

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.

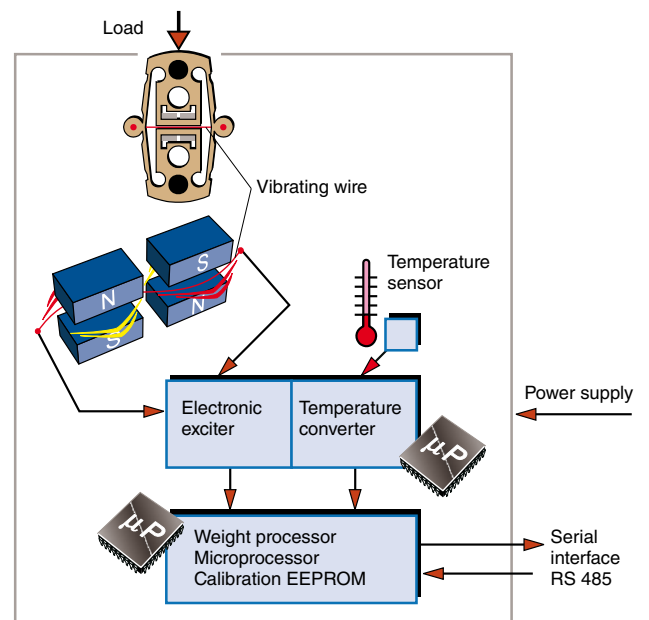
Main Features

- 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 +200 %
- Built-in underload protection of -50 %



Vibrating Wire Principle of Operation

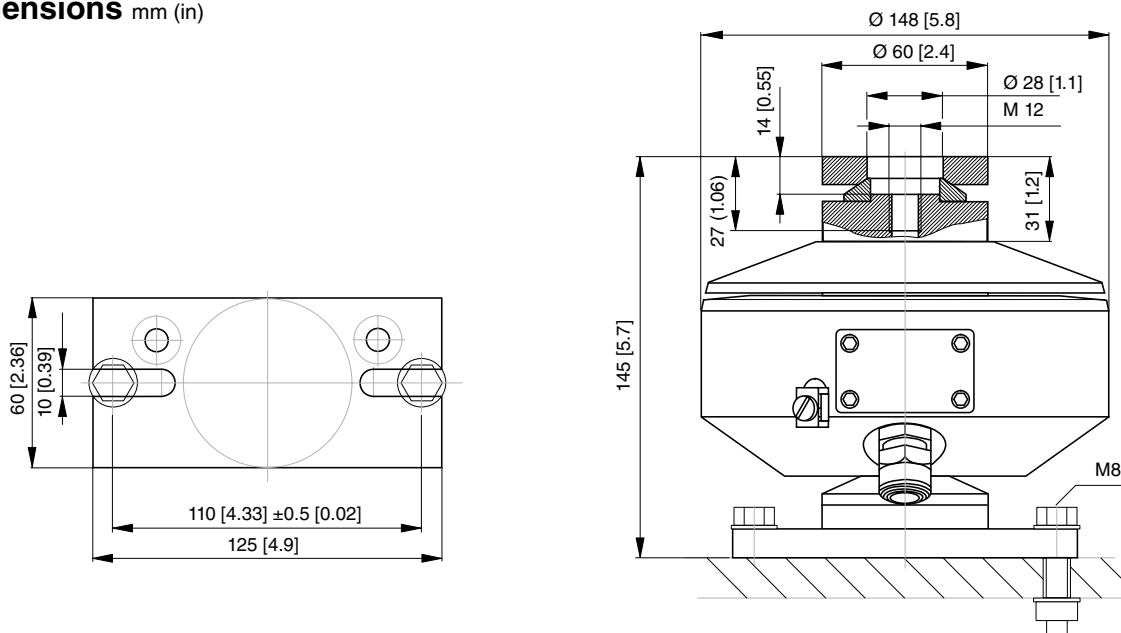
The SFT exploits the dependency of a vibrating wire's resonant frequency on its tension to measure applied loads. Through mechanical means the applied load is transmitted to the wire, causing a change in its resonant frequency from which the weight of the applied load is computed by the onboard microprocessor.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



Technical Data

Load range:	2000 / 3000 / 5000 / 10000 N [200, 300, 500, 1000 kg]	
Combined error:	< ± 0.03% (Note: all percentage values are in relation to load capacity)	
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:	Standard & XPC3: RS 485 XPC2: current loop	
Power supply:	7.2 ... 12.5 VDC	
Power consumption:	max. 0.36 W at 12 VDC	
Connection:	Via internal Junction Box	
Communication distance:	max. 500 m (max. 300 m for intrinsically safe XPC2 version, longer on request)	
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:		
Atex	K-SFT-II-L XPC3	II 3D Ex tc IIIC T65°C Dc (IECEx SEV 21.0029X)
	K-SFT-II-L XPC2	II 2G Ex ia IIC T4 Gb II 2D Ex ia IIIC T65°C Db (EU-Type Examination Certificate SEV 12 ATEX 0127, IECEx SEV 12.0005) requires Ex interface XPC1
Korea	K-SFT-L XPC2	KCs cert. KGS 23-GA4BO-0027X, KGS 23-GA4BO-0028X
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