NORDMANN

TOOL MONITORING
AND PROCESS CONTROL

Strain Gauge DMS-Kralle

DMS-CU

Technical Data:

Sensor DMS-Kralle

Dimensions (WxHxD):	25 x 18 x 57 mm
Weight:	approx. 270 g (sensor incl. cable)
Cable to control unit:	LiYD11Y 4 x 0.25 mm^2
mm	length 5 m / outer diameter 4.4

Control-Unit DMS-CU

Dimensions (WxHxD):	35 x 58 x 81 mm
Weight:	approx. 70 g
Mounting: cabinet	To be installed in the electric
	on standard rail acc. to DIN 46277and DIN EN 50022

DMS-Kralle with control unit DMS-CU:

Measuring sensitivity:	35 mV/με after amplification (factor 2500)
Measuring range:	±10 V at 286 με

- **Force sensor on latest-generation DMS base, developed using Finite Element Method (FEM)**
- **Easy installation with a single M5 screw**
- **Control unit DMS-CU included**
- **Insensitive to magnetic field disturbances**
- **Higher measuring sensitivity than strain gauges attached directly to the monitored component using mechanical transmission**
- **Higher measuring sensitivity than BDA-Kralle**

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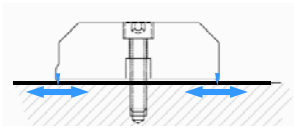
Application:

Force sensor for monitoring of dynamic and static forces of cutting tool machines.

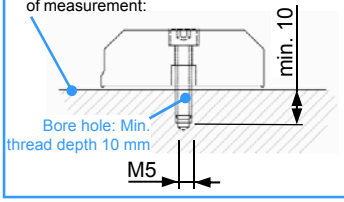
Measuring principle:

Measurement of the structural strain between the two claw feet with respect to elongation and compression.

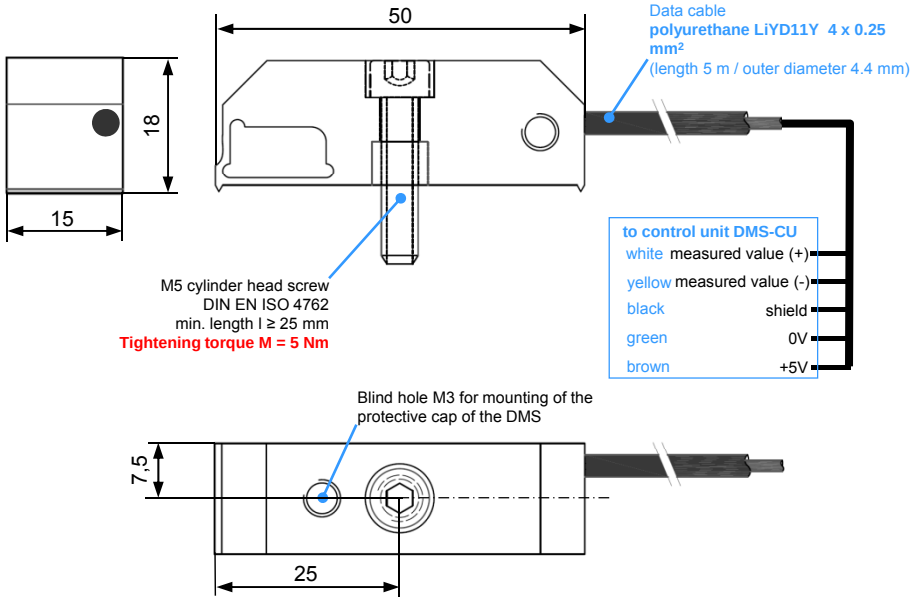


Installation instruction:

Before installation, roughen roughen surface perpendicular to direction of measurement:



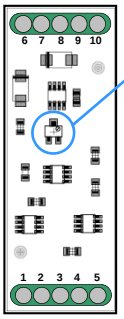
Detail drawing DMS-Kralle:



All dimensions in [mm]

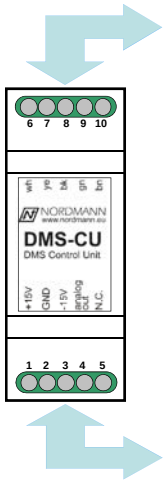
Zero adjustment:

The zero point is set via an internal spindle trimmer (R2). Remove the top cover by pressing the snap fits on both sides (see detail drawing DMS-CU).



spindle trimmer for zero adjustment

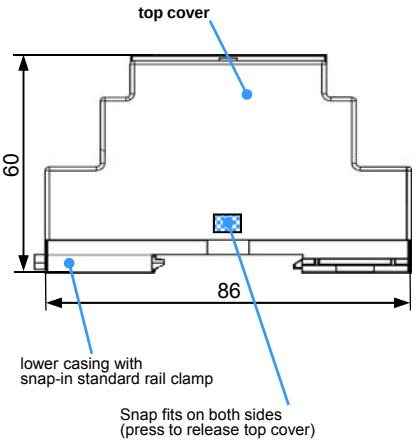
Pin assignment DMS-CU:



DMS-Kralle		
6 (wh)	white	measured value (+)
7 (ye)	yellow	measured value (-)
8 (bk)	black	shield
9 (gn)	green	0V
10 (bn)	brown	+5V

Tool Monitor	
1 (+15V)	X4:2, X4:8, X4:14
2 (GND)	X4:10, X4:16
3 (-15V)	X4:6, X4:12, X4:18
4 (analog out)	X4:22 to X4:36
5 (N.C.)	N.C. (Not Connected)

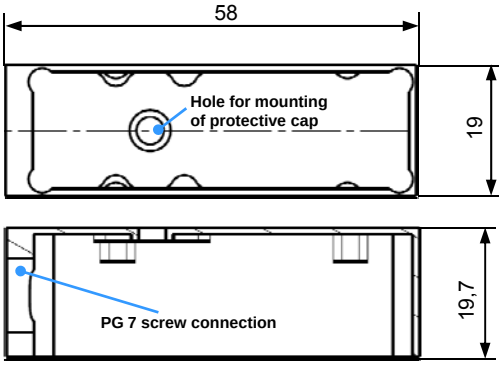
Detail drawing DMS-CU:



Protective cap for DMS

(not included in scope of supply)

To minimize temperature drift due to strong air flow or coolant, for example.



Order number:

8 . 9 . 1	DMS-Kralle
8 . 9 . 9	DMS-CU
8 . 9 . 1K	Protective cap

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