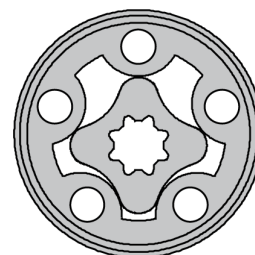


HYDRAULIC MOTORS OM



GENERAL

Displacement, (cm ³ /rev)	8.2 ÷ 50
Max. Speed, (RPM)	1950 ÷ 400
Max. Torque, (daNm)	1.1 ÷ 4.5
Max. Output, (kW)	1.8 ÷ 2.4
Max. Pressure Drop, (bar)	100 ÷ 70
Max. Oil Flow, (l/min)	16 ÷ 20
Min. speed, (RPM)	50 ÷ 20
Pressure fluid	Mineral based - HLP (DIN 51524) or HM (ISO 6743/4)
Temperature range, (°C)	-30 ÷ 90
Optimal Viscosity range, (mm ² /s)	20 ÷ 75
Filtration	ISO code 20/16 (Min. recommended fluid filtration of 25 micron)

PRESSURE LOSSES

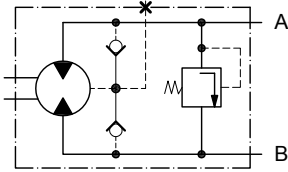


SPECIFICATION DATA

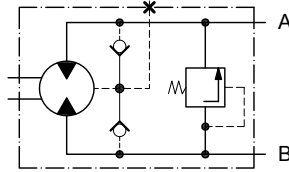
Type				OM 8	OM 12.5	OM 20	OM 32	OM 40	OM 50
Displacement [cm ³ /rev.]				8,2	12,9	20	31,8	40	50
Max. Speed, [RPM]	cont.			1950	1550	1000	630	500	400
	int.			2440	1940	1250	790	625	500
Max. Torque [daNm]	cont.			1,1	1,6	2,5	4	4,1	4.5
	int.			1,5	2,3	3,5	5,7	5,7	5.8
	peak			2,1	3,3	5,1	6,4	6,6	8
Max. Output [kW]	cont.			1,8	2,4	2,4	2,4	1,8	1,7
	int.			2,6	3,2	3,2	3,2	3,0	2,1
Max. Pressure Drop [bar]	cont.			100	100	100	100	80	70
	int.			140	140	140	140	110	90
	peak			200	200	200	200	140	125
Max. Oil Flow [l/min]	cont.			16	20	20	20	20	20
	int.			20	25	25	25	25	25
Max. Inlet Pressure, [bar]	cont.			140	140	140	140	140	140
	int.			175	175	175	175	175	175
	peak			225	225	225	225	225	225
Max. Return Pressure w/o Drain Line or Max. Pressure in Drain Line, [bar]	cont.	0-100	RPM	140	140	140	140	140	140
	cont.	100-400	RPM	100	100	100	100	100	100
	cont.	400-800	RPM	50	50	50	50	50	-
	cont.	>800	RPM	20	20	20	-	-	-
	int.	0-max.	RPM	140	140	140	140	140	140
Max. Return Pressure with Drain Line [bar]	cont.			140	140	140	140	140	140
	int.			175	175	175	175	175	175
	peak			225	225	225	225	225	225
Max. Starting Pressure with Unloaded Shift, [bar]				4	4	4	4	4	4
Min. Starting Torque [daNm]	at max	press.	drop cont.	0,7	1,2	2,1	3,4	3,3	3,7
	at max	press.	drop int.	1,0	1,7	2,9	4,8	4,6	4,8
Min. Speed, [RPM]				50	40	30	30	25	20
Weight, avg. [kg]	OM			1,9	2	2,1	2,2	2,3	2,5
	OMF(S)			2,3	2,4	2,5	2,6	2,7	2,9
	OMFS			2,7	2,8	2,9	3,0	3,1	3,3
	OMP			2,5	2,6	2,7	2,8	2,9	3,1
	OMPF			2,7	2,8	2,9	3,0	3,1	3,3
	OMD			2,6	2,7	2,8	2,9	3,0	3,2
	OMDF			2,8	2,9	3,0	3,1	3,2	3,4

Intermittent operation: the permissible values may occur for max. 10% of every minute.
Peak load: the permissible values may occur for max. 1% of every minute.

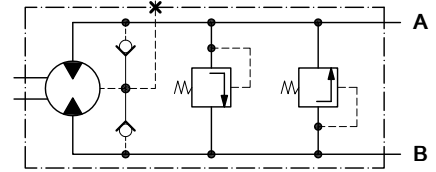
OMP Series with Integrated
Internal Crossover Relief Valve
A→B, $\Delta p=100$ bar (50 bar)



OMP Series with Integrated
Internal Crossover Relief Valve
B→A, $\Delta p=100$ bar (50 bar)

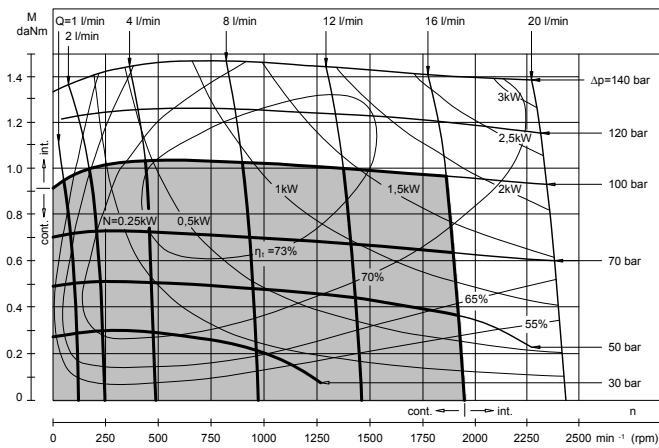


OMD Series with Integrated
Internal Crossover Relief Valve
B→A, $\Delta p=100$ bar (50 bar)

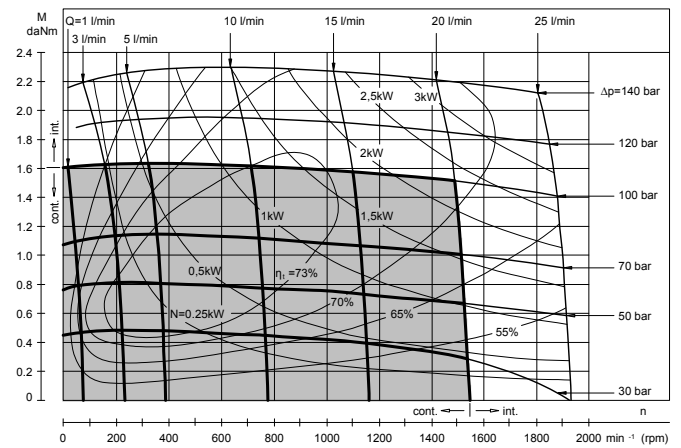


FUNCTION DIAGRAMS

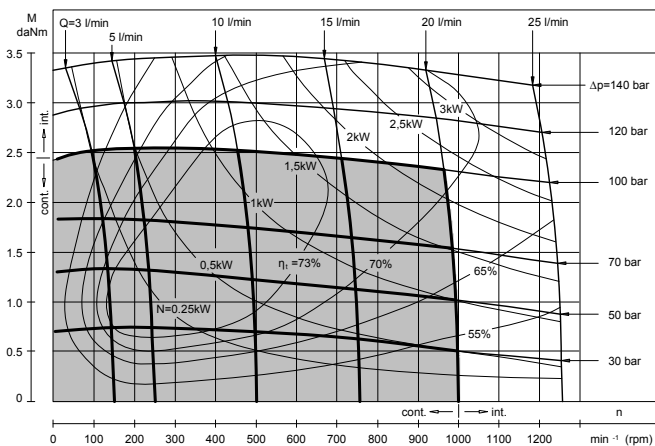
OM 8



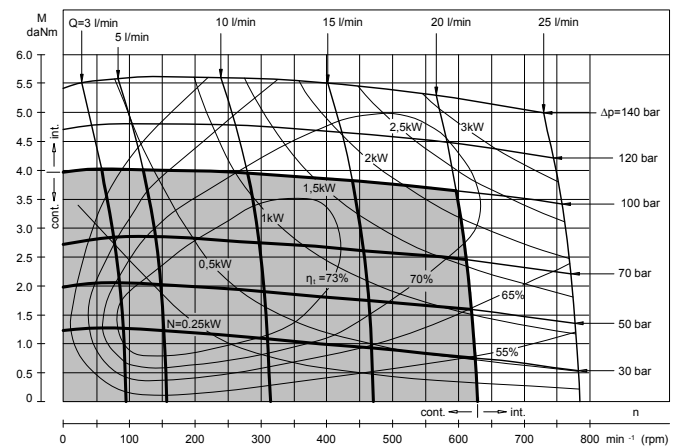
OM 12.5



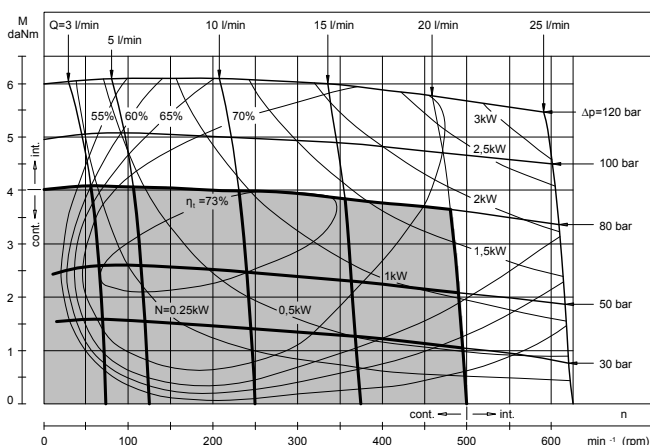
OM 20



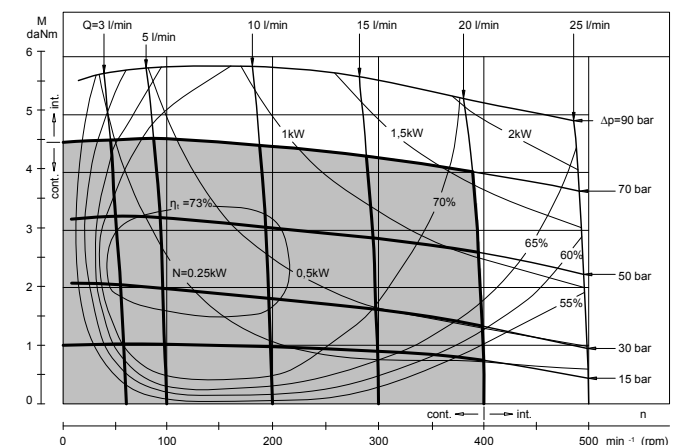
OM 32



OM 40

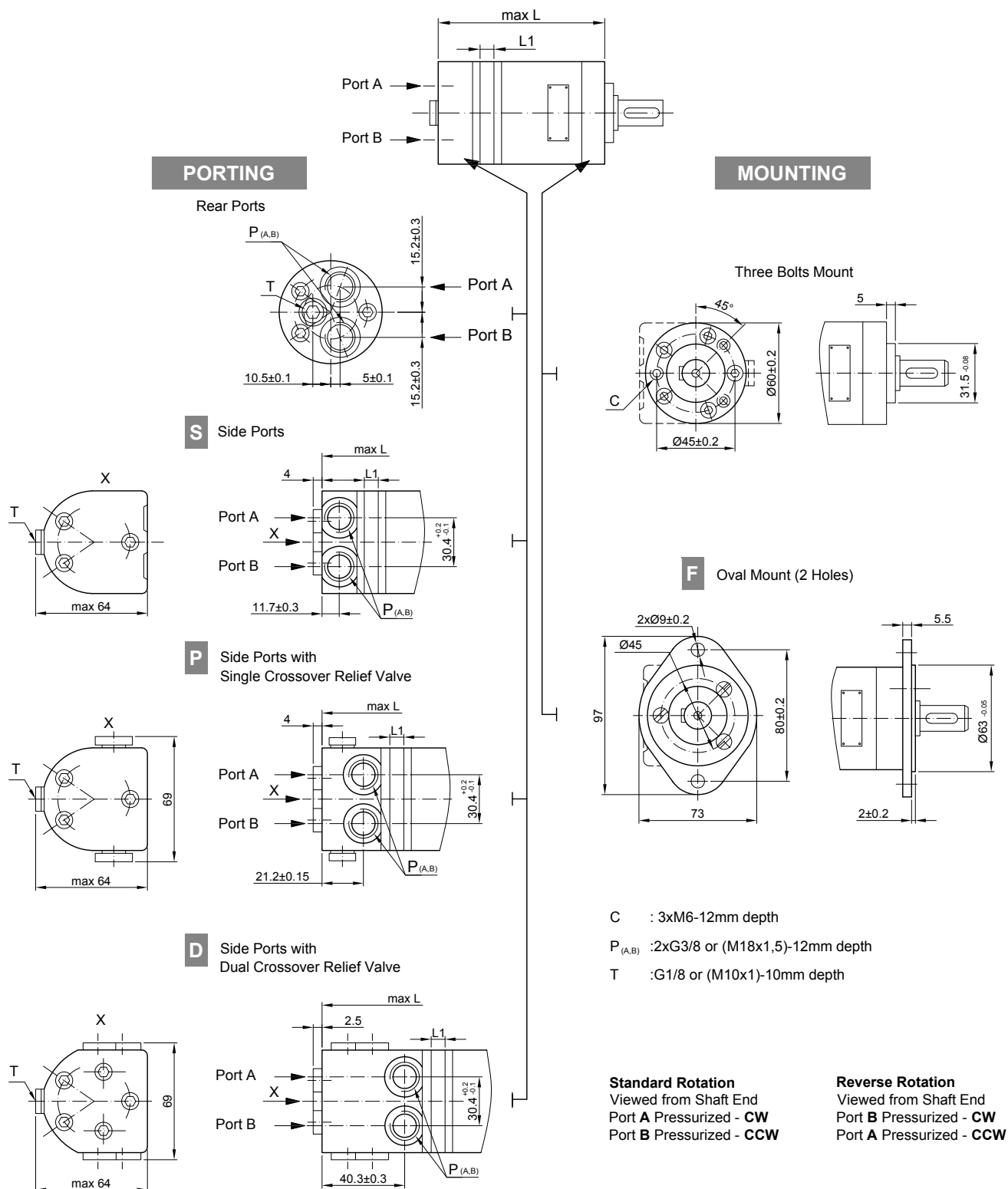


OM 50



The function diagrams data was collected at back pressure 5+10 bar and oil with viscosity of 32 mm²/s at 50° C.

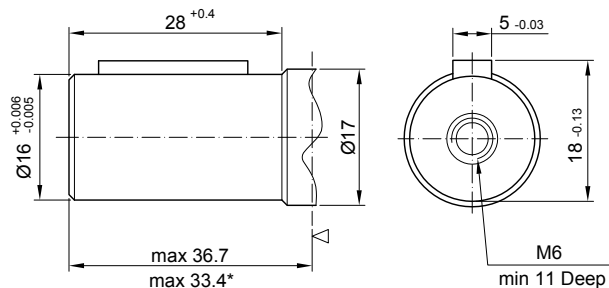
DIMENSIONS AND MOUNTING DATA



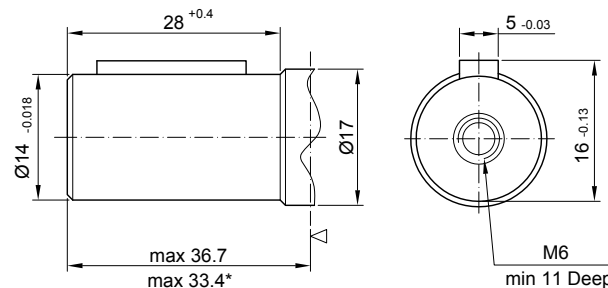
Type	L , mm	Type	L , mm	Type	L , mm	Type	L , mm	L1 , mm
OM 8	104	OMS 8	105	OMP 8	115	OMD 8	134	3.5
OM 12.5	106	OMS 12.5	107	OMP 12.5	117	OMD 12.5	136	5.5
OM 20	109	OMS 20	110	OMP 20	120	OMD 20	139	8.5
OM 32	114	OMS 32	115	OMP 32	125	OMD 32	144	13.5
OM 40	117.5	OMS 40	118.5	OMP 40	128.5	OMD 40	147.5	17
OM 50	121.5	OMS 50	122.5	OMP 50	132.5	OMD 50	151.5	21

SHAFT EXTENSIONS

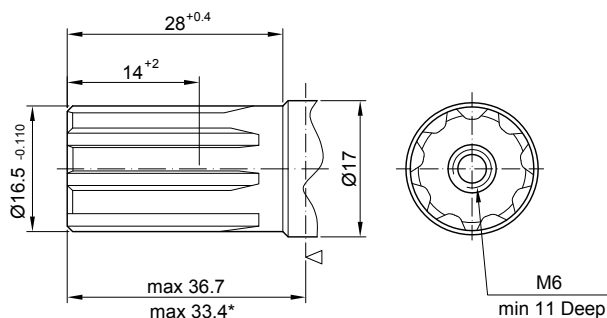
C Ø16 straight, Parallel key 5x5x16 DIN 6885
Max. Torque 3,9 daNm



CK Ø14 Straight, Paralle key 5x5x16 DIN 6885
Max. Torque 3 daNm

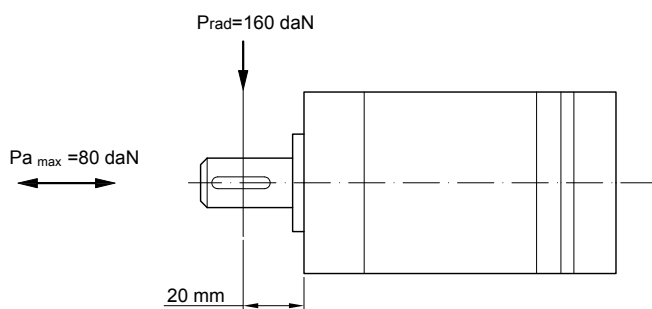


SH Ø16,5 Splined, B17x14 DIN 5482
Max. Torque 4,4 daNm



▽ Motor Mounting Surface
* For F Mounting

PERMISSIBLE SHAFT LOAD



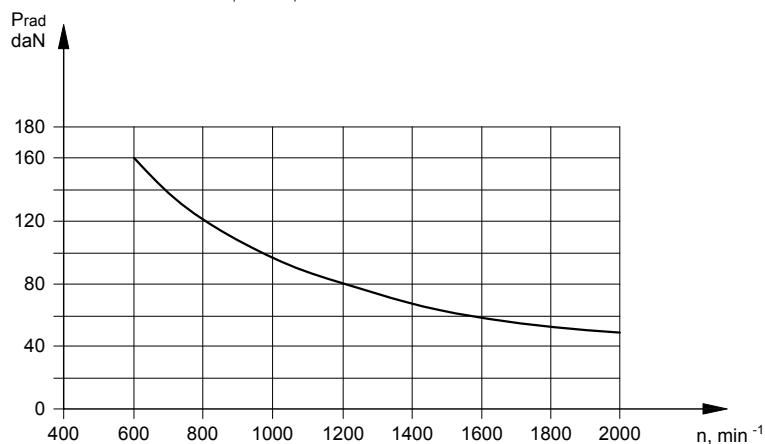
The permissible radial shaft load (P_{rad}) is calculated from the distance (L) between the point of load application and the mounting surface:

$$P_{rad} = \frac{130040}{(61.5+L)}, \text{ (daN)}$$

(L in mm; $L \leq 80$)

The drawing shows the permissible radial load when $L=20$ mm.

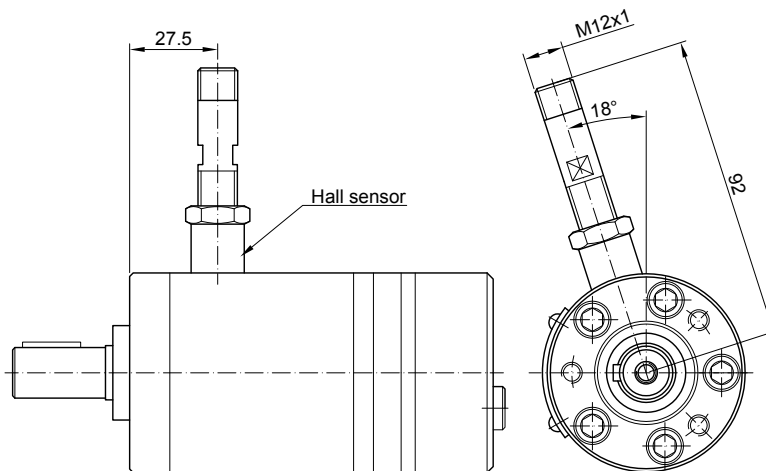
If the calculated shaft load exceeds the permissible, a flexible coupling must be used.



HYDRAULIC MOTORS WITH SPEED SENSOR TYPE OM...RS

Meta Hydraulic is introducing hydraulic motor with a new generation of speed sensor. The electric output signal is a standard voltage signal that can be used for regulating the speed of a motor.

The speed is measured by a sensor in accordance with the Hall principle. Signal processing and amplification are performed in the sensor housing. Connection is provided in the housing by a Plug connector M12 Series.



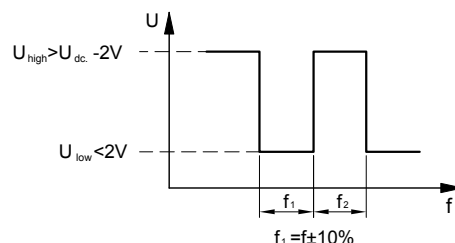
This performance is applicable for all motors of OM series. The main technical features correspond to the standard motors series OM.

DIFFERENTIAL HALL SENSOR

TECHNICAL DATA

Frequency range	3...20 000 Hz
Output	PNP
Power supply	10...36 VDC
Current input	20 mA (@24 VDC)
Current load	500 mA (@24 VDC; 24°C)
Ambient Temperature	minus 40... plus 125°C
Protection	IP 67
Plug connector	M12-Series
Mounting principle	ISO 6149
Pulses per revolution	30

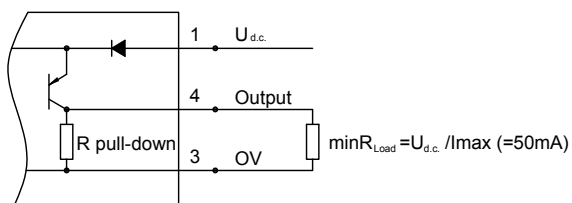
OUTPUT SIGNAL



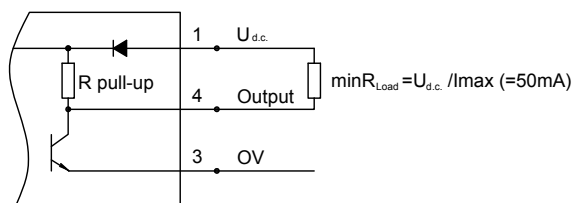
Load max.: $I_{high} = I_{low} < 50\text{mA}$
No load current, max: 20 mA

WIRING DIAGRAM

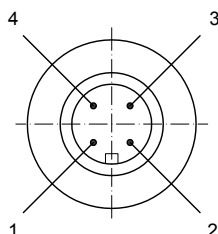
PNP



NPN



STICK TYPE



Terminal No.	Connection
1	Ud.c.
2	No connection
3	0V
4	Output signal

ORDER CODE

	1	2	3	4	5	6	7	8	9	10	11	12
OM												

1	Adjustment Option
omit	without valve
P	Side ports with single crossover relief valve
D	Side ports with dual crossover relief valve
2	Mounting Flange
omit	Three bolts mount
F	Oval mount, two holes
3	Port type (not valid for P and D version)
omit	Rear ports
S	Side ports
4	Displacement code
8	8,2 [cm³/rev]
12.5	12,9 [cm³/rev]
20	20 [cm³/rev]
32	31,8 [cm³/rev]
40	40 [cm³/rev]
50	50 [cm³/rev]
5	Shaft Extensions
C	ø16 straight Parallel key 5x5x16 DIN 6885
VC	ø16 straight Parallel key 5x5x16 DIN 6885 with corrosion resistant bushing
CK	ø14 straight, Parallel key 5x5x16 DIN 6885
SH	ø16,5 splined, B17x14 DIN 5482

6	Ports
omit	BSPP (ISO 228)
M	Metric (ISO 262)
7	Line to control *
L	B → A (left running)
R	A → B (right running)
8	Valve Rated Pressure**
/50	Δp=50 bar
/100	Δp=100 bar
9	Speed Monitoring
omit	none
RS-P	with speed sensor (PNP pull-down resistor)
RS-N	with speed sensor (NPN pull-up resistor)
10	Rotation
omit	Standard Rotation
R	Reverse Rotation
11	Option (Paint)
omit	no paint
P	Painted
PC	Corrosion Protected Paint
12	Design Series
omit	Factory specified

The permissible output torque for shafts must not be exceeded

* For "P" option useful only

** For "P" and "D" option useful only