



series 80M

PRESSURE CONTROLS

FIREYE TYPE 80M CONTROLS provide air flow proving and, high and low pressure interlocks for steam, air and non-corrosive liquids and gases. Air flow proving is provided by differential pressure control Type 80MB71 which closes its contact on pressure differential increase. It can be connected across the passes of a boiler and set to close its contacts when the pressure differential, caused by the air flowing through the boiler, is sufficient to indicate that the boiler is being adequately purged. Adjustment is internal to prevent accidental change of setting.

All other 80M controls provide high or low pressure

interlocks and are approved by Factory Mutual as pressure supervisory switches. High pressure interlocks open circuit when the pressure being supervised exceeds a pre-set safe maximum value. Low pressure interlocks open circuit when the pressure falls below a safe operating minimum. Adjusting screws are covered to prevent accidental change of setting. Pressure setting and switch action are readily visible without removing cover.

Contacts on all Type 80M controls are of the sealed mercury switch type to ensure reliable operation in industrial applications.

Specifications

TYPE	ACTION ON PRESS. DIFF. INCREASE	RANGE DIFF. INCHES W.C.		MAX. SURGE W.C.	ELECTRICAL RATING		OVERALL DIMENSIONS	
					115V AC	230V AC	DIA.	DEPTH
80MB71	Closes	-6.0 to + 6.0	.03	10	.3a	.15a	7"	3 3/4"
TYPE	ACTION ON PRESS. RISE	RANGE INCHES	DIFF. W.C.	MAX. SURGE P.S.I.G.	ELECTRICAL RATING		OVERALL DIMENSIONS	
80MA72	Opens	1.0-30.0	.6-1.0	20	6.0a	3.0aØ	7"	3 3/4"
80MB72	Closes	1.0-30.0	.6-1.0	20	6.0a	3.0aØ	7"	3 3/4"
TYPE	ACTION ON PRESS. RISE	RANGE P.S.I.G.	DIFF. P.S.I.G.	MAX. SURGE P.S.I.G.	ELECTRICAL RATING		OVERALL DIMENSIONS	
80MA73	Opens	1/8-20	1-20	30	10.0a	5.0a†	7"	2 1/2"
80MB73	Closes	1/8-20	1-20	30	10.0a	5.0a†	7"	2 1/2"
80MA75	Opens	1/4-60	2-1/2-60	80	10.0a	5.0a†	7"	2 1/2"
80MB75	Closes	1/4-60	2-1/2-60	80	10.0a	5.0a†	7"	2 1/2"
80MA76*	Opens	1-150	6-150	200	10.0a	5.0a†	7"	2 1/2"
80MB76*	Closes	1-150	6-150	200	10.0a	5.0a†	7"	2 1/2"
80MA77*	Opens	2-300	12-300	400	10.0a	5.0a†	7"	2 1/2"
80MB77*	Closes	2-300	12-300	400	10.0a	5.0a†	7"	2 1/2"

*Available on special order only.

Ø1/6 HP 115/230V

†1/4 HP 115/230V

Mounting

All Type 80M controls must be mounted in a vertical position. Type 80MB71 and 80MA&B72 controls must be mounted securely on a flat panel or wall surface. Pressure connections to the 1/8" I. P. S. tapings on the bottom should be made with copper tubing to avoid transmitting vibration. Type 80MA&B73-77 may be mounted directly on its 1/4" I. P. S. connection if the vibration is not excessive. If excessive vibration exists, the control should be independently mounted and the connection made with copper tubing. If steam over 15 PSIG is the pressure medium, a pigtail siphon must be used to prevent live steam entering the bourdon tube.

Wiring

All wiring should be done in accordance with the National Electric Code and all local regulations. Attach only flexible BX cable directly to the control case. If rigid conduit is used, insert a short piece of BX cable between the conduit and control case. The load on the control must not exceed that shown in the specifications for the control. If it does, a suitable interposing relay must be used.

Adjustments

Type 80MB71

1. When used as an air flow or purge proving switch, connect furnace pressure sampling line to front tapping on control and end of last pass sampling tube to rear tapping on control. Remove cover of control. Adjusting screw is centrally located in control. As pressure difference increases switch closes. Turning adjusting screw counter clockwise increases pressure required to close switch.

2. When used as a windbox pressure switch, connect windbox pressure sampling tube to front tapping on the control. The rear tapping is left open. Adjust as above.

Type 80MA&B72

Connect pressure sampling line to rear tapping on control. Loosen top screw on adjustment shield on right side of control case. Turn adjusting screw so that adjustment indicator stops at desired pressure. Replace adjustment shield.

Type 80MA&B73-77

Remove thumb screw and adjustment shield on lower right hand side of case (Figure 1). Two knurled adjusting screws are now exposed. The lower screw adjusts the pointer which indicates the lower limit of adjustment. Similarly the upper pointer which indicates the upper limit of adjustment. The difference between the setting of the upper and lower pointers is the differential adjustment. Do not attempt to force the control to operate at less than the minimum differential shown on the nameplate. After adjusting replace adjustment shield and tighten thumb screw.



FIGURE 1

Guarantee

We guarantee to replace or, at our option, repair any products or parts thereof (except electronic tubes, and cells) which are found defective in material or workmanship within one year from date of shipment. Our obligation with respect to such products or parts shall be limited to replacement or repair f.o.b. Cambridge, Mass.,

and in no event shall we be liable for consequential or special damages, or for transportation, installation, adjustment, or other expenses which may arise in connection with such products or parts. Note: Guarantee is void unless guarantee card (supplied with equipment) is filled out completely and mailed within 10 days of installation.



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