

## Force Translator Sensor



### FEATURES

- Easy mounting
- Small size
- Versatile
- Low sensitivity to load position
- AC or DC excitation
- High accuracy & stability
- Noise immunity

### DESCRIPTION

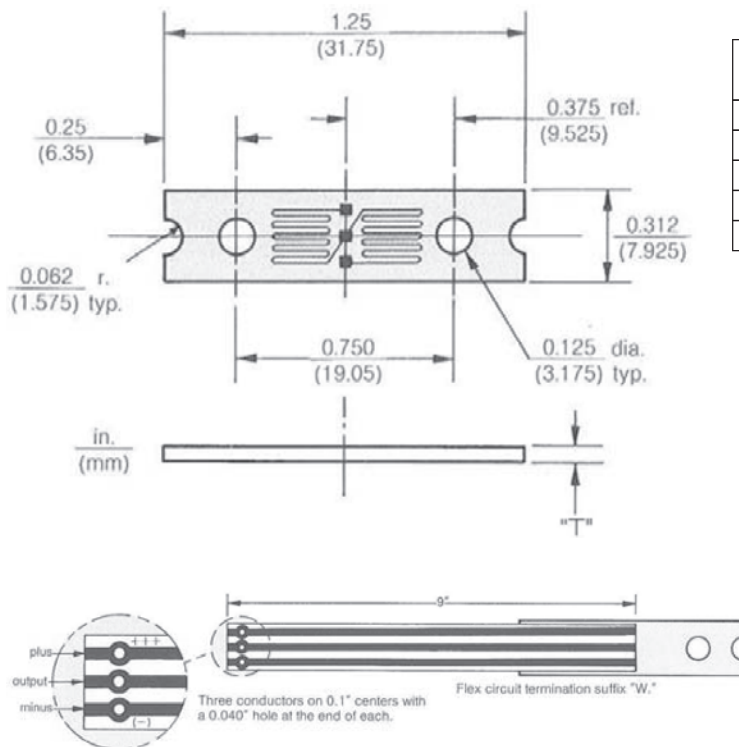
A low cost primary transducer offering excellent price-performance characteristics for a broad range of OEM applications. Employing half-bridge design, FT30 provides superior zero-offset stability over a wide temperature range.

FT30's solid-state strain gage design offers higher reliability performance than other sensors technologies. Zero calibration and electrical termination can be matched to customer needs.

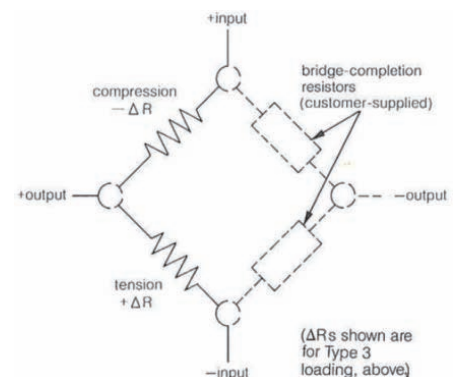
### APPLICATIONS

- Fetal monitors
- Fluid weighers
- Infusion pump
- Contact displacement
- Gripper-force sensing
- Major appliances
- Vending machines
- Textile manufacturing

### OUTLINE DIMENSIONS in mm [inch]



Model	Capacity N	Dim "T" in (mm)	Material
FT30-1	4.45	0.018 (0.46)	Aluminum
FT30-5	22.25	0.040 (1.02)	Aluminum
FT30-10	44.5	0.031 (0.79)	Stainless Steel
FT30-20	88.98	0.048 (1.22)	Stainless Steel
FT30-40	177.96	0.062 (1.58)	Stainless Steel



**SPECIFICATIONS**

PARAMETER	VALUE	UNIT
Excitation, recommended	10	VDC or VAC
Excitation, maximum	20	VDC or VAC
Bridge configuration	Active half bridge (adjacent arms)	
Gage resistance, each gage	500	$\Omega$
Gage resistance, tolerance	50	$\pm\Omega$
Gage match, option U	25	$\Omega$
Gage match, option M	5	$\Omega$
Gage match, option MM	0.5	$\Omega$
Full Scale (FS) output, 1 lb (0.45 kg)	1.0	mV/V $\pm 20\%$ at 72°F
Full Scale (FS) output, 5 lb (2.27 kg)	1.0	mV/V $\pm 20\%$ at 72°F
Full Scale (FS) output, 10 lb (4.54 kg)	1.2	mV/V $\pm 20\%$ at 72°F
Full Scale (FS) output, 20 lb (9.1 kg)	1.0	mV/V $\pm 20\%$ at 72°F
Full Scale (FS) output, 40 lb (18.1 kg)	1.2	mV/V $\pm 20\%$ at 72°F
Non-linearity	0.15	$\pm\%$ of FS
Hysteresis	0.15	$\pm\%$ of FS
Non-repeatability	0.05	$\%$ of FS
Temperature effect on zero	0.006	$\pm\%$ of FS/°F nominal
Temperature effect on output, 1 and 5 lb	0.03	$\pm\%$ of FS/°F
Temperature effect on output, 10, 20, 40 lb	0.02	$\pm\%$ of FS/°F
Insulation resistance, gage to element	1000	M $\Omega$
Maximum transient voltage, gage to element	100	V Peak
Maximum load, safe	150	$\%$ of rated capacity
Maximum load, ultimate	250	$\%$ of rated capacity
Temperature range, operating	-40 to +150	°F
Temperature range, storage	-60 to +200	°F
Deflection at Full Scale, 1 lb (0.45 kg)	0.006	inch
Deflection at Full Scale, 5 lb (2.27 kg)	0.003	inch
Deflection at Full Scale, 10 lb (4.54 kg)	0.005	inch
Deflection at Full Scale, 20 lb (9.1 kg)	0.0025	inch
Deflection at Full Scale, 40 lb (18.1 kg)	0.002	inch
Fatigue life	Greater than 3106 unidirectional cycles	