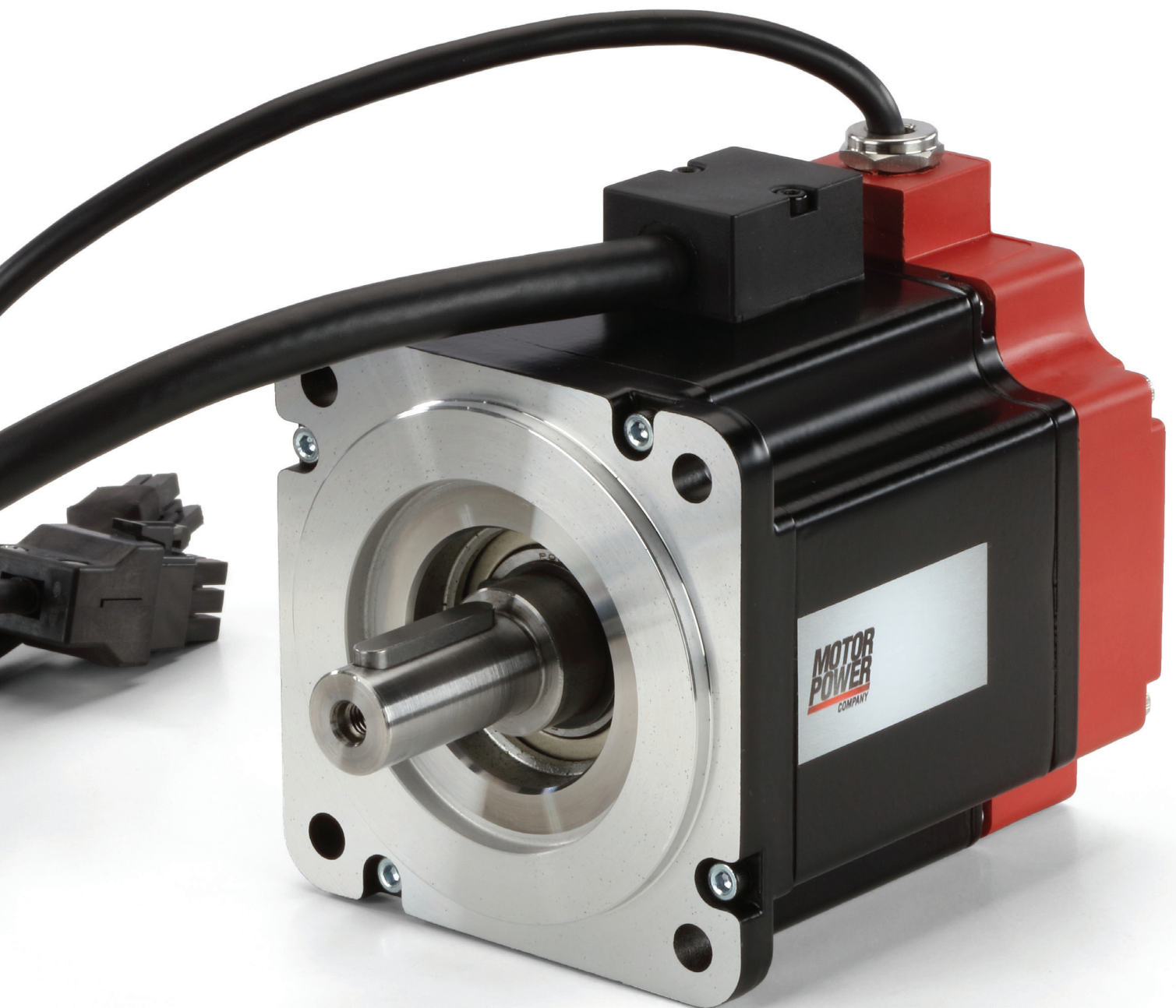


TC4

TETRA COMPACT 4



SEE IT BEFORE IT HAPPENS

**MOTOR
POWER**
COMPANY

TETRA COMPACT 4

NEXT-LEVEL SERVO MOTORS

Introducing the TETRA COMPACT 4 series from Motor Power Company a breakthrough in high-performance brushless servo motors. Born from years of hands-on experience, these motors redefine the standards in the brushless servomotors category.

With a unique design that is 30% shorter than its predecessors, the TETRA COMPACT 4 series maintains exceptional power density, efficiency, and speed, setting a new benchmark for AC synchronous motors.

This series features 10-pole servomotors with a variety of feedback options, offering unmatched quality and a broad range of power ratings. Perfectly suited for modern machine performance requirements, Motor Power Company doesn't just provide individual components but complete motion solutions. Pairing these high-performance servomotors with versatile drives of the series BL servo, the TETRA COMPACT 4 series excels across a diverse array of applications. Welcome to a new era of innovation and efficiency in motion technology.

CONTENTS

	Features	5
	Servomotor type designation	6
	Winding table code	7
	Product lineup	8
TC4 40 1A	Ratings and Specifications - Torque /Speed charts	10
TC4 40 1B	Ratings and Specifications - Torque /Speed charts	12
	External dimensions	14
TC4 60 2A	Ratings and Specifications - Torque /Speed charts	16
TC4 60 2B	Ratings and Specifications - Torque /Speed charts	18
	External dimensions	20
TC4 80 3A	Ratings and Specifications - Torque /Speed charts	24
TC4 80 3B	Ratings and Specifications - Torque /Speed charts	26
TC4 80 3C	Ratings and Specifications - Torque /Speed charts	28
	External dimensions	30
TC4 100 4A	Ratings and Specifications - Torque /Speed charts	34
TC4 100 4B	Ratings and Specifications - Torque /Speed charts	36
	External dimensions	38
TC4 130 5F	Ratings and Specifications - Torque /Speed charts	40
TC4 130 5G	Ratings and Specifications - Torque /Speed charts	41
TC4 130 5H	Ratings and Specifications - Torque /Speed charts	42
	External dimensions	43
TC4 150 6A	Ratings and Specifications - Torque /Speed charts	45
TC4 150 6B	Ratings and Specifications - Torque /Speed charts	46
TC4 150 6C	Ratings and Specifications - Torque /Speed charts	47
	External dimensions	48
TC4 180 7A	Ratings and Specifications - Torque /Speed charts	51
TC4 180 7C	Ratings and Specifications - Torque /Speed charts	52
TC4 180 7D	Ratings and Specifications - Torque /Speed charts	53
TC4 180 7E	Ratings and Specifications - Torque /Speed charts	54
TC4 180 7F	Ratings and Specifications - Torque /Speed charts	55
	External dimensions	56
	Feedback Resolver	58
	Feedback Encoder	59
	Brake features	62
	Wiring motor connection	63

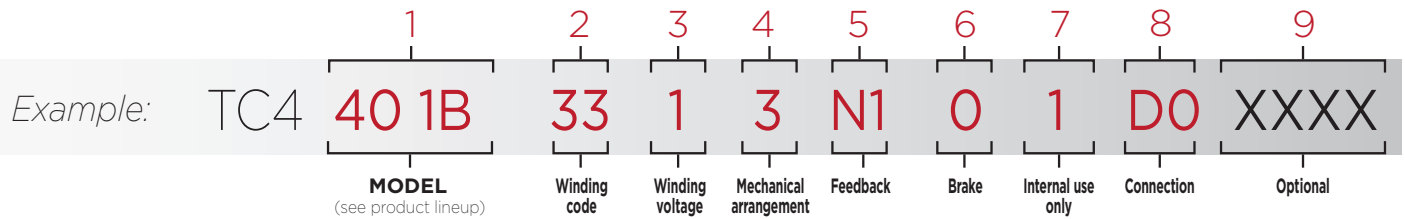


UL file: E216686 - MPC IF 155

FEATURES

Motor type	Three-phase BPM synchronous servo motor
POLES Number	10 (5 poles pair)
Available frame sizes	40 - 60 - 80 - 100 - 130 - 150 - 180 mm
Rated output torque	From 0.16 to 47.75 Nm
Rated output power	From 50 to 7500 W
Rated servomotor speed	Up to 6000 rpm
Maximum servomotor speed	Up to 8000 rpm
Insulation class	F (155 °C)
Protection class	IP 65 (with oil seal)
Ambient operating temperature	-20 ÷ +40 °C
Ambient storage temperature	-40 ÷ +70 °C
Relative humidity	5 ÷ 85 %, non-condensing
Cooling type	Natural convective
Maximum operating altitude	Up to 3000 m above sea level (derating 1%/100m from 1000m onwards)
Temperature sensor	PT1000 (no sensor for size 40)
Shaft end	Smooth or keyed
Feedback	Resolver, TTL Encoder, Absolute Encoder (Hiperface, EnDat, BiSS Line, RS-485)*
Bearing life	20.000 h under rated operation condition
Balancing quality grade	G 6.3 according to ISO 1940
Magnet material	NdFeB with epoxy coating
External coating	RAL 9005 black powder
Approvals	CE, Rohs, Reach, UL file: E216686 - MPC IF 155

*Available also in single cable configuration



1	MODEL	See PRODUCT LINEUP (p.8)
2	TYPE OF WINDING	See WINDING TABLE CODE (p.7)
3	WINDING VOLTAGE	<ul style="list-style-type: none"> 0 → 24 Vdc 1 → 48 Vdc 6 → 60 Vdc 2 → 230 Vac 4 → 400 Vac
4	MECHANICAL ARRANGEMENT	<ul style="list-style-type: none"> 0 Smooth shaft 1 Smooth shaft + oil seal 2 Keyed shaft 3 Keyed shaft + oil seal
5	FEEDBACK	<ul style="list-style-type: none"> A1* Hiperface absolute multi-turn encoder A3* Hiperface DSL absolute single-turn 20 bit encoder A4* Hiperface DSL absolute multi-turn 20 bit encoder A5* Hiperface safety DSL single-turn 20 bit encoder A6* Hiperface safety DSL multi-turn 20 bit encoder A11* EnDat 2.2 single-turn 19-bit encoder A12* EnDat 2.2 multi-turn 19-bit encoder A15* Hiperface safety DSL single-turn 24 bit encoder A16* Hiperface safety DSL multi-turn 24 bit encoder A22* Safety EnDat 3 single-turn 19 bit encoder A23* Safety EnDat 3 multi-turn 19 bit encoder M1 TTL 2000 ppr encoder M2 Absolute single-turn 17-bit RS-485 encoder N1 A-format 24-bit absolute multi-turn with external battery (not included). Encoder N1 available for models 40-60-80 R1* Resolver

*Not available for TC4 40 models

6	BRAKE	<ul style="list-style-type: none"> 0 Without brake 1 With brake
7	Stator connection (Internal use only)	<ul style="list-style-type: none"> 0 Stator wire connection 1 Stator PWB connection
8	CONNECTION	<ul style="list-style-type: none"> D0 300mm cable length with 6 pins power AMP connector and 9 pins signal AMP connector, only for sizes 40-60-80 D2 300mm cable length with 6 pins power AMP connector and 15 pins signal AMP connector. This connection is available only for sizes 40-60-80 with M1 encoder. G2 90° M23 turnable connectors - PT 1000 on power connector H2 90° M23 turnable connectors - PT 1000 on signal connector G3 90° M40 turnable connectors - PT 1000 on power connector H3 90° M40 turnable connectors - PT 1000 on signal connector C21 One cable solution 90° M23 turnable connector



WINDING TABLE CODE

	TYPE OF WINDING										
	41	77	33	78	09	13	21	20	15	16	17
TC4 40 1A	0	0	1	1	2						
TC4 40 1B	0	0	1	1		2					
TC4 60 2A							2	2	4	4	
TC4 60 2B							2	2	4	4	
TC4 80 3A							2	2	4	4	
TC4 80 3B							2	2	4	4	
TC4 80 3C							2	2	4	4	
TC4 100 4A									2/4		4
TC4 100 4B									2/4		4
TC4 130 5F									2/4		4
TC4 130 5G									2/4		4
TC4 130 5H									2/4		4
TC4 150 6A									2/4		4
TC4 150 6B									2/4		4
TC4 150 6C									2/4		4
TC4 180 7A									2/4		4
TC4 180 7C									2/4		4
TC4 180 7D									2/4		4
TC4 180 7E									2/4		4
TC4 180 7F									2/4		4

PRODUCT LINEUP

Servomotor Type	Nominal Power P_n <small>(ref. to 3000 rpm)</small>	Nominal Power P_n <small>(ref. to 6000 rpm)</small>	Nominal Torque M_n <small>(ref. to 3000 rpm)</small>	Peak Torque M_{max}	Continuous Working Speed n_M	Maximum Working Speed n_{Max}	Moment of Inertia w/o brake	24 Vdc	48 Vdc	230 Vac	400 Vac
	[W]	[W]	[Nm]	[Nm]	[rpm]	[rpm]	[kg cm ²]	[/]	[/]	[/]	[/]
TC4 40 1A	50	85	0.16	0.56	3000/6000	8000	0.0305	√	√	√	√
TC4 40 1B	100	175	0.32	1.12	3000/6000	8000	0.0561	√	√	√	√
TC4 60 2A	200	350	0.64	2.24	3000/6000	8000	0.223			√	√
TC4 60 2B	400	600	1.27	4.44	3000/6000	8000	0.414			√	√
TC4 80 3A	400	700	1.27	4.44	3000/6000	8000	0.79			√	√
TC4 80 3B	750	1100	2.38	8.33	3000/6000	8000	1.42			√	√
TC4 80 3C	1000	1300	3.18	11.10	3000/6000	8000	2.03			√	√
TC4 100 4A	1000	-	3.18	16.50	3000	6000	2.53			√	√
TC4 100 4B	2000	-	6.37	33.00	3000	6000	4.61			√	√
TC4 130 5F	1000	-	3.18	14.30	3000	4000	6.70			√	√
TC4 130 5G	1500	-	4.77	21.48	3000	4000	9.72			√	√
TC4 130 5H	2000	-	6.36	28.65	3000	4000	12.77			√	√
TC4 150 6A	2500	-	7.95	33.42	3000	4000	15.18			√	√
TC4 150 6B	4000	-	12.73	66.85	3000	4000	27.68			√	√
TC4 150 6C	6000	-	19.10	100.27	3000	4000	40.17			√	√
TC4 180 7A	2000	-	6.37	28.65	3000	4000	25.22			√	√
TC4 180 7C	3500	-	11.14	50.30	3000	4000	44.81			√	√
TC4 180 7D	4500	-	17.20	71.62	2500	4000	64.99			√	√
TC4 180 7E	5500	-	21.00	87.53	2500	4000	102.46			√	√
TC4 180 7F	7500	-	28.65	119.37	2500	4000	140.62			√	√

MW
P

TETRA
COMPACT

4

40

RATINGS and SPECIFICATION

			24 Vdc		48 Vdc		230 Vac	
TYPE OF WINDING			77	41	78	33	09	09
ELECTRICAL DATA								
Continuous stall torque (*)	M_o	[Nm]	0.18					
Peak torque	M_{Max}	[Nm]	0.56					
Nominal torque	M_n	[Nm]	0.16	0.135	0.16	0.135	0.16	0.135
Nominal power	P_n	[W]	50	85	50	85	50	85
Continuous stall current	I_o	[Arms]	4.35	7.26	2.18	2.72	0.60	0.60
Maximum current	I_{Max}	[Arms]	15.05	25.08	7.52	9.40	2.09	2.09
Nominal current	I_n	[Arms]	3.99	5.61	1.99	2.10	0.55	0.47
Nominal working speed	n_N	[rpm]	3000	6000	3000	6000	3000	6000
Maximum working speed	n_{Max}	[rpm]	6250	8000	6250	7850	8000	8000
Torque constant	K_t	[Nm/Arms]	0.041	0.025	0.083	0.066	0.298	0.298
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	2.5	1.5	5.0	4.0	18.0	18.0
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.73	0.24	2.93	1.85	36.06	36.06
Winding inductance	$L_{q\ u-v}$	[mH]	0.31	0.10	1.24	0.77	15.62	15.62
Electrical time constant	T_e	[ms]	0.42	0.43	0.42	0.42	0.43	0.43
Thermal resistance	R_{th}	[°C/W]	3.1					
Mechanical time constant (a)	T_m	[ms]	1.30	1.19	1.31	1.29	1.24	1.24
Rotor inertia without holding brake	J	[kg·cm ²]	0.0305					
Rotor inertia with holding brake	J	[kg·cm ²]	0.0326					
Mass without holding brake	m	[kg]	0.40					
Mass with holding brake	m	[kg]	0.56					
Max. axial shaft load 3000 / 6000 rpm	SL_a	[N]	45 / 35					
Max. radial shaft load 3000 / 6000 rpm	SL_r	[N]	120 / 95					

Rated output with 185 x 185 x 8 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
(*) without brake.
(a) without brake and without feedback.

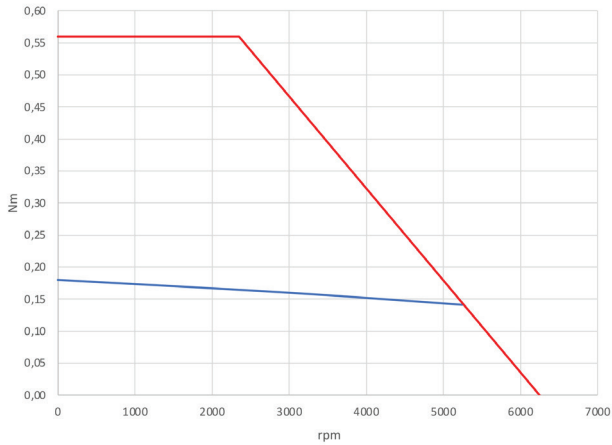
TC4

TORQUE/SPEED CHARTS

401A 77

Operative curves at 24 Vdc

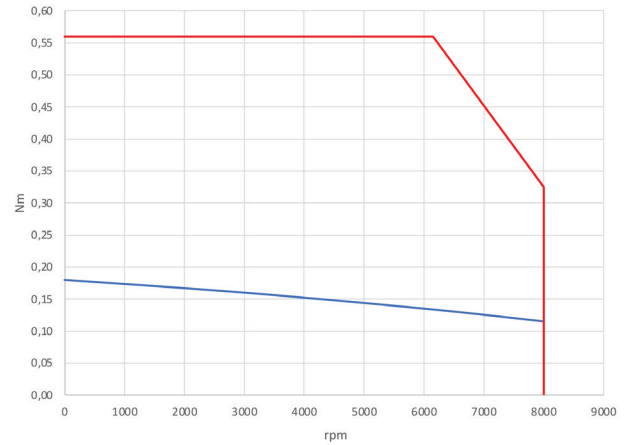
— Cn — Cmax



401A 41

Operative curves at 24 Vdc

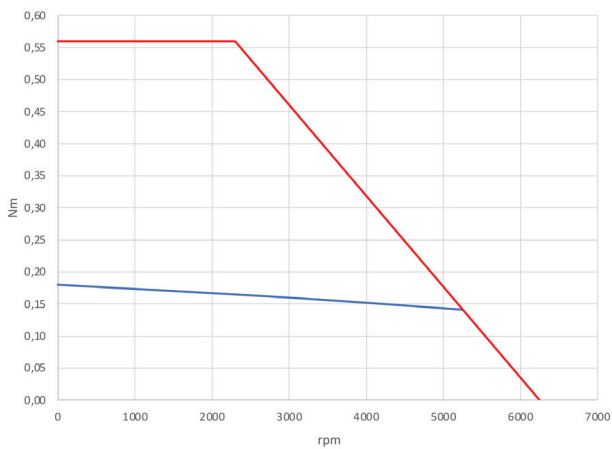
— Cn — Cmax



401A 78

Operative curves at 48 Vdc

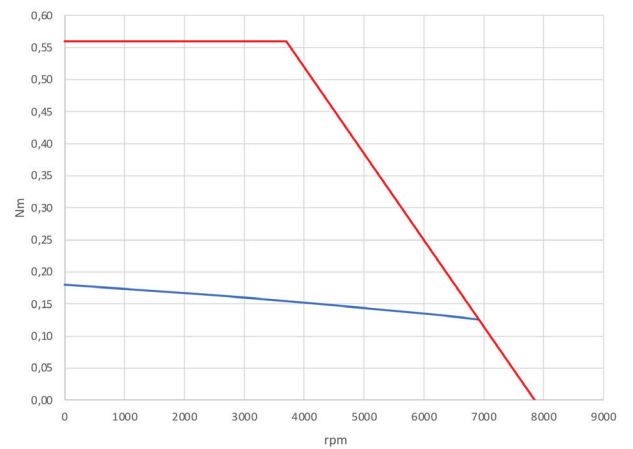
— Cn — Cmax



401A 33

Operative curves at 48 Vdc

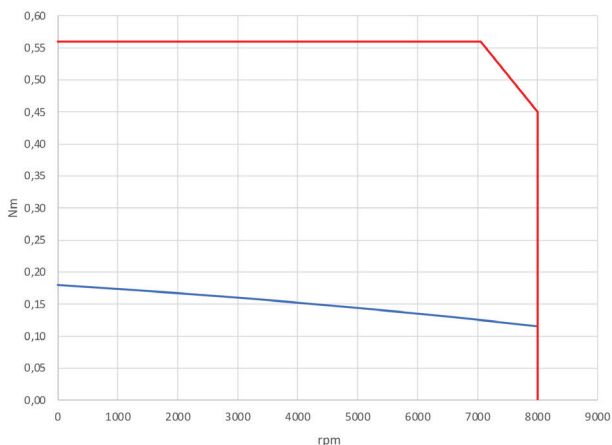
— Cn — Cmax



401A 09

Operative curves at 230 Vac

— Cn — Cmax



Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
All rights reserved Motor Power Company®

RATINGS and SPECIFICATION

			24 Vdc		48 Vdc		230 Vac	
TYPE OF WINDING			77	41	78	33	13	13
ELECTRICAL DATA								
Continuous stall torque (*)	M_o	[Nm]	0.33					
Peak torque	M_{Max}	[Nm]	1.12					
Nominal torque	M_n	[Nm]	0.32	0.28	0.32	0.28	0.32	0.28
Nominal power	P_n	[W]	100	175	100	175	100	175
Continuous stall current	I_o	[Arms]	7.98	13.30	3.99	4.99	0.73	0.73
Maximum current	I_{Max}	[Arms]	30.10	50.16	15.05	18.81	2.74	2.74
Nominal current	I_n	[Arms]	8.15	11.88	4.07	4.45	0.74	0.65
Nominal working speed	n_N	[rpm]	3000	6000	3000	6000	3000	6000
Maximum working speed	n_{Max}	[rpm]	6250	8000	6250	8000	7800	7800
Torque constant	K_t	[Nm/Arms]	0.041	0.025	0.083	0.066	0.455	0.455
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	2.5	1.5	5.0	4.0	27.5	27.5
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.253	0.087	1.019	0.632	30.848	30.848
Winding inductance	$L_{q\ u-v}$	[mH]	0.149	0.046	0.596	0.361	17.679	17.679
Electrical time constant	T_e	[ms]	0.59	0.53	0.59	0.57	0.57	0.57
Thermal resistance	R_{th}	[°C/W]	2.44					
Mechanical time constant (a)	T_m	[ms]	0.83	0.79	0.83	0.81	0.83	0.83
Rotor inertia without holding brake	J	[kg·cm ²]	0.0561					
Rotor inertia with holding brake	J	[kg·cm ²]	0.0580					
Mass without holding brake	m	[kg]	0.49					
Mass with holding brake	m	[kg]	0.68					
Max. axial shaft load 3000 / 6000 rpm	SL_a	[N]	45 / 35					
Max. radial shaft load 3000 / 6000 rpm	SL_r	[N]	120 / 95					

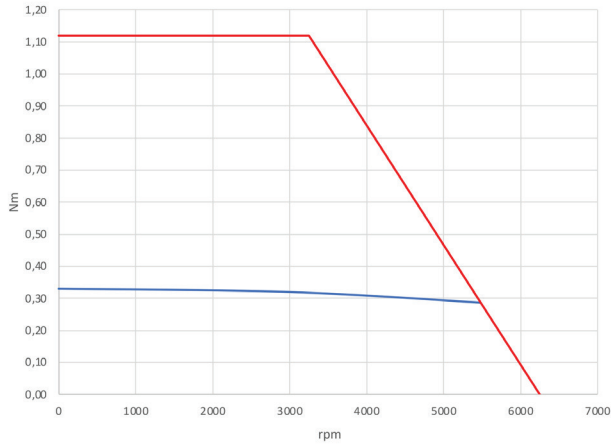
Rated output with 185 x 185 x 8 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
(*) without brake.
(a) without brake and without feedback.

TORQUE/SPEED CHARTS

401B 77

Operative curves at 24 Vdc

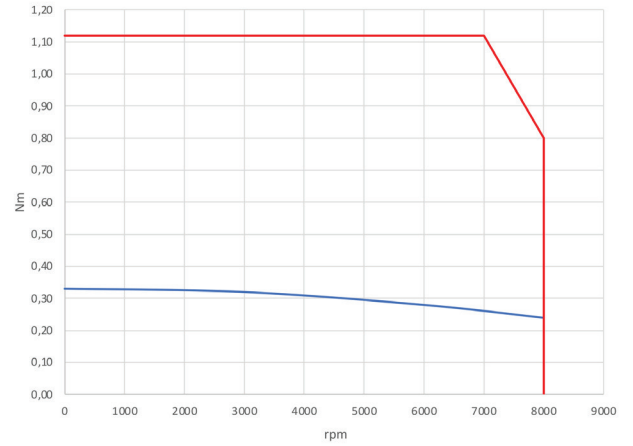
— Cn — Cmax



401B 41

Operative curves at 24 Vdc

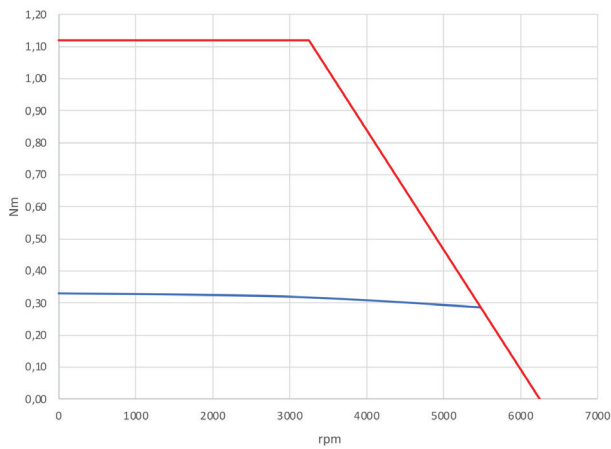
— Cn — Cmax



401B 78

Operative curves at 48 Vdc

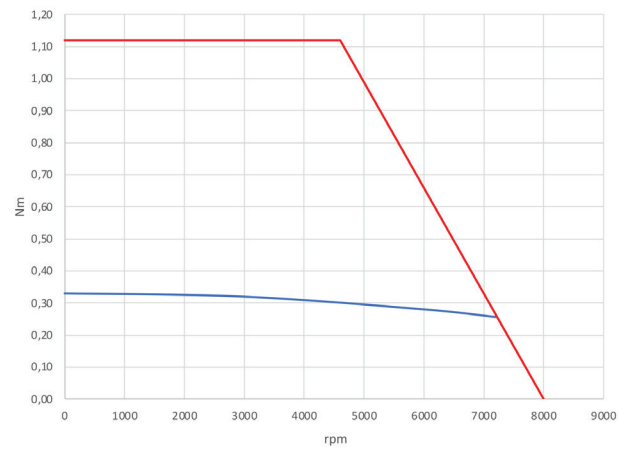
— Cn — Cmax



401B 33

Operative curves at 48 Vdc

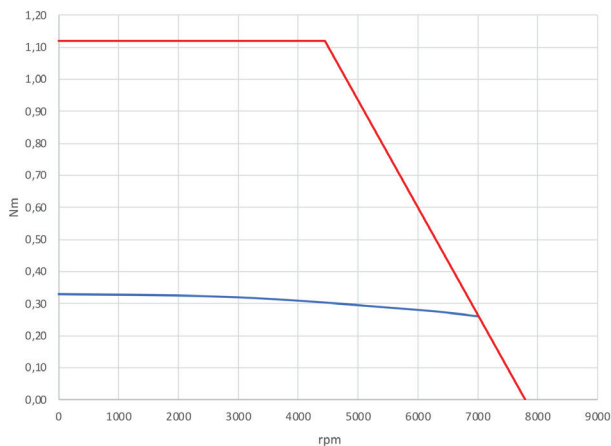
— Cn — Cmax



401B 13

Operative curves at 230 Vac

— Cn — Cmax



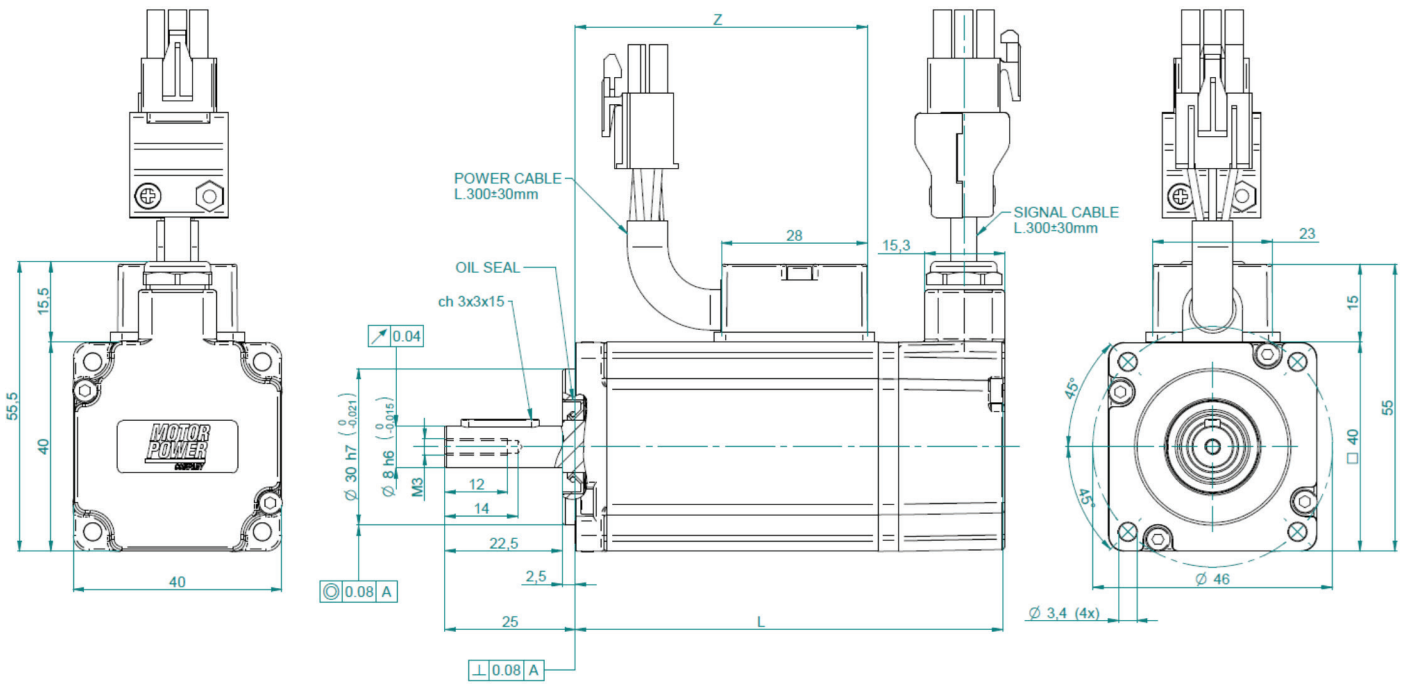
Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
All rights reserved Motor Power Company®

40 EXTERNAL DIMENSIONS

DO connection

Model	Feedback type	L [mm]	L with brake [mm]	Z [mm]	Z with brake [mm]
1A	N1-M1-M2	66.0	89.0	40.0	40.0
1B	N1-M1-M2	82.0	105.0	56.0	56.0



MW
P

TETRA
COMPACT 4 60

			230 Vac		400 Vac	
TYPE OF WINDING			20	21	16	15
ELECTRICAL DATA						
Continuous stall torque (*)	M_o	[Nm]	0.67			
Peak torque	M_{Max}	[Nm]	2.24			
Nominal torque	M_n	[Nm]	0.64	0.56	0.64	0.56
Nominal power	P_n	[W]	200	350	200	350
Continuous stall current	I_o	[Arms]	0.92	1.27	0.56	0.74
Maximum current	I_{Max}	[Arms]	3.42	4.73	2.08	2.74
Nominal current	I_n	[Arms]	0.91	1.10	0.55	0.63
Nominal working speed	n_N	[rpm]	3000	6000	3000	6000
Maximum working speed	n_{Max}	[rpm]	4800	6800	5100	6800
Torque constant	K_t	[Nm/Arms]	0.728	0.526	1.20	0.91
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	44.0	31.8	72.5	55.0
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	20.19	10.24	51.62	31.75
Winding inductance	$L_{q\ u-v}$	[mH]	28.32	14.93	77.18	44.50
Electrical time constant	T_e	[ms]	1.40	1.46	1.50	1.40
Thermal resistance	R_{th}	[°C/W]	2.63			
Mechanical time constant (a)	T_m	[ms]	0.85	0.83	0.80	0.86
Rotor inertia without holding brake	J	[kg·cm ²]	0.223			
Rotor inertia with holding brake	J	[kg·cm ²]	0.236			
Mass without holding brake	m	[kg]	0.92			
Mass with holding brake	m	[kg]	1.44			
Max. axial shaft load 3000 / 6000 rpm	SL_a	[N]	42 / 32			
Max. radial shaft load 3000 / 6000 rpm	SL_r	[N]	260 / 200			

Rated output with 250 x 250 x 12 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
 (*) without brake.

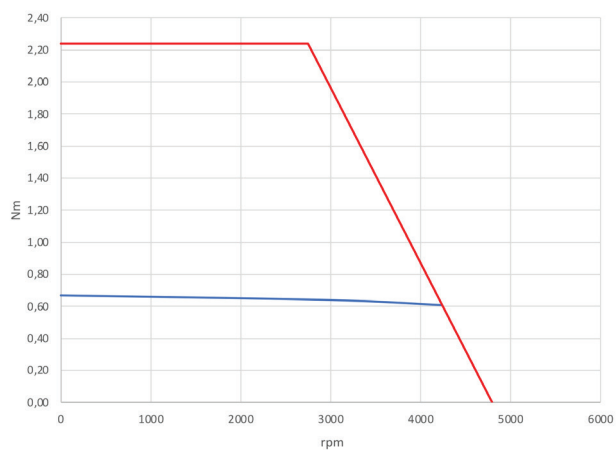
(a) without brake and without feedback.

TORQUE/SPEED CHARTS

602A 20

Operative curves at 230 Vac

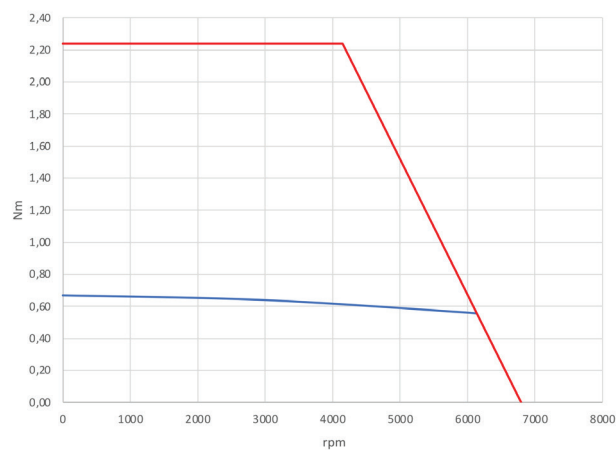
— Cn — Cmax



602A 21

Operative curves at 230 Vac

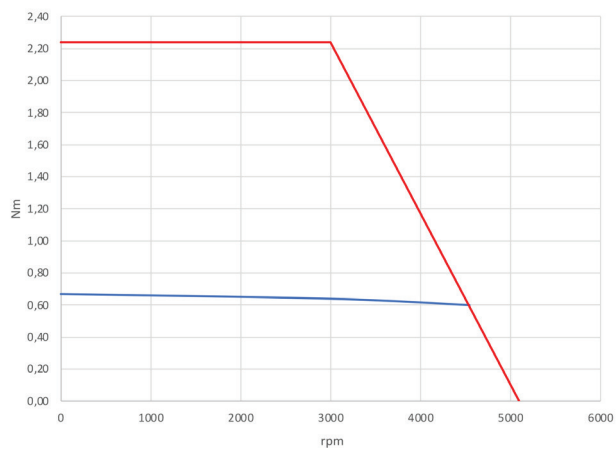
— Cn — Cmax



602A 16

Operative curves at 400 Vac

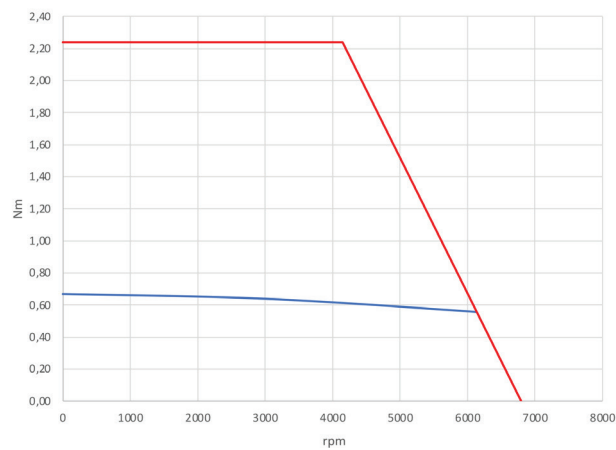
— Cn — Cmax



602A 15

Operative curves at 400 Vac

— Cn — Cmax



Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
All rights reserved Motor Power Company®

			230 Vac		400 Vac	
TYPE OF WINDING			20	21	16	15
ELECTRICAL DATA						
Continuous stall torque (*)	M_o	[Nm]	1.38			
Peak torque	M_{Max}	[Nm]	4.44			
Nominal torque	M_n	[Nm]	1.27	0.95	1.27	0.95
Nominal power	P_n	[W]	400	600	400	600
Continuous stall current	I_o	[Arms]	1.90	2.62	1.15	1.52
Maximum current	I_{Max}	[Arms]	6.78	9.38	4.11	5.42
Nominal current	I_n	[Arms]	1.80	1.90	1.11	1.10
Nominal working speed	n_N	[rpm]	3000	6000	3000	6000
Maximum working speed	n_{Max}	[rpm]	4900	6800	5150	6800
Torque constant	K_t	[Nm/Arms]	0.728	0.526	1.20	0.91
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	44.0	31.8	72.5	55.0
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	7.35	3.85	19.55	11.77
Winding inductance	$L_{q\ u-v}$	[mH]	14.76	7.75	40.29	22.93
Electrical time constant	T_e	[ms]	2.02	2.02	2.07	1.96
Thermal resistance	R_{th}	[°C/W]	1.55			
Mechanical time constant (a)	T_m	[ms]	0.57	0.57	0.56	0.59
Rotor inertia without holding brake	J	[kg·cm ²]	0.414			
Rotor inertia with holding brake	J	[kg·cm ²]	0.427			
Mass without holding brake	m	[kg]	1.33			
Mass with holding brake	m	[kg]	1.85			
Max. axial shaft load 3000 / 6000 rpm	SL_a	[N]	42 / 32			
Max. radial shaft load 3000 / 6000 rpm	SL_r	[N]	260 / 200			

Rated output with 250 x 250 x 12 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.

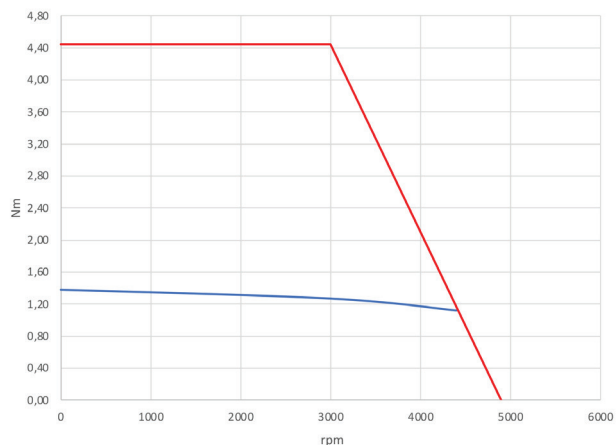
(*) without brake.

(a) without brake and without feedback.

TORQUE/SPEED CHARTS

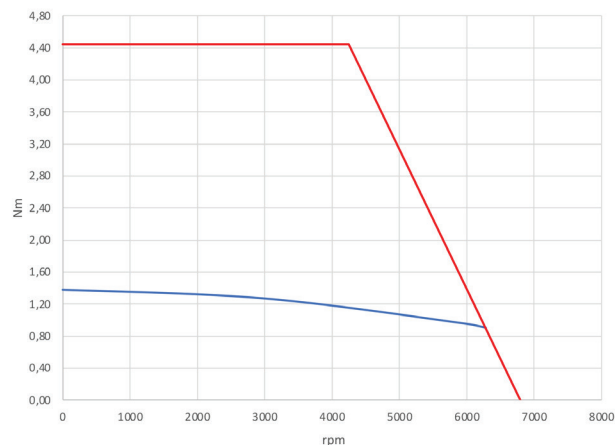
602B 20

Operative curves at 230 Vac — Cn — Cmax



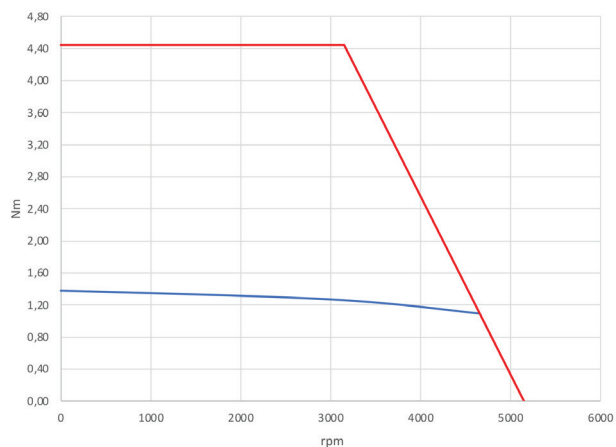
602B 21

Operative curves at 230 Vac — Cn — Cmax



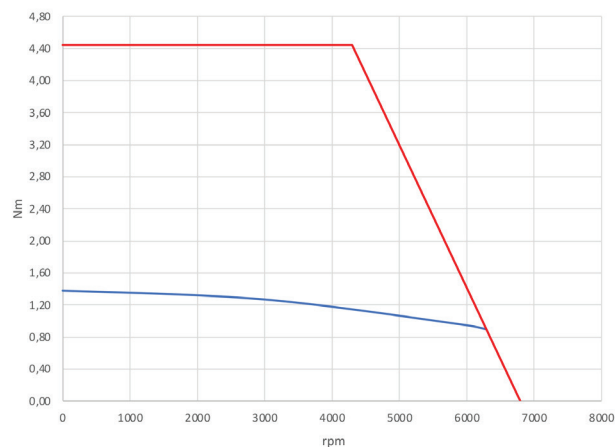
602B 16

Operative curves at 400 Vac — Cn — Cmax



602B 15

Operative curves at 400 Vac — Cn — Cmax



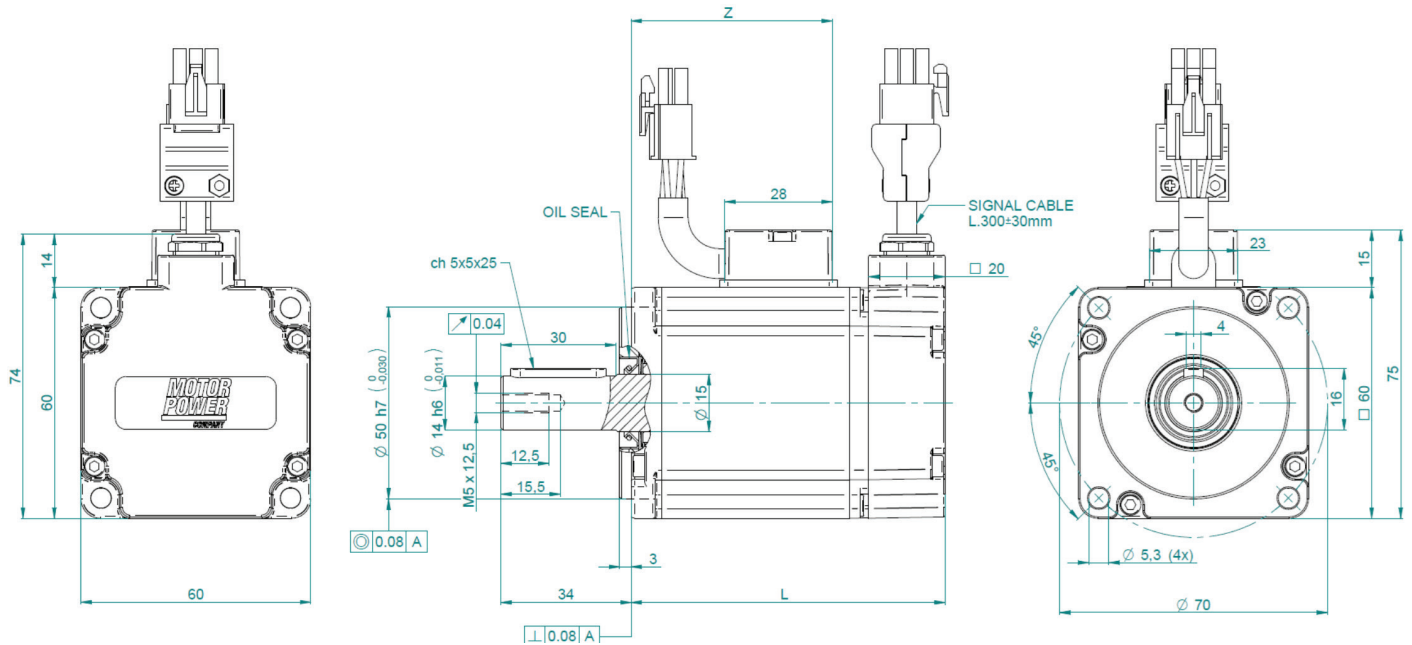
Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
All rights reserved Motor Power Company®

60 EXTERNAL DIMENSIONS

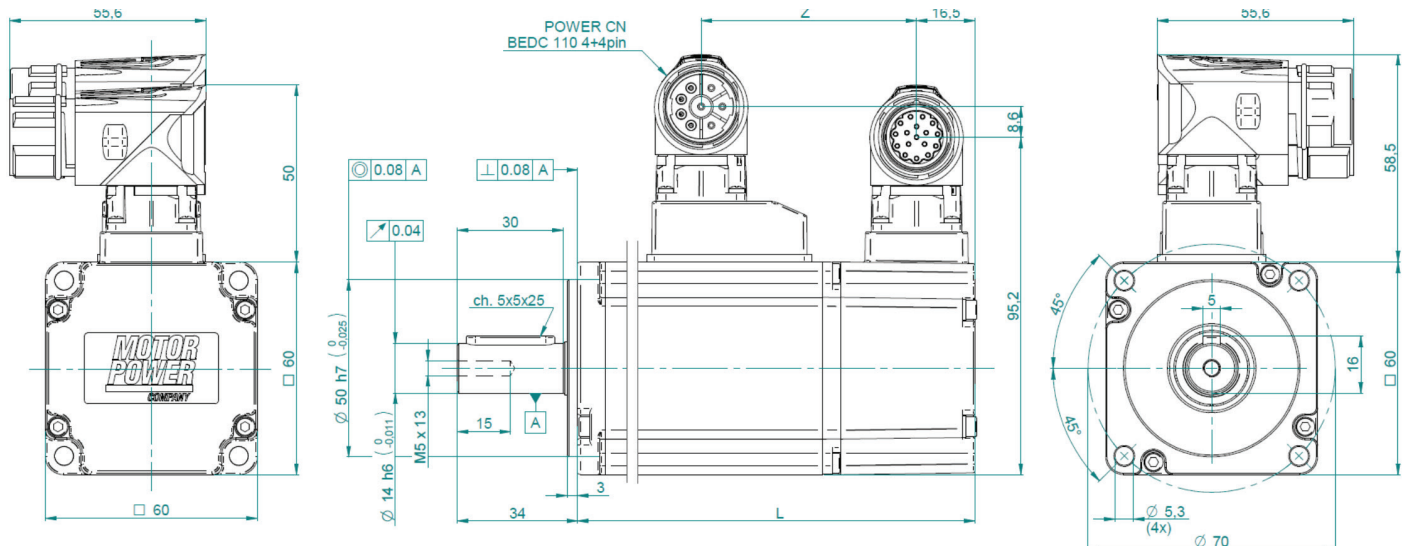
D0 connection

Model	Feedback type	L [mm]	L with brake [mm]	Z [mm]	Z with brake [mm]
2A	N1-M1-M2	82.0	112.0	52.5	52.5
2B	N1-M1-M2	105.0	135.0	75.5	75.5



G2/H2 connection

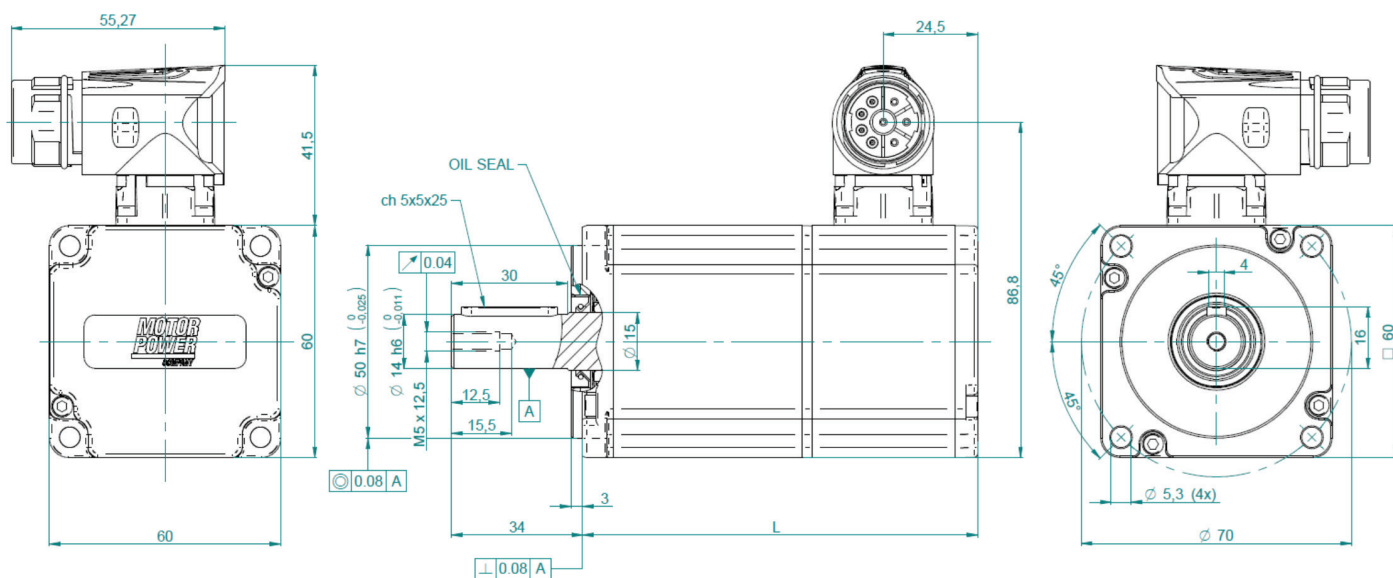
Model	Feedback type	L [mm]	L with brake [mm]	Z [mm]	Z with brake [mm]
2A	A11-A12-M1-M2-N1-R1	100.0	130.0	61.0	91.0
2B	A11-A12-M1-M2-N1-R1	123.0	153.0	61.0	91.0
2A	A1	110.0	140.0	70.0	100.0
2B	A1	133.0	163.0	70.0	100.0



60 EXTERNAL DIMENSIONS

C21 connection

Model	Feedback type	L [mm]	L with brake [mm]
2A	A11-A12-A22-A23	102.5	132.0
2B	A11-A12-A22-A23	125.5	155.0
2A	A3-A4-A5-A6-A15-A16	112.5	142.0
2B	A3-A4-A5-A6-A15-A16	135.5	165.0



MW
P

TETRA
COMPACT 4 80

			230 Vac		400 Vac	
TYPE OF WINDING			20	21	16	15
ELECTRICAL DATA						
Continuous stall torque (*)	M_o	[Nm]	1.38			
Peak torque	M_{Max}	[Nm]	4.44			
Nominal torque	M_n	[Nm]	1.27	1.12	1.27	1.12
Nominal power	P_n	[W]	400	700	400	700
Continuous stall current	I_o	[Arms]	1.90	2.62	1.15	1.52
Maximum current	I_{Max}	[Arms]	6.78	9.38	4.11	5.42
Nominal current	I_n	[Arms]	1.84	2.24	1.11	1.27
Nominal working speed	n_N	[rpm]	3000	6000	3000	6000
Maximum working speed	n_{Max}	[rpm]	4900	6800	5200	6800
Torque constant	K_t	[Nm/Arms]	0.728	0.526	1.20	0.91
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	44.0	31.8	72.5	55.0
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	6.84	3.43	17.60	10.35
Winding inductance	$L_{q\ u-v}$	[mH]	18.50	9.66	50.18	29.00
Electrical time constant	T_e	[ms]	2.71	2.81	2.84	2.80
Thermal resistance	R_{th}	[°C/W]	1.72			
Mechanical time constant (a)	T_m	[ms]	1.02	0.98	0.97	1.03
Rotor inertia without holding brake	J	[kg·cm ²]	0.79			
Rotor inertia with holding brake	J	[kg·cm ²]	0.86			
Mass without holding brake	m	[kg]	1.83			
Mass with holding brake	m	[kg]	2.62			
Max. axial shaft load 3000 / 6000 rpm	SL_a	[N]	115 / 90			
Max. radial shaft load 3000 / 6000 rpm	SL_r	[N]	440 / 350			

Rated output with 250 x 250 x 12 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.

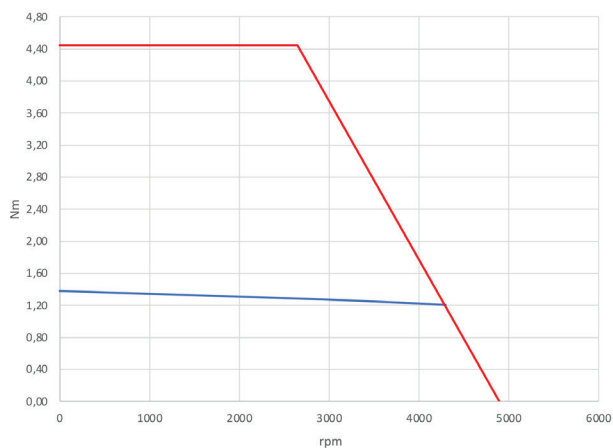
(*) without brake.

(a) without brake and without feedback.

TORQUE/SPEED CHARTS

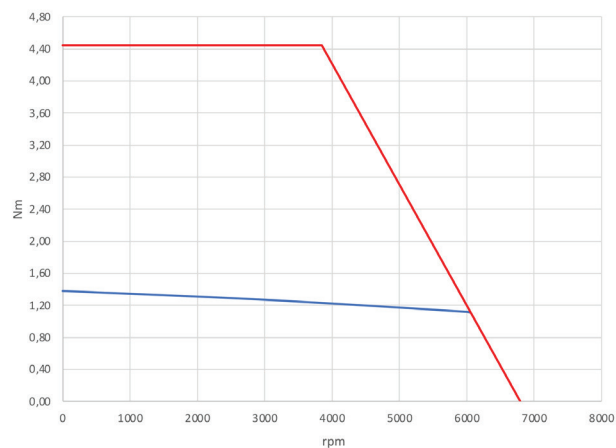
803A 20

Operative curves at 230 Vac — Cn — Cmax



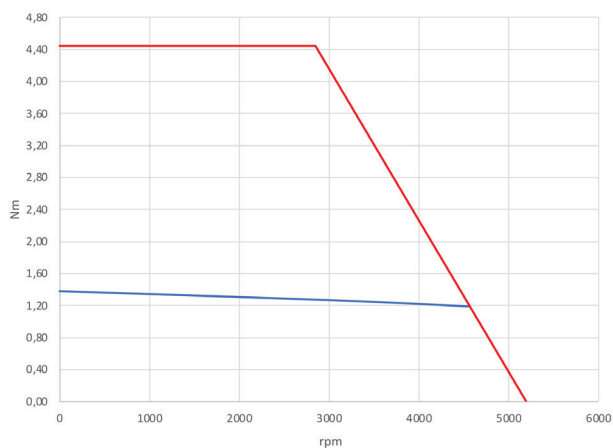
803A 21

Operative curves at 230 Vac — Cn — Cmax



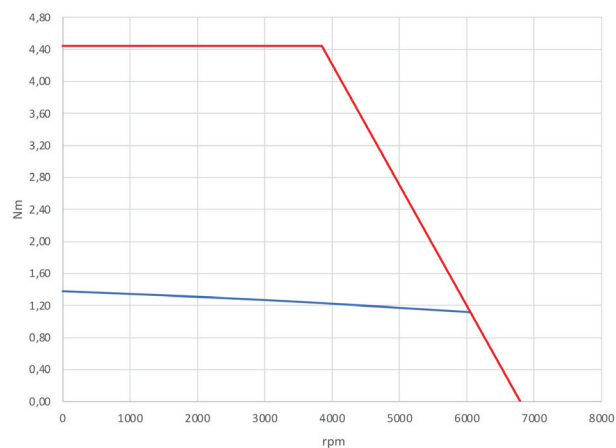
803A 16

Operative curves at 400 Vac — Cn — Cmax



803A 15

Operative curves at 400 Vac — Cn — Cmax



Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
All rights reserved Motor Power Company®

			230 Vac		400 Vac	
TYPE OF WINDING			20	21	16	15
ELECTRICAL DATA						
Continuous stall torque (*)	M_o	[Nm]	2.64			
Peak torque	M_{Max}	[Nm]	8.33			
Nominal torque	M_n	[Nm]	2.38	1.75	2.38	1.75
Nominal power	P_n	[W]	750	1100	750	1100
Continuous stall current	I_o	[Arms]	3.63	5.02	2.20	2.90
Maximum current	I_{Max}	[Arms]	12.72	17.60	7.72	10.17
Nominal current	I_n	[Arms]	3.44	3.50	2.09	2.02
Nominal working speed	n_N	[rpm]	3000	6000	3000	6000
Maximum working speed	n_{Max}	[rpm]	4900	6800	5350	6800
Torque constant	K_t	[Nm/Arms]	0.728	0.526	1.20	0.91
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	44.0	31.8	72.5	55.0
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	1.62	0.88	4.29	2.60
Winding inductance	$L_{q\ u-v}$	[mH]	7.76	4.02	20.86	12.31
Electrical time constant	T_e	[ms]	4.24	4.25	4.24	4.17
Thermal resistance	R_{th}	[°C/W]	1.69			
Mechanical time constant (a)	T_m	[ms]	0.49	0.49	0.49	0.51
Rotor inertia without holding brake	J	[kg·cm ²]	1.42			
Rotor inertia with holding brake	J	[kg·cm ²]	1.50			
Mass without holding brake	m	[kg]	2.76			
Mass with holding brake	m	[kg]	3.37			
Max. axial shaft load 3000 / 6000 rpm	SL_a	[N]	115 / 90			
Max. radial shaft load 3000 / 6000 rpm	SL_r	[N]	440 / 350			

Rated output with 250 x 250 x 12 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.

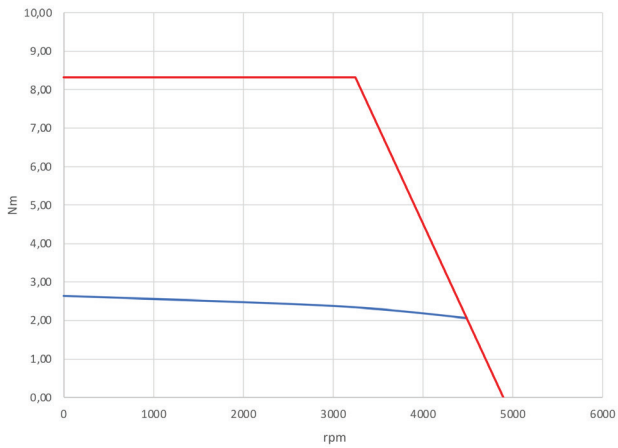
(*) without brake.

(a) without brake and without feedback.

TORQUE/SPEED CHARTS

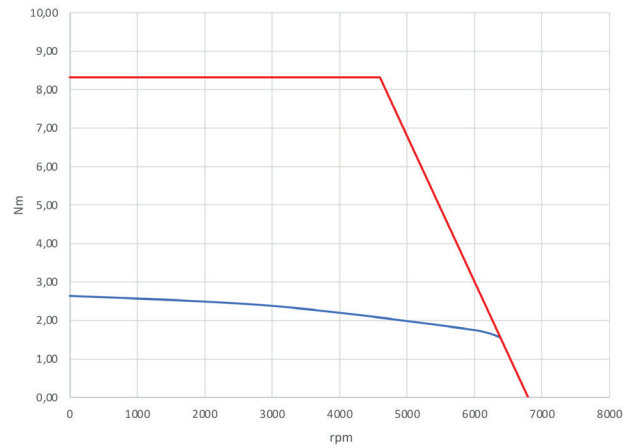
803B 20

Operative curves at 230 Vac



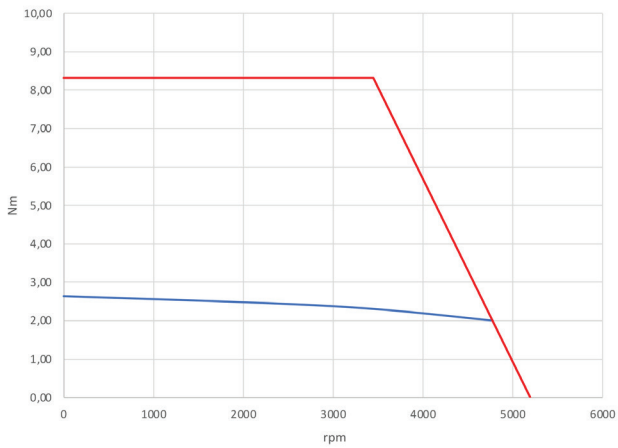
803B 21

Operative curves at 230 Vac



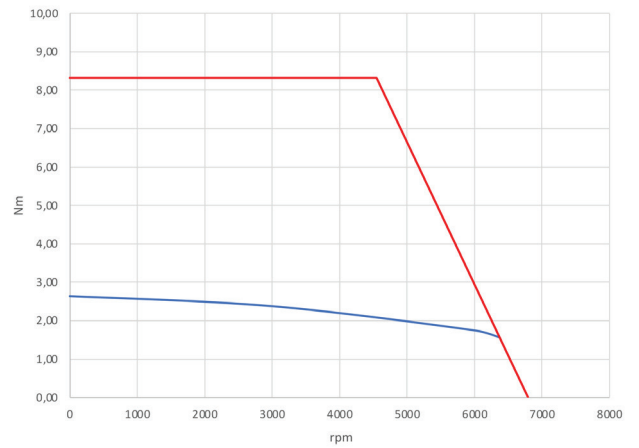
803B 16

Operative curves at 400 Vac



803B 15

Operative curves at 400 Vac



Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
All rights reserved Motor Power Company®

			230 Vac		400 Vac	
TYPE OF WINDING			20	21	16	15
ELECTRICAL DATA						
Continuous stall torque (*)	M_o	[Nm]	3.54			
Peak torque	M_{Max}	[Nm]	11.1			
Nominal torque	M_n	[Nm]	3.18	2.10	3.18	2.10
Nominal power	P_n	[W]	1000	1300	1000	1300
Continuous stall current	I_o	[Arms]	4.86	6.73	2.95	3.89
Maximum current	I_{Max}	[Arms]	16.95	23.45	10.29	13.56
Nominal current	I_n	[Arms]	4.50	4.12	2.73	2.43
Nominal working speed	n_N	[rpm]	3000	6000	3000	6000
Maximum working speed	n_{Max}	[rpm]	4900	6800	5200	6800
Torque constant	K_t	[Nm/Arms]	0.728	0.526	1.20	0.91
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	44.0	31.8	72.5	55.0
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	1.28	0.68	3.41	2.05
Winding inductance	$L_{q\ u-v}$	[mH]	5.89	3.20	16.20	9.40
Electrical time constant	T_e	[ms]	4.61	4.72	4.76	4.60
Thermal resistance	R_{th}	[°C/W]	1.32			
Mechanical time constant (a)	T_m	[ms]	0.49	0.50	0.48	0.50
Rotor inertia without holding brake	J	[kg·cm ²]	2.03			
Rotor inertia with holding brake	J	[kg·cm ²]	2.11			
Mass without holding brake	m	[kg]	3.25			
Mass with holding brake	m	[kg]	3.87			
Max. axial shaft load 3000 / 6000 rpm	SL_a	[N]	115 / 90			
Max. radial shaft load 3000 / 6000 rpm	SL_r	[N]	440 / 350			

Rated output with 250 x 250 x 12 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.

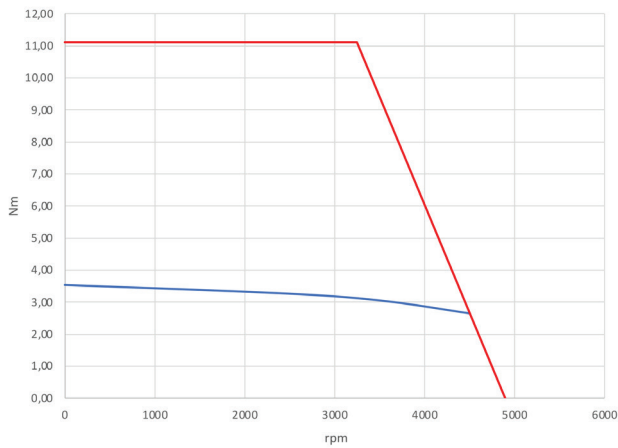
(*) without brake.

(a) without brake and without feedback.

TORQUE/SPEED CHARTS

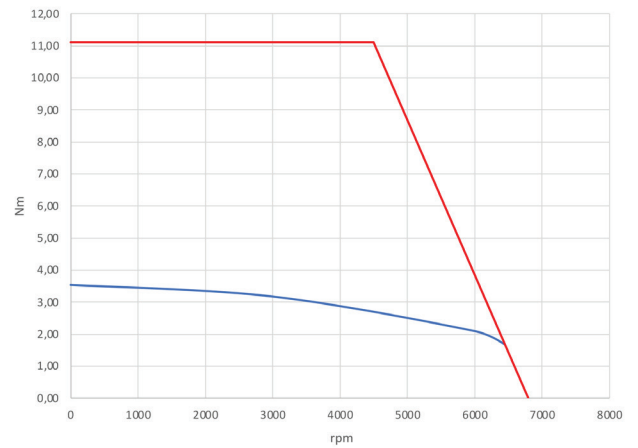
803C 20

Operative curves at 230 Vac — Cn — Cmax



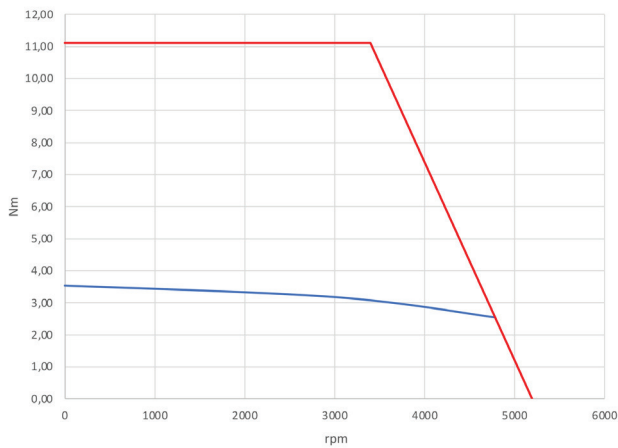
803C 21

Operative curves at 230 Vac — Cn — Cmax



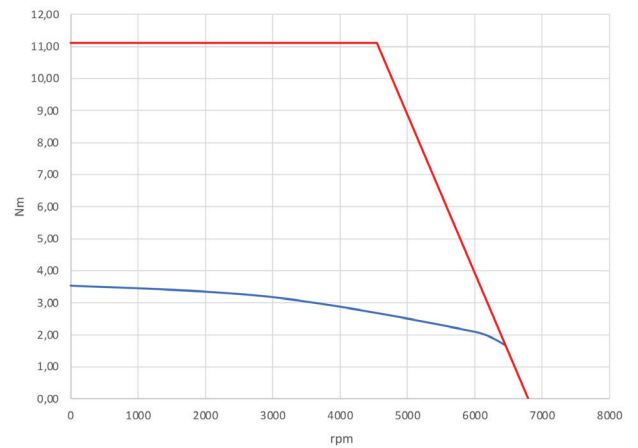
803C 16

Operative curves at 400 Vac — Cn — Cmax



803C 15

Operative curves at 400 Vac — Cn — Cmax



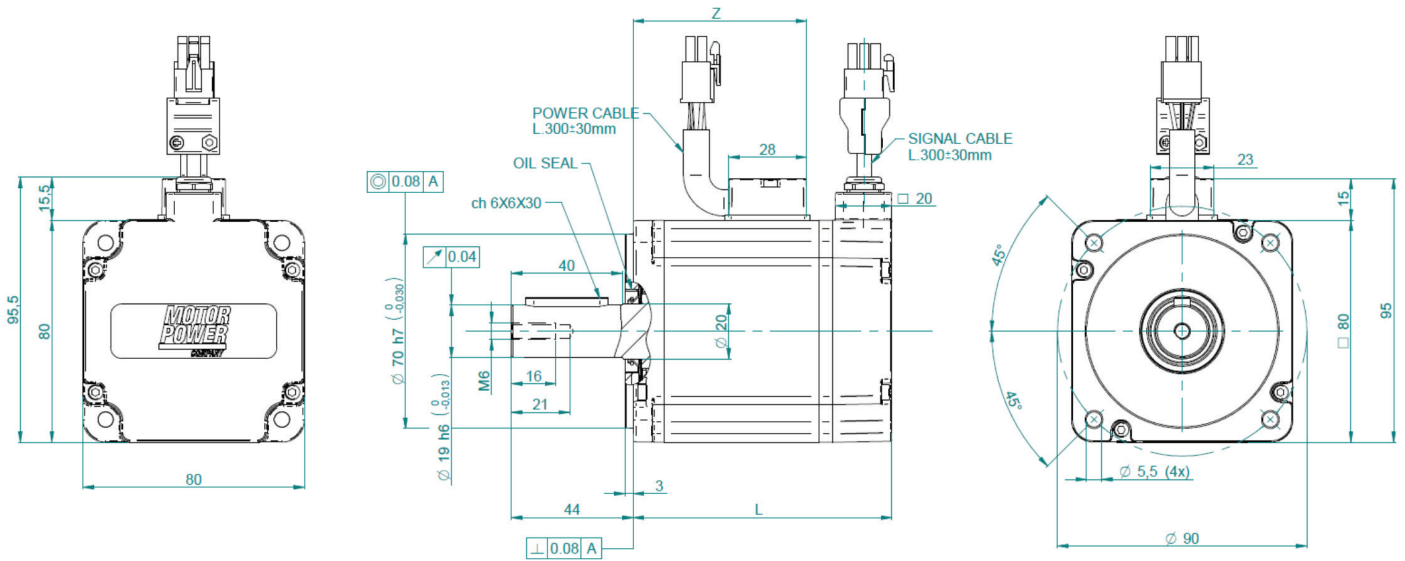
Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
All rights reserved Motor Power Company®

TC4 80 EXTERNAL DIMENSIONS

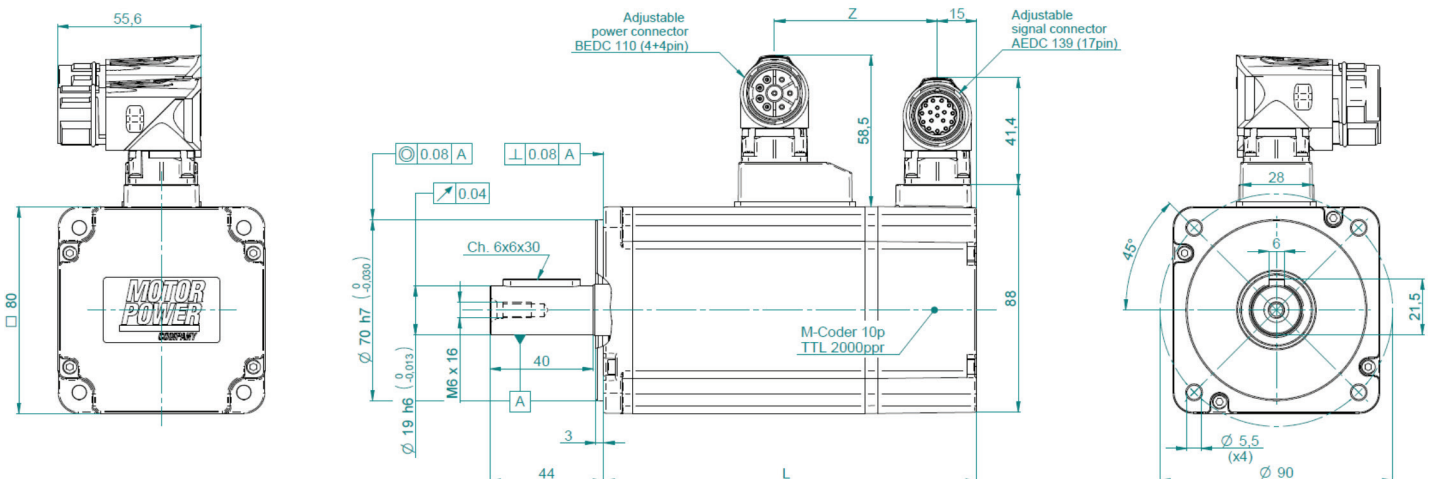
D0 connection

Model	Feedback type	L [mm]	L with brake [mm]	Z [mm]	Z with brake [mm]
3A	N1-M1-M2-R1	93.0	125.0	62.5	62.5
3B	N1-M1-M2-R1	115.0	147.0	84.5	84.5
3C	N1-M1-M2-R1	127.0	159.0	96.0	96.0
3A	A1	120.0	152.0	62.5	62.5
3B	A1	142.0	174.0	84.5	84.5
3C	A1	154.0	186.0	96.0	96.0



G2/H2 connection

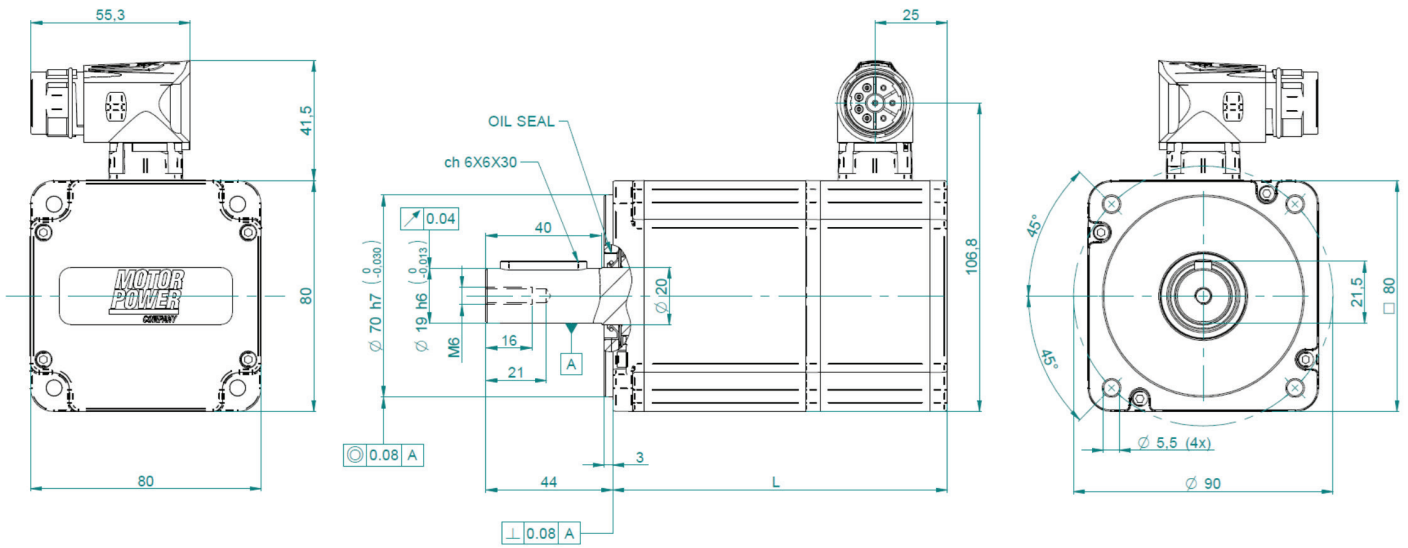
Model	Feedback type	L [mm]	L with brake [mm]	Z [mm]	Z with brake [mm]
3A	A11-A12-M1-M2-N1-R1	110.0	142.0	63.0	95.0
3B	A11-A12-M1-M2-N1-R1	132.0	164.0	63.0	95.0
3C	A11-A12-M1-M2-N1-R1	144.0	176.0	63.0	95.0
3A	A1	120.0	152.0	70.0	102.0
3B	A1	142.0	174.0	70.0	102.0
3C	A1	154.0	186.0	70.0	102.0



TC4 80 EXTERNAL DIMENSIONS

C21 connection

Model	Feedback tipe	L [mm]	L with brake [mm]
3A	A11-A12-A22-A23	116.0	145.0
3B	A11-A12-A22-A23	138.0	167.0
3C	A11-A12-A22-A23	150.0	179.0
3A	A3-A4-A5-A6-A15-A16	126.0	155.0
3B	A3-A4-A5-A6-A15-A16	148.0	177.0
3C	A3-A4-A5-A6-A15-A16	160.0	189.0



MW
P

TETRA
COMPACT

4

100

100 4A RATINGS and SPECIFICATION

ELECTRICAL DATA	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
Continuous stall torque (*)	M_0	[Nm]		4.0	
Peak torque	M_{Max}	[Nm]		16.5	
Nominal torque	M_n	[Nm]		3.18	
Nominal power	P_n	[W]		1000	
Continuous stall current	I_0	[Arms]	4.40	4.40	2.50
Maximum current	I_{Max}	[Arms]	23.87	23.87	13.57
Nominal current	I_n	[Arms]	3.76	3.76	2.14
Nominal working speed	n_N	[rpm]		3000	
Maximum working speed	n_{Max}	[rpm]	3700	6000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	1.50	1.50	4.20
Winding inductance	$L_{q\ u-v}$	[mH]	14.28	14.28	44.43
Electrical time constant	T_e	[ms]	9.54	9.54	10.58
Thermal resistance	R_{th}	[°C/W]		15.53	
Mechanical time constant (a)	T_m	[ms]	0.46	0.46	0.41
Rotor inertia without holding brake	J	[kg·cm ²]		2.53	
Rotor inertia with holding brake	J	[kg·cm ²]		2.65	
Mass without holding brake	m	[kg]		5.55	
Mass with holding brake	m	[kg]		6.60	
Max. axial shaft load 3000 / 5000 rpm	SL_a	[N]		245 / 220	
Max. radial shaft load 3000 / 5000 rpm	SL_r	[N]		690 / 580	

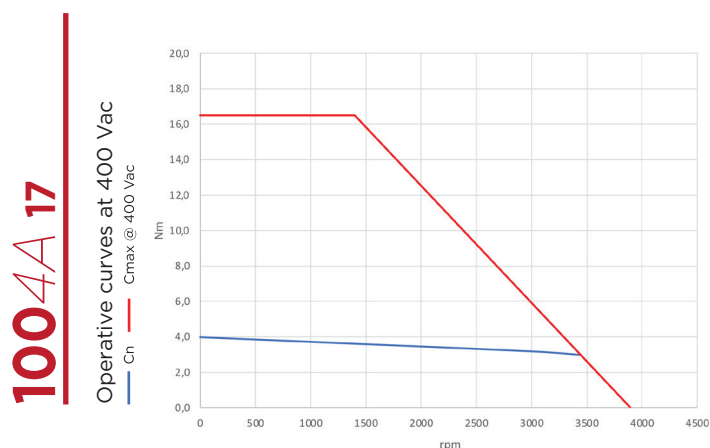
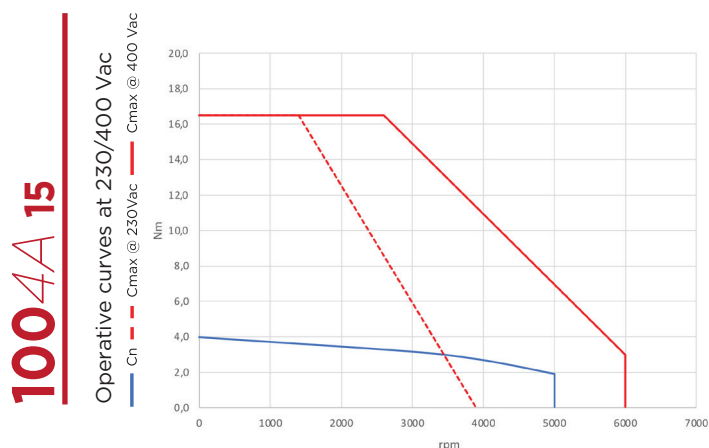
Rated output with 300 x 300 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing. (*) without brake.

(a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice. All rights reserved Motor Power Company®



100 4B RATINGS and SPECIFICATION

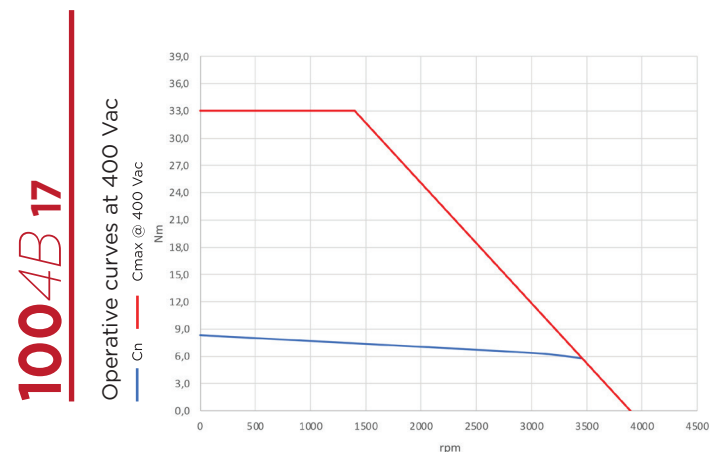
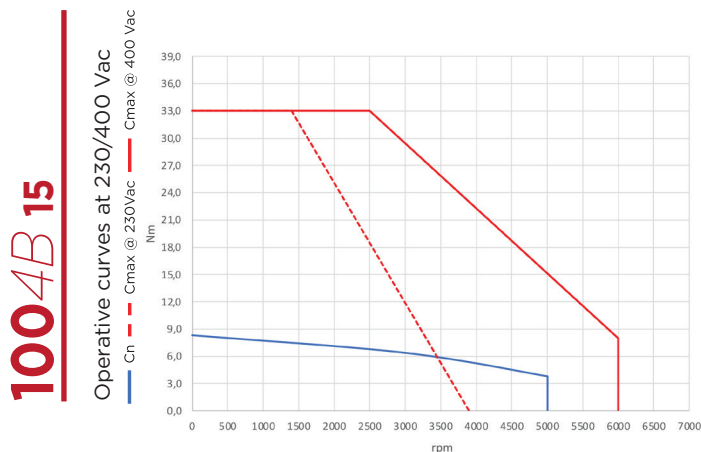
	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
ELECTRICAL DATA					
Continuous stall torque (*)	M_0	[Nm]		8.30	
Peak torque	M_{Max}	[Nm]		33.0	
Nominal torque	M_n	[Nm]		6.37	
Nominal power	P_n	[W]		2000	
Continuous stall current	I_0	[Arms]	9.12	9.12	5.19
Maximum current	I_{Max}	[Arms]	47.73	47.73	27.15
Nominal current	I_n	[Arms]	7.53	7.53	4.28
Nominal working speed	n_N	[rpm]		3000	
Maximum working speed	n_{Max}	[rpm]	3700	6000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.61	0.61	1.94
Winding inductance	$L_{q\ u-v}$	[mH]	7.14	7.14	22.22
Electrical time constant	T_e	[ms]	11.63	11.63	11.46
Thermal resistance	R_{th}	[°C/W]		0.84	
Mechanical time constant (a)	T_m	[ms]	0.34	0.34	0.35
Rotor inertia without holding brake	J	[kg·cm ²]		4.61	
Rotor inertia with holding brake	J	[kg·cm ²]		4.73	
Mass without holding brake	m	[kg]		8.09	
Mass with holding brake	m	[kg]		9.14	
Max. axial shaft load 3000 / 5000 rpm	SL_a	[N]		245 / 220	
Max. radial shaft load 3000 / 5000 rpm	SL_r	[N]		690 / 580	

Rated output with 300 x 300 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
 (*) without brake.
 (a) without brake and without feedback.

TORQUE/SPEED CHARTS

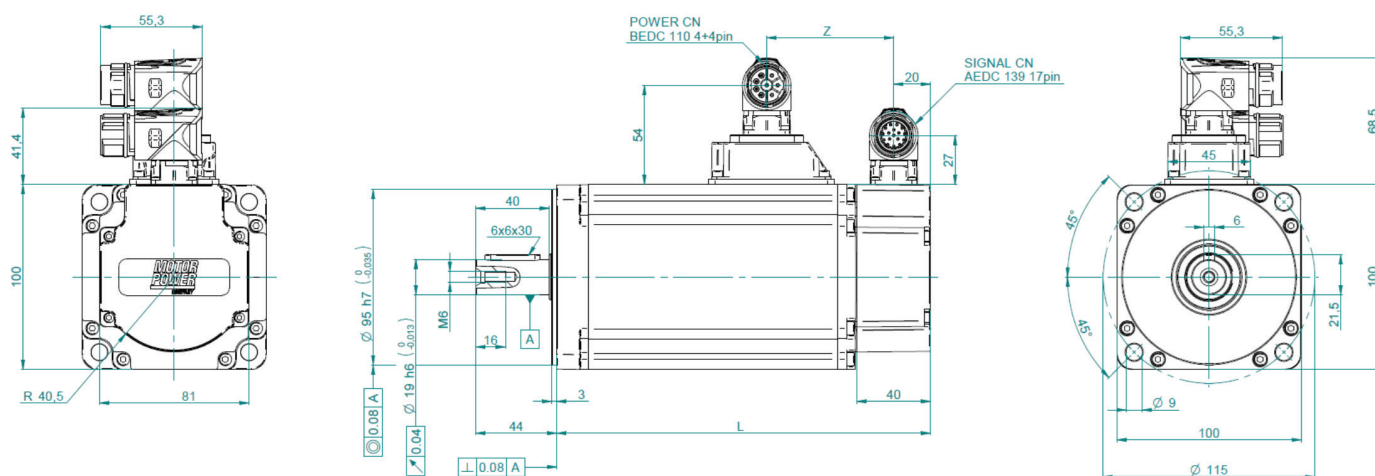
Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
 All rights reserved Motor Power Company®



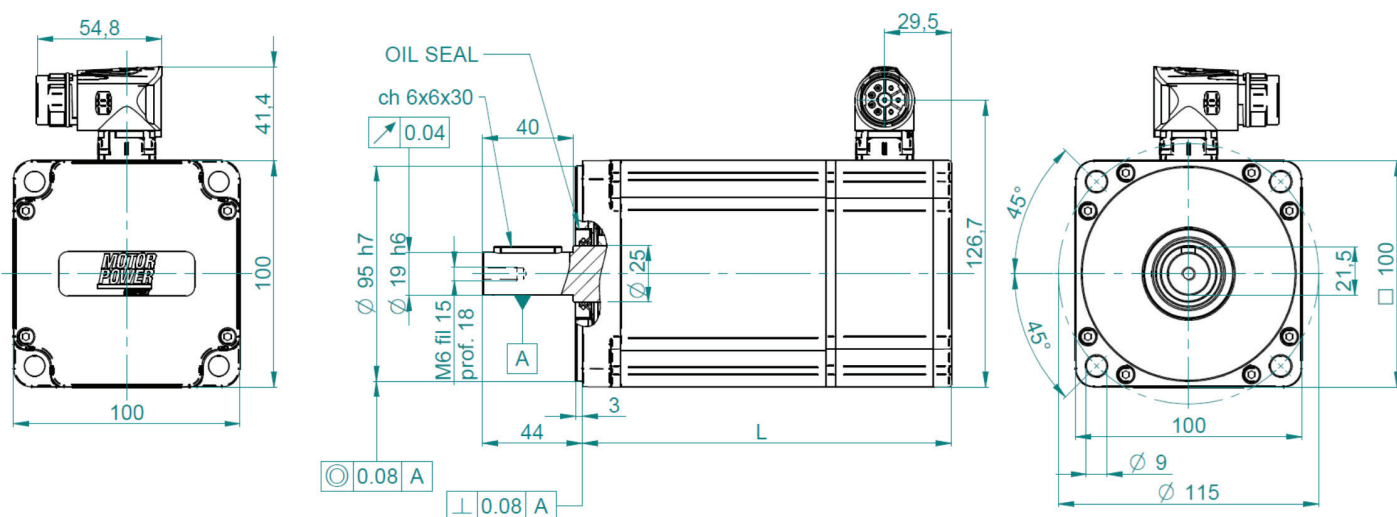
G2/H2 connection

Model	Feedback tipe	L [mm]	L with brake [mm]	Z [mm]	Z with brake [mm]
4A	A11-A12-M1-M2	158.0	188.0	69.0	99.0
4B	A11-A12-M1-M2	203.0	233.0	69.0	99.0
4A	A1-R1	173.0	203.0	84.0	114.0
4B	A1-R1	218.0	248.0	84.0	114.0



C21 connection

Model	Feedback tipe	L [mm]	L with brake [mm]
4A	A11-A12-A22-A23	163.0	193.0
4B	A11-A12-A22-A23	208.0	238.0
4A	A3-A4-A5-A6-A15-A16	179.0	209.0
4B	A3-A4-A5-A6-A15-A16	224.0	254.0



MW
P

TETRA
COMPACT

4

130

130 5F RATINGS and SPECIFICATION

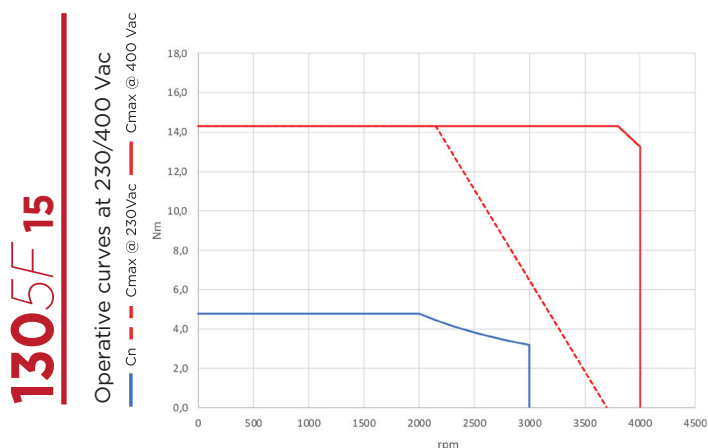
TYPE OF WINDING	230 Vac		400 Vac		
	15	15	15	17	
ELECTRICAL DATA					
Continuous stall torque (*)	M_0	[Nm]	4.77		
Peak torque	M_{Max}	[Nm]	14.3		
Nominal torque	M_n	[Nm]	3.18		
Nominal power	P_n	[W]	1000		
Continuous stall current	I_0	[Arms]	5.24	5.24	2.98
Maximum current	I_{Max}	[Arms]	17.47	17.47	9.93
Nominal current	I_n	[Arms]	3.76	3.76	2.14
Nominal working speed	n_N	[rpm]	3000		
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.87	0.87	2.64
Winding inductance	$L_{q\ u-v}$	[mH]	9.37	9.37	29.20
Electrical time constant	T_e	[ms]	10.77	10.77	11.06
Thermal resistance	R_{th}	[°C/W]	-		
Mechanical time constant (a)	T_m	[ms]	0.70	0.70	0.69
Rotor inertia without holding brake	J	[kg·cm ²]	6.70		
Rotor inertia with holding brake	J	[kg·cm ²]	7.95		
Mass without holding brake	m	[kg]	7.35		
Mass with holding brake	m	[kg]	8.87		
Max. axial shaft load 3000 rpm	SL_a	[N]	230		
Max. radial shaft load 3000 rpm	SL_r	[N]	1200		

Rated output with 400 x 400 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
 (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
 All rights reserved Motor Power Company®



130 5G RATINGS and SPECIFICATION

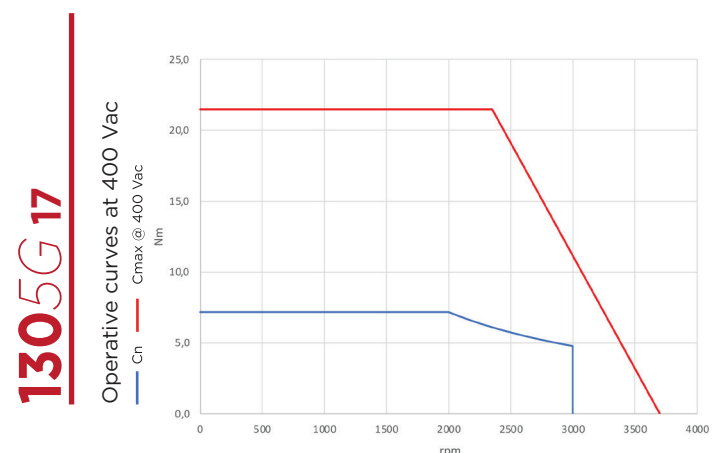
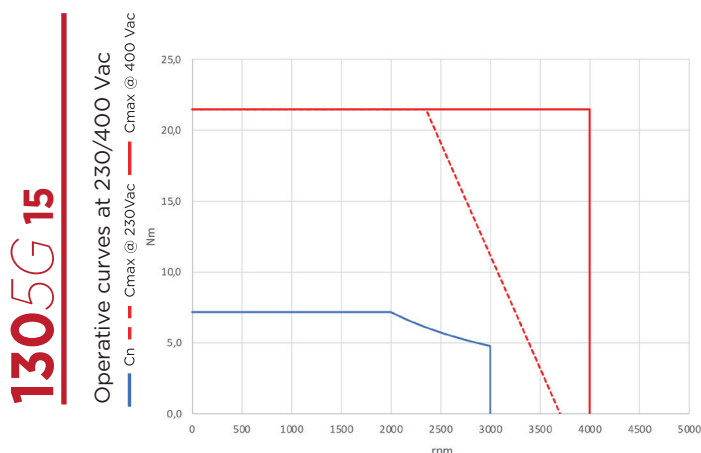
	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
ELECTRICAL DATA					
Continuous stall torque (*)	M_o	[Nm]		7.16	
Peak torque	M_{Max}	[Nm]		21.48	
Nominal torque	M_n	[Nm]		4.78	
Nominal power	P_n	[W]		1500	
Continuous stall current	I_o	[Arms]	7.87	7.87	4.48
Maximum current	I_{Max}	[Arms]	26.20	26.20	14.92
Nominal current	I_n	[Arms]	5.64	5.64	3.21
Nominal working speed	n_N	[rpm]		3000	
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.47	0.47	1.64
Winding inductance	$L_{q\ u-v}$	[mH]	5.34	5.34	20.66
Electrical time constant	T_e	[ms]	11.36	11.36	12.60
Thermal resistance	R_{th}	[°C/W]		-	
Mechanical time constant (a)	T_m	[ms]	0.58	0.58	0.53
Rotor inertia without holding brake	J	[kg·cm ²]		9.72	
Rotor inertia with holding brake	J	[kg·cm ²]		10.98	
Mass without holding brake	m	[kg]		8.80	
Mass with holding brake	m	[kg]		10.32	
Max. axial shaft load 2000 rpm	SL_a	[N]		230	
Max. radial shaft load 2000 rpm	SL_r	[N]		1200	

Rated output with 400 x 400 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
 (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
 All rights reserved Motor Power Company®



130 5H RATINGS and SPECIFICATION

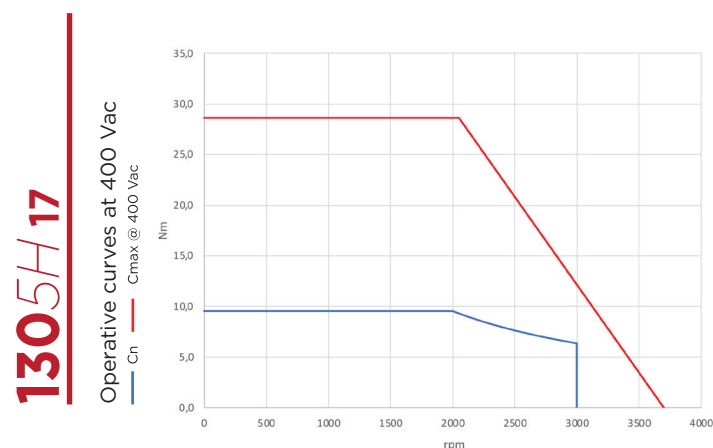
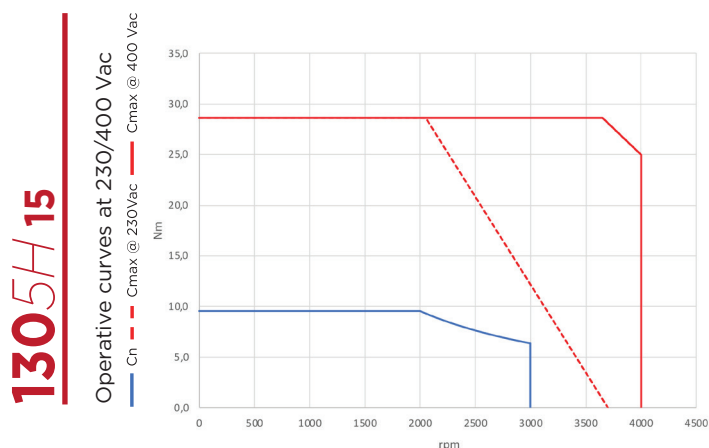
TYPE OF WINDING	230 Vac		400 Vac		
	15	15	15	17	
ELECTRICAL DATA					
Continuous stall torque (*)	M_0	[Nm]	9.55		
Peak torque	M_{Max}	[Nm]	28.65		
Nominal torque	M_n	[Nm]	6.37		
Nominal power	P_n	[W]	2000		
Continuous stall current	I_0	[Arms]	10.50	10.50	5.97
Maximum current	I_{Max}	[Arms]	35.00	35.00	19.90
Nominal current	I_n	[Arms]	7.53	7.53	4.28
Nominal working speed	n_N	[rpm]	3000		
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.38	0.38	1.06
Winding inductance	$L_{q\ u-v}$	[mH]	5.00	5.00	15.40
Electrical time constant	T_e	[ms]	13.16	13.16	14.53
Thermal resistance	R_{th}	[°C/W]	-		
Mechanical time constant (a)	T_m	[ms]	0.58	0.58	0.53
Rotor inertia without holding brake	J	[kg·cm ²]	12.77		
Rotor inertia with holding brake	J	[kg·cm ²]	14.04		
Mass without holding brake	m	[kg]	10.54		
Mass with holding brake	m	[kg]	12.68		
Max. axial shaft load 2000 rpm	SL_a	[N]	230		
Max. radial shaft load 2000 rpm	SL_r	[N]	1200		

Rated output with 400 x 400 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
 (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

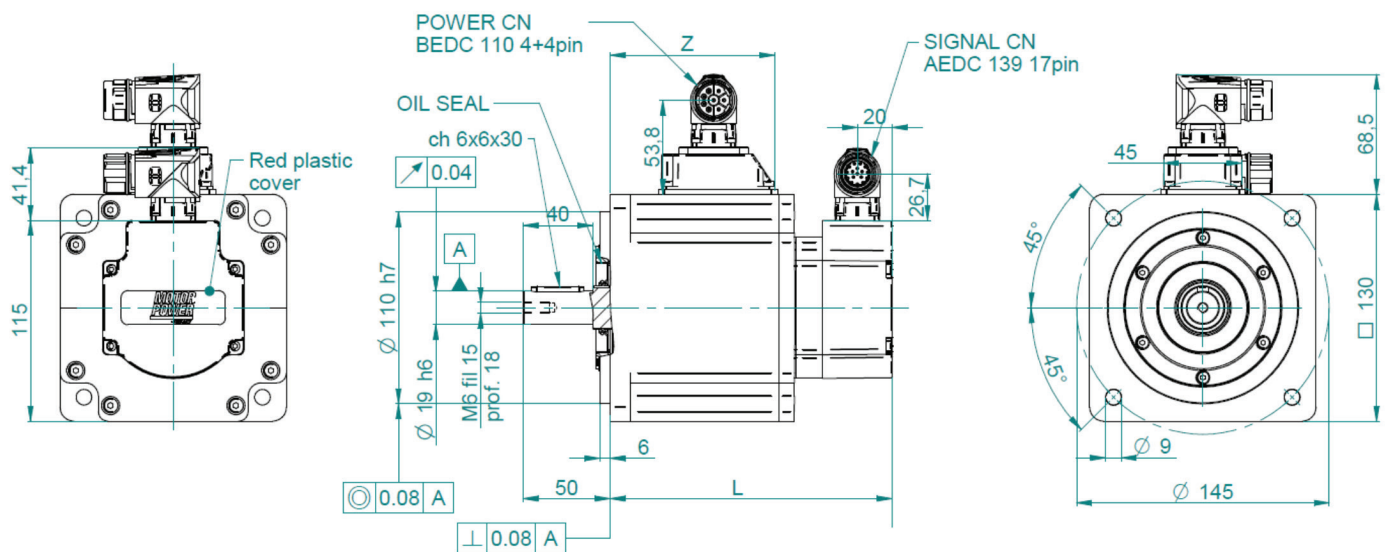
Any specifications are subjected to change without notice.
 All rights reserved Motor Power Company®



130 EXTERNAL DIMENSIONS

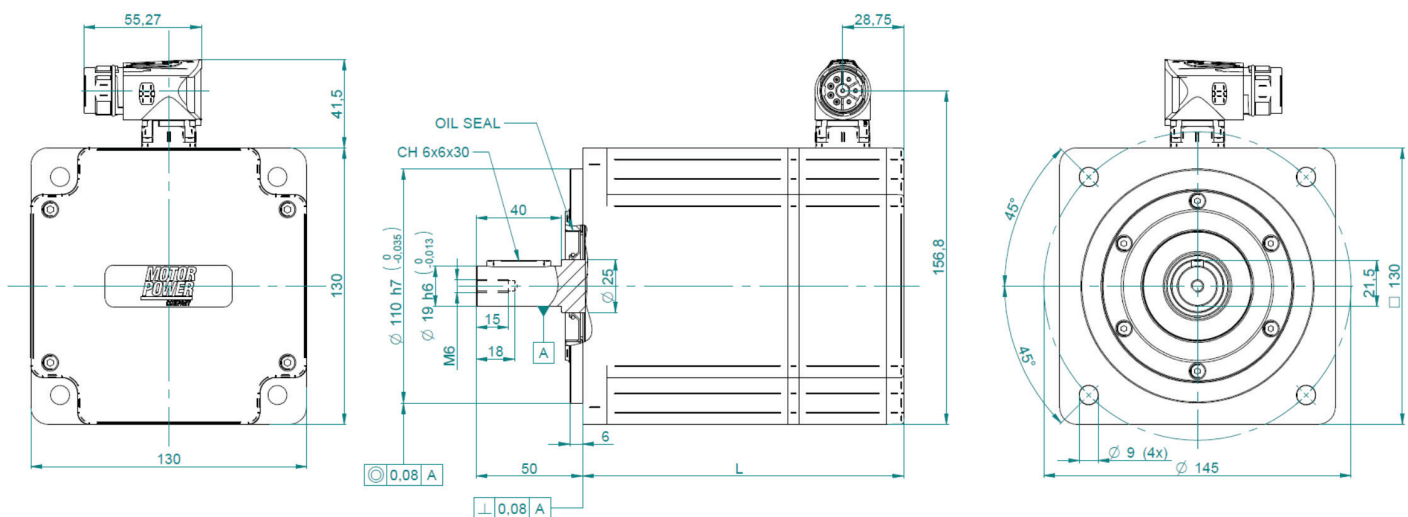
G2/H2 connection

Model	Feedback type	L [mm]	L with brake [mm]	Z [mm]	Z with brake [mm]
5F	A1-A11-A12-M1-M2-R1	162.0	191.0	94.5	94.5
5G	A1-A11-A12-M1-M2-R1	178.0	207.0	110.5	110.5
5H	A1-A11-A12-M1-M2-R1	202.0	231.0	134.5	134.5



C21 connection

Model	Feedback type	L [mm]	L with brake [mm]
5F	A11-A12-A22-A23	151.5	180.0
5G	A11-A12-A22-A23	167.5	196.0
5H	A11-A12-A22-A23	184.5	205.0



150

TETRA
COMPACT 4

150 6A RATINGS and SPECIFICATION

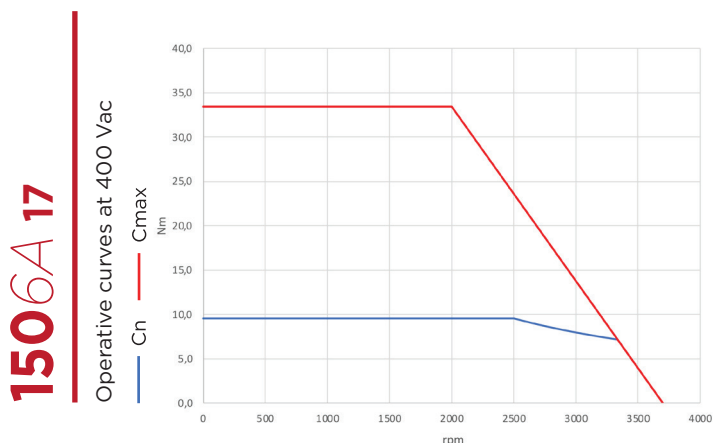
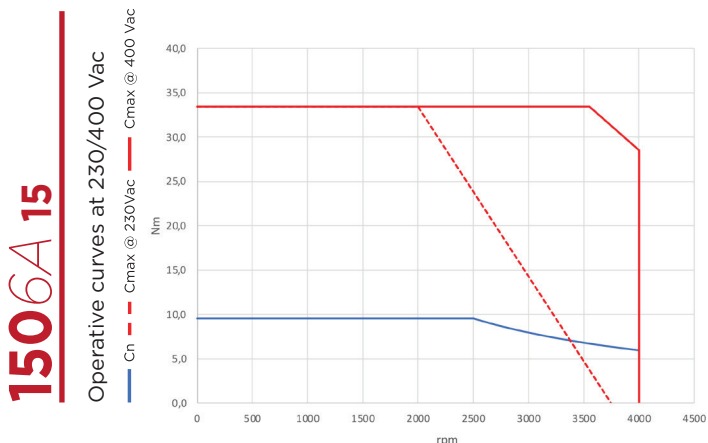
	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
ELECTRICAL DATA					
Continuous stall torque (*)	M_o	[Nm]		9.55	
Peak torque	M_{Max}	[Nm]		33.43	
Nominal torque	M_n	[Nm]		7.96	
Nominal power	P_n	[W]		2000	
Continuous stall current	I_o	[Arms]	10.50	10.50	6.00
Maximum current	I_{Max}	[Arms]	40.80	40.80	23.20
Nominal current	I_n	[Arms]	9.40	9.40	5.35
Nominal working speed	n_N	[rpm]		3000	
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.31	0.31	0.95
Winding inductance	$L_{q\ u-v}$	[mH]	4.47	4.47	13.82
Electrical time constant	T_e	[ms]	14.28	14.28	14.49
Thermal resistance	R_{th}	[°C/W]		1.33	
Mechanical time constant (a)	T_m	[ms]	0.57	0.57	0.57
Rotor inertia without holding brake	J	[kg·cm ²]		15.18	
Rotor inertia with holding brake	J	[kg·cm ²]		16.55	
Mass without holding brake	m	[kg]		13.68	
Mass with holding brake	m	[kg]		17.20	
Max. axial shaft load 2500 rpm	SL_a	[N]		450	
Max. radial shaft load 2500 rpm	SL_r	[N]		1850	

Rated output with 475 x 475 x 20 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing. (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
All rights reserved Motor Power Company®



150 6B RATINGS and SPECIFICATION

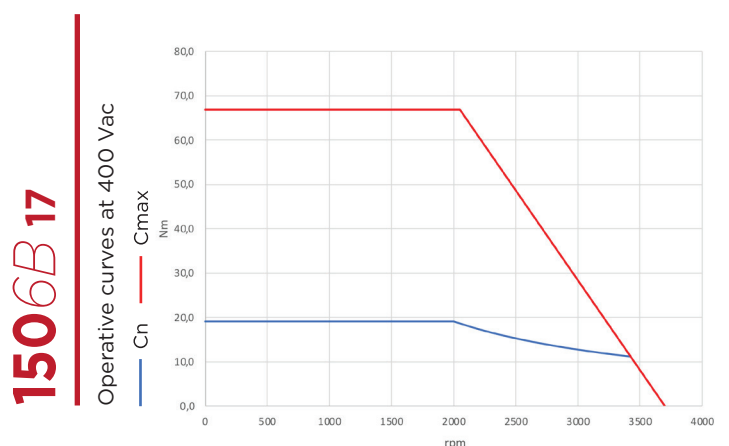
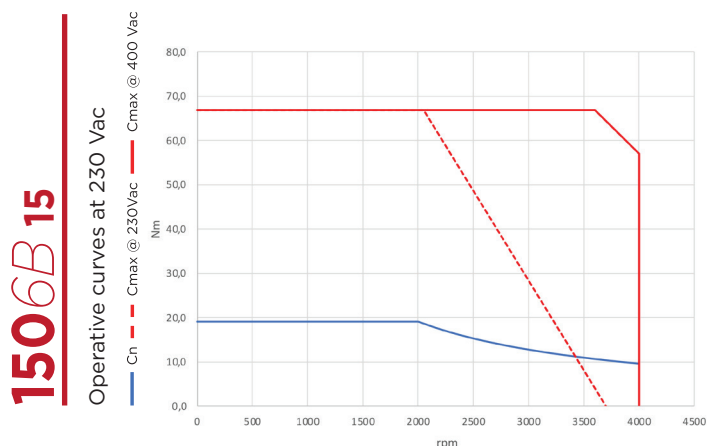
	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
ELECTRICAL DATA					
Continuous stall torque (*)	M_o	[Nm]		19.1	
Peak torque	M_{Max}	[Nm]		66.85	
Nominal torque	M_n	[Nm]		12.73	
Nominal power	P_n	[W]		4000	
Continuous stall current	I_o	[Arms]	21.00	21.00	11.94
Maximum current	I_{Max}	[Arms]	81.65	81.65	46.44
Nominal current	I_n	[Arms]	15.05	15.05	8.56
Nominal working speed	n_N	[rpm]		3000	
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.11	0.11	0.36
Winding inductance	$L_{q\ u-v}$	[mH]	2.23	2.23	6.78
Electrical time constant	T_e	[ms]	20.01	20.01	18.78
Thermal resistance	R_{th}	[°C/W]		0.9	
Mechanical time constant (e)	T_m	[ms]	0.37	0.37	0.39
Rotor inertia without holding brake	J	[kg·cm ²]		27.68	
Rotor inertia with holding brake	J	[kg·cm ²]		28.76	
Mass without holding brake	m	[kg]		18.00	
Mass with holding brake	m	[kg]		22.40	
Max. axial shaft load 2500 rpm	SL_a	[N]		450	
Max. radial shaft load 2500 rpm	SL_r	[N]		1850	

Rated output with 475 x 475 x 20 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing. (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice. All rights reserved Motor Power Company®



TC4

150 6C RATINGS and SPECIFICATION

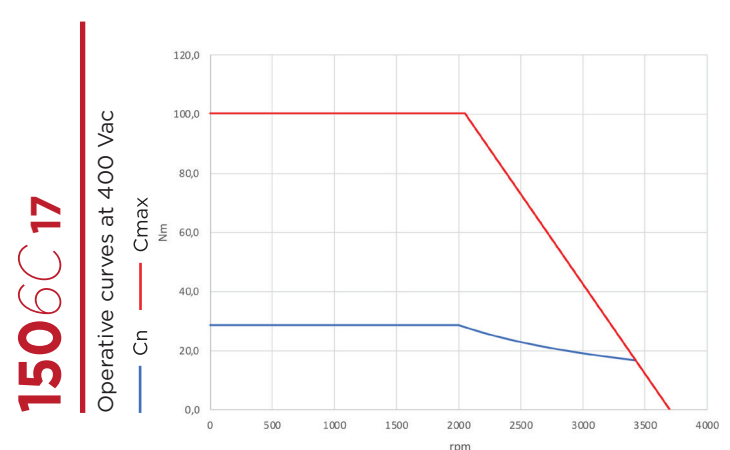
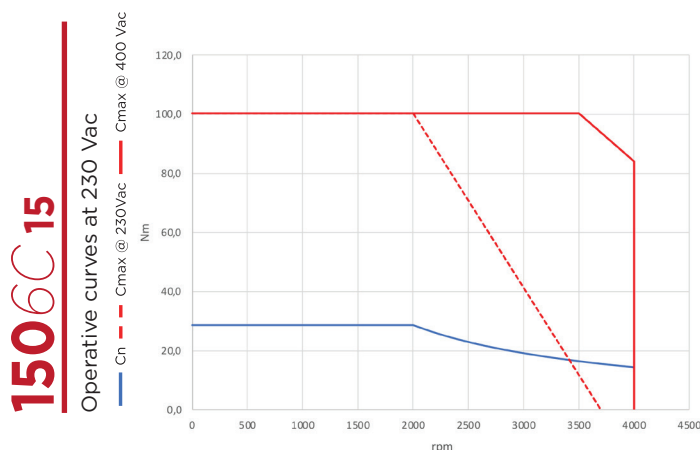
	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
ELECTRICAL DATA					
Continuous stall torque (*)	M_o	[Nm]		28.65	
Peak torque	M_{Max}	[Nm]		100.28	
Nominal torque	M_n	[Nm]		19.1	
Nominal power	P_n	[W]		6000	
Continuous stall current	I_o	[Arms]	31.50	31.50	17.90
Maximum current	I_{Max}	[Arms]	122.50	122.50	69.70
Nominal current	I_n	[Arms]	22.60	22.60	12.85
Nominal working speed	n_N	[rpm]		3000	
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.072	0.072	0.19
Winding inductance	$L_{q\ u-v}$	[mH]	1.54	1.54	4.52
Electrical time constant	T_e	[ms]	21.11	21.11	23.24
Thermal resistance	R_{th}	[°C/W]		0.61	
Mechanical time constant (a)	T_m	[ms]	0.35	0.35	0.31
Rotor inertia without holding brake	J	[kg·cm ²]		40.17	
Rotor inertia with holding brake	J	[kg·cm ²]		41.25	
Mass without holding brake	m	[kg]		23.26	
Mass with holding brake	m	[kg]		27.67	
Max. axial shaft load 2500 rpm	SL_a	[N]		450	
Max. radial shaft load 2500 rpm	SL_r	[N]		1850	

Rated output with 475 x 475 x 20 mm aluminium heat sink flange coupling. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing. (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
All rights reserved Motor Power Company®

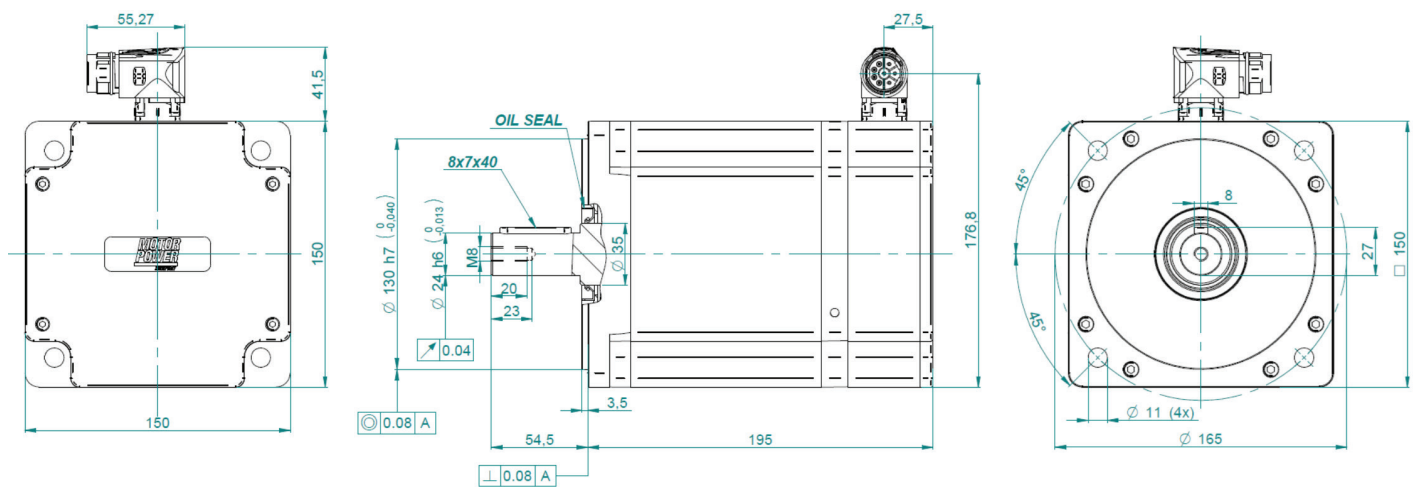


TC4

150 EXTERNAL DIMENSIONS

C21 connection

Model	Feedback type	L [mm]	L with brake [mm]
6A	A11-A12-A22-A23	205.0	250.0
6B	A11-A12-A22-A23	250.0	295.0
6C	A11-A12-A22-A23	295.0	340.0



MW
P

TETRA
COMPACT

4

180

180 7A RATINGS and SPECIFICATION

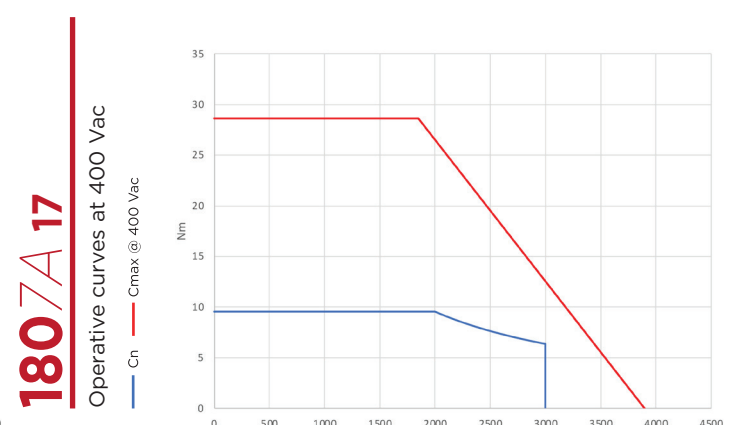
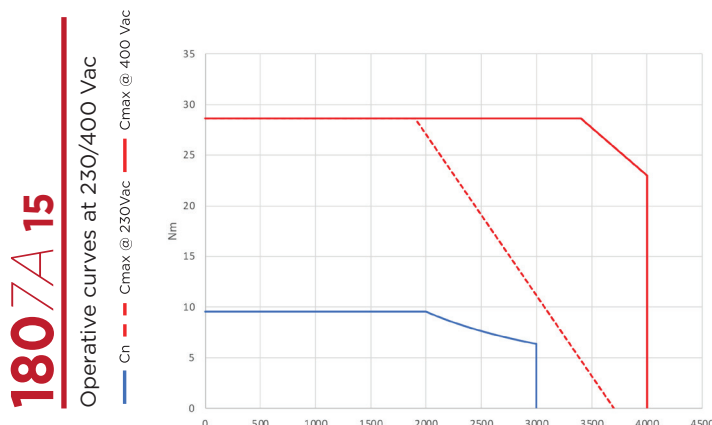
	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
ELECTRICAL DATA					
Continuous stall torque (*)	M_o	[Nm]		9.55	
Peak torque	M_{Max}	[Nm]		28.65	
Nominal torque	M_n	[Nm]		6.37	
Nominal power	P_n	[W]		2000	
Continuous stall current	I_o	[Arms]	10.50	10.50	5.97
Maximum current	I_{Max}	[Arms]	42.00	42.00	23.88
Nominal current	I_n	[Arms]	7.53	7.53	4.28
Nominal working speed	n_N	[rpm]		3000	
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.39	0.39	1.20
Winding inductance	$L_{q\ u-v}$	[mH]	4.60	4.60	14.48
Electrical time constant	T_e	[ms]	11.79	11.79	12.07
Thermal resistance	R_{th}	[°C/W]		-	
Mechanical time constant (a)	T_m	[ms]	1.19	1.19	1.18
Rotor inertia without holding brake	J	[kg·cm ²]		25.22	
Rotor inertia with holding brake	J	[kg·cm ²]		30.39	
Mass without holding brake	m	[kg]		14.64	
Mass with holding brake	m	[kg]		19.64	
Max. axial shaft load 2000 rpm	SL_a	[N]		500	
Max. radial shaft load 2000 rpm	SL_r	[N]		2300	

Rated output with 550 x 550 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
 (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
 All rights reserved Motor Power Company®



180 7C RATINGS and SPECIFICATION

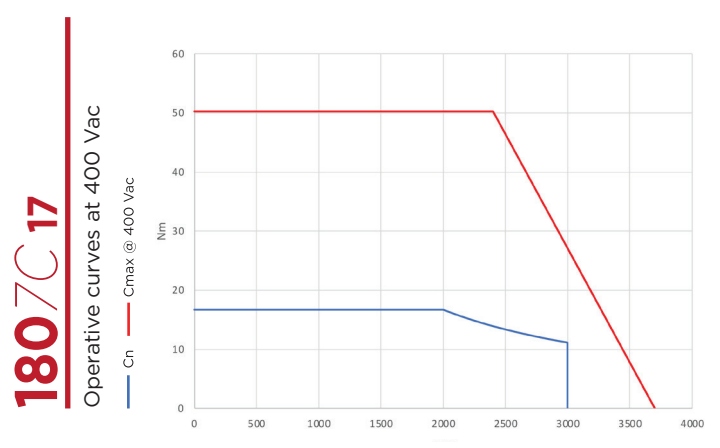
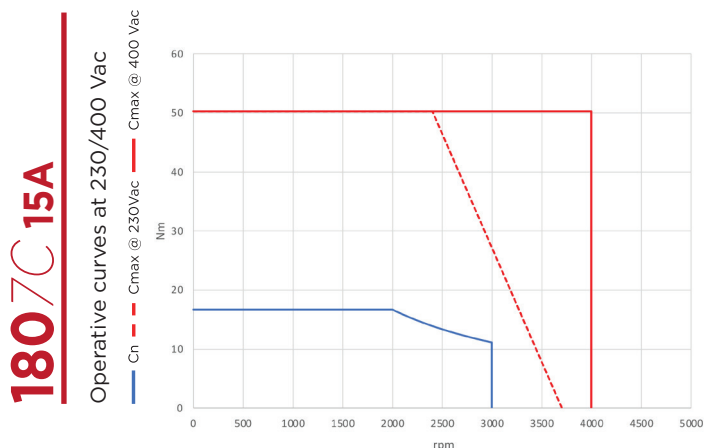
	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
ELECTRICAL DATA					
Continuous stall torque (*)	M_0	[Nm]		16.7	
Peak torque	M_{Max}	[Nm]		50.3	
Nominal torque	M_n	[Nm]		11.14	
Nominal power	P_n	[W]		3500	
Continuous stall current	I_0	[Arms]	18.36	18.36	10.44
Maximum current	I_{Max}	[Arms]	65.05	65.05	37.00
Nominal current	I_n	[Arms]	13.17	13.17	7.49
Nominal working speed	n_N	[rpm]		3000	
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.13	0.13	0.37
Winding inductance	$L_{q\ u-v}$	[mH]	2.13	2.13	6.62
Electrical time constant	T_e	[ms]	16.38	16.38	17.89
Thermal resistance	R_{th}	[°C/W]		-	
Mechanical time constant (a)	T_m	[ms]	0.68	0.68	0.68
Rotor inertia without holding brake	J	[kg·cm ²]		44.81	
Rotor inertia with holding brake	J	[kg·cm ²]		46.60	
Mass without holding brake	m	[kg]		20.0	
Mass with holding brake	m	[kg]		25.0	
Max. axial shaft load 2000 rpm	SL_a	[N]		500	
Max. radial shaft load 2000 rpm	SL_r	[N]		2300	

Rated output with 550 x 550 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
 (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
 All rights reserved Motor Power Company®



180 7D RATINGS and SPECIFICATION

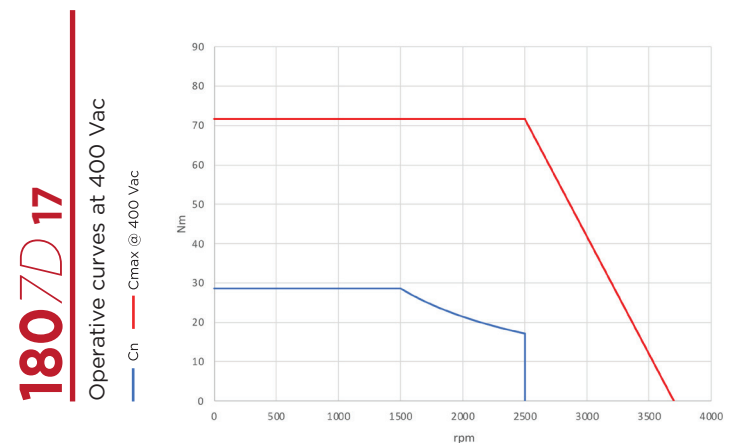
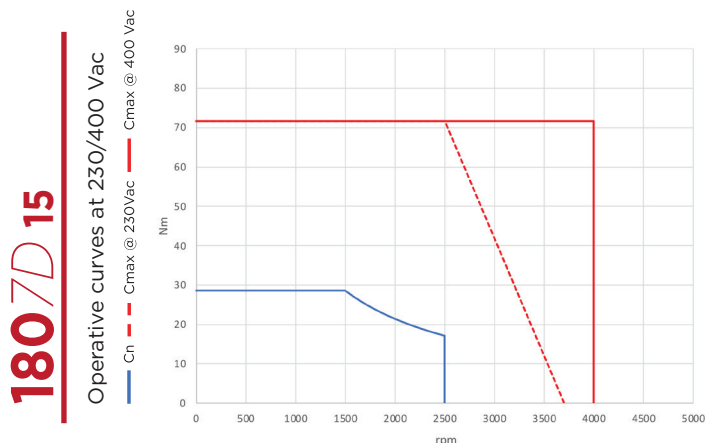
	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
ELECTRICAL DATA					
Continuous stall torque (*)	M_o	[Nm]	28.65		
Peak torque	M_{Max}	[Nm]	71.62		
Nominal torque	M_n	[Nm]	17.20		
Nominal power	P_n	[W]	4500		
Continuous stall current	I_o	[Arms]	31.50	31.50	17.90
Maximum current	I_{Max}	[Arms]	92.60	92.60	52.68
Nominal current	I_n	[Arms]	21.99	21.99	12.50
Nominal working speed	n_N	[rpm]	2500		
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.07	0.07	0.21
Winding inductance	$L_{q\ u-v}$	[mH]	1.42	1.42	4.21
Electrical time constant	Te	[ms]	20.29	20.29	20.05
Thermal resistance	R_{th}	[°C/W]	-		
Mechanical time constant (a)	T_m	[ms]	0.55	0.55	0.54
Rotor inertia without holding brake	J	[kg·cm ²]	64.99		
Rotor inertia with holding brake	J	[kg·cm ²]	66.78		
Mass without holding brake	m	[kg]	25.69		
Mass with holding brake	m	[kg]	31.40		
Max. axial shaft load 2000 rpm	SL_a	[N]	500		
Max. radial shaft load 2000 rpm	SL_r	[N]	2300		

Rated output with 550 x 550 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
 (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
 All rights reserved Motor Power Company®



180 7E RATINGS and SPECIFICATION

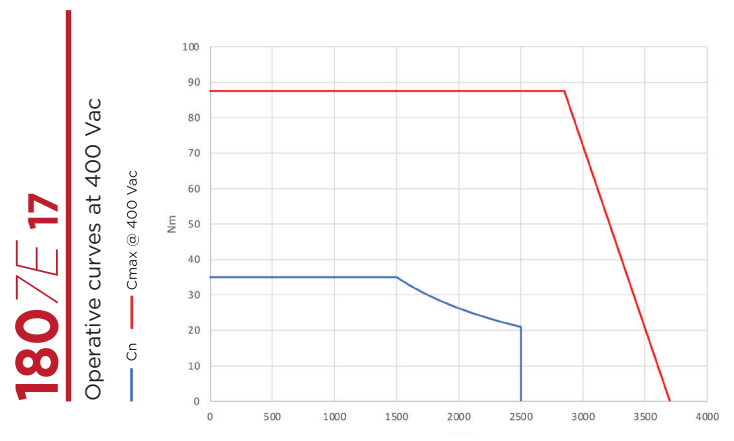
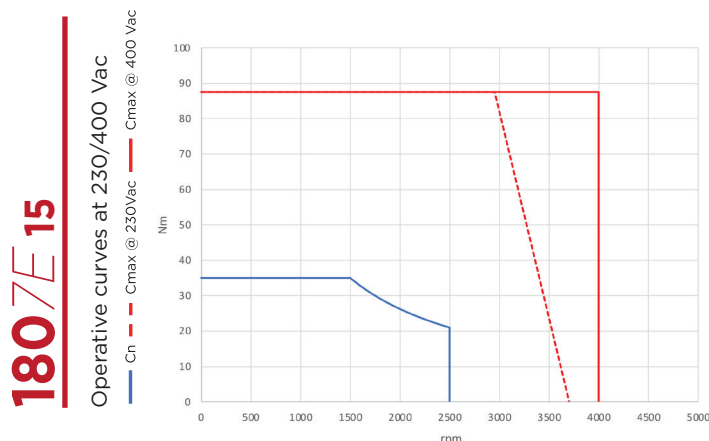
	TYPE OF WINDING	230 Vac		400 Vac	
		15	15	15	17
ELECTRICAL DATA					
Continuous stall torque (*)	M_o	[Nm]		35.0	
Peak torque	M_{Max}	[Nm]		87.53	
Nominal torque	M_n	[Nm]		21.0	
Nominal power	P_n	[W]		5500	
Continuous stall current	I_o	[Arms]	38.5	38.5	21.88
Maximum current	I_{Max}	[Arms]	113.2	113.2	64.38
Nominal current	I_n	[Arms]	26.84	26.84	15.27
Nominal working speed	n_N	[rpm]		2500	
Maximum working speed	n_{Max}	[rpm]	3700	4000	3700
Torque constant	K_t	[Nm/Arms]	0.91	0.91	1.60
Voltage constant	$K_{e\ u-v}$	[Vrms/krpm]	55.0	55.0	96.7
Winding resistance @ 20 °C	R_{u-v}	[Ohm]	0.04	0.04	0.12
Winding inductance	$L_{q\ u-v}$	[mH]	0.81	0.81	2.64
Electrical time constant	T_e	[ms]	21.89	21.89	22.76
Thermal resistance	R_{th}	[°C/W]		-	
Mechanical time constant (a)	T_m	[ms]	0.46	0.46	0.46
Rotor inertia without holding brake	J	[kg·cm ²]		102.46	
Rotor inertia with holding brake	J	[kg·cm ²]		104.30	
Mass without holding brake	m	[kg]		34.15	
Mass with holding brake	m	[kg]		39.09	
Max. axial shaft load 2000 rpm	SL_a	[N]		500	
Max. radial shaft load 2000 rpm	SL_r	[N]		2300	

Rated output with 550 x 550 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing. (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice. All rights reserved Motor Power Company®



180 7F RATINGS and SPECIFICATION

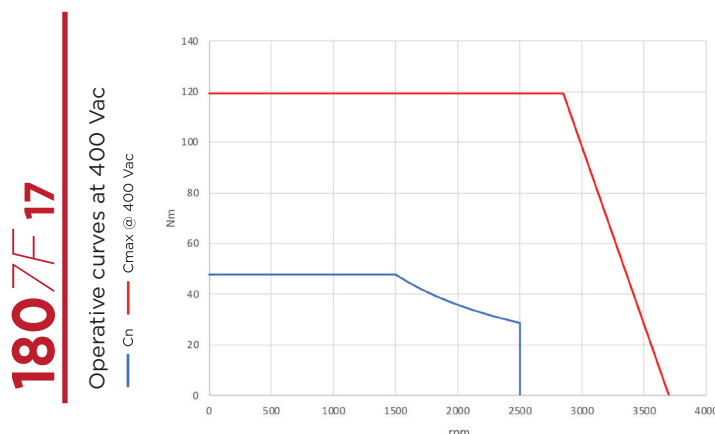
	TYPE OF WINDING	400 Vac
		17
ELECTRICAL DATA		
Continuous stall torque (*)	M_o [Nm]	47.75
Peak torque	M_{Max} [Nm]	119.37
Nominal torque	M_n [Nm]	28.65
Nominal power	P_n [W]	7500 (*)
Continuous stall current	I_o [Arms]	29.85
Maximum current	I_{Max} [Arms]	87.80
Nominal current	I_n [Arms]	20.83
Nominal working speed	n_N [rpm]	2500
Maximum working speed	n_{Max} [rpm]	4000
Torque constant	K_t [Nm/Arms]	1.60
Voltage constant	$K_{e\ u-v}$ [Vrms/krpm]	96.7
Winding resistance @ 20 °C	R_{u-v} [Ohm]	0.10
Winding inductance	$L_{q\ u-v}$ [mH]	2.30
Electrical time constant	T_e [ms]	23.71
Thermal resistance	R_{th} [°C/W]	-
Mechanical time constant (a)	T_m [ms]	0.38
Rotor inertia without holding brake	J [kg·cm ²]	140.62
Rotor inertia with holding brake	J [kg·cm ²]	142.66
Mass without holding brake	m [kg]	44.52
Mass with holding brake	m [kg]	49.59
Max. axial shaft load 2000 rpm	SL_a [N]	500
Max. radial shaft load 2000 rpm	SL_r [N]	2300

Rated output with 550 x 550 x 20 mm aluminium heat sink flange. Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing.
 (*) without brake. (a) without brake and without feedback.

TORQUE/SPEED CHARTS

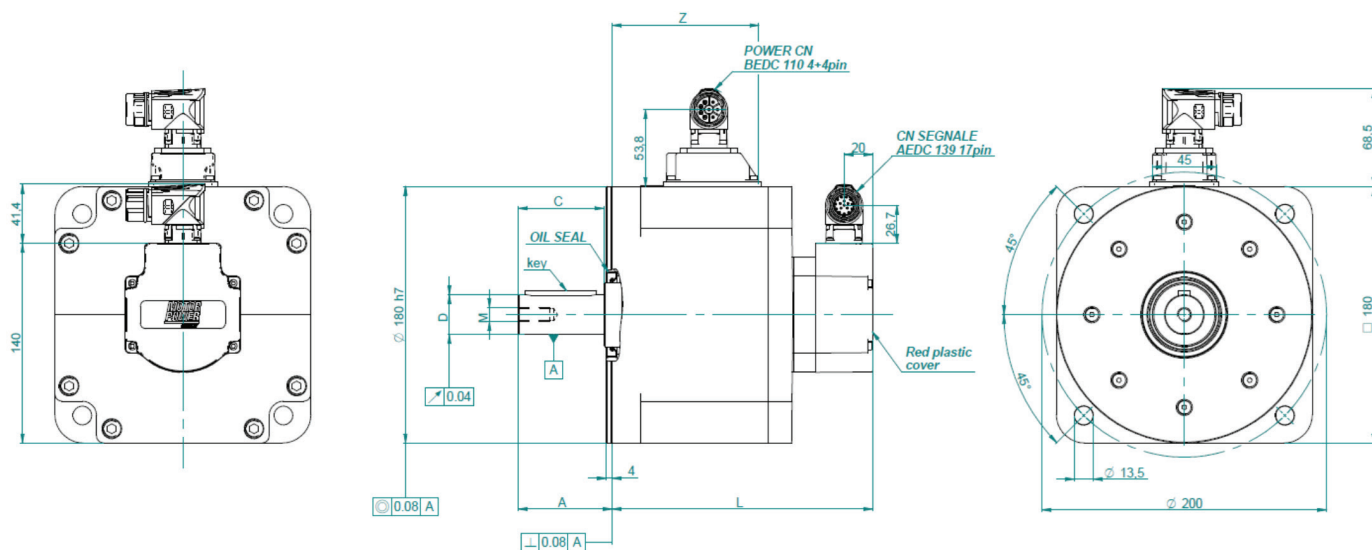
Operative temperature -20 ÷ +40 °C

Any specifications are subjected to change without notice.
 All rights reserved Motor Power Company®



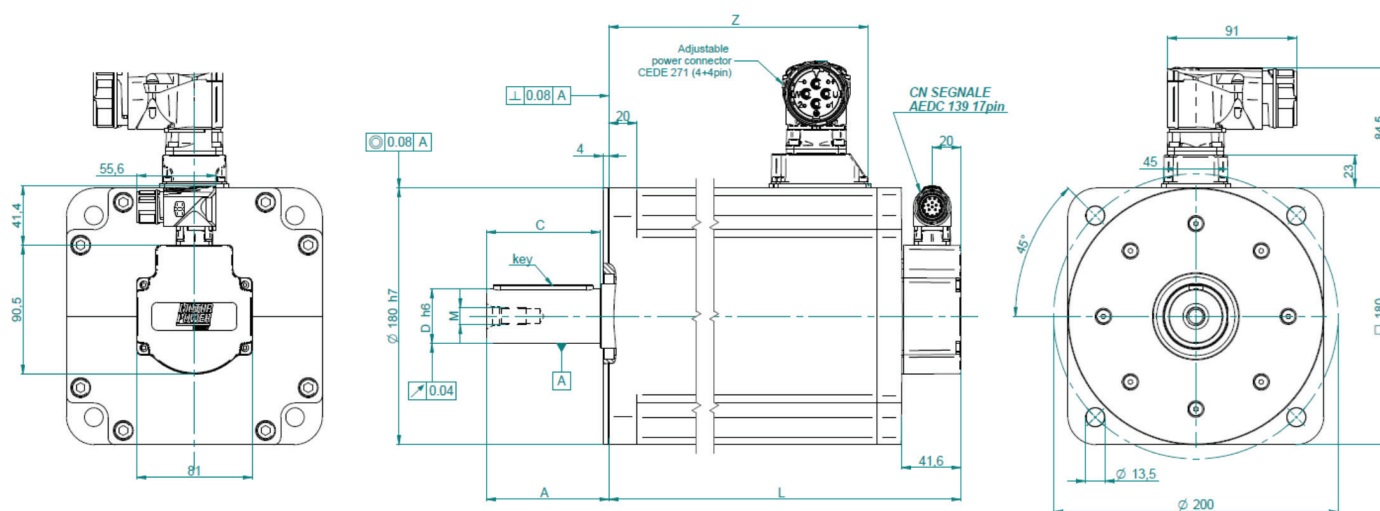
G2/H2 connection

Model	Feedback tipe	L [mm]	L with brake [mm]	Z [mm]	Z with brake [mm]	D [mm]	A [mm]	C [mm]	M	Key (b x h x l)
7A	A11-A12-M1-M2	168.0	203.0	103.0	103.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7C	A11-A12-M1-M2	201.0	236.0	136.0	136.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7D	A11-A12-M1-M2	234.0	269.0	169.0	169.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7E	A11-A12-M1-M2	278.0	313.0	213.0	213.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7F	A11-A12-M1-M2	341.0	376.0	276.0	276.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7A	A1-R1	183.0	218.0	103.0	103.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7C	A1-R1	216.0	251.0	136.0	136.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7D	A1-R1	249.0	284.0	169.0	169.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7E	A1-R1	293.0	328.0	213.0	213.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7F	A1-R1	356.0	391.0	276.0	276.0	38.0	86.0	80.0	M12x28	10 x 8 x 70



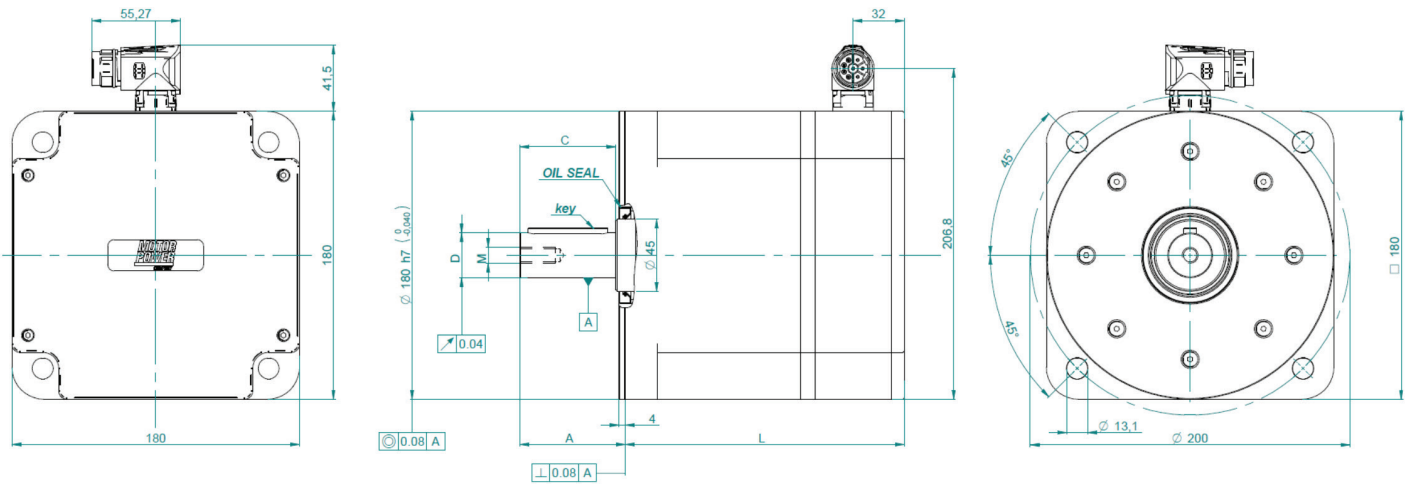
G3/H3 connection

Model	Feedback tipe	L [mm]	L with brake [mm]	Z [mm]	Z with brake [mm]	D [mm]	A [mm]	C [mm]	M	Key (b x h x l)
7A	A11-A12-M1-M2	168.0	203.0	103.0	103.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7C	A11-A12-M1-M2	201.0	236.0	136.0	136.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7D	A11-A12-M1-M2	234.0	269.0	169.0	169.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7E	A11-A12-M1-M2	278.0	313.0	213.0	213.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7F	A11-A12-M1-M2	341.0	376.0	276.0	276.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7A	A1-R1	183.0	218.0	103.0	103.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7C	A1-R1	216.0	251.0	136.0	136.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7D	A1-R1	249.0	284.0	169.0	169.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7E	A1-R1	293.0	328.0	213.0	213.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7F	A1-R1	356.0	391.0	276.0	276.0	38.0	86.0	80.0	M12x28	10 x 8 x 70



C21 connection

Model	Feedback type	L [mm]	L with brake [mm]	D [mm]	A [mm]	C [mm]	M	Key (b x h x l)
7A	A11-A12-A22-A23	174.5	209.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7C	A11-A12-A22-A23	207.5	242.0	28.0	66.0	60.0	M10x22	8 x 7 x 50
7D	A11-A12-A22-A23	240.5	275.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7E	A11-A12-A22-A23	284.5	319.0	38.0	86.0	80.0	M12x28	10 x 8 x 70
7F	A11-A12-A22-A23	347.5	382.0	38.0	86.0	80.0	M12x28	10 x 8 x 70



feedback

TC4 Resolver

		R1	
<i>Motor size</i>		TC4 60 - TC4 80	TC4 100 - TC4 130 - TC4 150 - TC4 180
Nominal voltage	[Vrms]	7±5%	
Nominal current	[mA]	50	
Phase shift	[deg]	+3°	-5°
Minimum sin amplitude	[mVrms]	20	
Frequency	[kHz]	10	
Poles number	[/]	2	
Transformer ratio	[/]	0.5 ± 5%	
Input impedance	[Ohm]	130 + j280	110+j140
Output impedance	[Ohm]	425 + j755	130+j240
System accuracy	[']	± 10'	
Rotor inertia	[kg cm2]	0.03	0.1

TC4 Encoder

	M1	M2
Type	M-CODER IH INCREMENTAL WITH HALL SENSOR ENCODER	M-CODER ST ABSOLUTE ENCODER
Protocol/Interface	Line Driver A/B/Z - U/V/W	RS 485 2.5 Mbit
Resolution	2-5000 ppr	17-bit
Accuracy	+/- 250''	
Working temperature	-40 °C ÷ +125 °C	
Working speed	< 12.000 rpm	
Max acceleration	100.000 rad/s ²	
Inertia	5.6 x 10 ⁻⁵ kg cm ²	
Weigth	20 g	
Main supply voltage	5 - 12 V	
Current consumption	100 mA (Max)	
External battery voltage	-	
External battery current consumption	-	
Note	Condition monitoring option	

	A1	A3	A4
Type	HIPERFACE ABSOLUTE MULTITURN ENCODER	HIPERFACE DSL ABSOLUTE SINGLETURN ENCODER	HIPERFACE DSL ABSOLUTE MULTITURN ENCODER
Protocol/Interface	HIPERFACE®	HIPERFACE DSL®	
Resolution	128 line	20 bit	
N° absolute multiturn steps	4096 (12 bit)	-	4096 (12 bit)
Accuracy	4096 (12 bit)	+/- 100''	
Working temperature	-20 °C ... +100 °C	-20 °C ... +115 °C	
Working speed	<9000 rpm	<12000 rpm	
Max acceleration	500.000 rad/s ²		
Inertia	4,5 gcm ²		
Weigth	70 g	100 g	
Main supply voltage	7 - 12 V		
Current consumption	60 mA (withoul Load)	150 mA (max)	
External battery voltage	-		
External battery current consumption	-		
Notes	Mechanical multiturn	-	Mechanical multiturn

TC4 Encoder

	A5	A6	A15
Type	HIPERFACE SAFETY DSL SINGLETURN 20 BIT ENCODER	HIPERFACE SAFETY DSL MULTITURN 20 BIT ENCODER	HIPERFACE SAFETY DSL SINGLETURN 24 BIT ENCODER
Protocol/Interface	HIPERFACE DSL®		
Resolution	20 bit		24 bit
N° absolute multiturn steps	-	4096 (12 bit)	-
Accuracy	+/- 100"		+/- 25"
Working temperature	-20 °C ... +115 °C		-40 °C ... +115 °C
Working speed	<12000 rpm		<9000 rpm
Max acceleration	250.000 rad/s ²		
Inertia	5 gcm ²		
Weight	100 g		
Main supply voltage	7 - 12 V		
Current consumption	150 mA (max)		
External battery voltage	-		
External battery current consumption	-		
Notes	Mechanical multiturn		
Safety function	SIL2 (IEC 61508) PL.d (EN ISO 13849-1:2015)		

	A16	A22	A23
Type	HIPERFACE SAFETY DSL MULTITURN 24 BIT ENCODER	ENCODER SAFETY ENDAT 3 SINGLETURN 19 BIT ENCODER	ENCODER SAFETY ENDAT 3 MULTITURN 19 BIT ENCODER
Protocol/Interface	HIPERFACE DSL®	ENDAT 3®	
Resolution	24 bit	19 bit	
N° absolute multiturn steps	4096 (12 bit)	-	4096 (12 bit)
Accuracy	+/- 25"	+/- 120"	
Working temperature	-40 °C ... +115 °C	-40 °C ... +110 °C	
Working speed	<9000 rpm	<15000 rpm	<12000 rpm
Max acceleration	250.000 rad/s ²	≤ 1 · 10 ⁵ rad/s ²	
Inertia	5 gcm ²	0.2 · 10 ⁻⁶ kgm ²	
Weight	100 g	40 g	40 g
Main supply voltage	7 - 12 V	3,6 - 14 V	
Current consumption	150 mA (Max)	95 mA at 5 V (w/o load)	115 mA at 5 V (w/o load)
External battery voltage	-	-	-
External battery current consumption	-	-	-
Note	Mechanical multiturn	-	Mechanical multiturn
Safety function	SIL2 (IEC 61508) PL.d (EN ISO 13849-1:2015)	SIL3 (IEC 61508) PL.e	

	A11		A12	
<i>Type</i>	EnDat 2.2 single-turn Encoder		EnDat 2.2 multi-turn Encoder	
Protocol/interface	ENDAT 2.2®			
Resolution	19-bit			
N° of absolute multi turn steps	-		4096 (12-bit)	
Accuracy	± 120"			
Working temperature	-40 °C ÷ +110 °C			
Working speed	< 15.000 rpm		< 12.000 rpm	
Max acceleration	≤ 1 · 10 ⁵ rad/s ²			
Inertia	0.2 · 10 ⁻⁶ kg m ²			
Weight	40 g			
Main supply voltage	3.6 – 14 V			
Current consumption	95 mA at 5 V (w/o load)		115 mA at 5 V (w/o load)	
External battery voltage	-		-	
External battery current consumption	-		-	
Notes	-		Mechanical multi-turn	

N1

Type **A-format 24-bit absolute multi-turn (with battery) and absolute single turn encoder (without battery). Encoder N1 available for models 40-60-80**

Protocol/Interface	A-FORMAT RS 485 2,5-16Mbits	
Resolution	24 bit	
N° absolute multiturn steps	65536 (16 bit)	
Accuracy	+/- 90"	
Working temperature	-20 °C ... +105 °C	
Working speed	<8000 rpm	
Max acceleration	1.0 × 10 ⁵ rad/s ²	
Inertia	2.6 × 10 ⁻⁹ kg*m ²	
Weigth	13 g	
Main supply voltage	5 +/- 10% V	
Current consumption	80uA typical 110 uA max	
External battery voltage	3,6 +/-10% V	
External battery current consumption	55uA typical 110 uA max	

Note Feedback N1 is provided as singleturn device.
With the multiturn usage battery must be applied. Please reach out our application team for assistance with the electric scheme connection.

specifications

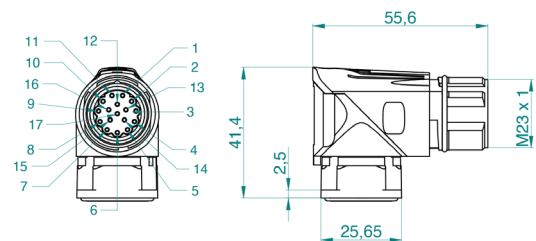
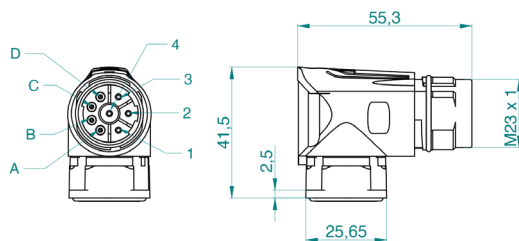
TC4 Brake features

MOTOR SIZE		40	60	80	100	130	150	180
Operating motor temperature	[°C]	-20 ÷ 120						
External ambient temperature	[°C]	-20 ÷ 40						
Standard brake duty	-	Stationary						
Minimum dry static torque (-20 ÷ 120 °C)	[Nm]	0.32	1.3	2.5	6.5	9.6	32	48
Nominal operating voltage (± 10 %)	[Vdc]	24						
Power consumption at 20 °C (± 7 %)	[W]	4.35	11.2	10.2	10.4	19.7	TBD	49.6
Release time	[ms]	22	58	46	49	71	TBD	120
Brake release time (pull-in)	[ms]	77	25	58	30	39	TBD	37
Maximum backlash	[deg]	1.2						

Connectors with G2 connection

Power connector		Feedback connector					
Pin	Function	Pin	A1	A11/A12	M1	N1	R1
1	Phase U	1	-	+5 Vdc sensor	Hall W	-	-
2	PE	2	-	-	Hall U	-	-
3	Phase W	3	0 Vdc	-	0 Vdc	0 Vdc	-
4	Phase V	4	7-12 Vdc	0 Vdc sensor	+5 Vdc	+5 Vdc	-
A	Brake + (#)	5	/sin	-	/ChA	/data	/sin
B	Brake - (#)	6	sin	-	ChA	data	sin
C	PT 1000 +	7	/data	+5 Vdc	/ChZ	-	/ref
D	PT 1000 -	8	data	clock +	ChZ	-	ref
		9	-	clock -	Hall V	-	-
		10	shield	0 Vdc	shield	shield	shield
		11	/cos	shield	/ChB	-	/cos
		12	cos	-	ChB	-	cos
		13	-	-	Hall /W	-	-
		14	-	data	Hall /V	-	-
		15	-	-	Hall /U	-	-
		16	-	-	-	-	-
		17	-	/data	-	-	-

(#) Optional



TC4 Wiring motor connection

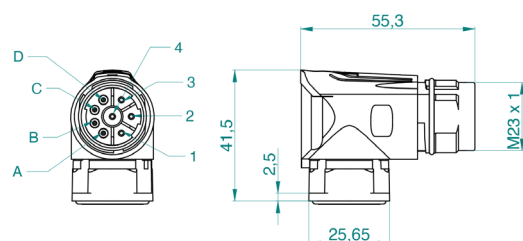
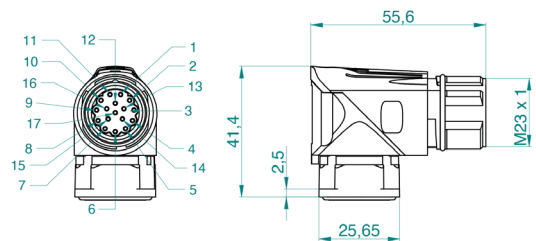
Connectors with H2 connection

Power connector		Feedback connector					
Pin	Function	Pin	A1	A11/A12	M1	N1	R1
1	Phase U	1	-	+5 Vdc sensor	Hall W	-	-
2	PE	2	-	PT 1000 +	Hall U	-	-
3	Phase W	3	0 Vdc	PT 1000 -	0 Vdc	0 Vdc	-
4	Phase V	4	7-12 Vdc	0 Vdc sensor	+5 Vdc	+5 Vdc	-
A	brake + (#)	5	/sin	-	/ChA	/data	/sin
B	brake - (#)	6	sin	-	ChA	data	sin
C	-	7	/data	+5 Vdc	/ChZ	-	/ref
D	-	8	data	clock +	ChZ	-	ref
		9	-	clock -	Hall V	-	-
		10	shield	0 Vdc	shield	shield	shield
		11	/cos	shield	/ChB	-	/cos
		12	cos	-	ChB	-	cos
		13	-	-	Hall /W	-	-
		14	-	data	Hall /V	-	-
		15	-	-	Hall /U	-	-
		16	PT 1000 +	-	PT 1000 +	PT 1000 +	PT 1000 +
		17	PT 1000 -	/data	PT 1000 -	PT 1000 -	PT 1000 -

(#) Optional


One cable connector with C21 connection

Pin	Function
1	Phase U
2	PE
3	Phase W
4	Phase V
A	Data +
B	Data -
C	Brake +
D	Brake -




Wiring motor connection **TC4**

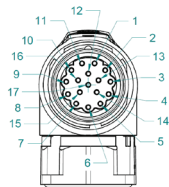
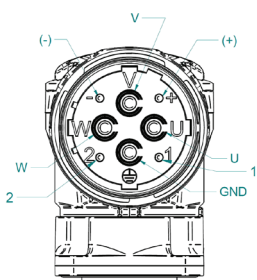
Connectors with G3 connection

Power connector		Feedback connector			
Pin	Function	Pin	A1	M1	R1
U	Phase U	1	-	-	-
	PE	2	-	-	-
W	Phase W	3	0 Vdc	shield	-
V	Phase V	4	7-12 Vdc	S1	-
+	brake + (#)	5	/sin	/S1	/sin
-	brake - (#)	6	sin	S2	sin
1	PT 1000 +	7	/data	/S2	/ref
2	PT 1000 -	8	data	S3	ref
		9	-	/S3	-
		10	shield	ChA	shield
		11	/cos	Index	/cos
		12	cos	/Index	cos
		13	-	/ChA	-
		14	-	ChB	-
		15	-	/ChB	-
		16	-	+5 Vdc	-
		17	-	0 Vdc	-

(#) Optional

Connectors with H3 connection

Power connector		Feedback connector			
Pin	Function	Pin	A1	M1	R1
U	Phase U	1	-	PT 1000 +	-
	PE	2	-	PT 1000 -	-
W	Phase W	3	0 Vdc	shield	-
V	Phase V	4	7-12 Vdc	S1	-
+	brake + (#)	5	/sin	/S1	/sin
-	brake - (#)	6	sin	S2	sin
1	-	7	/data	/S2	/ref
2	-	8	data	S3	ref
		9	-	/S3	-
		10	shield	ChA	shield
		11	/cos	Index	/cos
		12	cos	/Index	cos
		13	-	/ChA	-
		14	-	ChB	-
		15	-	/ChB	-
		16	PT 1000 +	+5 Vdc	PT 1000 +
		17	PT 1000 -	0 Vdc	PT 1000 -

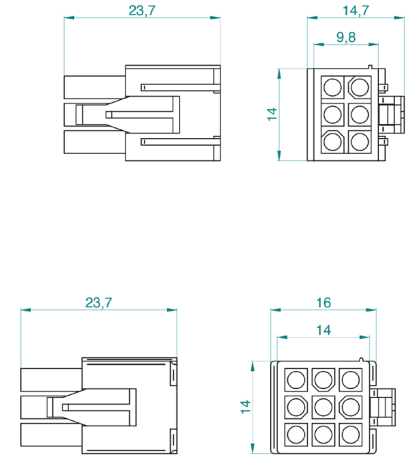


(#) Optional

TC4 Wiring motor connection

Connectors with D0 connection (9 pins, only for models 40-60-80)

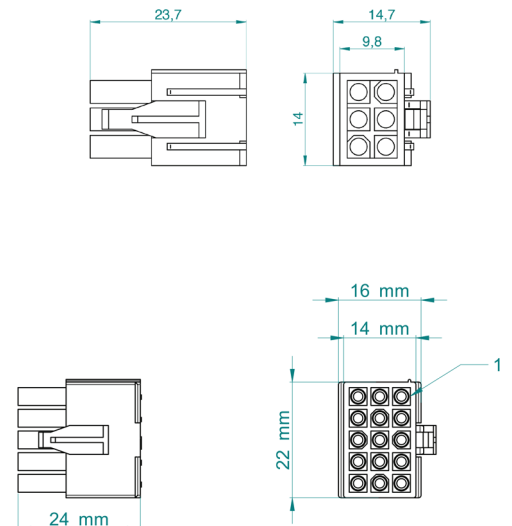
Power connector		Feedback connector			
Pin	Function	Pin	A1	N1	R1
1	Phase U	1	data +	data +	-
2	Phase V	2	+ sin	-	-
3	Phase W	3	Refsin	-	-
4	PE	4	data -	data -	-
5	PT 1000 + / brake + ^(#)	5	+ cos	-	-
6	PT 1000 - / brake - ^(#)	6	Refcos	-	-
		7	8V / us	+ 5V	-
		8	0V	0V	-
		9	shield	shield	-



(#) Optional

Connectors with D2 connection (15 pins, only for models 40-60-80)

Power connector		Feedback connector	
Pin	Function	Pin	M1
1	Phase U	1	Ch A
2	Phase V	2	Ch/A
3	Phase W	3	Ch B
4	PE	4	Ch/B
5	PT 1000 + / brake + ^(#)	5	Ch Z
6	PT 1000 - / brake - ^(#)	6	Ch/Z
		7	Hall U
		8	Hall/U
		9	Hall V
		10	Hall/V
		11	Hall W
		12	Hall/W
		13	5 Vdc
		14	0 Vdc
		15	Shield



(#) Optional

Motor Power Company
www.motorpowerco.com
info@motorpowerco.it

All rights reserved.
Complete or partial reproduction
is not allowed without our permission.

All technical data in this catalog
may be changed without prior notice.



**Motor Power
Company s.r.l.**

Reggio Emilia (Italy)
T. +39 0522 682710
info@motorpowerco.it

**Motor Power
Company (Taicang)
Motion Co. Ltd.**

Taicang, P.R.China
T. + 86 512 33337978
infoasia@motorpowerco.com



motorpowerco.com