Welded Construction

External Mount Pressures to 1000 psi (69 bar) at Temperatures to 750°F (400°C), Optional Explosion-Proof Enclosures, Hermetically Sealed Switches

Long life and reliable operation is inherent in the design of the 201 series. The heavy duty welded carbon steel chamber provides a control to operate up to 1000 psi (69 bar) and process temperature up to 750°F (400°C), 400°F (205°C) at the electrical head assembly. The use of an external magnet reduces the possibility of magnetic particle build up inside the armature and subsequent loss of operation as may occur with the internal magnet repulsion design. Choice of construction provides equipment suitable for specific gravity as low as 0.60. Electrical requirements are met by use of hermetically sealed snap action or mercury switches in a variety of actions including SPST, SPDT, DPDT and DPST arrangements. Optional circuits are available for low current/voltage DC; high current DC; or high temperature applications. Check the current chart for the switch best suited for your application. Standard process connections are combination 1” NPT and 1” socket weld hubs. Flanged connections are offered as an option.

APPLICATIONS
Refineries, chemical plants, power generating stations, water treatment plants, mixing systems, scrubbers, accumulators, condensate recovery, industrial tanks and vessels.

<table>
<thead>
<tr>
<th>Switch Level Change</th>
<th>Single Stage Operation</th>
<th>Switch Level Change</th>
<th>Two Stage Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN SP GR 0.6</td>
<td>6/34 (25.4 mm)</td>
<td>MIN SP GR 0.75</td>
<td>7/14 (22 mm)</td>
</tr>
<tr>
<td>600 psi (41 bar)</td>
<td>3/4 (19 mm)</td>
<td>1000 psi (69 bar)</td>
<td>3/4 (19 mm)</td>
</tr>
<tr>
<td>100°F (38°C)</td>
<td>400°F (205°C)</td>
<td>750°F (400°C)</td>
<td>3/4 (19 mm)</td>
</tr>
<tr>
<td>1.0</td>
<td>3/4 (19 mm)</td>
<td>1.0</td>
<td>3/4 (19 mm)</td>
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<tr>
<td>0.6</td>
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<td>100 °F (38°C)</td>
<td>1.0</td>
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<td>1.0</td>
</tr>
<tr>
<td>NPT/socket weld hubs</td>
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<tr>
<td>(flanged)</td>
<td></td>
<td>(flanged)</td>
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</tr>
</tbody>
</table>

**A** is adjustable by 1”.

**A** is not adjustable.

SPECIFICATIONS

C1-60: Minimum specific gravity 0.60. Process pressure 600 psig (41 bar) at 100°F (38°C), 500 psig (34 bar) at 750°F (400°C).*

C1-75: Minimum specific gravity 0.75. Process pressure 1000 psig (69 bar) at 100°F (38°C), 750 psig (52 bar) at 750°F (400°C).*

*Heat fins (HF) and/or high temperature switches should be considered for process temperatures above 500°F (260°C).

Switch Type: Snap action or mercury. See charts A and B.

Electrical Rating: See charts A and B.

Wiring Connections: G, WT or E enclosure, terminal block. EV enclosure 12” (460 mm) leads.

Process Connections: Combination 1” NPT/socket weld hubs or flanges. See chart C.


Weight: 201, 27 lb (12.3 kg); 203, 37 lb (17 kg); 204, 44 lb (20 kg).

Suggested Specifications

Liquid level control shall be 201 (203) (204) Series with combination 1” NPT/socket weld hubs (flanged) process connections. Chamber shall be welded suitable for operation at 1000 psig (69 bar) at 100°F (38°C), 750 psig (52 bar) at 750°F (400°C) at a minimum specific gravity of 0.75; or, 600 psig (41 bar) at 100°F (38°C), 500 psig (34 bar) at 750°F (400°C) at a minimum specific gravity of 0.60.

Circuits shall be (hermetically sealed) snap action (mercury) switch (SPST) (SPDT), (DPDT). Enclosure shall be general purpose (weatherproof) (explosion-proof) (explosion-proof - vapor proof). Switch mechanism shall be gravity return and shall be activated by a stainless steel float.
### Chart A - Electrical Circuits and Ratings

#### Options

- **HF**: 12

#### Welded Chamber Construction

- **C1 60**: Refer to Chart C for pressure/temperature ratings.
- **C1 75**: Carbon steel body. Minimum specific gravity 0.60 side/bottom process connections. Combination 1 NPT/socket weld hub.

#### Welded Chamber Construction with Flanged Process Connections

- **C1 60**: Refer to Chart C below for pressure/temperature ratings.
- **C1 75**: High temperature snap switch. Continuous rating 800°F (425°C).

#### Enclosure

- General purpose, NEMA-1. Weatherproof, NEMA-3R, 4, 4X.

### Chart B - Electrical Circuits and Ratings

#### Switch Type

- **SP-ST**: Open on level FALL
- **SP-ST**: Open on level RISE
- **SP-DT**: One switch
- **SP-DT**: Two switches E.I.*
- **SP-DT**: Two switches E.I.*
- **DP-ST**: Two switches E.I.*
- **DP-ST**: Two switches E.I.*
- **SP-DT**: One switch
- **SP-DT**: Two SP-DT switches
- **SP-DT**: One switch
- **SP-DT**: Two SP-DT switches
- **DP-ST**: Two SP-DT switches
- **SP-ST**: One switch
- **SP-ST**: Two SP-ST switches
- **DP-ST**: Two SP-DT switches

#### Electrical Ratings in AMPS

- AC: 10, 15, 20, 25, 30, 40, 50, 60
- DC: 10, 15, 20, 25, 30, 40, 50, 60

#### Ordering Code

- **129V**: 120V AC
- **240V**: 240V AC
- **125V**: 125V DC
- **250V**: 250V DC

#### Minimum Specific Gravity

- **1.000 psi 750 psi**: 1
- **600 psi 500 psi**: 1
- **300 psi 200 psi**: 0.75
- **150 psi 100 psi**: 0.6

### Chart C

#### Series

- **201**: 1 NPT
- **203**: 1 NPT
- **203**: 3 NPT
- **204**: FLANGED
- **204**: FLANGED
- **204**: FLANGED
- **204**: FLANGED
- **204**: FLANGED

#### Mounting Style

- **UL**: UL Listed
- **CSA**: CSA Certified

#### Minimum Specific Gravity

- **1.000 psi 750 psi**: 1
- **600 psi 500 psi**: 1
- **300 psi 200 psi**: 0.75
- **150 psi 100 psi**: 0.6

#### Pressure Rating at

- **38°C 100°F**: Minimum flange pressure
- **400°C 750°F**: Maximum flange temperature

#### Flange Class

- **150#**: 150# flanges side/bottom process connection.
- **300#**: 300# flanges side/bottom process connection.
- **600#**: 600# flanges side/bottom process connection.

#### Order Code

- **129V**: 129V DC
- **240V**: 240V DC
- **125V**: 125V DC
- **250V**: 250V DC

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