AX-AM8DR

Analogue Monitor with Display and Relays

Product Overview

The AX-AM8DR is a cost effective solution to display and monitor a mixed selection of 10V or 20mA analogue signals, loop power is provided for current sensors. Each of the 8 input signals is individually scaled before being displayed allowing a mixed combination of sensor ranges. Each input has a limit relay with independent reversible on and off setpoints. The limit relay actions are also combined to drive a common alarm relay when any limit relay on, reducing wiring.

Features

- Monitor 8 analogue signals
- Individual input limit relays
- Common alarm relay
- Individual Loop power
- Independent display scaling for each input
- Independent limit relay On/Off setpoints for each input
- Normal / Inverted limit relay operation
- 24Vac/dc / 230Vac supply (See order codes)

Product Specifications

Operating Voltage	24Vac	24Vac 50/60Hz ±15% or 24Vdc ±15%
	230Vac (-230)	100 - 230Vac
Inputs	Voltage	0-10V, 2-10V (> 47KΩ load impedance)
	Current	0-20mA, 4-20mA (500Ω load impedance)
Outputs	Loop power	24Vdc, 200mA total
	Limit relay * 8	Normally open contacts 250Vac, 10A (Resistive)
	Common alarm relay	Normally open contact 250Vac, 10A (Resistive)
Wiring		Rising clamp screw terminals for 0.5-2.5mm² cable
Dimensions		180 x 130 (180 inc glands) x 64mm
Operating Environment		0-40ºC, 5-95% RH (non-condensing)
Country of Origin		United Kingdom

Order Codes

AX-AM8DR	Analogue monitor, 8 channel with display and relays, 24V supply
AX-AM8DR-230	Analogue monitor, 8 channel with display and relays, 100 - 230Vac supply

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Datasheet Contents

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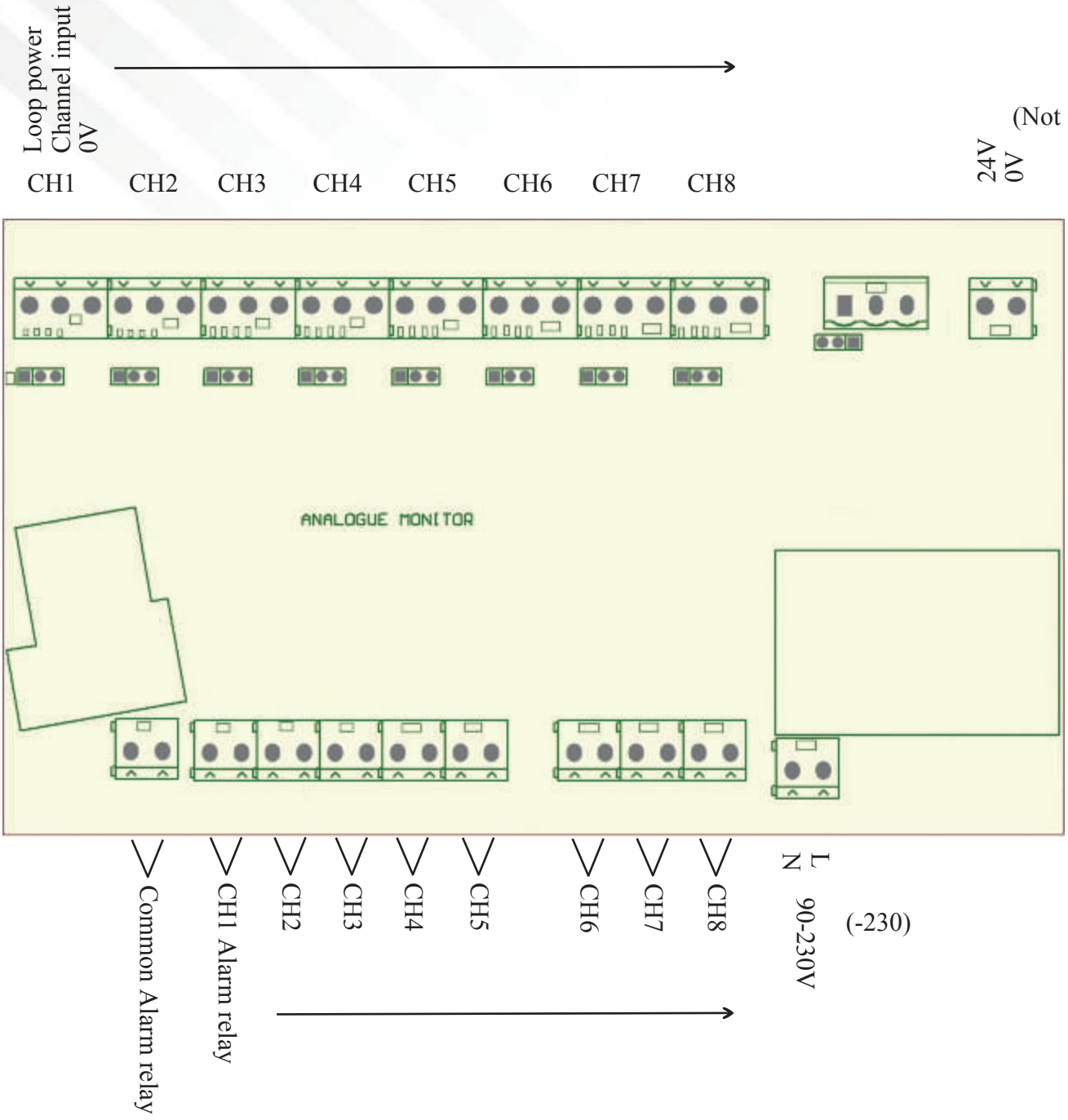
Installation

The AX-AM8DR should be installed by a suitably qualified technician in conjunction with any guidelines for the equipment it is to be connected to and any local regulations. Field wiring should be installed to satisfy the requirements set out by the manufacturer of the equipment that the module is being connected to.

Operation

The AX-AM8DR can monitor and display up to 8 analogue signals. These can be any combination of 0-10V, 2-10V, 0-20mA and 4-20mA signals. Voltage signals and self powered current signals should be connected between 0V and IN. Loop powered current sensors should be connected between 24V and IN. The channel input jumper has to be set for voltage or current inputs along with the input mode setting. The inputs are scaled before being displayed allowing different sensor ranges to be combined ie 0-300 and 0-500. Alternatively a scaling of 0-10.0 or 0-20.0 can be used and the levels set in volts or mA. Each input has a limit relay on level (RON) and a limit relay of level (ROFF). If RON is set above ROFF then the relay will energise (contact close) when the input is equal to or greater than RON and will de-energise (contact open) when the input is equal to or less than ROFF. If RON is set below ROFF then the actions are inverted, the relay will energise (contact close) when the input is equal to or less than RON and will de-energise (contact open) when the input is equal to or greater than ROFF. The DELAY value determines how long the limit has to be exceeded before the relay switches. The common relay will energise when any channel alarm relay is on.



Voltage input

NC LOOP POWER
V_{IN} —— INPUT
0V —— 0V

Input jumper = V

External powered current input

NC LOOP POWER
I_{IN} —— INPUT
0V —— 0V

Input jumper = mA

Loop powered current input

LOOP POWER
Sensor - I_{IN} —— INPUT
0V

Input jumper = mA

NC = No connection

Menu Operation

To enter the user menu press and hold **Enter** for 3 seconds to show Password screen

Press INC/DEC to set 129

Press **Enter** once only

Press INC/DEC to set 127

Press **Enter** to enter menu.

Press **Enter** to scroll through options and press INC / DEC to change values

When changes are complete stop pressing buttons for 10 seconds. The new values will be stored and unit returns to operating mode.

See Mode1 - 8 below for actions of **X** (Copy) button.

Menu Options

Mode1 to 8 [nnode1 to 8]

Action - Sets the operating mode for the input. The input jumper must be moved when changing between voltage and current input modes.

When Mode2 to 8 is displayed pressing **X** will copy the settings from previous input and scroll the menu to next input MODE. If all inputs are to be set the same then set the Mode, Scale, RON and ROFF values for input one press MENU to select MODE2 and press **X** seven times.

Options -

Note for Voltage inputs Input jumper has to set to V position. For current inputs Input jumper has to be set to mA position.

DIS Input disabled

VNS Voltage input with no step, 0-10V

VST Voltage input with step, 2-10V

VSA Voltage input with step and alarm, 2-10V. Channel relay set of input 1V or less.

INS Current input with no step, 0-20mA

IST Current input with step, 4-20mA

ISA Current input with step and alarm, 4-20mA. Channel relay set of input 2mA or less

Scale1 to 8 [SCALE1 to 8]

Action - Scales the display value shown relative to the input. Takes input step into account.

Options -

10.0, 20.0

100, 200, 300, 400, 500, 600, 700, 800, 900, 999

RON1 to 8 [r0n1 to 8]

Action - This sets the level at which the channel relay switches on. The display value is scaled

If RON > ROFF relay switches on when input above RON.

If RON < ROFF relay switches on when input below ROFF.

Options -

10.0, 20.0 steps of 0.1

100, 200 steps of 1

300, 400, 500 steps of 2

600 - 999 steps of 5

ROFF1 to 8 [r0ff1 to 8]

Action - This sets the level at which the channel relay switches off. The display value is scaled.

If RON > ROFF relay switches off when input below ROFF.

If RON < ROFF relay switches off when input above ROFF.

Options - As per RON above

Delay

Action - Sets the time the input value has to be above or below the RON or ROFF level before the channel relay switches.