3.11

36ER38-20 TYPE

Proportional Relief Valve

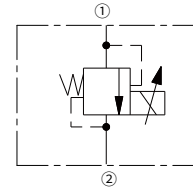
Maximum pressure(bar / psi)	**248 / 3600**
Rated flow (L/min / gpm)	11.4 / 3

Features

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

Contents

Symbol



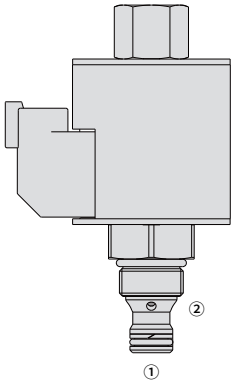
Description

A screw-in, cartridge-style, direct acting, poppet-type hydraulic relief valve, which can be infinitely adjusted across a Inverse proportion range using a variable electric input. Pressure output is proportional to DC current input.This valve can be used as a pressure limiting device in demanding applications.

Operation

The 36ER58-20 blocks flow from port ① to port ② until sufficient pressure is present at port ① to offset the electrically induced solenoid force. With no current applied to the solenoid, the valve will free flow from port ① to port ② .

Note: Back pressure on port 2 becomes additive to the pressure setting at a 1 :1 ratio.



Ordering code

36ER38-20 □ – □ – □ – □ – □ □ □ □

Option:
None Blank
150μ Screen S

Maximum Relief Pressure:
0~207bar(0~3000psi) A
0~138bar(0~2000psi) B
0~69bar(0~1000psi) C

Porting:
Cartridge only 0

Seals:
Buna N (Std.) N
Polyurethane P
Fluorocarbon V

Voltage Std. Coil:
Less Coil 00
10VDC 10
12VDC 12
20VDC 20
24VDC 24

Termination (VDC) E-Coil:
Amp Junior Timer (IP67 Rated) EJ
Deutsch DT04-2P (IP69K Rated) ER
DIN 43650 (IP65 Rated) EG

Technical data

Hydraulic

Maximum pressure	248 bar (3600 psi)
Rated flow	11.4 L/min (3 gpm)
Internal leakage	⩽ 1mL/min （20d/min） @207bar
Control signal	DC or PWM (Significant improvements in valve performance occur with superimposed dither, with either control method.)
Dither frequency	⩾ 200Hz
Hysteresis with Dither 250 Hz	3.3% (7% maximum without dither)
Step response	T_{ON} <50 ms; T_{OFF} <7 ms
Operational relief pressure range from zero to maximum control current	A:0~207bar；B:0~138bar；C:0~69bar
Cavity	VC08-2 (See technical reference)
Fluid	Mineral-based or synthetics with lubricating properties
Viscosity range	7.4 to 420 mm^2/s
Temperature range	-40 to 100 °C (Buna N seals)
	-54 to 107 °C (Polyurethane seals)
	-26 to 204 °C (Fluorocarbon seals)
Degree of fluid contamination	The minimum pollution level is ISO4406 level 18/16/13, and level 15/13/11 is recommended to prolong the service life

Electric

Coil		E-Coil
Maximum current (A)	12VDC	1.32
	24VDC	0.66
Electric resistance (Ω) @20° C	12VDC	7.1±5
	24VDC	29±7%

Materials

Cartridge:
Weight: 0.16 kg ; Steel with hardened work surfaces.
External surface galvanized with nickel. Buna N O-rings and polyester elastomer back-up standard.

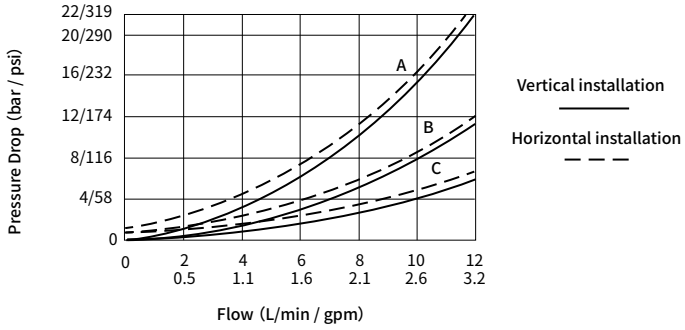
Standard Ported Body:
Anodized high-strength aluminum alloy, rated to 240 bar; Ductile iron and steel bodies available; Dimensions may differ, consult factory.

Standard Coil: Consult factory.

E-Coil:
Weight: 0.41 kg; Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with Deutsch sockets.

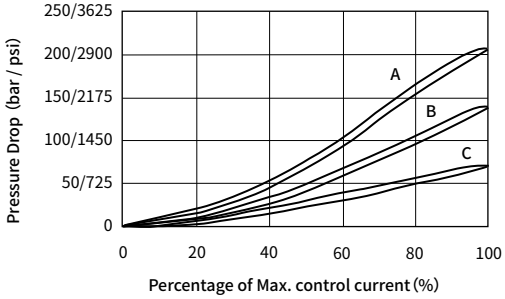
Characteristic curves

The flow and press from port ① to port ②, coil de-energized



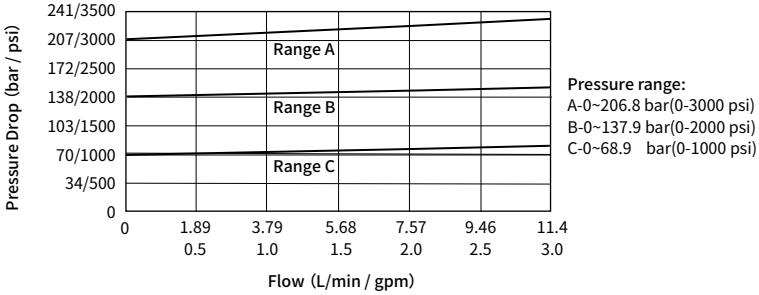
Pressure relief and 250Hz current characteristic

Pressure relief: ① to ②

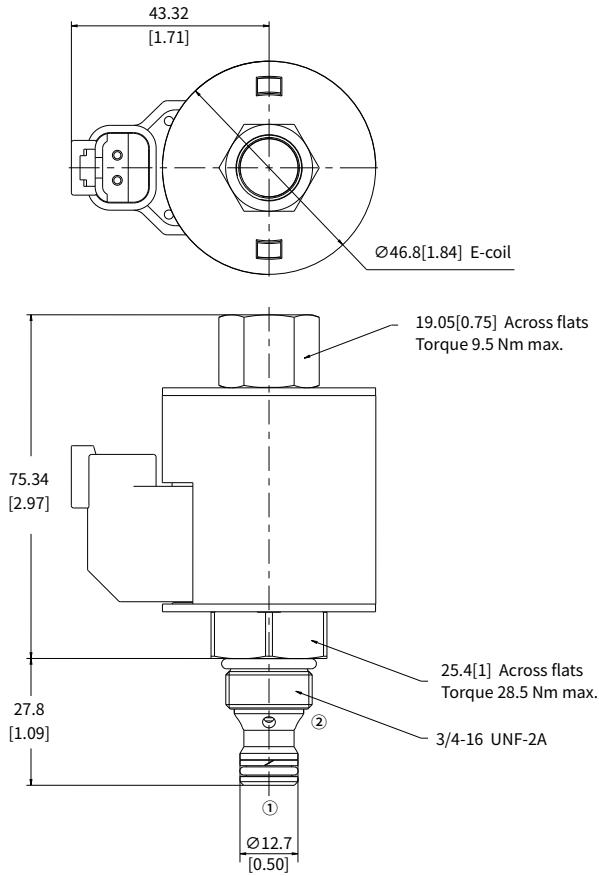


Standard pressure relief and flow characteristic

Standard pressure relief: ① to ②



Unit dimensions



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