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

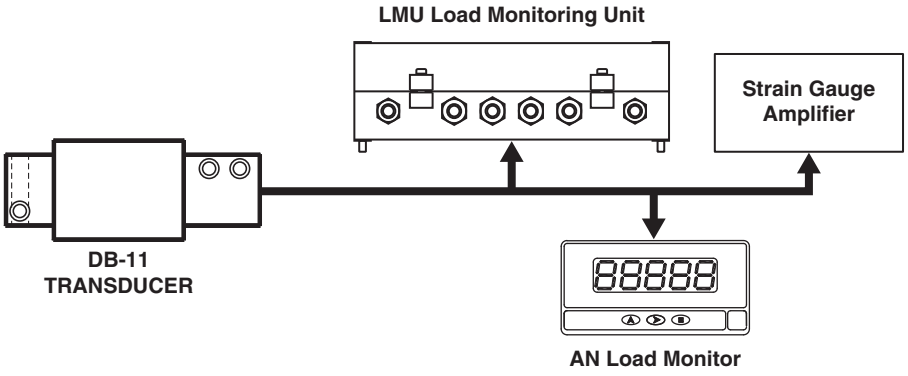
DESCRIPTION

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 Impedence	350 ±5 Ω
Output Impedence	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%

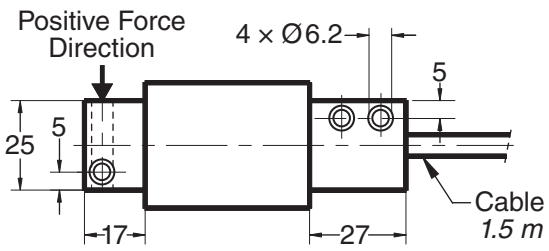
ENVIRONMENTAL CHARACTERISTICS	
Reference Temperature	+23 °C
Operating Temperature	-10 °C to +40 °C
Temperature Influence: On Zero	< ±0.2% / 10 K
Temperature Influence: On Sensitivity	< ±0.7% / 10 K
Protection Class	IP 67 (according to DIN 40050)
EX Approval	EX II 3 D
CONNECTION CABLE	
Cable Length	1.5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

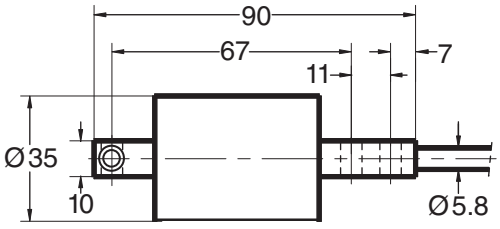
PIN CONNECTIONS

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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