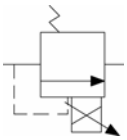
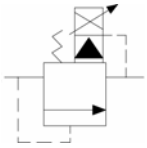
Proportional Pressure Relief Valves

Normally closed

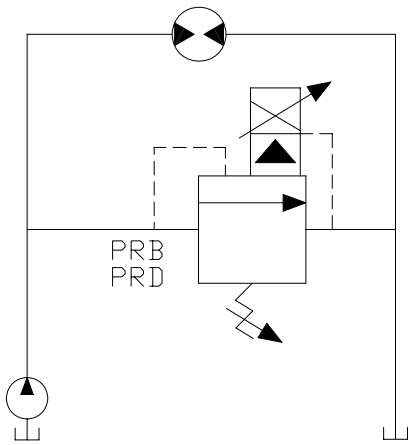
	GPM	PSI	LPM	BAR	MODEL	PAGE
	0,8	430	3	30	EB-PRL	18
	12	3000	45	207	EE-PRB	20
	30	3000	114	207	ET-PRB	22

Normally open

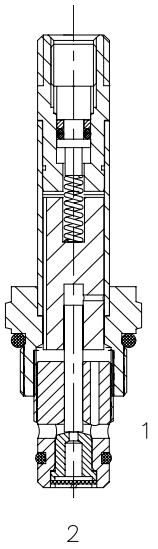
	GPM	PSI	LPM	BAR	MODEL	PAGE
	12	3000	45	207	EE-PRD	24

Typical Schematic

Typical application for the PRL and PRB is for fan or motor speed control.



EB-PRL 2 Way, Normally Closed, Low Pressure Proportional Relief Valve



DESCRIPTION

8 size, 3/4"-16 thread, solenoid operated, 2 way normally closed poppet style, proportional flow control valve.

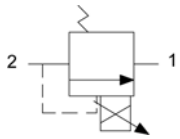
OPERATION

The EB-PRL blocks flow from (2) to (1) until sufficient pressure is present at (2) to offset a spring induced force. As solenoid current is increased, it offsets a portion of this force, resulting in a lower relief pressure. Can be infinitely adjusted across a prescribed range in response to a PWM (Pulse Width Modulated) current. Pressure output is inversely proportional to the current input. This valve is intended for use as a pressure limiting device in low pressure applications.
Note: backpressure on port (1) becomes additive to the pressure setting at a 1:1 ratio.

FEATURES

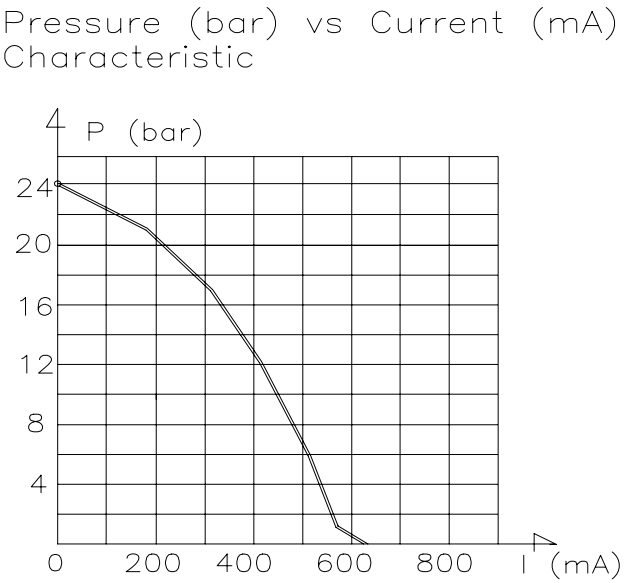
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.

HYDRAULIC SYMBOL



Standard pressure setting is 0 – 24 bar.
On request, the maximum value can be set in the range 10 – 30 bar

PERFORMANCE



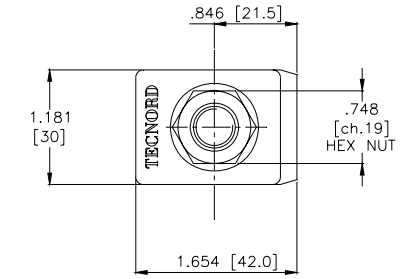
VALVE SPECIFICATIONS

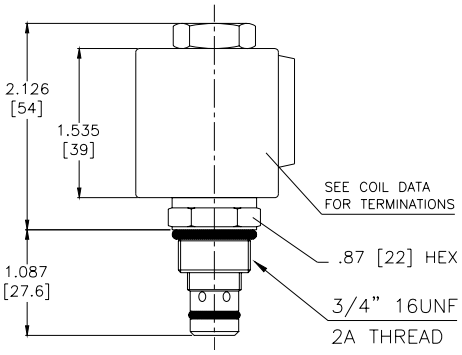
Nominal Flow Rate	0,8 GPM (3 LPM)
Max Inlet Pressure	430 PSI (30 bar)
Controlled pressure range	(see graph)
Leakage at rest	max 10 cc/min at 30 bar
Reduced pressure tolerance	+ / - 4%
Viscosity Range	36 to 3000 SSU (3 to 647 cSt)
Filtration	ISO 18/16/13
Media Operating Temperature Range	-40° to 250° F (-40° to 120° C)
Weight	.58 lbs. (.26 kg)
Operating Fluid Media	General Purpose Hydraulic Fluid
Cartridge Torque Requirements	25 ft-lbs (34 Nm)
Coil Nut Torque Requirements	4-6 ft-lbs (5.4 -8.1 Nm)
Cavity	POWER 2W
Cavity Tools kit (form tool, reamer, tap)	40500005

COIL SPECIFICATIONS

Current Supply Characteristics	PWM (Pulse Width Modulation)
Rated Current Range	0 – 700 mA
PWM or Super-imposed Dither Frequency	150 – 200 Hz
Coil Resistance at 68°F (20°C)	7,5 Ohm (12 Vdc) / 28 Ohm (24 Vdc) +/- 5%

DIMENSIONS





(for bodies style and sizes see section “Accessories”)

ORDERING INFORMATION

EB-PRL - _____ - _____ - _____ - _____

OPTIONS

Buna Standard	**00**
Viton Standard	**V0**

BODIES

Blank	Without Body
N	¼” BSP Ports
S	#6 SAE Ports

VOLTAGE

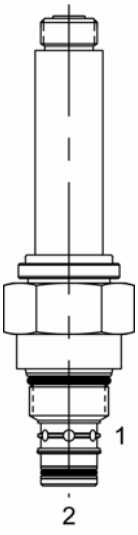
12	12 VDC
24	24 VDC

“A” COIL TERMINATION

DL	Double Lead
HC	DIN 43650 (Hirschman)
JT	AMP Jr. Timer - Integral
MP	Metri-Pack - Integral

Approximate Coil Weight: .42lbs (.19 kg)

EE-PRB 2 Way, Normally Closed, Proportional Relief Valve



DESCRIPTION

10 size, 7/8-14 thread, “Delta” series, solenoid operated, 2 way normally closed, pilot operated spool type relief valve.

OPERATION

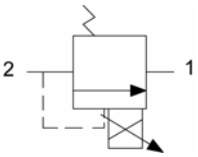
The EE-PRB blocks flow from (2) to (1) until sufficient pressure is present at (2) to offset a spring induced force. As solenoid current is increased, it offsets a portion of this force, resulting in a lower relief pressure. Can be infinitely adjusted across a prescribed range in response to a PWM (Pulse Width Modulated) current. Pressure output is inversely proportional to the current input. With full current applied to the solenoid, the valve will free flow from (2) to (1), at approximately 50 PSI (3,5 bar)

Note: Backpressure on port (1) becomes additive to the pressure setting at a 1:1 ratio.

FEATURES

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.

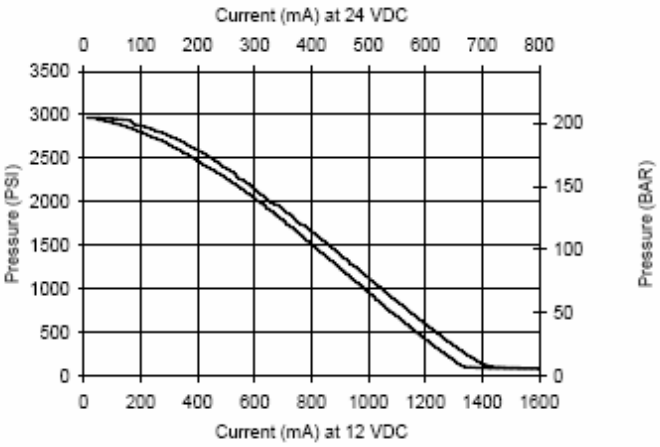
HYDRAULIC SYMBOL



Great for fan drive motor control.
For best performance valve must be purged of air.
Locate below reservoir or add check valve to return.

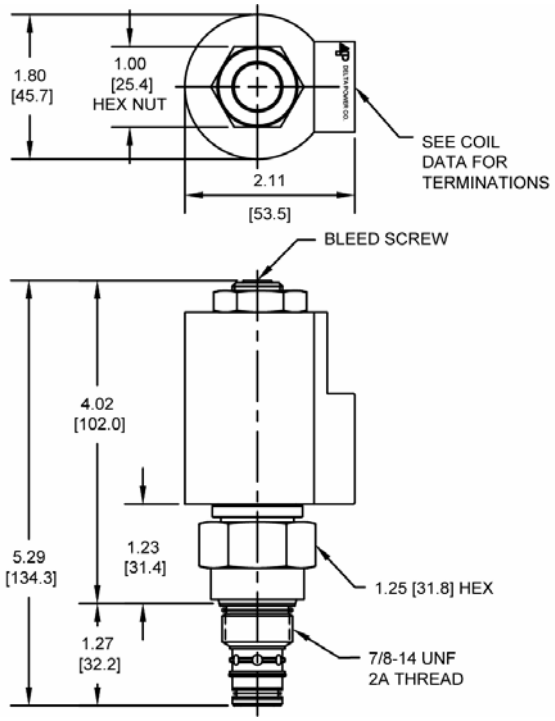
PERFORMANCE

Actual Test Data (Cartridge Only)



VALVE SPECIFICATIONS	
Nominal Flow	0-12 GPM (0-45 LPM)
Operating Range	50 - 3000 PSI (3.4-207 bar)
Typical Hysteresis	10% Max
Viscosity Range	36 to 3000 SSU (3 to 647 cSt)
Filtration	ISO 18/16/13
Media Operating Temperature Range	-40° to 250° F (-40° to 120° C)
Weight	.78 lbs. (.35 kg)
Operating Fluid Media	General Purpose Hydraulic Fluid
Cartridge Torque Requirements	30 ft-lbs (40.6 Nm)
Coil Nut Torque Requirements	5-7 ft-lbs (6.8-9.5 Nm)
Cavity	DELTA 2W
Cavity Tools kit (form tool, reamer, tap)	40500000
Seal Kit	21191202
COIL SPECIFICATIONS	
Current Supply Characteristics	PWM (Pulse Width Modulation)
Rated Current Range	200 – 1600 mA
PWM or Super-imposed Dither Frequency	500 Hz
Coil Resistance (12 Vdc)	5.1 Ohm +/- 5% at 68°F (20°C)

DIMENSIONS



(for bodies style and sizes see section " Accessories")

ORDERING INFORMATION

EE-PRB - ____ - ____ - ____ - ____ - ____

OPTIONS
Buna Standard **00**
Viton Standard **V0**

PRESSURE RANGE
50 – 1500 PSI **15**
50 – 3000 PSI **30**

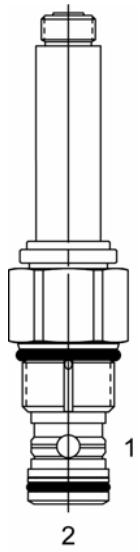
"T" COIL TERMINATION
HC DIN 43650 (Hirschman)
DL Double Lead

VOLTAGE
12 12 VDC
24 24 VDC

BODIES
Blank Without Body
N 3/8 BSP Ports
S #8 SAE Ports

Approximate Coil Weight: .89 lbs. (.41 kg.)

ET-PRB 2 Way, Normally Closed, Proportional Relief Valve



DESCRIPTION

12 size, 1 1/16-12 thread, “Tecnord” series, solenoid operated, 2 way normally closed, pilot operated relief valve.

OPERATION

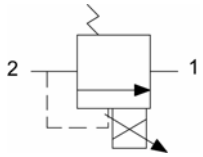
The ET-PRB blocks flow from (2) to (1) until sufficient pressure is present at (2) to offset the a spring induced force. As solenoid current is increased, its force offsets a portion of the spring force, resulting in a lower relief pressure.
Can be infinitely adjusted across a prescribed range in response to a PWM current. Pressure output is inversely proportional to the current input. With full current applied to the solenoid, the valve will free flow from (2) to (1) at approximately 50 PSI.

Note: Backpressure on port (1) becomes additive to the pressure setting at a 1:1 ratio.

FEATURES

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.

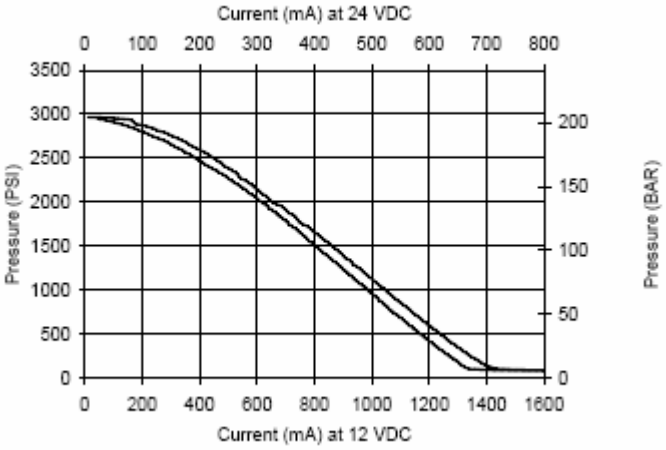
HYDRAULIC SYMBOL



Great for fan drive motor control
For best performance valve must be purged of air.
Locate below reservoir or add check valve to return.

PERFORMANCE

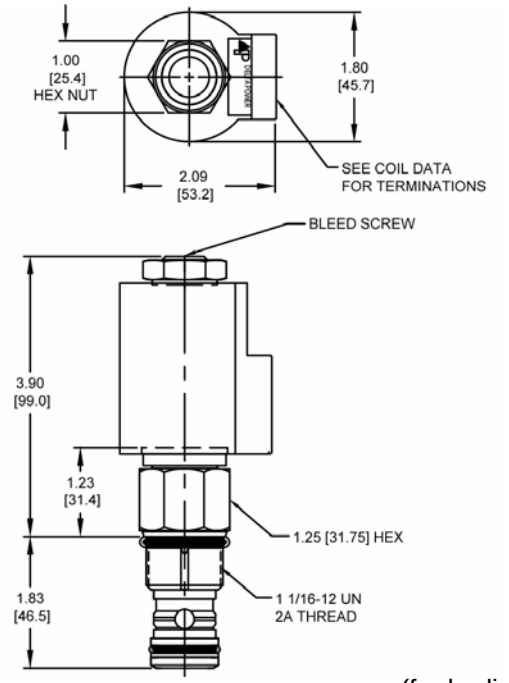
Actual Test Data (Cartridge Only)



VALVE SPECIFICATIONS	
Nominal Flow	0-30 GPM (0-114 LPM)
Operating Range	50-3000 PSI (3-207 bar)
Typical Hysteresis	5%
Viscosity Range	36 to 3000 SSU (3 to 647 cSt)
Filtration	ISO 18/16/13
Media Operating Temperature Range	-40° to 250° F (-40° to 120° C)
Weight	.77 lbs. (.35 kg)
Operating Fluid Media	General Purpose Hydraulic Fluid
Cartridge Torque Requirements	70 ft-lbs (92 Nm)
Coil Nut Torque Requirements	5-7 ft-lbs (6.8-9.5 Nm)
Cavity	TECNORD 2W
Cavity Toolsv kit (form tool, reamer, tap)	40500032
Seal Kit	21191300
COIL SPECIFICATIONS	
Current Supply Characteristics	PWM (Pulse Width Modulation)
Rated Current Range	200 – 1600 mA
PWM or Super-imposed Dither Frequency	500 Hz
Coil Resistance (12 Vdc)	5.1 Ohm +/- 5% at 68°F (20°C)

TECNORD

DIMENSIONS



(for bodies style and sizes see section " Accessories")

ORDERING INFORMATION

ET - PRB - ____ - ____ - ____ - ____ - ____

OPTIONS
Buna Standard **00**
Viton Standard **V0**

PRESSURE RANGE
50 – 1500 PSI **15**
50 – 3000 PSI **30**

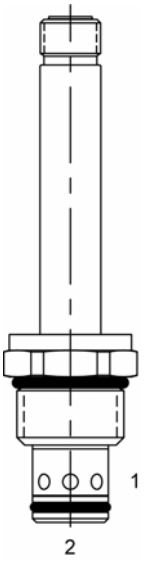
"T" COIL TERMINATION
HC DIN 43650 (Hirschman)
DL Double Lead

VOLTAGE
12 12 VDC
24 24 VDC

BODIES
Blank Without Body
N ¾" BSP Ports
S #12 SAE Ports

Approximate Coil Weight: .89 lbs. (.41 kg.)

EE-PRD 2 Way, Normally Open, Proportional Relief Valve



DESCRIPTION

10 size, 7/8-14 thread, “Delta” series, solenoid operated, 2 way normally open, pilot operated spool type relief valve.

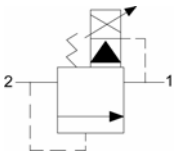
OPERATION

The EE-PRD blocks flow from (2) to (1) until sufficient pressure is present at (2) to offset the electrically induced solenoid force.
Can be infinitely adjusted across a prescribed range in response to a PWM (Pulse Width Modulated) current. Pressure output is proportional to the current input. With no current applied to the solenoid, the valve will free flow from (2) to (1) at approximately 50 PSI.
Note: Backpressure on port (1) becomes additive to the pressure setting at a 1:1 ratio.

FEATURES

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.

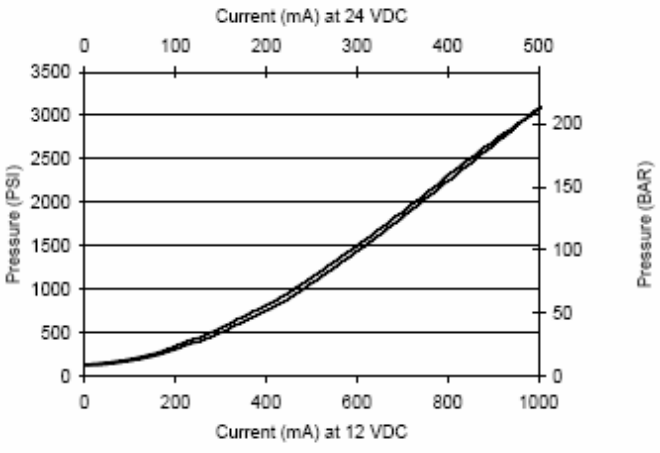
HYDRAULIC SYMBOL



For best performance valve must be purged of air.
Locate below reservoir or add check valve to return.

PERFORMANCE

Actual Test Data (Cartridge Only)



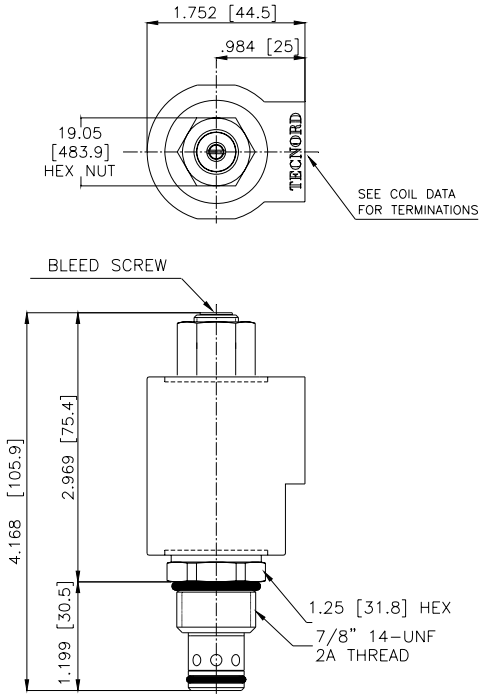
VALVE SPECIFICATIONS

Nominal Flow	0-12 GPM (0-45 LPM)
Operating Range	50-3000 PSI (3-207 bar)
Typical Hysteresis	5%
Viscosity Range	36 to 3000 SSU (3 to 647 cSt)
Filtration	ISO 18/16/13
Media Operating Temperature Range	-40° to 250° F (-40° to 120° C)
Weight	.30 lbs. (.13 kg)
Operating Fluid Media	General Purpose Hydraulic Fluid
Cartridge Torque Requirements	30 ft-lbs (40.6 Nm)
Coil Nut Torque Requirements	4-6 ft-lbs (5.4-8.1 Nm)
Cavity	DELTA 2W
Cavity Tools Kit (form tool, reamer, tap)	40500000
Seal Kit	21191202

COIL SPECIFICATIONS

Current Supply Characteristics	PWM (Pulse Width Modulation)
Rated Current Range	200 – 1100 mA
PWM or Super-imposed Dither Frequency	500 Hz
Coil Resistance (12 Vdc)	5.9 Ohm +/- 5% at 68°F (20°C)

DIMENSIONS



(for bodies style and sizes see section "Accessories")

ORDERING INFORMATION

EE-PRD - ____ - ____ ____ - ____

OPTIONS

Buna Standard	**00**
Viton Standard	**V0**

BODIES

Blank	Without Body
N	3/8" BSP Ports
S	#8 SAE Ports

VOLTAGE

12	12 VDC
24	24 VDC

"V" COIL TERMINATION

HC	DIN 43650 (Hirschman)
DI	Deutsch – Integral DT04-2P
DL	Double Lead
JT	AMP Jr. Timer - Integral