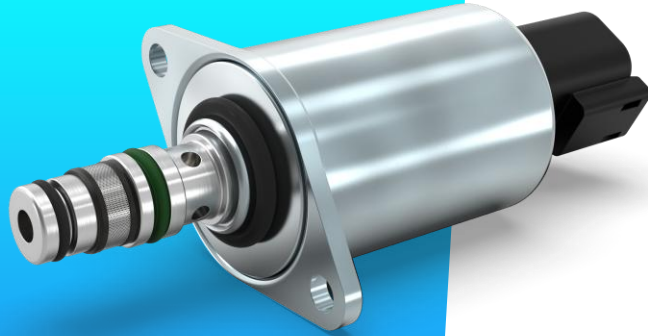


NG-PPCD03 Fail-Safe Proportional Valve



Proportional
valves

Directional
valves

Smart
products

Special
designs

Product classification

Name	Max volume flow @ 6 bar dp	
PPCD03	1,25 l/min	Direct controlled
PPCD04	2,5-5 l/min	
PPCD05	10 l/min	
PPCD06	15 l/min	
PPCD08	20 l/min	
PPCD09	30 l/min	
PPCP09	35 l/min	Pilot operated
PPCP13	72 l/min	



Hydraulic Data

Max pressure pump	$P_p = 50$ bar
Max pressure tank	$P_T = 30$ bar
Max pressure work	$P_A = 25$ bar
Hysteresis	< 3,5 % of the nominal pressure at 100 Hz PWM signal
Contamination level	Min Filtration: 20/18/15 According to ISO 4406
Fluid	Mineral Oil According to DIN 51524
Temperature range fluid	-30°C to +105°C
Leakage (internal)*	< 0,02 l/min (de-energized) < 0,15 l/min (energized)
Filterscreen size	125 μ m (P-Port)

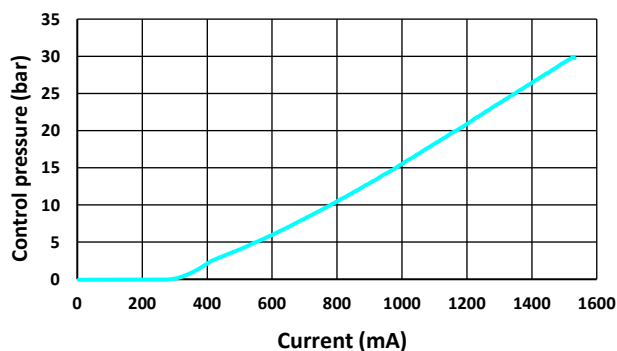
Electrical Data

Voltage	12 V	24 V
Max current	1500 mA	750 mA
Resistance	4,72 $\Omega \pm 5\%$	20,8 $\Omega \pm 5\%$
Type of control	Current control PWM 100 Hz recommended	
Connector	AMP Junior timer Deutsch Connector DT04-2P	
Protection class	up to IP6K6 / IPX9K	
Switching time	$t_{on} < 50$ ms (pA = 0% to 90%) $t_{off} < 50$ ms (pA = 100% to 10%)	

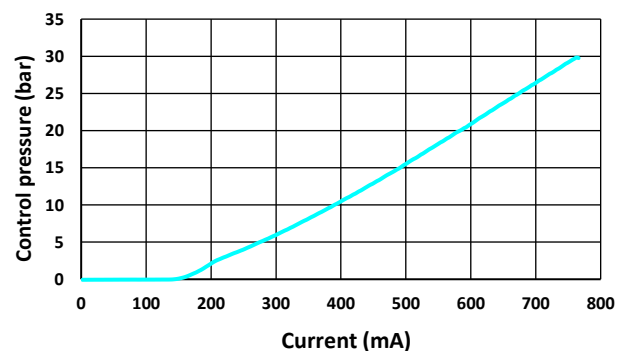
* The reported data are measured @ $P_p=35$ bar and an oil viscosity of 32 cSt

Current vs. Pressure (Average characteristic)

P-I CURVE (12 V)



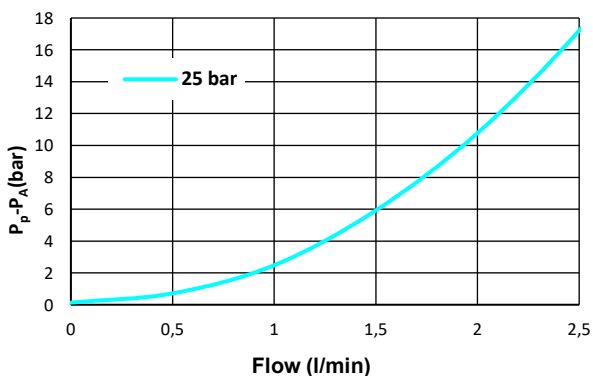
P-I CURVE (24 V)



Flow characteristics (Average characteristic)

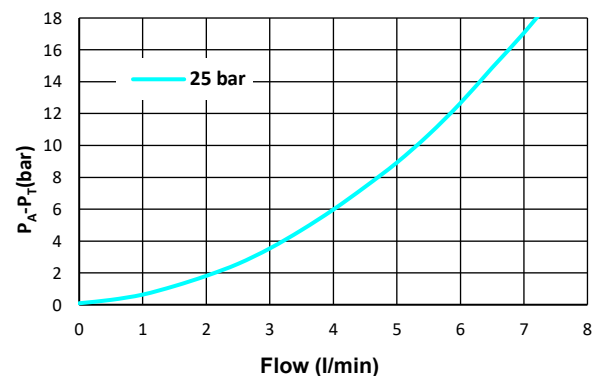
PRESSURE DROP PUMP TO CONTROL PORT (P→A)

Valve only



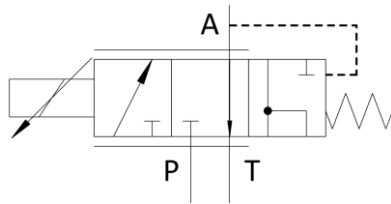
PRESSURE DROP CONTROL PORT TO TANK (A→T)

Valve only





Hydraulic schematic



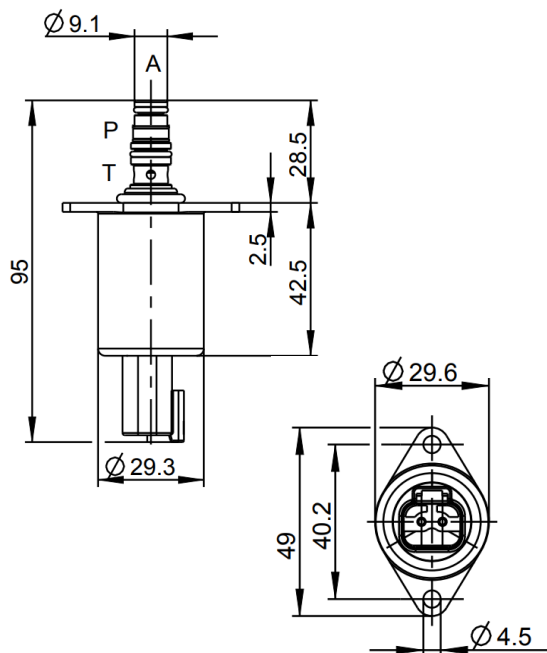
Hydraulic schematic for normal functionality

Additional data

Weigth	approx. 175 g
Mounting Position (recommended)	any
MTTF_d-value	150 years
Reference	Valve specifications according to Thomas LHP 89

Dimensions with Deutsch Connector*

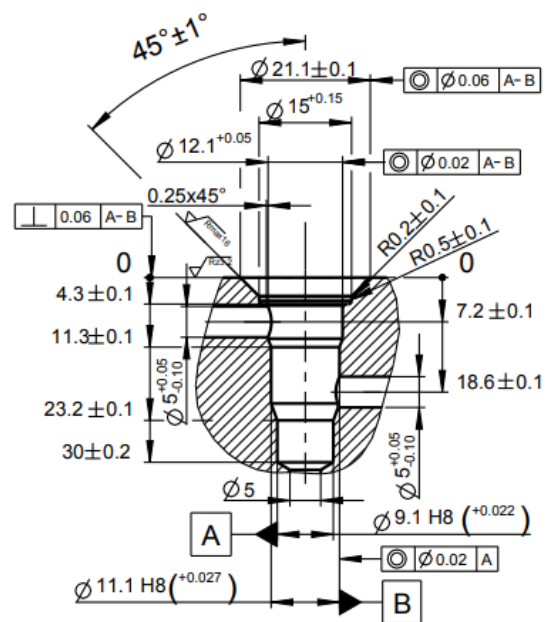
(All dimensions in mm)



* Dimensions for AMP Jr. Connector and Lead wires available on request.

Cavity Dimensions

(All dimensions in mm)



Functionality

Valves with fail safe function are providing a safety function if the valve spool gets stuck due to contamination which goes beyond the specified limits in our customers systems. In the case of a stuck spool the valve is able to limit the actual pressure at the working port.

For more information please do not hesitate to contact us.

Residual A-Port Pressure

at vary supply pressure (@valve completely open)

Max. supply pressure	Max. pressure in A	Spool position
50 bar	< 5 bar	0,125mm open
26 bar	8 bar	complete open
30 bar	9 bar	complete open
40 bar	10 bar	complete open
50 bar	12 bar	complete open



Model code

PPCD03	-005	-a	-a	-25	-12	-J	-H	-W
					-24	-D		
Valve style								
Version								
Solenoid type								
Cavity type								
Control pressure range: 25 bar								
				Voltage: 12 V or 24 V				
				Connector: J AMP Jr Power Timer or D Deutsch DT04-2P				
						Seal material: N NBR		
							Manual override: W without	

- Defined by Thomas
- Customers choice

DISCLAIMER



The presented information is based on current knowledge and provides only non-binding information to the customer. Any liability in connection with this information is excluded. It is the responsibility of the customer to determine the suitability and appropriateness of the product for his intended purpose. We reserve the right to change the product with regard to technical progress and new developments.

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