File E157180

Project 05CA07634

Issued: 2005-07-29

REPORT

on

INDUSTRIAL CONTROL EQUIPMENT

COMPONENT - MOTOR CONTROLLERS, FLOAT- AND PRESSURE-OPERATED

MA-TER SRL
PESSANO CON BORNAGO, MILANO, ITALY

D E S C R I P T I O N

PRODUCT COVERED:

USR, CNR - Open Type, Industrial Control Equipment, Component - Float and Pressure Operated Motor Controllers, Pressure Switches,

"XP7 Series":

- Model No. XP7, followed by 00, 01, 02, **05** may be followed by "No digit", A, R, may be followed by "No digit", -L.

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

- USR - Indicates investigated to United States Standard for Industrial Control Equipment, UL508 (Seventeenth Edition).
- CNR - Indicates investigated to Canadian National Standard for Industrial Control Equipment, C22.2 No.14-05

Note: USR = United States Standards - Recognized
CNR = Canadian National Standards - Certified

GENERAL:

The devices covered by this Report are pressure-operated single-pole switches intended for the direct command of single-phase circuit, indicated for use in steam generators and any pressure control systems, at a maximum operating ambient temperature of 85°C. This device has been subjected to 100,000 cycles of operation and it is intended for regulating use only. The pressure connection is made through an in-let 1/4 inch or 1/8 inch male thread connector provided on the housing of the device.

Since these devices are intended for use in steam generators and any pressure control systems, their actuation consists of a slow increase in the applied pressure until the actuating "off" pressure is reached and therefore opening the 1-NC power contacts (opening the Micro-Switch / Relay Coil Supply contacts and then opening the Relay Load Contact). The "off" pressure is adjustable, in the pressure range, acting on the regulation screw.

The contact will close if the applied pressure slow decrease under the "on" reset pressure value $P_{on} = P_{off} - P_{diff}$.

ILL. 1

RATINGS:

1. Electrical Ratings -

a) Micro-Switch / Relay Coil / Switch Supply (Tab-Terminals: 6c-6d):

- 125 V ac (15 A / 0.1 A - 100,000 cycles)

b) Relay Contacts / Pressure Switch Load Contacts (Tab-Terminals: 6a-6b):

- 125 V ac, Single-Pole, 15 A Resistive - 100,000 cycles

Refer to Ill. 1 for details.

2. Environmental Ratings -

- Operating Ambient Temperature - 85°C max

3. Operating Pressure Ratings -

a) Operating Pressure Range: 0.2 ÷ 6.0 Bars (2.9 ÷ 87.0 PSI)

b) Fixed Differential Pressure: 0.6 Bars (8.7 PSI)

c) Maximum Pressure: 6.5 Bars (94.3 PSI)

4) Hydraulic-Nipple - "Tightening Torque" Ratings:

a) Polymeric Nipple - 0.5 Nm (0.05 Kg m)

b) Metal Nipple / Metal Adapter - 8.8 Nm (0.90 Kg m)

NOMENCLATURE BREAKDOWN:

Model No.:	XP7	01	A	-L
	I	II	III	IV

I. Basic Pressure Switch (with Relay) Series, XP7

II. Switch Housing Base Materials

00 = Housing metal part constructed of Brass
01 = Housing metal part constructed of Stainless Steel
02 = Housing polymeric part constructed of R/C Plastic (QMFZ2)
05 = Brass / Polymeric Housing Base provided with an in-let "Rapid-coupling" connector

III. Pressure Control Means

No digit = Basic control means
A = Automatic control means
R = Adjustable control means

IV. Switch Supply (Micro-Switch / Relay-Coil) Electrical Ratings

No digit = 15 A, 125 / 250 Vac
-L = 0.1 A, 125 / 250 Vac