SP-TTL Speed Sensor

Magnetic speed pickup with conditioned output

Up to
- 2,000 Hertz

Output
- 0 - 5 volt square wave

The SP-TTL speed sensor is capable of detecting passing ferrous objects including a gear tooth to enable shaft speed to be calculated.

The unit conditions the signal to provide a 0 - 5 volt square wave output. This enables it to be connected direct to panel meters or the Webtec C2000. It is all housed in a robust housing and comes complete with lock nuts for easy mounting and adjustment.

Manufacturers of hydraulic components and test equipment for the Mobile, Industrial and Agricultural industries

WEBTEC
WEBTEC PRODUCTS LIMITED

Nuffield Road,
St. Ives, Cambs.,
PE27 3LZ, UK
Tel: +44(0)1480 397400
Fax: +44(0)1480 466555
www.webtec.co.uk
E-mail: sales@webtec.co.uk

Features

- Wide range 1 - 2000 Hertz
- Steel and aluminium housing
- 0 - 5 volt square wave output
- Two lock nuts provide
- M12 4 pin connection

BFPA

nqa. ISO 9001 Registered UKAS

Certificate No.8242

SPTTL-BU-ENG-2507.pdf 04/10
(Issue 1)

Specifications

Model number	Output	Frequency range
SP-TTL	Pulse	1 - 2000 Hertz

Functional specification

Operating temperature: Ambient - 5 to 40°C (41 to 104°F)
Weight: 0.25kg (0.55 lbs)

Electrical specification

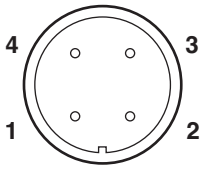
Supply voltage (VS): 12 - 32 VDC
Pulse output: 0 - 5 V square wave
Connection type: M12 x 1 4 pin

Construction material

Main Body -steel 212A42 electroless nickel plated,
Lid - Aluminium 2011 T3
Treaded section - 212A42 electroless nickel plated

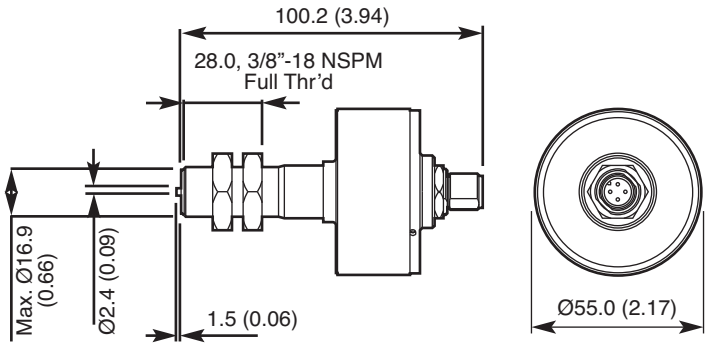
Installation and connection details

Dimensions in mm (inches)



Pins
1 - +24 V DC
2 - Out (Pulse)
3 - GND
4 - CASE

Connecting cable (5m) FT9879-05
Extension cable (5m) FT10229-05
Connector (M12x1 4 pin) FT9880



Installation guidance

When using the sensor to detect a gear tooth, there is an optimum shape to achieve maximum output voltage from the sensor before conditioning. This relationship is as follows:

A is equal to or greater than 2.3mm
B is equal to or greater than C
C is equal to or greater than 7mm
D is as close as possible
E is equal to or greater 2.3mm

The above configuration is usually not available in a stock gear, but it is not necessary to have the maximum output into the conditioning. Conventional stock gears can be used if the tooth width A is equal to or greater than 2.3mm and C is 3.5mm.
For ease of alignment, it is recommended that the gear thickness should be at least 5mm.

When using the sensor to detect a bolt head or other ferrous object, as a 'detecting head' the following should be considered:
Use only solid material - filled cap head bolts can give a double count
Keeping the detecting head thin between 1.5 and 2mm will give the greatest speed range
The maximum velocity of the detecting head should not exceed 25 m/s
Ensure the detecting head provides the only edges within 10mm of the sensor

Accessories

A range of panel meters are available please contact the sales office for help and advice on your application.

Magnetic Sensor

A = Dimension of top of tooth
B = Height of tooth
C = Space between teeth
D = Clearance
E = Gear thickness