Examination Certificates apply in general only to the use of electrical apparatus under atmospheric conditions. The use in ambient temperatures of > 60 °C was tested with regard to hot surfaces by the mentioned certification authority. If the equipment is not used under atmospheric conditions, a reduction of the permissible minimum ignition energies may have to be taken into consideration.
Highest permissible ambient temperature	The temperature ranges, according to temperature class, are given in the EC-Type Examination Certificate.
Installation, Comissioning	Laws and/or regulations and standards governing the use or intended usage goal must be observed. The intrinsic safety is only assured in connection with an appropriate related apparatus and according to the proof of intrinsic safety.
Maintenance	No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.
Special conditions	
Protection from mechanical danger	When used in the temperature range below -20 °C the sensor should be protected from knocks by the provision of an additional housing.

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ATEX 3G (nA)

Instruction	**Manual electrical apparatus for hazardous areas**
Device category 3G (nA)	for use in hazardous areas with gas, vapour and mist
Directive conformity	94/9/EG
Standard conformity	EN 60079-15:2005 Ignition protection category "n" Use is restricted to the following stated conditions
CE symbol	CE
Ex-identification	Ex II 3G Ex nA IIC T6 X
General	The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The data stated in the data sheet are restricted by this operating instruction! The special conditions must be observed!
Installation, Comissioning	Laws and/or regulations and standards governing the use or intended usage goal must be observed.
Maintenance	No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.
Special conditions	
Minimum series resistance R_V	A minimum series resistance R_V is to be provided between the power supply voltage and the proximity switch in accordance with the following list. This can also be assured by using a switch amplifier.
Maximum operating voltage U_{Bmax}	The maximum permissible operating voltage UBmax must be restricted to the values given in the following list. Tolerances are not permitted.
Maximum permissible ambient temperature T_{Umax}	depending on the max. operating voltage U_{Bmax} and the minimum series resistance R_v. Details are given in the following list.
at U_{Bmax}=9 V, R_V=562 Ω	60 °C (140 °F)
using an amplifier in accordance with EN 60947-5-6	60 °C (140 °F)
Protection from mechanical danger	The sensor must not be exposed to **ANY FORM** of mechanical danger.
Protection from UV light	The sensor and the connection cable must be protected from damaging UV-radiation. This can be achieved when the sensor is used in internal areas.
Protection of the connection cable	The connection cable must be prevented from being subjected to tension and torsional loading.

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