Proportional Control Valves with Integrated Electronics

Series D641 P

Rated flow 16...140 l/min ($\Delta p_N = 10$ bar)
Operating pressure up to 350 bar

Mounting pattern to DIN 24340
Form A 10 (ISO 4401-AC-05-4-A)

Port size
Valve body design: [mm] dia. 10.5
4-way version with 5 chambers
2-way version, P, A and P, B
5-way version P, A, P, B and A, T

Rated flow ($\pm 10\%$)
at 10 bar valve pressure drop [l/min] 16/25/50 4-way version
140 2×2-way and 5-way versions

Valve version
Spool configuration
Pilot valve
Without additional mechanical feedback
With additional mechanical feedback

Main spool stroke [mm] $\pm 2.5$
Main spool drive area [cm$^2$] 2
Threshold* [ms] 45
Hysteresis* [%] $< 0.3$
Null shift for $\Delta T = 55^\circ C$ [%] $< 1$
Null flow* max. (axis cut version) [l/min] 3.0
Pilot valve oil flow at 100% step input* [l/min] 2
Mass [kg] 5.4

*At 140 bar pilot pressure or operating pressure

Typical characteristics
With pilot valve A67815–001 or A03086–011

Step response

Frequency Response at 140 bar pilot pressure or operating pressure.
Screw plug M4 x 8 DIN 9612-8.8 MOOG P/N 76689-040-008 with sealing ring dia 4 MOOG P/N 76425-040 not needed for internal pilot supply

Important: With internal pilot supply, the operating pressure is applied internally to port X, for this reason, port X must be sealed with an O-ring. Ensure that mounting manifold covers this area.

Replaceable filter element A67999-065

Electrical null adjustment: Flow will increase out of port A, when potentiometer turned in clockwise direction (4 turn potentiometer under screw plug).

Flush plate for internal supply 76046-001
Flush plate for external supply 76046-002

Mounting pattern for 2 x 2-way and 5-way version
Mounting manifold on request

Mounting manifold A03230-001 for internal supply
Mounting manifold A03230-002 for external supply
Dimensions to DIN 24340, form A 10, port NG 11,
mounting surface flat within 0.02 mm, average surface finish value Ra better than 1 µm

Electrical connection
Valves with voltage command
Standard

Supply

Command signal
0...±10 V

Spool position output

Section C-C

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