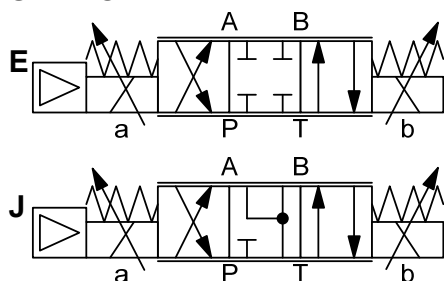




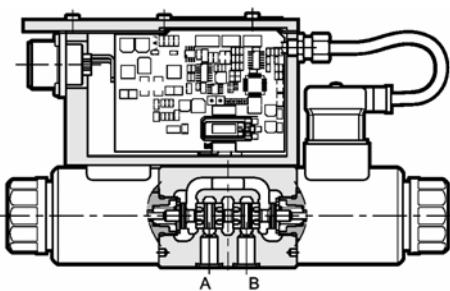
4/3-Proportional Solenoid Valve direct acting, with integrated Electronics Subplate to ISO4401 **P4WEE 06**

SYMBOL



up to 40 l/min
up to 350 bar

FUNCTION



The P4WEE 06 is a direct acting solenoid valve which combines the directional control with the velocity control of the consumer.

The controlled nominal flow is proportional to the electrical input signal at the coil. Analogue to his size the coil creates a force and moves the piston against the spring. Herewith the corresponding cross section diameters are opened which determines the flow rate in dependence of the pressure differential.

The integrated digital electronics permits a better performance of the valve and function by

- shortened response times
- reduced hysteresis
- better repeat accuracy
- integration CAN-Open (option)

FEATURES

- High flow rate due to optimized casted housing
- Small hysteresis by super finish of moving parts
- Long life cycle times by armature switching under oil
- Simple exchangeability by international standardized hole pattern ISO 4401
- Integrated digital amplifier

SPECIFICATIONS

Operating pressure:

ports P, A, B: max. 350 bar
port T: max. 140 bar

Nominal flow:

max. 40 l/min

Hysteresis (in % of Qmax):

< 3%

Repeat accuracy:

(in % of Qmax) < +/- 1,0%

Switch-on time (0-100%):

50 ms

Switch-off time (100-0%):

60 ms

Media operating temp.range:

-20°C up to +80°C

Ambient temperature range:

-20°C up to +50°C

Hydraulic fluid:

Hydraulic fluid to

DIN 51524 part 1 and 2

10 mm²/s up to 400 mm²/s

ISO4406 class 18/16/13

according to ISO4406

no orientation restrictions

Vent system and valve

before setting in motion

ISO4401-03-02-0-05

CETOP 4.2-4-03-350

2,4 kg

Viscosity range:

Filtration:

Installation:

Hint:

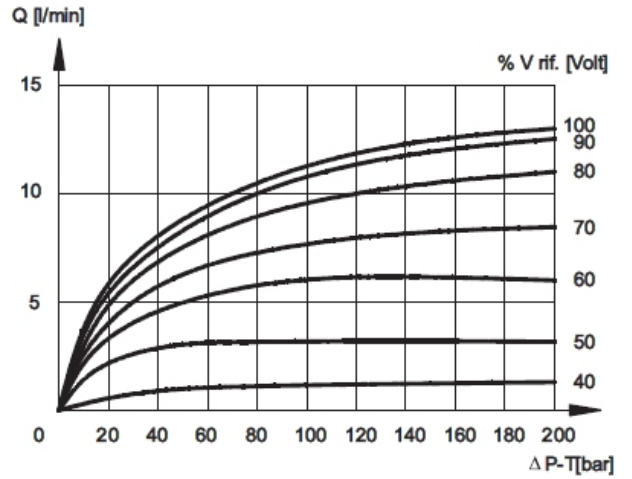
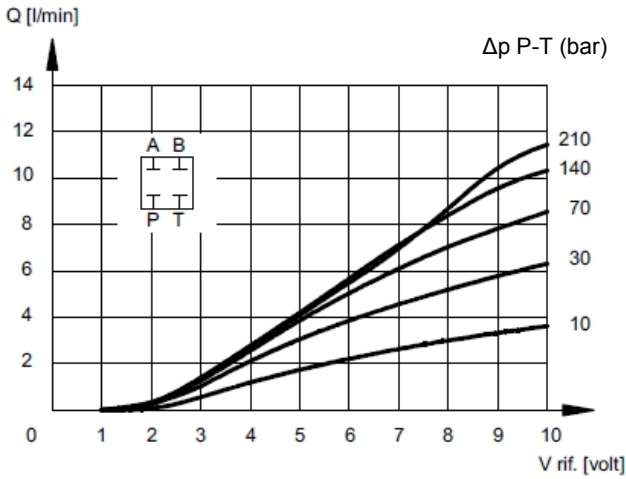
Hole pattern:

Weight:

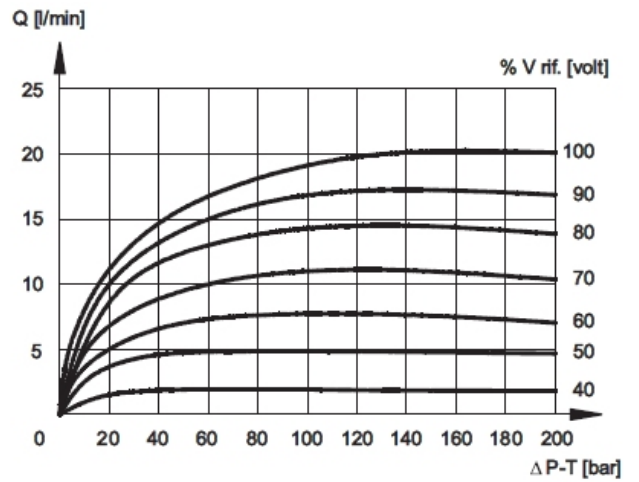
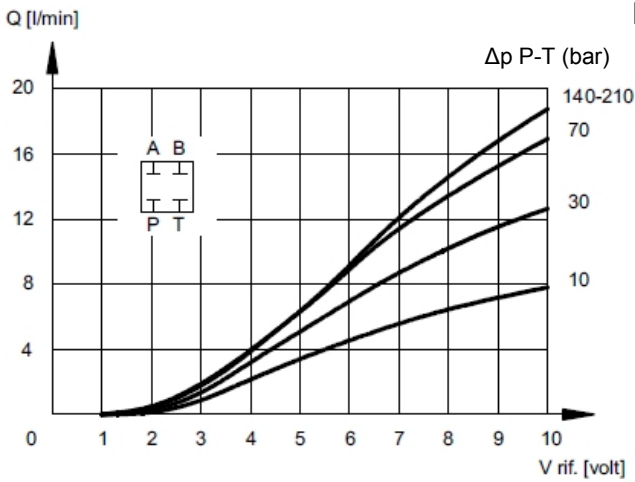
PERFORMANCE

measured at $v = 33 \text{ mm}^2/\text{s}$ and $T_{oil} = 46^\circ \text{ C}$ (The related Δp is measured between lines P and T of the valve)

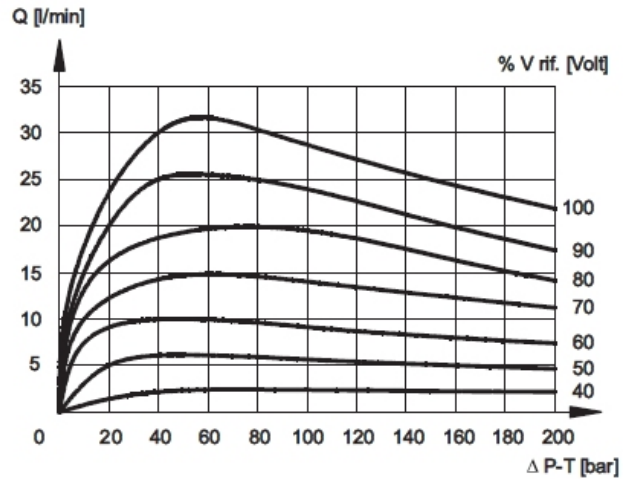
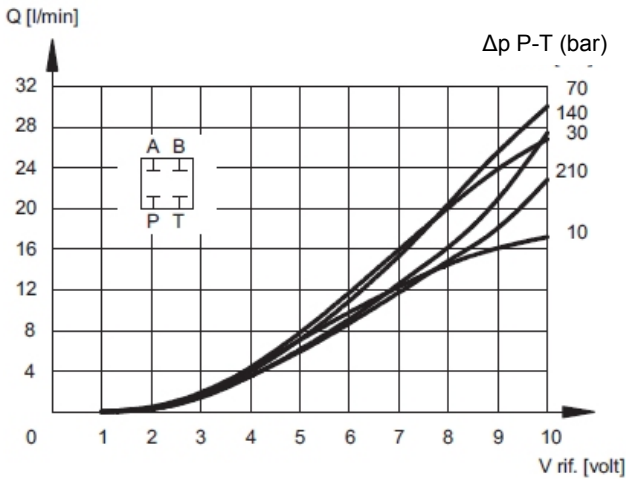
E04



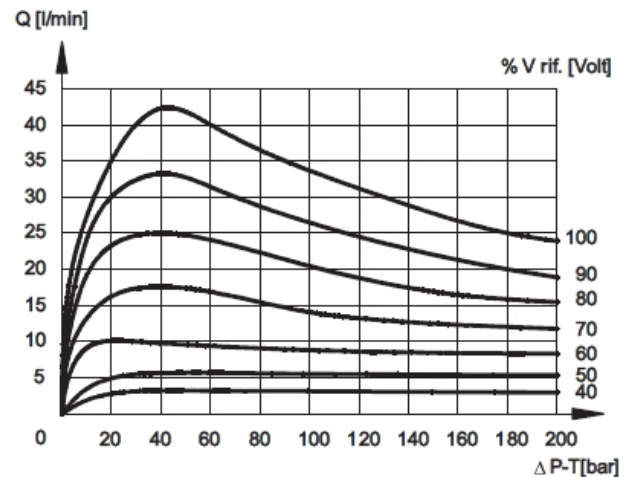
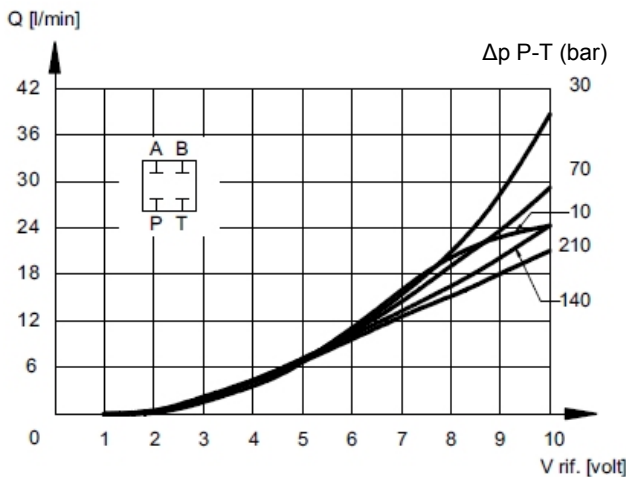
E08



E16

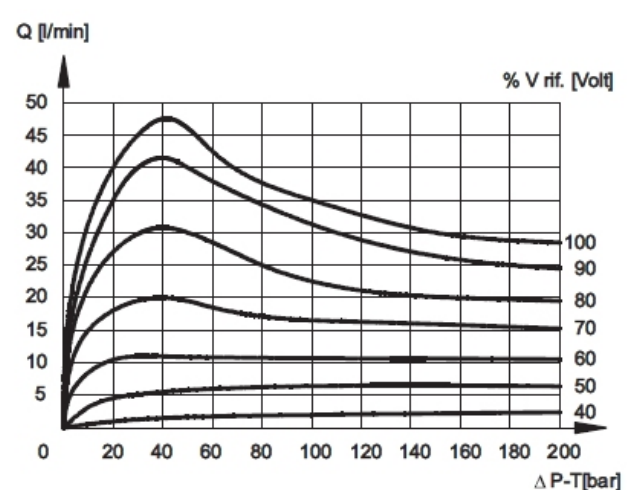
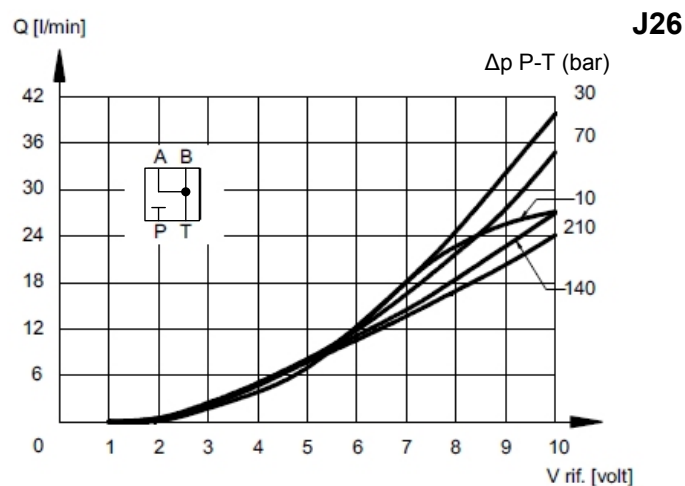
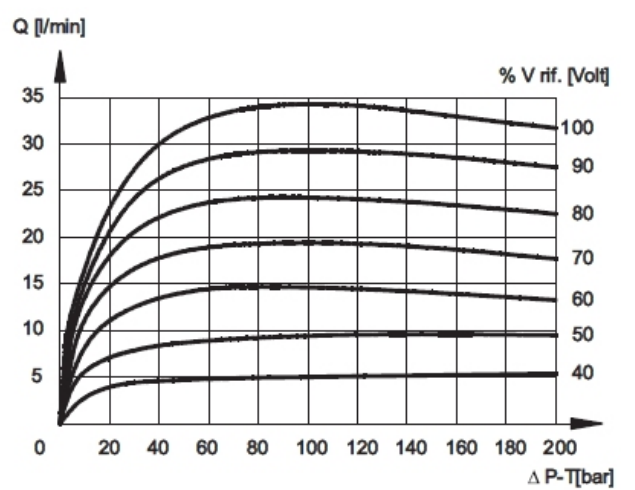
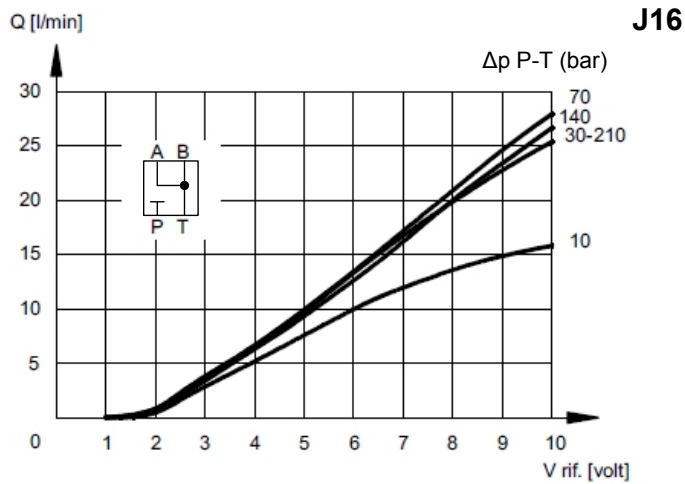
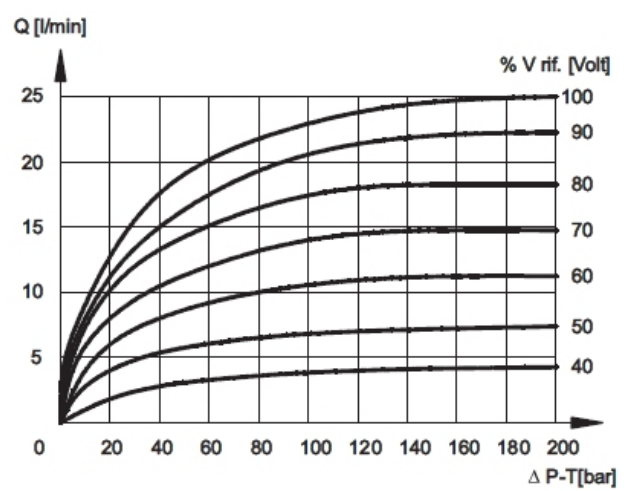
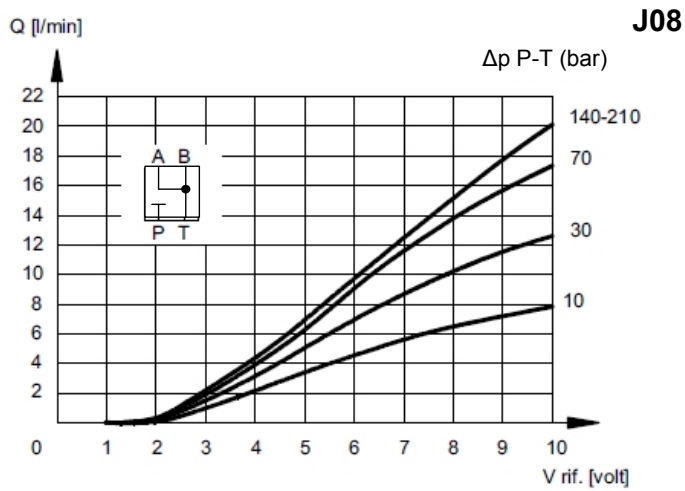
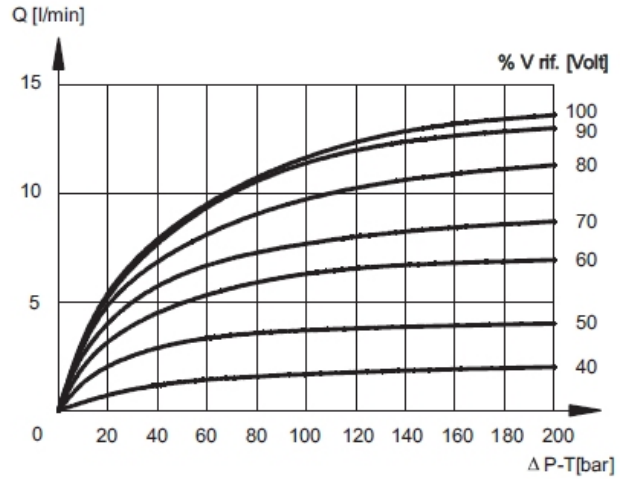
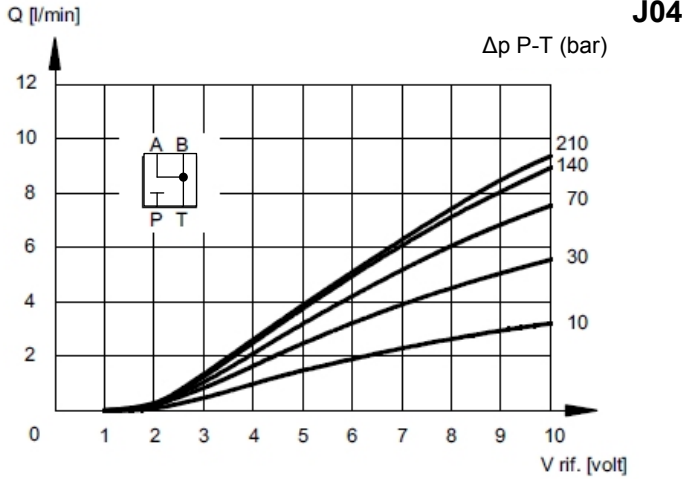


E26

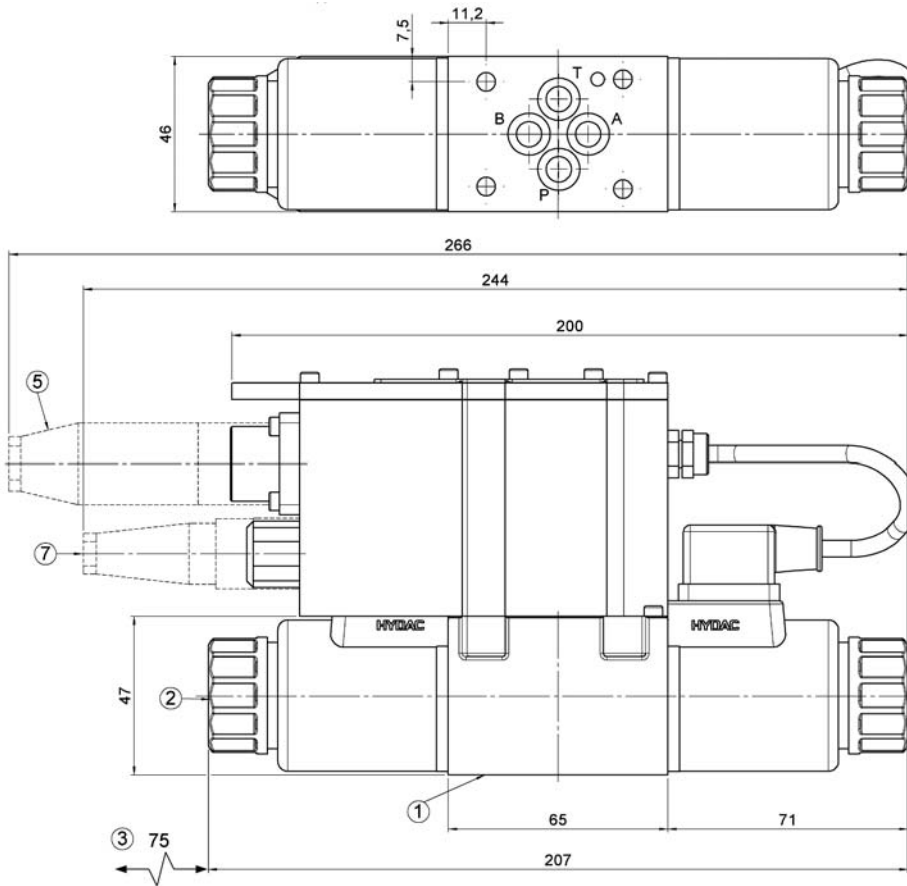


PERFORMANCE

measured at $v = 33 \text{ mm}^2/\text{s}$ and $T_{oil} = 46^\circ \text{ C}$ (The related Δp is measured between lines P and T of the valve)



DIMENSIONS

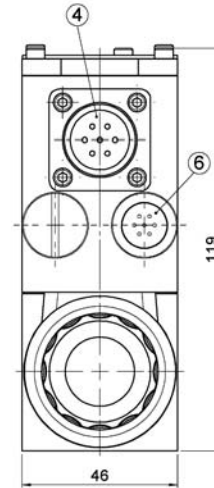


- 1) Mounting plate with O-rings 4 x 9.25 x 1.78 NBR
- 2) Manual override
- 3) Free space for mounting the coil
- 4) Main plug
- 5) Plug 7 pin DIN 43563 – IP65 PG11 EX7/L/10
(not included in delivery Mat. 6080324)
- 6) Plug for CAN bus (optional)
- 7) Plug 5 Pin M12 - IP65 PG7 EC5S/M12L/10
(only for CAN bus)

Fastening screws: 4x M5 x 30 10.9

Torque 5 Nm +0,5 Nm. All dimensions in mm.

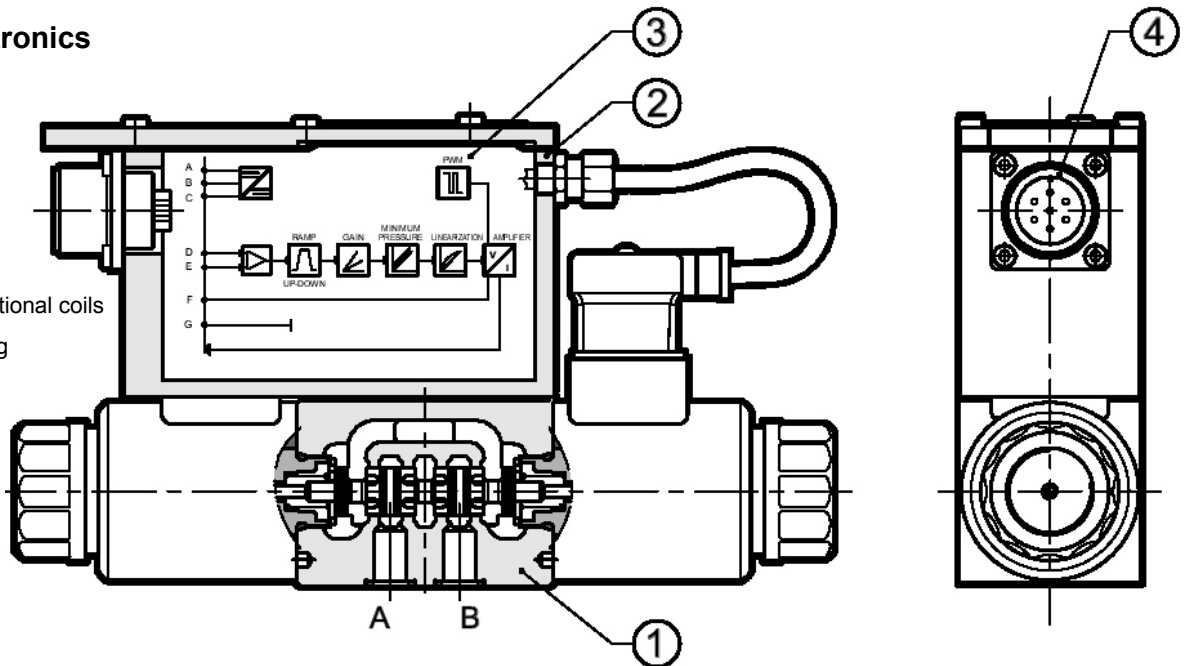
Fastening elements are not in the scope of delivery.



Onboard Electronics

Parameter setting
only with CAN bus
Option and CAN PC
USB Connection!

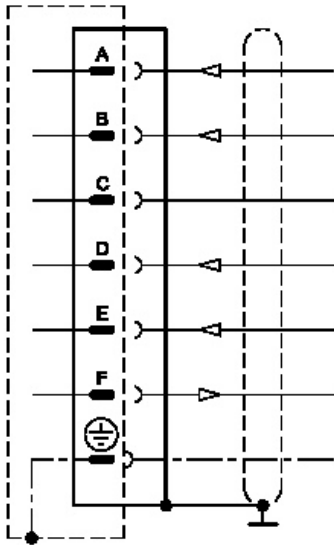
- 1) Valve with proportional coils
- 2) Electronic housing
- 3) Digital amplifier
- 4) Main connector



| | |
|-------------------|--|
| Power input: | 50 W |
| Nominal voltage: | 24 VDC (19-35VDC, ripple max.3Vpp) |
| Current draw: | 1,88 A max. |
| Coil duty rating: | 100% (continuous) |
| Input signal E0: | Setpoint-voltage signal +/-10VDC (Impedance Ri >50 kOhm) |
| Input signal E1: | Setpoint-current signal 4-20mA (Impedance Ri =316Ohm) |
| Alert signals: | Overload and overheating of Electronics |
| Communication: | Field Bus Interface CAN-Bus ISO 11898 |
| Electronics port: | 7-pin MIL-C-5015-G (DIN43563) |
| CAN-Bus-port: | M12-IEC 60947-5-2 (Option on request) |
| EMC EN50081-1: | Corresponding 89/336 CEE Standard |
| EMC EN50082-2: | Corresponding 89/336 CEE Standard |
| IP rating: | IP65 (CEI EN 60529 Standard) |

Input signal E0

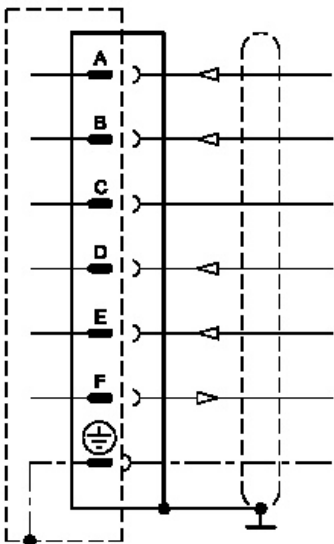
voltage signal



| Pin | Werte | Function | Details |
|-----|------------|--------------------------------|--|
| A | 24 VDC | Supply voltage | from 19 to 35 VDC (ripple max. 3Vpp) |
| B | 0 V | Supply (0) | 0 V |
| C | ---- | Not connected | -- |
| D | ± 10 V | Input signal (analogue) | Impedance $R_i > 50$ KOhm (see detail 1) |
| E | 0 V | Differential ground (analogue) | -- |
| F | ± 10 V | Analogue output | +/- 100% I_{max} (see detail 2) |
| PE | GND | Protective earth conductor | -- |

Input signal E1

current signal



| Pin | Werte | Function | Details |
|-----|------------|--------------------------------|--------------------------------------|
| A | 24 VDC | Supply voltage | from 19 to 32 VDC (ripple max. 3Vpp) |
| B | 0 V | Supply (0) | 0 V |
| C | ---- | Not connected | -- |
| D | 4 + 20 mA | Input signal (analogue) | Impedance $R_i = 316$ Ohm |
| E | 0 V | Differential ground (analogue) | -- |
| F | ± 10 V | Analogue output | +/- 100% I_{max} (see detail 2) |
| PE | GND | Protective earth conductor | -- |

Detail 1: The input signal is a differential signal (only E0-Version). For solenoid valves with two coils, with positive reference signal at Pin D, the flow is from P - A and B - T. At reference signal Zero it is in neutral position. For solenoid valves with one coil, with positive reference signal at Pin D, the flow is from P - B and A - T. The piston stroke is proportional to $U_D - U_E$. If there is only one input signal, Pin B (0V power supply) and Pin E (0V Reference signal) have to be connected together at protective earth.

Detail 2: setting the test point Pin F in relation to Pin B (0V)

Detail 3: foresee a fuse at Pin A (24 VDC) for the protection of the electronics: 5A/50V fast acting.

CAN Bus Interface (Option /C)

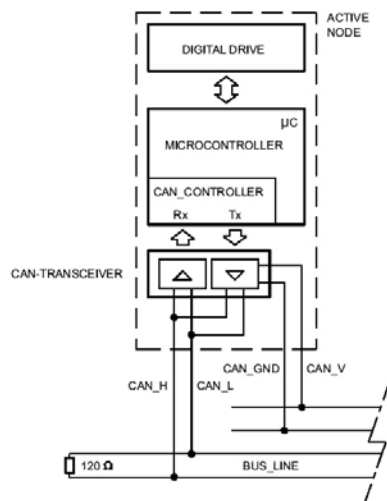
will be needed to parameterize the Onboard Electronics

CAN PC/USB Interface

- content:

Parameterize-software and PC connection cable between CAN Bus and PC:

On request (not in the standard scope of delivery only in connection with OBE and PC interface)



CAN connector connection scheme

| Pin | Values | Function |
|-----|------------|--------------------------|
| 1 | CAN_SHLD | Monitor |
| 2 | CAN +24VDC | BUS + 24 VDC (max 30 mA) |
| 3 | CAN 0 DC | BUS 0 VDC |
| 4 | CAN_H | BUS line (high signal) |
| 5 | CAN_L | BUS line (low signal) |

Standard models Part No.

P4WEE 06 E04 D01-24PG E0/V 6078965
 P4WEE 06 E08 D01-24PG E0/V 6078966
 P4WEE 06 E16 D01-24PG E0/V 6078967
 P4WEE 06 E26 D01-24PG E0/V 6078968

P4WEE 06 J04 D01-24PG E0/V 6078969
 P4WEE 06 J08 D01-24PG E0/V 6078970
 P4WEE 06 J16 D01-24PG E0/V 6078971
 P4WEE 06 J26 D01-24PG E0/V 6078972

P4WEE 06 E04 D01-24PG E1/V 6078977
 P4WEE 06 E08 D01-24PG E1/V 6078978
 P4WEE 06 E16 D01-24PG E1/V 6078979
 P4WEE 06 E26 D01-24PG E1/V 6078980

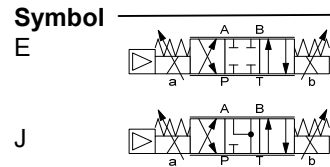
P4WEE 6 J04 D01-24PG E1/V 6078981
 P4WEE 6 J08 D01-24PG E1/V 6078982
 P4WEE 6 J16 D01-24PG E1/V 6078983
 P4WEE 6 J26 D01-24PG E1/V 6078984
 Other types on request

MODEL CODE

P4WEE 06 E 26 D01-24PG E0 /V/C

Name _____
 Proportional solenoid valve
 with integrated Electronics

Nominal size _____
 6



Nominal flow _____
 04= 4 l/min
 08= 8 l/min
 16=16 l/min
 26=26 l/min
 (At $\Delta p=10$ bar P-T)

Type _____
 D01 = standard type with
 manual override

Nominal voltage _____
 24 = 24 V DC

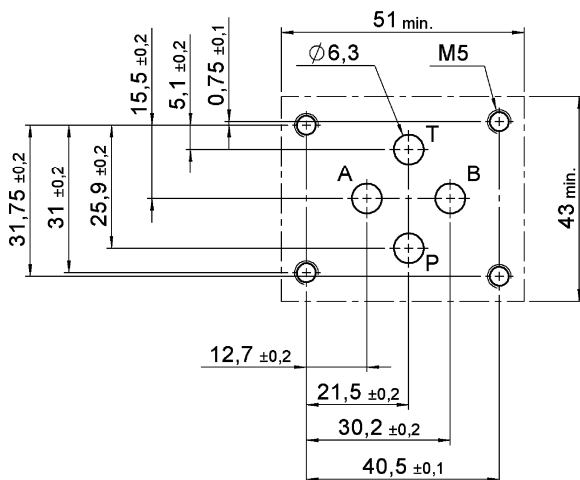
Coil connector _____
 PG= DIN plug to EN175301-803 (for coil)

Input signal _____
 E0= +/-10 V
 E1= 4-20 mA

Seal material _____
 V= FPM (Standard)
 N= NBR (optional)

Option _____
 C = CAN-Bus (on request)

Hole pattern to ISO 4401-03-02-0-05



Annotation
 The technical information in this brochure are relating to the operating conditions and applications. At deviant applications and/or operating conditions please contact the technical dept. Technical information are subject to technical modifications.

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