

2 x 4~20 mA out for Tmax and Channel No.

ISOSCAN-H



96(H) x 192(W) x 220(D) mm

ISOSCAN-V



192(H) x 96(W) x 220(D) mm

FLAMEPROOF

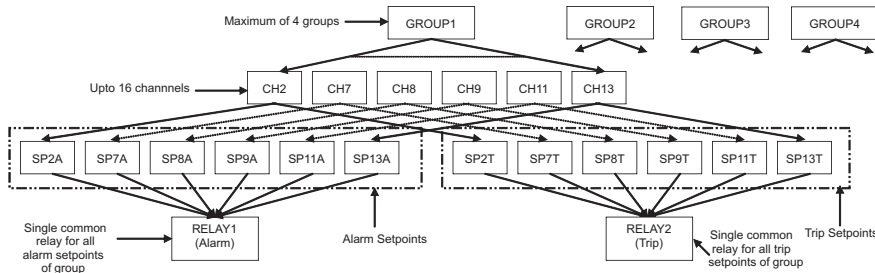


- Upto 16 inputs/8 outputs
- For Temperature, Pressure, Flow, Level, RH, Conductivity, etc.
- Universal Input : 8 Thermocouples, Pt100, mV or mA input front panel selection without DIP for each channel
- Front panel user calibration
- Input burn protection
- Non-volatile memory for parameters - no batteries
- Password protection for program mode
- 3 key, 5 level programming
- Setpoint and level locks
- 4~20 mA output corresponding to maximum temperature or any selected channel, maximum temperature of all channels, or temperature of any selected channel.
- 4~20 mA output corresponding to channel number, complimentary to maximum temperature facility to track the channel no.
- Tactile membrane keypad
- 85~265 V AC SMPS or 24 V DC supply

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GROUPING / INDIVIDUAL ALARMS / COMMON RELAYS VERSION 19.XX

Fig 1



Maximum No.	
Channels	16
Groups	4
Channels in a group	16
Setpoints in a group	32
Setpoints in all	32
Relays	8

Note : Once a channel is selected in one group, you cannot select it in another group.

Example

- No. of channels : 16 • Input type / unit / resolution : See Table 2
- No. of groups : 4 • No. of relays : 8
- Channels / relays / relay logic in each group : See Table 1

TABLE 1

Group No.	Channels Selected	Relay No.	Relay Logic
1	2, 7, 8, 9, 11, 13	1 (alarm) 2 (trip)	Lo Trip Hi
2	3, 14, 16	3 (alarm) 4 (trip)	Hi Trip Lo
3	10, 12	5 (alarm) 6 (trip)	HiHi Trip Hi
4	1, 4, 5, 6, 15	7 (alarm) 8 (trip)	LoLo Trip Lo

TABLE 2

Channel No.	Input type	Unit	Resolution
1	TC B	°C	0.1
2	TC E	°F	1
3	TC J	°K	0.1
4	TC K	°C	0.1
5	TC N	°C	0.1
6	TC R	°C	1
7	TC S	°F	1
8	TC T	°F	0.1
9	Pt100	°F	0.1
10	LIN V (0-50 mV)	BAR	0.01
11	0-20 mA	°F	0.001
12	4-20 mA	BAR	0.1
13	Pt100	°F	1
14	TC N	°K	1
15	TC J	°K	0.1
16	TC K	°K	0.1

CURRENT OUTPUT MODES

There are 6 current output modes :

Mode No.	Mode Name	Current output 1	Current output 2
1	T max	T max	Channel no. of T max
2	T max + Hold	Run mode - T max Hold mode - T of hold channel	Run-mode-channel no. of T max Hold mode-channel no. of hold channel
3	T <sub>A</sub> + A	T of assigned channel A	Assigned channel number A
4	T <sub>A</sub> + T <sub>B</sub>	T of channel A	T of channel B
5	Display Scan Rate	T of displayed channel	Displayed channel no.
6	Output Scan Rate	T	Channel No.

Mode 1 : T Max

Current output1 (I<sub>1</sub>) corresponds to highest temperature (Tmax) from all channels.  
Current output2 (I<sub>2</sub>) corresponds to channel no. of that channel.

Mode 2 : T Max + Hold

- i) Instruments in RUN mode
  - I<sub>1</sub> corresponds to highest temperature (Tmax) from all channels.
  - I<sub>2</sub> corresponds to channel no. of that channel.
- ii) Instruments in HOLD mode
  - I<sub>1</sub> corresponds to temperature (T) of HOLD channel.
  - I<sub>2</sub> corresponds to channel no. of HOLD channel.

Mode 3 : T<sub>A</sub> + A

I<sub>1</sub> corresponds to temperature (T) of any assigned channel A.  
I<sub>2</sub> corresponds to channel no. of channel A.

Mode 4 : T<sub>A</sub> + T<sub>B</sub>

I<sub>1</sub> corresponds to temperature (T<sub>A</sub>) of assigned channel A.  
I<sub>2</sub> corresponds to temperature (T<sub>B</sub>) of assigned channel B.

Mode 5 : Display Scan Rate

I<sub>1</sub> corresponds to temperature (T) of displayed channel.  
I<sub>2</sub> corresponds to channel no. of displayed channel.

Mode 6 : Output Scan Rate

I<sub>1</sub> corresponds to PV<sub>A</sub>.  
I<sub>2</sub> corresponds to Channel No.A  
I<sub>1</sub> & I<sub>2</sub> change simultaneously at the programmed Output Scan Rate (I.out SCANRATE).

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**SPECIFICATIONS**

Specifications & features are subject to change without notice.

<p><b>INPUTS</b></p> <p><b>Maximum no. of channels (X)</b> 16</p> <p><b>Input types</b></p> <p>    <b>Thermocouple</b> B, E, J, K, N, R, S, T</p> <p>    <b>RTD</b> Pt100, 3-wire</p> <p>    <b>Linear input</b> 0~50 mV, 0~20 mA, 4~20 mA (each input independently scaleable and without any DIP reconfiguration)</p> <p><b>Channel scan rate</b> &lt; 1.6 seconds for 16 channels</p> <p><b>Channel-to-channel isolation</b> Suitable for low (leakage) voltages less than 3V AC</p> <p><b>Input protection</b></p> <p>    Thermocouple, mV, ± 10 V DC max</p> <p>    RTD inputs</p> <p>    Current inputs Current limit &lt; 30 mA, 28 V DC max</p> <p><b>Range limits</b> See Table 4</p> <p><b>Accuracy</b> See Table 4</p> <p><b>Cold junction compensation</b> Automatic</p> <p><b>Sensor break protection</b> User programmable</p> <p><b>CONTROL</b></p> <p><b>Control functions (Fig 2)</b></p> <p>    High alarm</p> <p>    Low alarm</p> <p>    Trip Hi</p> <p>    Trip Lo</p> <p>    Trip Hi Hi</p> <p>    Trip Lo Lo</p> <p><b>Control action</b> Direct / reverse</p> <p><b>Hysteresis</b> 0.1 - 99.9 °C / °F / EU</p> <p><b>Compressor ON time delay</b> 1 - 200 sec</p> <p><b>Alarm type</b> Autoreset, Latch, Hold, Latch + Hold</p> <p>    <b>Latch (Ltch)</b> Once relay gets ON, it remains 'ON' until alarm is acknowledged by ▲ key</p> <p>    <b>Hold</b> Alarm is disabled at power ON. After process variable reaches normal (non alarm) value, the alarm is enabled.</p> <p>    <b>Ltch.Hold</b> Combination of Latch &amp; Hold logic.</p> <p><b>OUTPUTS</b></p> <p><b>Maximum no. of outputs (Y)</b> 8</p> <p><b>Output type</b></p> <p>    a) Electromagnetic relay</p> <p>    b) SSR drive</p> <p><b>Relay contact type</b> NO-C</p> <p><b>Relay contact rating</b> 5A / 230V AC, resistive</p> <p><b>ADJUSTMENTS</b></p> <p><b>Setpoint</b> Full range adjustable</p> <p><b>Alarm</b> Full range adjustable</p> <p><b>Unit</b> User programmable</p> <p><b>Resolution</b> User programmable 0.0001, 0.001, 0.01, 0.1 or 1 for linear input, 0.1 or 1 for temperature</p>	<p><b>OTHER MAJOR PARAMETERS</b></p> <p><b>Setpoint lock</b></p> <p><b>Level lock</b></p> <p><b>Display scan rate</b> 1~99 seconds/channel</p> <p><b>SKIP channel</b> Enable/disable</p> <p><b>Display channel</b> Display/hide</p> <p><b>Output scan rate</b> 1~99 seconds/channel</p> <p><b>CALIBRATION</b></p> <p><b>Zero &amp; span</b> Through front panel keys &amp; display</p> <p><b>User calibration</b> Sensor span and sensor zero</p> <p><b>CJC calibration</b> Room temperature</p> <p><b>INDICATION</b></p> <p><b>Display type</b> 0.56" (15 mm), 7 - segment LED and 2x16 character LCD display</p> <p><b>Process variable</b> Upper, 4 ½ digit, LED display</p> <p><b>Setpoint</b> Middle, 4 ½ digit, LED display</p> <p><b>Channel no.</b> Lower, 2 digit, LED display</p> <p><b>Status indication</b> 16 LEDs for alarm, 16 LEDs for relay status &amp; 2x16 LCD</p> <p><b>OTHER</b></p> <p><b>Keypad</b> Membrane, tactile, 3 keys</p> <p><b>Memory for programmed parameters</b> Non-volatile, indefinite duration</p> <p><b>Field Connections</b> Screw type connections in plug-in terminals</p> <p><b>Plug-in Terminal Type</b> a) Standard (Brass nickel plated) b) Gold plated</p> <p><b>Supply voltage</b> a) 85~265 V AC, 50/60 hz b) 24 V DC supply</p> <p><b>Power consumption</b> 5 watts</p> <p><b>Dimensions (in mm)</b></p> <p>    ISOSCAN-H 96(H)x192(W)x220(D)</p> <p>    ISOSCAN-V 192(H)x96(W)x220(D)</p> <p>    FLP ISOSCAN X8Y8 &amp; below : 420(H)x365(W)x165(D) X12Y0 &amp; above : 500(H)x365(W)x165(D)</p> <p><b>Mounting</b></p> <p>    ISOSCAN-H In panel cutout of 90x186 mm</p> <p>    ISOSCAN-V In panel cutout of 186x90 mm</p> <p>    FLP ISOSCAN Surface</p> <p><b>FLP enclosure</b> Certified flameproof for gas groups I, IIA &amp; IIB</p> <p><b>Protection (FLP enclosure)</b> IP55</p> <p><b>Operating ambient temperature</b> 0 - 50 °C</p> <p><b>Relative humidity</b> Below 90%, non condensing</p>
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**TABLE 4**

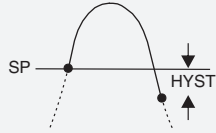
SENSOR / INPUT	RANGE LIMITS (°C / EU)		RANGE IN WHICH ACCURACY IS SPECIFIED		TYPICAL ACCURACY AT 30 °C (°C / EU)	WORST CASE ACCURACY (°C / EU)
	LOW SCALE	HIGH SCALE	LOW SCALE	HIGH SCALE		
Pt - 6% Rh / Pt - 30% RH (B)	400	1820	400	1820	± 3	± 5
Chromel / Constantan (E)	-270	1000	0	1000	± 1	± 3
Iron / Constantan (J)	-210	760	0	760	± 1	± 3
Chromel / Alumel (K)	-270	1372	-50	1200	± 1	± 3
Nicrosil / Nisil (N)	-270	1300	-50	1200	± 1	± 3
Pt / Pt - 13% Rh (R)	0	1760	0	1760	± 2	± 5
Pt / Pt - 10% Rh (S)	0	1760	0	1760	± 2	± 5
Copper / Constantan (T)	-270	400	-200	400	± 1	± 3
Pt100, 3-wire	-200	850	-200	850	± 0.5	± 2.0
Linear (0~50 mV, 0~20 mA, 4~20 mA)	-19999	19999	-19999	19999	± 5 EU	± 20 EU

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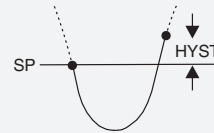
**Fig 2 CONTROL FUNCTIONS**

—— ON      ..... OFF

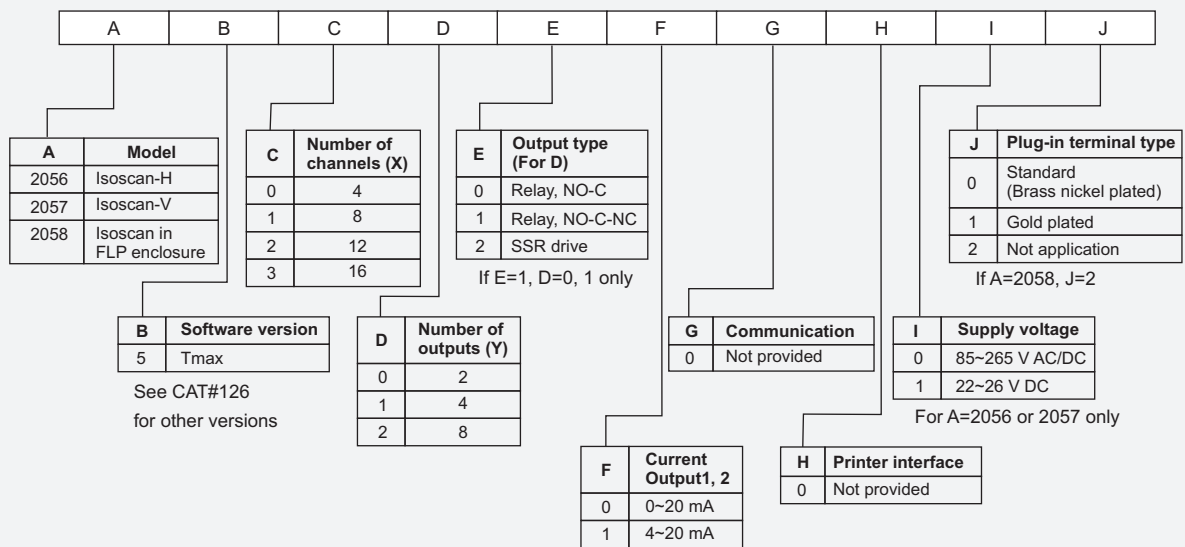
HIGH ALARM / TRIP HI / TRIP HI HI



LOW ALARM / TRIP LO / TRIP LO LO



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