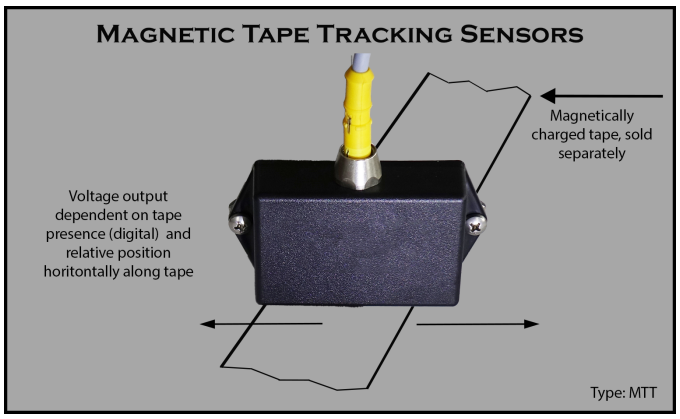
M3X2-MTTA-LCCB5F - *Magnetic Tape Tracking Sensors*

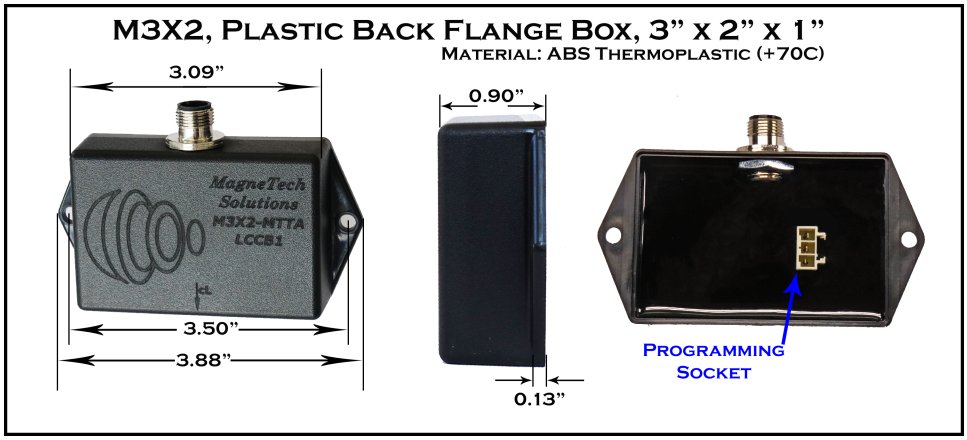
Analog Output Magnetic Tape Tracker, regulated input, both analog and pnp digital outputs, Plastic back flange box 3 x 2 x 1", Integral Panel mount 5 pin Female 12mm micro connector

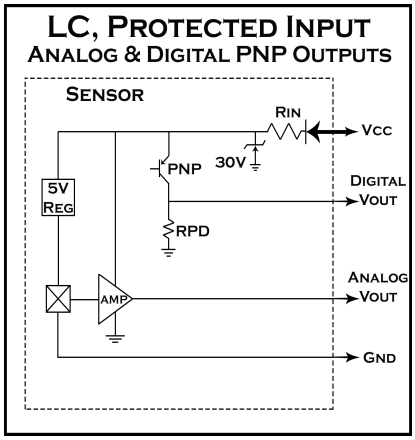


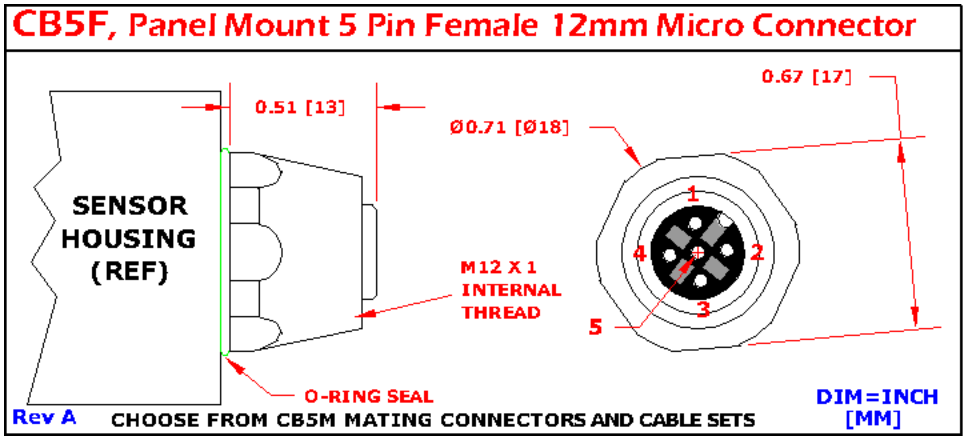
- *ANALOG OUTPUT VS OFFSET DISTANCE*
- *DIGITAL 'TAPE DETECT' OUTPUT*
- *DETECTS VERY LOW FIELDS*
- *POTTED AND SEALED*
- *WIDE SENSING GAP RANGE*

ENVIRONMENTAL SPECIFICATIONS
M3X2 Housing

Corrosion Resistance	TBD
Installation Torque	TBD
Enclosure	TBD
Vibration	TBD
Max temp (overrides elec. Max temp)	70 degree C







Connections Chart	
Pin 1	Vcc
Pin 2	Analog Vout
Pin 3	Ground
Pin 4	Digital Vout
Pin 5	No Connection
CB5F-MTTA	

Date Code 'YYM'

YY = YEAR, M = MONTH

A JAN	D APR	H JUL	L OCT
B FEB	E MAY	J AUG	M NOV
C MAR	G JUN	K SEP	N DEC

The MTTA Magnetic Tape Tracking Sensors provide an analog output that varies from 0 to 10 volts as they move left and right over magnetic tape. To work properly, the tape must be magnetized with the NORTH pole pointing toward the sensor. The positions Left, Centered, and Right are defined on page 2 of this specification.

These sensors also have a digital 'Tape Detect' output that goes on only when they detect tape. This output clamps the analog voltage to 0 or 5 volts if it does not detect tape (see page 2). The 'Detection Gap' is defined on page 2.

We also offer Digital- Only Magnetic Tape Tracking Sensors that have 3 outputs 'Left, Right, and Center'. These outputs only go on when they are over the tape; if the tape moves left, the right output goes off. Contact Magnetech Solutions for more information.

M3X2-MTTA-LCCB5F - *Magnetic Tape Tracking Sensors*

Analog Output Magnetic Tape Tracker, regulated input, both analog and pnp digital outputs, Plastic back flange box 3 x 2 x 1", Integral Panel mount 5 pin Female 12mm micro connector

CS1169-LC
ELECTRICAL & FUNCTIONAL SPECIFICATIONS

Absolute Max Limits	Conditions	MIN	MAX	Units
Supply Voltage, Vcc	Absolute Max	-36	36	Volts DC
Short Circuit Vo to GND or Vcc	Vcc = 0 to 30 volts	-----	5	Minutes
Maximum Magnetic Field	Max field at point 1/4" inside the box	-----	500	Gauss
Storage Temperature	Non powered	-40	110	Deg. C
Digital Output Power	T = 25C	--	1	W
Load Dump per ISO 7637-2	24V, 100mS, Rs = 5	--	100	Volts
ESD	Air Contact	--	-15k	Volts

Electrical Specs	Conditons	MIN	MAX	Units
Temperature Range	Operating	-40	85	Degrees C
Supply Voltage, Vcc	T = -40 to +60C	+12	+36	Volts DC
Supply Voltage, Vcc	T = -40 to +85C	+12	+24	Volts DC
Supply Current	Operating	10	45	mA
Magnet Detect Time Delay	Output delay after seeing magnet	0.2	1	mS
Magnet Lose Time Delay	Output elay after magnet goes away	5	10	mS
Analog Source Current	Analog Vout to Gnd	-3	+3	mA
Pull Down Resistor, Rpd	Internal, Digital Vout to Gns	4.9	5.1	k Ohms
Rin, Input Resistor	Internal	95	105	Ohms
Digital Vout Low VOL	**Vcc = 24, Rload > 100k**	**0**	**0.7**	**Volts**
Digital Vout High, VOH	**Vcc = 24, Rload > 100k**	**20**	**24**	**Volts**
Rise or fall time, PNP Output	C load < 100pf	-----	5	uS

Magnetic Characteristics	Condition	Minimum	Typical	Max	Units
Tape Detect Gap Range	Centered over tape	0-1.8	0-2.5	0-3.5	Inches
Tape Left (POS 1)	Max Detect Offset Distance, .8"gap	2	2.2	3.2	Inches
Tape Right (POS 3)	Max Detect Offset Distance, .8"gap	2	2.4	3.5	Inches
Analog Output	**Tape Left 2" (position 1)**	**0.72**	**0.8**	**0.88**	**Volts**
Analog Output	**Tape Centered (position 2)**	**4.92**	**5**	**5.08**	**Volts**
Analog Output	**Tape Right 2" (position 3)**	**9.12**	**9.2**	**9.28**	**Volts**
Analog Output	**No magnetic field**	**4.5**	**5**	**5.5**	**Volts**
Digital PNP Output	**No magnetic field**	**0**	**0.01**	**0.7**	**Volts**

Bold indicates 100% factory tested before shipment