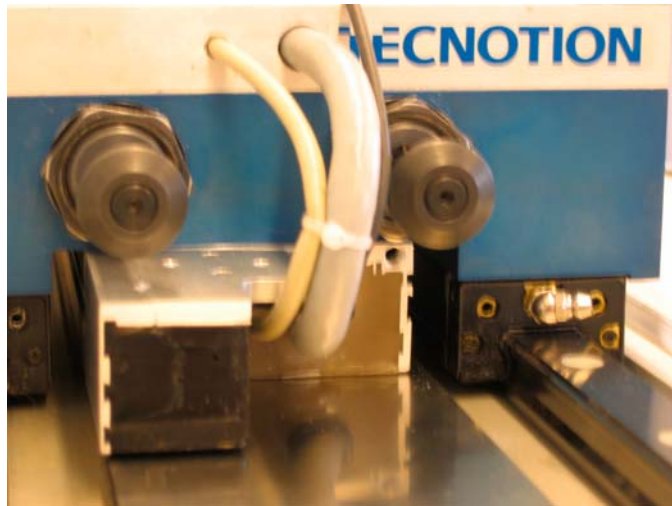
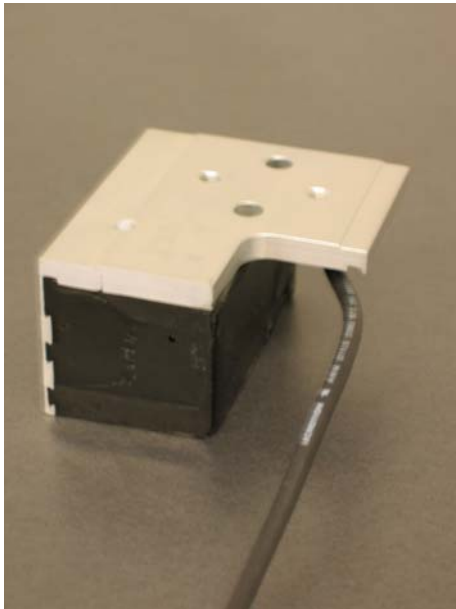


Analog Hall Position Sensor

for Tecnotion T- Series Ironcore Linear Motors

2'0



Description

The Analog Hall sensor is meant to be used on Tecnotion Ironcore linear motors as position sensor. In this function, the sensor replaces a separate optical or magnetic scale.

Advantages of the Analog Hall Position Sensor are:

- Low price. You obtain a complete feedback system for the price of a reading head.
- The sensor is not sensitive to dust and pollution.
- Mounting is straightforward on the same surface as the coilunit.

The sensor measures the magnetic field of the magnettrack below and gives a standard, analog feedback signal to the servodrive. The signals are 1V peak-peak Sine and Cosine with a period of 24mm.

For optimal results, the analog signals have to be calibrated on offset and amplitude. This procedure can be performed by most standard servodrives. Check with your supplier.

The system requires the mounting of a sensorhead only. The scale is formed by the magnettrack.

The sensorhead has to be mounted above the magnettrack, in front of the coilunit. Cable can be joined with that of the coilunit.

Alignment is relatively uncritical. The sensorhead mounting height corresponds to that of the TM and TL linear motors. For use with TB and TG linear motors, a filling of 1 or 3mm respectively is needed between sensor and coilunit mounting surfaces (not available at Tecnotion). Normal tolerance of linear motor mounting height is adequate for the sensor.

Rotation should be within 0.5 degree to movement axis. Side of sensor should be aligned with coilunit (± 1 mm) to be sure that the sensor is not above a row of magnet joints. Position in length is irrelevant.

Specification

Signal:	1Vpp SinCos 120R closing																											
Signal Period:	24mm																											
Repeatability:	$\pm 30\mu\text{m}$																											
Resolution:	$\pm 10\mu\text{m}$																											
Accuracy:	$\pm 100\mu\text{m}$ ($\pm 0.1\text{mm}$) <ul style="list-style-type: none">• with magnetplate mounting accuracy within $\pm 20\mu\text{m}$• using offset and amplitude compensation																											
Supply:	+5Vdc 100mA																											
Cable:	3m Lapp Unitronic-FD CP (TP), UL/CSA, \varnothing 6.8mm, flexing: R=7.5D <table><tr><td>Green</td><td>A+</td><td>(Cos)</td></tr><tr><td>Yellow</td><td>A-</td><td>(Cos)</td></tr><tr><td>Blue</td><td>B+</td><td>(Sin)</td></tr><tr><td>Red</td><td>B-</td><td>(Sin)</td></tr><tr><td>Brown</td><td>+5V</td><td></td></tr><tr><td>White</td><td>gnd</td><td></td></tr><tr><td>Pink</td><td>+5V_sense</td><td></td></tr><tr><td>Grey</td><td>gnd_sense</td><td></td></tr><tr><td>Shield</td><td>GND (Connected to Shield only)</td><td></td></tr></table>	Green	A+	(Cos)	Yellow	A-	(Cos)	Blue	B+	(Sin)	Red	B-	(Sin)	Brown	+5V		White	gnd		Pink	+5V_sense		Grey	gnd_sense		Shield	GND (Connected to Shield only)	
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Dimensions

