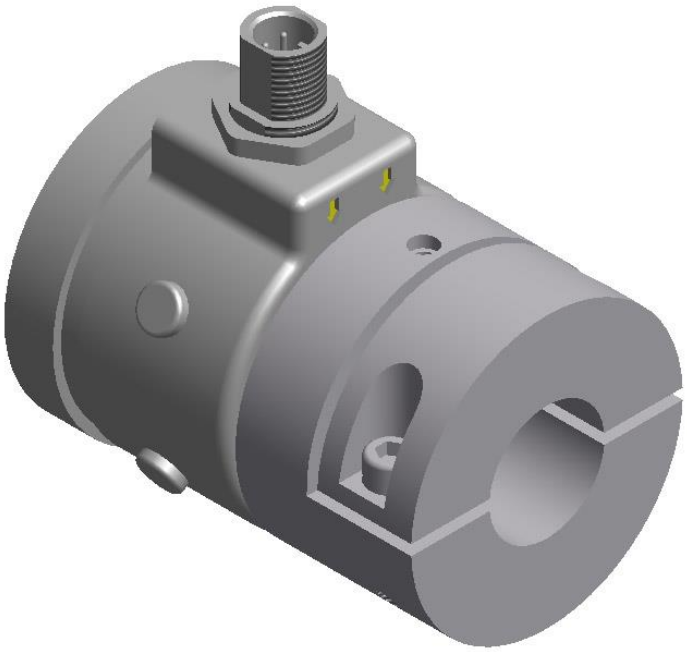
MAXCESS
MAGPOWR

TS Load Cell

User Manual



EN

EC-12 connector type

MI 850A342 B

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About these operating instructions

All of the information herein is the exclusive proprietary property of Maxcess International and is disclosed with the understanding that it will be retained in confidence and will neither be duplicated nor copied in whole or in part nor be used for any purpose other than for which disclosed.

Periodically there will be updates to this manual. The latest version is available on our website or by calling your regional office listed on the back page of this publication.

These load cell devices must not be installed or used in a machine or system which does not comply with the machinery directive 2006/42/EC.

These load cell devices were designed and manufactured to be installed as Partly Completed Machinery into a machine or partly completed machine.

The instructions must be read and used by all persons who have the responsibility of installing and maintaining these load cell devices.

These instructions must be retained and incorporated in the technical documentation for the machine or partly completed machinery into which the load cell device is installed.

CE marking

Only the 2006/42/EC Machinery directive applies to these devices and they are not marked with the CE sign.

Electromagnetic Compatibility (EMC)

The load cell device is inherently benign in terms of electromagnetic compatibility and the EMC directive has not been applied. The electromagnetic compatibility of the load cell device can only be assessed in connection with the entire electrical installation including the control. The machine builder who installs this partly completed machinery into a machine is responsible for compliance with the EMC directive.

Language

These are the original instructions, written in English.

Product overview

The MAGPOWR TS web tension sensors are extremely accurate devices used to measure tension in any unwind, rewind, or intermediate web processing application. The unique low-profile design minimizes space requirements inside the machine frames, thus maximizing the potential for web width. The TS model sensors also offer the flexibility of a variety of mounting styles and coupling options.

MAGPOWR web tension sensors are ruggedly constructed with mechanical overload stops in both force directions to eliminate sensor damage and the need to recalibrate even after extreme overloads. A full Wheatstone bridge arrangement of four foil strain gages is used in each sensor for the most accurate means of measuring web tension. In addition, all sensors incorporate a dual beam construction design to insure linear output under all loading conditions.

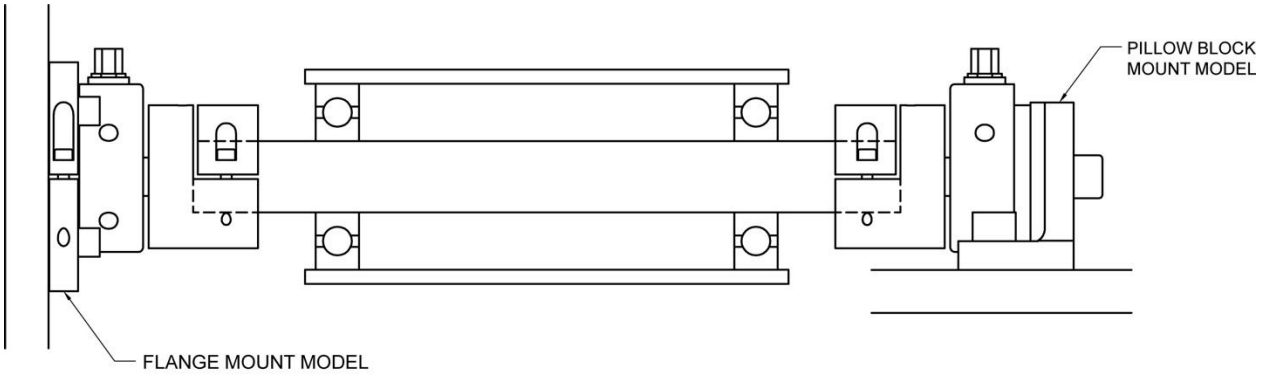
The TS style tension sensors can be mounted to the machine side frame in one of several ways. They can be mounted on a vertical surface using the Stud mount model, or the Flange mount model, or to a horizontal surface using the Pillow Block model.

The TS style tension sensors allow three methods of coupling to the customer's application. The coupling types are Split couplings, In-Roll coupling and Wire Pulley.

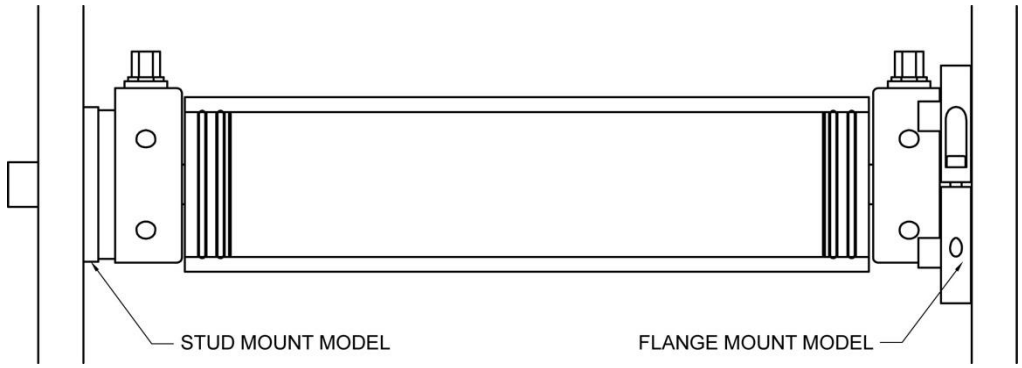
The TS style tension sensors allow any combination of mounting and coupling types.

Mounting and coupling options

The Split Coupling configuration supports the customer's dead or live shaft on each side of the machine.



The In-Roll configuration supports the customer's roll assembly (hollow tube) on each side of the machine.



The Wire Pulley coupling configuration supports the single strand or wire, and measures tension in the wire or strand as it passes over the pulley.

Instructions for use

To ensure safe and problem free installation of the load cell device, the load cell must be properly transported and stored, professionally installed and placed in operation. Proper operation and maintenance will ensure a long service life of the device. Only persons who are acquainted with the installation, commissioning, operation and maintenance of the system and who possess the necessary qualifications for their activities may work on the load cell. **Note:** The safety information may not be comprehensive.

Please note the following:

- The content of these operating instructions
- Any safety instructions on the device
- The machine manufacturer's specifications
- All national, state, and local requirements for installation, accident prevention and environmental protection

Information about safety instructions

The safety instructions and symbols described in this section are used in these operating instructions. They are used to avoid possible dangers for users and to prevent material damage.

SIGNAL WORD
Source of danger and its results
Avoiding dangers

The signal word **DANGER** refers to the danger of death or serious bodily injuries.

The signal word **WARNING** refers to the danger of moderate to severe bodily injuries.

The signal word **CAUTION** refers to the danger of slight to moderate bodily injuries or material damage.

The signal word **NOTICE** refers to the possibility of damage to equipment.

Symbols used

The following safety identification symbols are used in these operating instructions.

WARNING/CAUTION – General danger or important note
Reference to general hazards that may result in bodily injuries or damage to device or material.

WARNING/CAUTION – Danger due to crushing
Reference to danger of injury caused by crushing.

WARNING/CAUTION – Danger due to cutting
Reference to danger of injury caused by cutting.

WARNING/CAUTION – Danger due to voltage, electric shock
Reference to danger of injury caused by electric shock due to voltage.

WARNING/CAUTION – Danger due to hot surfaces
Reference to risk of injury caused by burning.

Basic safety information

Proper use

The load cell devices are intended to be used on machines or systems to monitor the tension in a web.
Indoor operation.

Improper use

Operation outside the technical specifications

Operation in an Ex-area or intrinsically safe area without a proper barrier.

Any other use than the proper use shall be deemed inappropriate

Installation and commissioning

Any load cell device that is damaged must not be installed or put into operation.

Only perform installation, maintenance or repair tasks on the load cell device when the machine has been stopped and is secured from being turned on.

Only perform installation, maintenance or repair tasks on the load cell device when there is no electrical power in the system.

The load cell device must be securely mounted before being placed in operation.

No modifications may be made to the load cell device.

Do not place electrical cables under mechanical strain.

Maintenance and repair

Warning – Danger of injury from crushing
Maintenance and repair tasks on the load cell device must be performed only when the machine has been stopped and has been secured from being turned on again.

Decommissioning

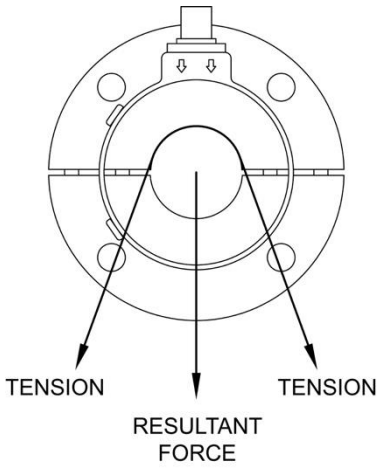
The load cell must be disposed of in accordance with all the applicable national, state and local regulations.

Mechanical and electrical installation

CAUTION – Possible damage to load cell.
Do not hammer on the load cell.

CAUTION – Possible damage to load cell.
Do not disassemble the load cell – there are no serviceable parts inside the unit.

WARNING – Danger of injury from crushing.
Maintenance and repair tasks on the load cell device must be performed only when the machine has been stopped and has been secured from being turned on again.



General

Select a clean flat surface where the wrap angle of the web does not change. Position the vertical centerline of the sensor so that it bisects the wrap angle of the web. If the orientation of the sensor requires the force direction arrow to be pointed opposite the resultant tension force direction, then the black (–S) and the white (+S) sensor leads to the MAGPOWR readout or control terminal block must be reversed.

Stud mount

Fasten to the machine frame with a bolt making sure that the bolt penetration does not exceed 12.7 mm [0.50 in]. A small hole is provided in the rear of the sensor to accept a pin to aid in alignment.

Flange mount

For the flange mounted version, fasten to the machine frame with 4 bolts.

Pillow block mount

For the pillow block style, mount the pillow block adapter with two bolts. A series of holes is provided in the pillow block adapter to allow alignment of the sensor with the resultant force.

Mechanical and electrical installation (continued)

Shaft and roll assembly (supplied by customer)

The sensor split coupling or in-roll coupling can accommodate shaft misalignment of 0.001 mm/mm [0.001 in/in].
Example: For 600 mm between machine side frames, the sensor must be aligned within .600 mm.

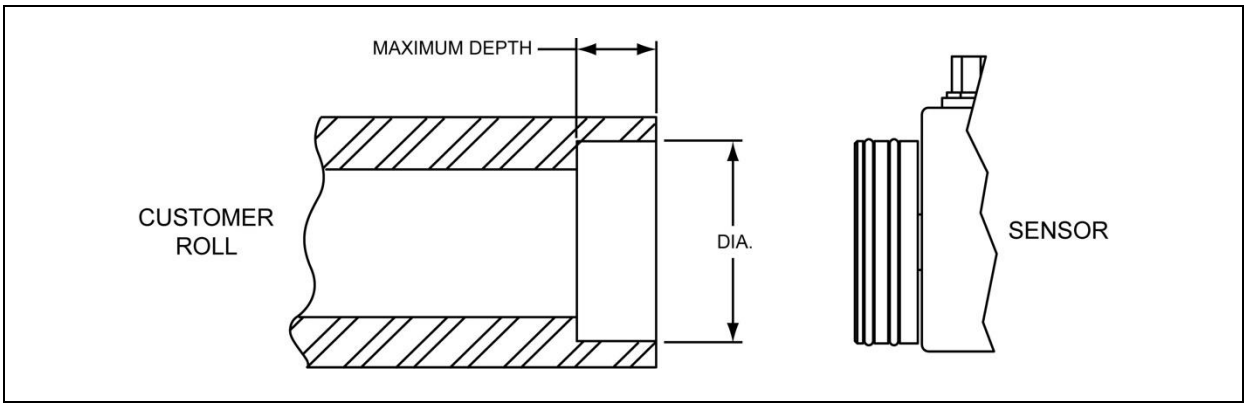
Split coupling models

Split coupling sensors can be used for both live and dead shaft applications. All split coupling sensors are shipped with the coupling locked in place for use with a dead shaft. For live shaft applications remove the anti-rotation screw located behind the removable part of the split coupling.

Remove the coupling screws and top half of the couplings. Gently lower the shaft/roller assembly into the couplings. The couplings have some misalignment capability to facilitate shaft mounting. Replace one coupling top half and screws. Tighten screws securely. Push this coupling toward the machine frame, and hold it in position while securing the coupling on the other end of the shaft. This will divide the thermal expansion capability between the two sensors.

In-roll coupling models

Insert one sensor into each end of a machined tube and install between machine frames accordingly.



52.0 +.05/-.00 mm diameter; 0.53 in. (13.5 mm) maximum depth for 5 lb, 50 lb, 2 kg, and 25 kg sensors
62.0 +.05/-.00 mm diameter; 0.76 in. (13.9 mm) maximum depth for 150, 330 and 500 lb, 75 kg, 150 and 250 kg sensors

Maintenance

No maintenance is required for the model TS sensors other than periodic lubrication of the bearing on the live shaft (rotating coupling) and in-roll applications.

A grease fitting is located on the top of the coupling for the split coupling models, and under the o-ring on in-roll coupling models. The grease fitting accepts a needle type grease gun. Lubricate the bearing with 1.0 gram Chevron SRI 2 or equivalent.

Model number key

Series – Load rating – Mounting type – Coupling type – Connector type – Units type – Sxx

Series	TS – Tension sensor
Load rating	in pounds = English units models in kilograms = Metric units models
Mounting type	S – Stud F – Flange P – Pillow block
Coupling type	C – Split coupling R – In-roll W – Wire pulley
Connector type	EC12
Units type	Blank – English units M – Metric units
Sxx	Specials – other variations

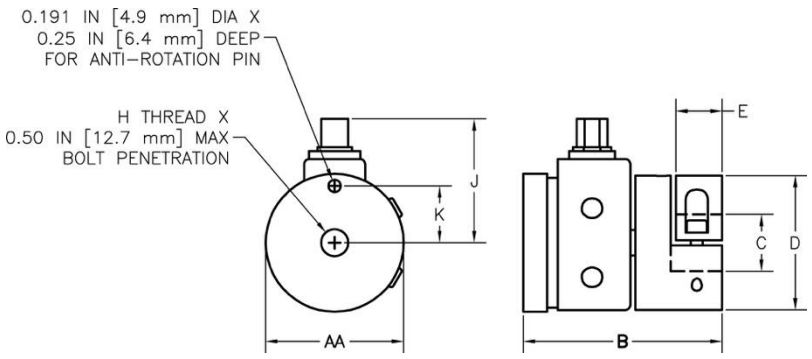
Available models

Mounting Type and Rating	Split Coupling Models	In-Roll Coupling Models	Wire Pulley Models
Stud Mount 5 lb Sensor	TS5SC-EC12	TS5SR-EC12	TS5SW-EC12
Stud Mount 25 lb Sensor	TS25SC-EC12	TS25SR-EC12	TS25SW-EC12
Stud Mount 50 lb Sensor	TS50SC-EC12	TS50SR- EC12	TS50SW-EC12
Stud Mount 150 lb Sensor	TS150SC-EC12	TS150SR-EC12	TS150SW-EC12
Stud Mount 330 lb Sensor	TS330SC-EC12	TS330SR-EC12	TS330SW-EC12
Stud Mount 500 lb Sensor	TS500SC-EC12	TS500SR-EC12	TS500SW-EC12
Flange Mount 5 lb Sensor	TS5FC-EC12	TS5FR-EC12	TS5FW-EC12
Flange Mount 25 lb Sensor	TS25FC-EC12	TS25FR-EC12	TS25FW-EC12
Flange Mount 50 lb Sensor	TS50FC-EC12	TS50FR-EC12	TS50FW-EC12
Flange Mount 150 lb Sensor	TS150FC-EC12	TS150FR-EC12	TS150FW-EC12
Flange Mount 330 lb Sensor	TS330FC-EC12	TS330FR-EC12	TS330FW-EC12
Flange Mount 500 lb Sensor	TS500FC-EC12	TS500FR-EC12	TS500FW-EC12
Pillow Block Mount 5 lb Sensor	TS5PC-EC12	TS5PR-EC12	TS5PW-EC12
Pillow Block Mount 25 lb Sensor	TS25PC-EC12	TS25PR-EC12	TS25PW-EC12
Pillow Block Mount 50 lb Sensor	TS50PC-EC12	TS50PR-EC12	TS50PW-EC12
Pillow Block Mount 150 lb Sensor	TS150PC-EC12	TS150PR-EC12	TS150PW-EC12
Pillow Block Mount 330 lb Sensor	TS330PC-EC12	TS330PR-EC12	TS330PW-EC12
Pillow Block Mount 500 lb Sensor	TS500PC-EC12	TS500PR-EC12	TS500PW-EC12
Metric Stud Mount 2 Kg Sensor	TS2SC-EC12M	TS2SR-EC12M	TS2SW-EC12M
Metric Stud Mount 10 Kg Sensor	TS10SC-EC12M	TS10SR-EC12M	TS10SW-EC12M
Metric Stud Mount 25 Kg Sensor	TS25SC-EC12M	TS25SR-EC12M	TS25SW-EC12M
Metric Stud Mount 75 Kg Sensor	TS75SC-EC12M	TS75SR-EC12M	TS75SW-EC12M
Metric Stud Mount 150 Kg Sensor	TS150SC-EC12M	TS150SR-EC12M	TS150SW-EC12M
Metric Stud Mount 250 Kg Sensor	TS250SC-EC12M	TS250SR-EC12M	TS250SW-EC12M
Metric Flange Mount 2 Kg Sensor	TS2FC-EC12M	TS2FR-EC12M	TS2FW-EC12M
Metric Flange Mount 10 Kg Sensor	TS10FC-EC12M	TS10FR-EC12M	TS10FW-EC12M
Metric Flange Mount 25 Kg Sensor	TS25FC-EC12M	TS25FR-EC12M	TS25FW-EC12M
Metric Flange Mount 75 Kg Sensor	TS75FC-EC12M	TS75FR-EC12M	TS75FW-EC12M
Metric Flange Mount 150 Kg Sensor	TS150FC-EC12M	TS150FR-EC12M	TS150FW-EC12M
Metric Flange Mount 250 Kg Sensor	TS250FC-EC12M	TS250FR-EC12M	TS250FW-EC12M
Metric Pillow Block Mount 2 Kg Sensor	TS2PC-EC12M	TS2PR-EC12M	TS2PW-EC12M
Metric Pillow Block Mount 10 Kg Sensor	TS10PC-EC12M	TS10PR-EC12M	TS10PW-EC12M
Metric Pillow Block Mount 25 Kg Sensor	TS25PC-EC12M	TS25PR-EC12M	TS25PW-EC12M
Metric Pillow Block Mount 75 Kg Sensor	TS75PC-EC12M	TS75PR-EC12M	TS75PW-EC12M
Metric Pillow Block Mount 150 Kg Sensor	TS150PC-EC12M	TS150PR-EC12M	TS150PW-EC12M
Metric Pillow Block Mount 250 Kg Sensor	TS250PC-EC12M	TS250PR-EC12M	TS250PW-EC12M

Split coupling sensors

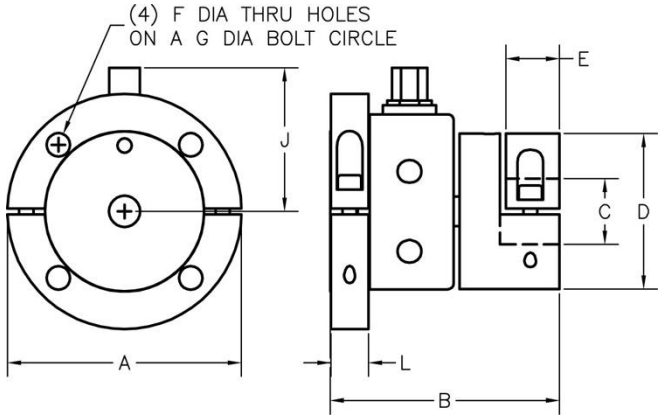
Stud mount models

TS5SC-EC12,
TS25SC-EC12
TS50SC-EC12
TS150SC-EC12
TS330SC-EC12
TS500SC-EC12
TS2SC-EC12M
TS10SC-EC12M
TS25SC-EC12M
TS75SC-EC12M
TS150SC-EC12M
TS250SC-EC12M



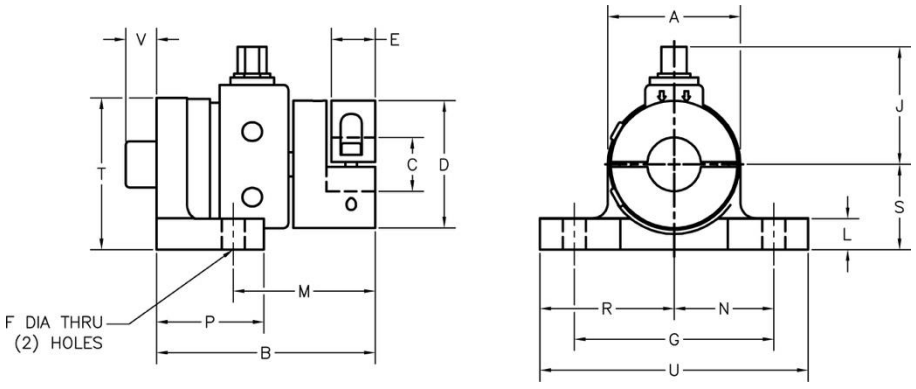
Flange mount models

TS5FC-EC12
TS25FC-EC12
TS50FC-EC12
TS150FC-EC12
TS330FC-EC12
TS500FC-EC12
TS2FC-EC12
TS10FC-EC12
TS25FC-EC12
TS75FC-EC12
TS150FC-EC12
TS250FC-EC12



Pillow block models

TS5PC-EC12
TS25PC-EC12
TS50PC-EC12
TS150PC-EC12
TS330PC-EC12
TS500PC-EC12
TS2PC-EC12M
TS10PC-EC12M
TS25PC-EC12M
TS75PC-EC12M
TS150PC-EC12M
TS250PC-EC12M



English split coupling models (units are in inches, weight in pounds)

MODEL	A	AA	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	WEIGHT
TS5SC-EC12		2.13	3.04	0.875	2.07	0.71			1/2-13	1.9	0.88										0.93
TS25SC-EC12		2.13	3.04	0.875	2.07	0.71			1/2-13	1.9	0.88										0.93
TS50SC-EC12		2.13	3.04	0.875	2.07	0.71			1/2-13	1.9	0.88										0.93
TS150SC-EC12		2.60	3.61	1.250	2.50	1.05			1/2-13	2.2	1.00										1.56
TS330SC-EC12		2.60	3.61	1.250	2.50	1.05			1/2-13	2.2	1.00										1.56
TS500SC-EC12		2.60	3.61	1.250	2.50	1.05			1/2-13	2.2	1.00										1.56
TS5FC-EC12	3.13		3.04	0.875	2.07	0.71	0.313	2.50		1.9		0.50									1.09
TS25FC-EC12	3.13		3.04	0.875	2.07	0.71	0.313	2.50		1.9		0.50									1.09
TS50FC-EC12	3.13		3.04	0.875	2.07	0.71	0.313	2.50		1.9		0.50									1.09
TS150FC-EC12	4.00		3.61	1.250	2.50	1.05	0.375	3.25		2.2		0.50									1.87
TS330FC-EC12	4.00		3.61	1.250	2.50	1.05	0.375	3.25		2.2		0.50									1.87
TS500FC-EC12	4.00		3.61	1.250	2.50	1.05	0.375	3.25		2.2		0.50									1.87
TS5PC-EC12	2.16		3.54	0.875	2.07	0.71	0.375	3.25		1.9		0.50	2.29	1.63	1.75	2.13	1.38	2.46	4.25	0.50	1.36
TS25PC-EC12	2.16		3.54	0.875	2.07	0.71	0.375	3.25		1.9		0.50	2.29	1.63	1.75	2.13	1.38	2.46	4.25	0.50	1.36
TS50PC-EC12	2.16		3.54	0.875	2.07	0.71	0.500	3.25		1.9		0.50	2.29	1.63	1.75	2.13	1.38	2.46	4.25	0.50	1.36
TS150PC-EC12	2.60		4.11	1.250	2.50	1.05	0.500	4.00		2.2		0.50	2.73	2.00	2.00	2.63	1.63	2.93	5.25	0.50	3.18
TS330PC-EC12	2.60		4.11	1.250	2.50	1.05	0.500	4.00		2.2		0.50	2.73	2.00	2.00	2.63	1.63	2.93	5.25	0.50	3.18
TS500PC-EC12	2.60		4.11	1.250	2.50	1.05	0.500	4.00		2.2		0.50	2.73	2.00	2.00	2.63	1.63	2.93	5.25	0.50	3.18

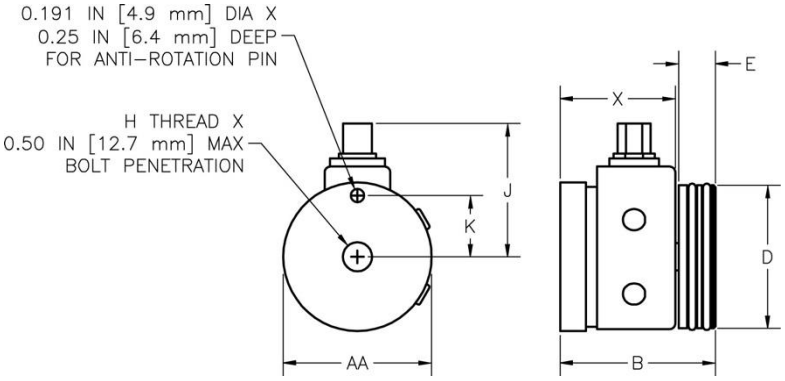
Metric stud mount split coupling models (units are in millimeters, weight in kilograms)

MODEL	A	AA	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	WEIGHT
TS2SC-EC12M		54.0	77.2	30.0	52.5	18.1			M12 X 1.75	48	22.4										0.42
TS10SC-EC12M		54.0	77.2	30.0	52.5	18.1			M12 X 1.75	48	22.4										0.42
TS25SC-EC12M		54.0	77.2	30.0	52.5	18.1			M12 X 1.75	48	22.4										0.42
TS75SC-EC12M		66.0	91.7	30.0	63.5	26.5			M12 X 1.75	56	25.4										0.71
TS150SC-EC12M		66.0	91.7	30.0	63.5	26.5			M12 X 1.75	56	25.4										0.71
TS250SC-EC12M		66.0	91.7	30.0	63.5	26.5			M12 X 1.75	56	25.4										0.71
TS2FC-EC12M	79.4		77.2	30.0	52.5	18.1	7.94	63.5		48		12.7									0.49
TS10FC-EC12M	79.4		77.2	30.0	52.5	18.1	7.94	63.5		48		12.7									0.49
TS25FC-EC12M	79.4		77.2	30.0	52.5	18.1	7.94	63.5		48		12.7									0.49
TS75FC-EC12M	101.6		91.7	30.0	63.5	26.5	9.53	82.6		56		12.7									0.85
TS150FC-EC12M	101.6		91.7	30.0	63.5	26.5	9.53	82.6		56		12.7									0.85
TS250FC-EC12M	101.6		91.7	30.0	63.5	26.5	9.53	82.6		56		12.7									0.85
TS2PC-EC12M	54.9		90.0	30.0	52.5	18.1	9.5	82.6		48		12.7	58.2	41.3	44.5	54.0	34.9	62.5	108.0	12.7	0.62
TS10PC-EC12M	54.9		90.0	30.0	52.5	18.1	9.5	82.6		48		12.7	58.2	41.3	44.5	54.0	34.9	62.5	108.0	12.7	0.62
TS25PC-EC12M	54.9		90.0	30.0	52.5	18.1	9.5	82.6		48		12.7	58.2	41.3	44.5	54.0	34.9	62.5	108.0	12.7	0.62
TS75PC-EC12M	66.0		104.3	30.0	63.5	26.5	12.7	101.6		56		12.7	69.3	50.8	50.8	66.7	41.3	74.4	133.4	12.7	1.44
TS150PC-EC12M	66.0		104.3	30.0	63.5	26.5	12.7	101.6		56		12.7	69.3	50.8	50.8	66.7	41.3	74.4	133.4	12.7	1.44
TS25-PC-EC12M	66.0		104.3	30.0	63.5	26.5	12.7	101.6		56		12.7	69.3	50.8	50.8	66.7	41.3	74.4	133.4	12.7	1.44

In-roll coupling sensors

Stud mount models

TS5SR-EC12
TS25SR-EC12
TS50SR-EC12
TS150SR-EC12
TS330SR-EC12
TS500SR-EC12
TS2SC-EC12M
TS10SC-EC12M
TS25SR-EC12M
TS75SR-EC12M
TS150SR-EC12M
TS250SR-EC12M



Flange mount models

TS5FR-EC12
TS25FR-EC12
TS50FR-EC12
TS150FR-EC12
TS330FR-EC12
TS500FR-EC12
TS2FR-EC12M
TS10FR-EC12M
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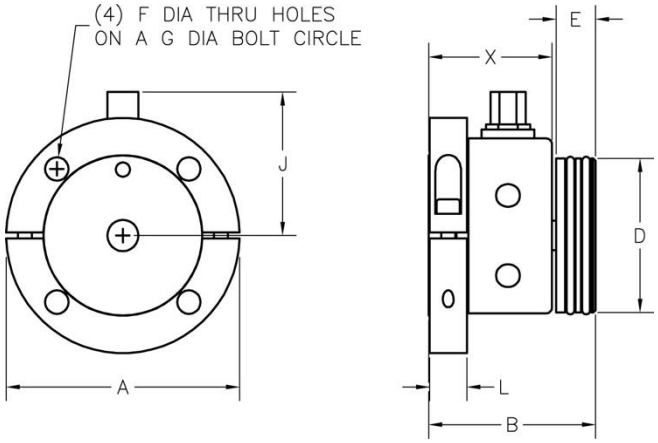
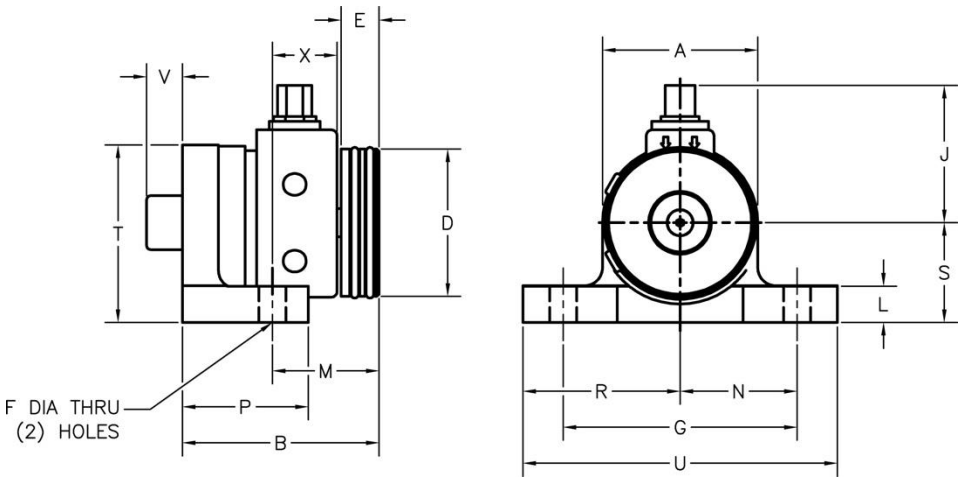
TS75FR-EC12M
TS150FR-EC12M
TS250FR-EC12M



Pillow block models

TS5PR-EC12
TS25PR-EC12
TS50PR-EC12
TS150PR-EC12
TS330PR-EC12
TS500PR-EC12
TS2PR-EC12M
TS10PR-EC12M
TS25PR-EC12M
TS75PR-EC12M
TS150PR-EC12M
TS250PR-EC12M



English in-roll models (units are in inches, weight in pounds)

MODEL	A	AA	B	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	X	WEIGHT
TS5SR-EC12		2.13	2.23	2.05	0.53			1/2-13	1.9	0.88										1.65	0.93
TS25SR-EC12		2.13	2.23	2.05	0.53			1/2-13	1.9	0.88										1.65	0.93
TS50SR-EC12		2.13	2.23	2.05	0.53			1/2-13	1.9	0.88										1.65	0.93
TS150SR-EC12		2.60	2.47	2.44	0.76			1/2-13	2.2	1.00										1.66	1.56
TS330SR-EC12		2.60	2.47	2.44	0.76			1/2-13	2.2	1.00										1.66	1.56
TS500SR-EC12		2.60	2.47	2.44	0.76			1/2-13	2.2	1.00										1.66	1.56
TS5FR-EC12	3.13		2.23	2.05	0.53	0.313	2.50		1.9		0.50									1.65	1.09
TS25FR-EC12	3.13		2.23	2.05	0.53	0.313	2.50		1.9		0.50									1.65	1.09
TS50FR-EC12	3.13		2.23	2.05	0.53	0.313	2.50		1.9		0.50									1.65	1.09
TS150FR-EC12	4.00		2.47	2.44	0.76	0.375	3.25		2.2		0.50									1.66	1.87
TS330FR-EC12	4.00		2.47	2.44	0.76	0.375	3.25		2.2		0.50									1.66	1.87
TS500FR-EC12	4.00		2.47	2.44	0.76	0.375	3.25		2.2		0.50									1.66	1.87
TS5PR-EC12	2.16		2.73	2.05	0.53	0.375	3.25		1.9		0.50	1.48	1.63	1.75	2.13	1.38	2.46	4.25	0.50	0.91	1.36
TS25PR-EC12	2.16		2.73	2.05	0.53	0.375	3.25		1.9		0.50	1.48	1.63	1.75	2.13	1.38	2.46	4.25	0.50	0.91	1.36
TS50PR-EC12	2.16		2.73	2.05	0.53	0.375	3.25		1.9		0.50	1.48	1.63	1.75	2.13	1.38	2.46	4.25	0.50	0.91	1.36
TS150PR-EC12	2.60		2.97	2.44	0.76	0.500	4.00		2.2		0.50	1.59	2.00	2.00	2.63	1.63	2.93	5.25	0.50	0.79	3.18
TS330PR-EC12	2.60		2.97	2.44	0.76	0.500	4.00		2.2		0.50	1.59	2.00	2.00	2.63	1.63	2.93	5.25	0.50	0.79	3.18
TS500PR-EC12	2.60		2.97	2.44	0.76	0.500	4.00		2.2		0.50	1.59	2.00	2.00	2.63	1.63	2.93	5.25	0.50	0.79	3.18

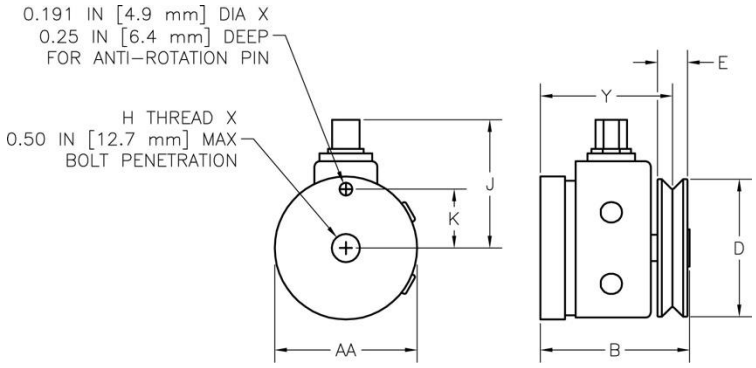
Metric stud mount in-roll models (units are in millimeters, weight in kilograms)

MODEL	A	AA	B	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	X	WEIGHT
TS2SR-EC12M		54.0	56.6	52.0	13.3			M12 X 1.75	48	22.2										42.0	0.42
TS10SR-EC12M		54.0	56.6	52.0	13.3			M12 X 1.75	48	22.2										42.0	0.42
TS25SR-EC12M		54.0	56.6	52.0	13.3			M12 X 1.75	48	22.2										42.0	0.42
TS75SR-EC12M		66.0	62.7	61.8	19.4			M12 X 1.75	56	25.4										42.2	0.71
TS150SR-EC12M		66.0	62.7	61.8	19.4			M12 X 1.75	56	25.4										42.2	0.71
TS250SR-EC12M		66.0	62.7	61.8	19.4			M12 X 1.75	56	25.4										42.2	0.71
TS2FR-EC12M	79.4		56.6	52.0	13.3	7.94	63.5		48		12.7									42.0	0.49
TS10FR-EC12M	79.4		56.6	52.0	13.3	7.94	63.5		48		12.7									42.0	0.49
TS25FR-EC12M	79.4		56.6	52.0	13.3	7.94	63.5		48		12.7									42.0	0.49
TS75FR-EC12M	101.6		62.7	61.8	19.4	9.53	82.6		56		12.7									42.2	0.85
TS150FR-EC12M	101.6		62.7	61.8	19.4	9.53	82.6		56		12.7									42.2	0.85
TS250FR-EC12M	101.6		62.7	61.8	19.4	9.53	82.6		56		12.7									42.2	0.85
TS2PR-EC12M	54.9		69.3	52.0	13.3	9.53	82.6		48		12.7	37.6	41.3	44.5	54.0	34.9	62.5	108.0	12.7	23.1	0.62
TS10PR-EC12M	54.9		69.3	52.0	13.3	9.53	82.6		48		12.7	37.6	41.3	44.5	54.0	34.9	62.5	108.0	12.7	23.1	0.62
TS25PR-EC12M	54.9		69.3	52.0	13.3	9.53	82.6		48		12.7	37.6	41.3	44.5	54.0	34.9	62.5	108.0	12.7	23.1	0.62
TS75PR-EC12M	66.0		75.4	61.8	19.4	12.70	101.6		56		12.7	40.4	50.8	50.8	66.7	41.3	74.4	133.4	12.7	19.9	1.44
TS150PR-EC12M	66.0		75.4	61.8	19.4	12.70	101.6		56		12.7	40.4	50.8	50.8	66.7	41.3	74.4	133.4	12.7	19.9	1.44
TS250PR-EC12M	66.0		75.4	61.8	19.4	12.70	101.6		56		12.7	40.4	50.8	50.8	66.7	41.3	74.4	133.4	12.7	19.9	1.44

Wire pulley coupling sensors

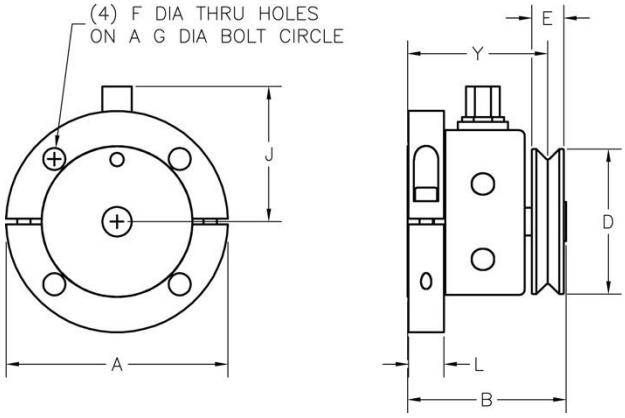
Stud mount models

TS5SW-EC12
TS25SW-EC12
TS50SW-EC12
TS150SW-EC12
TS330SW-EC12
TS500SW-EC12
TS2SW-EC12M
TS10SW-EC12M
TS25SW-EC12M
TS75SW-EC12M
TS150SW-EC12M
TS250SW-EC12M



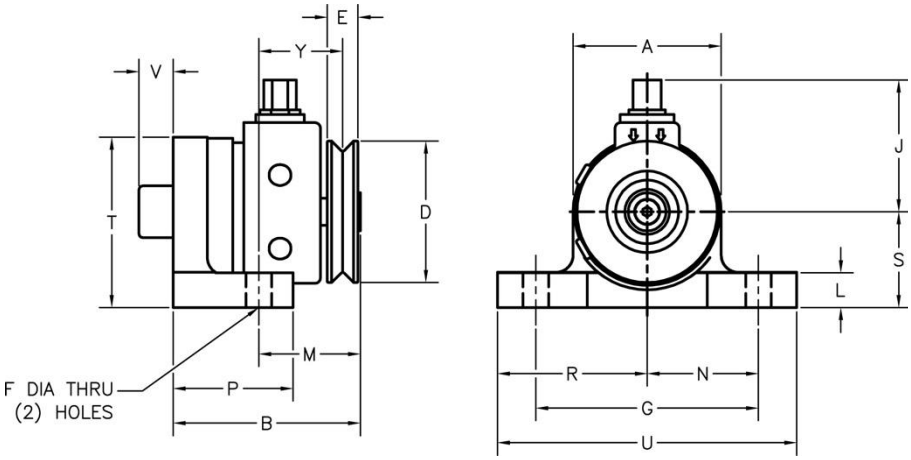
Flange mount models

TS5FW-EC12
TS25FW-EC12
TS50FW-EC12
TS150FW-EC12
TS330FW-EC12
TS500FW-EC12
TS2FW-EC12M
TS10FW-EC12M
TS25FW-EC12M
TS75FW-EC12M
TS150FW-EC12M
TS250FW-EC12M



Pillow block models

TS5PW-EC12
TS25PW-EC12
TS50PW-EC12
TS150PW-EC12
TS330PW-EC12
TS500PW-EC12
TS2PW-EC12M
TS10PW-EC12M
TS25PW-EC12M
TS75PW-EC12M
TS150PW-EC12M
TS250PW-EC12M



English wire pulley models (units are in inches, weight in pounds)

MODEL	A	AA	B	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	Y	WEIGHT
TS5SW-EC12		2.13	2.25	2.05	0.45			1/2-13	1.9	0.88										1.97	0.68
TS25SW-EC12		2.13	2.25	2.05	0.45			1/2-13	1.9	0.88										1.97	0.68
TS50SW-EC12		2.13	2.25	2.05	0.45			1/2-13	1.9	0.88										1.97	0.68
TS150SW-EC12		2.60	2.43	2.70	0.57			1/2-13	2.2	1.00										2.07	1.08
TS330SW-EC12		2.60	2.43	2.70	0.57			1/2-13	2.2	1.00										2.07	1.08
TS500SW-EC12		2.60	2.43	2.70	0.57			1/2-13	2.2	1.00										2.07	1.08
TS5FW-EC12	3.13		2.25	2.05	0.45	0.313	2.50		1.9		0.50									1.97	0.84
TS25FW-EC12	3.13		2.25	2.05	0.45	0.313	2.50		1.9		0.50									1.97	0.84
TS50FW-EC12	3.13		2.25	2.05	0.45	0.313	2.50		1.9		0.50									1.97	0.84
TS150FW-EC12	4.00		2.43	2.70	0.57	0.375	3.25		2.2		0.50									2.07	1.39
TS330FW-EC12	4.00		2.43	2.70	0.57	0.375	3.25		2.2		0.50									2.07	1.39
TS500FW-EC12	4.00		2.43	2.70	0.57	0.375	3.25		2.2		0.50									2.07	1.39
TS5PW-EC12	2.16		2.75	2.05	0.45	0.375	3.25		1.9		0.50	1.50	1.63	1.75	2.13	1.38	2.46	4.25	0.50	1.23	1.11
TS25PW-EC12	2.16		2.75	2.05	0.45	0.375	3.25		1.9		0.50	1.50	1.63	1.75	2.13	1.38	2.46	4.25	0.50	1.23	1.11
TS50PW-EC12	2.16		2.75	2.05	0.45	0.375	3.25		1.9		0.50	1.50	1.63	1.75	2.13	1.38	2.46	4.25	0.50	1.23	1.11
TS150PW-EC12	2.60		2.93	2.70	0.57	0.500	4.00		2.2		0.50	1.55	2.00	2.00	2.63	1.63	2.93	5.25	0.50	1.19	2.70
TS330PW-EC12	2.60		2.93	2.70	0.57	0.500	4.00		2.2		0.50	1.55	2.00	2.00	2.63	1.63	2.93	5.25	0.50	1.19	2.70
TS500PW-EC12	2.60		2.93	2.70	0.57	0.500	4.00		2.2		0.50	1.55	2.00	2.00	2.63	1.63	2.93	5.25	0.50	1.19	2.70

Metric stud mount wire pulley models (units are in millimeters, weight in kilograms)

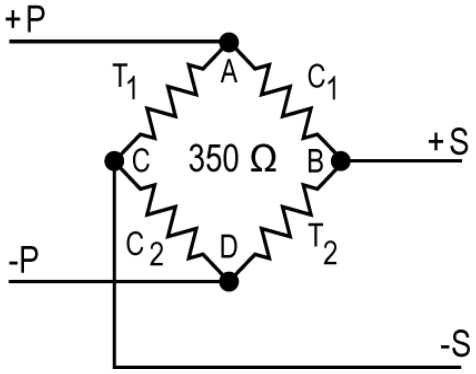
MODEL	A	AA	B	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	Y	WEIGHT
TS2SW-EC12M		54.0	57.1	52.0	11.4			M12 X 1.75	48	22.2										50.0	0.31
TS10SW-EC12M		54.0	57.1	52.0	11.4			M12 X 1.75	48	22.2										50.0	0.31
TS25SW-EC12M		54.0	57.1	52.0	11.4			M12 X 1.75	48	22.2										50.0	0.31
TS75SW-EC12M		66.0	61.6	68.6	14.4			M12 X 1.75	56	25.4										52.5	0.49
TS150SW-EC12M		66.0	61.6	68.6	14.4			M12 X 1.75	56	25.4										52.5	0.49
TS250SW-EC12M		66.0	61.6	68.6	14.4			M12 X 1.75	56	25.4										52.5	0.49
TS2FW-EC12M	79.4		57.1	52.0	11.4	7.94	63.5		48		12.7									50.0	0.38
TS10FW-EC12M	79.4		57.1	52.0	11.4	7.94	63.5		48		12.7									50.0	0.38
TS25FW-EC12M	79.4		57.1	52.0	11.4	7.94	63.5		48		12.7									50.0	0.38
TS75FW-EC12M	101.6		61.6	68.6	14.4	9.53	82.6		56		12.7									52.5	0.63
TS150FW-EC12M	101.6		61.6	68.6	14.4	9.53	82.6		56		12.7									52.5	0.63
TS250FW-EC12M	101.6		61.6	68.6	14.4	9.53	82.6		56		12.7									52.5	0.63
TS2PW-EC12M	54.9		69.9	52.0	11.4	9.53	82.6		48		12.7	38.2	41.3	44.5	54.0	34.9	62.5	108.0	12.7	31.1	0.50
TS10PW-EC12M	54.9		69.9	52.0	11.4	9.53	82.6		48		12.7	38.2	41.3	44.5	54.0	34.9	62.5	108.0	12.7	31.1	0.50
TS25PW-EC12M	54.9		69.9	52.0	11.4	9.53	82.6		48		12.7	38.2	41.3	44.5	54.0	34.9	62.5	108.0	12.7	31.1	0.50
TS75PW-EC12M	66.0		74.3	68.6	14.4	12.70	101.6		56		12.7	39.3	50.8	50.8	66.7	41.3	74.4	133.4	12.7	30.2	1.22
TS150PW-EC12M	66.0		74.3	68.6	14.4	12.70	101.6		56		12.7	39.3	50.8	50.8	66.7	41.3	74.4	133.4	12.7	30.2	1.22
TS250PW-EC12M	66.0		74.3	68.6	14.4	12.70	101.6		56		12.7	39.3	50.8	50.8	66.7	41.3	74.4	133.4	12.7	30.2	1.22

6-1 SPECIFICATIONS

Product specifications

Warning – Do not use the devices outside of their rated specifications

Gage Resistance	350 ohm
Gage Type	Metal foil, full bridge
Excitation Voltage	10 VDC nominal
Output Signal	21 mVDC nominal at full load rating
Operating Temperature	-30° C to 80° C [-22° F to 176° F]
Temperature effect on zero	0.02% of rating per °C [.01 % of °F]
Combined non-linearity and hysteresis	0.5% of full scale maximum
Repeatability	0.2% of full scale maximum
Overload stops	105% to 150% of full load rating
Deflection at full load	0.41 mm [0.016 in.]
Cable Connector	12B221-1; MAGPOWR mating cable assembly Part #LCC5M, or mating connector Part #12B220-1 (pin 1, +power; pin 2, +signal; pin 3, -signal; pin 4, -power)
Climate Class	3K3 (EN60721)



Wiring diagram		
+P	Pin 1	Red
+S	Pin 2	White
-S	Pin 3	Black
-P	Pin 4	Green

Service requests and replacement parts

To request service or to get replacement parts, contact one of the following addresses:

Fife Corporation
222 West Memorial Rd.
Oklahoma City, OK, 73114, USA
Phone: 1.405.755.1600
Fax: 1.405.755.8425
Web: www.maxcessintl.com

Fife-Tidland GmbH
Max-Planck-Strasse 8
65779 Kelkheim
Deutschland
Telefon: +49.6195.7002.0
Fax: +49.6195.7002.933
Web: www.maxcess.eu

OR

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