



2.15

35ER08-27 TYPE

Inverse-proportional Electric Relief Valve

Maximum pressure(bar / psi)	241 / 3500
Rated flow (L/min / gpm)	19 / 5

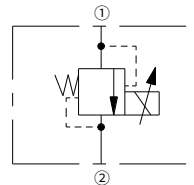
Features

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

Contents

Description	02
Operation	02
Ordering code	02
Technical data	03
Materials	03
Performance	04
Dimensions	05

Symbol



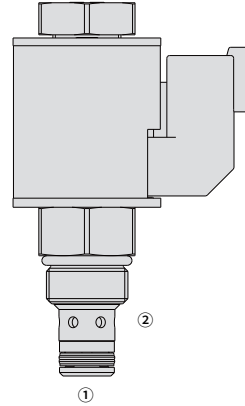
Description

A screw-in, cartridge-style, pilot-operated, spool-type pressure relief valve, which can be infinitely adjusted across a prescribed range using a variable electric input.

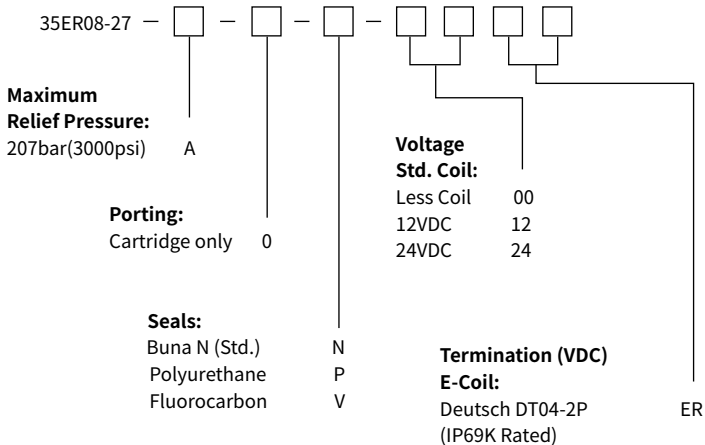
Pressure output is inversely proportional to DC current input. This valve is intended for use as a pressure limiting device in demanding applications.

Operation

The 35ER08-27 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 at ± 50 psi of the spring maximum. Applying current to the coil reduces the induced spring force thereby reducing the valve setting. The regulated pressure is inversely proportional to the input electrical current.



Ordering code



Technical data

Hydraulic

Maximum pressure	241 bar (3500 psi)
Rated flow	19 L/min (5 gpm) P = 7.8 bar (113.3 psi) \pm 10%, cartridge only, ① to ② coil energized
Maximum pilot flow	0.76 L/min (0.2 gpm)
Relief pressure range from zero to maximum control current	Minimum Pressure is factory adjusted; A: 207~4.1 bar (3000~60 psi)
Hysteresis	< 3%
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
Installation recommendation	When possible, the valve should be mounted below the reservoir oil level. This will maintain oil in the armature preventing trapped air instability. If this is not feasible, mount the valve horizontally for best results.

Electric

Coil		E-Coil
Maximum current (A)	12VDC	1.2A
	24VDC	0.6A
Electric resistance (Ω) @20° C	12VDC	5.4 \pm 8% Ω
	24VDC	21.7 \pm 5% Ω

Materials

Cartridge:

Weight: 0.13 kg ; Steel with hardened work surfaces.

External surface galvanized with nickel. Buna N O-rings and polyester elastomer back-up standard.

Standard Ported Body:

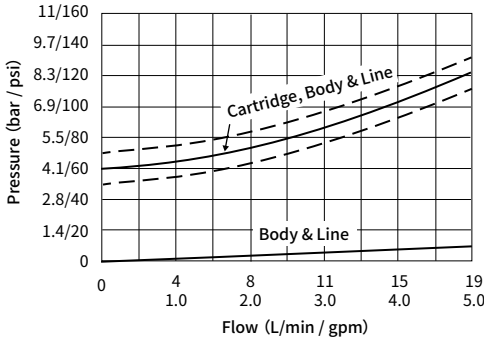
Anodized high-strength aluminum alloy, rated to 240 bar; Ductile iron and steel bodies available; Dimensions may differ, consult factory.

E-Coil (X30E Series):

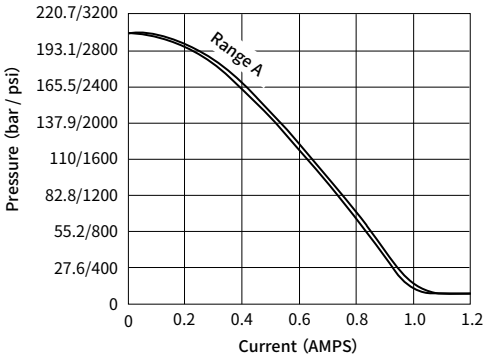
Weight: 0.14 kg; Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with Deutsch sockets.

Characteristic curves

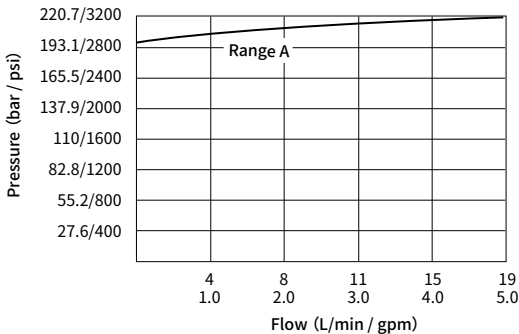
Pressure Drop VS. Flow Characteristic
 Flow from Port ① to Port ② with Coil Energized, at Maximum Set Current



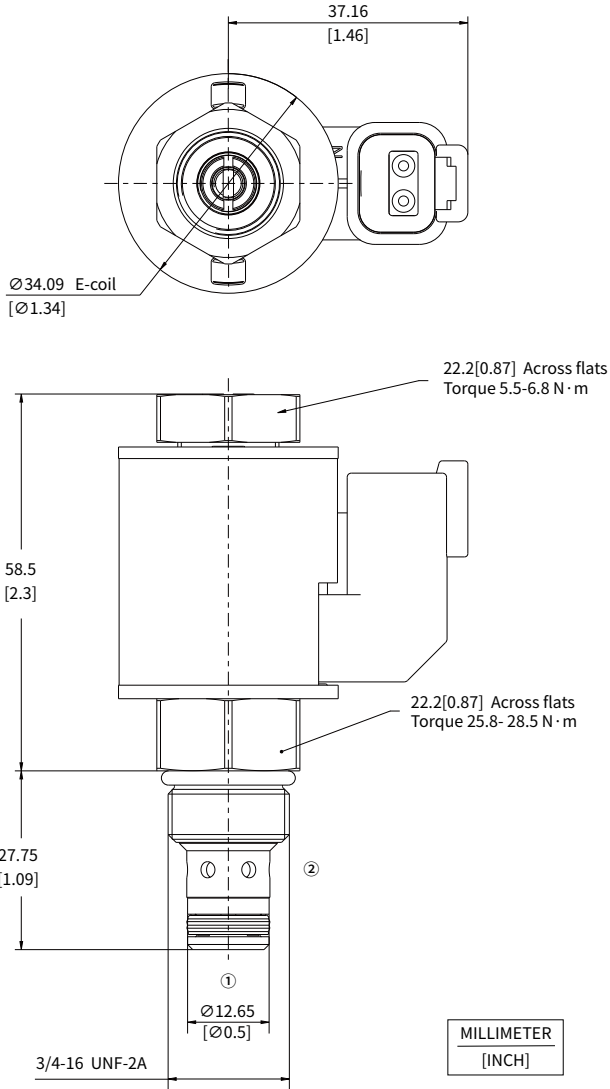
Relief Pressure vs. Current (DC) Characteristic
 Relieving Pressure Port ① to Port ②
 5.68 lpm (1.5 gpm) Flow using 12VDC Coil, 200 Hz PWM
 % of Maximum Control Current



Typical Relief Pressure VS. Flow Characteristic
 Typical Relieving Pressure Port ① to Port ② ; Cartridge in Body



Unit dimensions



China

+86 400 101 8889

America

+01 630 995 3674

Germany

+49 (30) 72088-0

Japan

+81 03 6809 1696



© This brochure can be reproduced, edited, reproduced or transmitted electronically without the authorization of Hengli Hydraulic Company. Due to the continuous development of the product, the information in this brochure is not specific to the specific conditions or applicability of the industry, thus, Hengli does not take any responsibility for any incomplete or inaccurate description.