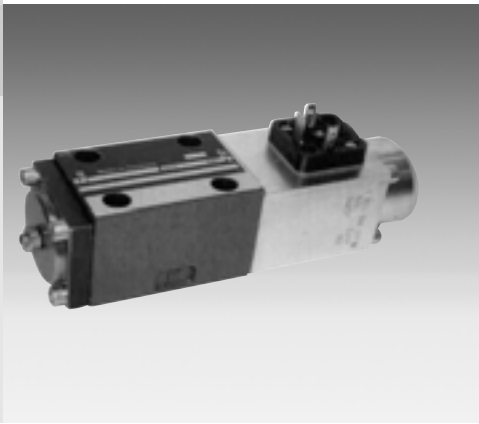
Rexroth
Bosch Group

Servo solenoid valves without position feedback

RE 29027/09.08

Type 4WRPH 6



Nominal size (NG) 6
Unit series 2X
Maximum working pressure P, A, B 315 bar, T 250 bar
Nominal flow rate 24 and 40 l/min (Δp 70 bar)

List of contents

Features

- Directly operated servo solenoid valve NG6, with control piston and sleeve in servo quality
- Actuated on one side, 4/4 fail-safe position when switched off or if enable not issued
- Control solenoid without position feedback
- Suitable for electrohydraulic controllers in production and testing systems
- For subplate mounting, position of connections to ISO 4401-03-02-0-05
- Subplates as per Technical Data Sheet RE 45053 (order separately)
- External trigger electronics via amplifier card or amplifier module (order separately)

For informations regarding the available spare parts see:
www.boschrexroth.com/spc

Ordering data

4WRP		H	6	C	B		L	−2X/	G24	Z4/		−855

For **external** trigger electronics **= no desig.**

Sleeve **= H**

Nominal size 6 **= 6**

Control spool
4/4-way design

= C

M = NBR seals
V = FKM seals
Suitable for mineral oils (HL, HLP) to DIN 51524

Electrical connection
Z4 = **with** plug-in connector, with plug to DIN EN 175301-803
Plug-in connector included in scope of delivery

Power supply to trigger electronics
G24 = +24 V DC

2X = Unit series 20 to 29 (installation and connection dimensions unchanged)

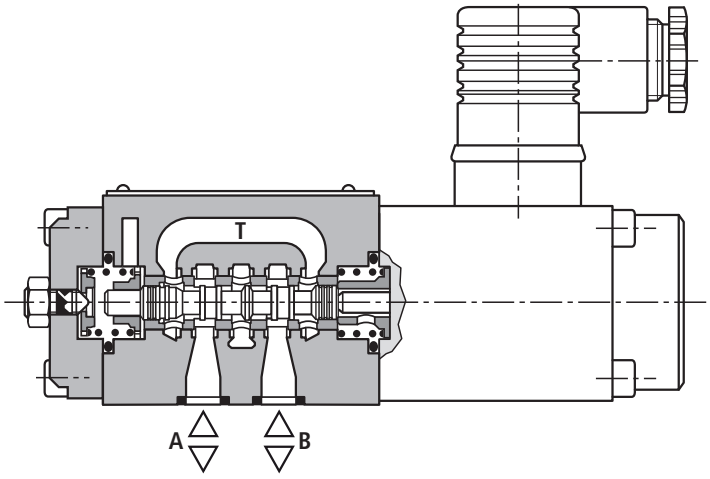
Flow characteristic
L = Linear

Nominal flow rate at 70 bar valve pressure difference
(35 bar per metering notch)

Nominal size 6
24 **=** 24 l/min
40 **=** 40 l/min

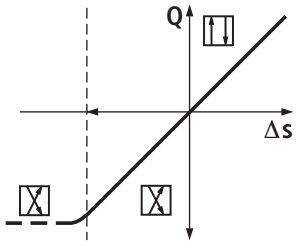
Function, sectional diagram

Servo solenoid valve 4WRPH 6



Valve body Control solenoid

Symbol



Standard = 1:1

Accessories (not included in scope of delivery)

Standard	Pictograms	Name	**Material No.**
ISO 4762		Valve fastening bolts (x4) Cheese-head bolt with socket head M5x30-10.9-N67F82170	**2 910 151 166**
		Amplifier card VT-VSRA1-527-10/V47	**0 811 405 183**
		Amplifier module VT-MSRA1-1-1X/V0/0	**R901197784**

Testing and service equipment

– Test box type VT-PE-TB2, see RE 30064.
– Test adapter type VT-PA-3, see RE 30070.

Technical data

General

Construction		Spool-type valve, directly operated, with steel sleeve
Actuation		Proportional solenoid, external electric amplifier or module
Type of mounting		Subplate attachment, mounting hole configuration NG6 (ISO 4401-03-02-0-05)
Installation position		Optional
Ambient temperature range	°C	–20...+70
Weight	kg	2.1
Vibration resistance, test condition		Max. 25 g, shaken in 3 dimensions (24 h)

Hydraulic (measured with HLP 46, ϑ_{oil} = 40 °C ±5 °C)

Hydraulic fluid			Hydraulic oil to DIN 51524, other fluids after prior consultation	
Viscosity range	recommended	mm^2/s	20...100	
	max. permitted	mm^2/s	10...800	
Hydraulic fluid temperature range		°C	–20...+80	
Maximum permitted degree of contamination of hydraulic fluid Purity class to ISO 4406 (c)			Class 18/16/13[1)]	
Direction of flow			See symbol	
Nominal flow at Δp = 35 bar per notch		l/min	24	40
Max. working pressure		bar	Port P, A, B: 315	
Max. pressure		bar	Port T: 250	
Operating limits at Δp Pressure drop at valve q_{Vnom}: > q_N valves		bar	315	160
Leakage at 100 bar		cm^3/min	< 500	< 900

Electrical

Cyclic duration factor	%	100 ED
Power supply		24 V_{nom} (external electric amplifier or module)
Degree of protection		IP 65 to EN 60529 with correctly fitted plug-in connector
Solenoid connection		Unit connector DIN EN 175301-803, M16x1.5 (2P+PE)
Max. solenoid current	A	2.7
Coil resistance R_{20}	Ω	2.5
Max. power consumption at 100% load and operating temperature	VA	40

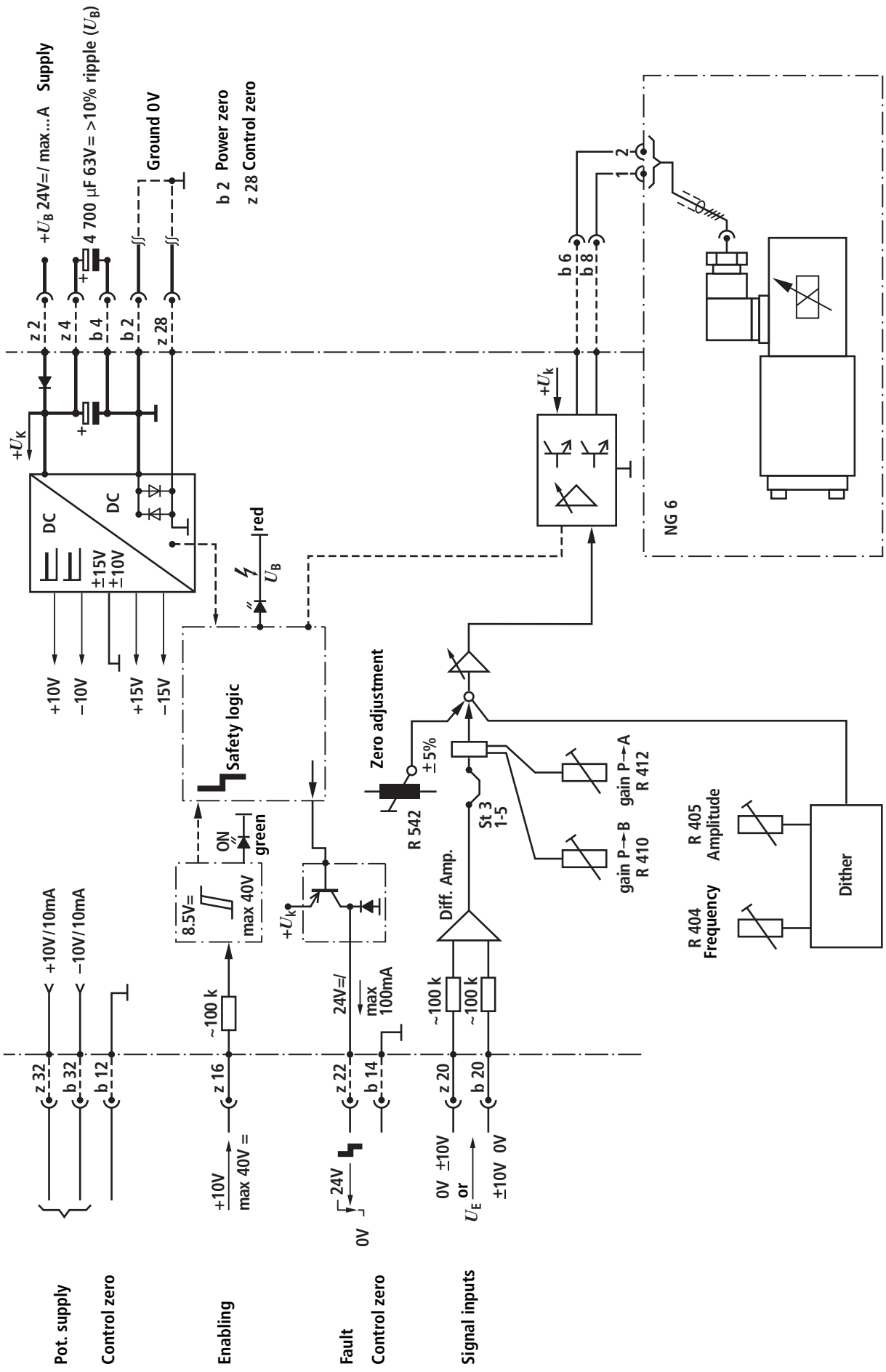
Static/Dynamic

Hysteresis	%	< 7
Response sensitivity	%	< 1
Response time for signal change 0...100%	ms	< 30

[1)] The purity classes stated for the components must be complied with in hydraulic systems.
Effective filtration prevents problems and also extends the service life of components.
For a selection of filters, see Technical Data Sheets RE 50070, RE 50076 and RE 50081.

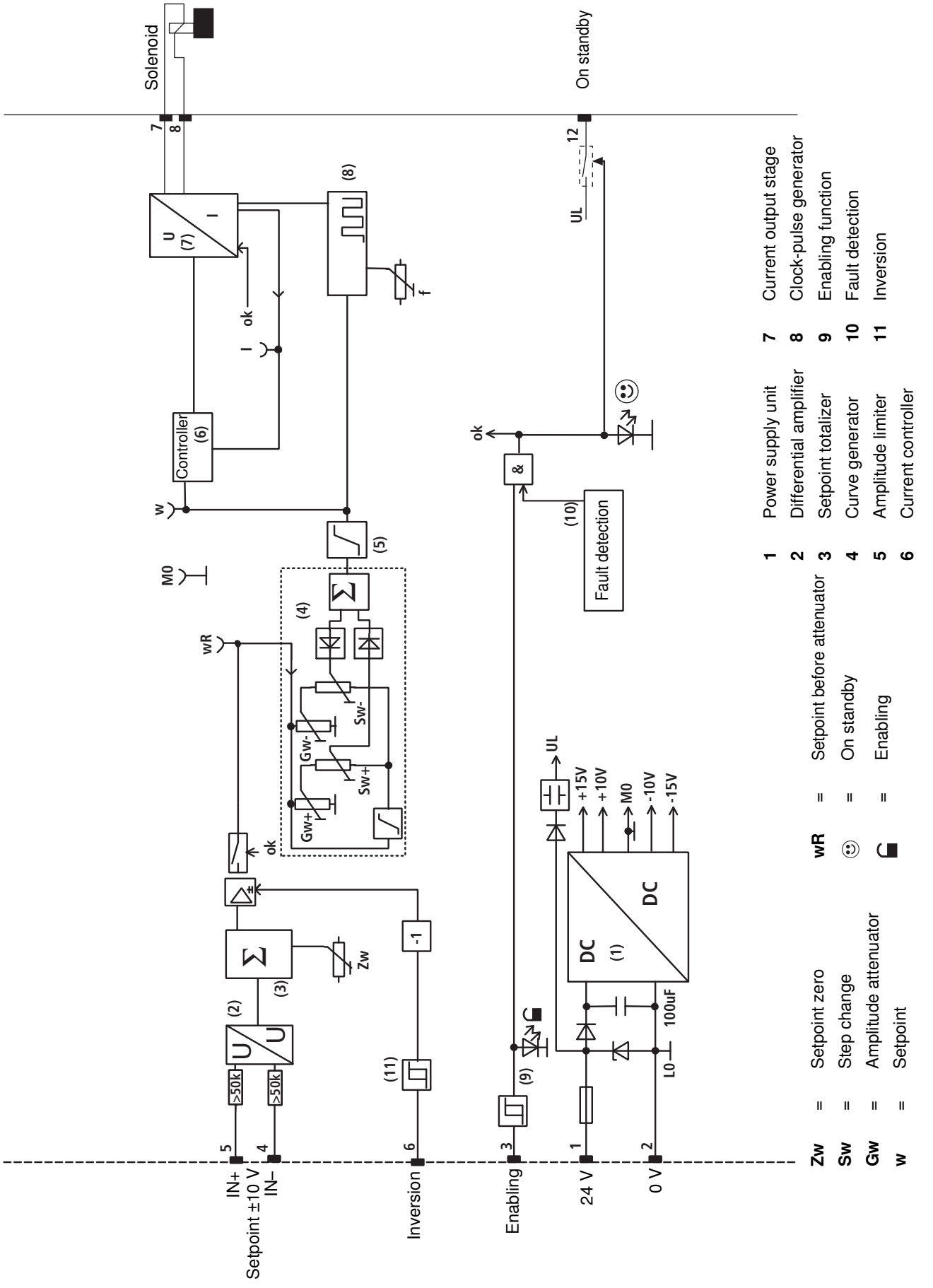
Amplifier card for external triggering

Circuit diagram/pin assignment



Amplifier module for external triggering

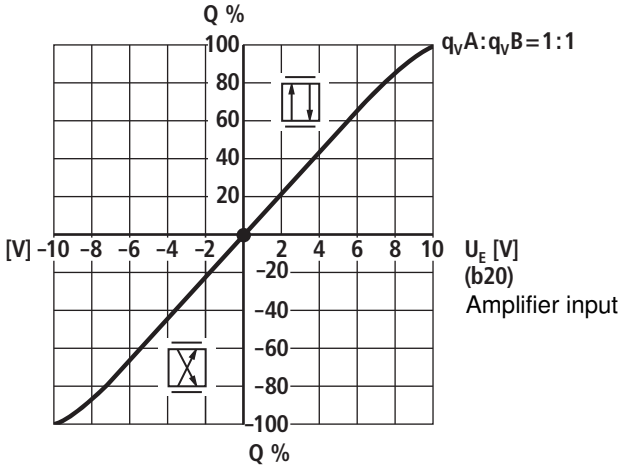
Circuit diagram/pin assignment



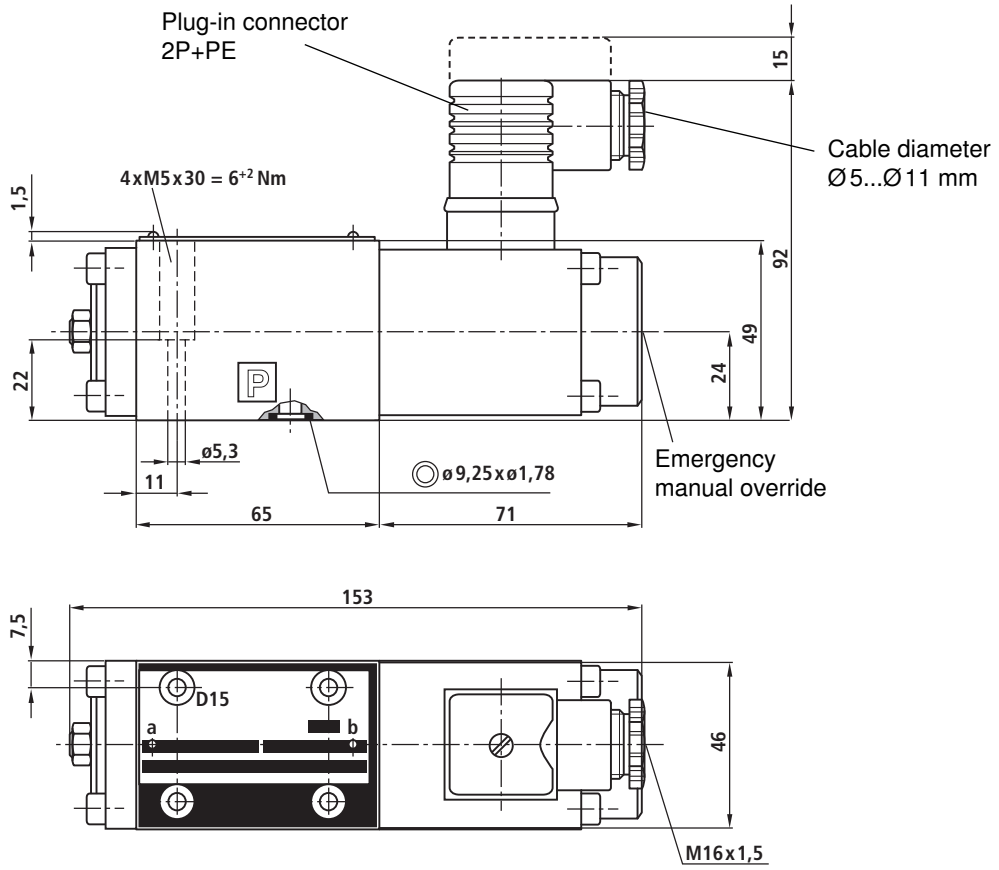
Characteristic curves (measured with HLP 46, ϑ_{oil} = 40 °C ± 5 °C)

Flow rate/signal function $Q = f(U_E)$

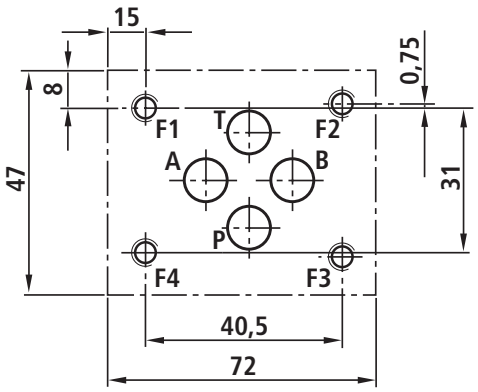
L: Linear



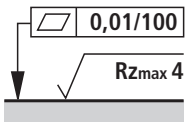
Unit dimensions (dimensions in mm)



Position of connections:
NG6 (ISO 4401-03-02-0-05)
For subplates,
see Technical Data Sheet RE 45053



Required surface quality
of valve contact surface



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