

DC-Micromotors

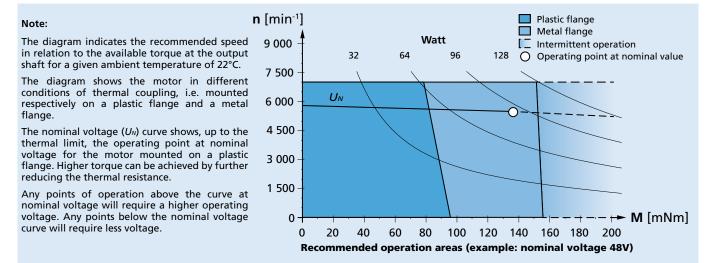
137 mNm

Graphite Commutation

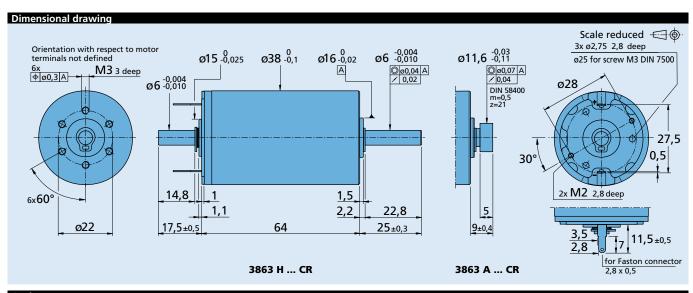
98,2 W

Values at 22°C and nominal voltage	3863 H		012 CR	018 CR	024 CR	036 CR	048 CR	
Nominal voltage	UN		12	18	24	36	48	V
Terminal resistance	R		0,161	0,365	0,663	1,55	2,59	Ω
Rotor inductance	L		44,3	92,4	177	398	708	μH
Efficiency, max.	$\eta_{\it max.}$		83	84	85	85	86	%
No-load current, typ.	lo .		0,338	0,234	0,163	0,113	0,0845	Α
No-load speed	n o		5 680	5 990	5 800	5 840	5 860	min ⁻¹
Stall torque	Мн		1 410	1 370	1 410	1 370	1 460	mNm
Rotor inertia	J		120	110	120	110	115	gcm ²
Friction torque	M_R		6,5	6,5	6,5	6,5	6,5	mNm
Torque constant	К м		19,9	28,8	39,8	59,8	79,7	mNm/A
Speed constant	k n		479	332	240	160	120	min ⁻¹ /V
Slope of n-M curve	Δ n/ Δ M		3,88	4,21	3,99	4,13	3,89	min-1/mNr
Thermal resistance:								
- winding to housing	Rth1	2,8						K/W
 housing to ambient (external plastic flange) 	Rth2 p	7,7						K/W
 housing to ambient (external metal flange) 	Rth2 m	1,5						K/W
Thermal time constant:	71072777	.,,,						
– winding	τ_{w_1}	58						s
– housing (external plastic flange)	Tw2p	1 200						s
- housing (external metal flange)	Tw2 m	240						S
Operating temperature range:	CW2 III	2.0						3
- motor		-30 +1	25					°C
– motor – winding, max. permissible								°C
- winding, max. permissible +155 Shaft bearings ball bearings, preloaded								
Shaft diameter		6	rigs, preioac	aeu				mm
Radial shaft load max.:		U						111111
- dynamic at 3 000 min ⁻¹ (3 mm from bearing)		60						N
Axial shaft load max.:		00						IN
– dynamic at 3 000 min ⁻¹		6						N
– static (shaft unsupported)		50						N
– static (shaft unsupported)		2 800						N
Shaft play, max.:		2 800						IN
– radial		0,015						mm
– radiai – axial		0,015						
	_	-						mm
Speed up to	n max.	7 000						min ⁻¹
Number of pole pairs		1 390						_
Mass								g
Housing material		steel, nick	ei plated					
Magnet material		NdFeB						
Rated values for continuous operation				00.5	424	122	107	
Rated torque	MΝ		69,5	99,5	131	132	137	mNm
Rated current (thermal limit)	IN		4	4	4	2,71	2,1	Α
Rated speed	n N		5 400	5 630	5 440	5 450	5 510	min ⁻¹

Note: Rated values are calculated with nominal voltage and at a 22°C ambient temperature. The R_{th2p} value has been reduced by 50%.







Options	Options					
Example product designation: 3863H012CR-158						
Option	Туре	Description				
U	Single Leads	For motors with single leads (PTFE), length 160 mm, red (+) / black (-)				
158	Shaft end	No second shaft end				
2016	Encoder combination	Motor with rear end shaft for combination with Encoder IE3, IERS3 and IER3				
1387	Brakes combination	For combination with Brakes MBZ				

Product combination											
Precision Gearheads / Lead Screws	Encoders	Drive Electronics	Cables / Accessories								
38/1 38/1 S 38/2 38/2 S 42GPT 44/1	IE3-1024 IE3-1024 L IERS3-500 IERS3-500 L IER3-10000 IER3-10000 L	SC 2804 S SC 5004 P SC 5008 S MC 5010 S	MBZ To view our large range of accessory parts, please refer to the "Accessories" chapter.								