



Overview



Description

This is a direct-acting, spool-type, proportional, pressure reducing/relieving valve. It is a drop-in, flange mounted cartridge type valve. The coil is an integral part of the valve and is not serviceable. The regulated pressure is inversely proportional to the input electrical current.

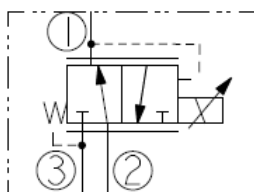
Operation

When no current is applied to the coil the valve allows free flow from 2 to 1 with the spring chamber constantly drained at port 3. Upon attainment of a predetermined pressure at port 1, the spool shifts to restrict inlet flow from port 2, thereby regulating the pressure at port 1. In this mode the valve will also relieve port 1 to port 3. Increasing current to the coil will decrease the control pressure at port 1 proportionally.

Features

- Economical drop-in style
- Mounting plate option
- Several regulated pressure ranges
- Quick response time
- Screen option
- Top-mounted connector
- Low leakage

Symbol



Ratings

Pressure Ratings

Pressure rating	44.8 bar (650 psi)	- Note: Port 1 and 2
	34.5 bar (500 psi)	- Note: Port 3
Proof pressure	207 bar (3000 psi)	- Note: Ports 1, 2
	54 bar (780 psi)	- Note: Port 3
Burst pressure	250 bar (3625 psi)	- Note: All ports pressurized
Control pressure at zero control current	31.3 ±4 bar (454 ±59 psi)	

Flow Ratings

Flow rating	11.4 lpm (3.0 gpm)	
Maximum internal leakage	230 ml/min (14.0 in ³ /min)	- Note: De-energized at 44.8 bar (650 psi)
	150 ml/min (9.2 in ³ /min)	- Note: Energized at 44.8 bar (650 psi)

Other Ratings

Cycle life	10 million cycles
Environmental rating	IP69K
Corrosion protection	960 hour salt spray per ASTM B117

Temperature Ratings

Operating fluid temperature	-40 to 149 °C (-40 to 300 °F)	- Note: HNBR
	-26 to 204 °C (-15 to 400 °F)	- Note: Fluorocarbon
Storage temperature	-40 to 70 °C (-40 to 158 °F)	
Ambient temperature	-40 to 100 °C (-40 to 212 °F)	

Operating Parameters

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt



Properties

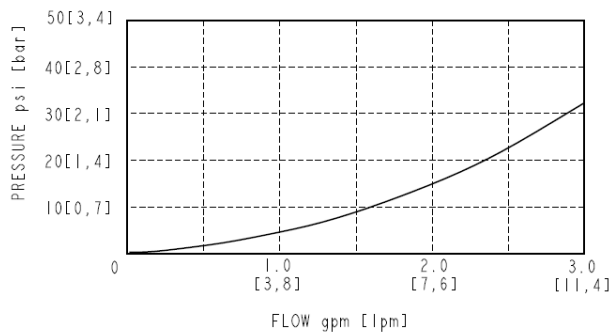
Unit weight	0.27 kg (0.59 lb)
Internal wetted surface area	156 cm ² (24.2 in ²)

Electrical Parameters

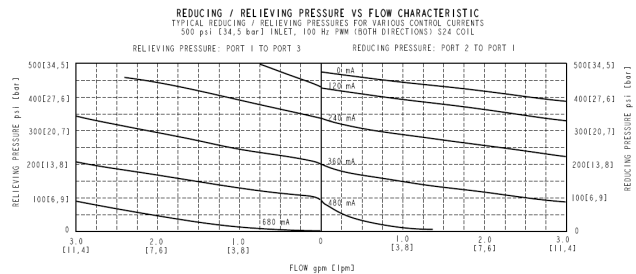
Maximum control current	1.34 A	- Note: S12 coil
	0.67 A	- Note: S24 coil
Hysteresis	Less than 5 %	- Note: At 100 Hz PWM, after 360 mA (S12 coil)/180 mA (S24 coil)
Coil resistance	4.83 $\hat{I}\odot$	- Note: S12 coil
	18.35 $\hat{I}\odot$	- Note: S24 coil

Performance

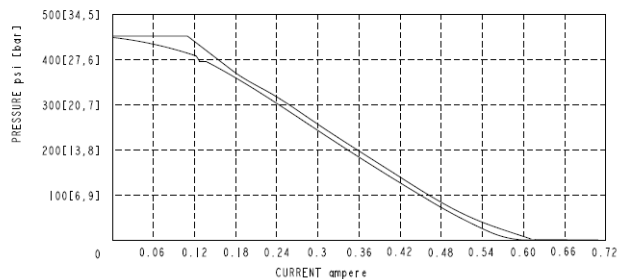
PRESSURE DROP VS FLOW CHARACTERISTIC
2 TO 1 (DE-ENERGIZED)
(CARTRIDGE ONLY)



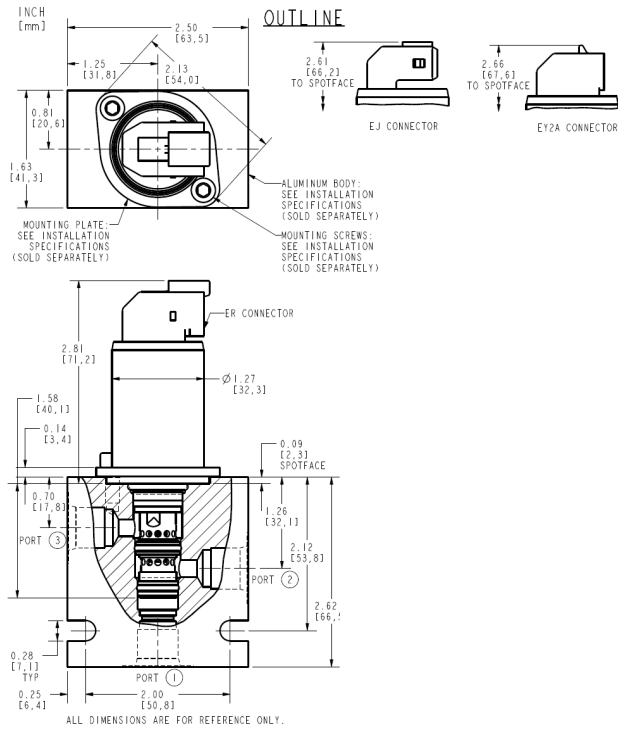
GENERAL TEST CONDITIONS
(UNLESS OTHERWISE SPECIFIED)
OIL: MOBIL DTE @ 104°F [40°C], 32 cSt.



REDUCING PRESSURE VS CURRENT CHARACTERISTIC
REGULATED PRESSURE PORT 1 - 100 Hz PWM (S24 COIL)
EHPR98-G37C



Dimensions



Installation Specifications

Cavity	VC-G028
Installation type	Flange mounted
Orientation restriction	None
Mounting screw torque	3 to 4 N-m (2.2 to 3.0 ft-lb)

Accessories

Mounting plate	HF P/N 4595096	- Note: Sold separately
Mounting screw	M5 x 0.8 x 12 mm long, HF P/N: 4002609	- Note: Sold separately
Seal kit	SK-G028-X	- Note: X=seal option
Ported test body	HF P/N: 71612X0	- Note: Sold separately

Order Code



ORDERING INFORMATION

EHPR98-G37XXX-0-X-XXXX

BASE MODEL NUMBER	
MAXIMUM REGULATED PRESSURE	454 psi [31,3 bar] - C
PLUNGER OPTION	STANDARD - BLANK * FAST RESPONDING - F
INLET PORT SCREEN	NONE - BLANK 142 MICRON - S
PORTING	CARTRIDGE ONLY - 0
SEALS	HNBR - G FLOUROCARBON - V
VOLTAGE	12V SYSTEM - S12 24V SYSTEM - S24
TERMINATION	DEUTSCH DT04-2P - ER AMPJUNIOR TIMER - EJ METRIPACK 150.2 - EY2A

* THE FAST RESPONDING PLUNGER IS TYPICALLY USED IN PILOT APPLICATIONS WITH INCREASED VOLUME AT THE CONTROL PORT. MINIMUM VOLUME AT THE CONTROL PORT MAY CAUSE THE VALVE TO BECOME UNSTABLE. CONSULT FACTORY FOR APPLICATION ASSISTANCE WHEN SELECTING THIS OPITON.

Model Options**EHPR98-G37DFG-H-J-KL****D Max Regulated Pressure**

CODE	DESCRIPTION
C	31.3 bar (454 psi)

F Plunger Option

CODE	DESCRIPTION
BLANK	Standard Version
F	Fast Responding

G Screen

CODE	DESCRIPTION
BLANK	NONE
S	100 Mesh Screen

H Line Body

CODE	DESCRIPTION
0	No Body

J Seal

CODE	DESCRIPTION
G	HNBR (Hydrogenated Nitrile Butadiene Rubber)
V	Fluorocarbon
P	Polyurethane

K Coil Voltage

CODE	DESCRIPTION
10	10 VDC



CODE	DESCRIPTION
12	12 VDC
14	14 VDC
20	20 VDC
24	24 VDC
28	28 VDC

L Coil Termination

CODE	DESCRIPTION
EJ	E-Coil, AMP Jr.
ER	E-Coil, Deutsch
EY2A	E-Coil, Metri-Pack 150.2