

KMS

Force Measuring Bar



Advantages

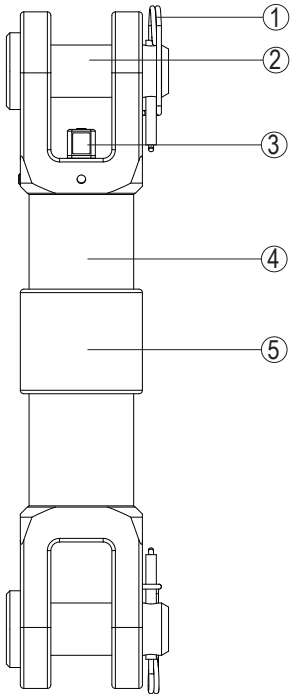
simple integration into plant- and process automation systems • compact design • applicable for extreme conditions
maintenance-free • various areas of application • convenient installation

Description

The Force Measuring Bar KMS is a compact and rugged measuring device to determine traction- and compressive force. The KMS was designed for harsh conditions in the mining and other industrial sectors. The rugged design, easy integration and installation into existing belt conveyors combined with a maintenance free operation characterizes the KMS.

The KMS is utilized e.g. for measuring the tensioning force at belt conveyors as well as in the area of load monitoring and overload protection in monorail trains and many other applications.

Construction



- ① Cotter pin
- ② Insert bolt
- ③ Electrical connection
- ④ Integrated transducer
- ⑤ Coupling rod with force sensor

Function

The Force Measuring Bar consists of a coupling rod with attached strain gauge and integrated transducer. The traction- and compression forces affecting the coupling rod are captured by the strain gauge. The integrated transducer converts the sensor signal into standard output signal.

The output signal is either an opto-decoupled signal of 5 -15 Hz or a voltage and current signal available through the integrated EMSYS plug through which the device will also electrically supplied.

Technical data

Electrical characteristics

- Input voltage. 12 V DC
- Power consumption. 20 mA
- Output signal (Type: KMS-*F-***). 5 - 15 Hz
- Output signal (Type: KMS-*I-***). 0 - 5 V or 0 - 20 mA

Mechanical characteristics

- Break load. 270 kN / 320kN
- Cotter pin. 30 x 92 C45 DIN EN 10083T2

Dimensions

- Length. 300 mm
- Diameter. 70 mm
- Weight. 4,5 kg

Measurement characteristics

- Accuracy. +1 %
- Measuring range. 3 - 100 kN (freely selectable)

Design

- Standard und ATEX [Ex I M2 EEx ib I]

Protection class

- Ip 65

Temperature range

- -20°C ≤ Ta ≤ +60°C