



**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-M0508-J-DEXC-SA418-TA12**  
Order Code: **BTL2E29**

**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

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  $\leq 500$  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  $\leq 90$  %, non-condensing  
Storage temperature -50...85 °C  
Temperature coefficient typ.  $\leq 30$  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  $\pm 5$   $\mu$ m  
Reproducibility  $\leq 5$   $\mu$ m  
Resolution  $\leq 0.66$   $\mu$ A