

2132i/2116i

Compact Indicator and Alarm Units



The 2132i/2116i are compact high performance 4 digit units for measurement and display of temperature and other process variables in standard 1/32 and 1/16 DIN panel sizes.

Both models include an alarm relay output and logic output.

The logic output can be used to drive an optional second relay or operate as an alarm acknowledge input.

The universal input of the 2132i/2116i accepts a wide range of two wire temperature sensors and process inputs.

Features

Universal input - covers a wide range of temperature and process inputs

Three alarm setpoints - separate warning and shut-down limits

One or two alarm outputs - alarm alert and shut-down outputs

Front panel configuration - easy, on-site set-up

Wide-range 85-264Vac, or 20-29Vac/dc supply - can be installed world-wide

Plug-in from front - rapid replacement, reducing downtime

IP65 panel sealing - can be used in wet and dusty atmospheres

Ideal for

- temperature indication
- 4-20mA process inputs
- over-temperature protection
- process value trip unit

Specifications

Dimensions:

Model 2132i: 48W x 24H x 103D mm

Model 2116i: 48W x 48H x 103D mm

Display:

Green 4 digit 10mm LED

Supply voltages:

85-264Vac

20-29Vac or dc, 15watts maximum

Operating ambient:

0-55°C, 5-95%RH non-condensing

Inputs:

Nine standard thermocouple types.

Pt100. Linear mV/mA

Sample rate:

5Hz

Relay output rating:

2A, 264Vac resistive

Panel sealing:

IP65, plug-in from front panel

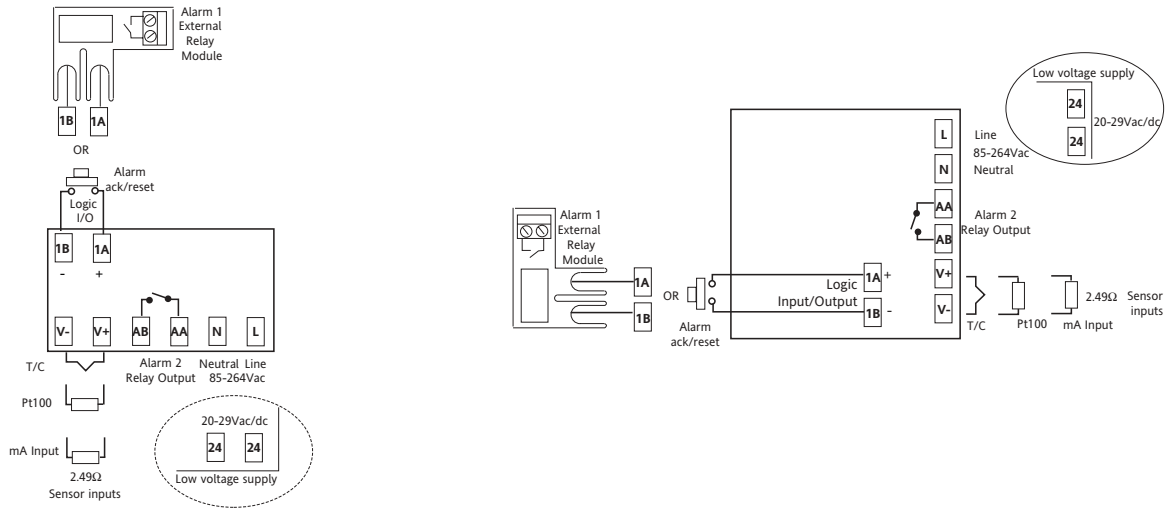
Data sheet:

HA026157

Rear terminal connections

Model 2132i

Model 2116i



Ordering codes

Model Number	Function	Supply Voltage	Manual	Logic Input/Output	Alarm 2 Relay Output	Sensor Input	Setpoint Min	Setpoint Max	Units	Ext. Relay Module	Input Adaptor
	note 1						note 2	note 2			

Model Number	Logic Input/Output	Sensor Input	Setpoint Min	Setpoint Max	Units
2132i 48x24mm unit 2116i 48x48mm unit	XX Disabled (note 1) Logic input AC Alarm ack/reset KL Keylock Non-latched alarm FH High alarm 1 FL Low alarm 1 Latched alarm HA High alarm 1 LA Low alarm 1 NW New alarm	Standard Sensor Inputs J J Thermocouple K K Thermocouple T T Thermocouple L L Thermocouple N N Thermocouple-Nicrosil/Nisil R R Thermocouple-Pt/Pt13%Rh S S Thermocouple-Pt/Pt10%Rh B B Thermocouple-Pt/Pt30%Rh -6%Rh P Platinel II Thermocouple Z RTD/PT100 DIN 43760 Factory Downloaded Input C C Thermocouple - W5%Re/W26%Re (Hoskins) D D Thermocouple - W3%Re/W25%Re E E Thermocouple 1 Ni/Ni18%Mo Thermocouple 2 Pt20%Rh/Pt40%Rh Thermocouple 3 W/W26%Re (Engelhard) Thermocouple 4 W/W26%Re (Hoskins) Thermocouple 5 W5%Re/W26%Re (Engelhard) Thermocouple 6 W5%Re/W26%Re (Bucose) Thermocouple 7 Pt10%Rh/Pt40%Rh Thermocouple 8 Exergen K80 I.R. pyrometer Process Inputs (Scaled to setpoint min and max) M -9.99 to +80mV linear Y 0 to 20mA linear (note 3) A 4 to 20mA linear (note 3) V 0 to 10Vdc linear (Input Adaptor required)	Min °C Max -210 1200 -200 1372 -200 400 -200 900 -200 1300 -50 1768 -50 1768 0 1820 0 1369 -200 850 0 2319 0 2399 -200 1000 0 1399 0 1870 0 2000 0 2010 10 2300 0 2000 200 1800 -45 650 -1999 9999 -1999 9999 -1999 9999 -1999 9999	Units C Celsius F Fahrenheit K Kelvin X Linear input	
	Alarm 2 Relay Output XX Disabled (note 1) Non-latched alarm FH High alarm 2 FL Low alarm 2 AL High alarm 2 & low alarm 3 Latched alarm HA High alarm 2 LA Low alarm 2 AA High alarm 2 & low alarm 3 NW New alarm				Ext. Relay Module XX Not fitted R7 Fitted (Operated by the logic output)
	Function ND Indicator only (Logic I/O and Alarm relay will not be fitted) AL Indicating alarm unit (Logic I/O and alarm output fitted)				Input Adaptor XX Not fitted V1 0-10Vdc A1 0-20mA current sense resistor (2.49Ω 0.1%)
	Supply Voltage VH 85-264Vac VL 20-29V dc or ac				
	Manual XXX No manual ENG English FRA French GER German NED Dutch SPA Spanish SWE Swedish ITA Italian				

Note 1. If 'ND' (Indicator only) is specified in the function field then 'XX' must be entered in the Logic Input output field and the Alarm 2 Relay output.

Note 2. Setpoint min and max: Include the decimal position required in the display value; up to one for temperature inputs, up to two for process inputs.

Note 3. An external 1% current sense resistor is supplied as standard. If greater accuracy is required specify 'A1' in the Input Adaptor field.

Example ordering code

2132i - AL - VH - ENG - AC - HA - K - 0 - 1000 - C - XX

2132i, Indicating alarm unit, 85 to 264Vac, English manual, Remote Acknowledge, Latched High Alarm Relay Output, Type K thermocouple, 0 to 1000°C, no options

2108i

Indicator and Alarm Unit



The 2108i provides accurate 4 digit measurement and display of temperature and other process variables in a standard 1/8 DIN format. Two alarm relay outputs are provided from up to three internal soft alarms. External digital keylock and alarm acknowledge inputs are standard.

The 2108i accepts outputs from all popular temperature, pressure, flow, and level measurement sensors.

Features

Universal input - covers a wide range of temperature and process inputs

Three alarm setpoint - separate warning and shut-down limits

Two alarm relay outputs - for operator alert and plant protection

Wide-range 85-264V ac, supply - can be installed world-wide

Plug-in from front - rapid replacement, reducing downtime

Front panel configuration - easy, on-site set-up

Ideal for

- temperature indication
- 4-20mA process inputs
- over-temperature protection
- process value trip unit

Specifications

Dimensions:

96W x 48H x 103D mm

Display:

Red or green 4 digit 15.9mm LED

Supply voltage:

85-264Vac

Operating ambient:

0-55°C, 5-95%RH non-condensing

Inputs:

Nine standard thermocouple types.

Pt100. Linear mV/mA

Sample rate:

5Hz

Relay output ratings:

2A, 264Vac resistive

Panel sealing:

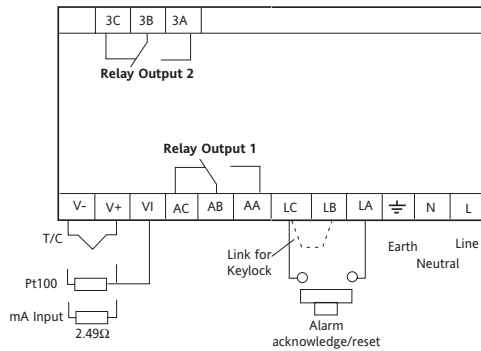
IP65, plug-in from front panel

Data sheet:

HA026159

Rear terminal connections

Model 2108i



Ordering codes

Model Number	Function	Display Colour	Supply Voltage	Relay Output 1	Relay Output 2	Manual	Sensor Input	Setpoint Min	Setpoint Max	Units	Input Adaptor
2108i	AL		VH					note 1	note 1		

Function	Relay Output 2	Sensor Input	Setpoint Min	Setpoint Max	Units
AL Alarm unit Display Colour GN Green display RD Red display Supply Voltage VH 85-264Vac Relay Output 1 RF Unconfigured Non-latched alarm FH High alarm 1 FL Low alarm 1 RA Rate of change alarm 1 Latched alarm HA High alarm 1 LA Low alarm 1 AA High alarm 1 & low alarm 3 RT Rate of change alarm 1 NW New alarm status	RF Unconfigured Non-latched alarm FH High alarm 2 FL Low alarm 2 RA Rate of change alarm 2 Latched alarm HA High alarm 2 LA Low alarm 2 RT Rate of change alarm 2 NW New alarm status	Standard Sensor Inputs J J Thermocouple Min °C Max K K Thermocouple -200 1372 T T Thermocouple -200 400 L L Thermocouple -200 900 N N Thermocouple-Nicrosil/Nisil -200 1300 R R Thermocouple-Pt/Pt13%Rh -50 1768 S S Thermocouple-Pt /Pt10%Rh -50 1768 B B Thermocouple-Pt/Pt30%Rh -6%Rh 0 1820 P Platinel II Thermocouple 0 1369 Z RTD/PT100 DIN 43760 -200 850 Factory Downloaded Input C C Thermocouple - W5%Re/W26%Re (Hoskins) 0 2319 D D Thermocouple - W3%Re/W25%Re 0 2399 E E Thermocouple -250 1000 1 Ni/Ni18%Mo Thermocouple 0 1399 2 Pt20%Rh/Pt40%Rh Thermocouple 0 1870 3 W/W26%Re (Engelhard) Thermocouple 0 2000 4 W/W26%Re (Hoskins) Thermocouple 0 2010 5 W5%Re/W26%Re (Engelhard) Thermocouple 10 2300 6 W5%Re/W26%Re (Bucose) Thermocouple 0 2000 7 Pt10%Rh/Pt40%Rh Thermocouple 200 1800 8 Exergen K80 I.R. pyrometer -45 650 Process Inputs (Scaled to setpoint min and max) M -9.99 to +80mV linear -1999 9999 Y 0 to 20mA linear (note 2) -1999 9999 A 4 to 20mA linear (note 2) -1999 9999 V 0 to 10Vdc linear (Input Adaptor required) -1999 9999			C Celsius F Fahrenheit K Kelvin X Linear input Input Adaptor XX Not fitted V1 0-10Vdc A1 0-20mA current sense resistor (2.49Ω 0.1%)
<p><i>Note 1. Setpoint min and max: Include the decimal points required in the display value; up to one for temperature inputs, up to two for process inputs.</i></p> <p><i>Note 2. A 1% 2.49Ω current sense resistor is supplied as standard. If greater accuracy is required a 0.1% resistor can be specified in the input adaptor field.</i></p>					

Example ordering code

2108i - AL - GN - VH - FH - FL - ENG - K - 0 - 1000 - C - XX

2108i, Indicator, green display, relay 1 high alarm, relay 2 low alarm, English manual, Type K thermocouple, 0 to 1000°C, no options

2408i

Universal Process Indicator and Alarm Unit



Accurate, stable measurement of temperature, pressure, level, flow and other process variables are provided by the 2408i universal indicator. An optional second process value input allows the average, difference, minimum or maximum of two values to be displayed. Large, red or green displays ensure good visibility in high and low ambient lighting.

Temperature linearisation functions for nine thermocouple types and Pt100 resistance thermometers are selectable. Other input linearisations may be factory downloaded.

Strain gauge and pressure sensor inputs can be energised from an internal 5 or 10Vdc supply. An automatic calibration routine is provided to remove zero and span offsets.

For liquid level measurement using pressure sensors, a custom 15-point fit may be applied to the input signal to give an accurate displayed value.

Features

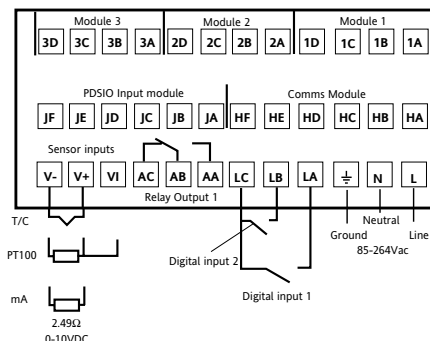
Four alarm setpoints - for plant protection and operating warning

Serial communications - for supervisory monitoring and data acquisition

DC retransmission - fully isolated retransmission to remote control and monitoring equipment

Rear terminal connections

Model 2408i



Ideal for

- temperature indication
- pressure, flow and level
- differential measurement
- weighing platforms and strain gauges
- process protection/monitoring

Specifications

Dimensions:

96W x 48H x 150D mm

Display:

Red or green 5 digit 15.9mm LED

Supply voltages:

85-264V ac

20-29V ac or dc, 15watts maximum

Operating ambient:

0-55°C, 5-95%RH non-condensing

Inputs:

Single or dual;

Nine standard thermocouple types.

Pt100. Strain gauge, Linear mV/mA

Sample rate:

9Hz

Relay output ratings:

2A, 264V resistive

Digital communications:

RS232, 2-wire RS485 and 4-wire RS422

Modbus®, Eurotherm ASCII,

DeviceNet and PROFIBUS

Panel sealing:

IP65, plug-in from front

Data sheet:

HA026172

