IDA

INTRINSICALLY SAFE TRI-COLOR DISPLAY

IECEx TSA 07.0026X

Description

The Ampcontrol IDA intrinsically safe tri-colour display allows remote indication of Methane, Carbon Dioxide or Carbon Monoxide levels (other gases and scaling can be made custom on request)

The display is housed in a cast stainless steel enclosure that has a rating of IP66 and has been certified Intrinsically Safe for Zone 0, Group I applications.

A large 38mm high three digit, seven segment display indicates the scaled gas level from a 4 - 20mA or 0.4 - 2V analogue input.

The display illuminates green, amber or red by changing the state of 2 digital inputs or automatically by programmable set-points.

Operation

Calibration: The IDA is factory calibrated and does not require any further calibration

Analogue Input: Both 4-20mA or 0.4-2V inputs are available. The IDA will sense which input is being used; no setting is required.

Colour changing mode: The mode which the display changes colour can be either set to *Auto* or *Manual* by changing a jumper on the PCB on the inside of the lid (shown on right)

When in **manual mode**, the colour depends on the state of two digital inputs *RED* and *GREEN (See wiring diagram over page)*

The **automatic mode** changes colour based on the analogue input and programmed set-points. To program the set-points:

1. Hold down the *SET* button for over 3 seconds until the display turns amber
2. Use a small screwdriver to turn the *COARSE* potentiometer to adjust the first two digits of the required amber set-point
3. Use a small screwdriver to turn the *FINE* potentiometer to adjust the last digit of the required amber set-point
4. Press the *SET* button, the display will turn red
5. Repeat steps 2 and 3 to configure the required red set-point
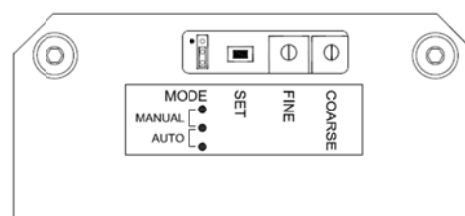6. Press the *SET* button. The display will read "SEt" on successful save

If the amber set-point is set as greater than the red set-point, the display will never turn amber.

Latching: If the IDA is set to *Auto* mode then it is possible to latch the display on red once the value rises above the red set-point. To turn latching on, a link must be installed between the +V and the RED input. To reset the latch once the value returns to below the red set-point the link must be broken momentarily. *(See wiring diagram over page)*
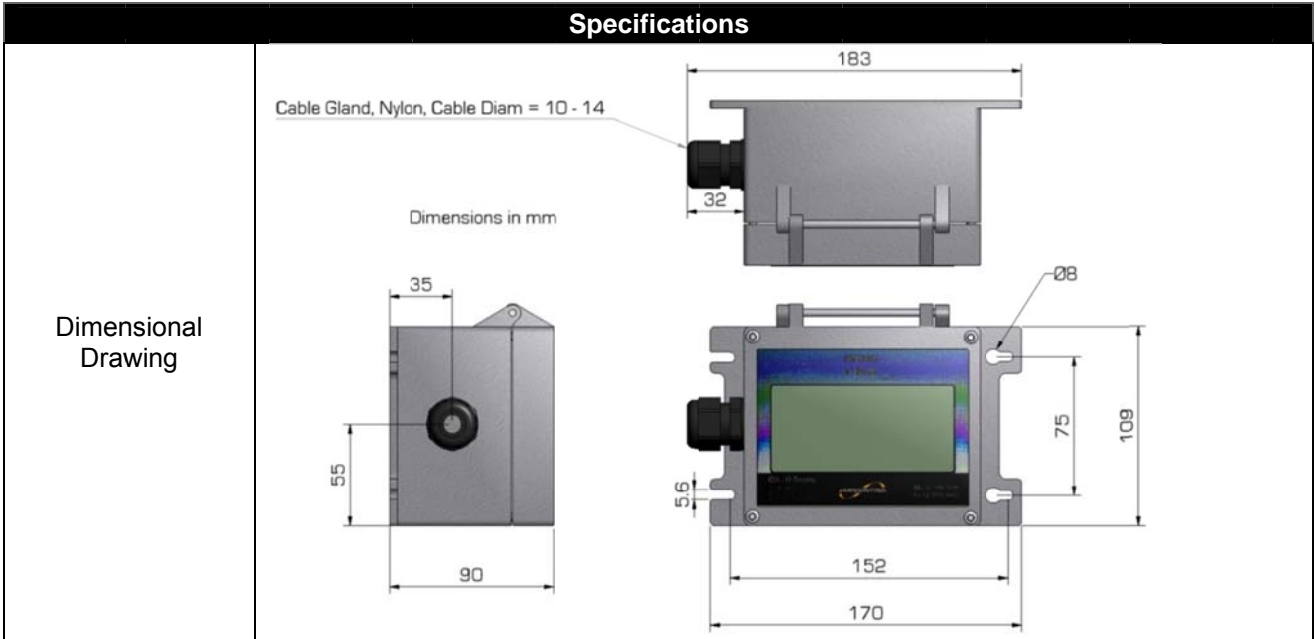
To latch on amber as well, a link must be made between the RED and GREEN inputs, or for amber latching only, between +V and GREEN.

Features

- Large 38mm High LED Display
- IP66 Ingress Protection
- Rugged Cast Stainless Steel Construction
- Reliable
- IECEx Certified Intrinsically Safe – Ex ia I
- Tri-Colour LED Display
- Selectable Current or Voltage Input
- User programmable alarm levels

IDA IS Display Module Technical Datasheet
IDAB001 Revision 4
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Specifications

Dimensional Drawing	

Dimensions	170 W x 109 H x 90 D	**I.S. Parameters** – Ex ia I IP66	
Weight	3kg	U_i = 16.5 V	
Operating Temp.	-20°C to +70°C	I_i = 3 A	
Ingress Protection	IP66	C_i = 0 µF	
Humidity Range	0-95% RH, non-condensing	L_i = 0 mH	
		Certificate: IECEx TSA 07.0026X	
Electrical Specifications		**Ordering Information**	
Supply Voltage	9 – 16.5VDC (Nom. 12VDC)	177521	IDA Methane (CH4) 0–5% **(Replaces 139995)**
Current (max)	110mA		
Analogue Input	4 – 20mA or 0.4 – 2V	177522	IDA Carbon Dioxide (CO2) 0–5%
Digital Inputs	9 – 16.5VDC @ <1mA	177523	IDA Carbon Dioxide (CO2) 0–2%
Accuracy	<±1% FSD	177524	IDA Carbon Monoxide (CO) 0–50ppm
Resolution	0.01% or 0.1ppm	177525	IDA Carbon Monoxide (CO) 0–100ppm

Electrical Connection

Manual Colour Changing Mode:

Automatic Colour Changing Mode:
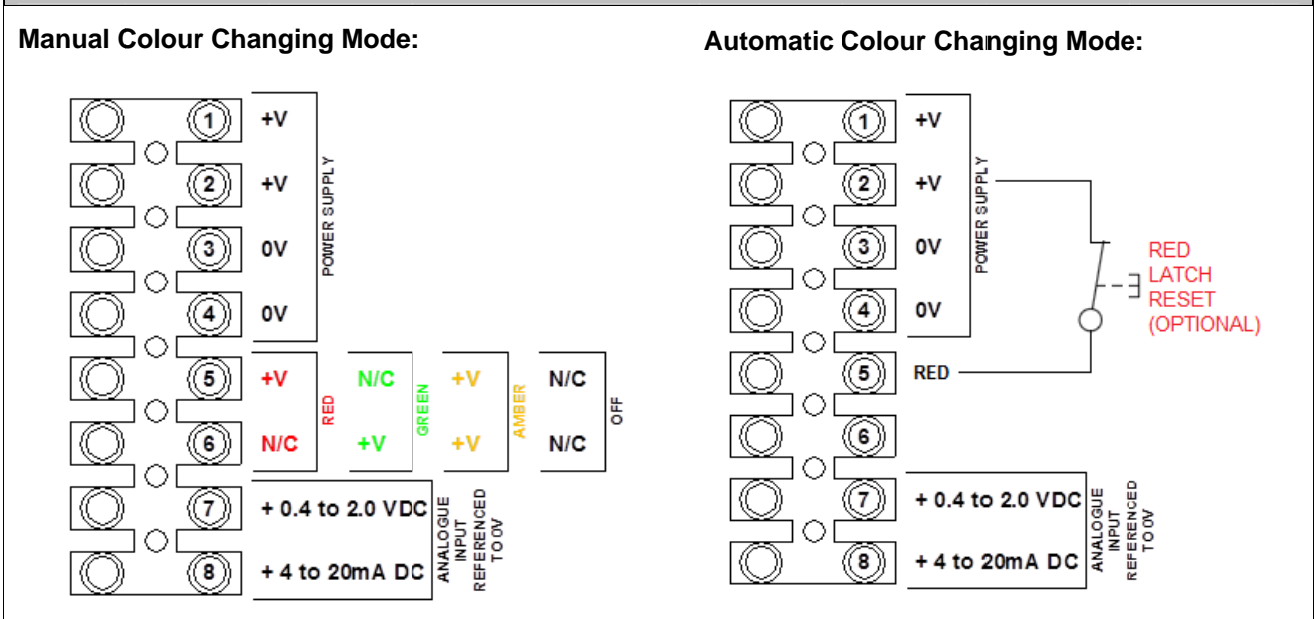
DISCLAIMER

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