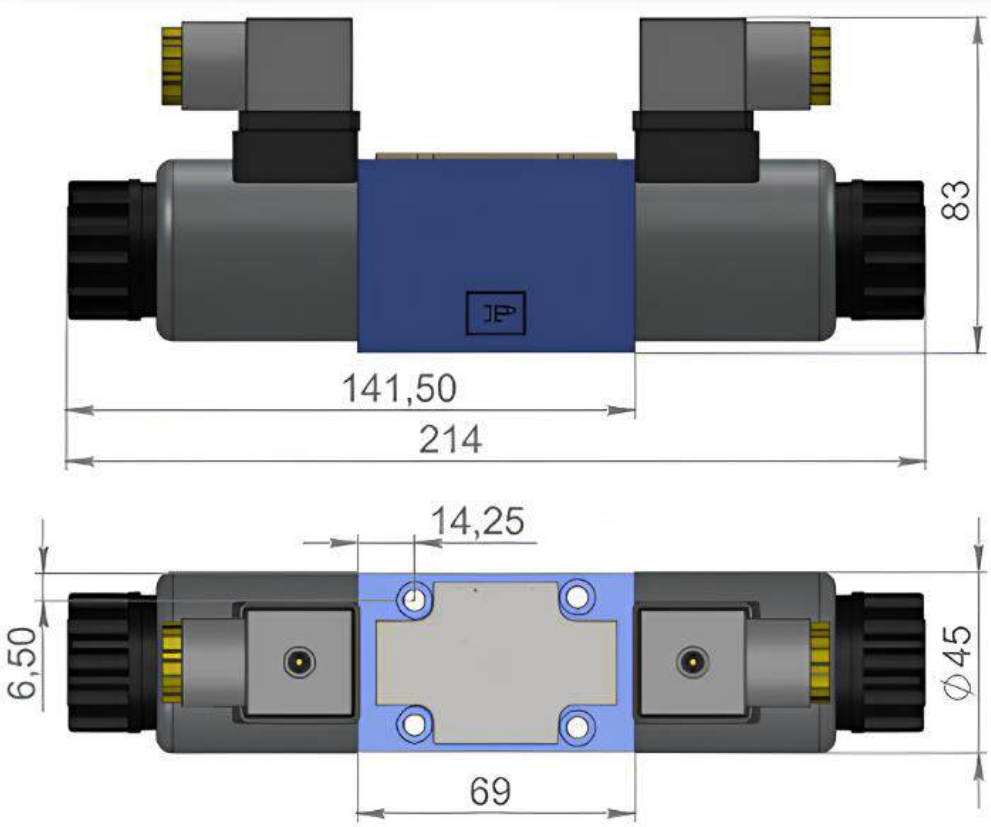
HYDROWEST

Direction valve

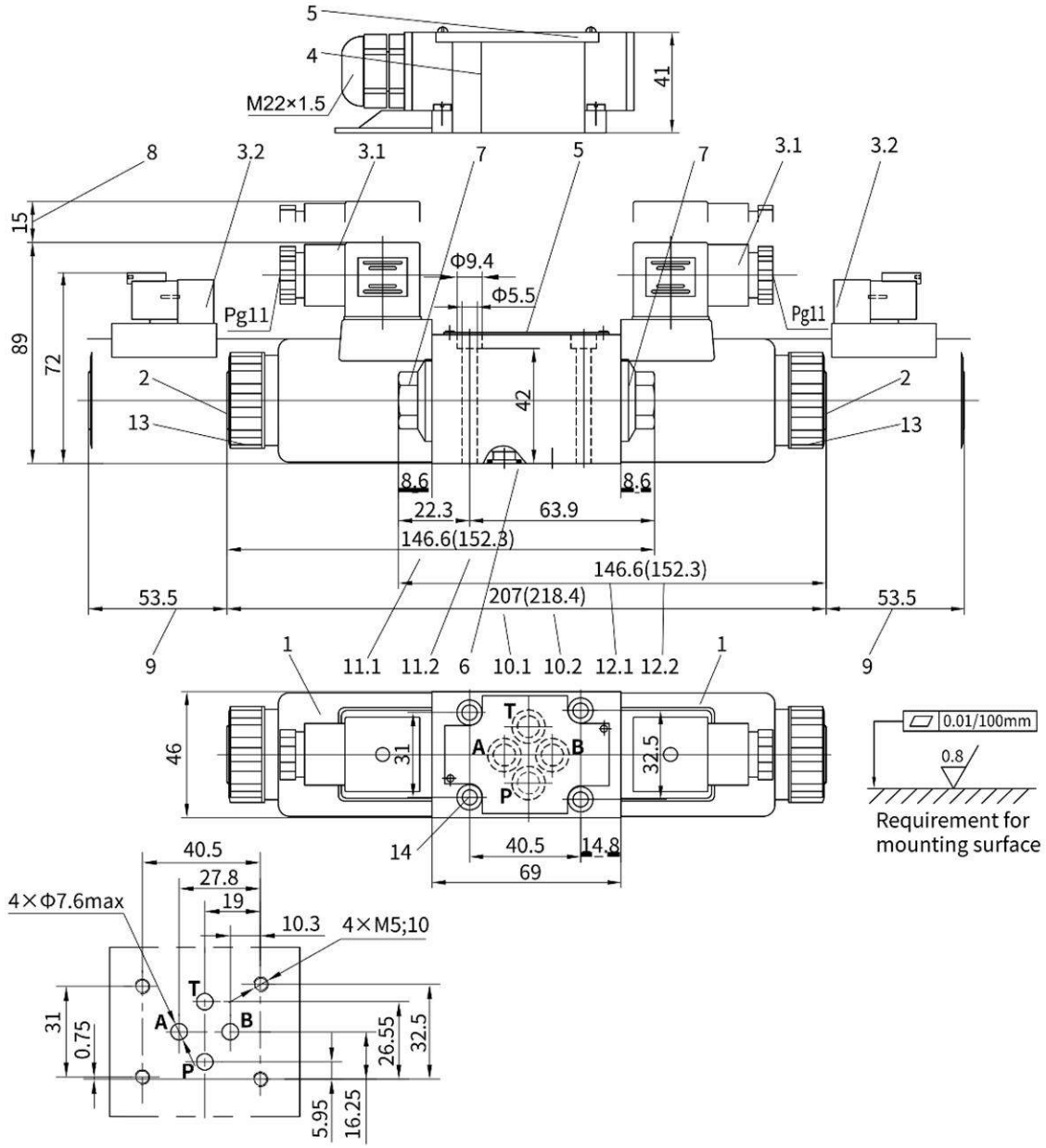
WE6



Unit dimensions

(Dimensions in mm)

Valve with DC or rectification AC solenoid

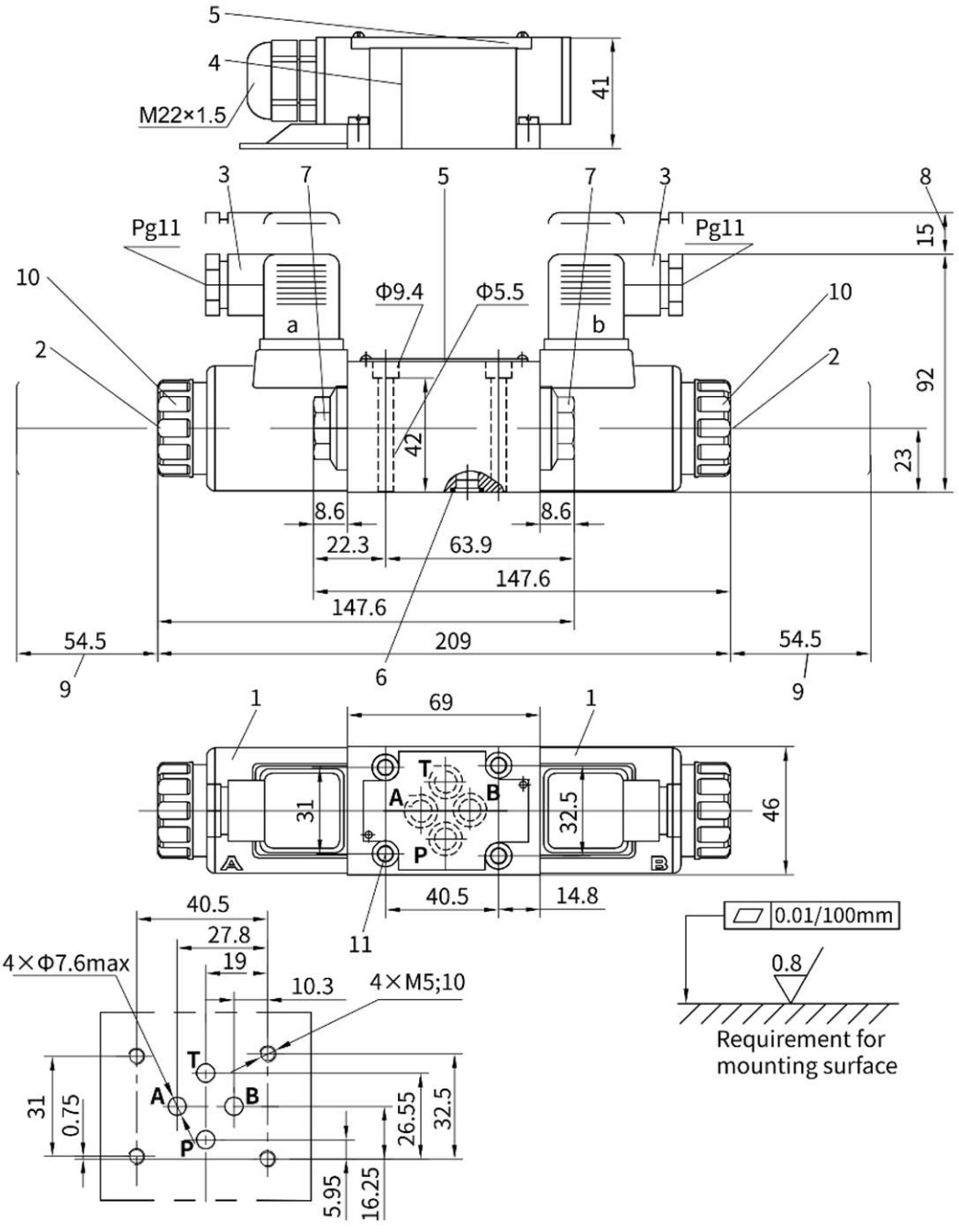


1 Solenoid
2 Manual override button
3.1 Plug-in connector to DIN 43 650
3.2 Deutsch connector assembly
4 Junction box with lead and light, M22×1.5 interface
5 Nameplate
6 O-ring: 9.25×1.78
7 Plug screw for valves with one solenoid
8 Space required to remove connector
9 Space required to remove coil
10.1 Dimension of 3-position valves, standard version
10.2 Dimension of 3-position valves, large-scope Type of voltage
11.1 Dimension of 2-position valves with solenoid at 'A', standard version
11.2 Dimension of 2-position valves with solenoid at 'A', large-scope Type of voltage
12.1 Dimension of 2-position valves with solenoid at 'B', standard version
12.2 Dimension of 2-position valves with solenoid at 'B', large-scope Type of voltage
13 Securing nut, tightening torque M_A=4Nm
14 Valve fixing screws.
Hexagon socket head cap screw
M5×50 GB/T 70.1-10.9,
Tightening torque M_A=8.9Nm

Unit dimensions

(Dimensions in mm)

Valve with AC solenoid



1 Solenoid
2 Manual override button
3 Plug-in connector to DIN 43 650 (rotatable 90°)
4 Junction box with lead and light, M22×1.5 interface
5 Nameplate
6 Seal rings 9.25×1.78
7 Plug screw for valves with one solenoid
8 Space required to remove connector
9 Space required to remove coil
10 Securing nut, tightening torque, M_A = 4 Nm
11 Valve fixing screws. Hexagon socket head cap screw
M5×50 GB/T 70.1-10.9,
Tightening torque M_A =8.9Nm

Technical data

Fixing position			Optional
Environment temperature range		°C	-30 to +50 (NBR seal)
			-20 to +50 (FKM seal)
Weight	Single solenoid	kg	1.5
	Double solenoids	kg	2.0
Max.operating pressure	Port A,B,P	bar	315
	Port T	bar	210 (DC),160 (AC), when the operating pressure exceed the permission value, port T must be used as drain port for spool symbol A and B
Max. flow-rate		L/min	80 (DC), 60 (AC)
Flow cross section (switching neutral position)		mm^2	for symbol Q 6% of nominal cross section
		mm^2	for symbol W 3% of nominal cross section
Fluid			Mineral oil suitable for NBR and FKM seal
			Phosphate ester for FKM seal
Fluid temperature range		°C	-30 to +80 (NBR seal)
			-20 to +80 (FKM seal)
Viscosity range		mm^2/s	2.8 to 500
Degree of contamination			Maximum permissible degree of fluid contamination: Class 9. NAS 1638 or 20/18/15, ISO4406

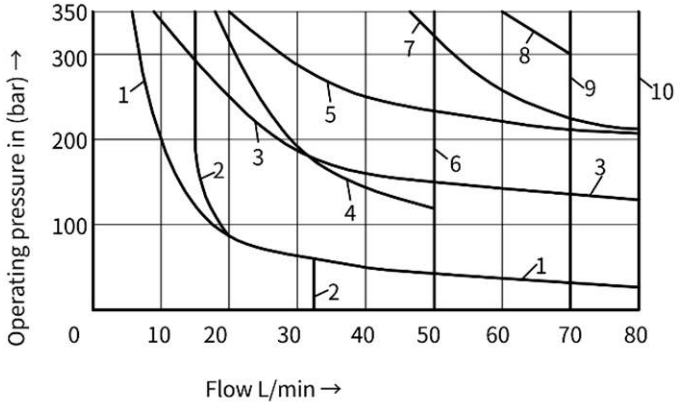
Electric data

Type of voltage			DC	AC 50Hz
Usable voltage		V	12,24,28[1)],48,96,110,205,220	110, 127, 220
Permissible voltage (deviation)		%	Standard solenoid:+10~-15; Large-scope solenoid:+20~-30	
Power consumption		W	Standard solenoid:30; Large-scope solenoid:32	
Holding power		VA	-	50
Making capacity		VA	-	220
Duty			Continuous working	
Switching time to ISO 6403	ON	ms	25 to 45	10 to 20
	OFF	ms	10 to 25	15 to 40
Switched frequency		times/h	to 15000	to 7200
Type of protection to DIN 40050			IP65(Z4, Z5L plug), IP67 (K7 Deutsch)	
Max. coils temperature		°C	+150	+180

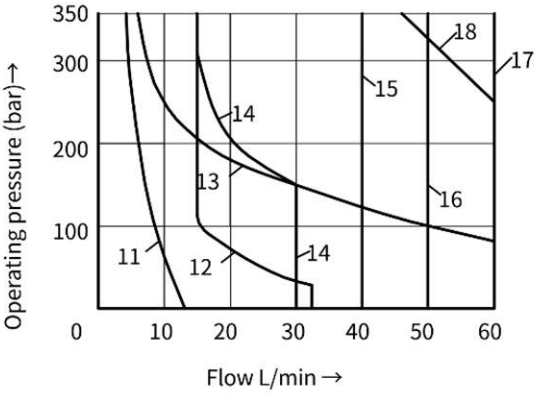
Performance limits

The specified switching performance limits are valid with two directions of flow.
Due to the flow forces acting within the valve, the permissible switching performance limit can be significantly lower with only one direction of flow! The switching performance limit was determined with the solenoid at operating temperature, at 15 % under-voltage and without tank pre-loading.

Solenoid DC		Solenoid AC-50Hz		Solenoid AC-60Hz	
Curve	Spool symbol	Curve	Spool symbol	Curve	Spool symbol
1	A, $B_{1)}$	11	A, $B_{1)}$	19	A, $B_{1)}$
2	V	12	V	20	V
3	A, B	13	A, B	21	A, B
4	F, P	14	F, P	22	F, P
5	J	15	G, T	23	G, T
6	G, H, T	16	H	24	J, L, U
7	A/O, A/OF, L, U	17	A/O, A/OF, C/O,	25	A/O, A/OF, Q, W
8	C, D, Y		C/OF, D/O, D/OF	26	C, D, Y
9	M		E, J, L, M	27	H
10	E, $R_{2)}$, C/O, C/OF		Q, $R_{2)}$, U, W	28	C/O, C/OF, D/O
	D/O, D/OF, Q, W	18	C, D, Y		D/OF, M, R, E, $R_{2)}$

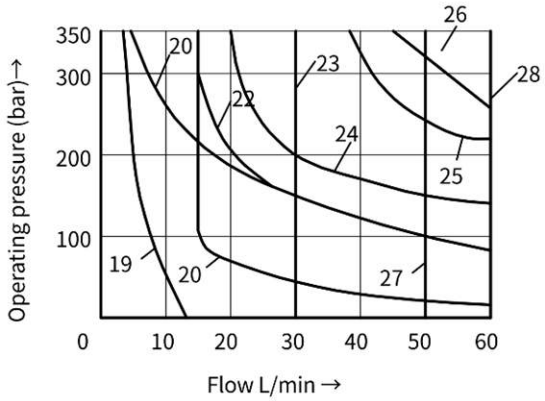


Solenoid DC	
Curve	Solenoid voltage(V)
1 to 10	12, 24, 48, 96, 205

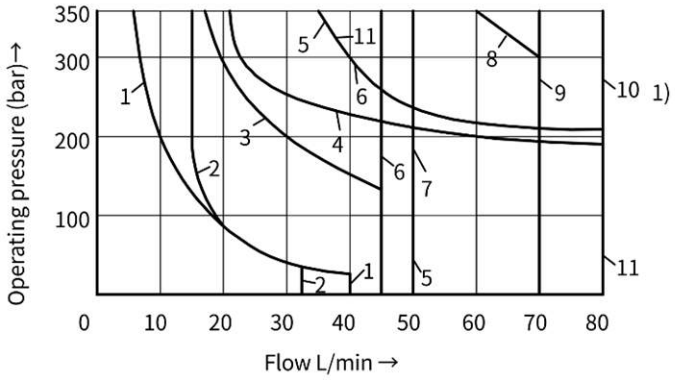


Solenoid AC		
Curve	Solenoid voltage	
11 to 18	W110	110V, 50Hz
	W127	127V, 50Hz
	W230	230V, 50Hz

Performance limits (Measured at t=40°C ±5°C , using HLP46)

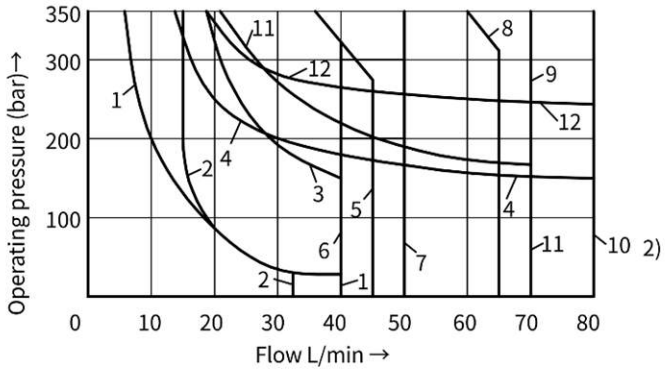


Solenoid AC		
Curve	Solenoid voltage	
19 to 28	W110	110V, 60Hz
	W230	230V, 60Hz



Solenoid DC	
Curve	Solenoid voltage
1 to $10_{1)}$	110, 180

Curve	Spool symbol	Curve	Spool symbol	Curve	Spool symbol
1	A,B	6	T	$10_{1)}$	E, R, C/O, C/OF, D/O, D/OF, Q, W
2	V	7	H	$10_{2)}$	R, C/O, C/OF, D/O, D/OF, Q, W
3	F, P	8	C,D		
4	J, L, U	9	M	11	A/O, A/OF
5	G			12	E

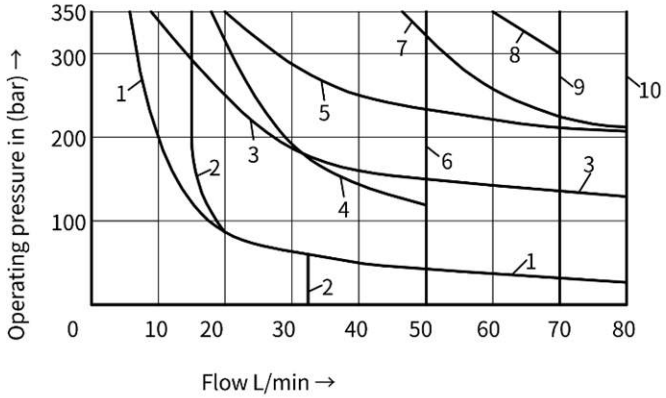


Solenoid AC	
Curve	Solenoid voltage
1 to 12, see$10_{2)}$	220

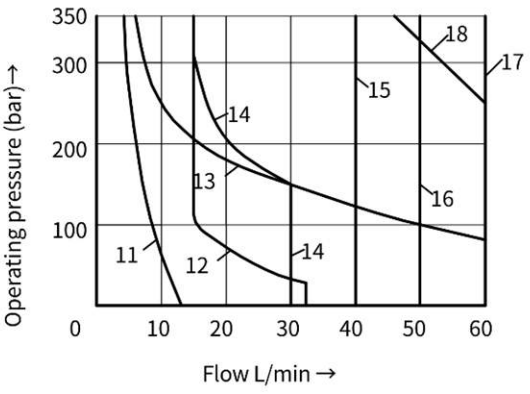
Performance limits

The specified switching performance limits are valid with two directions of flow.
Due to the flow forces acting within the valve, the permissible switching performance limit can be significantly lower with only one direction of flow! The switching performance limit was determined with the solenoid at operating temperature, at 15 % under-voltage and without tank pre-loading.

Solenoid DC		Solenoid AC-50Hz		Solenoid AC-60Hz	
Curve	Spool symbol	Curve	Spool symbol	Curve	Spool symbol
1	A, $B_{1)}$	11	A, $B_{1)}$	19	A, $B_{1)}$
2	V	12	V	20	V
3	A, B	13	A, B	21	A, B
4	F, P	14	F, P	22	F, P
5	J	15	G, T	23	G, T
6	G, H, T	16	H	24	J, L, U
7	A/O, A/OF, L, U	17	A/O, A/OF, C/O,	25	A/O, A/OF, Q, W
8	C, D, Y		C/OF, D/O, D/OF	26	C, D, Y
9	M		E, J, L, M	27	H
10	E, $R_{2)}$, C/O, C/OF		Q, $R_{2)}$, U, W	28	C/O, C/OF, D/O
	D/O, D/OF, Q, W	18	C, D, Y		D/OF, M, R, E, $R_{2)}$



Solenoid DC	
Curve	Solenoid voltage(V)
1 to 10	12, 24, 48, 96, 205



Solenoid AC		
Curve	Solenoid voltage	
11 to 18	W110	110V, 50Hz
	W127	127V, 50Hz
	W230	230V, 50Hz

	WE	6	- 6XJ /				/			*

3 ways =3 (For spool A and B)
4 ways =4

Solenoid directional valve

Nominal size =6

Symbols e.g. C, E etc.

Series 60J to 69J = 6XJ (60J to 69J: unchanged installation and connection dimensions)

With spring return = No code
Without spring return = O
Without spring return, and with detent=OF

Standard solenoid = E
Large-scope solenoid (Only for 12V and 24V) =N

24V DC =G24 220V
AC 50/60 Hz = W220 Plug rectification 220V = W220R
110V AC 50/60 Hz = W110

With concealed hand emergency = N9

Z4 = square plugs (not applicable for the integer)
Z5L = square plugs with lamps
K4 = DIN4365 sockets without plugs
DL = Connecting box

No code = Without throttle insert
B08 = Throttle Φ0.8 mm
B10 = Throttle Φ1.0 mm
B12 = Throttle Φ1.2 mm
B15 = Throttle Φ1.5mm
B20 = Throttle Φ2.0 mm
B25 = Throttle Φ2.5 mm
B30 = Throttle Φ3.0 mm

No code = NBR seals
V = FKM seals

No code = Without locating hole
/60= With locating hole
/62 = With locating pin hole

Further details in clear text