


## Description

A CST Hammer Union Pressure Transmitter is manufactured with oilfield proven silicon-on-sapphire technology. These transmitters are designed to withstand the roughest of oilfield applications. The sapphire diaphragms are impervious to sour gas, corrosive and other abrasive media. CST Hammer Union Pressure Transmitters are proven to hold up under the shock of regular roughneck handling, installation and removal as well as the continuous vibrations of a triplex type pump. CST offers this robust transmitter in the configurations WECO #1502 or the WECO #2002. These pressure transmitters are available with 0-5 VDC, 0-10 VDC or 4-20 mA outputs.

Silicon-on-sapphire sensors provide accuracy down to 0.01% FSO with effectively no hysteresis. Long term drift of less than 1% FSO and proof pressures greater than 5X the rated line pressures are additional features of these versatile pressure products.


If accuracy, stability and price are important to you, consider CST Hammer Union Pressure Transmitters for your precise pressure measurement needs.

### Hammer Union Pressure & Temperature Transmitter



Silicon on Sapphire Diaphragm  
High life-cycle under extreme conditions

Up to 300°C



**CANADA SENSORS  
TECHNOLOGY INC.**

[www.canadasensors.com](http://www.canadasensors.com)

10 - 328 Wale Rd.,  
VICTORIA, BC V9B 0J6

## FEATURES

- Silicon on Sapphire Diaphragm
- Fast response time <100 microseconds
- Infinite cycle life @ rated FSPR
- Flush face abrasion-proof diaphragm
- No signal decay
- No hysteresis
- EMI/RFI protected
- NEMA 4 and 4X enclosure
- On diaphragm temperature sensor

## OPTIONAL

- 4-20 mA output
- 0-5 VDC output
- 0-10 VDC output
- Compliant with MRO-175 (latest revision) for corrosive service
- 3" wing union for 20,000 psi service
- #2002 WECO® FMC Corporation
- On diaphragm silicon RTD

## APPLICATIONS

- Drilling
- Acidizing
- Wellhead Measurements
- Mud Logging
- Cementing
- Standpipe
- Well Stimulation
- Pressure Pulse Measurement

State-of -the-art Silicon-on-Sapphire pressure transducers have a proven track record in the aerospace, flight test, plastics and down-hole markets. Piezoresistive silicon islands are epitaxially grown onto single-crystal sapphire. Sapphire is a perfect electrical insulator that does not require diode isolation junctions found on diffused semiconductor pressure transducers. Sapphire is chemically inert allowing compatibility with virtually all media.

CST Hammer Union Pressure sensors are made with silicon-on-sapphire technology. These transmitters are designed to withstand the roughest of oil field applications including NACE standard MRO-175. The sapphire diaphragms are resistant to corrosive and abrasive materials. A CST Hammer Union Pressure Transmitter is proven to hold up under the shock of regular installation and removal as well as the continuous vibrations of a triplex type pump.

CST offers this robust transmitter in the WECO #1502 for 15,000 PSI or the WECO #2002 for 20,000 PSI service. The sensors are available with 0-5 VDC, 0-10 VDC or 4-20 ma outputs.

Silicon-on-sapphire sensors provide accuracy to 0.01% FSO with effectively no hysteresis. Long term drift of less than 1% FSO and proof pressures greater than 2X the rated line pressure are standard features of these hammer union transmitter products.

If accuracy, stability and price are important to you, consider a CST Silicon-on-Sapphire Hammer Union Pressure Transmitter for your pressure measurement needs.



## **PRODUCT SPECIFICATIONS**

<b>ACCURACY:</b>	± 0.25% of FSO (BFSL)
<b>REPEATABILITY:</b>	± 0.1% of FSO
<b>OPERATING TEMPERATURE:</b>	-60°F TO +250°F
<b>COMPENSATED TEMPERATURE:</b>	-60°F TO +250°F
<b>THERMAL ZERO SHIFT:</b>	± 0.01% FSO/°F
<b>THERMAL SPAN SHIFT:</b>	± 0.01% FSO/°F
<b>INPUT VOLTAGE:</b>	14-36 VDC for 0-5 VDC output (12 VDC available) 14-36 VDC for 0-10 VDC output (12 VDC available) 14-24 VDC for 4-20 mA output
<b>OUTPUT SIGNAL:</b>	4 ma @ Zero Pressure, 20 ma @ Full Scale Output
<b>INSULATION RESISTANCE:</b>	50 MEGAOHMS @ 100 VDC
<b>CIRCUIT PROTECTION:</b>	reverse polarity protection
<b>RFI/EMI IMMUNITY:</b>	0.3-0.9 giga-Hz
<b>OPERATING PRESSURE RANGES:</b>	up to 20.000 PSI
<b>OVER PRESSURE:</b>	1.5 times rated pressure or WECO fitting's maximum pressure of 20,000 PSI
<b>BURST PRESSURE:</b>	2.5 times rated pressure or WECO fitting's maximum pressure of 20.000 PSI