The Series DFS Low Limit Freeze Protection Switch protects cooling coils in air handler systems by preventing frost build up on the coils. By sensing the lowest temperature along any 1 section of capillary, the DPDT manual or automatic reset relays signal the building management system, as well as cut off the fan. Set points can be adjusted as low as 34°F (1°C) utilizing the visual set point indicator and set point screw. The Series DFS includes mounting clips for easy installation.

**Series DFS Low Limit Freeze Protection Switch**

**Description:**
- **Temperature Switches:**
  - **Mechanical**
  - **Low Limit Freeze Protection Switch**
- **Temperature along any 1 section of capillary, the DPDT manual or automatic reset relays**
- **Signal:** Building management system, cut off the fan
- **Adjustable Range:** 34°F (1°C) to 70°F (21°C)

**Specifications:**
- **Temperature Limit:** Operating: -60 to 160°F (-51 to 71°C)
- **Sensing Element:** 300°F (149°C) max.
- **Switch Type:** DPDT snap acting.
- **Electrical Ratings:**
  - **Inductive:** 14 FLA, 84 LRA, 3/4 hp @ 120 VAC; 12 FLA, 72 LRA, 2 hp @ 240 VAC
  - **Pilot Duty:** 720 VA max. @ 120 to 600 VAC; 144 VA max. @ 24 VAC
- **Reset Action:** Manual or automatic.
- **Adjustable Range:** 34 to 70°F (1 to 21°C)
- **Deadband:** 4.5°F (2.5°C), fixed.
- **Agency Approvals:** cUL, UL.

**Price Table:**

<table>
<thead>
<tr>
<th>Model</th>
<th>Reset Action</th>
<th>Capillary Length</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFS-DA20</td>
<td>Automatic</td>
<td>20' (609 cm)</td>
<td>$155.00</td>
</tr>
<tr>
<td>DFS-DM10</td>
<td>Manual</td>
<td>10' (305 cm)</td>
<td>$119.00</td>
</tr>
<tr>
<td>DFS-DA10</td>
<td>Automatic</td>
<td>10' (305 cm)</td>
<td>$118.00</td>
</tr>
</tbody>
</table>

** Brands and Models:**
- **Mercoid**
  - **DA-7035N**
  - **Temperature Switches**
  - **Bulb and Capillary, Inert Gas Fill**

**Features:**
- **Visible on/off indication**
- **Inert gas activated Bourdon tube**
- **Snap action switch standard**
- **Repeatability:** ± 1% of full-scale.
- **Deadband:** Adjustable from minimum in model chart to full range. Optional low fixed deadband.
- **Capillary:** 6 ft (1.8 m) standard. Ranges 1N to 7N, and 10N: copper. Ranges 8N, 9N, 11N: 304 SS.
- **Set Point Scale:** Indication in °F and °C.
- **Process Connection:** 3/4” male NPT. Other sizes available.
- **Mounting Orientation:** Vertical and level.
- **Set Point Adjustment:** External knobs for set point and reset point.
- **Weight:** 5 lb (2.3 kg).

**General Specifications:**
- **Wetted Material:** Vapor-filled copper capillary, tin-plated, 10’ or 20’.
- **Housing Material:** Plated steel case, painted steel cover, plastic set point window.
- **Pressure Limit:** 300 psi (20.6 bar).
- **Operating Range:** -60 to 160°F (-51 to 71°C).
- **Enclosure Rating:** General purpose. Optional weatherproof and explosion-proof.
- **Repeatability:** ± 1% of full-scale.
- **Switch Type:** SPDT snap switch.
- **Electrical Connections:** Screw terminals.
- **Conduit Hub:** 7/8” (22.23 mm) hole for 1/2” (12.7 mm) conduit.
- **Bulb and Capillary:** Inert gas fill.

**Price List:**

<table>
<thead>
<tr>
<th>Model</th>
<th>Range °F</th>
<th>Min. Temp. °F</th>
<th>Min. Deadband °F</th>
<th>Min. Insertion Depth”</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-7035-153-1N</td>
<td>40 to 50</td>
<td>23 (13)</td>
<td>2-7/8 (73)</td>
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<td>$619.40</td>
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<tr>
<td>DA-7035-153-3N</td>
<td>0 to 35</td>
<td>25 (14)</td>
<td>2-7/8 (73)</td>
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<td>$619.40</td>
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<tr>
<td>DA-7035-153-4N</td>
<td>15 to 50</td>
<td>26 (14)</td>
<td>2-7/8 (73)</td>
<td></td>
<td>$619.40</td>
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<tr>
<td>DA-7035-153-5N</td>
<td>25 to 65</td>
<td>41 (23)</td>
<td>2-7/8 (73)</td>
<td></td>
<td>$525.40</td>
</tr>
<tr>
<td>DA-7035-153-7N</td>
<td>40 to 120</td>
<td>42 (23)</td>
<td>2-7/8 (73)</td>
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<td>$525.40</td>
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<tr>
<td>DA-7035-153-8N</td>
<td>50 to 150</td>
<td>42 (23)</td>
<td>2-7/8 (73)</td>
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<td>$525.40</td>
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<tr>
<td>DA-7035-153-9N</td>
<td>60 to 250</td>
<td>42 (23)</td>
<td>2-7/8 (73)</td>
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<tr>
<td>DA-7035-153-10N</td>
<td>75 to 350</td>
<td>40 (23)</td>
<td>2-7/8 (73)</td>
<td></td>
<td>$525.40</td>
</tr>
</tbody>
</table>

**Notes:**
- Items are net priced and are not subject to any discount.
- Prices are in USD, $.
- Optional LRA, 2 hp @ 120 Vac.
- Pilot Duty: 720 VA max. @ 120 to 600 VAC; 144 VA max. @ 24 VAC.
- Specifications vary by model.

**Contact:**
- DWYER INSTRUMENTS, INC. | www.dwyer-inst.com

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**Image Descriptions:**
- **Series DFS Low Limit Freeze Protection Switch Diagram**
- **Temperature Switches Chart**
- **Mercoid DA-7035N Temperature Switches**

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**Insertion depth can be increased through use of bulb supports or wells. Consult factory.**

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**Series DA-7035N Temperature Switches include the same time-proven switching mechanism used in our Series DA pressure switches. Bourdon tube assures high sensitivity and long life. Fully adjustable deadband makes units suitable for a wide range of control applications. Visible, calibrated dial and external adjustments make changing setpoints simple and fast.**