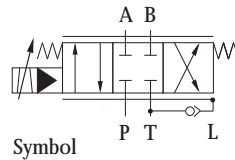
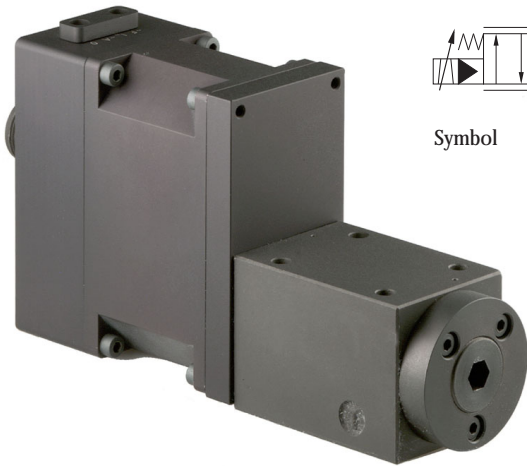


## Elektrohydraulic Servovalves Typ HVM 064



### Special features:

- high reliability
- easy service
- robust construction
- high dynamic response
- relatively insensitive to contamination
- variable metering orifices only
- $Q_{max} = 40\text{ l/min}$  at  $D_p = 70\text{ bar}$
- $p_{max} = 315\text{ bar}$

### General description:

Type	:	electrical input stage, torque motor, sliding spool system
Control	:	torque motor actuated pilot spool
main spool	:	located in 4-way sliding and correlated to the same
Style of mounting	:	subplate / Cetop 03
Mounting position	:	unrestricted
Weight	:	1,5kg

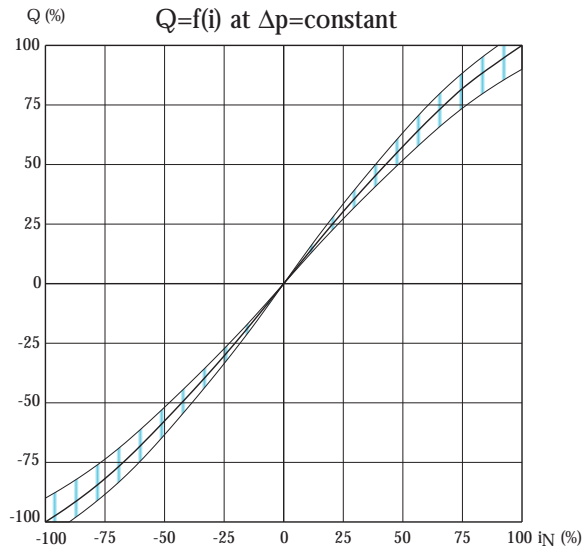
### Technical Data

#### 1. Hydraulic Data (definition according to DIN 24311)

.1	rated pressure	$p_N$	=	210	[bar]
.2	operating pressure	$p_{b \text{ min}}$	=	10	[bar]
.2.1	return line pressure	$p_{b \text{ max}}$	=	315	[bar]
.2.2	no separate leakage line necessary	$p_{r \text{ max}}$	=	10	[bar] static
.3	max. pressure (static test pressure)	$p_{max}$	=	450	[bar]
.4	rated flow at $\Delta p = 70\text{ bar}$	$Q_N$	=	20/30/40	[l/min]
.5	quiescent flow, max. at $p_n$	$Q_{01+02}$	<	5% $Q_N$	
.6	hysteresis	H	<	5% $i_N$ 3% $i_N$	(without Dither) (with Dither)
.7	threshold sensitivity	E	<	0,4% $i_N$ 0,1% $i_N$	(without Dither) (with Dither)
.8	threshold span	S	<	2% $i_N$ 1% $i_N$	(without Dither) (with Dither)
.9	linearity deviation		<	10% $i_N$	
.10	flow symmetry $-Q_N$ zu $+Q_N$		<	10% $i_N$	
.11	pressure gain (see diagram)	$V_P$	>	0,4 $P_b / 1\% i_N$	
.12	overlap, standard	h	=	-1...+3% $i_N$	
.13	operating temperature range	$\delta_M$	=	253...353	[K]
.13.1	temperature drift		≤	2% $i_N / 50K$	
.14	viscosity range of fluid	$\gamma_{min}$	=	10... 1000 $\text{mm}^2/\text{s}$	approximate value normal: ISO VG 10...ISO VG 46
.15	filtration of fluid		<	class 4-5 class 15/14/11	to NAS 1638 or to ISO 4406
.16	fluid standard		=	HLP-hydraulic oils as per DIN 51524 Teil 2 (Special equipments possible)	

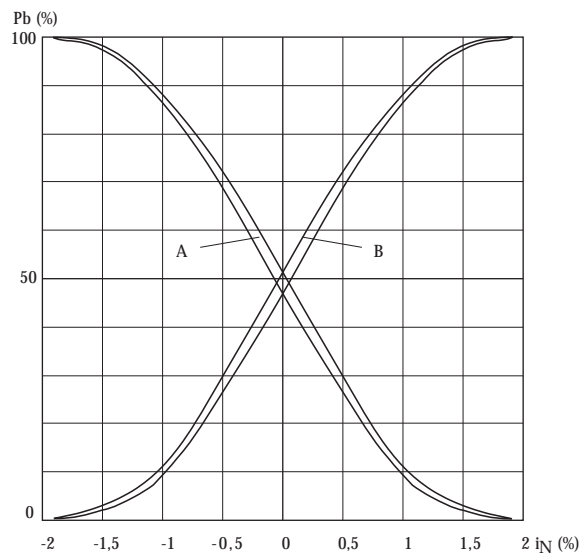
## 2. Diagrams HVM 063

Flow rate-signal function



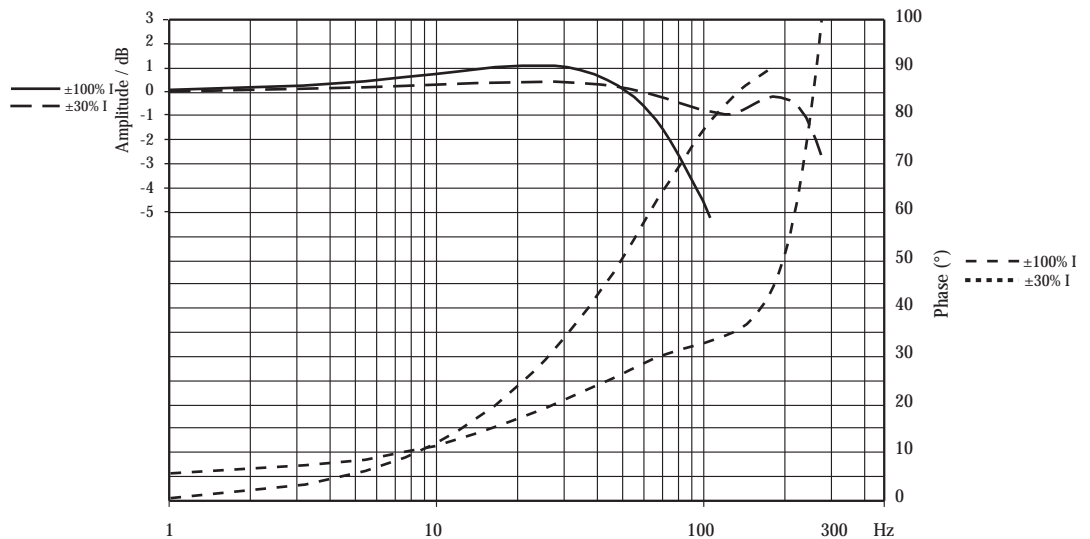
Pressure gain

$$V_p = \tan \alpha = \frac{\Delta p}{\Delta I}$$



Frequency Response

Coils: 1x12Ω  
 Power Supply: ±32V  
 P<sub>V</sub>: 210bar



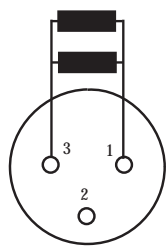
### 3. Electrical Data

#### 3.1 Electrical Data without Electronic



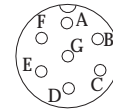
connector (M8x1)

Standard-coils parallel at 1 and 3; 2 NC



coil type		inductance	rated current	resistance	power
1	1 coil	170 mH	± 150 mA	55Ω	1,25 W
	2 coil parallel	146 mH	± 300 mA	27,5Ω	2,5 W
2	1 coil	42 mH	± 325 mA	13,6Ω	1,4 W
	2 coil parallel	31 mH	± 650 mA	6,5Ω	2,75 W

#### 3.2 Electrical Data with Electronic



connector 7 pol. DIN 43563

24 V DC (18...28V) 400mA

0V B

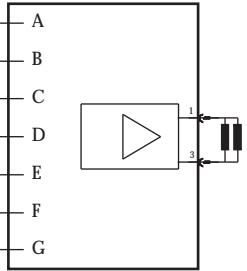
Spare C

Signal + D

Signal - E

Testoutput 5V = 1A F

PE G



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

Order Information

## HVM 064 - 040 - 1200 - XX - E1

<u>Model</u>	
062	
<u>Rated flow</u>	
Q <sub>N</sub> at Δp =70 bar	
020 l/min	
030 l/min	
040 l/min	
<u>Seal material</u>	
1 Perbunan	
2 Viton	
3 Butyl	
4 Vulkollan	
5 Ethylen-Propylen	
<u>Resistance / coil [R20]</u>	
1 6 Ω (2x12 Ω parallel)	
2 30 Ω (2x60 Ω parallel)	
4 12 Ω (1coil)	
<u>Overlap</u>	
0 Zero overlap	
1 Positiv overlap	
2 Negativ overlap	
<u>Amount of overlap</u>	
positiv or negative	
1..9	
<u>Design letter</u>	
assigned by manufacturer	
Elektronic	

- E1 Voltage input ±10V
- E2 Current input 4...20mA P > A
- E3 Current input 4...20mA P > B
- E4 Current input ±20mA

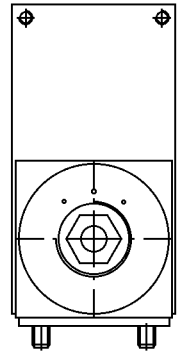
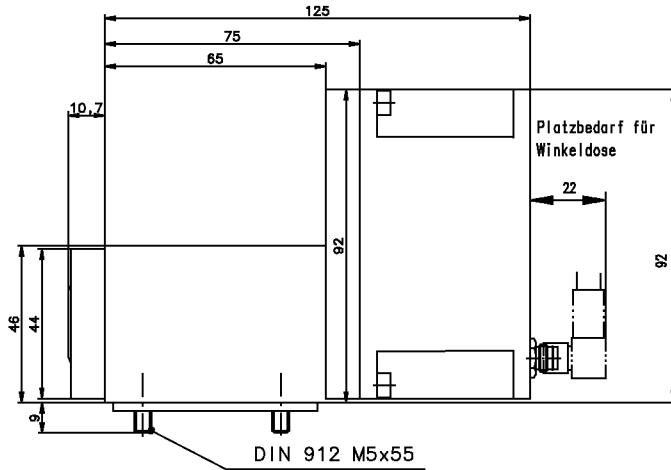
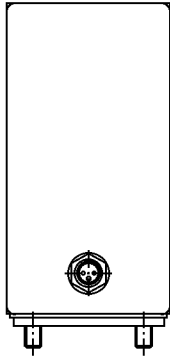
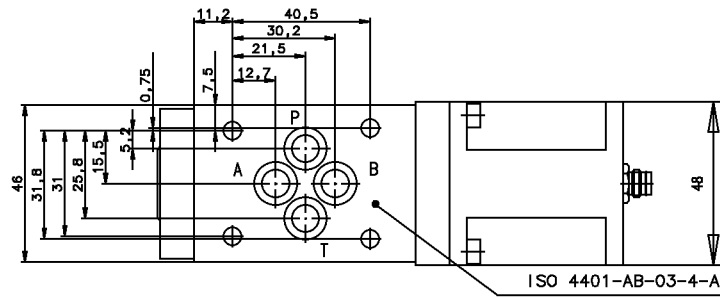
5.Accessories:

Description			Order No.
Connector	3pol.	KE 79-3406-52-03	10249
Connector 90°	3pol.	KE 79-3408-52-03	10250
Connector	7pol.	KE CA 06 COM 14S 7S	21855
Sub plate	NG 6	HZ 050	39276
scavenger plate	NG 6	HZ 062	39686
Box-Amplifier		BOE XXX-025-0-5-0A	46965

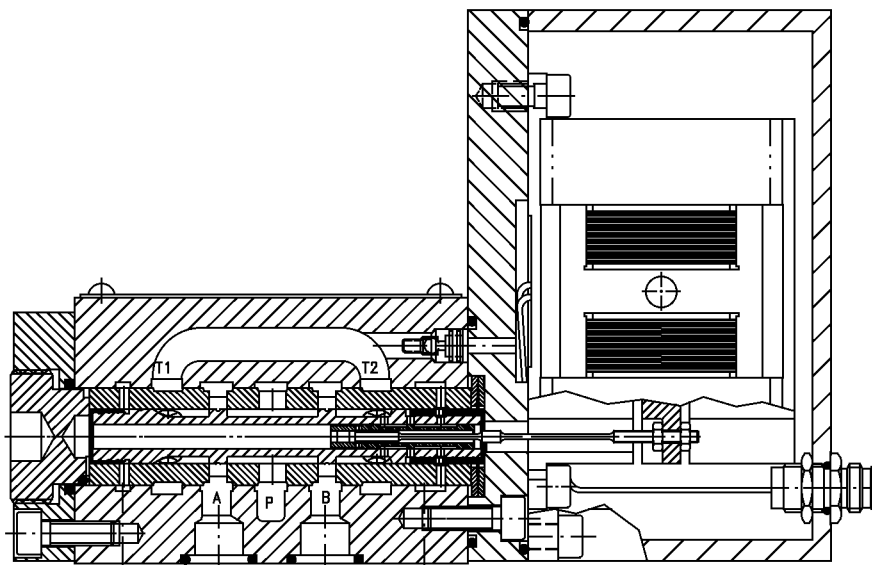
Important remarks:

Valve mounting surface must be flat within 0,02mm and smoothness not to exceed 6µm. 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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Lecköl mit Tank im Ventil über Rückschlagventil verbunden. Aus diesem Grund darf der Tankdruck 10 bar statisch nicht überschreiten!



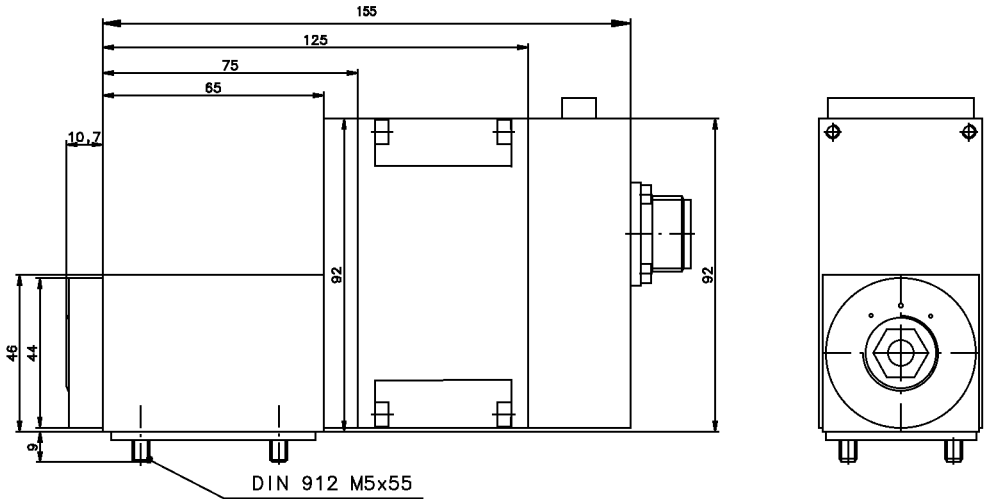
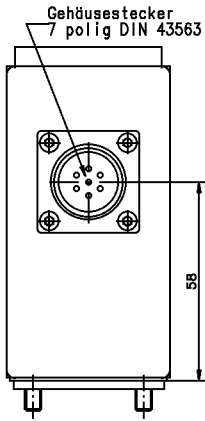
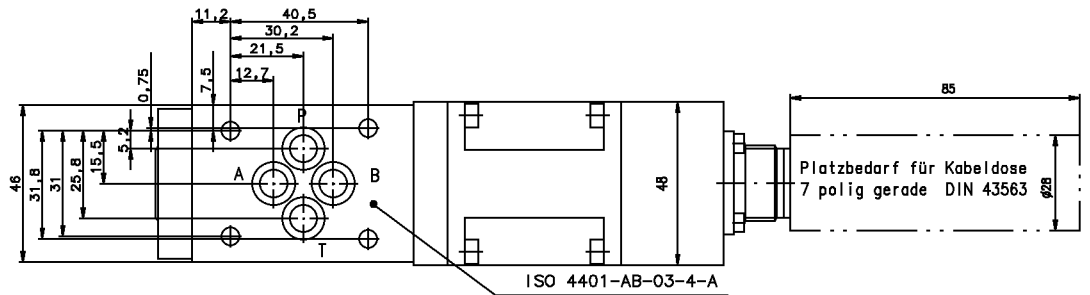
Angaben ohne Einheiten in mm  
All dimensions without unit in mm

Nur zur Information / Only for information

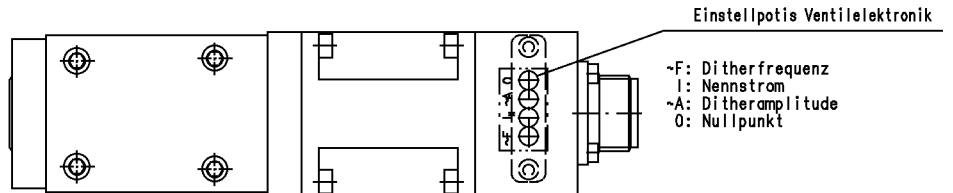
Änderungsindex / Amendment index		Ventil Valve	HVM 064-0XX-1XXX-XA	Id.- Nr. -
	-			
Datum Date	Name Name			
dwg.	01.04	Dindorf		
		Jos. Schneider Optische Werke GmbH Ringstr. 132 55543 Bad Kreuznach Germany		

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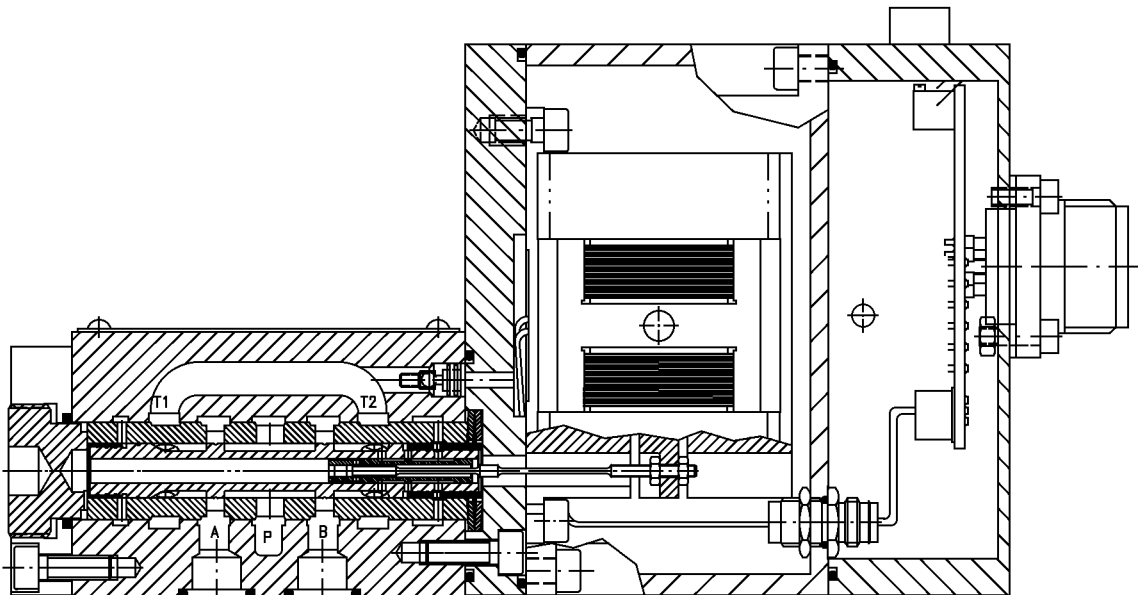
A	24 VDC ; 400 mA
B	0 V
C	Signal 0
D	± 10 V
E	0 V
F	Feedback
G	PE $\equiv$



Lecköl mit Tank im Ventil über Rückschlagventil verbunden. Aus diesem Grund darf der Tankdruck 10 bar statisch nicht überschreiten!



Einstellpotis Ventilelektronik  
 -F: Ditherfrequenz  
 I: Nennstrom  
 -A: Ditheramplitude  
 0: Nullpunkt



Angaben ohne Einheiten in mm  
 All dimensions without unit in mm

Nur zur Information / Only for information

Änderungsindex / Amendment index		Ventil Valve	HVM 064-XXX-XXXX-XX-EX	Id.- Nr. -
Datum Date	Name Name			
dwg.	01.04	Dindorf	Jos. Schneider Optische Werke GmbH Ringstr. 132 55543 Bad Kreuznach Germany	