

Designed for durability and ease-of-use, the stainless steel Thermo Scientific 1400S transmitter calculates the density, level, moisture and/or related variables of process materials. It is known for producing a highly accurate reading, enabling operators to respond rapidly to variations in the process material to minimize upset conditions and eliminate potential shutdowns.

## Thermo Scientific 1400S Transmitter

Stainless Steel Transmitter  
for Signal Processing



The rugged, stainless steel Thermo Scientific 1400S Transmitter accurately calculates the density, level, moisture and/or related variables of process materials. It is engineered to work in tandem with several Thermo Scientific gauges, each comprised of a detector/sensor. This detector/sensor receives and conditions a signal and communicates it to the 1400S, providing an isolated 4-20 mA output that represents the process conditions within the pipe or vessel. This integrated communication between the detector/sensor and transmitter provides increased accuracy and stability of the measurement.

The 1400S features a four-line, alphanumeric, beveled display that can be read in direct sunlight from as far away as three meters. The value that appears on this display can be sent to serial ports or used to drive current outputs and alarms. Engineered to monitor system performance, the 1400S generates system fault and warning alarms to minimize process disruptions. The value generated by the 1400S can be set in many different units of measurement to facilitate international use.

The 1400S consists of all plug-and-play boards that incorporate a CPU board, a detector interface board and an input/output (I/O) board. The base unit is supplied with either an isolated, self-powered 4-20 mA output or a loop-powered, isolated 4-20 mA output with up to three additional isolated and independent 4-20 mA outputs available. Any combination of these outputs can be configured to eight independent data or span channels. Units are user-selectable and options include most engineering units of measure. The software logic is an English language, menu-driven interface. An external keypad and a self-contained help menu simplify ongoing operation.

The 1400S is designed for use with several Thermo Scientific gauges, including:

- DensityPro+
- KRILPRO
- KRILPRO-LS
- KRIL
- MOLA
- MOLA-LS
- 4790.

### Features and Benefits

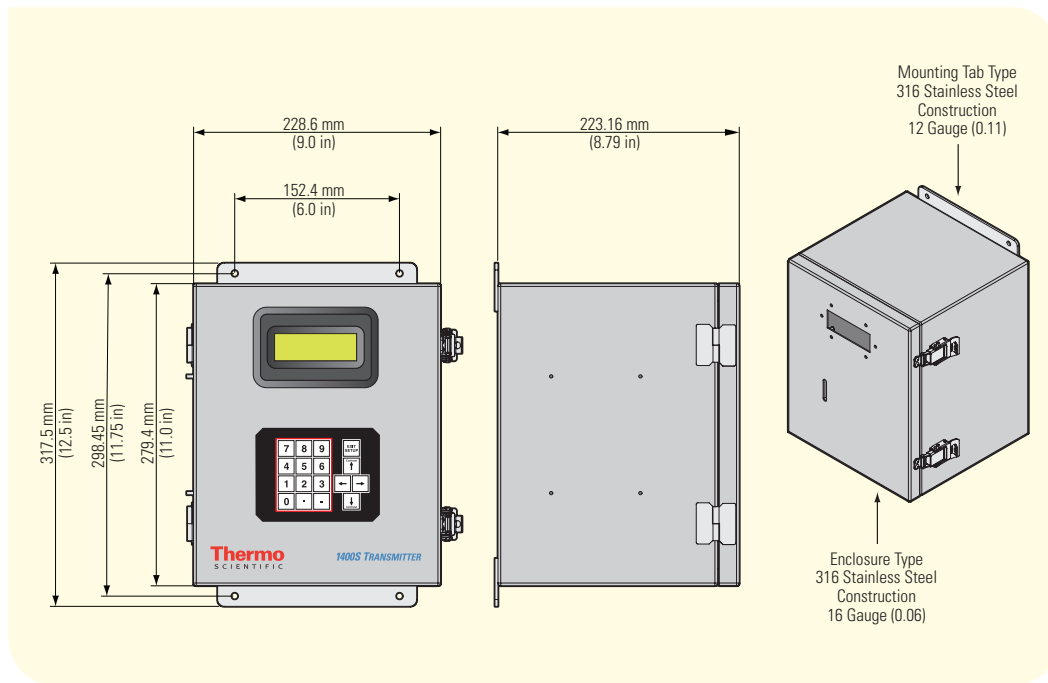
- Rugged design – able to withstand tough operating conditions
- Environmentally sound – resilient to corrosive atmospheres
- User-friendly – self-contained help menu facilitates operation
- Expandable – up to three additional 4-20 mA outputs can be added
- Retrofit capable – compatible with Thermo Scientific D and M Transmitter models
- AC or DC powered – either option ensures low power consumption
- CSA and ATEX certified – worldwide installation base

## Thermo Scientific 1400S Transmitter

### General Specifications

System Architecture	Multiprocessor-based electronics for uninterrupted output during data entry and system interrogation; all user data doubly stored in non-volatile memory with no battery backup required
Display	Four-line backlit display; displays up to eight readouts simultaneously
Current Outputs	4-20 mA isolated self-powered or loop-powered into 800 ohms; field scalable One (1) current output standard Up to three current outputs available, each representing independent span channels
Serial Outputs	RS485 half duplex; RS232 full duplex
Contact Closure Outputs	Up to 16-115 VAC/28 VDC SPDT @ 10 amps (230 VAC SPDT @ 8 amps)
Inputs	Up to three additional I/O available Dry contact closure
Programming Options	Menu-driven direct keypad entry
Power	AC Version: 100-240 VAC 50/60 Hz; Power = 17.2 W DC Version: 20-28 VDC; Power = 12 W
Approvals	NEMA 4X/IP65 ATEX: II 3 G Ex nA IIC T6 (-40°C ≤ Ta ≤ 60°C) DC version, EPSILON 08 ATEX 2387; II 3 G Ex nA nC IIC T4 (-20°C ≤ Ta ≤ 50°C) AC version, EPSILON 08 ATEX 2387 CSA: Class I, Div 2, Groups A, B, C and D; Class II, Div 2, Groups F and G; Class III Enclosure type 4X, Temperature code T3C/T4 Power = 20-28 VDC, 12 W, 100 to 240 VAC, 50-60 Hz, 2 Amp, 25 VA maximum; Ambient temperature variation -40°C to +60°C (-40°F to +140°F) CE compliant Low Voltage Directive compliant EMC Directive compliant

### Thermo Scientific 1400S Transmitter Dimensional Diagram



© 2008 Thermo Fisher Scientific Inc. All rights reserved. Results may vary under different operating conditions. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representatives for details. Literature Code PI.2059.0508

14 Gormley Industrial Avenue, Unit 14 Gormley, Ontario L0H 1G0 CANADA	+1 (905) 888-8808 +1 (905) 888-8828 fax
Room 1010 - 1019 Ping'an Mansion No. 23 Jinrong Street Xicheng Dist, Beijing 100032 CHINA	+86 (10) 5850-3588 +86 (10) 6621-0847 fax
A-101, ICC Trade Tower, Senapati Bapat Road Pune 411016 Maharashtra INDIA	+91 (20) 6626 7000 +91 (20) 6626 7001 fax
Ion Path, Road Three, Winsford Cheshire CW7 3GA UNITED KINGDOM	+44 (0) 1606 548700 +44 (0) 1606 548711 fax
1410 Gillingham Lane Sugar Land, TX 77478 USA	+1 (800) 437-7979 +1 (713) 272-0404 +1 (713) 272-4573 fax

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

**Thermo**  
SCIENTIFIC