

RE 29 181/09.00

Replaces: 11.99



Proportional pressure reducing valve Type DRE 4 K

Nominal size 4

Series 3X

Maximum operating pressure up to 30 bar

Maximum flow 6 L/min



H/A 1199/87

Type DRE 4 K-3X/18G24-10NK4M
with plug-in connector (separate order)

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Function

The type DRE 4 K proportional pressure reducing valve reduces the pressure in port A in proportion to the solenoid current. It operates virtually independently from the pressure in port P. The valve is suitable for the control of directional valves, particularly those in the mobile sector. The hydraulic pressure in port A acts via a spool against the solenoid force. When the proportional solenoid is de-energised, via a return spring, the spool switches to make the connection from port A to port T.

The valve is supplied suitable for a 24 V DC supply.
(12 V DC version on request)

A programmable electrical remote control type THE6 is available for the control of the valve (separate order, see page 3).

Further electronic signal transmitters and electrical amplifier modules for controlling the valve are available (separate order, see page 3).

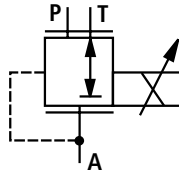
Ordering details

DRE	4	K	-3X/			K4	M	*
Proportional pressure reducing valve								
Nominal size 4		= 4						
Cartridge valve		= K						
Series 30 to 39 (30 to 39: unchanged installation and connection dimensions)		= 3X						
Max. settable pressure at port A 18 bar		= 18						
Max. settable pressure at port A 30 bar		= 30						
Nominal voltage 24 VDC; max. control current 1.0 A		= G24-10						
Nominal voltage 12 VDC; max. control current 2.2 A (on request)		= G12-22						
Further details in clear text								
NBR seals, suitable for mineral oil (HL, HLP) to DIN 51 524								
K4 =								
Electrical connections								
With component plug DIN 43 650-AM2								
Without plug-in connector								
Plug-in connector - separate order, see page 3								
No code =								
Without hand override								
N =								
With hand override								

Preferred types

Material no.	Type
00959368	DRE 4 K-3X/18G24-10K4M
00959369	DRE 4 K-3X/30G24-10K4M
00959370	DRE 4 K-3X/30G24-10NK4M

Symbol



Technical data (for applications outside these parameters, please consult us!)

General

Installation		optional
Storage temperature range	°C	- 20 to + 80
Ambient temperature range	°C	- 20 to + 70
Weight	kg	0.6

Hydraulic (measured with HLP46 at 40 °C ± 5 °C)


Max. settable pressure	Port A	Pressure stage 18 bar	bar	18
		Pressure stage 30 bar	bar	30
Max. perm. inlet pressure	Port P		bar	100
Back pressure	Port T	zero (when pressure in port A is controlled) up to max. of 100 bar (spool is opened from P to A)		
Max. perm. flow			L/min	6
Leakage flow	Port T		cm ³ /min	< 50
Pressure fluid	Mineral oil (HL, HLP) to DIN 51 524 Further pressure fluids on request!			
Pressure fluid temperature range			°C	- 20 to + 80
Viscosity range			mm ² /s	10 to 380
Degree of contamination	Max. permissible degree of contamination of the pressure fluid is to NAS 1638		Filter with a minimum retention rate of $\beta_x \geq 75$ is recommended	
	class 9		x = 10	
Hysteresis		%		< 5
Repeatability		%		< ± 2 to 18 or 30 bar
Stepped response	Pressure stage 18 bar with SM12	0 % → 100 %	ms	< 150
		100 % → 0 %	ms	< 150
	Pressure stage 30 bar	0 % → 100 %	ms	< 200
		100 % → 0 %	ms	< 200

Technical data (for applications outside these parameters, please consult us!)**Electrical**

Voltage type		DC	
Nominal voltage	VDC	24	12
Max. control current	A	1.0 at 100% command value	2.2 at 100% command value
Spool resistance	at 20 °C	Ω 12	2,4
	at 80 °C	Ω 18,24	3,65
Duty	%	100	
Electrical connections		with component plug to DIN 43 650-AM2	
¹⁾ separate order- see below		plug-in connector to DIN 43 650-AF2/Pg 11 ¹⁾	
Protection to DIN 40 050		IP 65 with fitted and secured plug-in connector	

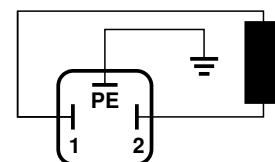
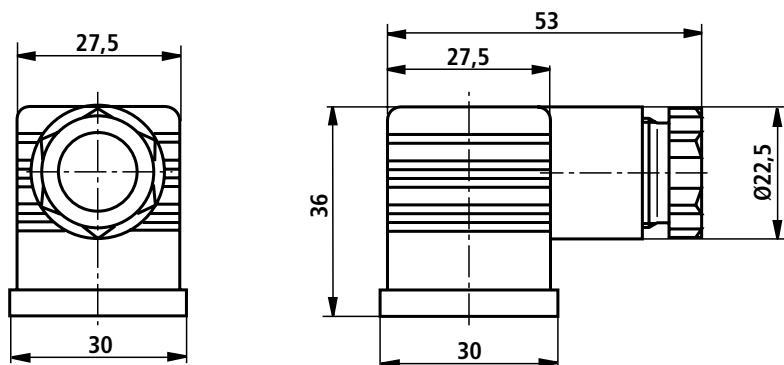
Control electronics (separate order)

– Analog amplifier (amplifier module)	MHVA1A to RE 29 874
	MHVA2A to RE 29 875
	VT 11004/15 to RE 29 728
	VT 11026 to RE 30 226
	VT 11031 to RE 29 760
	VT 11032 and VT 11165 to RE 29 764
	VT 11550 to VT 11554 to RE 29 870
– Digital amplifier in Eurocard format	VT-VSPD-1 to RE 30 123
– Electrical signal transmitter	VT 10468 to RE 29 753
	VT 10406 to RE 29 754
	VT 10399 to RE 29 755
	THE 6 to RE 29 771
– Power supply module	VT 11005 to RE 29 732
	VT 11006 to RE 29 729

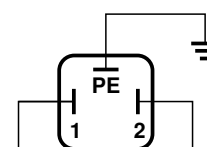
 **Note:** For details regarding the **environmental simulation test** covering EMC (electro-magnetic compatibility), climate and mechanical loading see RE 29 181-U (declaration regarding environmental compatibility).

Electrical connections

Plug-in connector to DIN 43 650-AF2/pg 11
Separate order under material no. **00074684**



Plug-in connector connection



To amplifier

