**DeltaPoint®**

**Resistance welding tip loss monitor**

**Description**

DeltaPoint® detects leaks from cap loss, hose burst or inadvertent shutoff. Monitoring robotic cells, pedestal welders or multiple work cells. Water is shut down to stop the leak and a signal is sent to the controller. The flow sensors have no moving parts to be affected by entrained contaminants. The only mechanical parts are the shut off and check valves.

**Features**

- Stand alone package for installation ease
- Sensor has no moving parts to wear, break or cause nuisance tripping
- Visual flow indication reads in GPM or LPM
- Visual Temperature indication reads in degrees F or C
- User Programmable: Leak rate alarm, response time, restart delay, Flow OK level, and minimum flow monitoring.
- Bypass - Electrical & Mechanical
- Available Versions: AC, DC, DeviceNet, Ethernet and Profinet
- Available Range: 6 GPM (23 LPM), 12 GPM (45 LPM) and 50 GPM (190 LPM)
- Water/Glycol coolant up to 20% mix
- Alarms are digital or go from 0 to max voltage
- Female micro-connectors

**Unit Specifications**

**General**
- Pressure Drop: See chart
- Differential Pressure Limits: 5 – 80 PSID (0.3 – 5.5 Bar)
- Maximum Operation Pressure 190 PSI (13 Bar)
- Fluid Temperature Limits 35-210°F (2-99°C)
- Ambient Temperature Limits: 32 – 122 F (0-50°C)
- Weight: 13.5 Lb (6.1 kg) / 22 Lb (10 kg)
- Weight with CPH option: 18.7 Lb (8.5kg)
- Wetted Material: Brass
- Electrical Enclosure: Aluminum Optional mounting bracket
- Optional valves: standard, heavy duty and air operated
- Porting: ¾ NPTF or BSPT

**Flow / Temperature Sensors**
- Accuracy ± 2% Full Scale Flow, ±1% Temperature
- Repeatability ± .25% of actual flow
- Response Time Flow: 1 second to 63% of flow change
- Response Time Temperature: 1.8 seconds
- Material: PVDF (Kynar)

**Solenoid Valve**
- Style: Diaphragm, 2-way pilot operated, NC
- Cv: 8.4
- Mechanical Bypass Standard
- Response Time: 1-1.5 seconds to shut off water. Length of hose run from unit to weld gun effects response time.
- Material: Forged Brass
- Seal: NBR (Buna N)

**Check Valve**
- Style: Piston, O ring seal
- Material: Forged Brass
- Seal: NBR (Buna N)

**Electrical Specifications**
- AC, DC, Ethernet, DeviceNet or Profinet
- Pass-through option (DeviceNet only)
**MAX FLOW RATE**

- 6 - 6 GPM (2.3 - 23 LPM) = 6GMP
- 1.2 - 12 GPM (4.5 - 45 LPM) = 12GMP
- 5 - 50 GPM (19 - 190 LPM) = 50GMP
- 2.3 - 23 LPM (6 - 6 GPM) = 23LM
- 4.5 - 45 LPM (1.2 - 12 GPM) = 45LM
- 19 - 190 LPM (5 - 50 GPM) = 190LM

**NOTE:** CPH option available with 23LM rate only.

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**ELECTRICAL CONNECTOR TYPE. Select one only from AC, DC, DeviceNet, EtherNet or Profinet:**

**AC PIN CONNECTOR WIRING OPTIONS**

**AC 5 pin Mini**
- 1: Grey AC Neutral
- 2: Red Alarm (SSR NC)
- 3: Black Chassis Ground
- 4: White Remote Reset
- 5: Blue AC Hot

**AC 6 pin Mini**
- 1: Brown AC Hot
- 2: White AC Neutral
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm (SSR NC)
- 6: Pink Alarm (SSR NC)

**3 Pin Micro**
- 1: Gr/Yl N/U
- 2: Red/Black Bypass Condition
- 3: Red/White Remote Shutoff

**NOTE:** Option A263 includes both a 6 pin AND a 3 pin Micro connector.

**AC 6 pin Micro**
- 1: Brown AC Hot
- 2: White AC Neutral
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm (SSR NC)
- 6: Pink Alarm (SSR NC)

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**DC PIN CONNECTOR WIRING OPTIONS**

**DC 5 pin Micro**
- 1: Grey 0 VDC
- 4: White Remote Reset
- 3: Blue Chassis Ground
- 2: Red Alarm Out
- 5: Blue +24 VDC

**DC 4 pin Micro**
- 1: Brown 0 VDC
- 2: White 0 VDC
- 3: Blue Remote Reset
- 4: Black Alarm Out

**DC 6 pin Micro**
- 1: Brown +24 VDC
- 2: White 0 VDC
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm Out
- 6: Pink Remote Shutoff

**DC 5 pin Micro (Available in EOA style only)**
- 1: Brown +24 VDC
- 2: White 0 VDC
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm Out
- 6: Pink Remote Shutoff

**DC 6 pin Micro (Choose EOA or Proteus style)**
- EOA style = D26E
- Proteus style = D26P

**DC 6 pin Micro (Available in EOA style only)**
- 1: Brown +24 VDC
- 2: White 0 VDC
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm Out
- 6: Pink Remote Shutoff

**DC 6 pin Micro (Available in Proteus style only)**
- 1: Brown +24 VDC
- 2: White 0 VDC
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm Out
- 6: Pink Remote Shutoff

**NOTE:** For Remote Shutoff, only “Solenoid Interrupt” and “Not Used” pin selection options available if selecting FD11 firmware.

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**TDC 5 pin Micro**
- 1: Brown +24 VDC
- 2: White 0 VDC
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm Out
- 6: Pink Remote Shutoff

**DC 5 pin Micro**
- 1: Brown +24 VDC
- 2: White 0 VDC
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm Out
- 6: Pink Remote Shutoff

**DC 5 pin Micro**
- 1: Brown +24 VDC
- 2: White 0 VDC
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm Out
- 6: Pink Remote Shutoff

**DC 5 pin Micro**
- 1: Brown +24 VDC
- 2: White 0 VDC
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm Out
- 6: Pink Remote Shutoff

**DC 5 pin Micro**
- 1: Brown +24 VDC
- 2: White 0 VDC
- 3: Blue Chassis Ground
- 4: Black Remote Reset
- 5: Grey Alarm Out
- 6: Pink Remote Shutoff

**NOTES:**
- Option A263 includes both a 6 pin AND a 3 pin Micro connector.
- AC options continue on next column.

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**NOTE:** Only 1 of the 3 options:
- 6: Pink Alarm N/U
- 5: Grey  Alarm Out
- 4: Black Remote Reset
- 3: Blue Chassis Ground
- 2: White AC Neutral
- 1: Brown +24 VDC

**NOTE:** Option A263 includes both a 6 pin AND a 3 pin Micro connector.

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**DEVICESNET PIN CONNECTOR WIRING OPTIONS**

DeviceNet 5 pin Micro = N2

1: Grey Drain
2: Red V +
3: Black V -
4: White CAN-H
5: Blue CAN-L

**NOTE:** N2 selection includes this preselected 4 pin Euro Style Micro Auxiliary Power Connector

DeviceNet 5 pin Mini = N1

1: Grey Drain
2: Red V +
3: Black V -
4: White CAN-H
5: Blue CAN-L

**NOTE:** Must select one Auxiliary Power Connector from below with an N1 selection:

**AUXILIARY CONNECTOR TYPE (DeviceNet Only)**

4 Pin Mini, US Style, * = unswitched

<table>
<thead>
<tr>
<th>Code</th>
<th>1: Black N/U</th>
<th>2: White N/U</th>
<th>3: Red N/U</th>
<th>4: Green/Yellow +24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1B</td>
<td>0 VDC</td>
<td></td>
<td></td>
<td>+24 VDC</td>
</tr>
<tr>
<td>F1C</td>
<td>0 VDC</td>
<td></td>
<td></td>
<td>+24 VDC</td>
</tr>
<tr>
<td>F1D</td>
<td></td>
<td></td>
<td>0 VDC</td>
<td></td>
</tr>
<tr>
<td>F1E</td>
<td>0 VDC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1F</td>
<td>+24 VDC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1G</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1J</td>
<td></td>
<td></td>
<td></td>
<td>+24 VDC</td>
</tr>
</tbody>
</table>

**4 Pin in Mini, Euro Style, * = unswitched**

<table>
<thead>
<tr>
<th>Code</th>
<th>1: Brown N/U</th>
<th>2: White N/U</th>
<th>3: Blue N/U</th>
<th>4: Black N/U</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1H</td>
<td></td>
<td></td>
<td></td>
<td>+24 VDC</td>
</tr>
</tbody>
</table>

**ETHERNET PIN CONNECTOR WIRING OPTIONS**

4 Pin Micro Power Connector (Male) = E1U

1: Black N/U
2: White 0 VDC
3: Red N/U
4: +24 VDC

4 Pin Micro Communication Connector (Female)
1: White RX-
2: Green/Yellow RX+
3: Orange TX-
4: Red RX-

**NOTE:** The 4 pin female Micro Communication Connector (Female) is automatically preselected with either Mini option selection made.

**FIRMWARE OPTIONS**

**AC**
- FA11 (12 GPM)
- FA12 (12 GPM)

**DC**
- FD11 (6 and 12 GPM)
- FD12 (12 GPM)
- FD13 (12 GPM)
- FD14 (50 GPM)

**DEVICENET**
- FN11 (12 GPM)
- FN12 (12 GPM)
- FN13 (50 GPM)
- FN14 (12 GPM)
- FN15 (12 GPM)
- FN16 (12 GPM)
- FN17 (12 GPM)
- FN18 (6 and 12 GPM)
- FN19 (23 LPM - CPH option only)
- FN20 (12 GPM)
- FN21 (12 GPM - Drawback Cylinder option only)

**ETHERNET**
- FE11 (12 GPM)
- FE12 (12 GPM - E1C connector only)
- FE13 (12GPM - E1C connector with dual temperature only)
- FE14 (12 GPM - E1C connector with dual temperature and dual temperature only)

**NOTE:** The 4 pin female Micro Communication Connector (Female) is automatically preselected with either Mini option selection made.

**DPL FACTORY / USER SETTINGS**

**Factory Standard Settings**

**User Settings**

**OPTIONS**

No Options Selected = N
Rotate Cover 180 Degrees = X
Rotate box 180 degrees for top feed installation = Y
External Flow Switch = F
Rev Polarity (+0VDC Ground) = R
Temp Probe on Supply Leg = S
High Temperature (200°F) = T
DeviceNet Firmware Mod = D
Dual Temperature (E1C connector only) = DT
Ethernet EIP Configuration (2 bytes in, 4 bytes out) = E
Drawback Cylinder = C
Poppet Style Check Valve = V1
Air Operated Shut-Off Valve = V2
2-3/4" Ball Valves (1/4 turn) installed on supply and return legs = V3
Reverse Valve Positions = RV
CoolPoint Flow Meter (model CP2-V5-N7-C16) = CPH
Auxiliary Connector in upper L location = CUL
DIMENSION DRAWING

6 AND 12 GPM UNIT

50 GPM UNIT

23 LM DPL WITH CPH OPTION

UNIT PRESSURE DROP CHART

NOTE: Cables for all versions are available. See product manuals for details.