Application

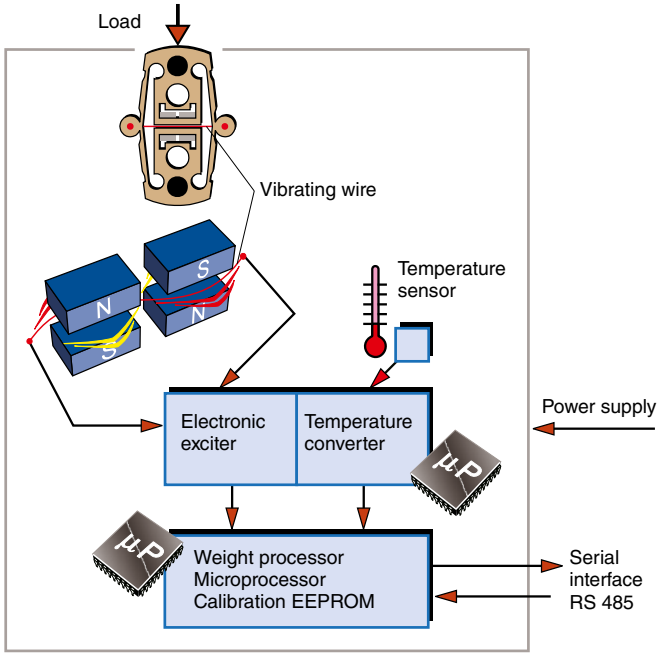
The P-SFT Smart Force Transducer, operating under compression, provides accurate, stable and reliable digital weight measurement under a broad range of operating conditions.

Main Features

- Direct digital weighing
- Onboard microcontroller
- Excellent repeatability and stability
- Ultra low deflection
- High tolerance to vibration and electrical noise
- Electronic linearization
- Electronic temperature compensation
- Stiff, rugged construction
- Serial channel interface (RS 485)
- Addressable two-way communication
- Built-in overload protection of + 400 kg
- Built-in underload protection of -100 kg

Vibrating Wire Principle of Operation

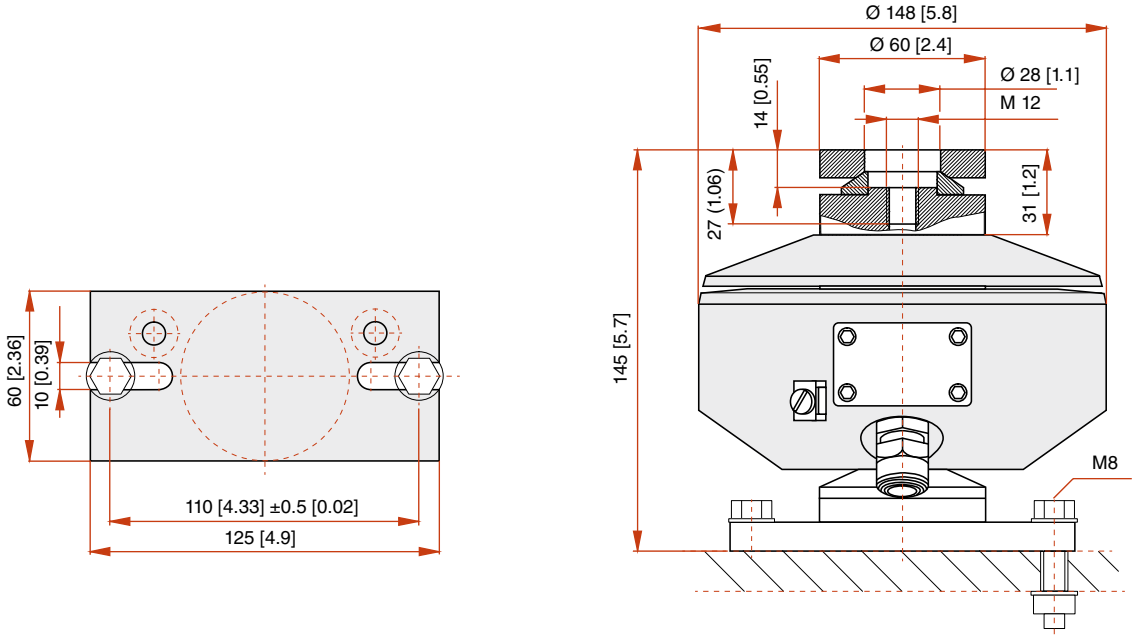
The P-SFT exploits the dependency of a vibrating wire's resonant frequency on its tension to measure applied loads. Through mechanical means the applied load is transmitted to the wire, causing a change in its resonant frequency from which the weight of the applied load is computed by the onboard microprocessor. A fully calibrated (linearized, spanned and temperature compensated) signal is transmitted via RS 485 serial communication to the controller.



Technical Specifications

Load capacity:	2000 N [200 kg]
Combined error:	< ± 0.03% *(Note: All percentage values are in relation to load capacity)*
Resolution:	1 : 500,000
Sampling rate:	56.25 samples per second
Creep:	0.02% of max. value (30 mins)
Hysteresis:	0.02% max.
Repeatability:	<= 0.001% (standard deviation of 30 measurements; measuring time 2 s.)
Operating temperature range:	-20 ... 60°C [-4 ... 140°F]
Temperature drift (per Kelvin):	SPAN 0.002% (-10 ... 60°C [14 ... 140°F]) ZERO 0.003% (-10 ... 60°C [14 ... 140°F])
Storage temperature:	-25 ... 80°C [-13 ... 176°F]
Output:	RS 485
Power supply:	12 VDC
Power consumption:	max. 0.36 W
Materials of construction enclosure:	Powder coated cast aluminum
Enclosure rating:	IP65
EMI-Protection:	Protected against EMI
Conformity:	CE, UL 61010-1 NRTL listed (USA & Canada)
Hazardous location (ATEX) rating:	
P-SFT-II-L XPC3	Ⓔx II 3D Ex tc IIIC T65°C Dc
Warranty:	Full five-year warranty from date of shipment

Dimensions mm [in]



Caution: these measurements are for general reference only. Please consult dimensional drawing for exact measurements