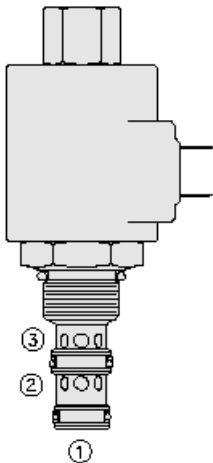




Overview

TS10-36A-0-N-0

www: www.salushydraulics.pl
 e-mail: pl@salushydraulics.pl
 shop/sklep: www.salushydraulics.pl/sklep/



Description

The TS10-36X is a screw-in, cartridge style, pilot-operated, spool-type, proportional pressure reducing/relieving valve which CAN be infinitely adjusted across a prescribed range using a variable electric input. The regulated pressure is proportional to the input electrical current

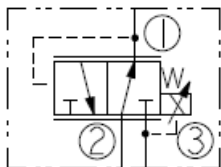
Operation

With current applied to the valve coil, the TS10-36XX allows flow from port 2 to port 1 until sufficient pressure is present at port 1 to open the pilot section by offsetting the electrically induced solenoid force. Upon reaching the predetermined pressure at port 1, the valve shifts to restrict inlet flow at port 2, thereby regulating pressure at port 1. In this mode, the valve also relieves port 1 to port 3. With no current applied, the valve will relieve at approximately 100 psi [6,9]

Features

- 12 and 24 volt coils standard.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Optional manual override.

Symbol



Ratings

Pressure Ratings

| | | |
|---------------------------|------------------------------------|-----------------------------|
| Pressure rating | 241.3 bar (3500 psi) | - Note: Ports 1, 2 |
| | 68.9 bar (1000 psi) | - Note: Port 3 |
| Proof pressure | 249.9 bar (3625 psi) | |
| Burst pressure | 758.4 bar (11000 psi) | - Note: With coil assembled |
| Adjustable pressure range | 6.9 to 206.8 bar (100 to 3000 psi) | - Note: Model-code A |
| | 6.9 to 158.6 bar (100 to 2300 psi) | - Note: Model code B |
| | 6.9 to 117.2 bar (100 to 1700 psi) | - Note: Model code C |

Flow Ratings

| | |
|--------------------|---|
| Flow rating | 56.8 lpm (15 gpm) |
| Maximum pilot flow | 0.02 lpm (0.08 gpm) - Note: With maximum control current and with inlet pressure of 241.3 bar (3500 psi) at regulated flow of 3.8 lpm (1 gpm) |

Other Ratings

| | |
|----------------------|---|
| Cycle life | Less than 5% performance degradation over 1 million cycles (based on simulated test at 37.8 lpm (10 gpm) flow and maximum pressure setting. |
| Corrosion protection | 960 hr salt spray per ASTM b117 |

Temperature Ratings

| | | |
|-----------------------------|-------------------------------|---------------------------------|
| Operating fluid temperature | -40 to 100 °C (-40 to 212 °F) | - Note: With buna N seals |
| | -26 to 204 °C (-15 to 400 °F) | - Note: With fluorocarbon seals |
| | -54 to 107 °C (-65 to 225 °F) | - Note: With polyurethane seals |
| Storage temperature | -40 to 70 °C (-40 to 160 °F) | |
| Ambient temperature | -40 to 70 °C (-40 to 160 °F) | |

Operating Parameters

| | |
|---------------------------------------|---|
| Fluids | Mineral based or synthetic with lubricating properties |
| Fluid viscosity range | 7.4 to 420 cSt |
| Maximum operating contamination level | 18/16/13 per ISO 4406 (tank pressure is additive to regulated pressure) |



Properties

| | | |
|------------------------------|---|-------------------|
| Unit weight | 0.21 kg (0.47 lb) | |
| Internal wetted surface area | 192 cm ² (29.8 in ²) | - Note: TS10-36X |
| | 198 cm ² (30.7 in ²) | - Note: TS10-36XM |

Electrical Parameters

D Series coils

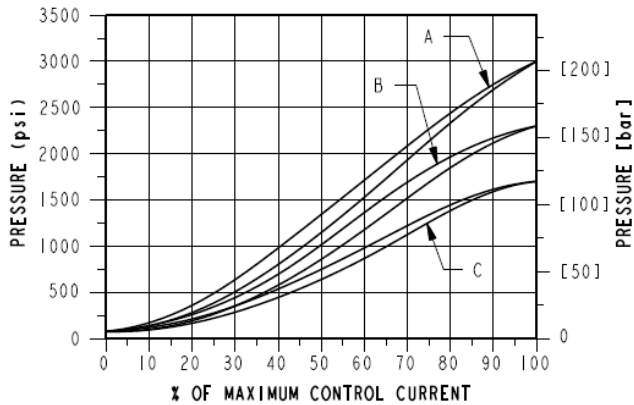
| | | |
|-------------------------|--------|---------------------|
| Maximum control current | 1.10 A | - Note: 12 Vdc coil |
| | 0.55 A | - Note: 24 Vdc coil |
| Valve inductance | 141 mH | - Note: 12 Vdc coil |
| | 626 mH | - Note: 24 Vdc coil |

E Series coils

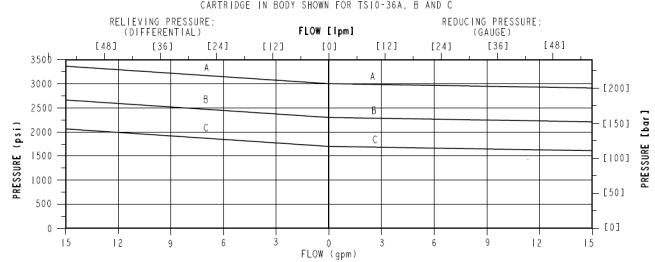
| | | |
|---------------------------|--------|---------------------|
| Maximum control current | 1.20 A | - Note: 12 Vdc coil |
| | 0.60 A | - Note: 24 Vdc coil |
| Valve inductance | 139 mH | - Note: 12 Vdc coil |
| | 600 mH | - Note: 24 Vdc coil |
| Recommended PWM frequency | 200 Hz | |

Performance

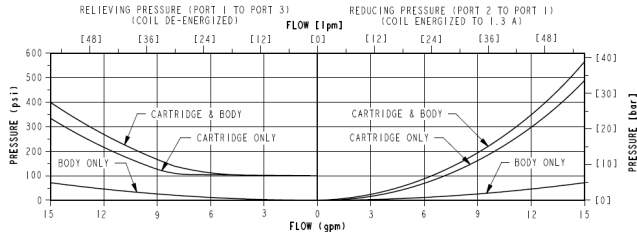
REDUCING PRESSURE VS CURRENT (DC)
PORT 2 TO PORT 1



TYPICAL RELIEVING / REDUCING PRESSURE VS FLOW @ MAXIMUM CURRENT

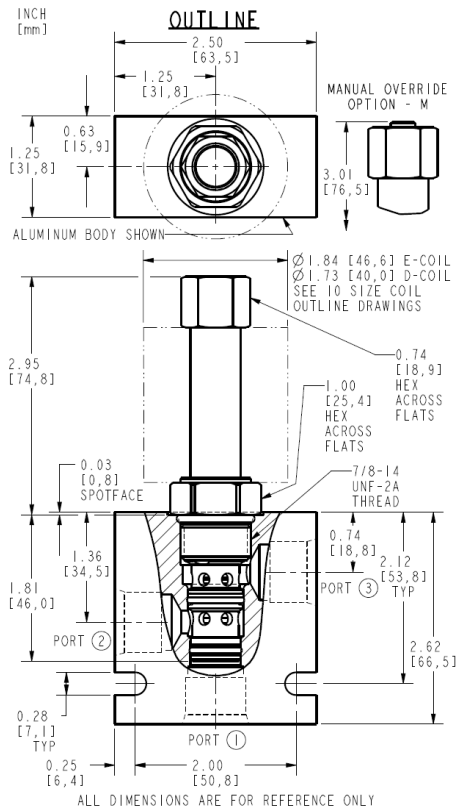


TYPICAL PRESSURE DROP VS FLOW





Dimensions



Materials

- Cartridge:** Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and polyester elastomer back-ups standard.
- Standard Ported Body:** Weight: 0.16 kg. (0.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ.
- Standard D-Coil:** Weight each: 0.32 kg. (0.7 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
- E-Coil:** Weight: 0.41 kg. (0.9 lbs.); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

Installation Specifications

| | |
|-------------------------------|-----------------------------------|
| Cavity | VC10-3 |
| Cartridge installation torque | 32.5 to 35.3 N-m (24 to 26 ft-lb) |
| Coil nut torque | 9.5 to 13.6 N-m (7 to 10 ft-lb) |
| Orientation restriction | None |

Accessories

| | | |
|----------|-----------------------|-------------------------|
| Seal kit | SK10-3X-BM SK10-3U-OO | - Note: X = seal option |
| Housings | | |
| Coils | | |

Order Code



ORDERING INFORMATION:

TS10-36XX-XX-X-XX/XX

BASE MODEL NUMBER:

PRESSURE CODE:

- 100-3000 psi - A
- 100-2300 psi - B
- 100-1700 psi - C

OPTION:

- NONE - BLANK
- MANUAL OVERRIDE - M

PORTING:

- CARTRIDGE ONLY - 0

SEAL OPTION:

- BUNA N - N
- FLUOROCARBON - V
- POLYURETHANE - P
- URETHANE - U

COIL VOLTAGE:

- LESS COIL - 00
- 12 VDC COIL - 12
- 24 VDC COIL - 24

COIL TERMINATIONS:

- DIN 43650 - DG
- LEAD WIRES (18 GAUGE) - DL
- DEUTSCH DT04-2P - ER
- METRI-PACK 150 - EY

| POSITION | CODE | DESCRIPTION |
|----------|-------|---|
| | | TS10-36DE-H-J-L |
| D | | Regulating Pressure Range |
| D | A | 6.9 to 206.8 bar (100 to 3000 psi) Pressure Range |
| D | B | 6.9 to 158.6 bar (100 to 2300 psi) Pressure Range |
| D | C | 6.9 to 117.2 bar (100 to 1700 psi) Pressure Range |
| E | | Manual Override |
| E | BLANK | NONE |
| E | M | Minimum Regulated Pressure Override, 3/16" Internal Hex |
| H | | Line Body |
| H | 0 | No Body |
| H | 6T | Aluminum SAE 6 |
| H | 8T | Aluminum SAE 8 |
| H | 6TD | Ductile Iron SAE 6 |
| H | 8TD | Ductile Iron SAE 8 |
| H | 3B | Aluminum BSPP 3/8" (3) |
| H | 3BD | Ductile Iron BSPP 3/8" (3) |
| J | | Seal |
| J | N | Buna-N |
| J | V | Fluorocarbon |
| J | P | Polyurethane |
| J | U | PPDI Urethane |
| L | | Coil |
| L | 0 | No Coil |
| L | 10DG | 10 VDC, D-Coil, DIN 43650 |
| L | 10DL | 10 VDC, D-Coil, Dual Lead Wires |
| L | 10DS | 10 VDC, D-Coil, Dual Spade |



| POSITION | CODE | DESCRIPTION |
|----------|---------|--|
| L | 10EL | 10 VDC, E-Coil, Dual Lead Wires |
| L | 10ER | 10 VDC, E-Coil, Deutsch |
| L | 12DG | 12 VDC, D-Coil, DIN 43650 |
| L | 12DL | 12 VDC, D-Coil, Dual Lead Wires, 18 inches long |
| L | 12DL/36 | 12 VDC, D-Coil, Dual Lead Wires, 36 inches long |
| L | 12DL/W | 12 VDC, D-Coil, Dual Lead Wires with Weatherpak |
| L | 12DR | 12 VDC, D-Coil, Deutsch |
| L | 12DS | 12 VDC, D-Coil, Dual Spade |
| L | 12EG | 12 VDC, E-Coil, DIN 43650 |
| L | 12EJ | 12 VDC, E-Coil, AMP Jr. |
| L | 12EL | 12 VDC, E-Coil, Dual Lead Wires, 18 inches long |
| L | 12EL/36 | 12 VDC, E-Coil, Dual Lead Wires, 36 inches long |
| L | 12ER | 12 VDC, E-Coil, Deutsch |
| L | 12EY | 12 VDC, E-Coil, Metri-Pack 150 |
| L | 20DS | 20 VDC, D-Coil, Dual Spade |
| L | 20ER | 20 VDC, E-Coil, Deutsch |
| L | 24AG | 24 VDC, D-Coil, DIN 43650 |
| L | 24AP | 24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires |
| L | 24DG | 24 VDC, D-Coil, DIN 43650 |
| L | 24DL | 24 VDC, D-Coil, Dual Lead Wires |
| L | 24DL/W | 24 VDC, D-Coil, Dual Lead Wires with Weatherpak |
| L | 24DP | 24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires |
| L | 24DR | 24 VDC, D-Coil, Deutsch |
| L | 24DS | 24 VDC, D-Coil, Dual Spade |
| L | 24EG | 24 VDC, E-Coil, DIN 43650 |
| L | 24EJ | 24 VDC, E-Coil, AMP Jr. |
| L | 24EL | 24 VDC, E-Coil, Dual Lead Wires, 18 inches long |
| L | 24EL/36 | 24 VDC, E-Coil, Dual Lead Wires, 36 inches long |
| L | 24ER | 24 VDC, E-Coil, Deutsch |
| L | 24EY | 24 VDC, E-Coil, Metri-Pack 150 |
| L | 36DS | 36 VDC, D-Coil, Dual Spade |