

Model 7600D DIN Rail Mount Sensor-Mate® PC Programmable Temperature Transmitter



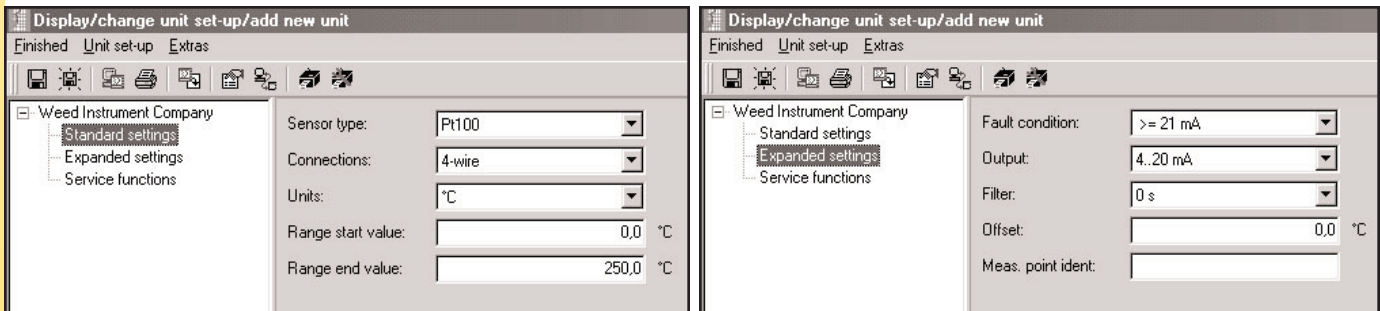
- DIN Rail Mounting Design
- 0.08% Accuracy
- Universal Inputs
- Microprocessor-Based Design
- PC Configuration with WeedComm Software
- Excellent Long-term Stability
- Input - Output Isolation
- Custom Input / Linearization Capabilities
- Narrow Profile
- Two Year Warranty

Data Sheet

The Model 7600D Sensor-Mate PC Programmable Temperature Transmitter is a highly accurate microprocessor-based temperature transmitter. The 7600D accepts a wide range of inputs - RTDs, Thermocouples, Resistance and Millivolt. The 7600D is loop-powered and provides a 4-20mA output signal. Configure the 7600D with a PC and WeedComm Software. The slim DIN rail design allows for many transmitters to be mounted in a small area.

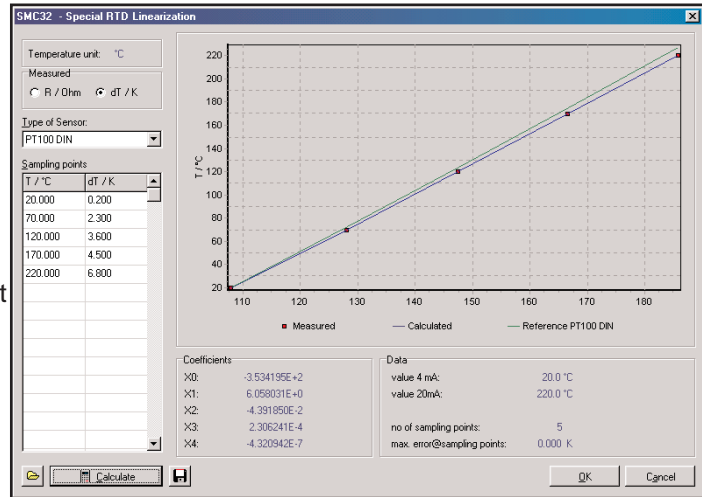
WeedComm Software

The WeedComm Software allows users to configure the 7600D transmitter using a PC and interface cable. The software is menu driven, clear and concise. Configurations can be completed off-line, saved and loaded to the transmitter at a later time. Saved configurations can be looked up by filename. Use the WeedComm Software for Custom Linearization features.



Custom Linearization

The 7600D offers the capability of entering custom linearization for non-standard electrical inputs or increased accuracy of the temperature measurement system. The result is a linear 4-20mA output for nearly any type of RTD, Thermocouple, Resistance or Millivolt input. Data is entered through the WeedComm Software.



Input Range:

Resistance Temperature Detector (RTD)

Input	Designation	Settable Range	Minimum Span
IEC 751 (0.00385055)	Pt 100	-328 to 1562°F (-200 to 850°C)	18°F (10°C)
	Pt 500	-328 to 482°F (-200 to 250°C)	18°F (10°C)
	Pt 1000	-328 to 482°F (-200 to 250°C)	18°F (10°C)
	Ni 100	-76 to 356°F (-60 to 180°C)	18°F (10°C)
	Ni 500	-76 to 302°F (-60 to 150°C)	18°F (10°C)
	Ni 1000	-76 to 302°F (-60 to 150°C)	18°F (10°C)

- Connection type: 2, 3 or 4 wire configuration.
- Software compensation of cable resistance possible in the 2 wire system (0-20 ohms).
- Sensor cable resistance max. 11 ohms per cable in the 3 and 4 wire system.
- Sensor current: less than or equal to 0.6 mA.

Resistance Transmitter

Designation	Settable Range	Minimum Span
Resistance	10 to 400 ohms	10 ohms
	10 to 2000 ohms	100 ohms

Thermocouples (T/C)

Input	Designation	Measuring Range Limits	Minimum Span
NIST Monograph 175 IEC 584	Type B	32 to 3308°F (0 to 1820°C)	900°F (500°C)
	Type E	-328 to 1679°F (-200 to 915°C)	90°F (50°C)
	Type J	-328 to 2192°F (-200 to 1200°C)	90°F (50°C)
	Type K	-454 to 2501°F (-200 to 1372°C)	90°F (50°C)
	Type N	-454 to 2372°F (-270 to 1300°C)	90°F (50°C)
	Type R	32 to 3214°F (0 to 1768°C)	900°F (500°C)
	Type S	32 to 3214°F (0 to 1768°C)	900°F (500°C)
	Type T	-328 to 752°F (-200 to 400°C)	90°F (50°C)
	ASTM E988	Type C	32 to 4208°F (0 to 2320°C)
Type D		32 to 4523°F (0 to 2495°C)	900°F (500°C)
Type L		-328 to 1652°F (-200 to 900°C)	90°F (50°C)
Type U		-328 to 1112°F (-200 to 600°C)	90°F (50°C)

- Internal cold junction (Pt 100)
- Accuracy of cold junction: +/- 1.8°F (1°C)

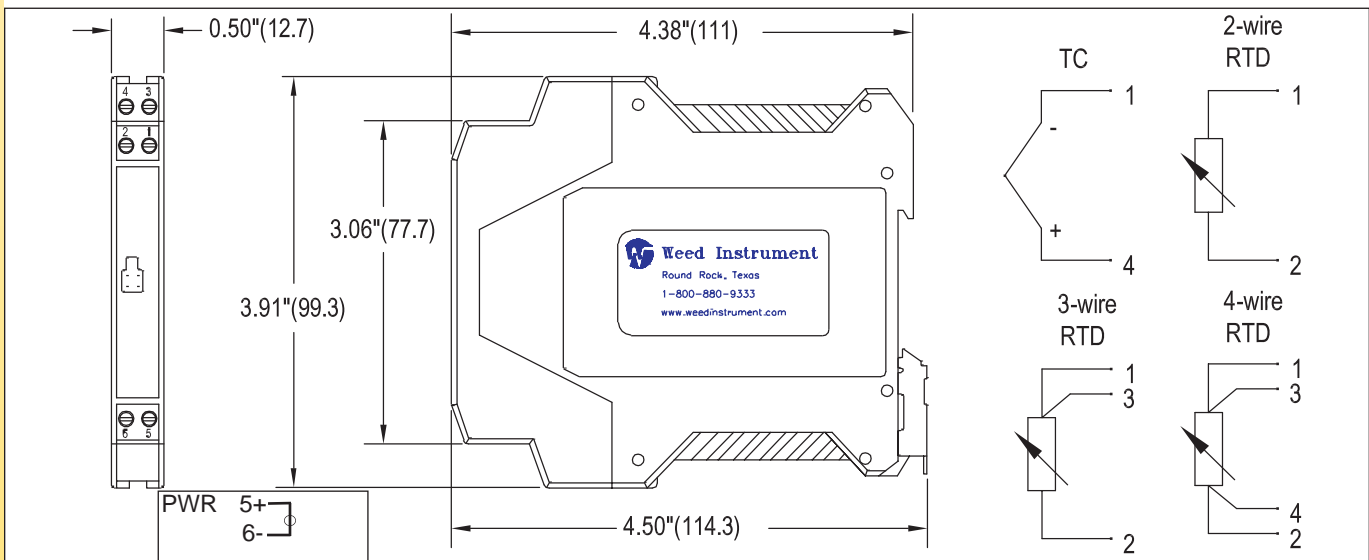
Input	Designation	Measuring Range Limits	Minimum Span
Voltage Transmitter(mV)	Millivolt transmitter (mV)	-10 to 100 mV	5mV

Specifications:

Output	4-20mA or 20-4mA.		
Zero & Span Adjustments	Use WeedComm Software. Can be set anywhere within sensor range under input section. Zero & Span are non interacting.		
Failsafe	Downscale 3.6 mA; Upscale 21.5 mA		
Response Time	1 second		
Damping	User settable from 0 to 8 seconds		
Isolation	3750 VAC, Input to Output		
Power Supply:	8 to 35 VDC		
Load Resistance:	$R_{Max} \text{ (ohms)} = (V_{Supply} - 8V) / .025A$		
Accuracy:	<u>Type</u>	<u>Measurement Accuracy</u>	
RTD	Pt 100, Ni 100	0.36°F (0.2°C) or 0.08% of span	
	Pt 500, Ni 500	0.9° F (0.5°C) or 0.20% of span	
	Pt 1000, Ni 1000	0.54°F (0.3°C) or 0.12% of span	
T/C	K, J, T, E, L, U	Typ. 0.9°F (0.5°C) or 0.08% of span	
	N, C, D	Typ. 1.8°F (1.0°C) or 0.08% of span	
	S, B, R	Typ 3.6°F (2.0°C) or 0.08% of span	
	<u>Measurement Range</u>	<u>Measurement Accuracy</u>	
Resistance Transmitters (ohms)	10 to 400 ohms	+/- 0.1 ohms or 0.08%	
Voltage Transmitters (mV)	10 to 2000 ohms	+/- 0.5 ohms or 0.12%	
	-10 to 75mV	+/- 20 μV or 0.08%	
	Whichever is greater.		
Long-Term Stability	±0.05% of calibrated span per year		
Cold Junction Compensation:	± 1°C (Measured with Pt 100 IEC 751, Class B)		
Temperature Limit	-40°F to 185°F (-40°C to 85°C)		
EMI/RFI Effect	Conforms to European Union Directives (CE Mark). Meets IEC 61326 Amend 1, 1998 and NAMUR NE21.		
Approvals & Standards	Factory Mutual (FM) / Canadian Standards Association (CSA) / ATEX CENELEC - Intrinsically Safe (IS) - Optional - See ordering information.		

Dimensions

Terminal Connections



Model	Description									
7D	DIN Rail Mount Sensor-Mate PC Programmable Temperature Transmitter									
1	Code Sensor Type - RTD									
	Q Pt 100, a = 0.00385055									
	C Pt 1000, a = 0.00385055									
	D Ni 100 (DIN 43760)									
	G Ni 1000 (DIN 43760)									
	P Programmable/Custom Configuration									
	Code Thermocouple Type									
	B Type B									
	E Type E									
	J Type J									
	K Type K									
N Type N										
R Type R										
S Type S										
T Type T										
C Type C										
D Type D										
L Type L										
U Type U										
Code Other										
O Potentiometer/Resistance										
M Millivolt										
2	Code Linearization									
	T With Temperature (RTD/TC)									
I With Input (Resistance/Millivolt)										
3	Code Connection									
	2 2-wires (RTD)									
	3 3-wires (RTD)									
	4 4-wires (RTD)									
	C Cold Junction Compensation (Thermocouple)									
	N No Cold Junction Compensation (Millivolt or Potentiometer)									
4	Code Sensor Break (Burnout)									
	U Upscale									
	D Downscale									
5	Code Temperature Sign - Lower Range (4mA)									
	+ Positive									
	- Negative									
6	Code Temperature Value - Lower Range (4mA)									
	050 Example: 050 = 50°, 250 = 250°									
7	Code Temperature Sign - Upper Range (20mA)									
	+ Positive									
	- Negative									
8	Code Temperature Value - Upper Range (20mA)									
	0300 Example: 0300 = 300°, 1000 = 1000°									
9	Code Temperature Units									
	C Degrees Centigrade									
	F Degrees Farenheit With Input									
10	Code Approvals & Standards									
	N None									
	F FM									
	C CSA									
	A ATEX									
11										
7D	Q	T	3	U	-	050	+	0300	C	N
Sample Part Number										
Your Part Number										

Order "4500/7600 Interface Cable" and "WeedComm" software as separate items.

