

*FLUOTEMP fiber optic temperature sensor converters are designed for industrial and life science applications. With tens of thousands of these devices in use world wide proves the long term reliability and durability of the FLUOTEMP system.*

## Description

The FLUOTEMP family of fiber optic temperature sensor converters has been designed with the user in mind. Industry leading performance in a cost effective package means you get an integrated analog output providing the industry standard of 4-20 mA and accuracy down to 0.05 °C without competitor's "laboratory" level pricing. From stand alone systems to 100+ channel banks, this product is designed to minimize setup and installation time. 35 mm DIN rail mounting, modular packaging, and combined signal & power BUS make system integration a breeze.

In multi-channel applications, the converters are interconnected via a built in power and communication BUS capable of up to 32 channels via the standard MODBUS protocol over RS-485. This means when you want to add a channel to a system, it's as easy as 1, 2, 3 all you have to do is snap the converter in place, connect the probe, then go back to the computer to setup your software.

These converters are compatible with the FluoTemp family of temperature probes. From tens of mK resolution scientific systems to decade long critical system monitoring in industrial applications, ask us how we can fit a specific converter and probe to your particular application. Volume discounts are available.

Visit [photon-control.com](http://photon-control.com) for more details.



## Features

- *DIN rail mountable saves installation time*
- *Ability to build 32 channel-arrays, means you spend time measuring, not wiring and configuring you system*
- *16bit analog output from 4 to 20mA*
- *ModBus protocol over RS-485*
- *Drivers for LabView and Visual Basic allow you to integrate into any digital environment*
- *22 Hz sampling rate captures quick processes.*



**Standard: FTC-DIN-ST-GEN**

Standard converters are suitable for many industrial applications. They have a large measurement range, and accuracy up to +/-0.5 °C. Resolution is 0.1 °C and a sampling rate of 11 Hz ensures accurate measurements. They are great for small laboratories that want good quality on a limited budget or for the large volume OEM applications where robustness and per-channel pricing are paramount.

**High Accuracy: FTC-DIN-ST-HA**

The industry leader in performance, High Accuracy boasts superior measurement accuracy and stability over a large measurement range down to 10 mK resolution, all without sacrificing sampling rate. This converter is the perfect choice for PRT replacement.

**Transformer Hotspot: FTC-DIN-ST-TH**

These converters were originally designed for transformer hot spot measurement and are ideal for any high voltage applications. All FTC-DIN-ST-TH incorporate superior electrical shielding to cope with the hostile EMI typical of power industry applications. In addition to the common approvals all Photon converters have, the I/O interface meets requirements of IEEE C37.90.

**Life Sciences: FTC-DIN-ST-LS**

This converter is optimized for fast response 200 µm probes which are highly sought after for life sciences applications due to their transparency to X-RAY and immunity to RF as well as EMI, such as that created by MRI systems. The Life Sciences line of converters has been specifically designed for these applications. The FTC-DIN-ST-LS can be custom calibrated to any subset of its overall range, enabling unparalleled accuracy at a lower cost than a High Accuracy unit.

**Comparison Chart**

Model: FTC-DIN-XX-XXX:	ST-GEN	ST-HA	ST-TH	ST-LS
<b>Performance Specifications</b>				
Measurement Range	-40°C to 350°C	-40°C to 350°C	-40°C to 200°C	-40°C to 100°C
Measurement Accuracy	0.2°C	0.05°C	0.2°C	0.05°C <sup>1</sup>
Measurement Sampling Rate	11Hz	22Hz	22Hz	22Hz
Measurement Resolution	0.1°C	0.01°C	0.1°C	0.01°C
<sup>1</sup> Within 25C of calibration point (usually 36.8 °C)				
<b>Electrical Specifications</b>				
Power Requirements	24 V +/-10% /60 mA @ 24 V			
Analog Output 4 - 20 mA resolution	12 bit	16 bit	16 bit	16 bit
Digital Interface RS-232	(1.8m RS-232 Interface Cable is available if required)			
ModBus over RS-485	No	Yes	Yes	Yes
<b>Environmental Requirements</b>				
Operating Temp. Range	-40°C to +60°C	-20°C to +55°C	-20°C to +55°C	-20°C to +55°C
<b>Physical Specifications</b>				
Converter Dimensions	115mm x 99mm x 22.5mm (4.53" x 3.90" x 0.89")			
Fiber Optic Interface ST	(SMA available on request, ordering example FTC-DIN-SMA-LS)			
DIN Rail Mounting	DIN 3 (35 mm, 1.3")			

**Approvals**

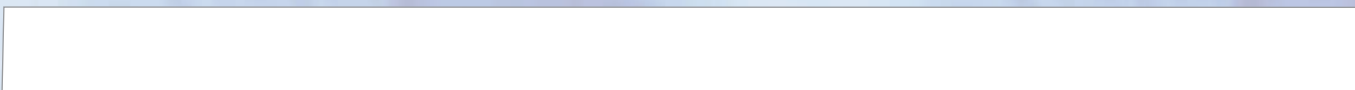
ST-GEN is CSA/UL approved to the requirements of CAN/CSA-C22.2 No. 61010-1-04 and UL 61010-1 (2nd Edition) Compliant with US, FCC Part -15 and CANADA, ICES-003 Class A radiated emission limits. Compliant with ICES 003 for a Class B digital device. Devices are not suitable for medical use. ST-HA, ST-TH, ST-LS are pending approvals

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DISTRIBUTED BY:



WARRANTY: All Photon Control Temperature Sensor Products (converters and probes) come with a 1-year warranty. Some limitations apply, please contact us for more details.

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Specifications subject to change without notice.