## Universal Transmitter

### General Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material</strong></td>
<td>LM25 Aluminum, painted (SS316 painted optional)</td>
</tr>
<tr>
<td><strong>Cable Entries</strong></td>
<td>5 conduits/cable entries – (2 right, 2 left, 1 bottom) Available in 1/4” NPT, or M25</td>
</tr>
<tr>
<td><strong>Termination</strong></td>
<td>Cage Clamp pluggable Terminal Blocks with retaining screws, 0.5 to 2.5mm (12-28 AWG)</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Integral cast mounting tabs provide secure mounting to surfaces and channel. Can be mounted to 2 to 6 inch pipe or ceiling with corresponding mounting kit (optional)</td>
</tr>
<tr>
<td><strong>User interface</strong></td>
<td>Standard Custom Baud LCD, 2.5” High Resolution DOT Matrix Display, Discrete Alarm and Status indication. Reliable Non-Intrusive 4 button interface magnetic wand access.</td>
</tr>
<tr>
<td><strong>Signal</strong></td>
<td>0-22mA analog current loop output with HART (version 6) compatible standard. Optional relay or Modbus.</td>
</tr>
</tbody>
</table>

### Environmental

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature</strong></td>
<td>-40°C to +65°C</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>20 to 90% RH non-condensing</td>
</tr>
<tr>
<td><strong>IP Rating</strong></td>
<td>NEMA 4X IP66</td>
</tr>
</tbody>
</table>

### Options

- Relay Option 3 - SPDT (2 Alarm, 1 Fault) Relays; 250 VAC 5A, 24VDC 5A (Resistive) with External Reset Input or Modbus option: RTU protocol; selectable Baud Rate; Optional HART with IS Port |
- Operating Voltage: 18-24 VDC Nominal (IEC & mV units 16-32 VDC; IR units 18-32 VDC (Class 2 supply required) |

### Power Consumption

- XNX used with: electrochemical sensor: 6.2 watts; millivolt (catalytic bead or IR cell): 6.5 watts; point Infrared sensor (Searchpoint Optima): 9.7 watts; open-path Infrared (Searchline Excel): 13.2 watts |

### Hazardous Area Approvals (Transmitter/Sensor Dependent)

- UL, cUL classified: UL 1203 and 913 Seventh edition; CSA, CSA 22.2 No. 30, CSA 22.2 No. 157 |
- Class 1, Division 1, Groups B, C, D / Class 1, Zone 1, Groups IB + H2 T4 Tamb. -40c to 65c |
- DEMKO* EC 60079-0, 4th Ed; IEC 60079-15th Ed; IEC 60079-11 5th Ed; NCC INMETRO* |
- Type Approval: EX [ia]d IIB + H2 T4 Tamb -40c to 65c |

### Performance Approvals (Sensor Dependent)

- Flammable gases: CSA 22.2 No. 152, FM* 6310, 6320, DEKRA/EXAM* IEC/EN 60079-29-1, EN 61779-4:2000 Toxic and Oxygen |
- FM* ISA 92.0.01; DEKRA/EXAM* EN 45544:2000, EN 50104: 1999 |
- Functional Safety: TUV EN 61508 SIL 2 Component Certification |

### Display Module & User Interface (Standard)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display Type</strong></td>
<td>Backlit LCD</td>
</tr>
<tr>
<td><strong>Information Displayed</strong></td>
<td>Gas Reading; Gas Name and Units of measurement; Fault and Alarm Status; Large Numeric concentration or LEL display; Bar graph current reading, set points and full scale. Security settings allow multi level operator access for set-up, configuration and calibration. Event history stores Time and Date of all Alarm, Diagnostic, Configuration events</td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>Magnetic wand with terminal screwdriver (supplied each unit)</td>
</tr>
</tbody>
</table>

### 4-20mA & HART (Standard Supply)

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Fully configurable isolated 4-20mA &amp; HART output module providing current sink, current source and isolated modes of operation. (supports HART 6.0 protocol)</td>
</tr>
<tr>
<td><strong>Non-intrusive Interface</strong></td>
<td>Optional local IS port to enable HOT connection of a HART handheld configurator</td>
</tr>
<tr>
<td><strong>Operating Modes</strong></td>
<td>Current sink / Current source / isolated current sink /Conventional or with HART data</td>
</tr>
<tr>
<td><strong>Output Range</strong></td>
<td>0 to 22mA</td>
</tr>
<tr>
<td><strong>4-20mA Signal Accuracy</strong></td>
<td>+/- 1% FS</td>
</tr>
<tr>
<td><strong>Max loop resistance</strong></td>
<td>600 Ohms at 24Vdc loop supply</td>
</tr>
</tbody>
</table>

### Functions Supported via HART

<table>
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<tr>
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<tbody>
<tr>
<td>Gas Name and Units of measurement</td>
<td>Detailed Sensor Information Including: Optical Signal Level Dynamic Reserve (Excel Only) Raw reading 24V supply voltage Temperature</td>
</tr>
<tr>
<td>4-20mA signal level</td>
<td>RTC (Excel Only) Calibration and Status Detailed Fault and Warning Information Fault and Alarm History Zero Calibration</td>
</tr>
</tbody>
</table>

* pending
**Local IS HART Port (Optional)**

**Description**
Provides externally accessible IS connections to the XNX transmitter to enable H0T connection of HC275/375 HART or equivalent hand held configurator.

**Installation**
Fitted to one of the cable entries on the XNX transmitter.

**Environmental Protection**
Terminals protected by cover to IP 66 when not in use

**Relay Module (Optional)**

**Description**
Provides three fully user configurable relay outputs that can be switched based on the current gas level and/or status of the transmitter. Provides 2 x SPCO alarm and 1 x SPCC fault relays. Single Pole Double Throw SPDT. Option PCB Factory installed in display module.

**Installation**
Fitted into housing base either at the factory or in the field by qualified service engineer.

**Rating**
Maximum: 240 VAC, 5A (non inductive load) / 24 VDC 5A CES
Minimum: 5V, 10mA (non inductive load)

**Electrical Connections**
Fault: Common, Normally Open, Normally Closed
Alarm 1: Common, Normally Open, Normally Closed
Alarm 2: Common, Normally Open, Normally Closed
Default

**Configuration**
Fault Relay:
- Normally energized
- Non latching
- Signal inhibit as fault
- Alarm 1 / 2 Relays:
  - Normally de-energized
  - Non latching
- Alarm rising on gas reading
- Alarm level 20% and 40% of scale
- Hysteresis of 2% of scale
- Fault Relay:
  - Normally energized / normally de-energized
  - Non latching
  - Alarm on rising / falling
  - Alarm level 10% to 90% of full scale

**Re-setting of Latched Relays**
Easily accessible interface on display (if used) or via HART interface (local or remote)

**Note**
Use of the Relay Module or ‘Other’ Communications Module (E.g. Foundation Fieldbus) is mutually exclusive. However, relay function may be used in conjunction with standard communication output i.e. 4-20mA with HART.

**Relay Specific Functions via HART Interface**
- Relay status information / Reset of latched conditions / Configuration of relays
- Forcing of relay state
- Reset through non intrusive User Interface.
- Remote Switch closure using Remote Reset input
- Remotely through HART

**Modbus RTU Module (Optional)**

**Description**
The Modbus output module provides an Isolated RS485 output to enable the connection of the XNX transmitter to a multi-drop Modbus network

**Installation**
Fitted into housing base either at the factory or in the field by qualified service engineer.

**Connections**
- RS485+, RS485- , Drain
- Isolated RS485, 1200 to 19.2K Baud

**Physical Layer**
Conforms to IEC 1158-2 and ISA 50.02, 31.25Kbits/s

**Maximum No. of Nodes**
254 XNX compatible transmitters only

**Protocol**
Modbus RTU

**Functions Supported**
As per Foundation Fieldbus Module (Optional) - see above

**Foundation Fieldbus Module (Optional)**

**Description**
Foundation Fieldbus compliant digital communications interface enables connection of the XNX transmitter to a multi-drop Foundation Fieldbus H1 network.

**Installation**
Fitted into housing base either at the factory or in the field by qualified service engineer.

**Connections**
- Sig+, Sig- and Screen

**Physical Layer**
Conforms to IEC 61158-2 and ISA 50.02, 31.25Kbits/s

**Maximum No. of Nodes**
32

**Functions Supported**
Gas Reading
- Gas Name and Units of measurement
- Instrument status (OK, warning, fault, over-range)
- General/Device Information
- Remote zero and span calibration (detector dependent)
- Detailed Sensor Information Including:
  - Optical Signal Level
  - Dynamic Reserve (Excel Only)
  - Raw reading
  - 24V supply voltage
  - Temperature
  - RTC (Excel Only)
  - Calibration and Configuration status
- Detailed Fault and Warning Information:
  - Fault and Alarm History
  - Zero Calibration

Further information is available upon request.

* Not available at time of publication. Please call your Honeywell Analytics sales person.

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