Proportional Control Valves with Integrated Electronics

Series D644

Rated flow 600 (340) l/min (Δp_N=10 bar)
Operating pressure up to 350 bar

Mounting pattern to DIN 24340
Form A 25 (ISO 4401-AE-08-4-A)

Port size [mm] dia 32
4 chamber version

Valve body design,
Rated flow (±10%)
at 10 bar valve pressure drop [l/min] 600 P*B*A*T
340 P*A*B*T
Valve version:
Spool configuration
2-stage
with stub shafts
Standard

Pilot valve:
Main spool stroke, [mm] D061
2
7
Main spool drive area [cm²] D076
2
10.75
Response time for 0 to 100% stroke*, [ms] 70
25
Threshold* [%] < 0.4
< 0.3
Hysteresis* [%] < 1.5
< 1
Null shift for ΔT = 55°C [%] < 1.5
< 2
Null flow* max. [l/min] Pilots valve oil flow at 100% step input*
5.0
4.5
Mass [kg]
13.5
14

*For 140 bar pilot pressure or operating pressure

Typical characteristics
with pilot valve D061-601
with pilot valve D076-039

Step response

Flow characteristic
at Δp = 5 bar per metering land

Data sheet D 233.04.01 En 11.85
Dimensions

Electrical connector 76197-004
(not included at delivery)

Series D061
Pilot valve

Name plate

Version with
Series D076
Pilot valve

O-rings included
at delivery
4 x 45122-113
2 x 45122-195

6 mounting bolts M 12 x 50
DIN 912-10.9,
tightening torque 110 Nm
(not included at delivery)

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

Replaceable filter element
for pilot valve D061: A40311
for pilot valve D076: A02640

Flushin plate: 76047

Mounting manifold A25855-009
Dimensions to DIN 24340, form A 25, port NG 32,
mounting surface flat within 0.02 mm, average surface finish value
Ra better than 1 μm

If pilot ports (X, Y) are not
used, they must be plugged
in mounting manifold

Section C-C

Conversion instructions for main stage
The supply and return connections to the pilot valve
may be either internally or externally connected as follows:

<table>
<thead>
<tr>
<th>Pilot supply via</th>
<th>Set screw location</th>
<th>Pilot return via</th>
<th>Set screw location</th>
</tr>
</thead>
<tbody>
<tr>
<td>internal P</td>
<td>closed</td>
<td>internal T</td>
<td>closed</td>
</tr>
<tr>
<td>external X</td>
<td>open</td>
<td>external Y</td>
<td>open</td>
</tr>
</tbody>
</table>

Set screw 1/8 NPTF

Set screw 1/8 NPTF

Set screw M 6

Set screw 1/8 NPTF

Set screw 1/8 NPTF

MOOG GmbH Germany D-7032 Böblingen- Haupts-Kleinen-Str. 58
Telephone (070 30) 622-0 Telex 7255777 - Telefax (070 30) 62 2100
Branch Office Düsseldorf D-4000 Düsseldorf 13 - Marienburger Str. 51
Telephone (0211) 7 40 95 87
Branch Office Vienna A-1235 Wien - Prinzlachasse 44
Telephone (0222) 66 80 47 - Telex 135688

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