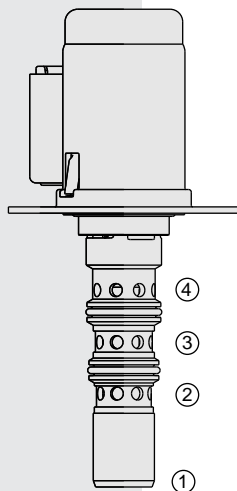


ELECTRO-PROPORTIONAL VALVES—PRESSURE CONTROLS

TS98-T34 Proportional Electric Reducing/Relieving



DESCRIPTION

A drop-in, flange-mounted, cartridge-style, pilot-operated, spool-type 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. This valve is intended for use as a pressure control device in demanding applications.

OPERATION

Without applied current, the **TS98-T34** allows flow from ③ to ④ while blocking ②. When the coil is energized, ③ is connected to ②, and pressure at ③ is controlled proportional to the amount of current applied to the coil. If pressure at ③ exceeds the setting induced by the coil, pressure is relieved to ④.

Back pressure on port ④ becomes additive to the pressure setting at a 1:1 ratio.

Note: This product may be customized for special OEM performance characteristics. Consult factory.

FEATURES

- Economical drop-in style.
- Integral waterproof coil standard.
See page 3.400.1 for a description of tests conducted to verify coil waterproofing.
- 12 or 24 VDC coils.
- Several push-on termination options.

RATINGS

Maximum Inlet Pressure and Regulated Pressure: 30 bar (435 psi)

Maximum Control Current: To achieve 20 bar (290 psi) regulated pressure:

0.85 amps for 12 VDC coil; 0.43 amps for 24 VDC coil

Note: Regulated pressures up to 29.3 bar (425 psi) can be attained with increased current values and 30 bar (435 psi) inlet pressure.

Deadband: 0.150 amps @ 12 VDC; 0.075 amps @ 24 VDC

Hysteresis: 5% PWM for 20 bar (290 psi) control pressure

Reducing/Relieving Pressure Range from Zero to Maximum Control Current:
0–20.7 bar (0–300 psi)

Rated Flow: Port ③ to ④ with coil de-energized: 30 lpm (8 gpm)

Maximum Pilot Flow: 0.79 lpm (0.21 gpm) with 20.7 bar (300 psi) inlet

Flow Path: Free Flow: ③ to ④ coil de-energized; Reduced: ② to ③ coil energized; Relieving: ③ to ④ coil energized; Port ① is not plumbed externally

Oil Temperature: -40 to 120°C (-40 to 248°F)

Ambient Air Temperature: -40 to 120°C (-40 to 248°F)

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 Recommendation: When possible, the valve should be mounted below the reservoir oil level. This will maintain oil in the armature preventing trapped air instability. If this is not feasible, mount the valve horizontally for best results.

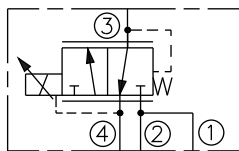
Flange Mounting Screws: M5 x 8; Part No. 4000039 (not provided with valve)

Cavity: Special; Consult factory; **Cavity Tool:** Special; Consult factory

Seal Kit: SK98-T3N; See page 8.650.1

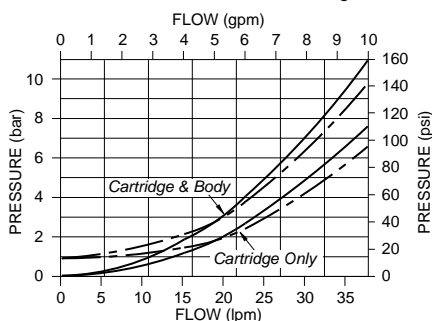
SYMBOLS

USAS/ISO:

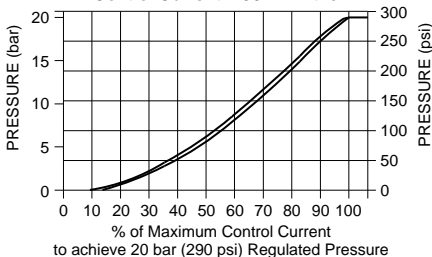


PERFORMANCE

Pressure Drop vs. Flow Characteristic
 - - - For Flow ③ to ④ with Coil De-energized
 — For Flow ② to ③ with Coil Energized



Reduced Pressure vs. Current Characteristic
 With Inlet Pressure at ② of 0–20.7 bar (0–300 psi)
 Control Current: 200 Hz Dither



Note: Regulated pressures up to 29.3 bar (425 psi) can be attained with increased current values and 30 bar (435 psi) inlet pressure.

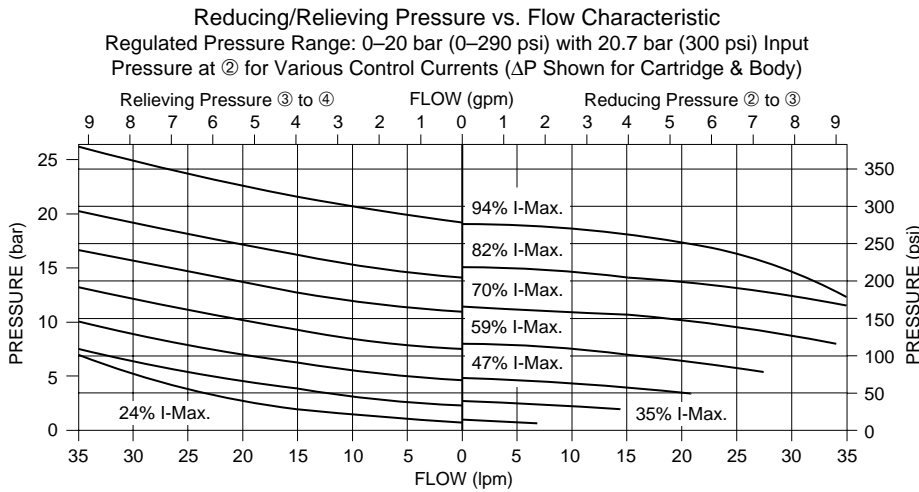
Recommended Electronic Controllers:

See page 2.001.1 or our Electronics catalog.

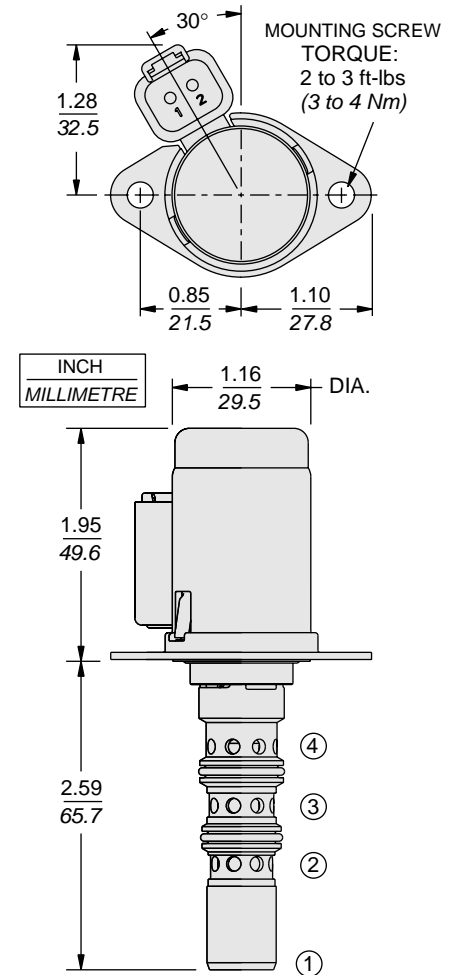
Valve w/Internally Piloted Spool

TS98-T34

PERFORMANCE (continued)



DIMENSIONS



MATERIALS

Cartridge including Coil: Weight: 0.23 kg. (0.50 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.

Special Ported Body: Consult factory.

Mounting Screws: Must be ordered separately: Part No. 4000039

TO ORDER

TS98-T34

Option
 None (Blank)
 Inlet Port Screen **S**

Porting
 Cartridge Only **0**

Seals
 Hydrogenated Nitrile (HNBR) **N**

Diode
 (Blank) None
Z Zener Diode

Termination
DJ Amp Junior Timer
Y2A Metri-Pack® 150.2A
DR Deutsch DT04-2P

Voltage
12 12 VDC (0.70 amps max.)
24 24 VDC (0.35 amps max.)
 Consult factory for other voltages