

Ext. communication to Host System
A Feeder
B Weighing System
C Control Module
D Operator Interface

Each Coperion K-Tron Modular Loss-in-Weight Feeder consists of the components A, B, C and D.

Component B is specified here.

Application

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

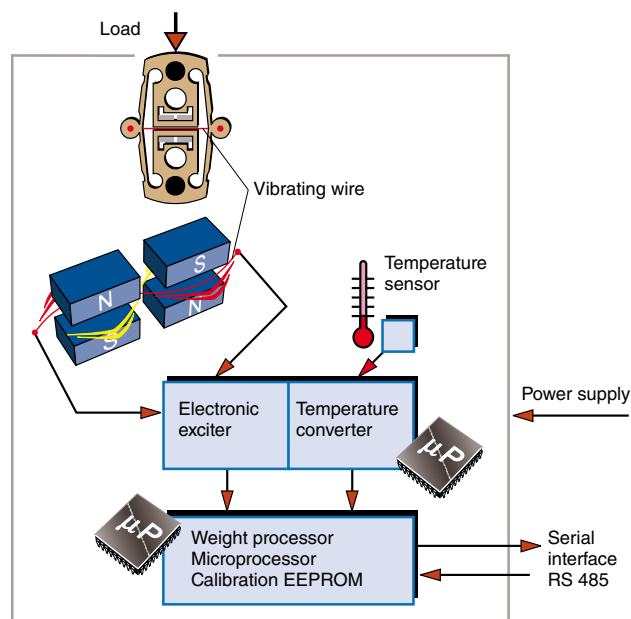
Main Features

- Direct digital weighing
- Onboard microcontroller
- Excellent repeatability and stability
- High resolution (1:8,000,000 in 20 ms)
- 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 +1000 kg
- Built-in underload protection of -100 kg



Vibrating Wire Principle of Operation

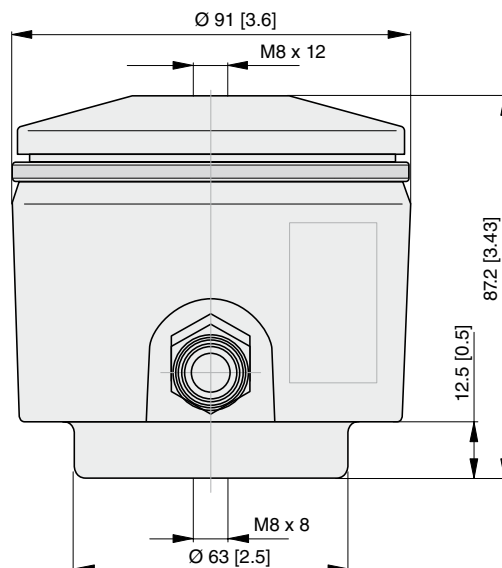
The SFT exploits the dependency of a vibrating wire's resonant frequency on its tension to measure applied loads. Through mechanical means the applied load is transmitted to the wire, causing a change in its resonant frequency from which the weight of the applied load is computed by the onboard microprocessor.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



Technical Data

Load ranges:	120, 180, 300, 600, 900, 1200 N [12, 18, 30, 60, 90, 120 kg]
Combined error:	< ± 0.03% <i>(Note: all percentage values are in relation to load capacity)</i>
Resolution:	1 : 8,000,000 in 20 ms
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/ambient 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:	7.2 ... 12.5 VDC
Power consumption:	max. 0.36 W at 12 VDC
Communication distance:	max. 500 m
Materials of construction enclosure:	Powder coated cast aluminum
Enclosure rating:	IP65, NEMA 4
EMI-Protection:	Fully protected against EMI
Conformity:	CE, UL 61010-1 NRTL listed (USA & Canada)
Hazardous location (ATEX) options:	
K-SFT-II-M XPC3	Ⓔ II 3D Ex tc IIIC T65°C Dc <i>(IECEx SEV 21.0039X)</i>
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