

## 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 well-established stator-rotor 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 motors to be combined with the gearheads of the leading precision gear manufacturers.

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

### Key features:

- Industry-leading power density
- Excellent overload capability
- Compact design
- Absolute Sin-Cos encoder, accuracy  $\pm 0.5^\circ$
- Prepared 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 $n_{max}$ * at $U_r$ [rpm]	24,000	12,000	9,000	8,000
Motor diameter D [mm]	32	32	45	45
Motor length L [mm]	35.7	40.1	41	48
Weight m [g]	75	90	170	215
Inertia J [kgcm <sup>2</sup> ]	0.0028	0.0041	0.0135	0.0235

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

## Electrical data

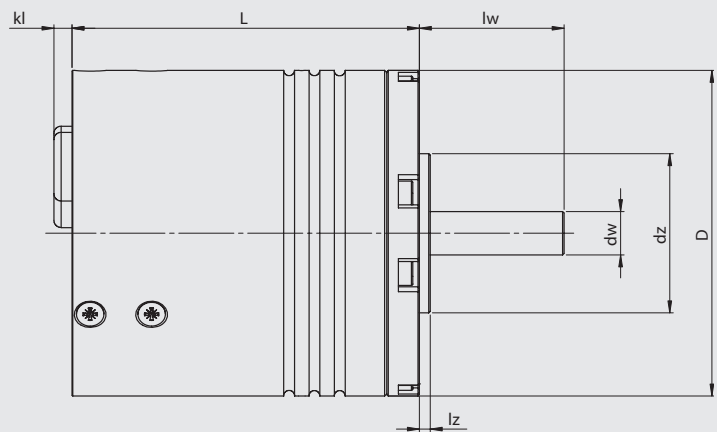
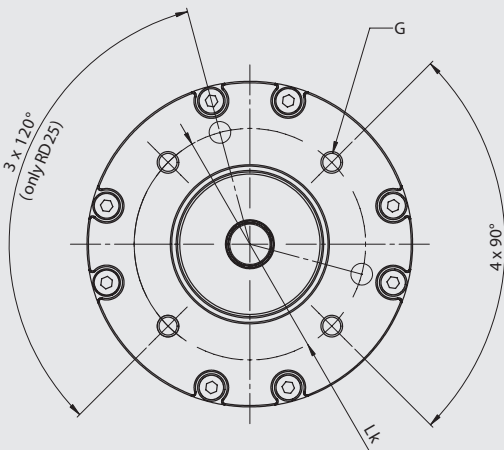
	RD25x04-VW	RD25x08-VW	RD38x06-VW	RD38x12-VW
Rated voltage $U_r$ [V]	24	24	24	48
Rated current $I_r$ [A]	2.8	2.8	5.0	5.0
Torque constant $k_T$ [Nm/A]	0.008	0.016	0.021	0.046
Terminal resistance $R_{TT}$ [mΩ]	500	748	363	530
Terminal inductance $L_{TT}$ [μH]	170	285	250	375
Number of pole pairs	7	7	7	7
Sensor type*	Magnetic encoder, differential Sin-Cos-signal, signal amplitude $1 V_{pp}$ , signal offset $U_{dd}/2$ , accuracy $\pm 0.5^\circ$ , supply voltage $U_{dd} = 5 V$			

All data relate to star-serial interconnection at  $U_r$ . The voltage level can be changed on request.

\* SSI, linear voltage, absolute parallel or incremental RS422 communication interface with resolution up to 8,192 inc/rev are available 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 dw [mm]	4 h6	4 h6	6 h6	6 h6
Shaft length lw [mm]	20	20	20	20
Centering diameter dz [mm]	16 j6	16 j6	22 j6	22 j6
Centering length lz [mm]	1.2	1.2	1.5	1.5
Pitch circle Lk [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



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