

MULTI-POINT TEMPERATURE SCANNERS

TEMPSCAN 15101

The Series TempScan 15101 Scanners are panel mounted instruments suitable for monitoring temperature of RTD or T/C Sensors with 2 Alarms. The alarm functions can be common to all channels or can be assigned to 2 groups of channels with one alarm relay individually assigned to each Group. In either case the Set Points are common to all Channels. Channel assignment for group alarms is to be specified with order.

The instruments are designed with CMOS ICs and incorporate a relay based multiplexer to select a sensor. A signal-conditioner with open-sensor detection and necessary linearisation processes the output of the scanned sensor. A Channel No display, a Temperature Indicator along with Push-buttons and LEDs provide the channel information to the operator. Open-sensor indication is provided by flashing the decimal points of the temperature indicator. Analog comparators activate the relay associated with the alarm group to provide SPDT contact output for annunciation etc. The alarm relays remain activated till the abnormal condition is cleared on all the channels within the group during one complete Scan Cycle.



The Scanners have two modes of operation. In the **Auto Mode** scanning continues at the scan rate selected by the operator, while in **Manual Mode** the channels can be advanced by a push-button.

INPUT SPECIFICATIONS

SENSOR OPTIONS RTDs & T/Cs as per the Sensor Table given below. The Instrument Range Limits must be within the Minimum and Maximum Span Limits given in the Table.

<i>Opt. Code</i>	<i>Sensor Type</i>	<i>Inst Range Limits °C</i>	<i>Opt. Code</i>	<i>Sensor Type</i>	<i>Inst Range Limits °C</i>	<i>Min Span</i>	<i>Max Span</i>
P	Pt 100	-200 to 800	J	Fe/Const	-50 to 700	200	500
			K	Cr/Al	-50 to 1200	200	800
			T	Cu/Const	-100 to 400	200	300
			E	Cr/Const	-100 to 800	200	400

(Min Span for RTD > 100)
(Max Span for RTD as above)

Sensor Standard Selectable. Set to DIN 43760 for RTDs or ISA/ANSI MC 96.1 for T/Cs

Signal Conditioning Specifications
RTDs - Bridge Current 0.5 to 1.5 mA
T/Cs - Input Impedance of > 1 Megohm
 Automatic CJ Compensation of 1 °C accuracy

Accuracy
RTDs - ±0.5% of f.s. ± 1 dgt
T/Cs - ±0.5% of f.s. ± 1 dgt ± 1 °C(CJ Error)

Over Range/ Open Sensor Indicated by flashing Decimal Points of the Indicator

Effect of Leadwire
RTDs - 1°C for 10% of nominal resistance per lead for 3-wire RTDs
T/Cs - 1°C for T/C lead-wire resistance of 100 ohms

<i>No of Channels</i>	<i>Option Codes</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>
No of Channels		6	8	10	12	16	20

OPERATOR INTERFACE

The front panel incorporates Switches and LED indicators for monitoring individual channels.

Channel Number One/Two digit 12mm LED display
Sensor Temp 3 ½ digit 12 mm LED display with a resolution of 1°C
Relay Status Two LED indicators for displaying Relay Status
Push Buttons
A/M When pressed, the scanner is in Manual mode
Advance A push increments channel number in Manual mode

OUTPUT SPECIFICATIONS

Output Options	The following options are available
Option I	Indicator only. No Alarms
Option A	Two Alarms common to all Channels and setpoints common to all Channels
Option B	One Alarms Each assigned to 2 I/P Groups with setpoint common to a Group The Input Groups are to be specified along with the order.
Alarm Type	Can be set to HI/LO
Alarm Settings	Settable throughout the Input Range for each alarm
Acc of Setting	±0.5% of f.s.
Hysteresis	0.5% of f.s.
Relay Operation	User selectable fail-safe or non-fail-safe through pluggable links.
Relay Status	Indicated by the Relay Status LED on front panel
Contact Output	One SPDT contact with rating of 230VAC, 3A, 100 VA maximum

POWER SUPPLY SPECIFICATIONS

POWER SUPPLY OPTIONS

Option A : 230V AC ± 10%, 45 to 55 Hz

Option B : 110V AC ± 10%, 45 to 55 Hz

ENVIRONMENTAL SPECIFICATIONS

Rated Temp	5 to 55 °C
Humidity	90% RH (Non-Condensing)
Zero Drift	< 1°C for every 10°C outside the specified ambient temperature of 22-32°C
Span Drift	Less than 0.005% of rdg / °C
Storage Temp	0 to 70 °C

MECHANICAL SPECIFICATIONS

Enclosure	Welded construction with pullout chassis
Painting	Powder Coated

ENCLOSURE OPTIONS

Option	Enclosure Type	Bezel Size	Cutout Size
H	Vertical	96(W) x 192(H)	92(W) x 186(H)
L	Horizontal	192(W) x 96(H)	186(W) x 92(H)
G	Custom		User Specified

I/O Terminals Suitable for 1.5 Sq mm wires

ACCESSORIES

Standard Mounting Clamps, Screws, Fuse, Instruction Manual, Warranty Certificate

1.2 ORDERING INFORMATION

Ordering Code To Order an instrument of your choice, select a specific Model on the basis of your channel requirement and specify your choice of Power, Encl, etc. in the following format

Model No	Input Code	Channel Code	Output Code	Power Code	Enclosure Code	Channel Groups	Range Value
15100/1	X	X	X	X	X	(K-L)	NNN-MMMM

(**Note:** The letters 'K', 'L' represent numbers specifying channels in each Group)

Example Specify 15101PBBAH(6-2)/0-200 to order TempScan 15101 for 8 PT-100 RTD sensors with two groups of 6 and 2 channels with one alarm per group, a range of 0-200 °C operating on 230V AC, 50Hz and housed in a 96(W) x 192(H) x 200(D) mm Enclosure.