

1/16 - 1/8 DIN INDICATOR CONCISE PRODUCT MANUAL (59344-6)

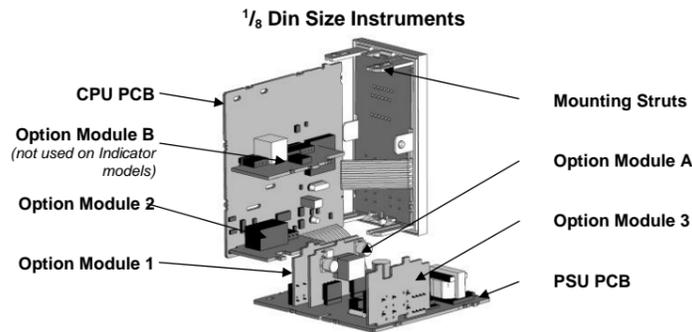
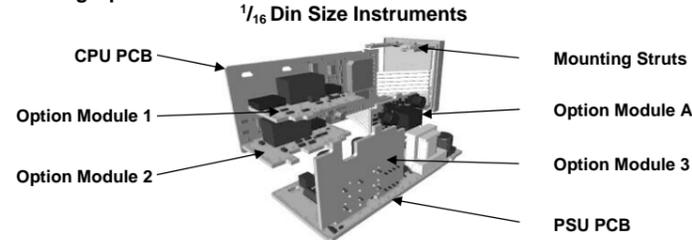
CAUTION: Installation should be only performed by technically competent personnel. Local Regulations regarding electrical installation & safety must be observed.

1. INSTALLATION

The two indicators covered by this manual have different DIN case sizes (refer to section 9). Some installation details vary between these models. These differences have been clearly shown.

Note: The functions described in sections 2 to 8 are common to both models.

Installing Option Modules

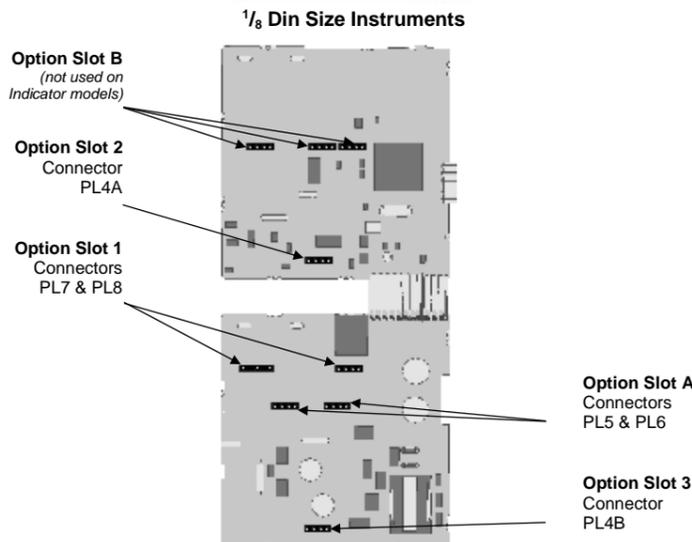
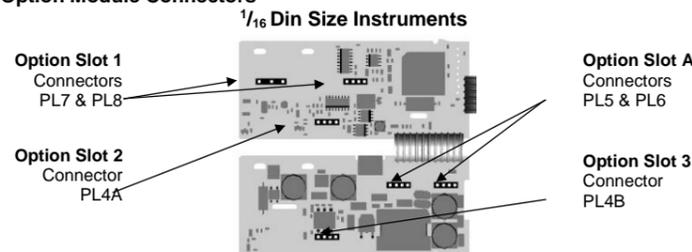


To access modules 1 or A, first detach the PSU and CPU boards from the front by lifting first the upper, and then lower mounting struts. Gently separate the boards.

- Plug the required option modules into the correct connectors, as shown below.
- Locate the module tongues in the corresponding slot on the opposite board.
- Hold the main boards together while relocating back on the mounting struts.
- Replace the instrument by aligning the CPU and PSU boards with their guides in the housing, then slowly push the instrument back into position.

Note: Option modules are automatically detected at power up.

Option Module Connectors

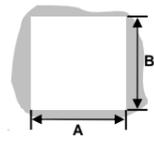


Panel-Mounting

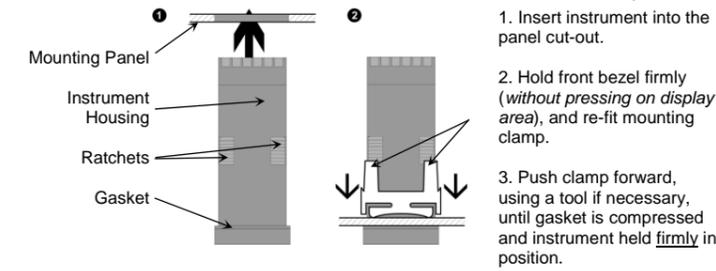
The mounting panel must be rigid, and may be up to 6.0mm (0.25inch) thick. Cut-out sizes are:

Cut-Out Dim A 1/16 Din = 45mm, 1/8 Din = 92mm
Cut-Out Dim B 1/16 & 1/8 Din = 45mm

For *n* multiple instruments mounted side-by-side, cut-out A is 48*n*-4mm (1/16 Din) or 96*n*-4mm (1/8 Din)



Tolerance +0.5, -0.0mm

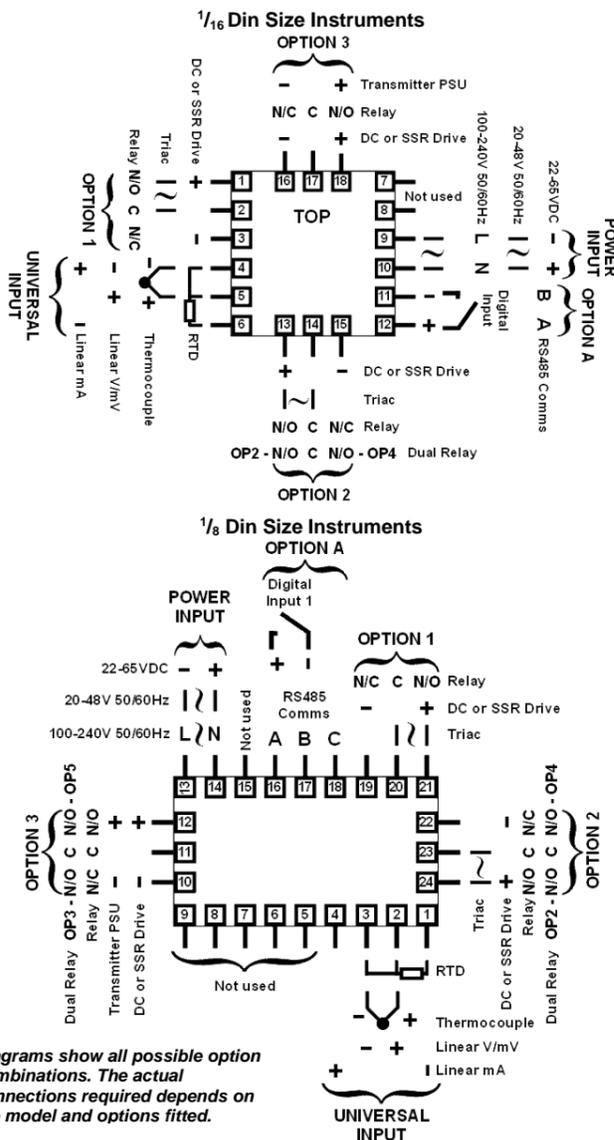


CAUTION: For an effective IP66 & NEMA 4X seal against dust and moisture, ensure gasket is well compressed against the panel, with the 4 tongues located in the same ratchet slot.

Rear Terminal Wiring

USE COPPER CONDUCTORS (EXCEPT FOR T/C INPUT). CABLE RATING 80°C MIN

Single Strand wire gauge: Max 1.2mm (18SWG)



Diagrams show all possible option combinations. The actual connections required depends on the model and options fitted.

CAUTION: Check information label on housing for correct operating voltage before connecting supply to Power Input
Fuse: 100 – 240Vac – 1amp anti-surge or 24/48Vac/dc – 315mA anti-surge

Supplementary Installation Information

- Designed to offer a minimum of Basic Insulation only & compliance shall not be impaired when fitted to the final installation. Ensure that supplementary insulation suitable for Installation Category II is achieved when fully installed.

- To avoid possible hazards, accessible conductive parts of the final installation should be protected by earthing in accordance with Class 1 Equipment. Output wiring should be within a Protectively Earthed cabinet & sensor sheaths should be bonded to protective earth or not be accessible.

- Live parts should not be accessible without the use of a tool.

- A disconnecting device should disconnect both LINE & NEUTRAL conductors simultaneously. The disconnecting device must be easily accessible.

2. SELECT MODE – SLct

Note: At first power-up **Go to Conf** is displayed, see section 5 of this manual.

Access to other menus is denied until configuration mode is complete.

Select mode is used to access the configuration and operation menu functions.

It can be accessed at any time by holding down **Go** and pressing **SLct**. The **SLct** legend is shown for 1 second, followed by the legend for the current mode.

Press **Up** or **Down** to choose the required mode, then press **Go** to enter.

An unlock code is required to prevent unauthorised entry to Configuration, & Setup modes.

Press **Up** or **Down** to enter the unlock code, then press **Go** to proceed.

Mode	Legend for 1 sec followed by	Set Value	Description	Default Unlock Codes	Units Display (1/8 Din Only)
Operator	SLct	OPtr	Normal operation	None	5
Set Up	SLct	SEtP	Tailor settings for application	10	
Configuration	SLct	ConF	Configure instrument for use	20	
Product Info	SLct	InfO	Instrument information	None	

Note: Automatic return to Operator Mode after 2 minutes without key activity.

3. CONFIGURATION MODE – ConF

First select Configuration mode from Select mode (refer to section 2).

Press **Go** to scroll through the parameters. While this key is pressed, and up to 1 second after, the parameter legend is shown, followed by the current value.

Press **Up** or **Down** to set the required value. Press **Go** to display **YES?**, press **Up** to accept the change, otherwise parameter will revert to previous value. To exit from Configuration mode, hold down **Go** and press **SLct** to return to Select mode.

Note: Parameters seen modal and configuration settings. Refer to user guide (available from your supplier) for details. Parameters marked * repeat in Setup Mode.

Parameter	Legend for 1 sec followed by	Set Value	Adjustment Range & Description	Default Value	Units Display (1/8 Din Only)	
Input Range/Type	inPt		See following table for possible codes	JC	r	
Code		Input Type & Range	Code	Input Type & Range	Code	Input Type & Range
bC		B: 100 - 1824 °C	L: 0.0 - 537.7 °C	P24F		PtRh20% vs 40%: 32 - 3362 °F
bF		B: 211 - 3315 °F	L: 32.0 - 999.9 °F			
cC		C: 0 - 2320 °C	N: 0 - 1399 °C	PtC		Pt100: -199 - 800 °C
cF		C: 32 - 4208 °F	N: 32 - 2551 °F	PtF		Pt100: -328 - 1472 °F
JC		J: -200 - 1200 °C	R: 0 - 1759 °C	PtC		Pt100: -128.8 - 537.7 °C
JF		J: -328 - 2192 °F	R: 32 - 3198 °F	PtF		Pt100: -199.9 - 999.9 °F
J.C		J: -128.8 - 537.7 °C	S: 0 - 1762 °C	0.20		0 - 20 mA DC
J.F		J: -199.9 - 999.9 °F	S: 32 - 3204 °F	4.20		4 - 20 mA DC
H.C		K: -240 - 1373 °C	T: -240 - 400 °C	0.50		0 - 50 mV DC
H.F		K: -400 - 2503 °F	T: -400 - 752 °F	10.50		10 - 50 mV DC
H.C		K: -128.8 - 537.7 °C	T: -128.8 - 400.0 °C	0.5		0 - 5 V DC
H.F		K: -199.9 - 999.9 °F	T: -199.9 - 752.0 °F	1.5		1 - 5 V DC
LC		L: 0 - 762 °C	PtRh20% vs. 40%: 0 - 1850 °C	0.10		0 - 10 V DC
LF		L: 32 - 1403 °F		2.10		2 - 10 V DC

Note: Decimal point shown in table indicates temperature resolution of 0.1°

Parameter	Legend for 1 sec followed by	Set Value	Adjustment Range & Description	Default Value	Units Display (1/8 Din Only)
Scale Range Upper Limit	rUL		Scale Range Lower Limit +100 to Range Maximum	Max (Lin = 1000)	u
Scale Range Lower Limit	rLL		Range Minimum to Scale Range Upper Limit -100	Min (Lin = 0)	L
Decimal point position	dPo5		0=XXXX, 1=XXX.X, (non-temperature ranges only) 2=xx.xx, 3=x.xxx		P
Linear Range Engineering Units Display	L inU		None (Blank), °C or °F 1/8 Din units only where linear inputs represent temperature	nonE	°C °F
Multi-Point Scaling	rMP5		EnAb d, sR	EnAb d, sR	S
Alarm 1Type	ALA 1		P_H i P_Lo	P_H i nonE	i
High Alarm 1*	PhR 1		Alarm 1 value, adjustable within scaled range, in display units	Max	1 (Alm1 only)
Low Alarm 1*	PLA 1			Min	= R
Alarm 1 Hysteresis*	AHY 1		1 LSD to full span in display units on safe side of alarm	1	-
Alarm 2Type	ALA 2			nonE	2
High Alarm 2*	PhR 2		Options as for alarm 1	Max	2
Low Alarm 2*	PLA 2			Min	

Parameter	Legend for 1 sec followed by	Set Value	Adjustment Range & Description	Default Value	Units Display (1/8 Din Only)
Al 2 Hysteresis*	AHY 2			1	=
Alarm 3Type	ALA 3			nonE	3
High Alarm 3*	PhR 3		Options as for alarm 1	Max	3
Low Alarm 3*	PLA 3			Min	
Al 3 Hysteresis*	AHY 3			1	=
Alarm 4Type	ALA 4		Options as for alarm 1	nonE	4
High Alarm 4*	PhR 4			Max	4
Low Alarm 4*	PLA 4		Options as for alarm 1	Min	
Al 4 Hysteresis*	AHY 4			1	4
Alarm 5 Type	ALA 5			nonE	5
High Alarm 5*	PhR 5		Options as for alarm 1	Max	5
Low Alarm 5*	PLA 5			Min	5
Al 5 Hysteresis*	AHY 5			1	5
Output 1 Usage	USE 1		A Ind Alarm 1, direct, non-latching A Inr Alarm 1, reverse, non-latching A ILd Alarm 1, direct, latching A ILr Alarm 1, reverse, latching A2nd Alarm 2, direct, non-latching A2nr Alarm 2, reverse, non-latching A2Ld Alarm 2, direct, latching A2Lr Alarm 2, reverse, latching A3nd Alarm 3, direct, non-latching A3nr Alarm 3, reverse, non-latching A3Ld Alarm 3, direct, latching A3Lr Alarm 3, reverse, latching A4nd Alarm 4, direct, non-latching A4nr Alarm 4, reverse, non-latching A4Ld Alarm 4, direct, latching A4Lr Alarm 4, reverse, latching A5nd Alarm 5, direct, non-latching A5nr Alarm 5, reverse, non-latching A5Ld Alarm 5, direct, latching A5Lr Alarm 5, reverse, latching		rEtP for linear outputs, A Ind for others
Output 1 PV Retransmit Type	tYP 1		0 10 0 to 10 V DC output 2 10 2 to 10 V DC output 0 20 0 to 20 mA DC output 4 20 4 to 20 mA DC output		0 10
Retransmit OP 1 Scale maximum	ro 1H		Display value between, -1999 & 9999 at which Output 1 will be at maximum		Range max H
Retransmit OP 1 Scale minimum	ro 1L		Display value between, -1999 & 9999 at which output 1 will be at minimum		Range min L
TxPSU 1 level	PSU 1		Output 1 Power Supply (0 to 10VDC)*	10.0	1
Output 2 Usage	USE 2		As for Output 1 Usage	A2nd	2
Output 2 PV Retransmit Type	tYP 2		As for Output 1 PV Retransmit Type		2
Retransmit OP2 Scale maximum	ro 2H		As for Retransmit Output 1 Scale Maximum		H
Retransmit OP2 Scale Minimum	ro 2L		As for Retransmit Output 1 Scale Minimum		L
TxPSU 2 level	PSU 2		Output 2 Power Supply (0 to 10VDC)*	10.0	2
Output 3 Usage	USE 3		As for Output 1 Usage	A3nd	3
Output 3 PV Retransmit Type	tYP 3		As for Output 1 PV Retransmit Type		3
Retransmit OP3 Scale maximum	ro 3H		As for Retransmit Output 1 Scale Maximum		H
Retransmit OP3 Scale minimum	ro 3L		As for Retransmit Output 1 Scale Minimum		L
TxPSU 3 level	PSU 3		Output 3 Power Supply (0 to 10VDC)*	10.0	3
Output 4 Usage	USE 4		Alarm output options as for Output 1 Usage	A4nd	4
Output 5 Usage	USE 5			A5nd	5
Display Strategy	d, sP		0, 1, 2, 3, 4 or 6 (refer to section 6)	0	d
Display Colour	CLor		rEd Permanent Red Grn Permanent Green r-G Red to Green on any alarm G-r Green to Red on any alarm		G-r c

Serial Communication Protocol	Prot	ASC I	ASCII	r7bn	P
		r7bn	Modbus with no parity		
		r7bE	Modbus with Even Parity		
		r7bo	Modbus with Odd Parity		
Comms Bit Rate	bAud	1.2, 2.4, 4.8, 9.6 or 19.2 kbps	4.8	b	
Comms Address	Addr	1 to 255 (Modbus), 1 to 99 (ASCII)	1	A	
Comms Write	CoEn	rLW	Read/Write	rLW	E
		rL0	Read only		
Digital Input Usage	d i	rrLY	Reset latched relay(s)	rrLY	I
		EA-E	Initiate Tare (zero display)		
		rPu	Reset min/max PV values		
		rE	Reset Alarm 1 elapsed time		
		rPuE	Reset Alarm 1 elapsed time & min/max PV values		
Config Lock	CLoc	Config Mode lock code, 0 to 9999	20	C	

4. SETUP MODE - SEtP

Note: Configuration must be completed before adjusting Setup parameters. First select Setup mode from Select mode (refer to section 2). Press **↵** to scroll through the parameters (while this key is pressed, and for 1 sec after, the parameter legend is shown, then the current value). Press **▲** or **▼** to change the value.

To exit from Setup mode, hold down **↵** and press **▲** to return to Select mode. **Note: Parameters displayed depends on how instrument has been configured.**

Parameter	Legend for 1 sec followed by	Set Value	Adjustment Range & Description	Default Value	Units Display (1/4 Din Only)
Input Filter Time Constant	FILt	OFF or 0.5 to 100.0 secs		2.0	t
Process Variable Offset	OFFS	±Span of controller		0.0	o
Raw PV value	SIG	Linear input value, un-scaled (mA, mV or VDC)			blank
High Alarm 1	PhA1	Alarm 1 value, adjustable within scaled range, in display units		Max	I (Alm1 only = R)
Low Alarm 1	PLA1			Min	
Alarm 1 Hysteresis	AHY1	1 LSD to full span in display units on safe side of alarm		1	-
High Alarm 2	PhA2	Options as for alarm 1		Max	2
Low Alarm 2	PLA2		Min		
AI 2 Hysteresis	AHY2			1	=
High Alarm 3	PhA3	Options as for alarm 1		Max	3
Low Alarm 3	PLA3		Min		
AI 3 Hysteresis	AHY3			1	=
High Alarm 4	PhA4	Options as for alarm 1		Max	4
Low Alarm 4	PLA4		Min		
AI 4 Hysteresis	AHY4			1	4
High Alarm 5	PhA5	Options as for alarm 1		Max	5
Low Alarm 5	PLA5		Min		
AI 5 Hysteresis	AHY5			1	5
Scaling Breakpoint 1	ScA1	Multi-point scaling breakpoint 1 value, adjustable from 0 to 100 in % of span		100	1
Display Value 1	d.S1	Value to be displayed at multi-point scaling breakpoint 1, in display units		Range Max	
Scaling Breakpoint 2	ScA2	Multi-point scaling breakpoint 2, adjustable up to 100% of span. Must be >ScA1 value			2
Display Value 2	d.S2	Value to be displayed at Multi-point scaling breakpoint 2, in display units			
Scaling Breakpoint 3	ScA3	Multi-point scaling breakpoint 3, adjustable up to 100% of span. Must be >ScA2 value			3
Display Value 3	d.S3	Value to be displayed at Multi-point scaling breakpoint 3, in display units			
Scaling Breakpoint 4	ScA4	Multi-point scaling breakpoint 4, adjustable up to 100% of span. Must be >ScA3 value			4
Display Value 4	d.S4	Value to be displayed at Multi-point scaling breakpoint 4, in display units			
Scaling Breakpoint 5	ScA5	Multi-point scaling breakpoint 5, adjustable up to 100% of span. Must be >ScA4 value			5
Display Value 5	d.S5	Value to be displayed at Multi-point scaling breakpoint 5, in display units			
Scaling Breakpoint 6	ScA6	Multi-point scaling breakpoint 6, adjustable up to 100% of span. Must be >ScA5 value			6
Display Value 6	d.S6	Value to be displayed at Multi-point scaling breakpoint 6, in display units			
Scaling Breakpoint 7	ScA7	Multi-point scaling breakpoint 7, adjustable up to 100% of span. Must be >ScA6 value			7
Display Value 7	d.S7	Value to be displayed at Multi-point scaling breakpoint 7, in display units			
Scaling Breakpoint 8	ScA8	Multi-point scaling breakpoint 8, adjustable up to 100% of span. Must be >ScA7 value			8
Display Value 8	d.S8	Value to be displayed at Multi-point scaling breakpoint 8, in display units			
Scaling Breakpoint 9	ScA9	Multi-point scaling breakpoint 9, adjustable up to 100% of span. Must be >ScA8 value			9
Display Value 9	d.S9	Value to be displayed at Multi-point scaling breakpoint 9, in display units			

Parameter	Legend for 1 sec followed by	Set Value	Adjustment Range & Description	Default Value	Units Display (1/4 Din Only)
Display Value 9	d.S9		Value to be displayed at Multi-point scaling breakpoint 9, in display units		
Tare Feature	EA-E	EAAb d.SA	Enables or disables the input auto-zero Tare feature	d.SA	r
Setup Lock Code	SLoc		0 to 9999	10	5

5. MESSAGES & ERROR INDICATIONS

These messages indicate that the instrument may require attention, or there is a problem with the signal input connection. The message legend is shown for 1 second, followed by its value. **Caution: Do not continue with the process until the issue is resolved.**

Parameter	Legend for 1 sec followed by	Value	Description	Units Display (1/4 Din Only)
Instrument parameters are in default conditions	GoTo	CONF	Configuration & Setup is required. This screen is seen at first turn on, or if hardware configuration is changed. Press ↵ to enter Configuration Mode, next press ▲ or ▼ to enter the unlock code, then press ↵ to proceed	C
Input Over Range	Err	CHH	Input signal is > 5% over-range	E
Input Under Range		LLL	Input signal is > 5% under-range (> 10% under-range for 4 to 20mA, 1 to 5V and 2 to 10V ranges)	
Input Sensor Break		OPEN	Break detected in input signal sensor or wiring	
Option 1 Error	Err1		Option 1 module fault	1
Option 2 Error	Err2		Option 2 module fault	2
Option 3 Error	Err3		Option 3 module fault	3
Option A Error	ErrA		Option A module fault	A
Option B Error	Errb		Shown if any module is fitted (option B not used on Indicators)	b

6. OPERATOR MODE - OPtR

This mode is entered at power on, or accessed from Select mode (see section 2). **Note: All Configuration mode and Setup mode parameters must be set as required before starting normal operations.** Press **↵** to scroll through the parameters (while this key is pressed, and for 1 sec after, the parameter legend is shown, followed by the current value).

Note: All Operator Mode parameters in Display strategy 6 are read only (see d.SP in configuration mode), they can only be adjusted via Setup mode.

Legend for 1 sec followed by	Value	Display Strategy and When Visible	Description	Units Display (1/4 Din Only)
Proc	PV Value*	Always	Process Variable value Read only Latched outputs can be reset	°C, °F or blank
r7A	Max PV Value	Strategies 0, 1, 3, 4, & 6	Maximum displayed value (inc CHH) or OPEN since r7A last reset. To reset, press ▼ or ▲ for 3 seconds, display = ---- when reset	°C, °F or blank
r7m	Min PV Value	Strategies 0, 1, 3, 4, & 6	Minimum displayed value (inc LLL) or OPEN since r7m last reset. To reset, press ▼ or ▲ for 3 seconds, display = ---- when reset	°C, °F or blank
Et	Elapsed Time	Strategies 0, 4 & 6 if alarm 1 configured. Format mm.ss to 99.59 then mmm.s (10 sec increments) Shows CHH if >999.9	Accumulated alarm 1 active time since Et last reset. To reset, press ▼ or ▲ for 3 seconds, display = ---- when reset	E
AL1	Alarm 1 Value	Strategies 2, 3, 4 & 6 if alarm 1 configured	Alarm 1 value, adjustable except in Strategy 6	I (Alm1 only = R)
AL2	Alarm 2 Value	Same options as AL1	Same options as AL1	2
AL3	Alarm 3 Value	Same options as AL1	Same options as AL1	3
AL4	Alarm 4 Value	Same options as AL1	Same options as AL1	4
AL5	Alarm 5 Value	Same options as AL1	Same options as AL1	5
ALSt	Active Alarm Status*	When one or more alarms are active	<ul style="list-style-type: none"> — Alarm 4 active — Alarm 2 active — Alarm 3 active — Alarm 5 active 	I if alarm 1 active

Alarm Indication

The Active Alarm Status screen indicates any active alarms. In addition, the associated Alarm LED flashes. For latching alarm outputs, the LED flashes when the alarm condition exists, and goes to ON when the alarm condition is no longer present if the output has not yet been reset.

*Resetting Latched Alarm Outputs

Any latched outputs can be reset whilst the Process variable or Alarm Status screens are displayed, by pressing the **▼** or **▲** key, via the Digital Input (if fitted) or with a communications command via the RS485 module (if fitted).

Note: Outputs will only reset if their alarm condition is no longer present.

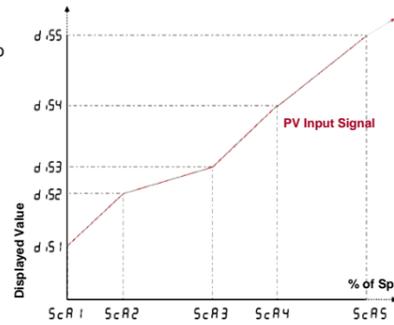
Caution: A reset will affect ALL latched outputs.

Additional 1/4 Din Indicator Units Display and LED's

In Operator Mode, a Units display shows °C or °F when temperature values are shown. This display is also used in other modes as a confirmation of the parameter type currently shown in the main display. The SET LED indicator is off in Operator Mode, Flashing in Configuration Mode and ON in Set-up mode. MIN **▼** and MAX **▲** LED's light when these stored values are shown.

Multi-Point Scaling

When enabled (r7PS = EAAb), up to 9 breakpoints can be set to compensate for non-linear input signals. For each breakpoint, the input scale value (ScAn) is entered in % of input span, followed by the value to be shown (d.Sn) in display units. Each breakpoint's input scale value must be higher than the previous value, but the display values can be higher or lower. Any scale value set to 100% becomes the last in the series.



Tare Feature

When Tare is enabled (EA-E = EAAb), it can be used to set the displayed value to zero automatically, by making the PV Offset parameter equal, but opposite to, the current process variable value. Tare can be initiated via the Digital Input (if fitted), with a communications command via the RS485 module (if fitted) or by using the following key press sequence: **Tare request is abort if the sequence is not followed exactly.**

Press **↵** until the process variable is displayed.

Hold down **▼** and **▲** together for three seconds until the display shows YES? Release both keys and press **▲** within 3 seconds to confirm the request.

The display should read 0 briefly, then begin responding to input signal changes.

7. PRODUCT INFORMATION MODE - rF0

First select Product information mode from Select mode (refer to section 2). Press **↵** to view each parameter (while this key is pressed, and for 1 sec after, the parameter legend is shown, followed by its value). Hold down **↵** and press **▲** to return to Select mode. **Note: These parameters are all read only.**

Parameter	Legend for 1 sec followed by	Value	Description	Units Display (1/4 Din Only)
Input type	In1	Un1	Universal input	t
Option 1 module type fitted	OPn1	nonE	No option fitted	1
		rLY	Relay output	
		SSr	SSR drive output	
Option 2 module type fitted	OPn2	tr1	Triac output	2
		LIn	Linear DC voltage / current output	
		SSr	SSR drive output	
Option 3 module type fitted	OPn3	tr1	Triac output	3
		LIn	Linear DC voltage / current output	
		SSr	SSR drive output	
Auxiliary Option A module type fitted	OPnA	nonE	No option fitted	A
		r4B5	RS485 communications	
		d.i0	Digital Input	
		dc24	24V DC Transmitter power supply	
Firmware type	FLW		Value displayed is firmware type number	F
Firmware issue	ISS		Value displayed is firmware issue number	n
Product Rev Level	PrL		Value displayed is Product Revision Level	r
Manufactured Date	d00n		Month & year of manufacture. Format mmyy	d
Serial number 1	Sn1		First four digits of serial number	A
Serial number 2	Sn2		Middle four digits of serial number	b
Serial number 3	Sn3		Last four digits of serial number	c

8. SERIAL COMMUNICATIONS

Refer to the full user guide (available from your supplier) for details.

9. SPECIFICATIONS

UNIVERSAL INPUT

Thermocouple Calibration: ±0.1% of full range, ±1LSD (±1°C for Thermocouple CJC).
BS4937, NBS125 & IEC584.

PT100 Calibration: ±0.1% of full range, ±1LSD.
BS1904 & DIN43760 (0.00385Ω/Ω/°C).

DC Calibration: ±0.1% of full range, ±1LSD.

Sampling Rate: 4 per second.

Impedance: >10MΩ resistive, except DC mA (5Ω) and V (47kΩ).

Sensor Break Detection: Thermocouple, RTD, 4 to 20 mA, 2 to 10V and 1 to 5V ranges only. High alarms activate for thermocouple/RTD sensor break, low alarms activate for mA/V DC sensor break.

Isolation: Isolated from all outputs (except SSR driver).

Universal input must not be connected to operator accessible circuits if single relay outputs are connected to a hazardous voltage source. Supplementary insulation or input grounding would then be required.

DIGITAL INPUT

Voltage Input: Reset or Tare occurs on high (2 to 24VDC) to low <0.8VDC, or Volt-free Contacts: Open to Closed transition.

Isolation: Reinforced safety isolation from inputs and other outputs.

OUTPUTS

Relay

Contact Type & Rating: Single pole double throw (SPDT), latching or non-latching action (selectable); 2A resistive at 120/240VAC.

Lifetime: >500,000 operations at rated voltage/current.

Isolation: Basic isolation from universal input and SSR outputs.

Dual Relay

Contact Type & Rating: Single pole single throw (SPST), latching or non-latching action (selectable); 2A resistive at 120/240VAC.

Lifetime: >200,000 operations at rated voltage/current.

Isolation: Reinforced safety isolation from inputs and other outputs.

SSR Driver

Drive Capability: SSR drive voltage >10V into 500Ω min.

Isolation: Not isolated from universal input or other SSR driver outputs.

Triac

Operating Voltage: 20 to 280Vrms (47 to 63Hz).

Current Rating: 0.01 to 1A (full cycle rms on-state @ 25°C); derates linearly above 40°C to 0.5A @ 80°C.

Isolation: Reinforced safety isolation from inputs and other outputs.

Linear DC

Accuracy: ±0.25% (mA @ 250Ω, V @ 2kΩ). Degrades linearly to ±0.5% for increasing burden (to specification limits).

Resolution: 8 bits in 250ms (10 bits in 1s typical, >10 bits in >1s typical).

Isolation: Reinforced safety isolation from inputs and other outputs.

Transmitter PSU

Power Rating: 24V Tx PSU Module; Unregulated 20 to 28V DC into 910Ω min

Linear output Module; Regulated 0.0 to 10.0V into 500Ω min.

Isolation: Reinforced safety isolation from inputs and other outputs.

SERIAL COMMUNICATIONS (RS485)

Physical: 1200, 2400, 4800, 9600 or 19200 bps.

Protocols: Modbus & West ASCII.

Isolation: Reinforced safety isolation from all inputs and outputs.

You cannot connect both configuration port & RS485 port at the same time.

OPERATING CONDITIONS (FOR INDOOR USE)

Ambient Temp.: 0°C to 55°C (Operating), -20°C to 80°C (Storage).

Relative Humidity: 20% to 95% non-condensing.

Altitude: <2000m

Supply Voltage and Power: 100 to 240VAC ±10%, 50/60Hz, 7.5VA

(for mains powered versions), or 20 to 48VAC 50/60Hz 7.5VA or 22 to 65VDC 5W

(for low voltage versions).

ENVIRONMENTAL

Standards: CE, UL & cUL

EMI: Complies with EN61326-1:2013.

Safety Considerations: EN61010 version 2010, UL61010-1 Edition 3 & CSA 22.2 No 1010.192. Pollution Degree 2, Installation Category II.

Front Panel Sealing: To IP66 & NEMA 4X when correctly mounted – refer to section 1.

PHYSICAL

Front Bezel Size: 1/16 Din = 48 x 48mm, 1/8 Din = 96 x 48mm

Depth Behind Panel: 1/16 Din = 110mm, 1/8 Din = 100mm.

Weight: 0.21kg maximum.