

# DC Motor Ø 64

# 1.13.063.XXX



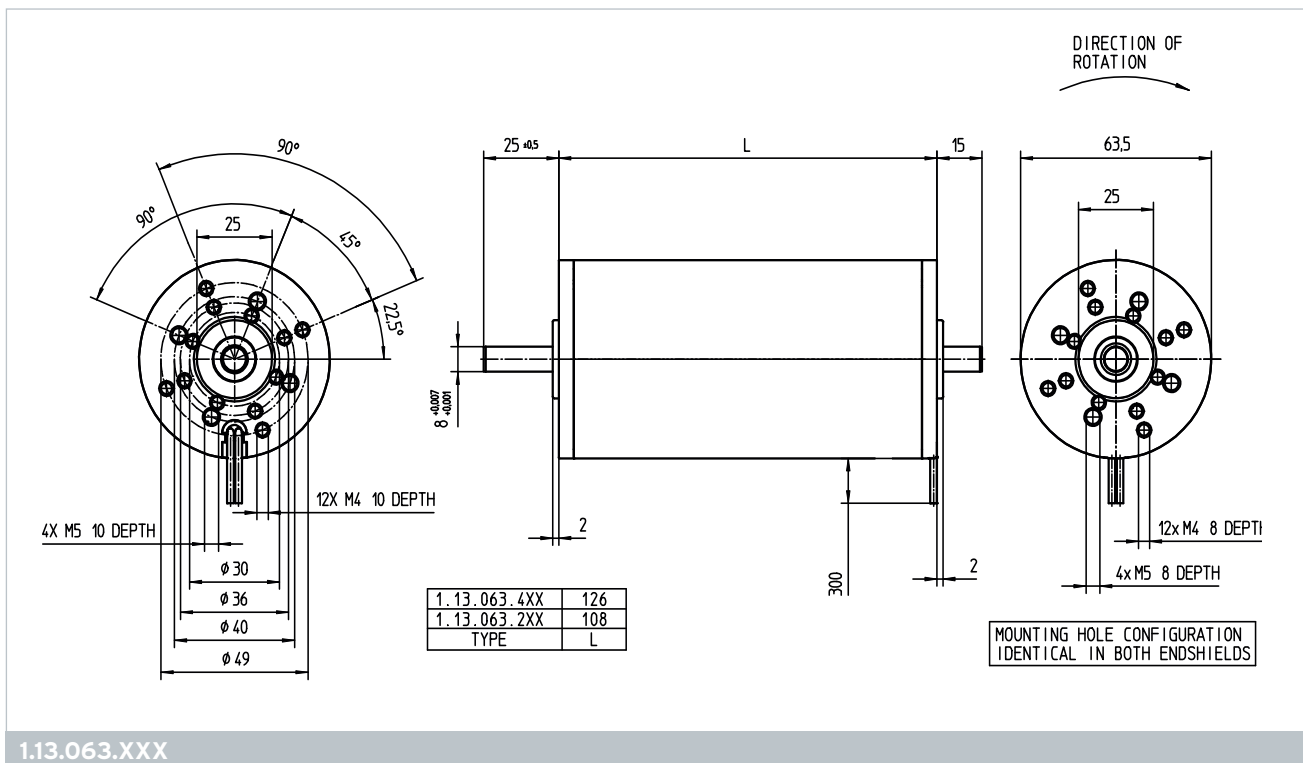
Design	
Commutator	Copper/12-segments
RFI Protection	2 chokes
Insulation class	Winding H, otherwise A
Protection class	IP40
Commutation	carbon brushes
Armature	straight slot
Magnet system	Permanent magnets, 2-pole
Bearings	2 preloaded ball bearings
Housing	Steel, corrosion protected
End shields	zinc die-cast on both sides

Type 1.13.063.XXX			220	221	407	408
<b>Characteristics*</b>						
Rated voltage	V	V	12	24	12	24
Rated power	$P_N$	W	115	115	150	150
Rated torque	$T_N$	mNm	350	350	400	400
Rated speed	$n_N$	rpm	3150	3150	3400	3400
Rated current	$I_N$	A	15	7.5	17	8.5
<b>No load characteristics*</b>						
No load speed	$n_o$	rpm	3700	3700	3900	3900
No load current	$I_o$	A	2.6	1.3	2.0	1.0
<b>Starting characteristics*</b>						
Starting torque	$T_s$	mNm	2500	2500	3400	3400
Starting current	$I_s$	A	95	47	128	64
<b>Performance characteristics*</b>						
max. Output power	$P_{max}$	W	230	230	340	340
max. Constant torque	$T_{max}$	mNm	350	350	400	400
<b>Motor parameters*</b>						
Weight	G	g	1300	1300	1600	1600
Rotor inertia	J	gcm <sup>2</sup>	850	850	1050	1050
Terminal resistance	R	Ohm	0.125	0.5	0.1	0.4
Mech. time constant	$\tau_m$	ms	15	15	11	11
Electr. time constant	$\tau_e$	ms	2.0	2.0	2.5	2.5
Speed regulation constant	$R_m$	rpm/mNm	1.5	1.5	1.02	0.98
Torque constant	$k_M$	mNm/A	27	54	27	54
Thermal resistance	$R_{th1}$	K/W	2.8	2.8	2.5	2.5
Thermal resistance	$R_{th2}$	K/W	3.3	3.3	3.0	3.0
Axial play			< 0.1	< 0.1	< 0.1	< 0.1
Direction of rotation			bidirectional			

## Operational conditions

Temperature range	T	°C	-10 - +70
Axial force	$F_A$	N	50
Radial force, 15 mm from mounting surface	$F_R$	N	200

\* at 25 °C



## Customized versions

The following modifications are available upon request:

- ▶ Encoder possible
- ▶ Internal chokes and/or capacitors
- ▶ Speed adjustment by winding change
- ▶ Modification of shaft length on both ends
- ▶ Modification of shaft configuration (flat, groove, etc.)
- ▶ Assembly of gears, pinions, worms, etc.
- ▶ Assembly of adapters and mounting plates
- ▶ Reduced cogging torque possible