

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.

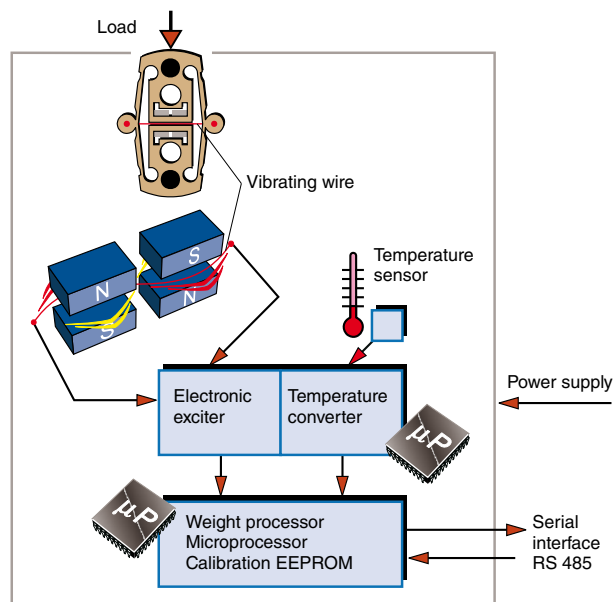
Main Features

- 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

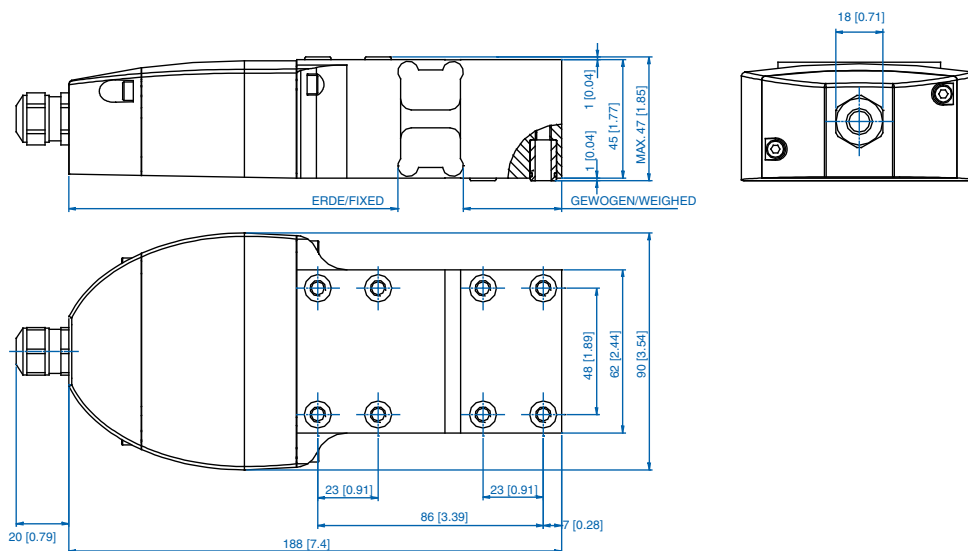
The SFT exploits the dependency of a vibrating wire's resonant frequency on its tension to measure applied loads. Through mechanical means the applied load is transmitted to the wire, causing a change in its resonant frequency, which is accurately measured and from which the weight of the applied load 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:	60, 200, 500, 1000 N [6, 20, 50, 100 kg]
Combined error:	$< \pm 0.03\%$ (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:	$\leq 0.001\%$ (standard deviation of 30 measurements; measuring time 2 s.)
Temperature drift (per °Kelvin):	SPAN: 0.002% (-10 ... 60°C [14 ... 140°F]) ZERO: 0.003% (-10 ... 60°C [14 ... 140°F])
Operating temperature range:	Standard & XPC3: -20 ... 60°C (-4 ... 140°F) XPC2: -20 ... 55°C [-4 ... 131°F]
Storage temperature:	-25 ... 80°C [-13 ... 176°F]
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 version, longer on request)
Output:	Standard & XPC3: RS 485 XPC2: current loop
Materials of construction enclosure:	Powder coated cast aluminum / nickel-plated aluminum
Enclosure rating:	IP65, NEMA 4
EMI-Protection:	Fully protected against EMI
Conformity	CE, UL 61010-1 NRTL listed (USA & Canada)
Hazardous location options:	
ATEX	K-SFT-III XPC3 $\text{Ex II 3D Ex tc IIIC T65°C Dc}$
	K-SFT-III XPC2 $\text{Ex II 2G Ex ia IIC T4 Gb}$ $\text{Ex II 2D Ex ia IIIC T65°C Db}$ (EU-Type Examination Certificate BVS 10 ATEX E 050, IECEx BVS 10.0035) Requires Ex Interface XPC1
Korea	K-SFT-III XPC2 KCs cert. KGS 23-GA4BO-0025X, KGS 23-GA4BO-0026X
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