

# Data sheet for Load Cells

Shear Beam with integrated analogue amplifier

Series KT805



- Compact shear beam with integrated analogue amplifier
- Output options 0...10 V, -10... +10 V, 4... 20 mA
- Response time < 1 ms
- Strain gauge full bridge
- Force transmission via M5-thread
- Compact size 78x34x36 mm
- Test report included

The KT805 force sensors are easy to install. They can be mounted with 2 screws to any flat and stable surface. Their compact size makes them a good choice even where space is at a premium.

Application examples: Force measurement in assembly processes in automation, motion control in handling systems.

## Data Load Cell

Rated force (F <sub>nom.</sub> )	2 kN	5 kN
Sensitivity voltage output	200 N / V	500 N / V
Sensitivity current output	125 N / mA	312.5 N / mA
Output signal options	0..10 V / -10... +10 V / 4... 20 mA	
Rated supply voltage	24 VDC	
Operating range of supply voltage	12 - 32 VDC	
Cut-off frequency	1600 Hz	
Response time	< 1 ms	
Relative linearity error	≤ 0.2 % F <sub>nom.</sub>	
Hysteresis	≤ 0.05 % F <sub>nom.</sub>	
Relative repeatability error	≤ 0.05 % F <sub>nom.</sub>	
Relative deviation of zero signal	≤ 1.0 % F <sub>nom.</sub>	
Relative Deviation of signal @ F <sub>nom.</sub>	≤ 1.0 %	
Relative creep (30min.)	≤ 0.05 % F <sub>nom.</sub>	
Maximum operation force	≤ 150 % F <sub>nom.</sub>	
Rated displacement	≤ 0.3 mm @ F <sub>nom.</sub>	
Operating temperature range	-10... +70 °C	
Temperature effect on output	≤ 0.15 % F <sub>nom.</sub> / 10 K	
Temperature effect on zero signal	≤ 0.1 % F <sub>nom.</sub> / 10 K	
Protection	IP40	
Insulation resistance	≥ 5 GΩ @ 50 VDC	
Cable material / length / diameter	Pur / 2 m / Ø 3.4 mm	
Electrical connection	3 x AWG28; shielded (shield connected to body)	
Material body / housing	Steel nickel plated / Steel with paint finish	
Mass	ca. 400 g	

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## Order code

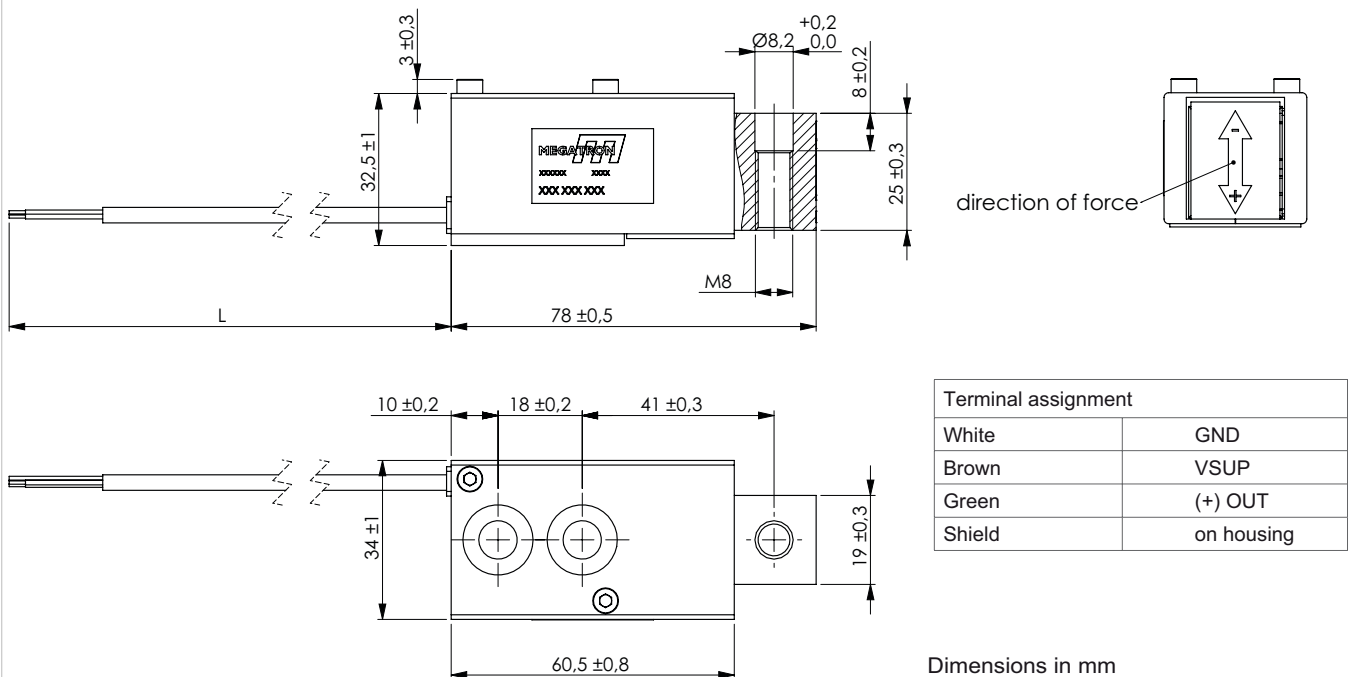
<b>Description</b>					
<b>Series</b>	KT805				
<b>Connecting cable: Cable length 2.0 m</b>	K				
<b>Rated force: 2 kN 5 kN</b>			2KN 5KN		
<b>Output signal (supply voltage 24V): 0..10 V 4..20 mA -10... +10 V (only with ZDP)</b>			2410 2442 2411		
<b>Direction of force (with Test Report P): Tension Pressure Tension + Pressure (only with 2411)</b>			ZP DP ZDP		
Order code example: KT805 K 2KN 2410 ZP					

**For higher quantities or on-going demand, additional options are available as described below on request**

For example:

- Customer specific cable length with connectors
- For project needs: modified mounting holes or threads

## Drawing

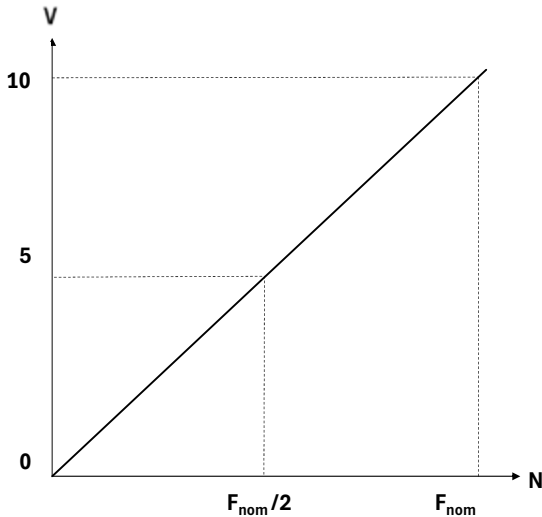


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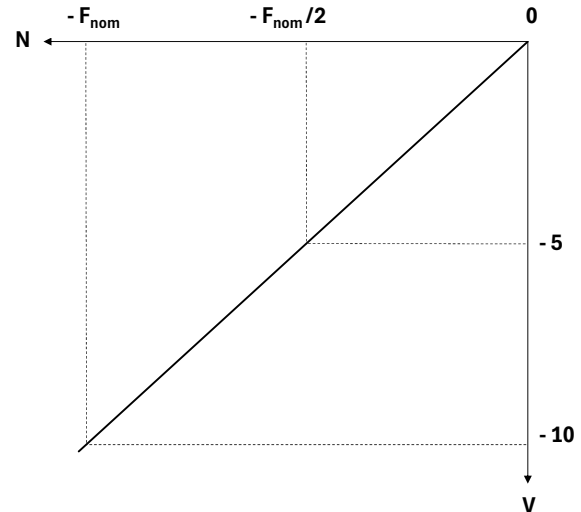
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## Signal details



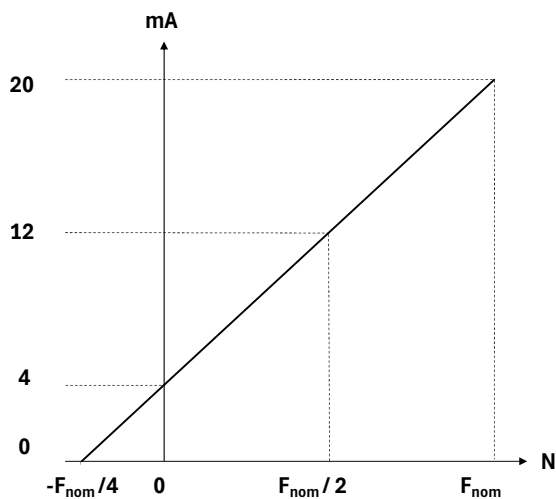
**Diagram 1 Curve for 0...+10 V**

Force direction pressure (Order code **DP** or **ZDP**)  
Force direction tension (Order code **ZP**)



**Diagram 2 Curve for 0... -10 V**

Force direction tension (Order code **ZDP**)  
For any other Order code : If the force direction is opposite to the selected Order code, a negative output signal is given



**Diagram 3 Curve for 4...20 mA**

Force direction tension (**ZP**) or pressure (**DP**)  
If the force direction is opposite to the selected Order code, an output signal from 0 to 4 mA is given