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Ajax



F. BAMFORD (INSTRUMENTS) LIMITED.

INSTALLATION OPERATING AND MAINTENANCE INSTRUCTIONS FOR THE "AJAX" RANGE OF AJ SERIES ELECTRIC FLOW INDICATORS FITTED WITH A STANDARD INDUSTRIAL SWITCHBOX



- Pressure ranges (7 models) covering 0.1– 220 BAR G. (2 – 3200 P.S.I.G.)
- Weather resistant enclosure
- Rugged construction, vibration and shock resistant
- Factory set or field adjustable
- Bellows or diaphragm sensing

The Bamford Ajax AJ series of Industrial Pressure Switches have been designed to provide automatic control and protection of plant and machinery where it is essential to monitor the pressure in pipes and tanks in systems such as hydraulic power packs, high pressure water and pneumatic lines, compressor cooling water circuits, lubricating oil lines and reservoirs. These devices are ruggedly constructed in bronze and utilize a weather resistant switch housing which contains a single pole double throw micro switch. Other switches can be supplied including an Intrinsically Safe version with silver plated noble metal contacts. They will operate over a wide temperature environment and can be mounted in any attitude without affecting performance. Two types of sensing element are available; either a metal bellows for high sensitivity, or a synthetic diaphragm for high over pressure resistance. The standard switch housing can be replaced by ATEX certified (See [leaflet XP2](#)) models on request.

1. For assembly and adjustment of the equipment please refer to the relevant General Arrangement Drawing.
2. Components to be incorporated into or used as replacement parts for the equipment shall be fitted by suitably trained personnel in accordance with the manufacturers documentation.

If the equipment is likely to come into contact with aggressive substances, then it is the responsibility of the user to take suitable precautions that prevent it from being adversely affected, thus ensuring that the type of protection provided by the equipment is not compromised.

Aggressive Substances: e.g. acidic liquids or gases that may attack metals, or solvents that may affect polymeric materials.

Suitable precautions: e.g. regular checks as part of routine inspections or establishing from the materials Data Sheets for its resistance to specific chemicals.

ENTRY INTO SWITCH HOUSING - NOTE: If already wired and in service, **ISOLATE ELSEWHERE BEFORE OPENING**.

The switchbox is tapped M20 x 1.5P, an appropriate approved cable gland must be used.

ELECTRICAL CONNECTIONS:






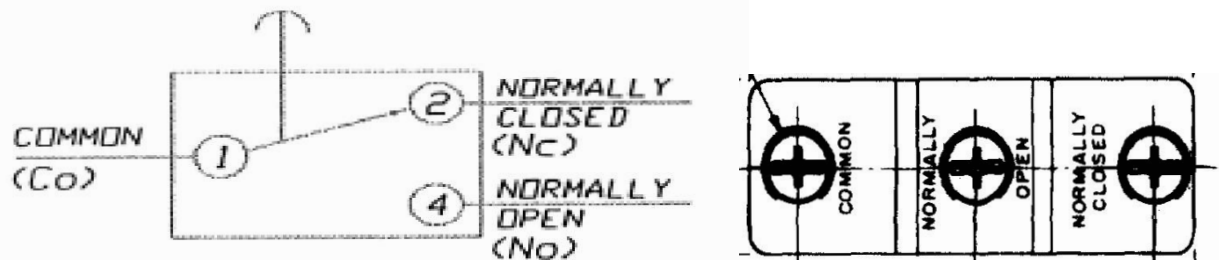
ELECTRICAL DATA	
CONTACT ARRANGEMENT	
S P D T	
-L74-	15A - 125, 250 OR 480 VAC, 2A - 600 VAC 1/8HP - 125 VAC; 1/4HP - 250 VAC 1/2A - 125 VDC; 1/4A - 250 VDC
-L288- -L306- -L315-	   
	16A 250V  T85 5E4

DIAGRAM OF CONNECTIONS



ADJUSTMENT: The following sequence should be adhered to for adjustment: -

Increase the pressure through the instrument to well above the required set point. Rotate the

The fluid should be pressurised to the desired operating pressure, the adjuster screw on the switch assembly should be rotated until the microswitch operates. The approximate switching position has now been reached and final adjustment can now be made. The procedure depends on if the switch is required to operate on a Rising or Falling pressure. If a rising pressure is required, the pressure should be reduced below the operating pressure and then built up SLOWLY until changeover of the switch occurs. Adjustment can then be made and the test repeated until the desired operating pressure is achieved. Conversely if the switch is required to operate on a falling pressure then the application should be pressurised to a point above the desired operating point and the pressure reduced until changeover of the Microswitch occurs.

Any adjustment can then be made and the process repeated until the desired operating point is reached.

Specifications

SETTING RANGES

Model No.	Range		Differential		Proof Pressure		Sensing Element
	Bar	LB/IN ² G.	Bar	LB/IN ² G.	Bar	LB/IN ² G.	
AJ/LP/1	0.1-0.7	2-10	0.3	5	20	300	Bellows
AJ/LP/2	0.7-3.5	10-50	0.3	7	20	300	Bellows
AJ/LP/3	3.5-9.6	50-140	0.7	10	20	300	Bellows
AJ/LP/4	9.6-17.2	140-250	1.4	20	20	300	Bellows

Pressure

Connections:

BELLOWS TYPE
 3/4" BSP parallel (male).
 Other connections available on request.

Maximum working temperature 95°C

Switch Housings:

Weather resistant

Conduit entry:

M20 x 1.5 pitch

Materials of construction

Wetted parts:

Manganese Bronze BS 2874 CZ114
 Stainless Steel 316
 Phosphor Bronze PB1 BS 2870

Switch Housing:

Aluminium Bronze BS EN 1982 AB2
 Gunmetal (I.S. Unit) BS EN 1982 LG2

SWITCH RATING (STANDARD)

VOLTS	DC		AC	
	RES	IND	RES	IND
30	2A	1A		
125	0.5A	0.02A	15A	5A
250	0.25A	0.02A	15A	5A
440	*	*	*	*

* Alternative switches may be fitted for 440 volts or intrinsically safe circuits.

