



Force Measurement Plate KMP



Technical data:

Material: 42CrMo4 tempered (1.7225+QT)
Dimensions (W x H x D) approx. (150-350 x 150-300 mm x 200 mm x 15mm)
Temperature range: +5 °C ... +80 °CL
Stiffness in measuring direction: 300 N/ μ m

Power supply: +15 V (5 mA)

Cable: LiYCY 2 x 0.14 mm²
Outer \varnothing = 6.1 mm / Length = 5.0 m
(Min. bending radius 10 mm)

Accessories: **Measuring amplifier DMS-CU (order number 8.9.9)**
(not included)

Installation: In the electric cabinet, either using 2 bolts or on standard rail TS 35 (according to DIN EN 60715)

- High stiffness in measuring direction for this panel form.
- Installation of the plate between spindle housing or tool carrier and feed slide.
- For feed force measurement: No interference from other force components (e.g. passive or cutting force)
- Customised production of the plate with other external dimensions and holes according to customer order

Structure and function:

The sensitive and fast-responding measuring plate is used to measure cutting forces.

The plate is installed between spindle housing or tool carrier and feed slide (see example image).

Application:

Sensitive gap elimination, as well as wear and breakage detection during drilling.

Installation instructions

Depending on the installation and measuring options, this sensor may require a design revision that must be taken into account when calculating the total costs. There are two order numbers for this additional expense that must be discussed with Nordmann's Technical Service Department BEFORE placing the order:

Order No. 8.7.K1

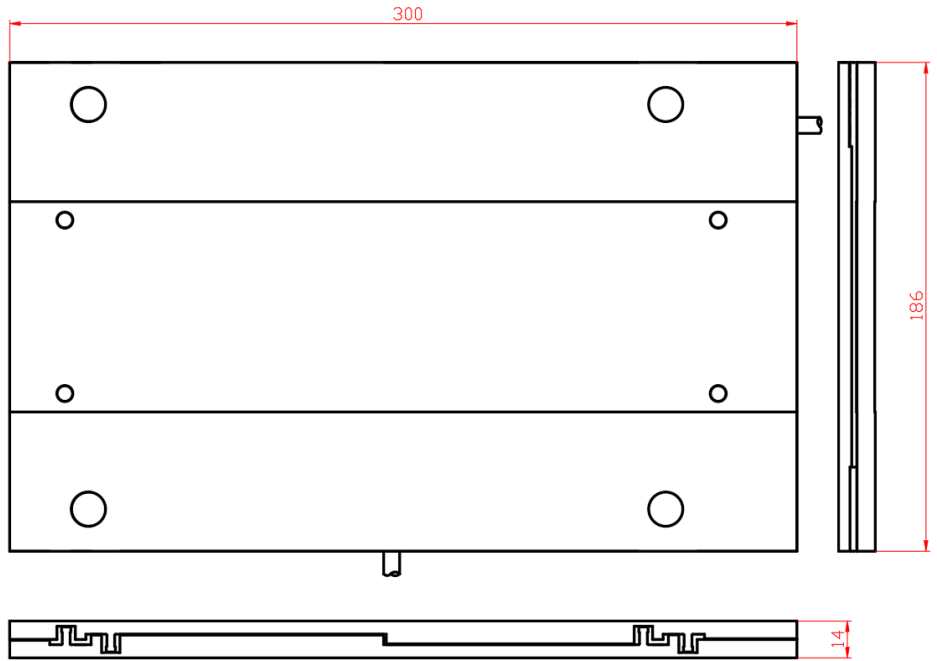
Design work for a force plate.
(Given axial symmetry of the top and bottom)

Order No. 8.7.K2

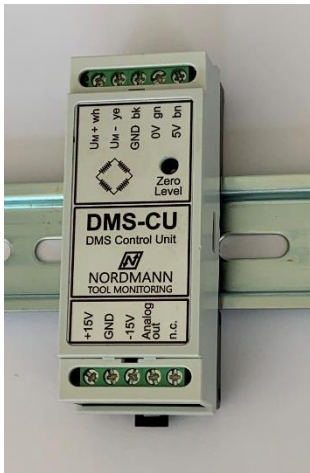
Design work for a force plate if the top and bottom are different and if there is no axial symmetry with regard to the centre line of the superimposed plates lying perpendicular to the direction of force.

Overview drawing:

(Shows standard force measurement plate KMP 8.7.1 300 x 186 x 14)



Accessories: DMS-CU



Port assignment DMS-CU:

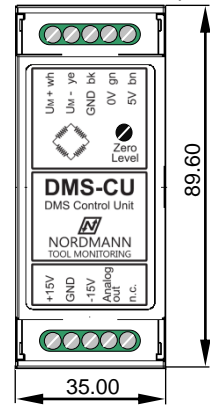
FP Force plate		
Um (wh)	White	Measured value (+)
Um (ye)	Yellow	Measured value (-)
GND (bk)	Black	Shield
0V (gn)	Green	±0V
5V (bn)	Brown	+5V

Zero level:
Spindle trimmer for zero point adjustment

Tool Monitor SEM-Modul (-e)	
1 (+15V)	X4:2 or X4:8 or X4:14
2 (GND)	X4:10 or X4:16
3 (-15V)	X4:6 or X4:12 or X4:18
4 (ana. out)	from X4:22 to X4:36
5 (n.c.)	n.c. (not connected)

Overview drawing DMS-CU:

Installation depth = 31.25 mm



Order number:

KMP 8.7.1 L x W x H
Force (external dimensions L x W x H)
Measurement Plate

KMP 8.7.2 L x W x H
Force (external dimensions L x W x H)
Plate Measurement
Top and bottom part differ*

Design work 8.7.K1

Design work 8.7.K2
Top and bottom part differ*



Zero level:

Spindle trimmer for zero point adjustment

Zero point adjustment:

After screwing on the FP, the measured value should be adjusted to 5 V (SEM-Modul) or 0 V (SEM-MODUL-e).

The value is adjusted via an internal spindle trimmer that can be reached with a fine slotted screwdriver. The trimmer can be given a total of 26 turns. (If turned too far to the left or right, the end of the adjustment range is indicated by a gentle tick.)

Installation information

DMS-CU:

Standard housing according to DIN 46199. Protection class IP40 (terminals IP20 BGVA3). For installation in the electric cabinet, either using 2 x M4 bolts or on standard rail TS 35 (according to DIN EN 60715)