**Top Mount-Displacer Type**

**Single or Two Stage, Fixed or Adjustable Deadband, Hermetically Sealed Switches, For Pumps or Alarms**

The most versatile liquid level controls in our line, displacer controls can be used to trigger alarms, provide shutdown or operate pumps.

**Operation:** Mercoid® Displacer Controls use displacers that do not float on the surface of liquids, but are suspended on a coil spring. They work on the principle that submerged solids weigh less in liquids, and as the liquid level rises and their weight decreases, the tension on the spring by which they are suspended is decreased. This allows the spring to move the cable and armature upward, actuating the hermetically sealed switches. Because they work on a different principle than float type liquid level controls, displacers are not affected by turbulence, or pressure, and are excellent for applications with viscous or dirty liquids.

**Dimensions are based** on porcelain displacers with 4" minimum flange type control. All dimensions are approximate and will vary depending on specific gravity, temperature, displacer material and size. Critical dimensions must be verified with the factory before placing order.

**Standard Construction:** Porcelain displacers, 10 foot 316SS cable and stops, 4" 125# CI flange: for operation in specific gravities as low as 0.5 and a maximum temperature of 200°F (93°C). For special conditions, other choices include: 316SS displacers: longer cable: monel or hastalloy cable and stops: other flange sizes, materials or pressure ratings, or 3/4" NPT top connection in lieu of flange.

**APPLICATIONS**

Oil refineries, chemical plants, power generating stations, pumping stations, sanitary/waste water facilities, sumps and open or closed tanks and vessels.

**SPECIFICATIONS**

- **Temperature Rating:** –20°F (–29°C) to 200°F (93°C).
- **Switch Type:** Snap action or mercury.
- **Electrical Rating:** See charts A and B.
- **Wiring Connections:** G, WT or E enclosure, terminal block. E enclosures, 18" (460 mm) leads.
- **Process Connection:** Top mount flange.
- **Enclosures:** G, painted steel and aluminum. WT, painted steel, aluminum and neoprene. E, aluminum. EV, aluminum, neoprene.
- **Wetted Parts:** Porcelain and 316SS standard. 316SS optional.
- **Weight:** All types with G or WT enclosure and 49 125# CI flange approximately 28 lb (12.7 kg). E and EV enclosure approximately 32 lb (14.5 kg).

**Suggested Specification:**

Liquid level control shall be top mounted for direct insertion into tank or sump. Operation shall be single stage with fixed (A190), adjustable (B190) deadband, or two stage for high and low alarm (195-4) or for two pumps (195-6). Circuit shall be (SPST) (SPDT) or (DPDT) (hermetically sealed) snap action (mercury) each stage. Control shall include 10 ft. SS cable porcelain (316SS) displacers and 4" flanges.
MODEL CHART – SERIES 190

EXAMPLE: How to order (see model chart)

EXAMPLE: Top mounted single stage, displacer type liquid level control. Watertight. NEMA-4 enclosure. SPDT snap action switch, fixed deadband 3/4" (15 mm) at 1.0. Specific gravity. Must be specified on order. Maximum operating temperature 200°F (93°C). With 10 ft. SS cable and porcelain displacers, and 4° 125# cast iron flange. A190-WT-7810-P-A-1.0-2

DISPLACERS
Porcelain displacers. Not suitable for non-vented steam systems.

CABLE LENGTH
16 ft. 316SS cable and stops (approx. 3 mtrs).
15 ft. 316SS cable and stops (approx. 4.5 mtrs).
20 ft. 316SS cable and stops (approx. 5 mtrs).
25 ft. 316SS cable and stops (approx. 7.5 mtrs).
30 ft. 316SS cable and stops (approx. 9 mtrs).

SPECIFIC GRAVITY
1.0 Specific gravity. Operating specific gravity must be specified on order, from .5 to 1.2

CONSTRUCTION
A190 – AA190
B190 – BB190

ENCLOSURES
G WT E EV

CIRCUITS:
SINGLE STAGE
A190 – AA190
B190 – BB190

TWO STAGE
195–4, 6
A195–4, 6

FLANGE
2 Mounting flange. 4° 125# cast iron. Other flanges available. See Chart 5.
0 No flange. 3/4” male NPT.

CALL TO ORDER: U.S. Phone 219 879-8000 • U.K. Phone (+44) (0)1494-461707 • Asia Pacific Phone 61 2 4272-2055

**Resistive
Available on special order. Change 1st digit in Ordering Code from 4 to 5 or 7 to 8

†0 Amp inductive (Polarized) at 125 VDC
‡Available on special order. Change 1st digit in Ordering Code from 4 to 5 or 7 to 8

-820 becomes -5820, -7810 becomes -8810, etc.
** Resistive

ELECTRICAL RATINGS IN AMPS

ORDERING CODE
120V 240V 440V 30V 125V 250V

A190 – AA190
B190 – BB190

195 – 4, 6
A195–4, 6

-4810 -4810 -4810 -4810 -4810 -4810
-4815 -4815 -4815 -4815 -4815 -4815

-9810 -9810 -9810 -9810 -9810 -9810
-9815 -9815 -9815 -9815 -9815 -9815

-7810 -7810 -7810 -7810 -7810 -7810
-7815 -7815 -7815 -7815 -7815 -7815

-06HM -06HM -06HM -06HM -06HM -06HM
-10HM -10HM -10HM -10HM -10HM -10HM

CALL TO ORDER: U.S. Phone 219 879-8000 • U.K. Phone (+44) (0)1494-461707 • Asia Pacific Phone 61 2 4272-2055

**Resistive