

# SERIES KT705

## SHEAR BEAM WITH INTEGRATED ANALOGUE AMPLIFIER

### GENERAL SPECIFICATION

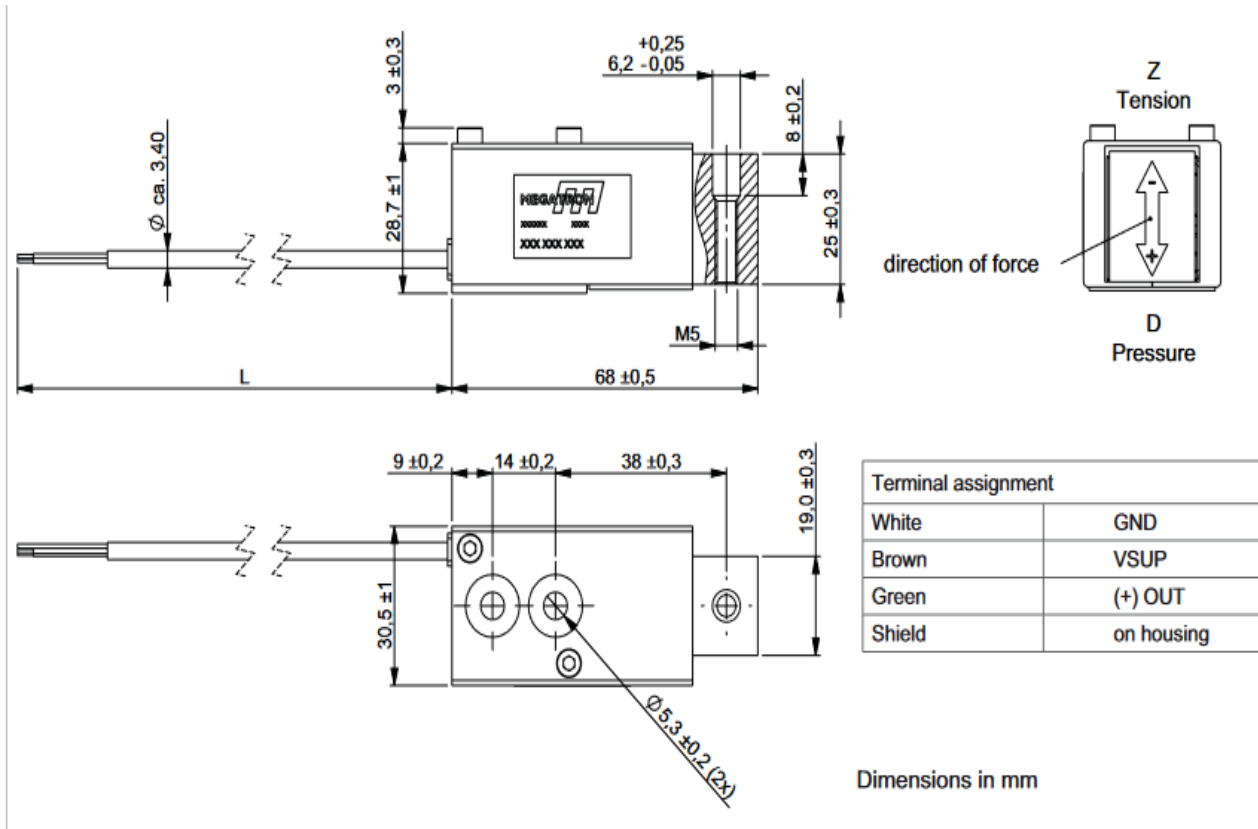
- The KT705 sensors measure forces up to 1kN in tension or compression or both. They can be easily mounted to any flat and stable surface using 2 screws. Their compact size makes them a good choice where space is at a premium. Application examples: Force measurement in assembly processes in automation, motion control in handling systems.



- Strain gauge full bridge
- Compact size 68x30x31 mm
- Output 0...10 V, -10... +10 V, 4... 20 mA
- Force transmission via M5-thread
- Response time < 1 ms

KT705 Specifications			
Rated force (F <sub>nom.</sub> )	200N	500N	1KN
Sensitivity voltage output	20N/V	50N/V	100N/V
Sensitivity current output	12,5N/mA	31,3N/mA	62,5N/mA
Output signal options	0V-10V / -10V..+10V / 4 - 20 mA		
Rated supply voltage	24 VDC		
Operating range of supply voltage	12 – 32 VDC		
Cut-off frequency	1600 HZ		
Response time	< 1ms		
Relative linearity error	≤ 0.2 % F <sub>nom.</sub>		
Hystérisis	≤ 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 °C up to +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	Aluminium / Steel with paint finish		
Mass	180 g		

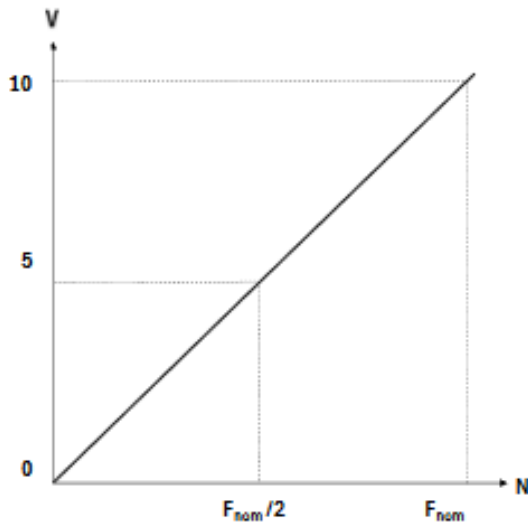
**DRAWING :**



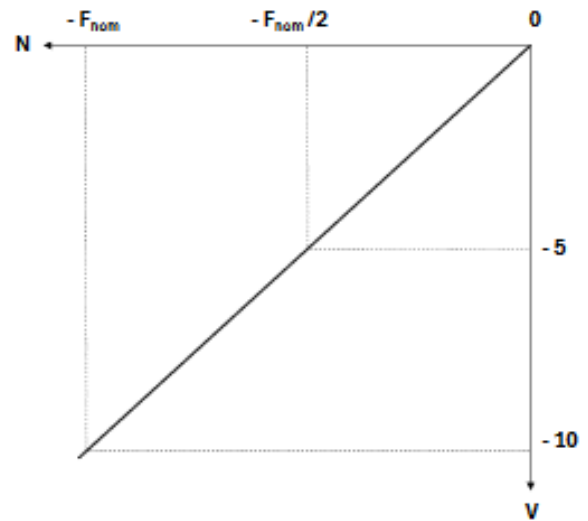
Order code					
Series	Kt705				
Cable 2m		K			
Rated force			200N 500N 1KN		
Output signal (supply Voltage 24V) 0..10V 4..20mA -10...+10V (only with ZDP)				2410 2442 2411	
Direction of force (each with test report P): Tension Pressure Tension + Pressure (only with 2411)					ZP DP ZDP

**Order code example: KT705 K 200N 2410 ZP**

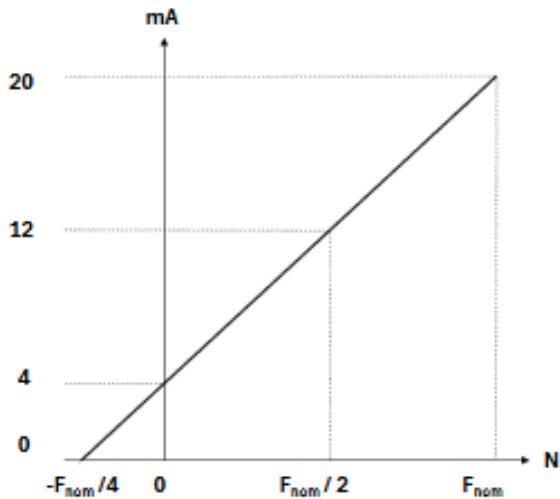
## OUTPUT SIGNAL :



**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