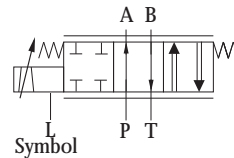


Electrohydraulic servovalve for bypass-operation



Special features:

- work with 1 or 2 metering edges
- high reliability
- easy service
- robust construction
- high dynamic response
- relatively insensitive to contamination
- variable metering orifices only
- $p_{max} = 500 \text{ bar}$

General description:

Type	:	electrical input stage, torque motor, sliding spool system
Pilot	:	none
main spool	:	directly controlled sliding spool
Style of mounting	:	subplate
Mounting position	:	unrestricted
Weight	:	1,3kg

Technical Data

1. Hydraulic Data (definition according to DIN 24311)

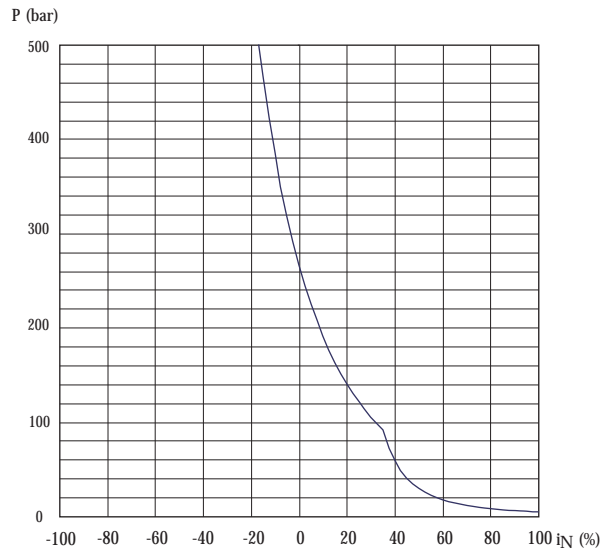
.1	operating pressure	$p_{b \text{ min}}(\text{for operating})$	=	0...500	[bar]	*at > 25cSt
			$p_{b \text{ max}}$	=	500	[bar]
.1.1	return line pressure	$p_{r \text{ max}}$	=	500	[bar]	adds itself too $p_{b \text{ min}}$
.2	max. pressure (static test pressure)	p_{max}	=	500	[bar]	
.3	rated flow at $\Delta p = 15 \text{ bar/edge}$	$Q_{\text{bei } 0\text{mA}}$	=	0,5	[l/min]	at 1 metering edge
		$Q_N \text{ at Rated current}$	=	1 / 3 / 5	[l/min]	(see flow curve)
.4	internal max. leakage (Lecköl)	Q_L	<	5	[cm ³ /min]	
.5	hysteresis	H	<	4,5% i_N	(without Dither)	
			<	2% i_N	(with Dither)	
.6	threshold sensitivity	E	<	0,2% i_N	(without Dither)	
			<	0,1% i_N	(with Dither)	
.7	threshold span	S	<	1,5% i_N	(without Dither)	
			<	1% i_N	(with Dither)	
.8	operating temperature range	ΔM	=	253...353	[K]	
.8.1	temperature drift		≤	2% $i_N / 50K$		
.9	viscosity range of fluid	γ_{min}	=	10...1000 mm ² /s approximate value normal: ISO VG 10...ISO VG 46		
.10	filtration of fluid		<	class 4-5		to NAS 1638 or
			<	class 15/14/11		to ISO 4406
.11	fluid standard		=	HLP-hydraulic oils as per DIN 51524 Teil 2 (Special equipments possible)		

See also data sheet HVM 025

2. Characteristics HVM

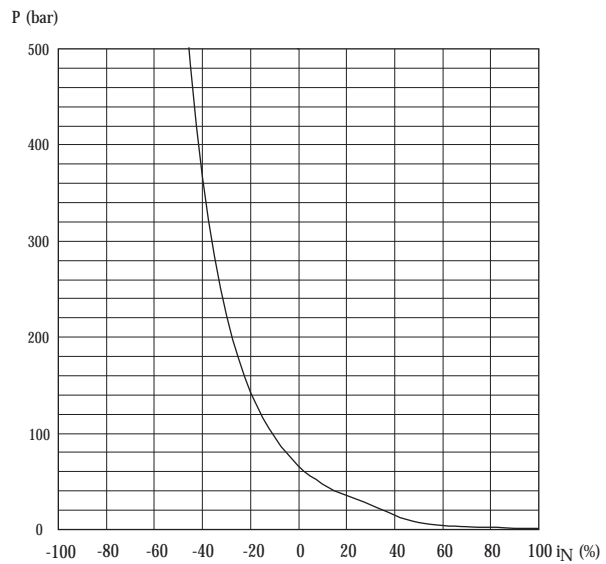
Pressure characteristic

(1 connection: $P > A$, or $B > T$)
at Q constantly 3.6 l/min.
(operating medium brake fluid DOT 4)



Pressure characteristic

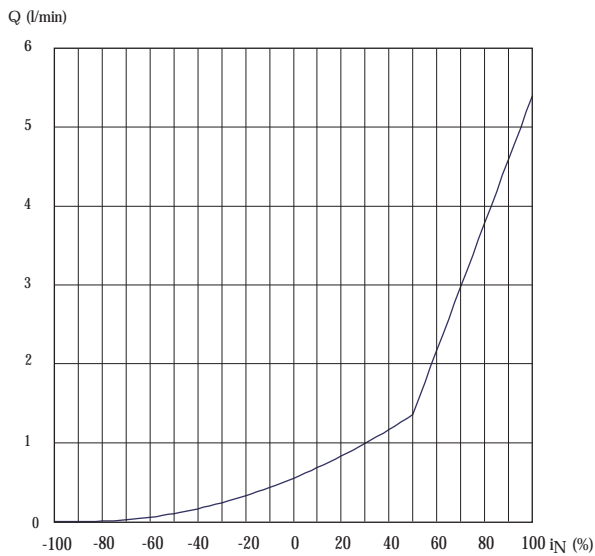
(2 connection: $P > A$ and $B > T$)
at Q constantly 3.6 l/min.
(operating medium brake fluid DOT 4)



2. Characteristics HVM

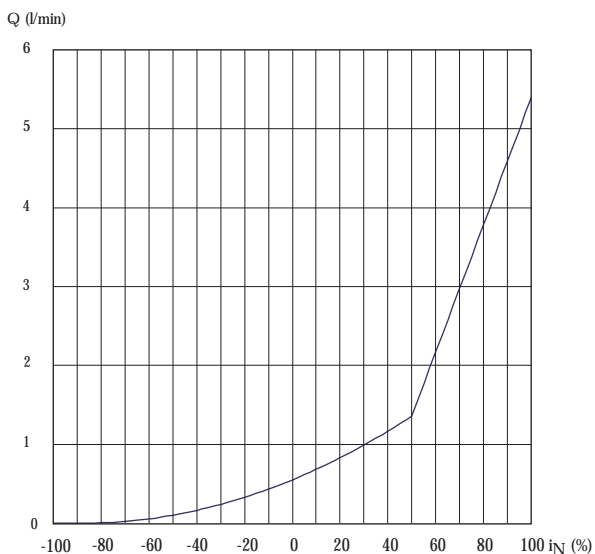
Flow characteristic

single flow
connection: P > A, or B > T at $\Delta p = 15$ bar
(operating medium brake fluid DOT 4)



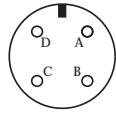
Flow characteristic

double flow
connection: P > A and B > T at $\Delta p = 15$ bar
(operating medium brake fluid DOT 4)

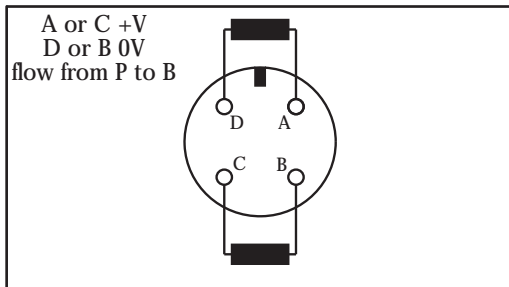


3. Electrical Data

3.1 Electrical Data without Electronic

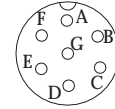


connector 4 pol.
DIN 43563

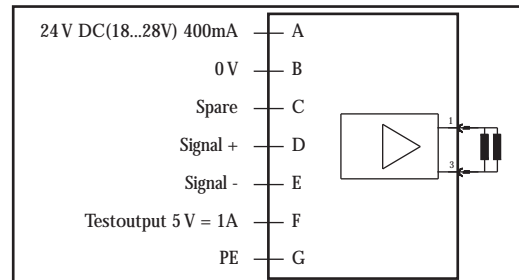


coil type		inductance	rated current	resistance	power
1	1 coil	86 mH	± 325 mA	11,5 Ω	1,35 W
	2 coil parallel	31,2 mH	± 650 mA	6 Ω	2,7 W
2	1 coil	320 mH	± 150 mA	60 Ω	1,35 W
	2 coil parallel	157 mH	± 300 mA	30 Ω	2,7 W

3.2 Electrical Data with Electronic

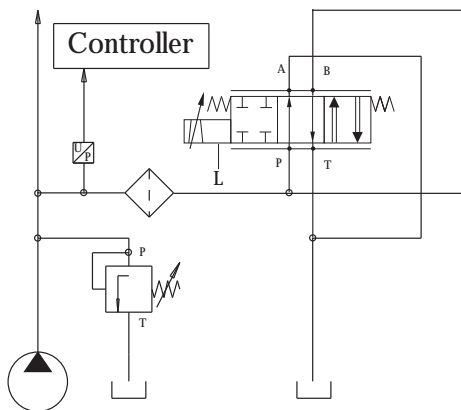


connector 7 pol.
DIN 43563



Input	E1	E2	E3	E4	Flow
Signal D>E	+ 10 V	4 mA	20 mA	+20 mA	P>A
	0 V	12 mA	12 mA	0 mA	0
	- 10 V	20 mA	4 mA	-20 mA	P>B

Example of Application Bypass-Double-Flow-Operating System



Order Information

HVM 025 - 005 - XX60 - 4G - BY - E

<u>Model</u>	
025 (Schneider)	
<u>Rated flow</u>	
QN bei $\Delta p = 15$ bar 001 / 003 / 005 l/min	
<u>Seal material</u>	
1 Perbunan 2 Viton 3 Butyl 4 Vulkollan 5 Ethylen-Propylen	
<u>Resistance / coil [R20]</u>	
2 60 Ω	
<u>overlap</u>	
6 asymmetrically edgetuning	
<u>Amount of overlap</u>	
assigned by manufacturer	
<u>Design letter</u>	
assigned by manufacturer	
<u>Special valve spool</u>	
for pressure control in the bypass pressure ports P+B pressureless ports A+T	
<u>Elektronic</u>	
E1 Voltage input $\pm 10V$ E2 Current input 4...20mA P nach A E3 Current input 4...20mA P nach B E4 Current input $\pm 20mA$	

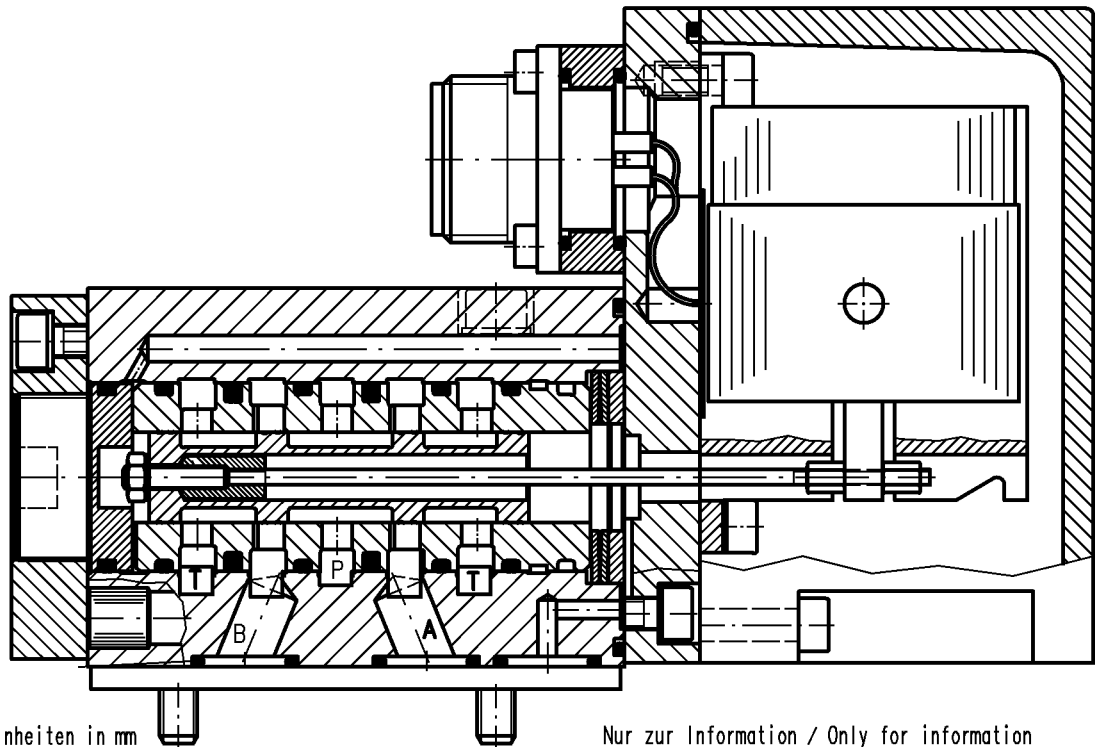
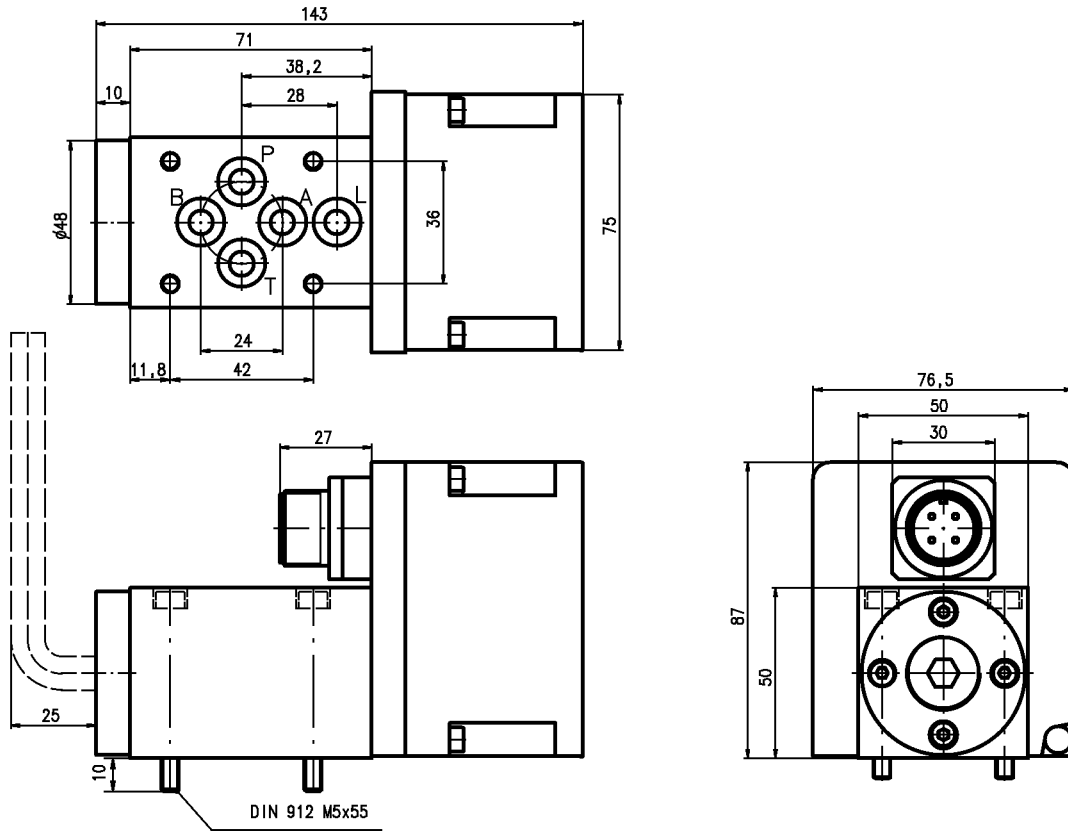
5. Accessories:

Description		Order No.
Connector 4pol.	KE CA 06COM E 14 S2S	13018
Sub plate	HZ 02	11589
scavenger plate	HZ 028	12396
Double flow plate with integrated high press filter	HZ 093	23917
Box-Amplifier	BOE 300-025-X-X-XX	
Digital-Amplifier	HE 303/ HE 304	

Important remarks:

Valve mounting surface must be flat within 0,02mm and smoothness not to exceed 6 μ m. Easy hydraulic Zero adjustment by means of Allen key S8 DIN 911. Max. permissible drain line pressure 10 bar. Valves with modified characteristics available. Modifications, which serve technical progress, remain reserving.

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Angaben ohne Einheiten in mm
All dimensions without unit in mm

Nur zur Information / Only for information

Änderungsindex / Amendment index		Datum Date	Name Name
-			
dwg.		15.07.03	Dindorf

Ventil
Valve
HVM 025-005-XX60-4G-BY

Id.- Nr.
-

Jos. Schneider Optische Werke GmbH
Ringstr. 132 55543 Bad Kreuznach
Germany

