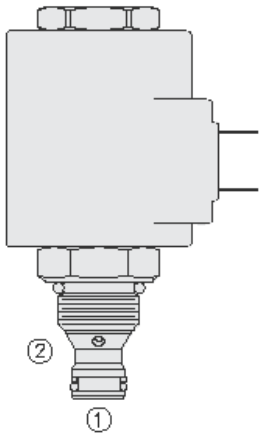




Overview



Description

Description: TS38-21 is a direct-acting, spool-type, proportional, pressure relieving valve. The regulated pressure is inversely proportional to the input electrical current. Port 1 is protected by 150 mesh screen.

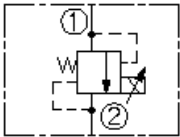
Operation

The TS38-21 blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to open the valve by overcoming the preset induced spring force. With no current applied, the valve will relieve range maximum. Applying current to the coil decreases the induced spring force, thereby reducing the valve setting.

Features

- 12 and 24 volt coils standard.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Hardened parts for long life.

Symbol



Ratings

Pressure Ratings

Pressure rating	248.2 bar (3600 psi)	- Note: A (at port 1)
	172.4 bar (2500 psi)	- Note: B (at port 1)
	75.8 bar (1100 psi)	- Note: C (at port 1)
	289.6 bar (4200 psi)	- Note: D (at port 1)
Proof pressure	344.7 bar (5000 psi)	- Note: Port 1
	241.3 bar (3500 psi)	- Note: Port 2
Burst pressure	758.4 bar (11000 psi)	
Adjustable pressure range	6.9 to 206.8 bar (100 to 3000 psi)	- Note: (a)
	6.9 to 137.9 bar (100 to 2000 psi)	- Note: (b)
	6.9 to 68.9 bar (100 to 1000 psi)	- Note: (c)
	6.9 to 241.3 bar (100 to 3500 psi)	- Note: (c)

Flow Ratings

Flow rating	1.1 lpm (0.3 gpm)
Hysteresis per cent	2.5 % - Note: (a) and (d)
	4 % - Note: (b)
	5 % - Note: (c)

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 and urethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 100 °C (-40 to 212 °F)	

Other Ratings

Corrosion protection	960 hr salt spray per ASTM b117
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Operating Parameters

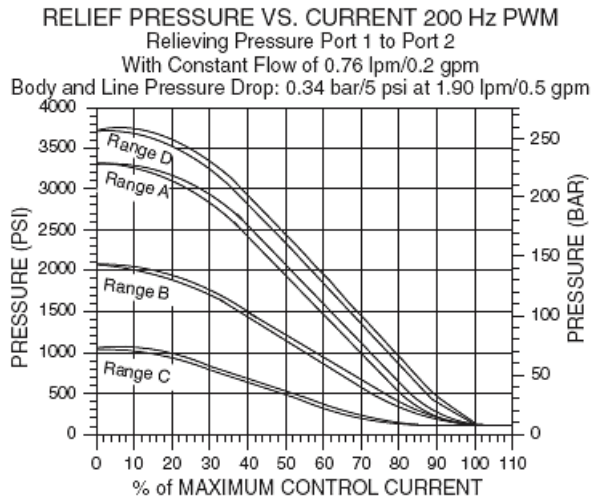
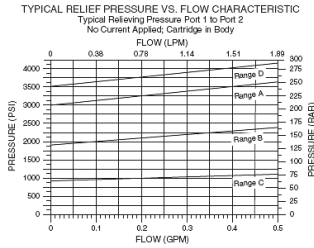
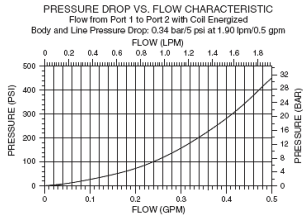
Fluids	Mineral based or synthetic with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



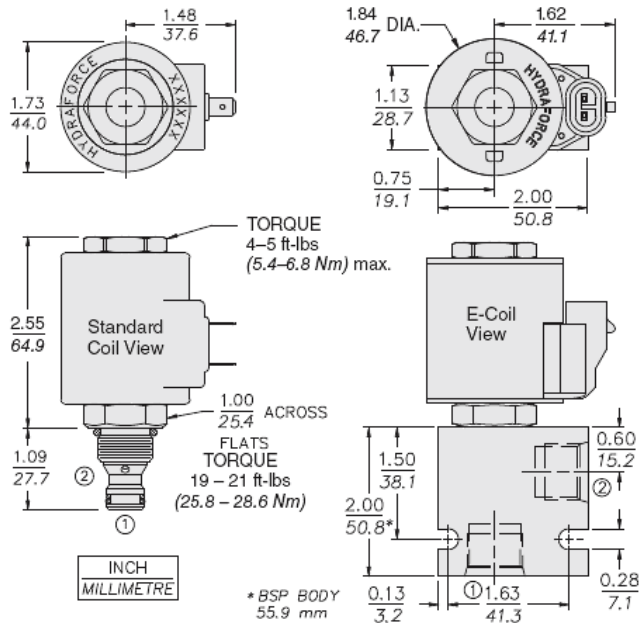
Properties

Unit weight	0.16 kg (0.35 lb)
Internal wetted surface area	107 cm ² (16.6 in ²)

Performance



Dimensions



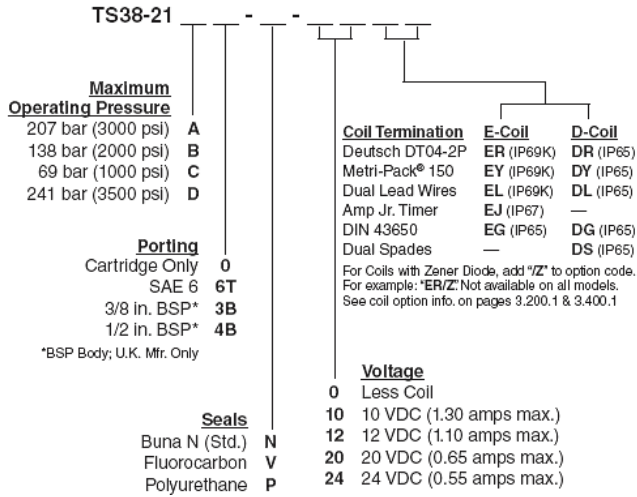
Installation Specifications

Cavity	VC08-2
Cartridge installation torque	25.8 to 28.6 N-m (19 to 21 ft-lb)
Coil nut torque	5.4 to 6.8 N-m (4 to 5 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK08-2N-B SK08-2V-B SK08-2P-B SK08-2U-O
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Order Code



Model Options

TS38-21D-H-J-L

D Regulating Pressure Range

CODE	DESCRIPTION
A	206.8 to 6.9 bar (3000 to 100 psi) Pressure Range
B	137.9 to 6.9 bar (2000 to 100 psi) Pressure Range
C	68.9 to 6.9 bar (1000 to 100 psi) Pressure Range
D	241.3 to 6.9 bar (3500 to 100 psi) Pressure Range

H Line Body

CODE	DESCRIPTION
0	No Body
4T	Aluminum SAE 4
6T	Aluminum SAE 6
8T	Aluminum SAE 8
6TD	Ductile Iron SAE 6
8TD	Ductile Iron SAE 8
2B	Aluminum BSPP 1/4" (2)
3B	Aluminum BSPP 3/8" (3)
3BD	Ductile Iron BSPP 3/8" (3)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane
U	PPDI Urethane

L Coil

CODE	DESCRIPTION
0	No Coil
10DG	10 VDC, D-Coil, DIN 43650
10DL	10 VDC, D-Coil, Dual Lead Wires



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