ANDANTEX USA Inc.

TENSION TRANSDUCERS

CARTRIDGE-STYLE

Modular Force Transducers (Load Cells) Combining Highly Responsive Web Tension Measurement & Control with Installation Flexibility

- Negligible displacement of “twin beam” design, resulting in high level linear output signal, high frequency response and overall system stability.
- Easily oriented at any angle to accommodate all web paths.
- Available in two basic module types and two different sizes-with each size available in 5 different load ratings.
- Wide range of Maximum Working Force ratings In each type & size.
- Wide operating temperature range.
- Built-in overload stop.
- Accommodates “MS” type connectors
- Corrosion-resistant finish and dust seal.
- Accommodates shaft expansion & shaft misalignment up to 1º.

Performance Benefits

Andantex USA Inc. specializes in the design and application of web tension control product solutions. Andantex USA Inc. Tension Transducers (Load Cells), provides measurement and control of web tension in continuous process machinery applications such as printing, embossing, slitting, coating, cutting, punching, laminating and folding; and in the production of paper, cellophane, cardboard, rubber, textiles, linoleum, foil, and extensible and photo film.

Andantex USA Inc. Transducers are force transducers that are easily applied, provide consistent product quality, and are highly responsive for enhanced system performance. Negligible motion maintains proper roll alignment.

Andantex USA Inc. Transducers are modular in design, providing the greatest degree of installation and application flexibility. With heavy-duty construction and a low maintenance design, they reduce the necessity of machine modifications while minimizing downtime.

Design Features

Andantex USA Tension Transducers utilize a cantilevered “twin beam” to render greater sensitivity and response without sacrificing protection from overload and transients common to industrial process machinery.

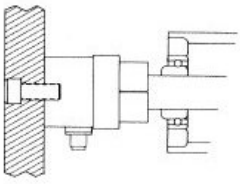
Semiconductor strain gauges are bonded to the beam assembly, and provide a linear output signal as the beams are deflected by the force acting on the transducer roll.

Andantex USA Inc. Transducer flexibility of installation is accomplished by adding mounting hardware to a basic module to complete the body style. Two basic module types are offered in two sizes each, with each size available in five different load ratings. This allows sensing of web tension over an extremely wide range. With an infinite transducer orientation capability, they easily accommodate tension forces applied in any direction.

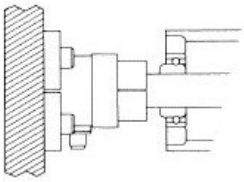
Andantex USA Inc. Transducers are designed to accommodate shaft expansion and shaft misalignment up to one degree. They incorporate a temperature compensated bridge circuit, a split coupling mount, built-in overload stop, “MS” type connectors, and a corrosion resistant finish and dust seal.

1705 Valley Road, Wanamassa, New Jersey 07712 • 800-713-6170 • Fax 732-493-2949 • E-mail: info@andantex.com • Web site: http://www.andantex.com

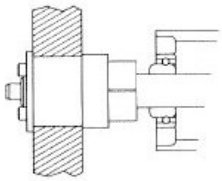
Mounting Option:



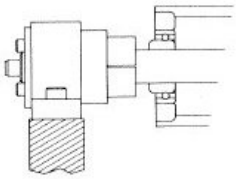
Type "S"
Stud Mounted



Type "FL"
Flange Mounted



Type "BR"
Bearing Replacement

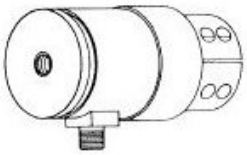


Type "PB"
Pillow Block

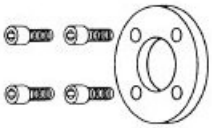
Mounting Kit Configuration:

This diagram illustrates the
Various configurations provided
By the Andantex modular design.

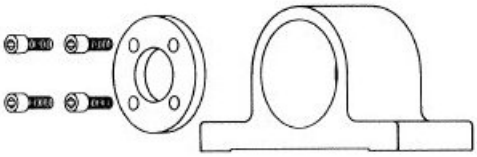
Type FL Mounting Kit
Size FL-1T or FL-2T



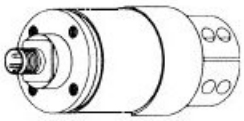
Side Connector Cartridge
SC-1T / SC-2T



Type BR Mounting kit
Size BR-1T or BR-2T



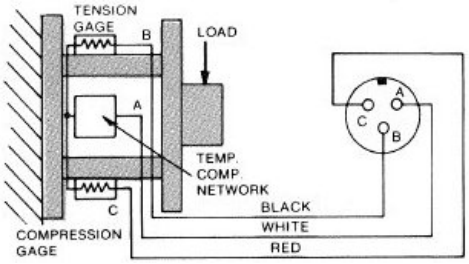
Type PB Mounting Kit
Size PB-1T or PB-2T



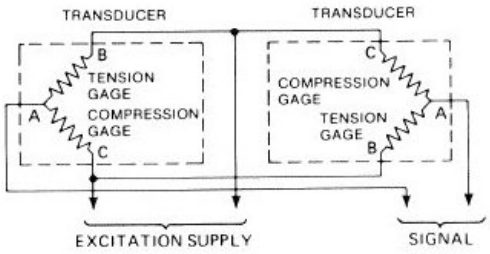
End Connector Cartridge
EC-1T / EC-2T

Principle of Operation:

Diagram of "Twin Beam" Transducer Gaging and Wiring.



Basic wiring diagram To form a complete bridge.



Specifications:

Gage Resistance:	Each transducer contains half a bridge having a nominal resistance of 120 ohms per gage, wired as shown above.
Gage Factor:	100 nominal
Excitation Voltage:	5.6 VDC or VAC (rms) maximum.
Output Signal @ rated MWF:	250 mV nominal / Transducer.
(Maximum Working Force)	500 mV nominal / Pair.
Operating Temperature Range:	0°F to +200°F. (Consult factory if operating temp. is greater than 200°F).
Sensitivity Change with Temperature:	Less then 0.02%/F. of rated output typical.
Humidity:	95% R.H.
Combined Non-Linearity and Hysteresis:	±0.5% maximum of rated output
Repeatability:	±0.2% maximum of rated output
Non-destructive Overload:	150% of M.W.F.
Ultimate Overload Rating:	300% of M.W.F.
"MZ" connectors:	MA-3102A-10SL-3P (3 Pin connector)
Input Impedance required:	5K Ohms per transducer. (10K/pair)
Output Impedance:	820 Ohms (nom.) per transducer or 1640 Ohms (nom.) per pair at 25°C.

Weight (Lbs. each):

Description	1T	2T
Cartridge Transducer	3.3	4.4
With "FL" Mounting Kit	4.2	6.0
With "BR" Mounting Kit	3.6	4.9
With "PB" Mounting Kit	6.0	8.5

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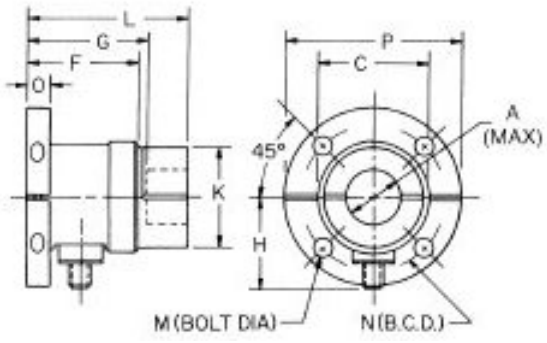
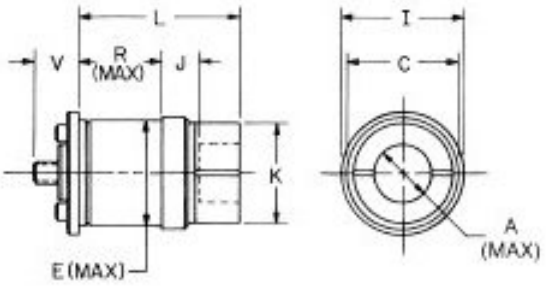
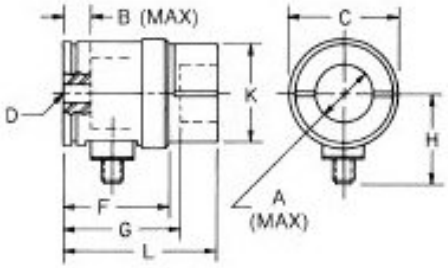
Dimensions:



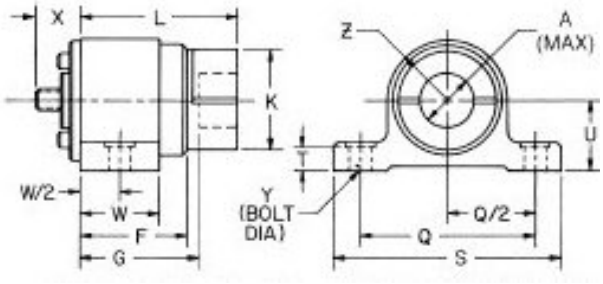
Type SC Cartridge with FL Mounting Kit



Type EC Cartridge with Br Mounting Kit



Type SC Cartridge



Type EC Cartridge with PB Mounting Kit

Dimensions in inches – Allow 2.5 in. Clearance for Connector

Size	A	B	C	D	E	F	G	H	I	J	K	L	M
1T (1.25)	1.25	0.55	2.50	½-13	2.375	2.44	2.60	2.10	2.75	0.87	2.25	3.63	⅜
2T (1.25)		0.60	2.75	⅝-11	2.625	2.85	2.98	2.23	3.00	1.11		4.04	½
1T (1.50)		0.55	2.50	½-13	2.375	2.44	2.60	2.10	2.75	0.87	2.50	3.63	⅜
2T (1.50)		0.60	2.75	⅝-11	2.625	2.85	2.98	2.23	3.00	1.11		4.04	½
	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1T (1.25,1.50)	3.25	0.50	4.00	4.00	1.74	5.38	0.58	1.63	1.02	1.75	1.02	½	1.50
2T (1.25,1.50)	3.50	0.62	4.50	5.00	1.87	6.12	0.68	1.94	1.02	1.88	1.02	½	1.70

Shaft length to be:

"Between Frames Width" less than twice G for type "S" and "FL" installations.

"Between Frames Width" less than twice J for type "BR" installations.

Certified Mounting Dimensions Supplied upon request.

Options and Accessories:

- Transducer Bushings to reduce standard bore Size: ⅝", ¾", ⅞", 1", 1-⅛, 1-$^{3}/_{16}$
  (Note: Standard Bushing O.D. is 1.25 inches)
- Standard Transducer Cables: 20 ft, 50ft, 75ft, 90° Connecter or straight.

Reference and Part Number:

REFERENCE:	Side Connector (SC) Part Number
1T-025LB.SC (1.25)	901.025.SC
1T-050LB.SC (1.25)	901.050.SC
1T-075LB.SC (1.25)	901.075.SC
1T-100LB.SC (1.25)	901.100.SC
1T-150LB.SC (1.25)	901.150.SC
2T-150LB.SC (1.25)	902.150.SC
2T-250LB.SC (1.25)	902.250.SC
2T-400LB.SC (1.25)	902.400.SC
2T-600LB.SC (1.25)	902.600.SC
2T-1000LB.SC (1.25)	902.1000.SC

REFERENCE:	End Connector (EC) Part Number
1T-025LB.EC (1.25)	901.025.EC
1T-050LB.EC (1.25)	901.050.EC
1T-075LB.EC (1.25)	901.075.EC
1T-100LB.EC (1.25)	901.100.EC
1T-150LB.EC (1.25)	901.150.EC
2T-150LB.EC (1.25)	902.150.EC
2T-250LB.EC (1.25)	902.250.EC
2T-400LB.EC (1.25)	902.400.EC
2T-600LB.EC (1.25)	902.600.EC
2T-1000LB.EC (1.25)	902.1000.EC

Cables	
REFERENCE:	Part Number
20' Cable Std. Ctr.	920.100.20
20' Cable 90° Ctr.	920.190.20
50' Cable Std. Ctr.	920.100.50
50' Cable 90° Ctr.	920.190.50
75' Cable Std Ctr.	920.100.75
75' Cable 90° Ctr.	920.190.75

MOUNTING KIT	
REFERENCE:	Part Number
1T-MTK.BR	901.000.SC
2T-MTK.BR	902.000.SC
1T-MTK.FL	901.000.FL
2T-MTK.FL	902.000.FL
1T-MTK.PB	901.000.PB
2T-MTK.PB	902.000.PB