



SERIES 102 LIQUID LEVEL CONTROLS

INSTALLATION AND OPERATING INSTRUCTIONS

OPERATING CHARACTERISTICS

When the float rises to the operating point, the mercury switch or switches are actuated by the mutual attraction between a magnetic plunger attached to the float within the float chamber and a magnet attached to the switch operating assembly. When the float drops, the magnetic plunger is moved out of the field of the magnet on the switch operating assembly and the switch or switches are restored to their original position by gravity.

The magnetic plunger attached to the float moves within a tube within the switch enclosure. The switch unit is mounted on the tube.

SPECIFICATIONS

MINIMUM SPECIFIC GRAVITY	MAX. PRESS. PSIG.	MAX. TEMP. °F.	MINIMUM LIQUID LEVEL CHANGE (WATER)	MATERIAL FLOAT CHAMBER	SPECIFY CODE
0.6	300	425°	5/8"	Cast Iron*	C-60
0.6	400	425°	5/8"	Steel	C1-60
0.6	400	425°	5/8"	Stn. Steel	C2-60

*Not for use with lethal or flammable substances either liquid or gaseous.

AVAILABLE CONSTRUCTION

ALL TYPES — STAINLESS STEEL REMOVABLE FLOAT AND TRIM

General Purpose (NEMA 1): Type 102G. For indoor service and other general applications. Switch assembly is enclosed in a heavy gauge steel case, finished in charcoal gray. 3/4" NPT conduit connection, can be rotated 360° to facilitate wiring.

Weather Resistant (NEMA 2, 3): Type 102W. For outdoor service and other applications. 3/4" NPT conduit connection, can be rotated 360° to facilitate wiring. Drain hole in case bottom. Neoprene gasketed cover.

Explosion-Proof (Class 1, Group C and D) (NEMA 7) Class 1, Group E, F and G (NEMA 9, 9A). Type 102E. For hazardous locations. 3/4" NPT conduit connection, can be rotated 360° to facilitate wiring.

Vapor-Proof—Explosion-Proof enclosures are identified by the letters "EV" in type number as in 102EV.

SPECIAL FEATURES

WIDE DIFFERENTIAL: Identified by the letter "D" in type number as in 102GD. Single stage only. Provides approximately double the fixed level change between "on" and "off" switch operation.

SEMI-AUTOMATIC with manual reset. Identified by the letters "RU" after type number. Example: 102G-RU. Operates automatically on level FALL only. Manual reset required on level RISE.

CIRCUITS AND ELECTRICAL RATINGS

MERCURY SWITCH CONTACTS OR SNAP-ACTION CONTACTS

SWITCH TYPE	SWITCH ACTION	ELECTRICAL RATINGS IN AMPS					ORDERING CODE SINGLE STAGE	TWO STAGE	
		120V AC	240V	440V [†]	125V DC	250V		LOWER	UPPER
Mercury Contacts	SP-ST Open on level FALL	10	5	3‡	10	5	-4821	-4821	-21
	SP-ST Open on level RISE	10	5	3‡	10	5	-4820	-4820	-20
	SP-DT One switch	4	2	1‡	4	2	-4810	-4810	-10
	SP-DT Two switches E.I.*	10	5	3‡	10	5	-4815	-4815	-15
	DP-ST Two switches E.I.* Open on level FALL	10	5	3‡	10	5	-4813	-4813	-13
	DP-ST Two switches E.I.* Open on level RISE	10	5	3‡	10	5	-4814	-4814	-14
	DP-DT Two SP-DT switches	4	2	1‡	4	2	-4806	-4806	-06
Snap-Action Contacts	SP-DT One switch	12	5	3‡	0.5**	0.25**	-7810	-7810	-10
	DP-DT Two SP-DT switches	12	5	3‡	0.5**	0.25**	-7806	-7806	-06
	DP-DT Two SP-DT switches	10	3		10‡	3‡	-9806	-9806	-06
	SP-DT One switch	10	3		10‡	3‡	-9810	-9810	-10

*Electrically Independent
‡10 Amp Inductive (Polarized) at 125V DC—
for temperature limits.

[†]Available on special order. Change 1st digit in Ordering Code from 4 to 5 or 7 to 8 —
i.e. -4820 becomes -5820; -7810 becomes -8810; etc.
**Resistive

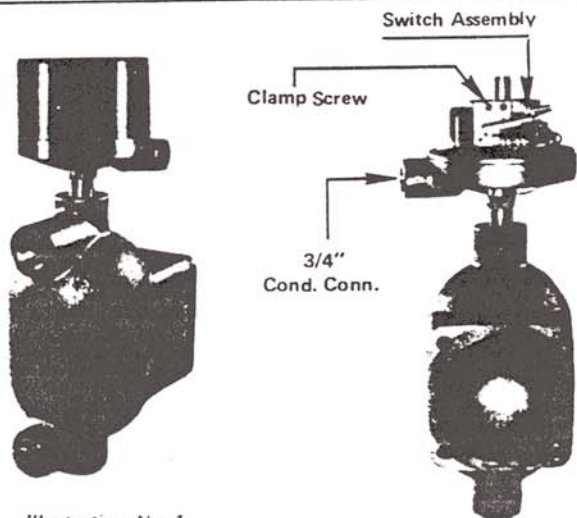


Illustration No. 1

Dimensions
See reverse side
of this sheet

Illustration No. 2

Note. Cold shock or water hammer must be avoided, as this condition may damage the float and prevent proper operation of the control.

INSTALLATION

LOCATION — MOUNTING

Select location recommended by equipment manufacturer. Use 1" pipe and mount all controls **VERTICALLY** and be sure that control switch mechanism is **LEVEL**.

WIRING

Wire in accordance with local electrical codes or follow equipment manufacturer's instructions.

Align wiring block to face conduit opening and tighten **CLAMP** screw of switch assembly.

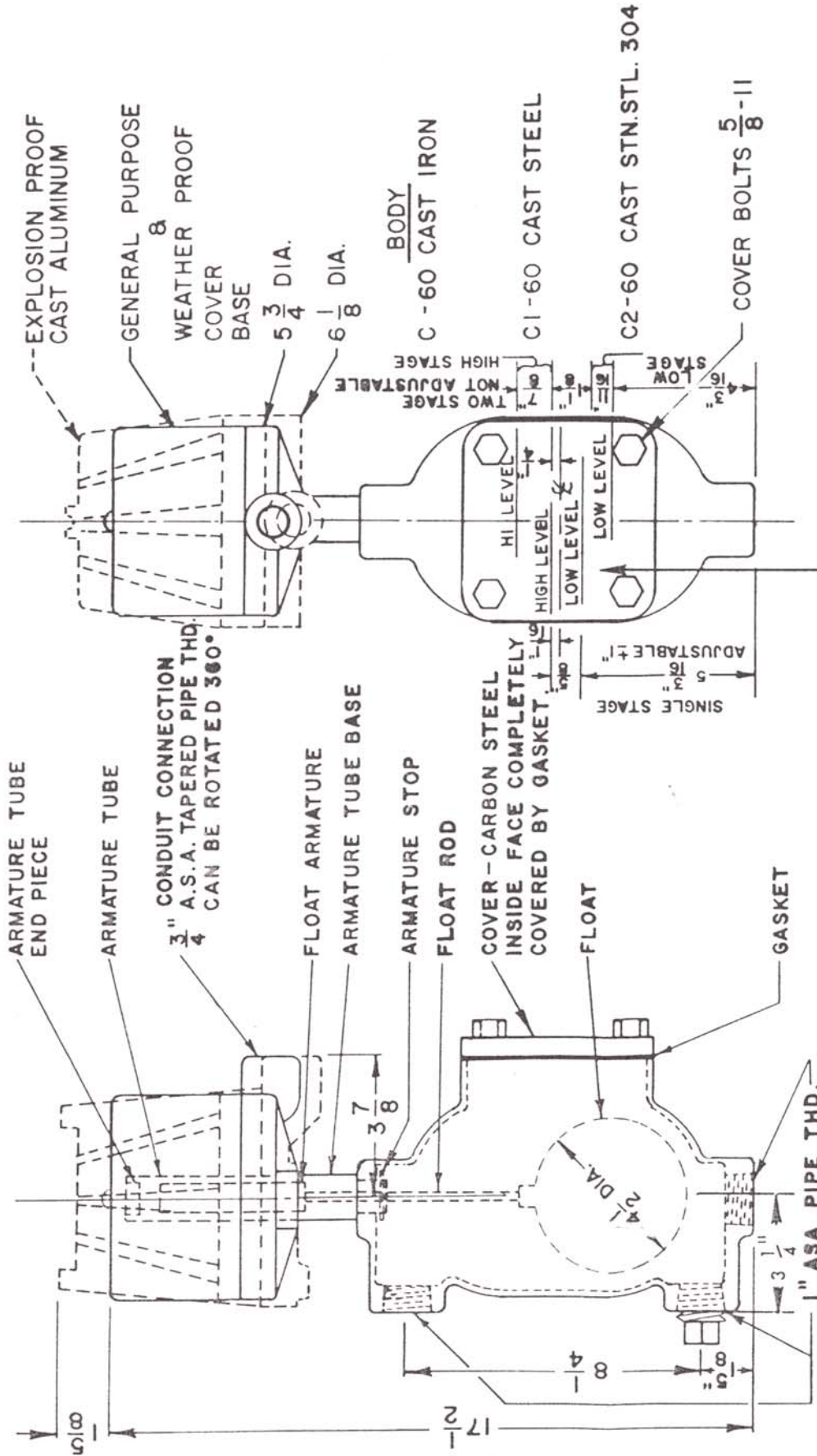
The 3/4" NPT conduit connection (on all types) can be rotated 360° to facilitate wiring.

Do not overload electrically. See rating stamped on nameplate.

LEVEL ADJUSTMENT

See page 2

TYPE 102



LEVEL ADJUSTMENT - SINGLE STAGE ONLY: The float travel between opening and closing of the circuit is approximately 5/8." Operating level can be raised approximately one inch by moving switch mechanism up to the top of the armature tube. It may also be lowered one inch by moving switch mechanism down to bottom of armature tube. To obtain either operation, loosen CLAMP screw (illustration No. 2) before raising or lowering switch assembly. Be sure to tighten CLAMP screw after the desired adjustment is made.

TWO-STAGE NOT ADJUSTABLE

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