



Basic features

Approval/Conformity

CE
CSA
IECEX
WEEE
UKCA
CCC Ex

Ex marking

ATEX: II 1/2GD
Ex db IIC T6 Ga/Gb
Ex ta IIIC T85°C Da IP68
Tamb -50°C to +70°C

II 1/2GD

Ex db IIC T5 Ga/Gb
Ex ta IIIC T100°C Da IP68
Tamb -50°C to +80°C
IECEX: Ex db IIC T6 Ga/Gb
Ex ta IIIC T85°C Da IP68
Tamb -50°C to +70°C

Ex db IIC T5 Ga/Gb
Ex ta IIIC T100°C Da IP68
Tamb -50°C to +80°C
NEC: Class I, Division 1, Groups
ABCD

Magnetostrictive Sensors
BTL7-E570-M0305-J-DEXC-SA418-TA12
Order Code: **BTL2E5N**

BALLUFF

Class II, Division 1, Groups EFG
Class III
Enclosure Type 4X/6P
Class I, Zone 1, AEx d IIC T* Ga/
Gb
Ex d IIC T* Gb
IP68-50°C to +65°C (T6) or -50°C
to +80°C (T5)
PESO: Ex d IIC T6 Ga/Gb
ATEX: II 1/2GD
Ex db IIC T6 Ga/Gb
Ex ta IIIC T85°C Da IP68
Tamb -50°C to +70°C

II 1/2GD
Ex db IIC T5 Ga/Gb
Ex ta IIIC T100°C Da IP68
Tamb -50°C to +80°C
IECEx: Ex db IIC T6 Ga/Gb
Ex ta IIIC T85°C Da IP68
Tamb -50°C to +70°C

Ex db IIC T5 Ga/Gb
Ex ta IIIC T100°C Da IP68
Tamb -50°C to +80°C
NEC: Class I, Division 1, Groups
ABCD
Class II, Division 1, Groups EFG
Class III
Enclosure Type 4X/6P
Class I, Zone 1, AEx d IIC T* Ga/
Gb
Ex d IIC T* Gb
IP68-50°C to +65°C (T6) or -50°C
to +80°C (T5)
PESO: Ex d IIC T6 Ga/Gb

Magnets, number (factory setting) 1

Electrical connection

Connection	Clamping terminal, 8-pin
Connection version	radial
Polarity reversal protected	Ub up to 36 V

Electrical data

Galvanic isolation	no
Inrush current	≤ 500 mA/10 ms
Operating voltage Ub	10...30 VDC
Overvoltage protection	Ub up to 36 V
Voltage-proof up to (GND to housing)	1000 V DC

Environmental conditions

Ambient temperature	-40...80 °C
EN 55016-2-3, Radiation	For industrial and residential use
EN 60068-2-27, Continuous shock	100 g, 2 ms
EN 60068-2-27, Shock	100 g, 6 ms
EN 60068-2-6, Vibration	12 g, 10...2000 Hz
EN 61000-4-2, ESD	Severity Level 3
EN 61000-4-3, RFI	Severity Level 3
EN 61000-4-4, Burst	Severity Level 3
EN 61000-4-5, Surge	Severity Level 2
EN 61000-4-6, High-frequency fields	Severity Level 3
EN 61000-4-8 Magnetic fields	Severity Level 4
IP rating	IP68
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-50...85 °C
Temperature coefficient typ.	≤ 30 ppm/K at 50% of nominal stroke 500mm

Functional safety

MTTF (40 °C)	58 a
--------------	------

Interface

Analog output	Analog, current
---------------	-----------------

Material

Housing material	1.4404 stainless steel
Material flange	1.4404 stainless steel
O-ring material	FKM
Protection tube material	1.4571 stainless steel

Mechanical data

Housing diameter	88 mm
Mounting part	Flange Ø18h6 plus holes
Null point	50.8 mm
Pressure rating max.	600 bar
Protection tube diameter	10.2 mm
Tightening torque	3.5 Nm

Range/Distance

Repeat accuracy	± 5 µm
Reproducibility	≤5 µm
Resolution	≤ 0.66 µA