

## Quad Alarm (v1) QAU775

### DESCRIPTION

The QUAD ALARM QAU775 will accept one input which can be almost any type of sensor or a high level process signal. Four individual trip points are then user adjusted over the specified range for the module. The module provides an auxiliary 24Vdc/50mA loop power supply or auxiliary supply to proximity sensors. For connection to other equipment, a scaled high level retransmit output (such as 4-20mA) is available. The trip points can produce open collector, or relay contact outputs. All trip points have a front status indication and dead-band (DB) adjustment. The four settable points are adjusted via 15-turn potentiometers with the help of test sockets giving a 0 - 5V trip set range.



### Calibration Example:

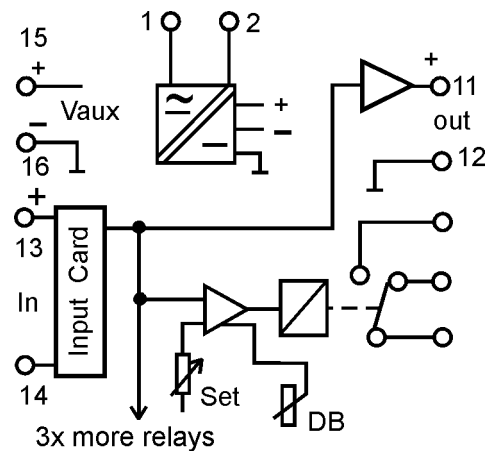
The DB can be adjusted from 1 - 25% by front panel pot for each trip point

Input:	0 - 100°C, 3-wire Pt100.
Trip point 1:	20°C = trip set 1V.
Trip point 2:	40°C = trip set 2V.
Trip point 3:	80°C = trip set 4V.
Trip point 4:	90°C = trip set 4.5V.
Retransmit output:	4-20mA (to recorder for example).

Internal link header sets reverse or direct trip action. The retransmit output is not galvanically isolated. Output signal type and calibration are normally factory set. Again recalibration can be carried out by resistor change and final internal trim adjustments.

### Typical applications:

- multi-stage discrete control (2 x heat, 2 x cool).
- monitoring high/high, high, low, low/low, for example on vital 4 - 20mA process signals.
- An optional window alarm can be ordered (factory set).



### General Specifications

Mounting:	35mm DIN-Rail.
Termination:	Plug-in Screw terminals.
Weight:	0.3 kg.
Protection class:	IP40 (IP65 Enclosure opt.)
Size:	80W x 70H x 110D mm.
Housing material:	Polycarbonate, aluminium.
Calibration accuracy:	< 0.5% of range.
Auxiliary Supply	20V (50mA) or 8V (25mA)
Trip repeatability:	< 0.5% of range.
Trip response time:	< 100ms.
Ambient temperature operating range:	0...+60°C.
Storage temp. range:	-20..+70°C
Temperature effect:	0.02% per °C.
Analogue output drive:	0 to 22mA (20V drive) or 0 to 20V (20mA drive)
Contact rating:	10A/250Vac resistive.
Switching hysteresis:	1 to 25% of input range. Factory set 1%.
Power requirements	4VA.

Electromagnetic compatibility: Complies with AS/NZS 4251.1 (EN 50081.1)

For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

### TYPE NO. DESIGNATION

#### Supply:

1 = 80-300Vdc / 80-280Vac 50/60Hz

2 = 10V - 60Vdc / 16 - 42Vac 50/60Hz.

#### Input:

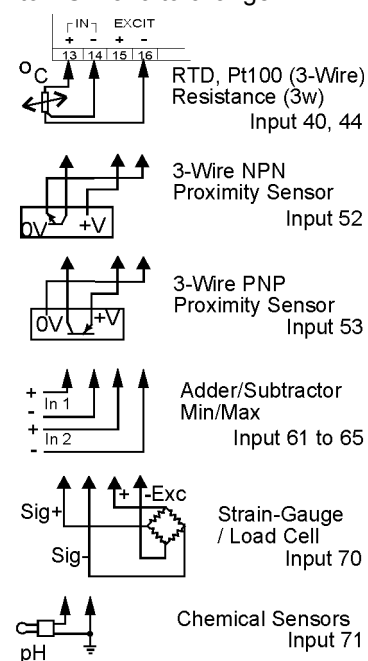
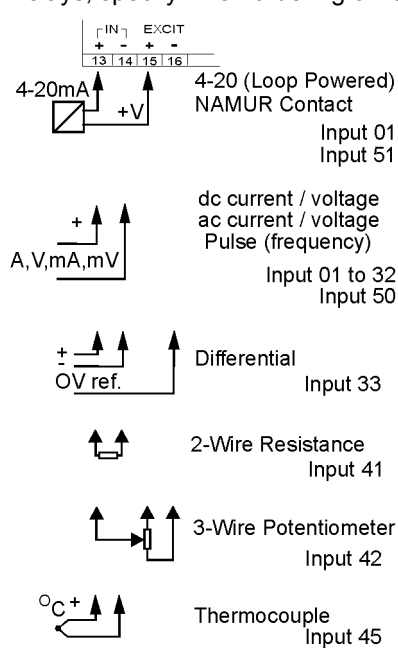
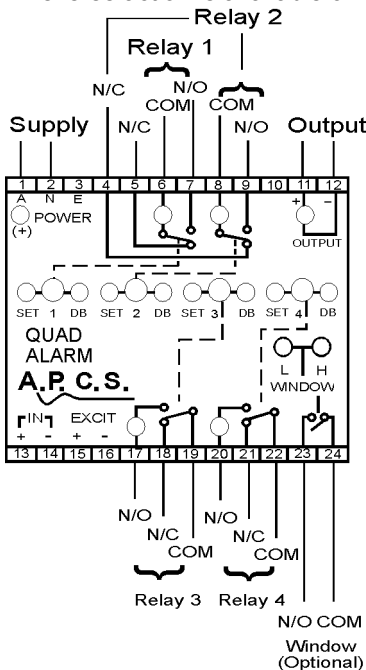
- |   |  |
|---|--|
| 01 = 4 - 20mA (51Ω)                     | *) 33 = Differential.                            |
| 02 = 0 - 20mA (51Ω)                     | *) 40 = Resistance 3-wire                        |
| 03 = 0 - 50mA (20Ω)                     | *) 41 = Resistance 2-wire (2Ω - 100k ohm).       |
| 04 = 0 - 1mA (1k Ω)                     | *) 42 = Potentiometer 3-wire (400Ω min).         |
| 05 = 0 - 10mA (100 Ω)                   | *) 43 = Watermark Soil Moisture Sensor SMS009.   |
| 08 = 0 - 1Vdc (1M Ω)                    | *) 44 = RTD (3-wire).                            |
| 09 = 0 - 2Vdc (1M Ω)                    | *) 45 = Thermocouple.                            |
| 10 = 0 - 5Vdc (1M Ω)                    | *) 46 = Conductivity 50uS/cm to 100mS/cm (k=1.0) |
| 11 = 0 - 10Vdc (1M Ω)                   | *) 50 = Frequency (dc pulse).                    |
| 13 = 0 - 20Vdc (1M Ω)                   | *) 51 = Frequency (NAMUR, contact).              |
| 14 = 1 - 5Vdc (1M Ω)                    | *) 52 = Frequency (NPN Prox 20V).                |
| *) 19 = Other (100Vdc or 100mA max)     | *) 53 = Frequency (PNP Prox 20V).                |
| *) 21 = DC voltage up to 2kV.           | *) 61 = Adder, 2 inputs 4 - 20mA floating.       |
| *) 22 = DC millivolt, <100mVdc.         | *) 62 = Subtractor, 2 inputs 4-20mA floating     |
| *) 23 = DC voltage, bipolar up to ±2kV. | *) 64 = MIN selector, 2 inputs 4-20mA signal.    |
| *) 24 = DC current input 10A max.       | *) 65 = MAX selector, 2 inputs 4-20mA signal.    |
| *) 25 = DC current, bipolar 10A max.    | *) 70 = Strain Gauge (8V exc. Advice cal.)       |
| *) 30 = AC voltage 10mV to 500V span.   | *) 71 = Chemical sensors (specify e.g. pH, ORP). |
| *) 31 = AC Current to 10A               |  |
| *) 32 = True r.m.s.                     | *) 99 = Other option types.                      |
- Specify calibration details for all “\*”) inputs. “\*”) = Price extra.

#### Retransmit Output:

- |                            |  |
|----------------------------|--|
| 1 = 0 - 1mA (18k Ω max).   | 5 = 0 - 20mA (900 Ω max).                  |
| 2 = 0 - 5mA (3.6k Ω max).  | 6 = 0 - 1V (50k Ω min).                    |
| 3 = 0 - 10mA (1.8k Ω max). | 7 = 1 - 5V (50k Ω min).                    |
| 4 = 4 - 20mA (900 Ω max).  | 8 = 0 - 10V (100k Ω min).                  |
|                            | *) 9 = Other specify (50mA not available). |

#### Options:

- |  |   |
|--|---|
| 00 = None.   | *) 02 = NPN open collector transistor alarm (30V, 100mA). |
| *) 01 = Window alarm (specify Hi & Lo trip value). | *) 99 = Other (Specify).                                  |
- Action:** Reverse action is available on all relays, specify when ordering or refer to DS77519 to change.



#### \*) Price Extra..

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