

MODEL 194 ROTARY POSITION SENSOR

With the Model 194 Rotary Position Sensor, Tecnadyne packages industry standard rotary sensors in a very compact, rugged and reliable housing for use in the extreme ocean environment. And due to its easily mounted configuration, the Model 194 can be installed on AUV's as a fin position sensor, or on manipulators, pan & tilts, winch drums or other subsea installations.

Using the magnetic coupling technology developed for Tecnadyne's underwater thruster motors, the Model 194 places the sensor in a hermetically sealed housing with no rotating shaft seals that can leak and cause failure.

Virtually any commercially available rotary sensor can be installed in the Model 194 housings and Tecnadyne offers several of these as standard equipment options. These include: 1-turn and 10-turn potentiometers, which can be externally powered to provide a linear voltage output with 1% linearity or a 4-20mA current loop output; true position resolvers that return 2-channel differential sinusoids in quadrature; differential square wave encoders that return signals in quadrature in resolutions ranging from 128 pulses per revolution to 4096 pulses per revolution; and natural binary sensors, that have resolutions to 4096 pulses per revolution.

The magnetic coupling components of the Model 194 are manufactured from stainless steel and the housings are manufactured from 6061-T6 aluminum, hard anodized and Teflon impregnated. The standard housings are depth rated to 750m, but 1,500m and 3,000m housings are available options. The green drive tang and bearing are Turcite, a modified Teflon, and have a maximum speed of 300rpm. Alternate bearing materials can be used for higher speeds.

As with all Tecnadyne products, the Model 194 Rotary Position Sensor can be modified to suit the customers specific requirements. Such modifications include customer specified subsea connectors, stainless steel or titanium housings, increased housing size to accommodate special sensors and greater depth capability.



MODEL 194 SPECIFICATIONS

Outputs

4-20mA current loop
Linear voltage
Quadrature sinusoids
Quadrature square wave
Natural binary

Max Speed

300rpm standard,
higher speeds optional

Weight

0.9lb (0.4kg) in air
0.6lb (0.3kg) in water

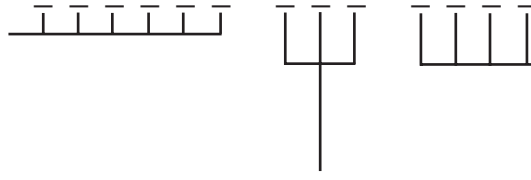
Depth Rating

2,500ft (750m) standard,
5,000ft (1,500m) &
10,000ft (3,000m)
optional

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Part Number: 194 -

- 4-20mA Linear Current Loop - MA
- 0-5V Linear Voltage, 1 turn - LV5
- 0-10V Linear Voltage, 1 turn - LV10
- 0-12V Linear Voltage, 1 turn - LV12
- 0-5V Linear Voltage, 10 turn - LV5
- 0-10V Linear Voltage, 10 turn - LV10
- 0-12V Linear Voltage, 10 turn - LV12
- 2-Channel Quadrature Sinusoids - QS
- Quadrature Square Wave, 128 PPR - SW0128
- Quadrature Square Wave, 320 PPR - SW0320
- Quadrature Square Wave, 400 PPR - SW0400
- Quadrature Square Wave, 500 PPR - SW0500
- Quadrature Square Wave, 512 PPR - SW0512
- Quadrature Square Wave, 800 PPR - SW0800
- Quadrature Square Wave, 1000 PPR - SW1000
- Quadrature Square Wave, 1024 PPR - SW1024
- Quadrature Square Wave, 1600PPR - SW1600
- Quadrature Square Wave, 2000 PPR - SW2000
- Quadrature Square Wave, 4096 PPR - SW4096
- Natural Binary, 320 PPR - NB0320
- Natural Binary, 400 PPR - NB0400
- Natural Binary, 500 PPR - NB0500
- Natural Binary, 512 PPR - NB0512
- Natural Binary, 800 PPR - NB0800
- Natural Binary, 1000 PPR - NB1000
- Natural Binary, 1024 PPR - NB1024
- Natural Binary, 1600PPR - NB1600
- Natural Binary, 2000 PPR - NB2000
- Natural Binary, 4096 PPR - NB4096



- 0750 - 750m depth
- 1500 - 1500m depth
- 3000 - 3000m depth

- F4P - SeaCon FAWL-4P-BC-R/A
- F4S - SeaCon FAWL-4S-BC-R/A
- F5P - SeaCon FAWL-5P-BC-R/A
- F5S - SeaCon FAWL-5S-BC-R/A
- F8P - SeaCon FAWL-8P-BC-R/A
- F8S - SeaCon FAWL-8S-BC-R/A
- X - Customer specified connector

