

**Low Water Cut-Offs – Mechanical
For Steam Boilers**

Series 150S



Low Water Cut-Off/Pump Controllers

- For commercial and industrial low or high pressure boiler applications
- For boilers of any steaming capacity
- Monel bellows provides corrosion resistance
- Snap action switches for high temperature service
 - 1 Single pole, single throw switch for pump control
 - 1 Single pole, double throw switch for low water cut-off and alarm actuation
- Optional features
 - Manual reset
 - 2 Single pole, single throw switches
 - 2 Single pole, double throw switches
 - Float block
 - BSPT threads
- Maximum pressure 150 psi (10.5 kg/cm²)
- For new electronic 150E Series see page 41

Model 150S-MD

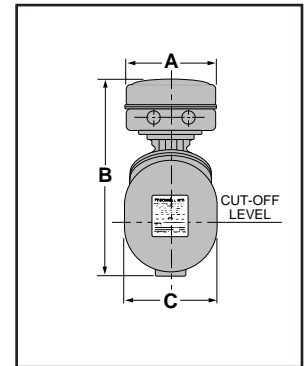
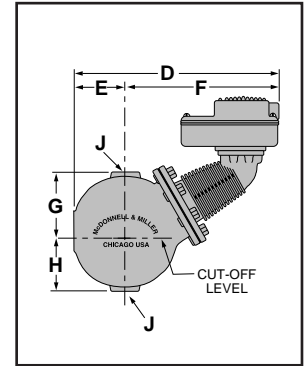
Maximum differential operation
– Prevents nuisance burner shutdowns in **low pressure** applications

- Maximum operating pressure 50 psi (3.5 kg/cm²)
- For additional information see page 56



Series 150S

with MERCURY FREE
Snap-Action
Switches



Electrical Ratings

Voltage	Pump Circuit Rating (Amperes)		Pilot Duty
	Full Load	Locked Rotor	
120 VAC	7.4	44.4	345 VA at
240 VAC	3.7	22.2	120 or 240 VAC

Alarm Circuit Rating (Amperes)	
Voltage	Amps
120 VAC	1
240 VAC	1/2

Ordering Information

Model Number	Part Number	Description	Weight lbs. (kg)
150S	171702	Combination low water cut-off/pump controller	24.7 (11.2)
150S-B	171903	150S w/float block	24.7 (11.2)
150S-B-M	172104	150S-B w/manual reset	24.7 (11.2)
150S-BMD	172002	150S w/float block and max. dif.	24.7 (11.2)
150S-BM-MD	172201	150S-BMD w/manual reset	24.7 (11.2)
150S-J	172601	150S w/BSPT threads	24.7 (11.2)
150S-MD	171802	150S w/maximum differential	24.7 (11.2)
150S-M	172702	150S w/manual reset	24.7 (11.2)
150S-M-MD	172802	150S-M w/maximum differential	24.7 (11.2)
150S-MJ	172901	150S-M w/BSPT threads	24.7 (11.2)
158S	178402	150S w/2 SPDT switches	26.3 (11.9)
158S-M	178502	158S w/manual reset	27.3 (12.4)
159S	178802	150S w/2 SPST switches	26.0 (11.8)

Dimensions, in. (mm)

A	B	C	D
5 7/8 (149)	12 17/16 (316)	6 (152)	13 1/4 (337)

E	F	G	H	J
3 5/16 (84)	9 15/16 (252)	4 1/8 (105)	3 7/16 (87)	1 NPT

BOILER CONTROLS

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BOILER CONTROLS

Low Water Cut-Off/Pump Controllers

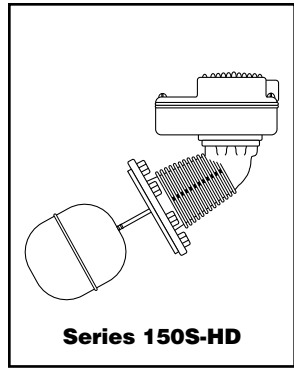
Series 150S & 157S Low Water Cut-Off/Pump Controllers

with
MERCURY FREE
Snap-Action
Switches



Replacement Head Mechanisms For Series 150, 150S, 157, 157S

For Model	Repl. Head Model No.	Part Number	Description	Weight lbs. (kg)
150	150S-HD or	173003	Head mechanism	11.0 (5.0)
150S	150S-M-HD	173203	150S-HD w/manual reset	11.0 (5.0)
157				
157S				
150 (MD)				
150S (MD)				
157 (MD)	150S-MD-HD	173103	150S-HD w/maximum differential	11.0(5.0)
157S (MD)	150S-M-MD-HD	173302	150S-HD w/manual reset and maximum differential	11.0(5.0)
157-RB-P				
157S-RB-P				
158	158S-HD or	178602	Head mechanism	12.5 (5.7)
158S	158S-M-HD	178702	158-S-HD w/manual reset	12.5 (5.7)
159				
159S	159S-HD	178902	Head mechanism	12.0 (5.7)



Head mechanisms include a gasket and bolts.
(S) in model number indicates snap switch.

Low Water Cut-Off/Pump Controllers

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Series 150S & 157S (continued)

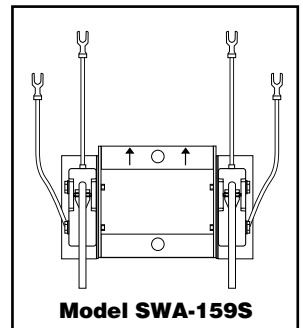
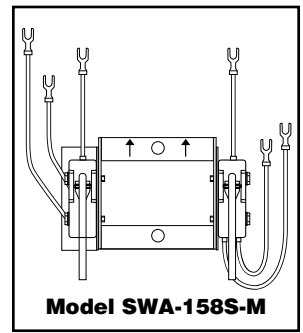
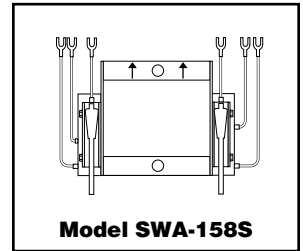
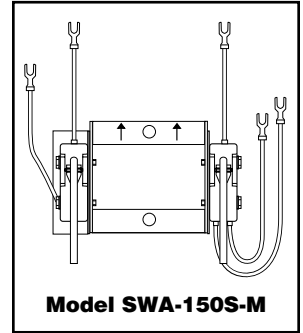
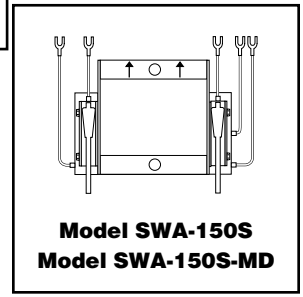
Low Water Cut-Off/Pump Controllers

IMPORTANT:

- Snap switches **must** be replaced as an assembly.
- We recommend complete head replacement to eliminate the need for field adjustment of the switch assembly.
- Series 150S and 157S Replacement Switch Assemblies are not interchangeable with Series 150 and 157 mercury switch controls.

Replacement Switch Assemblies For Series 150S and 157S

For Model	Repl. Switch Model No.	Part Number	Description	Weight lbs. (kg)
150S 150S-B 157S 157S-A 157S-P 157S-R 157S-RL	SWA-150S	310462	Snap-action switch assembly	0.5 (.23)
150S-B-M 150S-BM-MD 150S-M-MD 150S-M 157S-A-M 157S-M 157S-M-MD 157S-M-RB-P-MD 157S-RB-M 157S-RL-M 157S-R-M	SWA-150S-M	310463	Snap-action switch assembly w/manual reset	0.5 (.23)
150S-B-MD 150S-MD 157S-MD 157S-P-MD 157S-R-MD 157S-RB-MD 157S-RB-P-MD 157S-RD-MD 157S-RLS-MD	SWA-150S-MD	310464	Snap-action switch assembly for maximum differential models	0.5 (.23)
158S	SWA-158S	310468	Snap-action switch assembly for Model 158S	0.5 (.23)
158S-M	SWA-158S-M	310469	SWA-158S with manual reset	0.5 (.23)
159S	SWA-159S	310470	Snap-action switch assembly	0.5 (.23)



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Switch assemblies include a mounting bracket and color-coded terminal connection wires.

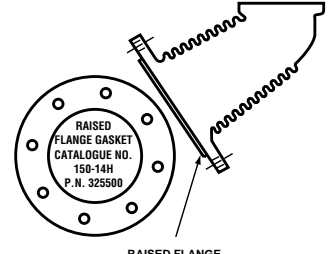
Low Water Cut-Off/ Pump Controllers

Series 150S & 157S (continued) Low Water Cut-Off/Pump Controllers

Components

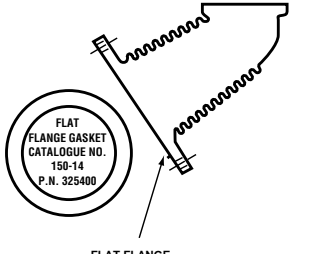
Item Number	Part Number	Model Number	Description	Weight lbs. (kg)
1	347900	SA150-106R	Bellows assembly	0.4 (.18)
2	347600	SA150-11	Float & rod	1.0 (0.5)
3	325500	150-14H	Head gasket for raised face flange head, 8 holes	0.5 (.23)
4	354106	EA-157-S	Short electrode for 157S-RBP	0.5 (.23)
5	354107	EA-157-L	Long electrode for 157S-RBP	0.5 (.23)
6	179150	PCH-G-A-2	Probe level control	2.7 (1.2)
7	326950	150-436	Cover	.435 (.19)

Series 150 Head Gasket and Casting



RAISED FLANGE

This new gasket, specifically designed for the Raised Flange Heads, may be used.



FLAT FLANGE

This gasket **must** be used on the Flat Flange Heads.



Low Water Cut-Off/ Pump Controllers

Series 150S & 157S (continued) Low Water Cut-Off/Pump Controllers



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BOILER CONTROLS

