

RANCO

O Pressure Controls



Schneider
Electric™

"O" SERIES SINGLE AND DUAL PRESSURE CONTROL S



O17 Dual Pressure Control

Single Pressure Controls are classified into two basic types: high or low pressure. All O16 and O52 controls incorporate SPDT switches. Therefore, all models are made or break on rise or fall of pressure according to which terminals are selected. Where there is a requirement for automatic cycling to be prohibited, all models are available with manual reset. Low pressure controls trip the manual reset mechanism on a drop in pressure, and high pressure controls on a rise.

T.U.V. bellows are available on certain high pressure models. In this configuration the models incorporate a "bellows within a bellows", designed so that if the operating bellows develops a leak, the second bellows contains the refrigerant and shuts off the system. Braze connection versions are available with or without capillary.

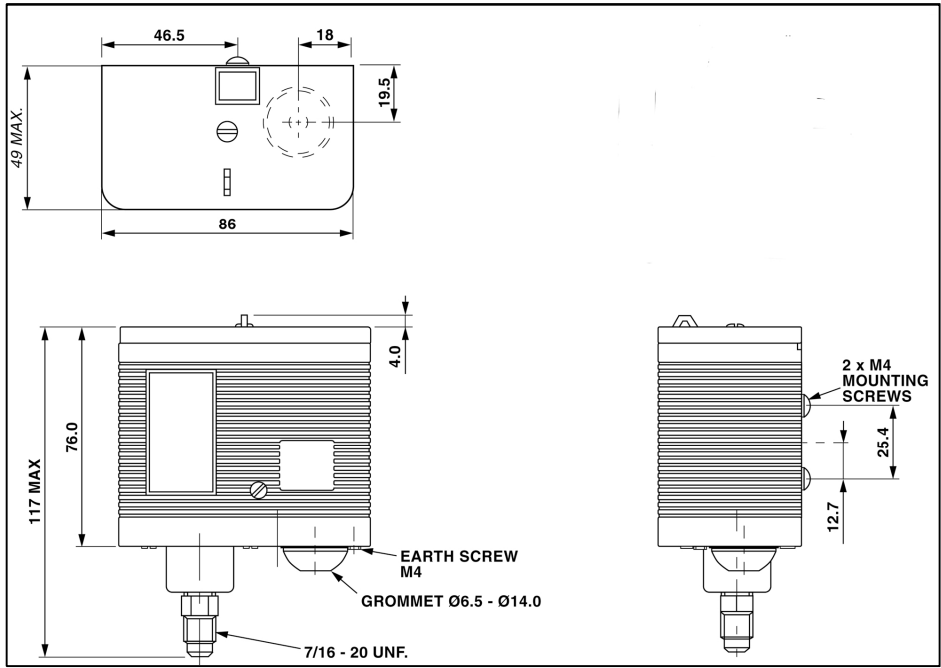
Pressure Specifications
Scale: p.s.i. and Bar (T.U.V. versions Bar only)
Pressure Connections: straight outlet male connection 7/16 - 20 UNF connect 1/4 female flare.

Dual Pressure Controls offer the combination of high and low pressure control, and/or limit functions, in one unit. These controls are available as standard or T.U.V. models. In either case, this range offers:

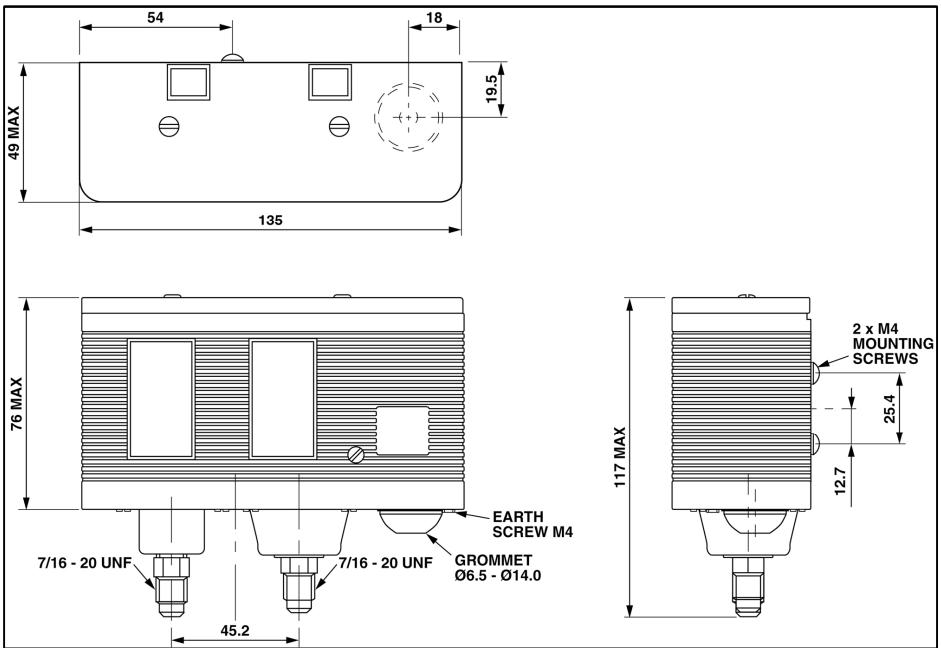
- automatic cycling on high and low pressure;
- manual reset high and low pressure;
- automatic low pressure cycling with manual reset high pressure limit;
- easy installation. Both high and low pressure functions operate one switch;
- the 4000 series Dual Signal Switch has an independent signal for both low and high pressure operation. The system clearly defines which side (low or high pressure) has caused the compressor shut down;
- braze tube versions are available with or without capillary.



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O16 Dimensions



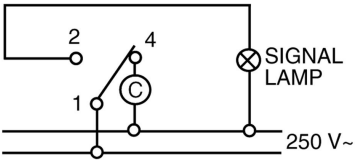
O17 Dimensions

INSTALLATION CONSIDERATIONS:

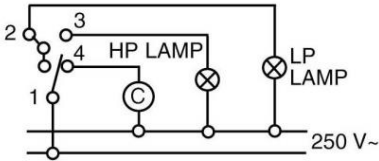
1. mount control on a flat surface to prevent distortion of the control case. Ensure sufficient room to connect capillaries and adjust controls;
2. mount control in an environment commensurate with the control enclosure;
3. wiring should be routed to prevent the possibility of water running along cables into the control;
4. wiring should conform to any applicable approvals, codes and industry practice. Electrical ratings must not be exceeded;
5. capillaries should be secured to prevent excessive vibration, and must not be twisted or kinked. Any bends must have a min. radius of 25 mm (1 inch);
6. the bellows must be held with a spanner while tightening flare-nut(s);
7. if mounting brackets not manufactured by Ranco are used, ensure gauge of material used is sufficient to avoid amplification of any vibration.

WIRING DIAGRAMS

NOTE: FUSE RATING 16 AMPS



O16 and standard O17



O17 dual signal switch



TECHNICAL DATA

O16 AND O17 MODELS:

Electrical Ratings:

the SPDT switch used on all O16/O17 controls except the O17 dual signal version, is rated at:

- 16(16)A 250V~ normally open or normally closed
- 1(1)A 250V~ on the other side

Conformity:

'O' series controls are approved to EN60730-2-6 and EN60730-2-9, and manufactured in accordance with ISO9001, and conform with relevant European directives.

Special Versions Only:

USA (UL) - Canada (CSA): 17 FLA 102 LRA 250V AC
For O17 Dual Signal

Switch Version:

ratings as above terminals 1 and 4. However, across terminals (1 and 2) and (1 and 3) maximum current is 0.1A, i.e. 0.1A 250V~

Terminals:

O16 and standard O17:
1 Common
2 Break on rise
3 -
4 Make on rise (O16)
Make on rise of L.P.O17
Break on rise of H.P.O17

O17 dual signal switch:

- 1 common;
- 2 make of signal circuit on fall of L.P.;
- 3 make of signal circuit on rise of H.P.;
- 4 make on rise of L.P., break on rise of H.P.

Cable Entry:

- O16/O17 14 mm Grommet
- O52 P.G.16 Connector

Refrigerants:

suitable for use on all gases. Pressure controls for use with ammonia are available on request.

Mounting:

two tapped holes on reverse of control to accept M4x6 mm screw (provided). See accessories for mounting brackets.

Range and "lowest event":

the lowest operating point of which the control is capable is called the lowest event". The ranges shown in the tables indicate the "lowest event" in brackets. This figure shows the lowest condition at which the switch will function.

Combination of setting and differential should not be made which would exceed the lowest event figure.

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- manual reset high and low pressure;
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TECHNICAL DATA cont

Scale Pointer:

on Low Pressure auto reset controls the pointers show where terminals 1 and 4 make. On all High Pressure controls the pointer shows where terminals 1 and 2 break. On Low Pressure manual reset controls the pointer shows where terminals 1 and 2 break. Dual controls follow the above on high and low sides.

Differential:

the differential is the difference between the cut-in and cut-out point for a given setting. Because of the characteristics of the 'fill' of temperature versions, the differential can vary across the range.

Adjustment:

by hexagonal nut incorporating cross headed screwdriver slot on both range and differential spindles.

Ranco O-Series Pressure Controls Specifications

O-Series Model	Schneider Part Number	High Press OR Low Press	Reset Mode		Pressure Range		Differential Range		Differential Type		Connection
			HP	LP	HP	LP	HP	LP	HP	LP	
Single Controls - Low Pressure											
O16-8705	O16H8705198	LP	--	M	--	-30 to 700	--	60	--	Fixed	*
O16-8706	O16H8706198	LP	--	A	--	-30 to 700	--	60 to 400	--	Adjustable	*
O16-8713	O16H8713198	LP	--	A	--	-30 to 700	--	60 to 400	--	Adjustable	**
Single Controls - High Pressure											
O16-8750	O16H8750198	HP	A	--	700 to 3000	--	250 to 800	--	Adjustable	--	*
O16-8751	O16H8751198	HP	M	--	700 to 3000	--	320	--	Fixed	--	*
Dual Pressure Controls											
O17-8701	O17H8701198	HP and LP	A	A	700 to 3000	-30 to 700	350	60 to 400	Fixed	Adjustable	*
O17-8703	O17H8703198	HP and LP	M	M	700 to 3000	-30 to 700	350	60	Fixed	Fixed	*
O17-8705	O17H8705198	HP and LP	M	A	700 to 3000	-30 to 700	350	60 to 400	Fixed	Adjustable	*
O17-8711	O17H8711198	HP and LP	A	A	700 to 3000	-30 to 700	350	60 to 400	Fixed	Adjustable	**

All Pressures and Differentials are in kPa

A = Auto

M = Manual

LP = Low Pressure

HP = High Pressure

* Male Connection 7/16" - 20 UNF for a 1/4" Female Flare

** Capillary Connection 1m long 1/4" Flare Fitting with Nut

ARANCO

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Information subject to change without notice.

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