



The Model 4015 4 digit (-1999 to 9999) LED Dual Channel Process Indicator can be applied to many applications which require a dual input and a single display eg. Temperature and humidity monitoring. Each channel is individually setup for zero, span, input type and more. The unit boasts a number of useful mathematical functions such as addition, subtraction, multiplication and division. The display as well as alarms, analogue out, peak hold can be selected using channel A, Channel B and the above mentioned mathematical functions.

Options include linearisation, analog output and set-points up to a total of four. Excitation is standard and is link selectable for 2-wire / 3-wire transmitters and a potentiometer input.

Selected options now feature 'Plug & Play' technology, allowing option boards to be ordered separately & field fitted when required.

FEATURES

- 1/8 DIN enclosure (45 x 92 cut-out), UL 94 V-0 flame retardant, 147mm depth
- Front panel IP 65 / NEMA 4 / UL Type 4 rating, bezel 48 x 96 mm
- -1999 to 9999 display counts, 14.2mm bright red LED display
- Dual channel process inputs of 0-20mA, 4-20mA and Volt input
- Dual 24VDC supply for 2 / 3 wire transmitters
- Low cost - high performance design
- Built in mathematical features such as adding (summing) / subtracting (differential), multiplication and division of both inputs
- Keypad lockout available at no extra charge
- Meets European EMC directive 89/336/EEC & Low Voltage directive 73/23/EEC
- 3 year guarantee

OPTIONS

3000	Lineariser (square root / sphere / & more)	3010	95-265V AC/DC isolated SMPS
3001-P	2 set points (solid-state relays)	3012	Peak / valley hold
3001-M	2 set points (electro-mechanical relays)	3013	RS 232 serial interface
3002	RS 485 serial interface	3014	Auto zero (with remote zero)
3003	0 - 20mA / 4 - 20 mA analogue output	3017-P	3 set points (solid-state relays)
3004-P	1 set point (solid-state relay)	3017-M	3 set points (electro-mechanical)
3004-M	1 set point (electro-mechanical relay)	3018-P	4 set points (solid-state relays)
3006	Isolated outputs (order with 3002/3/7/13)	3018-M	4 set points (electro-mechanical)
3007	0 - 10V analogue output	3020	Ultra bright Red LED display
3008	8 - 30V galvanic isolated DC supply	3025	Keypad lockout
3009	Parallel BCD output	3026	Display hold

NOTE : Most of the above options are factory fitted. Customer / field fitted options are available as 'plug-&-play' boards & software activated options. Contact factory for more information.
NOTE : Option 3009 cannot be ordered with any alarm options, or with option 3006.

SPECIFICATIONS

DISPLAY & OPERATION

Specification	4 digit (-1999 to 9999) bright red LED, 14.2mm high
Setup and calibration	Full digital with visual prompting in plain messages
Memory retention	Full non-volatile operation

ANALOG INPUT RANGES

0 - 20 mA	Input impedance 100	Other ranges on request
4 - 20 mA	Input impedance 100	
0 - 200mV	Input impedance 100 k	These inputs are all standard and are link selectable, with programmable zero, span and decimal point.
0 - 2 V	Input impedance 100 k	
0 - 10 V	Input impedance 500 k	
Potentiometer	Input impedance 100 k	

ANALOG PERFORMANCE

Accuracy & linearity	0.05% of full scale, ± 1 display count
A/D Type & resolution	16 bit dual slope, 40 000 internal counts
A/D conversion rate	Approximately 7 per second
Temperature coefficient	20 ppm/ $^{\circ}$ C typically
Settling time (process inputs)	0.5 seconds
Settling time (frequency input)	5 msec (no averaging)
Power-up / self test time	1 - 3 seconds
Warm up time	None required

EXCITATION

(FOR EXTERNAL TRANSMITTERS & POTS)

Link selectable for:
24 VDC (17-26V), current limited. (For 2-wire transmitters).
5VDC \pm 1%. Maximum 25mA.
2.5 VDC precision reference, 2mA maximum for potentiometer (2k pot minimum).

Option: 24 VDC (17-26V), increased current capacity 100mA with option 3010.

ANALOG OUTPUT OPTION

Analog output isolation	Optional, 1500V input/output isolation (order option 3006)
Analog output accuracy	0.1% of full scale, 12-bits
Analog output temp. coefficient	20 ppm / $^{\circ}$ C typically
Current analog output load	500 maximum (current is source, not sink)
Voltage analog output load	1 k minimum

SET POINT OPTIONS

Adjustable settings:	Hysteresis, on delay, hi/lo, normally open/closed
Electro-mechanical relay:	
Rating	250V AC, 30V DC, 2A, power factor 1
Form type	Form C (change-over contact)
Solid-state relay:	
Rating	400V AC/DC, 0.5A, power factor 1
Form type	Form A (normally open contact)

REGULATORY COMPLIANCE

Regulatory requirements	Complies with EC Directives 89/336/EEC & 73/23/EEC
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SERIAL INTERFACE OPTIONS

Serial interface
Isolation to input
Capabilities - Digibus protocol
Capabilities - Ascibus protocol

RS-232 or RS-485, 2400, 4800, 9600 & 19200 baud
Optional, 1500V isolation (order option 3006)
Full remote control, except for field setup
- continuous output approximately 5 x second
- output on demand via print button
- output on demand via serial request

ENVIRONMENTAL

Operating temperature range
Service temperature range
Storage temperature range
Humidity

-10 to +50°C
-15 to +60°C
-40 to +80°C
< 85% non-condensing

MECHANICAL SPECIFICATIONS

Dimensions
Protection
Front panel rating

DIN 1/8, 96 mm wide x 48 mm high x 147 mm deep
Industrial strength, UL 94 V-0 flame retardant ABS plastic
IP 65 / NEMA 4 / UL Type 4 with supplied o-ring seal

POWER SUPPLY

STANDARD

115 / 230 VAC \pm 10% (standard), link selectable, 50/60Hz, 5VA typical

OPTIONAL

8V-30VDC isolated switch mode power supply option (Option 3008), 5VA typical

95V-265V AC/DC switch mode power supply option (Option 3010), 5VA typical

10V-30VDC non-isolated DC power supply (Option 3028), 5VA typical

ORDERING EXAMPLE

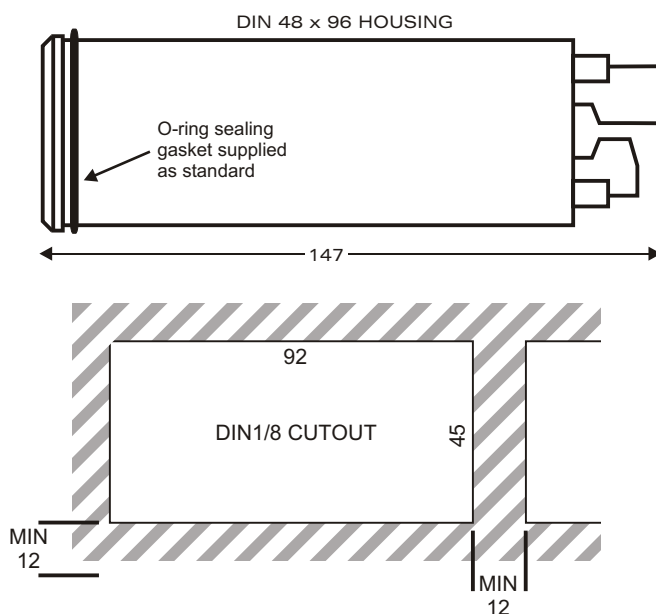
Option modules (see page 1)

MODEL 4015 - 3001P - 3003

Input : 4 - 20 mA
Display : 0 - 100.0 %
Aux Supply : 230 VAC
Analog output : 4 - 20 mA = 0 - 100.0 %
Setpoints : 2 setpoints with solid state relays

FRONT PANEL

DIMENSIONS & CUTOUT



DIN 48 x 96 industrial strength single piece housing
Flame retardant ABS plastic (meets UL 94 V-0)
Front panel rating is IP65 with supplied O-ring seal

