Micromann Universal, Auxiliary Powered, Alarms

UCVR Current/Voltage Inputs
URTR Resistive Temperature Detector Inputs
UTCR Thermocouple Inputs
UHZR Frequency Inputs
CNDR Conductivity sensor Inputs
XFAR Extended Function Alarm

Micromann universal alarms monitor and display process measurements. Each model covers a range of similar signal and sensor types:

- Two versatile alarm channels with LED status indication
- Dual SPDT relay outputs
- Display in Engineering units
- Complete isolation
- AC or DC powered
- Removable, screw-type, terminal blocks
- Compact metal housing
Universal Alarm Modules

Description
The Micromann series are fully isolated, microprocessor based, alarm modules for use with most common process measurement signals and sensors. You can program all features of Micromann operation through the front panel keypad. When the set-up is complete, you simply remove the security link to protect the setup.

General Technical Data

Display
- Type: Full 4 digit, red 7mm LED
- Scaling to display in % or engineering units
- Display range: -999 to 9999
- Status indicators: Trip 1 / Trip 2 / Processor status

Alarm outputs
- Type: Two SPDT relay contact outputs
- Rating: 3A at 250Vac/30Vdc
- Setpoints: Any value within the display range
- Deadband: From 1 display count
- Alarm action: High alarm or Low alarm
- Output sense: Normally de-energised or energised
- Alarm reset: Automatic or manual
- Alarm timer delay: From 0 to 4200 seconds

Power Supply
- Type: AC or DC powered
- AC: 110Vac (100-132Vac) at 47-63Hz or 240Vac (200-264Vac) at 47-63Hz
- DC: 12 to 50Vdc (other voltages on request)
- Power Usage: AC 6VA or 6W at 24Vdc

Housing
- Type: Dual DIN rail mount, Anodised Aluminium Enclosure
- Dimensions: See diagram
- Weight: 0.5kg
- Connection type: Plug in terminal blocks with screw connections

Performance
- Repeatability: ±0.05% of span
- Temperature drift: Less than 0.02% span per °C
- Long term drift: 0.1% per 10,000 hours
- Response time: 320ms for 10-90% output change
- Input step response: Programmable (from 250mS to 32s)
- Sampling rate: 5 samples per second
- Setup retention: 100 years minimum

Insulation Co-ordination
- Ports: Input / Relay One / Relay Two / Power Supply / Case
- Rated Insulation Voltage: 300Veff
- Overvoltage Category: III
- Impulse Withstand: 4kV (1.2 / 50)
- Isolation: 2 kV (between ports)

Environmental Conditions
- Operating temperature: 0 to 60 °C
- Storage temperature: -25 to +70 °C
- Pollution Degree: 2
- Relative humidity: 10–90% (non-condensing)

Options
- FPS: Custom transducer power supply

Approvals
- Micromann Series:
  - CAN/CSA C22.2 No. 1010.1:92
  - UL61010-1: 2004
  - EN50178:1998
  - BS EN 61326:1998 + A2
- LV Directive: EMC

You can tailor each alarm’s operation individually during setup. If necessary, you can also allow setpoint adjustment (from the front panel) during normal operation. Alarm operation can be set to ‘manual reset’ so that active alarms will remain tripped until manually cleared.
UCVR Current/Voltage
- Convert, filter and Isolate current and voltage signals
- Power for active input devices
- Linearises square law signals
- Bipolar inputs

UTCR Temperature (T/C)
- Select J, K, N, T, E, B, S, R or mV inputs
- Temperature Display in °C/F
- Burn-out alarm
- CJC Temperature display

URTR Temperature (RTD)
- Accepts 2-wire and 3-wire PT100 RTD inputs
- Temperature Display in °C/F
- Automatic lead length compensation

Technical Data

Inputs
- Input Type: Analogue current/voltage signals, Thermocouple (type J, K, N, T, E, B, S, R) or millivolt signals, 2-wire or 3-wire, PT100 RTD (to BS1904:1984/IEC751:1983)
- Standard range limits: –55.00mA to +55.00mA or –55.00V to +55.00V (without recalibration)

Thermocouple (type J, K, N, T, E, B, S, R) or mV inputs
- Display Limits
  - Upper: 870°C (1598°F), 1372°C (2502°F), 1300°C (2372°F), 400°C (752°F), 700°C (1292°F), 1800°C (3272°F), 1768°C (3214°F), 60.00mV

Transducer supply 24Vdc (to 25mA) output
- Input impedance: 22Ω (current inputs), 1MΩ (voltage inputs)
- Resolution: 1μA/1mV per bit for small ranges
- Minimum recommended span: 1mA or 1V
- Linearisation: Linear or square root
- Lead length compensation

Display
- Display Limits
  - Resolution: 0.001 engineering units
- Scaling to display in °C or °F or mV to display temperature (in °C or °F)
- Display range: -999 to 9999

Performance
- CJC tracking error: Less than 0.02% per °C ambient change
- Lead length compensation: Better than 0.05% error for equal changes in lead resistance

Input Connections

Terminal Signal
- 1: 24Vdc (out)
- 2: Current +
- 3: Common –
- 4: Voltage +
- 5: Not used
- 6: Not used

Terminal mV Signal T/C Signal
- 1: mV +
- 2: mV –
- 3: CJC Board (white dot to terminal 2)
- 4: Not used
- 5: Not used
- 6: Not used

Ordering Information

Type (Model Supply) Cat. No.
UCVR 12-50Vdc 7940010174

Note: For other ranges please specify as UCVR 1 where 1 = Power Supply Voltage

Default Burnout Action is Upscale. For Downscale please specify on order.

Notes
- Subject to technical alterations without notice
- Printed in Australia
- 7940015667
- 04/03/2008
Universal Alarm Modules

**Technical Data**

**Inputs**
- **Input Type**: Programmable frequency (includes debouncing for volt-free contacts)
- **Standard range limits**: Any range inside the limits 0 to 10kHz (or 0.1Hz for debounced volt-free contacts)
- **Minimum recommended span**: 0.001Hz
- **Input voltage range**: 50mV to 250V (ac and dc) others on request
- **Sensor supply output**: Nominally 12Vdc to 25mA others on request (see /FPS option)
- **Temperature range**: 0-200°C
- **Cell Constants**: 0-0.1 to 99.99/cm
- **Excitation voltage**: Less than 6V p/p @ 400Hz
- **Lead length compensation**: < 2% of change for equal changes in lead resistance (up to 30Ω)
- **Temperature Compensation**: Linear or user defined up to 5 points
- **Input impedance**: 22Ω (Current) or 1mΩ (Voltage)

**Display**
- **Scaling**: to display in % or engineering units
- **Display range**: -999 to 9999
- **Resolution**: 0.001 engineering units

**Performance**
- **Repeatability**: ±0.02% of span
- **Noise immunity**: 40dB CMRR (1.5kVrms limit)

**Notes**

**Input Connections**

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12Vdc (out)</td>
</tr>
<tr>
<td>2</td>
<td>Pull Up/Down</td>
</tr>
<tr>
<td>3</td>
<td>0V</td>
</tr>
<tr>
<td>4</td>
<td>Low Voltage (&lt;24Vdc) Signal +</td>
</tr>
<tr>
<td>5</td>
<td>Signal –</td>
</tr>
<tr>
<td>6</td>
<td>High Voltage (&gt;24Vdc) Signal +</td>
</tr>
</tbody>
</table>

**Ordering Information**

**Specify as**
- Where

<table>
<thead>
<tr>
<th>Type (Model Supply)</th>
<th>Cat. No.</th>
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</thead>
<tbody>
<tr>
<td>UHZR 1 12-50Vdc</td>
<td>7940015213</td>
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</table>

Note: For other ranges please specify as UHZR 1 where 1 = Power Supply Voltage

<table>
<thead>
<tr>
<th>Type (Model Supply)</th>
<th>Cat. No.</th>
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</thead>
<tbody>
<tr>
<td>CNDR 12-50Vdc</td>
<td>7940017921</td>
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Note: For other ranges please specify as CNDR 1 where 1 = Power Supply Voltage

<table>
<thead>
<tr>
<th>Type (Model Supply)</th>
<th>Cat. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>XFAR 12-50Vdc</td>
<td>7940014450</td>
</tr>
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Note: For other ranges please specify as XFAR 1 where 1 = Power Supply Voltage