## Positive Bias Relay / Differential Pressure Regulator

Signal-operated regulator designed to provide outlet pressure which is the sum of the input signal pressure plus a preset bias. As an option, the relay can start with bias range -0.3 bar / -4 psi. The relay can also be used as a differential pressure regulator. Description

Media compressed air or non-corrosive gases

Supply pressure max, 17 bar

max. 10 bar, pilot port G1/4 Pilot pressure response sensitivity: < 1 mbar Accuracy Air consumption

without constant bleed Relieving function relieving

Relief capacity 110 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint

Gauge port  $\ensuremath{\mathrm{G}}\xspace_{\!\!\!/}$  on both sides of the body, screw plugs supplied Mounting position any 0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F

Temperature range Material Body: aluminium die-cast Elastomer: NBR/Buna-N

Inner valve: brass

G¼ and G¾, 1300 I/min parallel translation

A	mensio B	ons C	Flow rate		Connection thread	Supply recommended			Order number
mm	mm	mm	m³/h*1	l/min*1	G	bar	bar	bar	
Pos	sitive	hia	s rela	av		supply pressure ma			R650

R650	supply pressure max. 17 bar, relieving, without constant bleed, transmission ratio 1:1			Positive bias relay						
R650-02C	010	0 1	5	G1⁄4	1200	72	16	170	68	
R650-02D		0 2	5							
R650-02E		0 4	8							
R650-02F		010	15							
R650-03D R650-03B R650-03F	010	0 1 0 2 0 4 010	5 5 8 15	G¾	1300	78	16	170	68	

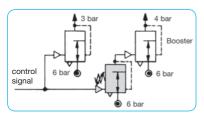


## Special options, add the appropriate letter

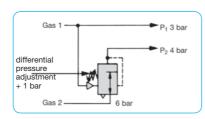
negative bias	factory-set to -0.3 bar	R650-0 <b>Y</b>
NPT	connection thread	R650-0 <b>N</b>
tapped exhaust	connection thread G1//8	R650-0 <b>X12</b>
tamper-proof cap	above spindle, total height 174 mm	R650-0 <b>T</b>



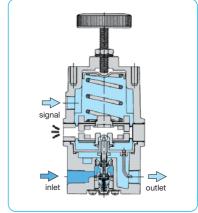
Ø 50 mm, 0...\*2 bar, G1/4 MA5002-..\*2 pressure gauge mounting bracket made of steel BW00-33



Example 1: constant differential pressure of 1 bar at high flow



Example 2: constant differential pressure of 1 bar



cross-section

supply pressure 7 bar

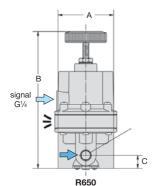
1200 1400 flow rate [l/min]

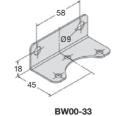
R650-02F

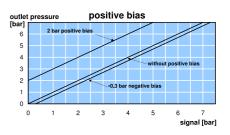
outlet pressure [bar]

200 400 600

2 0











<sup>\*1</sup> at 7 bar supply pressure and 6 bar outlet pressure \*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar