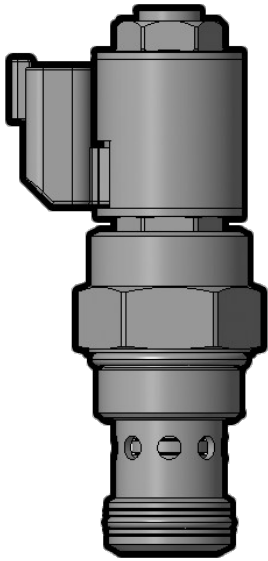




Overview



Description

PV16-23X is a two-way, normally closed, pilot operated, electro proportional hydraulic cartridge valve intended for use with an external compensator or load-sensing pump control.

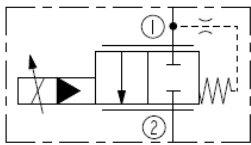
Operation

When de-energized, the valve blocks flow from 1 to 2. With increasing current applied to the solenoid, output flow from 1 to 2 will increase proportionally. The valve is intended for use with an operating differential across the valve of 7 to 11 bar [100 to 160 psi]. The set value of the external pressure compensator, or pump control, must provide for both the valve operating differential, as well as for system losses between the compensator and the PV16-23X at max required flow.

Features

- Continuous-duty rated coil.
- Hardened spool and cage for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Waterproof E-Coils rated up to IP69K.
- 960 hour salt-spray rated solenoid tubes.
- All HyPerformance products are tested to NFPA specification T2.6.1. and are tested at a verification level of 90% and an assurance of 99%.

Symbol



Ratings

Pressure Ratings

Pressure rating	241 bar (3500 psi)
Burst pressure	896 bar (13000 psi)

Flow Ratings

Flow rating	95 to 170 lpm (25 to 45 gpm)
Maximum internal leakage	15 ml/min (0.9 in ³ /min) - Note: At port 2 at 13.8 bar (200 psi) at port 1 and no current applied

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
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 hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406

Properties

Unit weight	0.48 kg (1.05 lb)	- Note: PV16-23
	0.53 kg (1.17 lb)	- Note: PV16-23M
	0.59 kg (1.31 lb)	- Note: PV16-23G
Internal wetted surface area	272 cm ² (42.2 in ²)	- Note: PV16-23
	292 cm ² (45.3 in ²)	- Note: PV16-23M/G



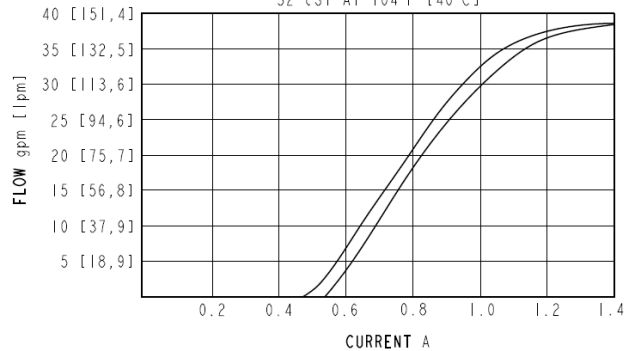
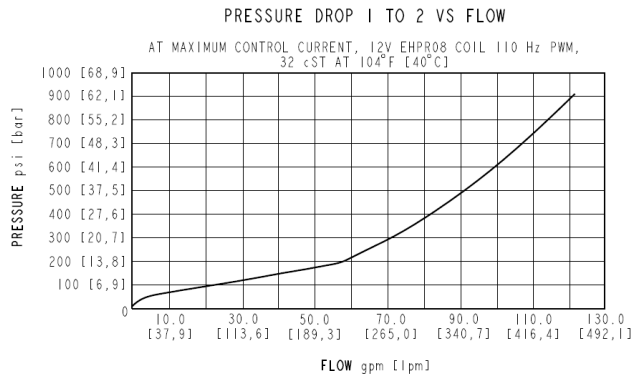
Electrical Parameters

Note	With EHPR08 E-series and D-series coil	
Maximum control current	1400 ±100 mA	- Note: Coil 12 V
	700 ±50 mA	- Note: Coil 24 V
Threshold current	525 ±125 mA	- Note: Coil 12 V
	263 ±63 mA	- Note: Coil 24 V
Dither PWM frequency	100 to 200 Hz	

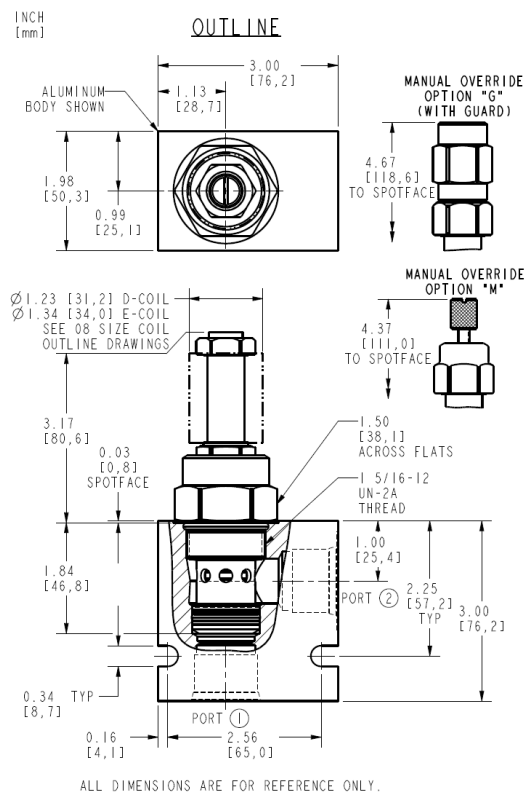
Performance

FLOW VS CURRENT

3000 psi [207 bar] INLET
WITH EC16-32-160 COMPENSATOR
12V EHPR08 COIL, 110 Hz PWM
32 cST AT 104°F [40°C]



Dimensions



Installation Specifications

Cavity	I Depending on orientation of manifold cross-drills, cavity variation A (VC16-2A) with undercut may be required to achieve full flow.
Cartridge installation torque	63.4 to 73.2 N-m (46 to 54 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restriction	None

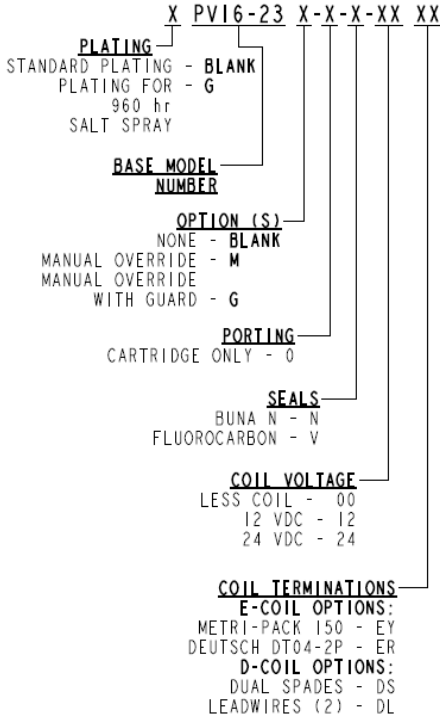


Accessories

Seal kit SK16-2X-MM - Note: X = Seal option

Order Code

ORDERING INFORMATION:



Model Options

PV16-23E-H-J-L

E Manual Override

CODE	DESCRIPTION
BLANK	NONE
G	Variable Position Override, Red Knurled Knob with Cover Cap
M	Variable Position Override, Red Knurled Knob

H Line Body

CODE	DESCRIPTION
0	No Body
12T	Aluminum SAE 12
16T	Aluminum SAE 16
12TD	Ductile Iron SAE 12
16TD	Ductile Iron SAE 16
6B	Aluminum BSPP 3/4" (6)
8B	Aluminum BSPP 1" (8)
8BD	Ductile Iron BSPP 1" (8)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon



CODE	DESCRIPTION
P	Polyurethane
U	PPDI Urethane

L Coil

CODE	DESCRIPTION
0	No Coil
12DG	12 VDC, D-Coil, DIN 43650
12ER	12 VDC, E-Coil, Deutsch
12EY	12 VDC, E-Coil, Metri-Pack 150
24DG	24 VDC, D-Coil, DIN 43650
24DL	24 VDC, D-Coil, Dual Lead Wires
24DS	24 VDC, D-Coil, Dual Spade
24ER	24 VDC, E-Coil, Deutsch