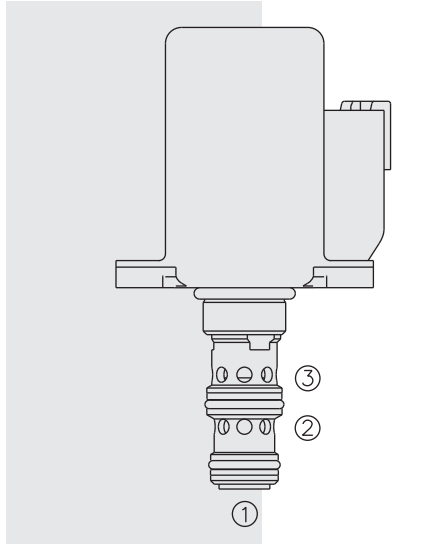


ELECTRO-PROPORTIONAL VALVES—PRESSURE CONTROLS

EHPR98-T38 Proportional Reducing/Relieving



DESCRIPTION

A direct-acting, spool-type, drop-in-style, flange-mounted, pressure reducing/relieving valve, which can be infinitely adjusted across a prescribed range using a variable electric input. Pressure output is proportional to DC current input. The Ecoil is an integral part of the valve assembly, and cannot be replaced or field-serviced.

OPERATION

The **EHPR98-T38** allows free flow from ① to ③ when no current is applied to the coil. When the coil is energized, ② is connected to ①. Increasing current applied to the coil will increase the control (reduced) pressure proportionally. If pressure at ① exceeds the setting induced by the coil, pressure from ① is relieved to ③.

Note: Back pressure on port ③ becomes additive to the pressure setting at a 1:1 ratio.

FEATURES

- Economical drop-in style.
- Integral waterproof coil standard.
- 1000-hour salt spray protection.
- 10, 12, 20 or 24 VDC coils.

RATINGS

Maximum Inlet Pressure: 241 bar (3500 psi)

Tank Port (③) Pressure: 34.5 bar (500 psi) maximum;
17.2 bar (250 psi) maximum with manual override option.

Maximum Control Current: 1.38 amps for 10 VDC coil; 1.30 amps for 12 VDC coil;
0.69 amps for 20 VDC coil; 0.65 amps for 24 VDC coil;

Control Pressure at Maximum Control Current: 30 bar (435 psi)

Resistance: 4.3 ohm (10V); 5.2 ohm (12V); 17.5 ohm (20V); 20.9 ohm (24V)

Inductance: 80 mH (12V)

Hysteresis: at 150 Hz PWM: 5% of maximum control pressure

Flow Rating: 18.9 lpm (5.0 gpm)

Maximum Internal Leakage: De-energized: 50 ml/min. (3 cu. in./min.) at 34.5 bar (500 psi); Energized at I-max: 100 ml/min. (6 cu. in./min.) at 34.5 bar (500 psi)

Temperature: -40 to 120°C (-40 to 250°F), with standard Buna N seals

Ambient Air Temperature: -40 to 80°C (-40 to 176°F)

Environmental Rating: IP69K

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

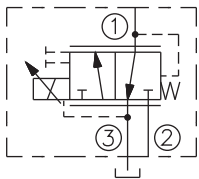
Mounting Screws: M4 x 0.7 x 12 Long; Part No. 4001015 (not provided with valve)

Cavity and Cavity Tool: VC-T011; See page 9.111.1

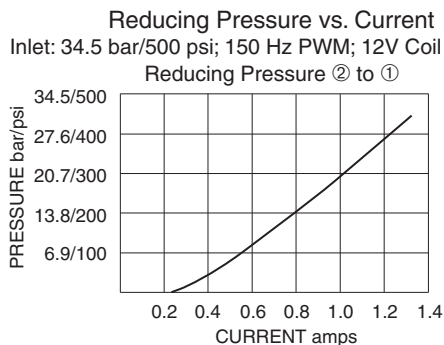
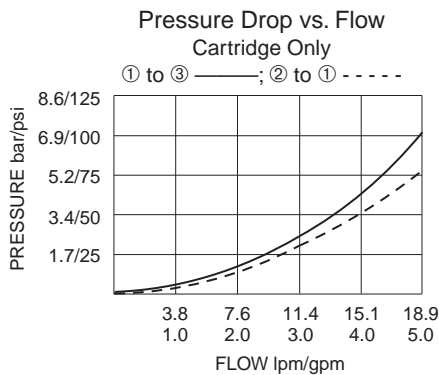
Seal Kit: SKEHPR98-T38x; See page 8.650.1

SYMBOLS

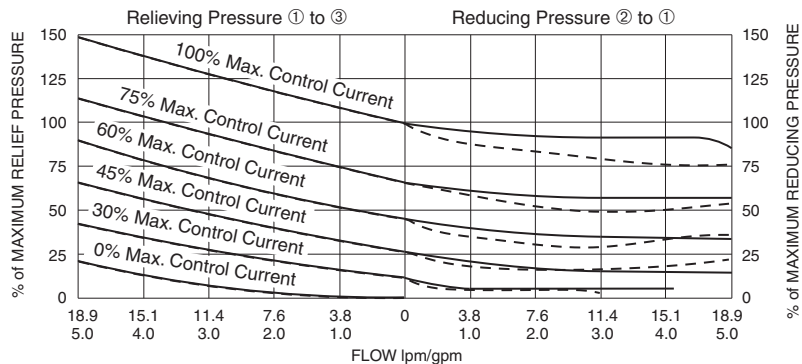
USASI/ISO:



PERFORMANCE



Typical Relieving/Reducing Pressure vs. Flow Characteristic
Typical Relieving Pressure at Various %s of Maximum Control Current
Inlet: 34.5 bar/500 psi ———; Inlet 241 bar/3500 psi - - - -
(Curves overlap on Relieving Pressure side of graph); 150 Hz PWM (Both Directions)

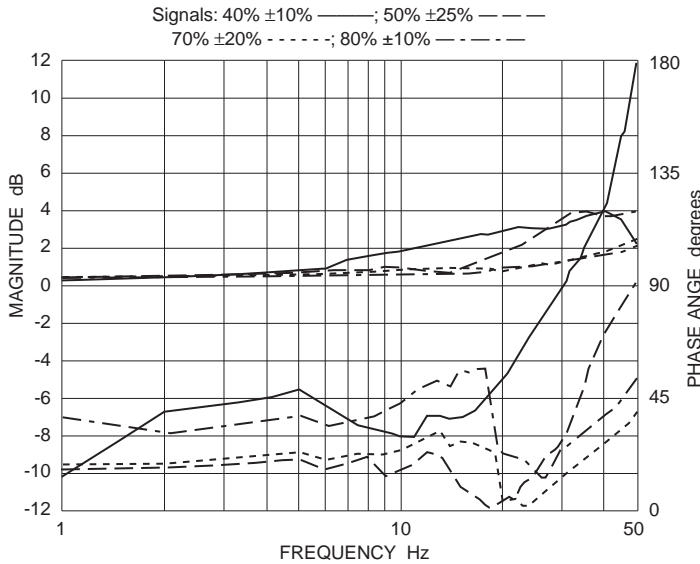


Drop-In-Style Valve

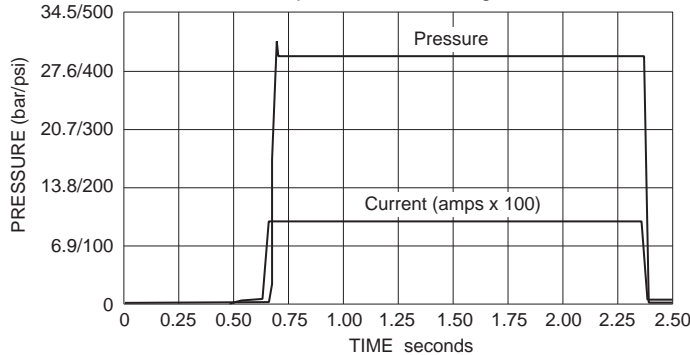
EHPR98-T38

PERFORMANCE (continued)

Typical Frequency Response Curves
 Inlet: 34.5 bar/500 psi; DC Current; Regulated Port Blocked
 (For 241 bar/3500 psi inlet frequency response curves, consult factory.)

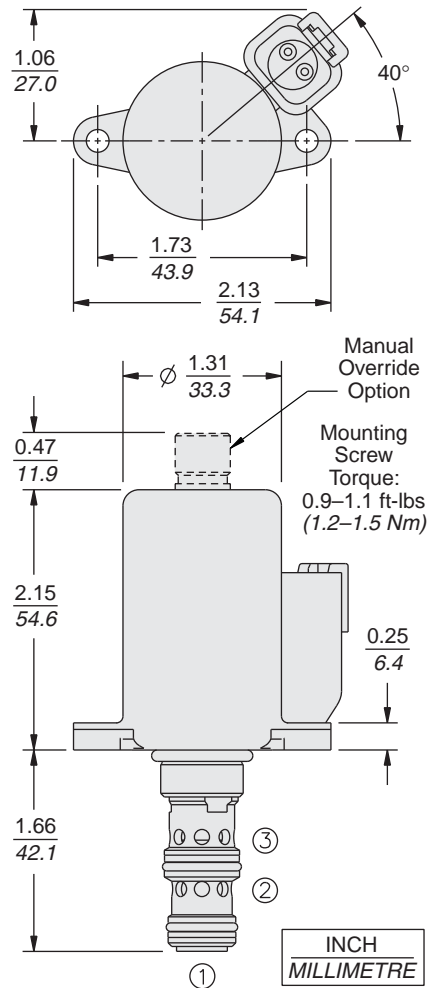


Typical Step Response Curve
 Inlet 34.5 bar/500 psi; DC Current; Regulated Port Blocked



Recommended Electronic Controllers:
 See page 2.001.1 or our Electronics catalog.

DIMENSIONS



Note: To operate manual override, rotate screw clockwise until desired pressure is achieved.

MATERIALS

Cartridge including Coil: Weight: 0.32 kg. (0.70 lbs.) Steel with hardened work surfaces. Zinc-Nickel plated exposed surfaces. HNBR O-rings standard. Coil is encapsulated, class H high-temperature magnetwire, with zinc-nickel plated shell.

Ported Test Body: Consult Factory

Mounting Screws: Must be ordered separately: Part No. 4001015

TO ORDER

EHPR98-T38

