

Servo motors RD25/38-VW

Compact drive units with industry-leading power density and a wide range of applications



With the servo motors RD25 and RD38 RoboDrive presents high-performance motors based on the proven stator-rotor installation kits. The RoboDrive technology provides the highest power density at maximum torque range and overload capability in a compact design. The integrated absolute encoder enables high positioning accuracy and excellent speed stability. The design of the mounting flange allows the combination with the gearheads of the leading precision gear manufacturers.

On request the motors are delivered with gearheads of Gysin, Maxon and Neugart.

Key features:

- Industry-leading power density
- Excellent overload capability
- Compact design
- Absolute SinCos encoder up to 12 bits
- Ready for gearheads of Maxon, Gysin and Neugart

Basic data

	RD25x04-VW	RD25x08-VW	RD38x06-VW	RD38x12-VW
Power P [W]	60	60	95	165
Rated torque T_r [Nm]	0,024	0,048	0,10	0,20
Peak torque T_{max} [Nm]	0,1	0,2	0,4	0,7
Rotation speed n_{max}^* [rpm]	24.000	12.000	9.000	8.000
Diameter D [mm]	32	32	45	45
Length L [mm]	35,7	40,1	41	48
Weight m [g]	75	90	170	215
Inertia J [kgcm ²]	0,0028	0,0041	0,0135	0,0235

* Theoretical no-load rotation speeds at $U_i = 24$ V (RD38x12-VW $U_i = 48$ V). Variations can arise from operation with different inverters. Higher rotation speeds or change of the voltage level can be achieved by changing the connection scheme.

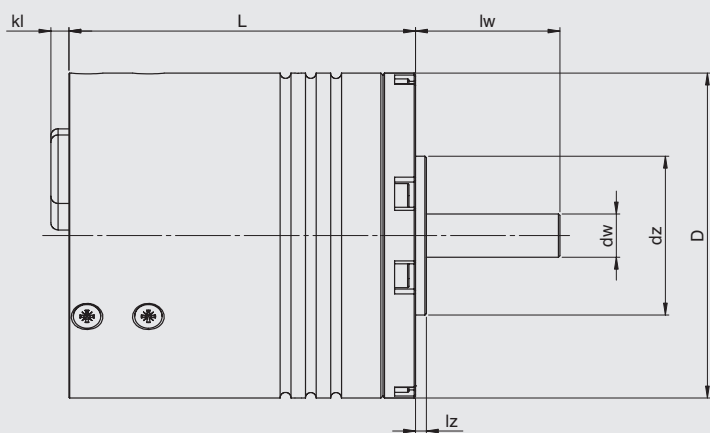
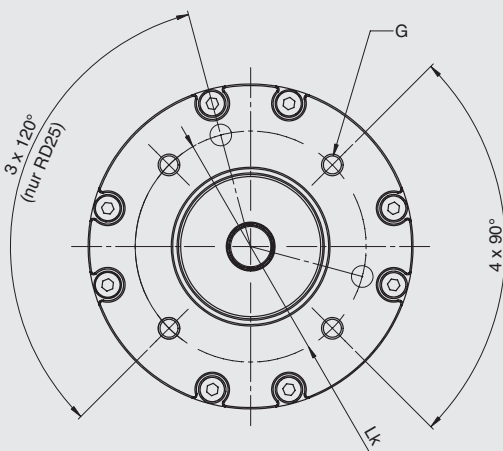
Electrical data

	RD25x04-VW	RD25x08-VW	RD38x06-VW	RD38x12-VW
Rated voltage U_r [V]	24	24	24	48
Rated current I_r [A]	2,8	2,8	5,0	5,0
Torque constant k_T [Nm/A]	0,008	0,016	0,021	0,046
Terminal resistance R_{TT} [mΩ]	500	748	363	530
Terminal inductance L_{TT} [μH]	170	285	250	375
Number of pole pairs	7	7	7	7
Sensor type	Magnetic encoder: Position accuracy interpolatable up to 12 bit, 4.096 inc/rev, accuracy $\pm 0,5^\circ$, supply voltage $U_{dd} = 5 V$			
Interface sensor	Analogous, differential Sin-Cos-signal, signal amplitude $V_{pp}=3,3 V$; signal offset 1,66 V		Analogous, differential Sin-Cos-signal, signal amplitude $V_{pp}=1,0 V$; signal offset $U_{dd}/2$	

All data relate to star-serial connection at $U_r = 48V$. The voltage level can be changed on request.

Dimensions

	RD25x04-VW	RD25x08-VW	RD38x06-VW	RD38x12-VW
Motor diameter D [mm]	32	32	45	45
Motor length L [mm]	35,7	40,1	41	48
Shaft diameter d_w [mm]	4 h6	4 h6	6 h6	6 h6
Shaft length l_w [mm]	20	20	20	20
Centering diameter d_z [mm]	16 j6	16 j6	22 j6	22 j6
Centering length l_z [mm]	1,2	1,2	1,5	1,5
Pitch circle l_k [mm]	22	22	32	32
Mounting thread G [metric]	M3 4x90° + 3x120°	M3 4x90° + 3x120°	M3 4x90°	M3 4x90°
Cable bushing length kl [mm]	3	3	3	3
Weight m [g]	75	90	170	215
Inertia J [kgcm ²]	0,0028	0,0041	0,0135	0,0235



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