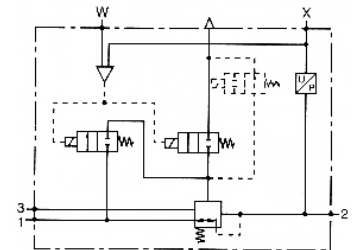


Pressure Regulating Valve (E/P, I/P)

3/8 " - 1/2 " NPT, G

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

CRE-.. 



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			CRE-3/8 CRE-1/2
Port size			3/8 " NPT, G 1/2 " NPT, G
Installation			In any position
Weight (mass)		kg	0.95
Medium and ambient temperature range	T _{min}	°C	0
	T _{max}	°C	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}	bar	0
	P _{1max}	bar	16 ****
Outlet pressure range	P _{2min}	bar	0
	P _{2max}	bar	10
Nominal flow*	Q _N	l/min	4500
		m ³ /h	270
Recommended Flow**	Q	l/min	850
		m ³ /h	51
			6000
			360
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	V	0-10
	I	mA	0-20, 4-20
Command input resistance	R _E	kΩ	200
Actual value output	U _X		0-10 VDC @ 20 mA

* @ p₁ = 10 bar to p₂ = 6.3 bar

** @ 6.3 bar and 25 m/s

*** see explanation on page 3

**** P₁ ≥ P₂ + 10% P₂

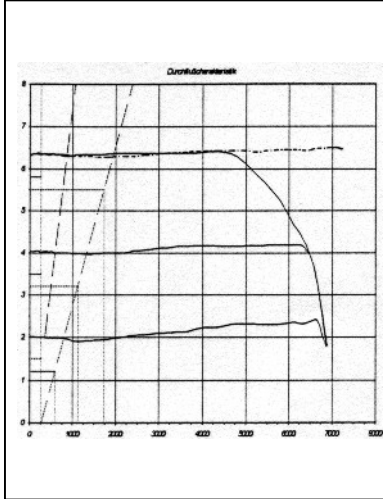


- Electronically controlled pressure regulating valve
- Remote controlled
- Control and operating pressure from 0 bar
- Airfit design
- Direct coupling with airfit comfort units
- No continuous air consumption

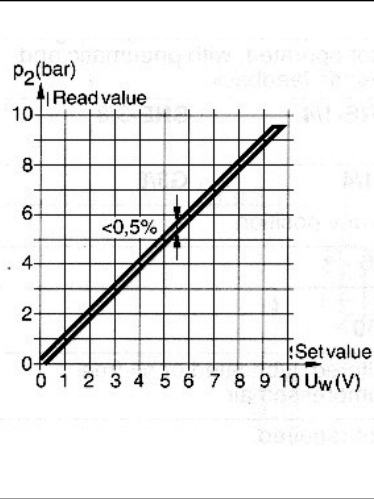
Further information: HOERBIGER-ORIGA Corporation
 100 West Lake Drive, Glendale Heights, IL 60139
 Tel: (630) 871-8300, Fax: (630) 871-1515
 E-Mail: usmarket@hoerbiger-origa.com



Flow Characteristics Type CRE-1/2

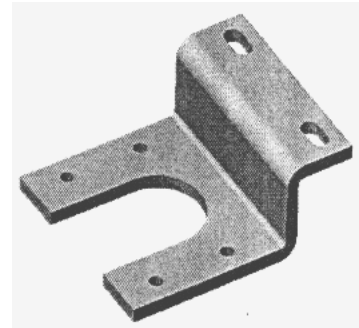


Output Pressure vs. Input Voltage



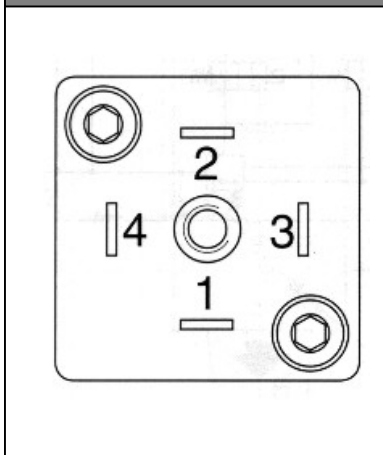
Accessories

Mounting Kit



Order #: PL 17518

Connection Diagram



Pin 1: Power Supply
24 VDC @ 0.15 A
(+/-10%)

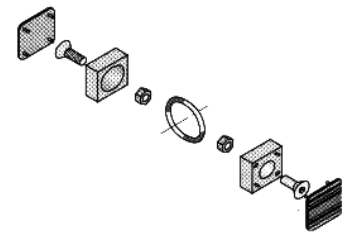
Pin 2: DC Return (0 VDC)

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

Pin 4: Actual pressure feedback
output (0-10 VDC @ 20 mA,
ref. to pin 2)

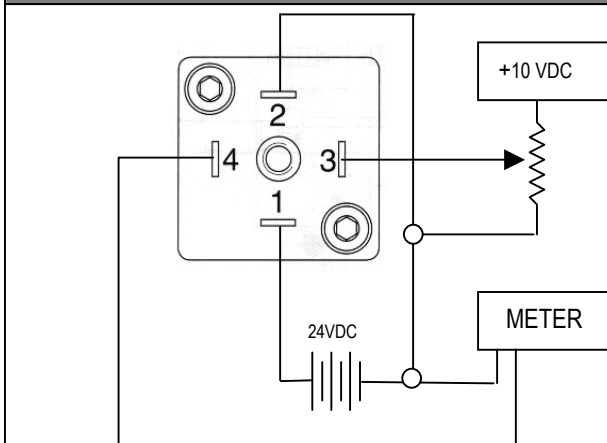
Accessories

Coupling Kit



Order #: PL 17608

Control Wiring



To Connect the CRE:

Pin 1 is connected to 24 VDC @ 150 mA

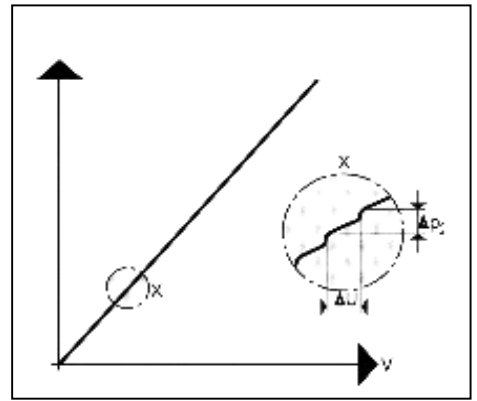
Pin 2 is connected to DC Return (GND.)

Pin 3 is connected to a potentiometer wiper terminal, when the other two terminals 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.

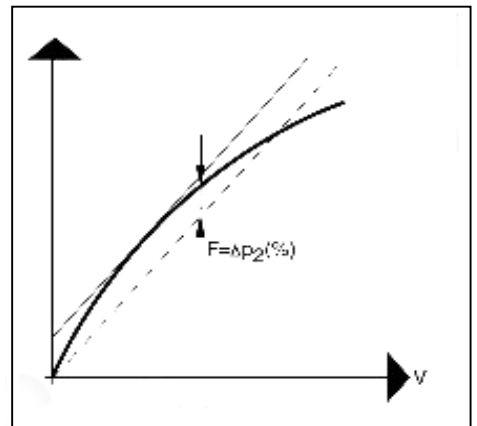
Sensitivity

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 CRE valve is below 0.5%, which means that the output value can be set very precisely.



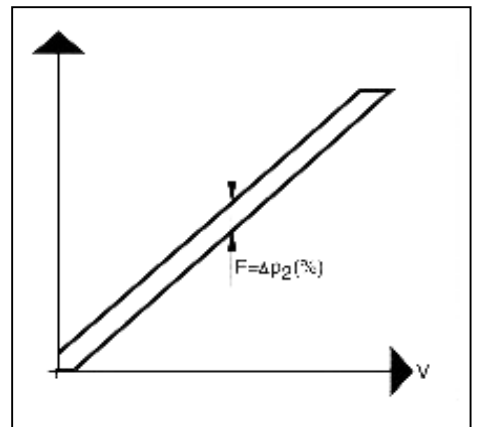
Linearity

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.



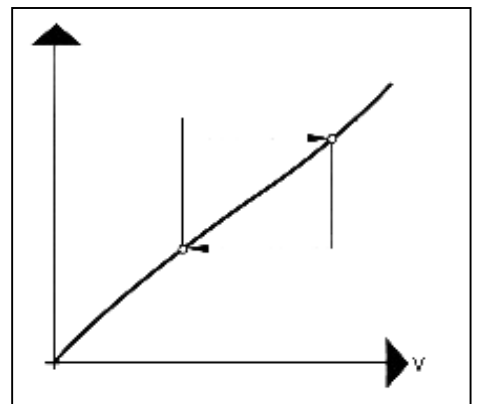
Hysteresis

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 CRE is below 0.1 bar.

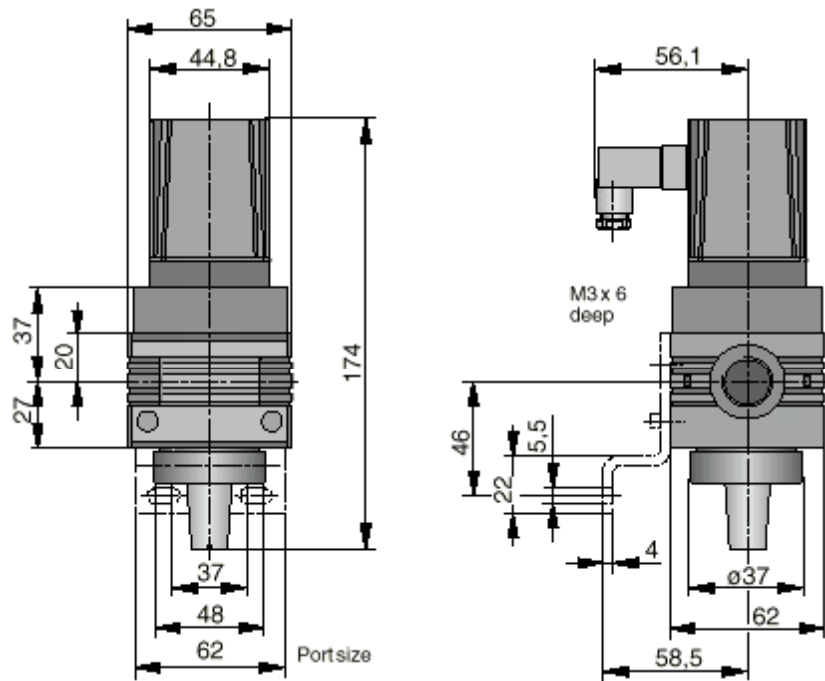


Repeatability

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.



CRE-1/2 Dimensions (mm)



Order Instructions

Basic Model—0-10 VDC Normally Closed (Unit holds pressure upon power loss)

Port Size	Max Output (bar)	Type	Order No.
3/8" NPT	10	CRE-U-3/8 NG US	PB 60149-N000
1/2" NPT	10	CRE-U-1/2 NG US	PB 60249-N000

4-20 mA Normally Closed (Unit holds pressure upon power loss)

3/8" NPT	10	CRE-I-3/8 NG US	PB 60149-N002
1/2" NPT	10	CRE-I-1/2 NG US	PB 60249-N002

0-20 mA Normally Closed (Unit holds pressure upon power loss)

3/8" NPT	10	CRE-I-3/8 NG US	PB 60149-N001
1/2" NPT	10	CRE-I-1/2 NG US	PB 60249-N001

0-10 VDC Normally Open (Unit EXHAUSTS pressure upon power loss)

3/8" NPT	10	CRE-U-3/8 NO US	PB 60149-N010
1/2" NPT	10	CRE-U-1/2 NO US	PB 60249-N010

BSPP (G) thread is available—eliminate "N" in order number and "US" in type

Accessories

Mounting Kit	PL 17518
Coupling Kit	PL 17608