Pressure Regulating Valve (E/P, I/P)

1/4 "- 3/8 " NPT, G

Electropneumatic pressure piloted valve with integral volume booster and closed loop feedback

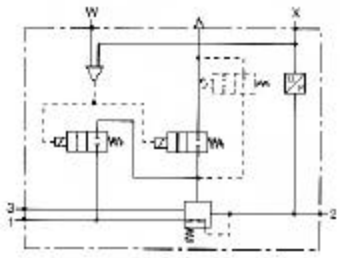
SRE-.. airfit

Characteristics to VDI 3292			Pressures quoted as gauge pressure	
Characteristics	Symbol	Unit	Description	
General Features				
System			Piston type pressure regulating valve pilot operated with pneumatic and electronic feedback	
Type			**SRE-1/4 US**	**SRE-3/8 US**
Port size			**1/4 " NPT, G**	**3/8 " NPT, G**
Installation			In any position	
Weight (mass)		kg	0.6	
Medium and ambient temperature range	T_{min} T_{max}	°C °C	0 50	
Medium			Filtered (oil-free or lubricated) compressed air	
Lubrication			Not required	
Pneumatic Characteristics				
Nominal pressure	p_n	bar	6.3	
Inlet pressure range	P_{1min} P_{1max}	bar bar	0 10	
Outlet pressure range	P_{2min} P_{2max}	bar bar	0 10	
Flow Rate	Q_{Max}	l/min	**2200**	**2500**
Hysteresis**	P_{2max}	%	<1	
Repeatability***	P_{2max}	%	<0.5	
Sensitivity***	P_{2max}	%	<0.5	
Linearity***	P_{2max}	%	<1	
Electrical Characteristics				
Nominal voltage	U_N	VDC	24 V +/-10%	
Residual ripple		%	10	
Current consumption	I_{max}	A	0.15	
Command value input	U_w I	V mA	0-10 0-20, 4-20	

* @ p_1 = 10 bar to p_2 = 6.3 bar

** @ 6.3 bar and 25 m/s

*** see explanation on page 3

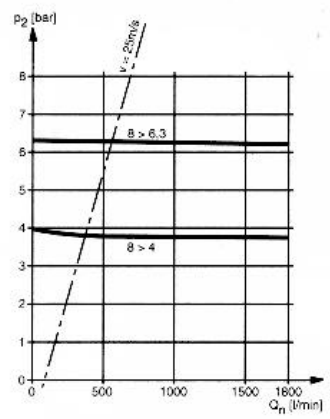


- Electronically controlled pressure regulating valve
- Remote controlled
- Control and operating pressure from 0 bar
- Airfit design
- Direct coupling with airfit swing units
- No continuous air consumption

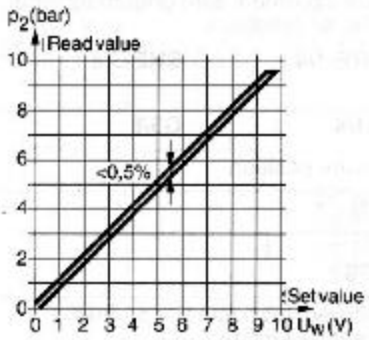
Further information: HOERBIGER-ORIGA Corporation
100 West Lake Drive, Glendale Heights, IL 60139
Tel: (630) 871-8300, Fax: (630) 871-1515
E-Mail: usmarket@hoerbiger-origa.com

HOERBIGER ORIGA

Flow Characteristics Type SRE-1/4

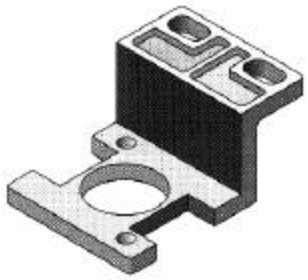


Output Pressure vs. Input Voltage



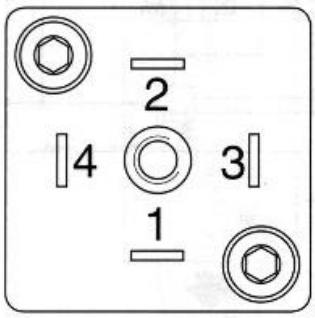
Accessories

Mounting Kit



Order #: PL 16965

Connection Diagram



Pin1: Power Supply
24 VDC @ 0.15 A
(+/-10%)

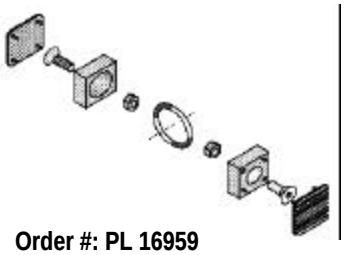
Pin 2: DC Return (0 VDC)

Pin 3: 0-10 VDC command input (ref. to pin 2)

Pin 4: Actual Value Out
(0-10 VDC @ 20 mA, ref. to pin 2)

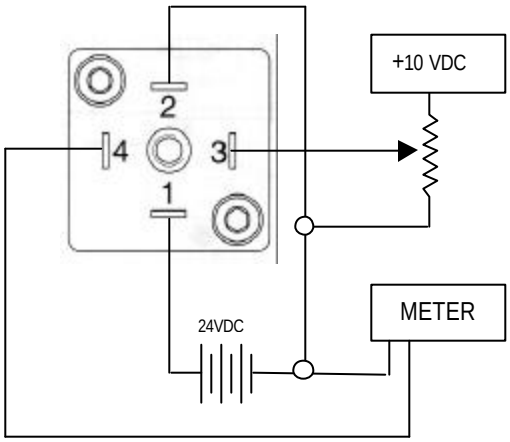
Accessories

Coupling Kit



Order #: PL 16959

Control Wiring



To Connect the SRE:

Pin 1 is connected to 24 VDC @ 150 mA

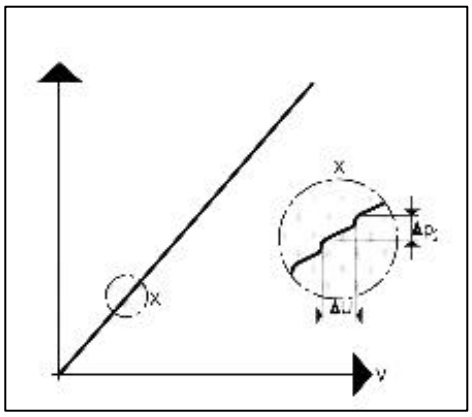
Pin 2 is connected to DC Return (GND.)

Pin 3 is connected to a potentiometer wiper terminal, when the other two teminals are connected to 10 VDC and the common DC return.

Pin 4 is connected to an analog input to a PLC if desired, to monitor actual pressure at the unit, or connected to a meter as shown.

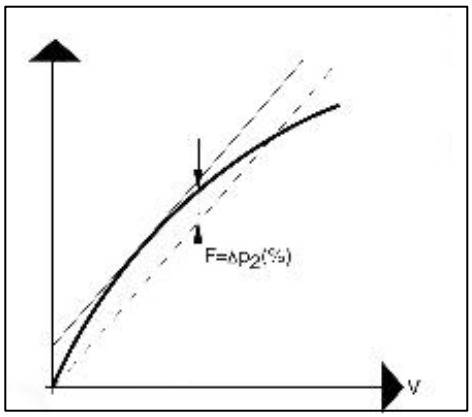
Sensitivity

The smallest change in command input which leads to a change in actual output pressure is referred to as sensitivity. This is expressed as a percentage of actual output pressure. Sensitivity of the SRE valve is below 0.5%, which means that the output value can be set very precisely.



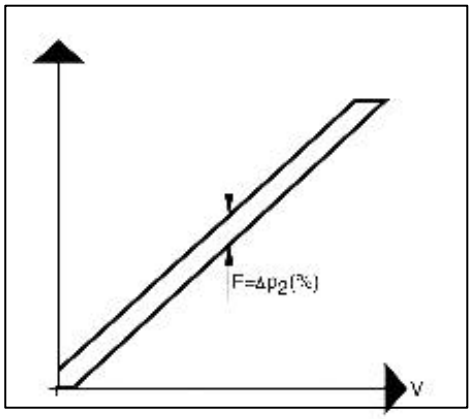
Linearity

The ideal curve showing output pressure with respect to an electronic signal input would be a straight line (see diagram.) Unfortunately, linearity is always less than perfect. The deviation can be calculated from the maximum deviation from the straight line at the highest possible pressure.



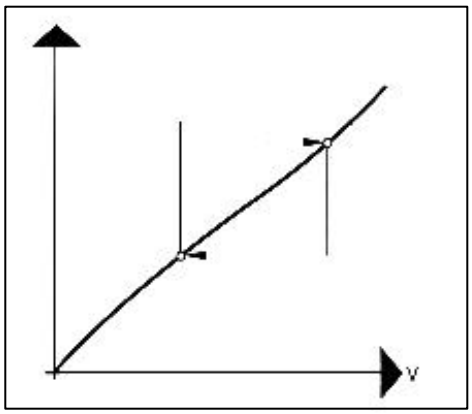
Hysteresis

The same command input at any one point along the output curve is different depending on whether the curve is ascending or descending. This difference, known as hysteresis, is caused by friction and temporary deformation of elastic components. The hysteresis of the SRE is below 0.1 bar.

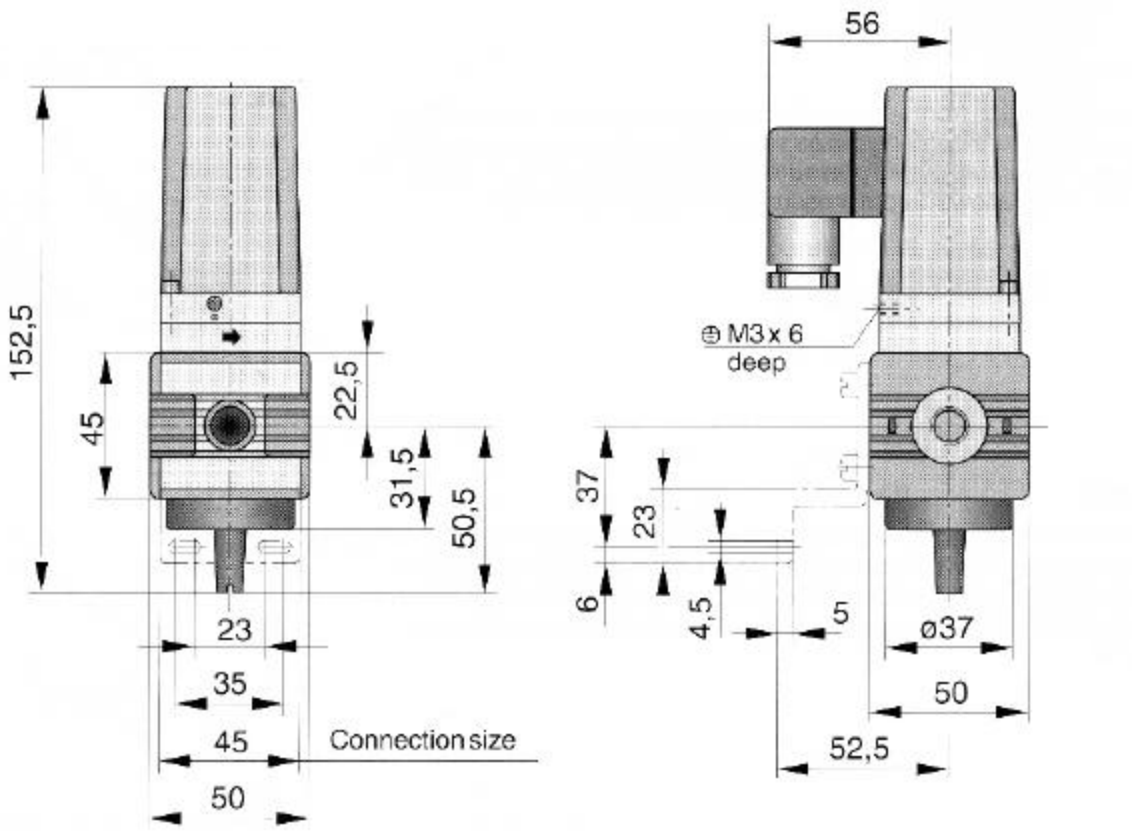


Repeatability

Control components, for a given set value, usually produce repeated actual values which differ less from each other than from the absolute set value, because the relatively large linearity deviation is excluded. Repeatability is improved if hysteresis is minimized.



SRE-1/4 Dimensions



Order Instructions

Basic Model—0-10 VDC Normally Closed *(Unit holds pressure upon power loss)*			
Port Size	Max Output (bar)	Type	Order No.
1/4 " NPT	10	SRE-U-1/4 NG US	PB 59849-N000
3/8" NPT	10	SRE-U-3/8 NG US	PB 59949-N000
4-20 mA Normally Closed *(Unit holds pressure upon power loss***)**			
1/4 " NPT	10	SRE-I-1/4 NG US	PB 59849-N002
3/8" NPT	10	SRE-I-3/8 NG US	PB 59949-N002
0-20 mA Normally Closed *(Unit holds pressure upon power loss***)**			
1/4 " NPT	10	SRE-I-1/4 NG US	PB 59849-N001
3/8" NPT	10	SRE-I-3/8 NG US	PB 59949-N001
0-10 VDC Normally Open *(Unit EXHAUSTS pressure upon power loss)*			
1/4 " NPT	10	SRE-U-1/4 NO US	PB 59849-N010
3/8" NPT	10	SRE-U-3/8 NO US	PB 59949-N010
BSPP (G) thread is available—eliminate "N" in order number and "US" in type			
Accessories			
Mounting Kit			PL 16965
Coupling Kit			PL 16959