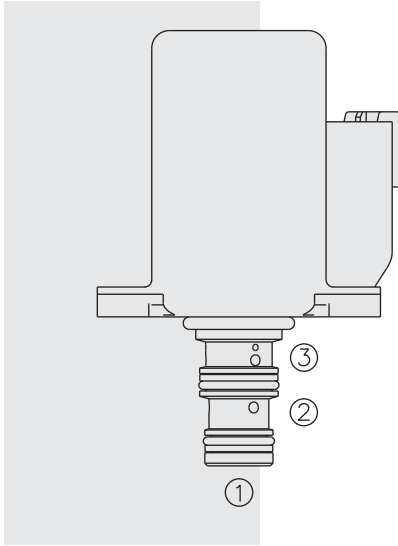


# ELECTRO-PROPORTIONAL VALVES—PRESSURE CONTROLS

## EHPR98-T35 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 Coil is an integral part of the valve assembly, and cannot be replaced or field-serviced.

### OPERATION

The EHPR98-T35 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.
- 10, 12, 20 or 24 VDC coils.
- Several push-on termination options.
- 1000-hour salt spray protection.

### RATINGS

**Maximum Inlet Pressure:** 103 bar (1500 psi); If higher inlet pressure is required (103 bar/1500 psi to 241 bar/3500 psi) select the "A" option in the model code.

**Maximum Tank Pressure:** 34.5 bar (500 psi);  
with Manual Override Option: 17.2 bar (250 psi)

**Control Pressure at Maximum Control Current:** 20.7 bar (300 psi)

**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:** 4.2Ω (10V); 5.1Ω (12V); 17.0Ω (20V); 19.3Ω (24V)

**Inductance:** 80 mH (12V); **Hysteresis:** Less than 4% with 100 Hz PWM

**Flow Rating:** 5.7 lpm (1.5 gpm)

#### Maximum Internal Leakage:

De-energized: 75 ml/minute (4.58 cu. in./minute) at 25 bar (365 psi);  
200 ml/minute (12.2 cu. in. minute) at 241 bar (3500 psi).

Energized at I-Max.: 125 ml/minute (7.63 cu. in./minute) at 25 bar (365 psi);  
400 ml/minute (24.4 cu. in. minute) at 241 bar (3500 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

**Installation:** Flange Mount

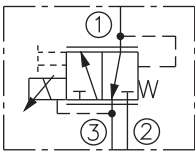
**Mounting Screws:** M4 x 0.7 x 12 Long; Part No. 4001015 (not provided with valve)

**Cavity:** VC-T009; See page 9.111.1; **Cavity Tool:** CT-T009R0-x-G; See page 8.600.1

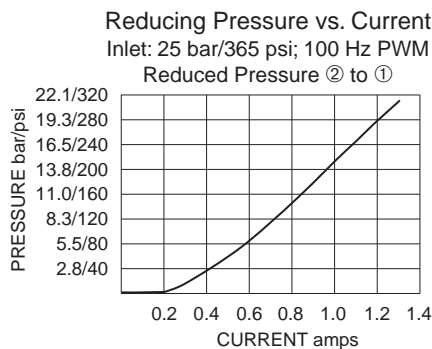
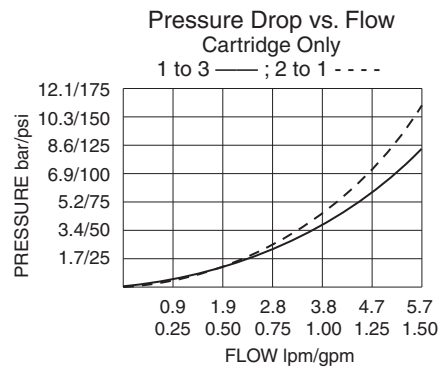
**Seal Kit:** SKEHPR98-T3X; See page 8.650.1

### SYMBOLS

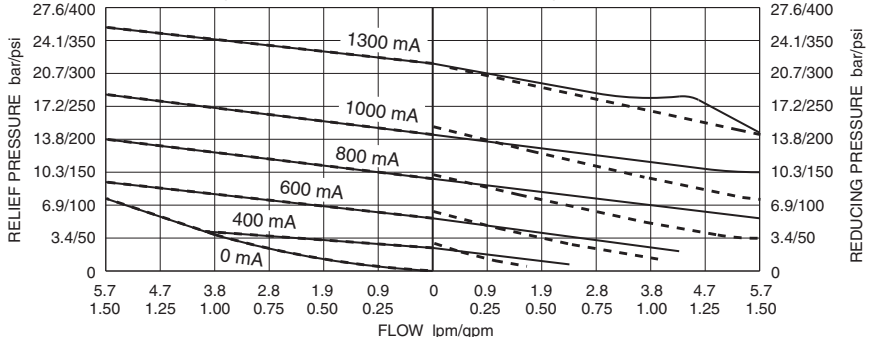
#### USAS/ISO:



### PERFORMANCE



Typical Relieving/Reducing Pressure vs. Flow Characteristic  
Inlet: 25 bar/365 psi ———; Inlet: 241 bar/3500 psi - - - -  
100 Hz PWM (Both Directions); Note: Curves overlap on Relieving Pressure (LH) side of graph



# Drop-In-Style Valve

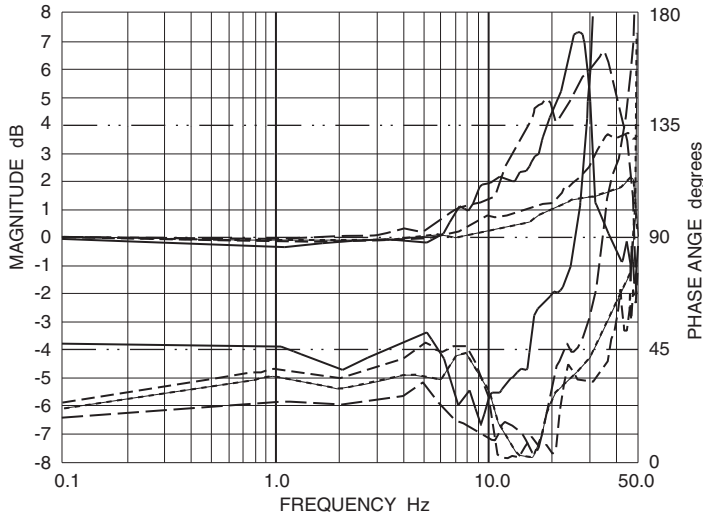
# EHPR98-T35

## PERFORMANCE (continued)

### Typical Frequency Response Curves

Inlet: 25 bar/365 psi; DC Current; Regulated Port Blocked

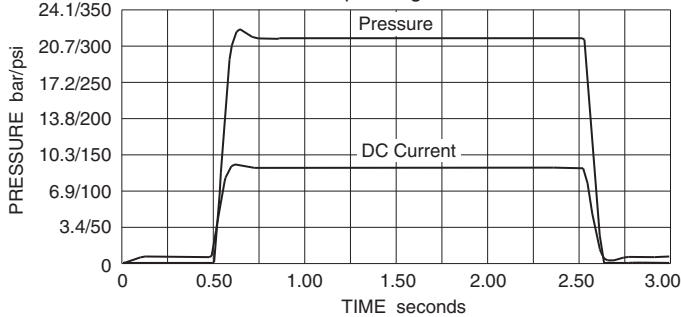
Signals: 40% ±10% —; 50% ±25% — —; 70% ±20% - - -; 80% ±10% - - - -



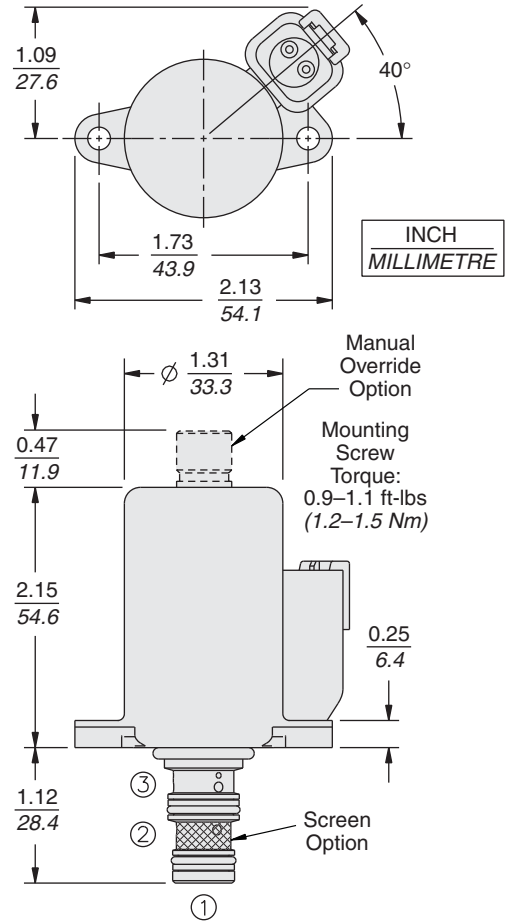
Note: For additional Frequency Response or Step Response information, consult factory.

### Typical Step Response Curve

Inlet 25 bar/365 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-T35

#### Inlet Pressure

0 to 103 bar (0 to 1500 psi) (Blank)  
103 to 241 bar (1500 to 3500 psi) **A**

#### Option

None (Blank)  
Manual Override **M**

#### Screen Option

None (Blank)  
142µ on Inlet Port 2 **S**

#### Porting

Cartridge Only **0**

#### Voltage

**10** 10 VDC  
**12** 12 VDC  
**20** 20 VDC  
**24** 24 VDC

Other voltages are available. Consult factory.

#### Seals

**N** Hydrogenated Nitrile (HNBR)  
**V** Fluorocarbon

#### Diode

(Blank) None  
**Z** Zener Diode, Bidirectional

#### Termination

**ER** Deutsch DT04-2P  
**EJ** Amp Junior Timer