



FLOAT LEVEL CONTROL SWITCHES

APPLICATION: MAGNETIC FLOAT SINGLE/MULTIPLE LEVEL CONTROL, SPST - SPDT

DESIGNATION: SERIES S-S10, S-S20, S-S30, S-X20, S-W50, A-11, A-21 & A-31

DESCRIPTION:

Floats, which contain embedded magnets, move up or down a guide tube with liquid level change. The flux density of the magnetic activates a dry reed switch encapsulated at precise dimensions in the guide tube.

The float switches provide accurate, reliable control which withstand vibration, shock, pressure and require no maintenance.

When properly used with BEC Solid-State relays, the reed switches offer in excess of one million cycles.

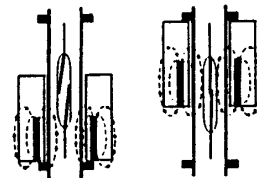
APPLICATIONS:

- * Monitor tank levels, process equipment.
* Activate pumps, motors and alarms.
* Pump-up, Pump-down operation.
* Operate interlocks, computer inputs.
* Side and vertical mounting variations.
* Combination level and temperature switching.
* Wide differentials to prevent excess cycling.
* Materials of brass, 316SS, PVC, polypropylene, teflon.

STANDARD FLOAT SPECIFIC GRAVITY

Table with 3 columns: SERIES, FLOAT MATERIAL, SPECIFIC GRAVITY. Rows include S-S10, S-S30, S-X20, S-W50, A-11, A-21, A-31.

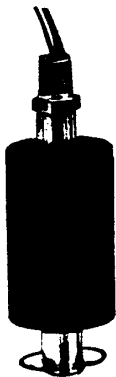
PRINCIPAL OF OPERATION



Changing liquid level moves magnetic float up or down the guide tube, actuating the SPST or SPDT reed switch.

WIDE AND EXTRA WIDE DIFFERENTIAL LEVEL CONTROLS

Suitable for reducing short cycle operation because of liquid turbulence.



1/2" Differential - Single reed switch, factory set or as specified. Available with 313 stainless steel float only.

1-1/2" Differential - Two reed switches. Upper switch latches on or off until level recedes 1-1/2". Lower switch unlatches and reverses the on/off condition. Requires a latch relay. See Data Chart "Figure C" for suitable Solid-State latching relays.

See BEC Bulletin B-1140 for suitable Solid-State latching relays.

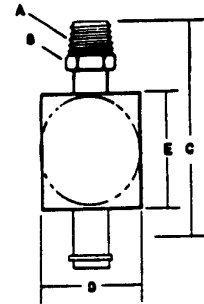
DATA CHART "FIGURE C"

Table with 10 columns: Series, Load AC @ 120/240 V, Material Stem, Material Float, Float PSI, Temp. of Water/Oil, NPT A, HEX B, C, D, F. Rows include S-W50, S-X20, and S-X20 with differentials.

Lead Length 24 Inches

Teflon coated stainless steel is available

SPST switch contacts



Series S-X20

S-W50

ADJUSTABLE LEVEL CONTROLS

Ideal for applications which require setting levels at time of installation

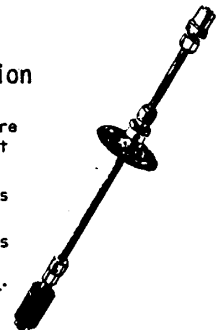
Single Point or Multi-Level Control Switches can be positioned by loosening a gland nut and sliding the entire control assembly up or down. Models shown can be adjusted approximately 10 inches; however, an extension kit enables adjustment limited only by good mechanical practice.

Ideal flexibility for applications that require setting levels at the time of installation or changing levels for process requirements, batching control, etc.

A sliding gland packing in the modified mounting fitting provides securing of the mounting stem and also acts as a pressure seal. Temperature limits shown below apply to fitting sliding gland. All-metal non-sliding glands are available for increased temperature and pressure ratings. Refer to Price List for dimensions/elec.

Buna-N Float: 0-180°F; 150 PSI

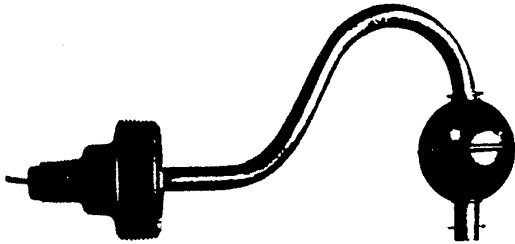
316SS Float: 0-300°F; 250 PSI @ 72°F, 125 PSI @ 300°F





SIDE MOUNTED LEVEL CONTROL

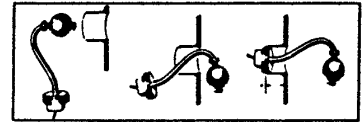
Installed at point of level indication



Suitable for larger vessels with inaccessible top or bottom mounting provisions. Bec Side-mounted level switches are inserted through a 2" NPT pipe boss in the tank wall.

Operating principle is identical with all BEC float level switches.

No linkage or cams exist. Larger insertion lengths are available.



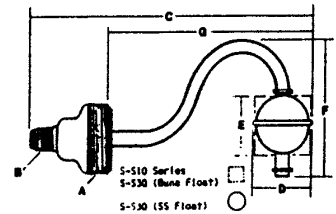
DATA CHART "FIGURE D"

Series	Load AC @ 120/240 V	Material Stem	Material Float	Float PSI	Temp. Of Water/Oil	A	B	C	D	E	F	G
S-510	50w	Brass (316SS)	Buna-N	160	180/230	2" NPT	1/2" NPT	9-3/4"	1-1/16"	1"	4-5/8"	7"
S-510	50w	316SS (Brass)	316SS	200	240	2" NPT	1/2" NPT	9-3/4"	1-1/16"	1"	4-5/8"	7"
S-530	15w (100w)	Brass	Buna-N	160	180/230	2" NPT	1/2" NPT	9-3/4"	1-7/8"	1-3/4"	4-5/8"	7"
S-530	15w (100w)	316SS	316SS	780	300	2" NPT	1/2" NPT	9-3/4"	2-1/16"	-	4-5/8"	7"

Lead length 24 Inches

SPDT contacts on S-530 only

Float reversible for NC or NO operation



LIQUID MULTI-LEVEL CONTROLS

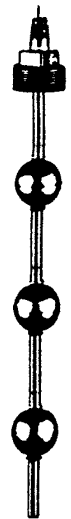
Monitor high, low and intermediate liquid levels

BEC LIQUID MULTI-LEVEL CONTROL SWITCHES can be assembled to monitor from two (2) to 40 control points, spaced as required, on a single tube length of 20 feet maximum.

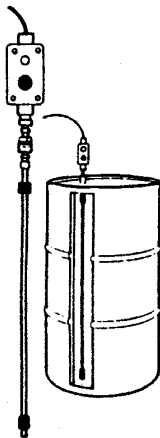
Each level is monitored with an individual reed switch positioned at a pre-specified dimension. A magnetic float opens or closes as liquid rises or falls.

Various material combinations of 316SS, Buna-N, Brass, PVC, etc., provide compatibility with corrosive and non-corrosive liquids.

Mounting is accomplished with 1/2" NPT, 1-1/4 or 1-1/2" MPT pipe plug fittings. Carbon steel or 316SS pipe flanges provide additional mounting options.



APPLICATION IDEA

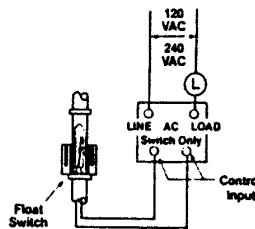


ELECTRICAL CHARACTERISTICS: Maximum Load

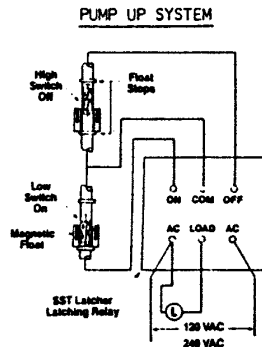
- Maximum Load: 15 and 100 Watts
- Voltage: 0 - 240 V AC/DC
- SPST Reed Switch: Reversible float for NC or NO operation
- SPDT " " : Optional 100 Watts @ 0-240 V AC/DC
- Lead Wires: 24 inches, 22 gauge stranded

SEE BEC BULLETIN B-1140 FOR SOLID-STATE CONTROL & LATCHING RELAYS

CONTROL RELAY



LATCHING RELAY



PUMP DOWN SYSTEM

Reverse ON & OFF Relay Terminal Wires.

