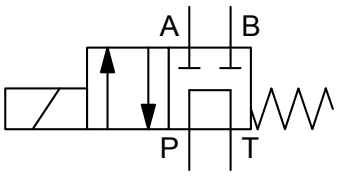
HYDAC INTERNATIONAL

4/2- directional- spool valve

Solenoid-operated, direct acting

4 WE 10 GA

SYMBOL



up to 120 l/min
up to 320 bar

FUNCTION

HYDAC 4/2 directional spool valves in the series 4WE 10 GA are directional valves for oil- hydraulic systems, which serve to open and close flow paths. In the de-energised mode the control spool is held in the rest position by the return spring. The actuation of the control spool occurs via an oil- immersed solenoid. The solenoid pushes the control spool from is rest position to is final position. This opens the required flow paths according to the symbol. When the solenoid is de-energised, the control spool is pushed back to the rest position by the return spring. A manual override permits the valve to be switched without energizing the solenoid.

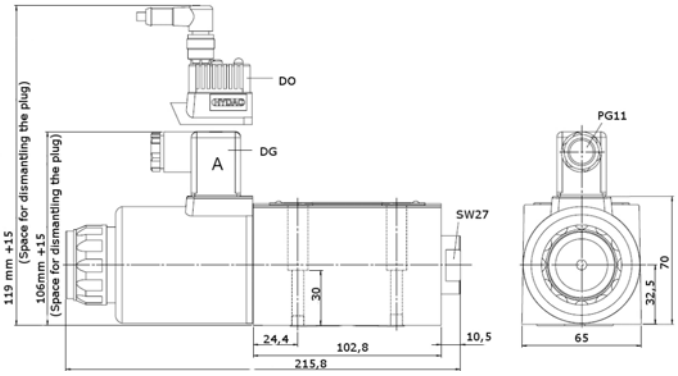
FEATURES

- Direct-acting, solenoid-operated valve NW 10
- Economical and reliable due to simple design
- Oil- immersed solenoid armature for long life and low noise operation
- Solenoid coils can be replaced with no possibility of oil leakage
- Interface to DIN 24340 Form A6, ISO 4401
- Manual override

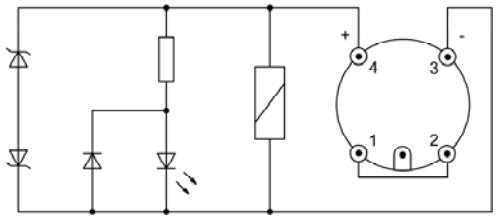
SPECIFICATIONS

Operating pressure:	port A,B,P: pmax= 320 bar port T: pmax= 210 bar
Nominal Flow:	max. 120 l/min
Media operating temp. range:	min. –20°C up to max. +80°C
Ambient temperature range:	min. –20°C up to max. +55°C
Fluids:	hydraulic oil to DIN 51524 part1 and 2
Viscosity range:	10 mm²/s up to 500 mm²/s is recommended
Filtration:	Class 20/18/15 according to ISO 4406 or cleaner
Max. switching frequency:	15.000/h
$MTTF_d$:	150 years
Installation:	no orientation restrictions
Manual override:	up to approx. 50 bar tank pressure possible
Seal materials:	Standard FKM
Weight:	4,3 kg
Electrics	
Type of voltage:	DC voltage
Voltage tolerance:	±10%
Nominal power:	42W (12V / 2,9A) or 48W (24V / 2,0A)
Switching time:	Switch-on time (coil): 80ms up to 120ms Switch-off time (spring): 70ms up to110ms Switch-on time (coil with rectifier): 90 ms up to 130 ms Switch-off time (spring):160ms up to 200 ms
Coil duty rating:	100%
Electrical connection:	plug to DIN 43650
IP rating:	IP 65 to EN 60529; DIN 40050 provided the connector is fitted correctly

DIMENSIONS

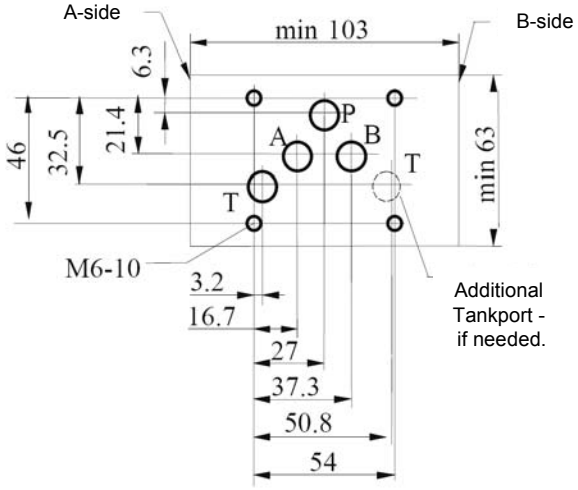


M12 coil
Electric
wiring



INTERFACE

to DIN 24340-A10 / ISO 4401 / ISO4401

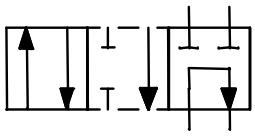


Mounting screws: M6 x 40 DIN 912-10.9

Torque: 10 + 1 Nm

Female connector and mounting screws (4 pcs.) must be ordered separately.

Crossover



MODEL CODE

4WE 10 GA S01 - 12DG / V

Name
4/2-directional spool valve

Nominal size
10 = Nominal size 10

Symbol

Series
Determined by manufacturer

Nominal voltage
12 = 12 Volt DC voltage
24 = 24 Volt DC voltage
96 and 205 Volt DC voltage on request (only type DG)
DG: DIN plug to EN 175301-803

Seal material
V = FKM (Standard)
N = NBR

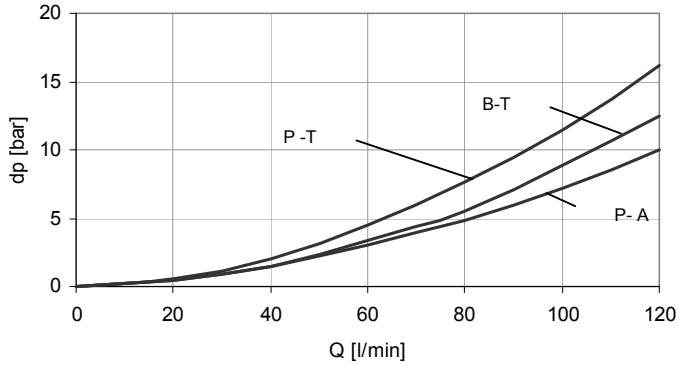
Supply voltage +/- 10%	Nominal voltage of the DC-coil	Nominal power of the DC-coil
110 V – 50/60 Hz	96 V	42 W
230 V – 50/60 Hz	205 V	42 W
by using a female connector with integrated rectifier		

Standard Models

Name	Part No.
4WE 10 GA S01–24DG /N	6082086
other models on request	

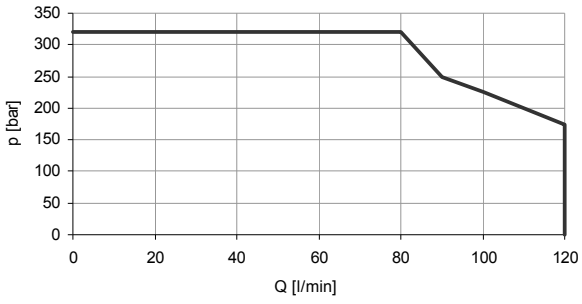
Pressure drop

Measured at ν = 36 mm²/s and t_{oil} = 45 °C



Operating limits

Measured at ν = 36 mm²/s and t_{oil} = 45 °C



The operating limits were determined using coils at operating temperature and 10% under voltage. The operating limits given are for applications with two flow directions. For flow in only one direction, the operating limits can be lower.
For operation with G96/G205 coils max. permitted flow rate shown in the graph must be reduced by 10%. The switch-on times will increase.

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NOTE
The information in this brochure relates to the operating conditions and applications described.
For applications or operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.