Pressure controllers

200-300 Line

APPLICATION AND USE

B300/B350 pressure controllers are used in civil and industrial plant where the pressure control of air, gas, not encrusting liquid without solid parts, in pipe, ducts, tanks etc., is required. They must not be used as safety accessories.

MANUFACTURING CHARACTERISTICS

B300 are 2-position electromechanical controllers. B350 are proportional-potentiometric electromechanical

controllers. They are composed of a sensing element, a kinematic group and an electrical drive switch.

TECHNICAL CHARACTERISTICS

Housing

Conduit opening

Fluid connection

Max fluid temperature

die-cast light alloy, industrial type with ABS blu cover PG11compression fittings 1/4" gas female T90

Temperature working storage Protection degree Terminals (B300) Weight

-25T65 IP 55 * screw-type for 1.5 to 2.5 mm² max wires

Weight Kg 1.4 (*) for polluted environment according to IEC 730-1 (93)/6.5.3

-5T50

Model	Range kPa	Differential kPa	Max safety pressure kPa	Electrical device	Contacts	Bellows sensing element
B301	10÷200	7÷30	600			
B302	100÷600	15÷120	900			Bronze
B303	200÷1400	60÷400	2200	SPDT**	15(2,5) A ~	
B304	500÷3000	80÷400	3800	microswitch	250 V~	
B301 X	10÷200	7÷30	600			
B302 X	100÷600	15÷120	900			Stainless steel
B303 X	200÷1400	60÷400	2200			
B304 X	500÷3000	80÷400	3800			

(**) Microdisconnection 1B type according to IEC 730-1 (93) / 6.4.3.2.

Model	Range kPa	Proportional Band kPa	Max safety pressure kPa	Electrical device	Bellows sensing element
B351	10÷200	25÷100	600		
B352	100÷600	35÷350	900		Bronze
B353	200÷1400	150÷900	2200	Potentiometer	
B354	500÷3000	120÷900	3800	165 Ohm	
B351 X	10÷200	25÷100	600		
B352 X	100÷600	35÷350	900		Stainless steel
B353 X	200÷1400	150÷900	2200		
B354 X	500÷3000	120÷900	3800		

2nd Issue

05/02



CONTROLLI 16010 SANT'OLCESE Genova - Italy Tel.: +39 01073061 Fax: +39 0107306870/871 E-mail: info@controlli.org Web: www.controlli.org

1

CE

B300/B350



DBL052E

INSTALLATION

Install the controllers in not aggressive environment, at a temperature range between -5 and 50 $^{\circ}$ C; they must not be subjected to steam or water jets or dripping.

For B300 having bronze sensing element , make sure that the controlled fluid is not aggressive for bronze and its alloy. If ammonia, stam and other aggressive fluids are used, it is necessary to use B300X models with stainless steel sensing element.

WIRING CONNECTIONS

Perform the connections according to the wiring diagram on the right and in compliance with existing standards.

For B300, it's necessary to carry out grounding using the terminal placed on the controller body.

Use cables with 1 mm² minimum section.

For teminal board connections it's necessary to remove the cover and put the cables through the conduit opening, being careful not to hinder the free movement of leverage.

Once the connections are carried out, replace the cover and tighten the screws in order to keep the thermostat protected.

START-UP

- Verify that connections are carried out correctly.
- Turn setting knob until main scale indicator points to the desired average pressure.

B300

- Adjust setpoint turning the screw located near the control knob until the scale indicator reaches the required pressure value.
- The differential value is symmetrical with respect to the set point

B350

- Adjust the prportional band turning the screw located near the control knob on the top until the scale indicator reaches the required pressure value
- The proportional band value is symmetrical with respect to the set point.
- -The proportional band must be set at the minimum value allowing the controller to check system without hunting.

For fluid temperature higher than 90 °C, it's necessary to use a pipe fitting (not included) between the controller connection and the pressure tap in order to enable heat leakage.

Install the thermostat in such position soas to make the connections, start-up and maintenance easier.

Mount the thermostat on panel by screwing it into the proper holes on thermostat base (see dimensions).

Attention: Do not damage the sensing element, the pressure of the controlled fluid must not exceed the max safety pressure stated on the "Technical characteristics" table.

B300



B350



N3121

Connections for MVB30-MVL30-MDL30 actuators: B on controller with M on actuator

R on controller with Y on actuator

V on controller with V+ on actuator

To reverse rotation direction change B with V.

DIMENSIONS (mm)



N4135

The performace stated on this sheet can be modified without any prior notice due to design improvements.

2 nd Issue	05/02	2	DBL052E



Automatic control systems for: air conditioning/heating/industrial thermal process.