



4.2.1

PPRV-04 TYPE
ELECTRIC PROPORTIONAL
PRESSURE REDUCING VALVE

Size	04
Rated pressure(bar)	50
Set pressure(bar)	25
Rated flow(L/min)	4



04

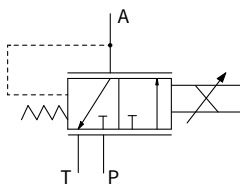
Contents

	Page
Ordering code	03
Symbol	03
Description	04
Operation	04
Features	04
Technical data	05
Characteristic curves	06
Unit dimensions	07
Cavity dimensions	08

Ordering code

Type	PPRV	04	S	25	D	24	F	10	Serial number
Size: 04									
Current range									Seal material:
0-1500mA			= L						FKM
0-750mA			= S						
Regulating pressure range:			20 bar						Voltage, 12V
			25 bar						24V
									Connector:
					D=				Deutsch connector DT04-2P
					J=				AMP Junior Timer

Symbol:



Description

Direct-acting control, cartridge structure, suitable for a special design of mobile machinery.

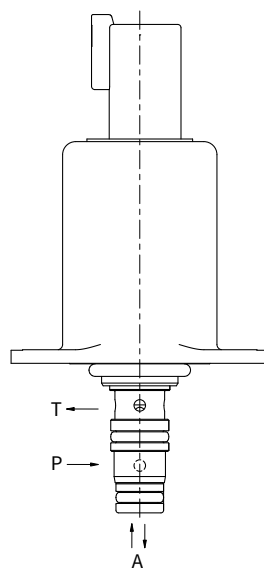
Operation

The PPRV-04 electric proportional decompression valve conducts proportional control of the pressure at control port A according to the magnitude of the current flowing into the electromagnet. The pressure at port A bears no relation to the pressure at port P.

When there is no current acting on the electromagnet, oil supply port P is closed, and control port A is connected to oil drain port T.

When the current acts on the electromagnet, oil supply port P is connected to the control port A, and oil drain port T is closed. The pressure at port A increases proportionally as the control current rises.

After the current is stabilized, if the pressure at control port A continues to rise under the action of an external force, oil supply port P is closed again. At the same time, port A is temporarily connected with oil drain port T, and not until the pressure at port A decreases to a reasonable level does P get reconnected to A, with T in closed state.



Features

- Quick response
- Compact size
- Oil-immersed DC solenoid

Technical data

General

Weight	0.203kg
Mounting position (recommended)	Optional, valve sleeve vertically downward
MTTF _d - value	150 years
Fluid temperature range	-30 to 80°C

Hydraulic

Max. pressure pump	$P_p = 50\text{bar}$
Max. pressure tank	$P_T = 30\text{bar}$
Max. working pressure	$P_A = 32\text{bar}$
Hysteresis	< 2 % of the nominal pressure at 130 Hz PWM signal
Maximum permitted degree of the contamination of hydraulic fluid cleanliness class	NAS1638 Class 9 and ISO4406 Class 20/18/15
Hydraulic fluid	Mineral oil according to DIN 51524
Hydraulic fluid temperature range	-30 to 105°C
Leakage	< 70mL/min (de-energized)
	< 220mL/min (energized)
Filterscreen size	200μm (Port P)

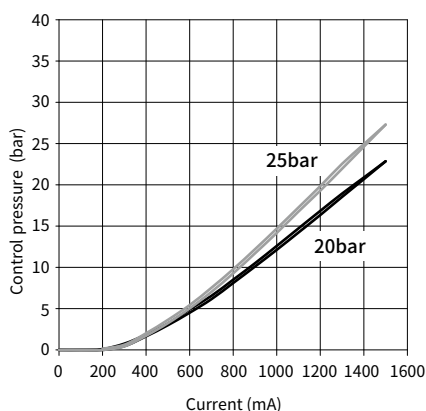
Electrical

Operating voltage (amplifier)	12 V	24 V
Max. control current	1500mA	750mA
Resistance at 20° C	4.8 Ω	24 Ω
Type of control	Current control PWM 100-200 Hz recommended	
Connector	Deutsch Connector DT04-2P AMP Junior Timer	
Protection Class	IP6K6/IPX9K	
Response time	$t_{on} < 50\text{ms}$	
	$t_{off} < 50\text{ms}$	

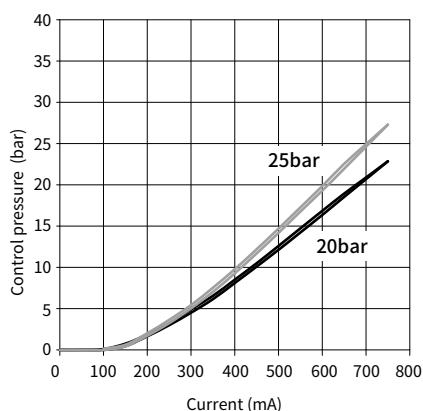
Characteristic curves (using HLP46, T=50°C)

• Current VS. Pressure characteristics

Curve: P-I (12V)

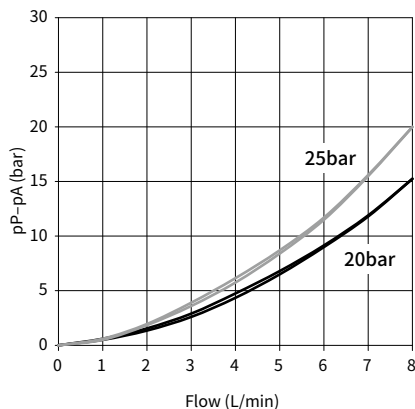


Curve: P-I (24V)

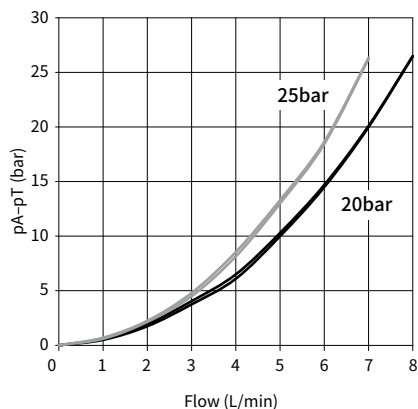


• Flow characteristics

Pressure drop pump to control port (P→A)



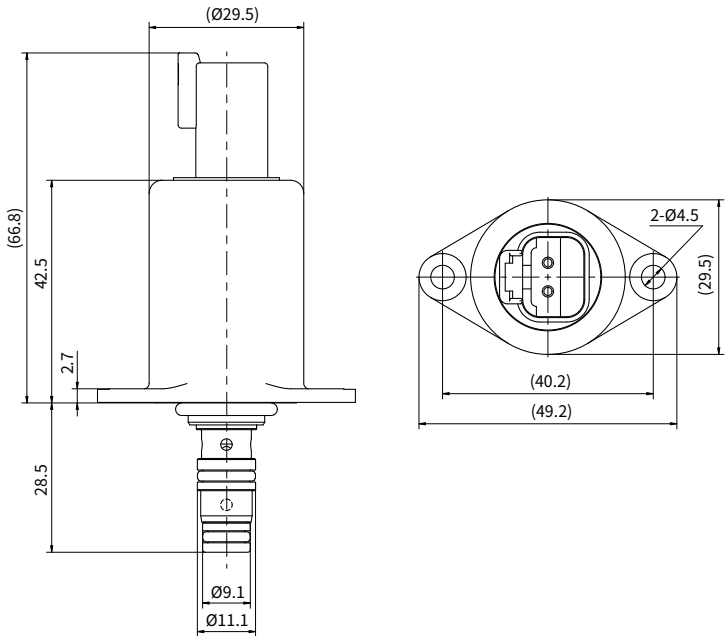
Pressure drop control port to tank (A→T)



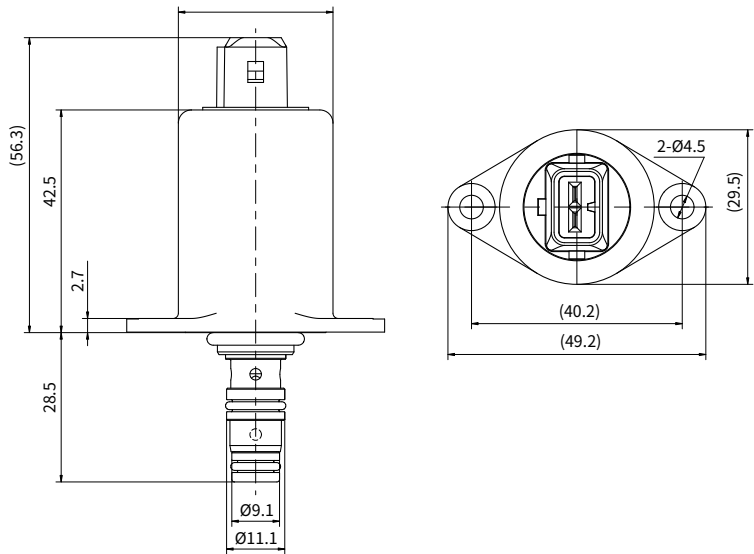
Unit dimensions

(dimensions in mm)

• Deutsch connector



• AMP Junior Connector



Cavity dimensions

