
DB-11

Force Transducer

FEATURES

- Nominal capacity: 20 N, 30 N, 50 N, 75 N and 100 N
- Accuracy: 0.5 %
- Strain gauge area double-sealed to IP 67 protection class
- High-strength anodized aluminum alloy measuring spring
- Aluminum alloy protective tube with two nitril-rubber membranes
- Shielded connection cable
- EX approval



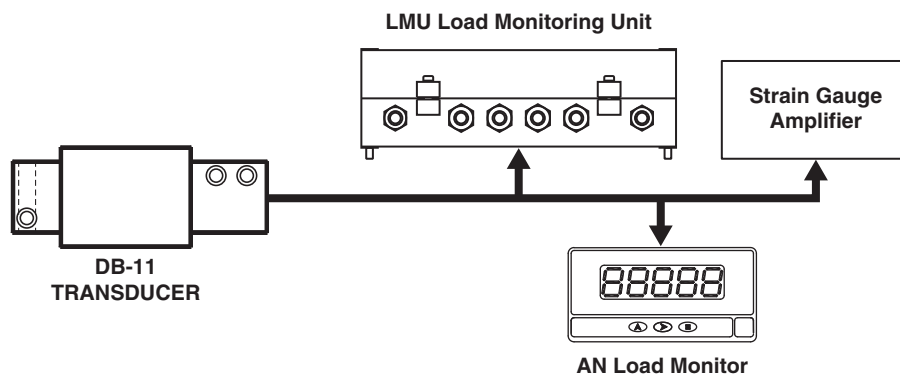
DESCRIPTION

The Magtrol DB-11 Transducer is designed for measuring both static and dynamic forces. Using strain gauge technology, a deformation of the sensing element provides an electrical signal proportional to the force being measured.

APPLICATIONS

Made entirely of aluminum, the DB-11 Transducer can be used for many low-range force measurements. Manufactured according to EX approval and connected to a signal conditioner, the DB-11 is ideal for weighing and dosing applications in explosive dust atmospheres.

SYSTEM CONFIGURATION



TECHNICAL RATINGS

| MECHANICAL CHARACTERISTICS | |
|--|--|
| Nominal Force | 20 N, 30 N, 50 N, 75 N and 100 N |
| Accuracy Class | 0.5% |
| Overload Limit | 150% (transducer with 20 N nominal load has built-in protection) |
| Overload at Rupture | > 300% (but at least 200 N) |
| Maximum Dynamic Load (double amplitude) | 70% |
| Displacement at Nominal Force | ≈ 0.5 mm |
| Weight | ≈ 0.16 kg |
| ELECTRICAL CHARACTERISTICS | |
| Nominal Sensitivity | max. 2 mV/V ± 5% (according to type) |
| Input Impedance | 350 ± 5 Ω |
| Output Impedance | 350 ± 5 Ω |
| Insulation Resistance | > 5 × 10 ⁹ Ω |
| Nominal Supply Voltage | 5 V to 10 V |
| Combined Error (nonlinearity + hysteresis) | 0.5% |
| Repeatability | < ± 0.05% |

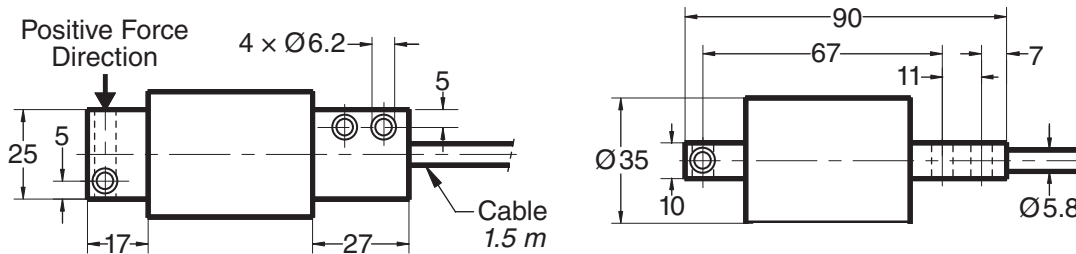
| ENVIRONMENTAL CHARACTERISTICS | |
|---------------------------------------|--------------------------------|
| Reference Temperature | +23 °C |
| Operating Temperature | -10 °C to +40 °C |
| Temperature Influence: On Zero | < ± 0.2% / 10 K |
| Temperature Influence: On Sensitivity | < ± 0.7% / 10 K |
| Protection Class | IP 67 (according to DIN 40050) |
| EX Approval | EX II 3 D |
| CONNECTION CABLE | |
| Cable Length | 1.5 m |

PIN CONNECTIONS

| Pin | Color Code |
|----------|------------|
| + supply | brown |
| - supply | white |
| + signal | green |
| - signal | yellow |

DIMENSIONS

Shielded connection cable 1.5 m long.
The shielding is not attached to the transducer body.



Due to the continual development of our products, we reserve the right to modify specifications without forewarning.



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