

DD-03

Load Cells and Force Transducers

FEATURES

- Nominal capacity: 20, 50, 100, 200, 500, 1000 kN
- Small dimensions: ideal for space-saving applications
- High accuracy and long service reliability
- Sealed strain gauge area
- Very high strength steel measuring spring with hard chrome-plated dome
- Accuracy class 0.3%
- Protection IP 66



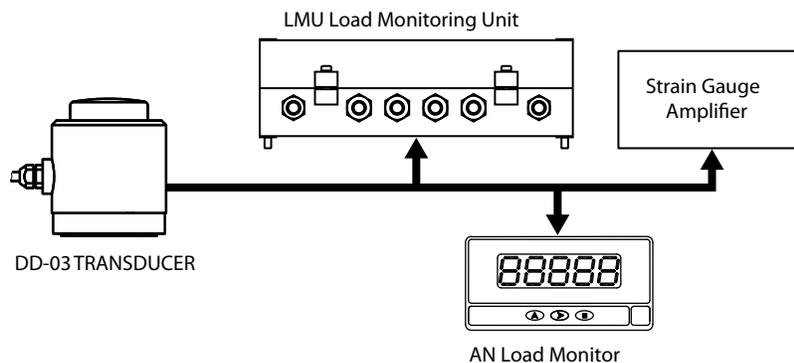
DESCRIPTION

Magtrol's DD-03 Force Transducers are designed for measuring static and dynamic compression loads. Using strain gauge technology, a deformation of the sensing element provides an electrical signal proportional to the load or force being measured.

APPLICATIONS

The DD-03 Force Transducer can be used to measure very large force ranges. When connected to a signal conditioner, this high-accuracy transducer is ideally suited for weight measurement applications in hoppers/silos, platforms and ski lifts.

SYSTEM CONFIGURATION



ORDERING INFORMATION

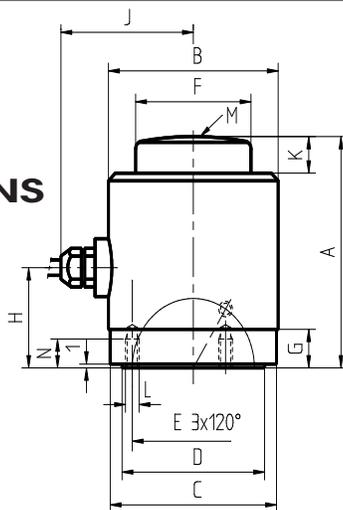
| | |
|----------------------------------|--------|
| PART NUMBER (P/N) | DD-03- |
| • Nominal Force : | |
| (kN) 20, 50, 100, 200, 500, 1000 | |

TECHNICAL RATINGS

| | | DD-03 | |
|--|----------------------------|-------------------------|--|
| MECHANICAL CHARACTERISTICS | | | |
| Nominal load | 20 kN, 50 kN, 100 kN | 200 kN, 500 kN, 1000 kN | |
| Accuracy class | 0,3 % | | |
| Overload Limit | 150 % | | |
| Overload at Rupture | > 400 % | | |
| Nominal deflection | ~ 0.1 mm | ~ 0.5 mm | |
| Weight | ~ 1.4 kg | ~ 5 kg | |
| ELECTRICAL CHARACTERISTICS | | | |
| Nominal output (output signal at nominal capacity) | 2 mV/V \pm 0.3 % | | |
| Input Impedance | 260 Ω | | |
| Output Impedance | 240 $\Omega \pm 2$ | | |
| Insulation resistance | > 10 ⁹ Ω | | |
| Supply voltage | \leq 20 V | | |
| Combined error (non-linearity and hysteresis) | < \pm 0.25 % | | |
| ENVIRONMENTAL CHARACTERISTICS | | | |
| Reference temperature | 23 °C | | |
| Operating temperature (compensated) | -10 °C to +60 °C | | |
| Usable temperature range | -40 °C to +80 °C | | |
| Temperature influence : on zero | < \pm 0.01 %/K | | |
| Temperature influence : on sensitivity | $\leq \pm$ 0.03 %/K | | |
| Protection Class | IP 66 | | |
| CONNECTION CABLE | | | |
| Cable length | 3 m | | |

DIMENSIONS

Shielded connection cable 3 m long.
The shielding is not attached to the transducer body.



| Dimensions (mm) | Nominal load (kN) | |
|-----------------|-------------------|---------------|
| | 20, 50, 100, 200 | 500, 1000 |
| A | 70 \pm 0.5 | 120 \pm 0.5 |
| B | 64 | 100 |
| C | 62 | 98 |
| D | 50 | 84 |
| E | 42 | 72 |
| F | 30 | 67 |
| G | 7 | 20 |
| H | 31 | 52 |
| J | 68 | 86 |
| K | 4 | 19 |
| L | M6 | M8 |
| M | R = 60 | R = 200 |
| N | 10 | 15 |

PIN CONNECTIONS

| PIN | COLOR CODE |
|----------|------------|
| + Supply | Brown |
| - Supply | White |
| + Signal | Yellow |
| - Signal | Green |

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



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