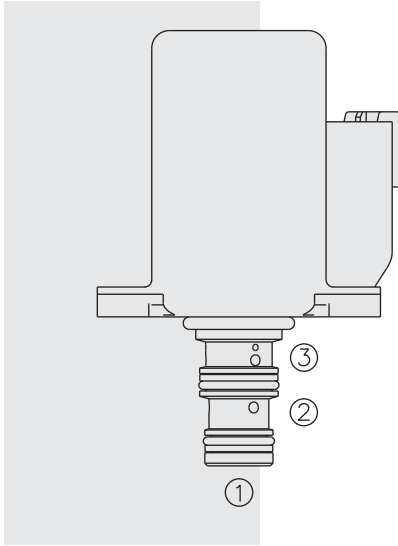


ELECTRO-PROPORTIONAL VALVES—PRESSURE CONTROLS

EHPR98-T33 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-T33** 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.
- Several push-on termination options.

RATINGS

Maximum Inlet Pressure: 241 bar (3500 psi)

Common Port Burst Pressure: One cycle at 158 bar (2300 psi) on all ports simultaneously pressurized

Tank Port (③) Pressure: 34.5 bar (500 psi) maximum for 100,000 cycles

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

Resistance: 4.2 ohm (10V), 5.1 ohm (12V), 17.0 ohm (20V), 19.3 ohm (24V)

Inductance: 80 mH (12V)

Hysteresis: Less than 3% with 200 Hz PWM

Flow Rating: 3.8 lpm (1.0 gpm)

Step Response: T_{ON} <30 ms; T_{OFF} <12 ms

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

Installation: Flange Mount

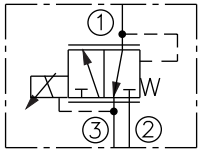
Mounting Screws: M4 x 0.7 x 12 Long; Part No. 4001015 (not provided with valve)

Cavity and Cavity Tool: VC-T009; See page 9.111.1

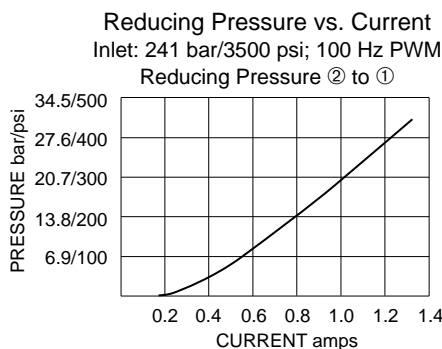
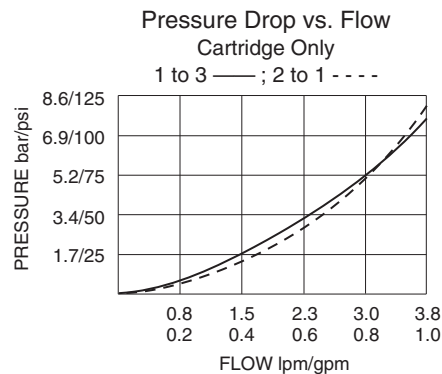
Seal Kit: SKEHPR98-T3X; See page 8.650.1

SYMBOLS

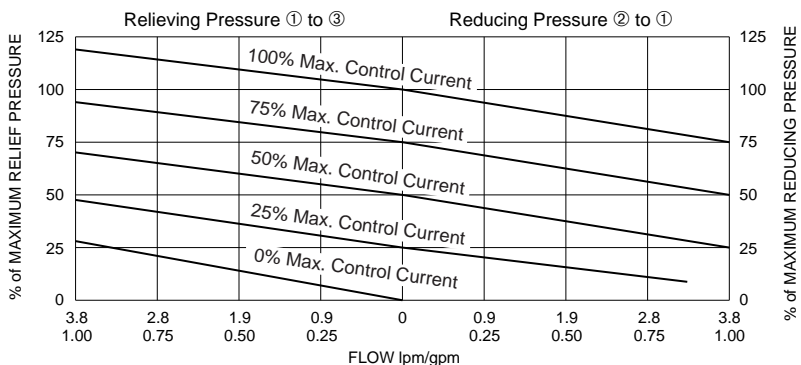
USAS/ISO:



PERFORMANCE



Typical Relieving/Reducing Pressure vs. Flow Characteristic
Typical Relieving Pressure at Various %s of Maximum Control Current
Inlet: 241 bar/3500 psi; 100 Hz PWM (Both Directions)

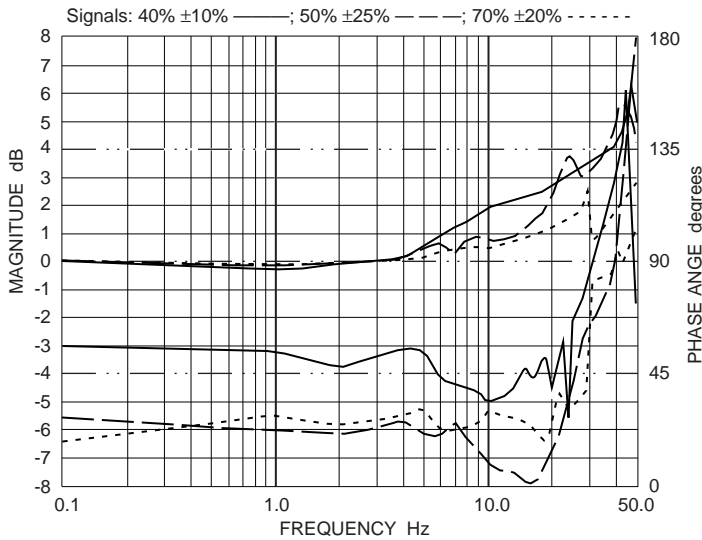


Drop-In-Style Valve

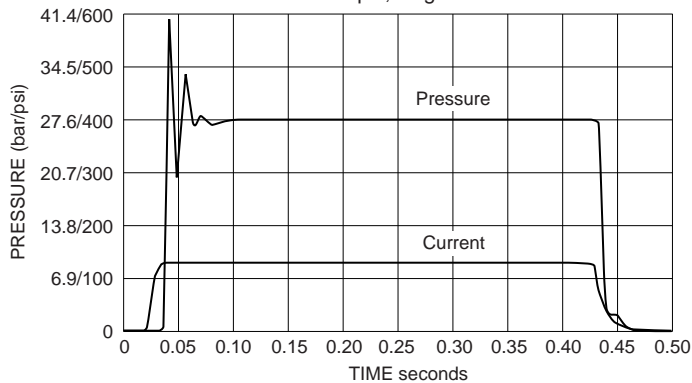
EHPR98-T33

PERFORMANCE (continued)

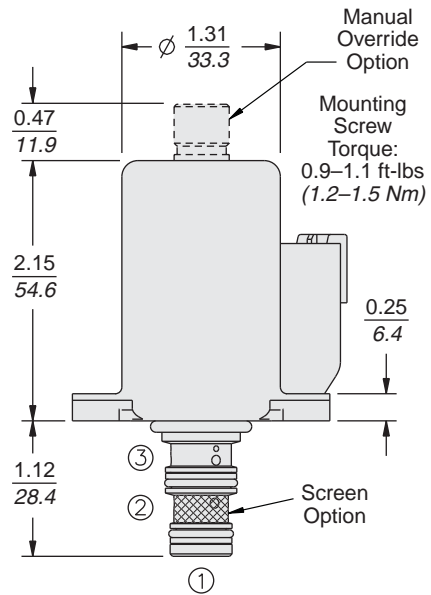
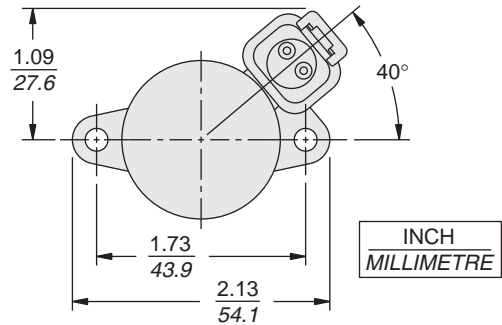
Typical Frequency Response Curves
Inlet: 241 bar/3500 psi; Regulated Port Blocked



Typical Step Response Curve
Inlet 241 bar/3500 psi; Regulated Port Blocked



DIMENSIONS



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

MATERIALS

Cartridge including Coil: Weight: 0.20 kg. (0.44 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-T33		-	-	-	-	-	-
Option	None (Blank)						
Manual Override	M						
Screen Option	None (Blank)						
142µ on Inlet Port 2	S						
Porting	Cartridge Only	0					
Seals	Hydrogenated Nitrile (HNBR)		N				
Termination	ER						Deutsch DT04-2P
	EJ						Amp Junior Timer
Voltage	10						10 VDC
	12						12 VDC
	20						20 VDC
	24						24 VDC

Other voltages and coils with internal diode are available. Consult factory.