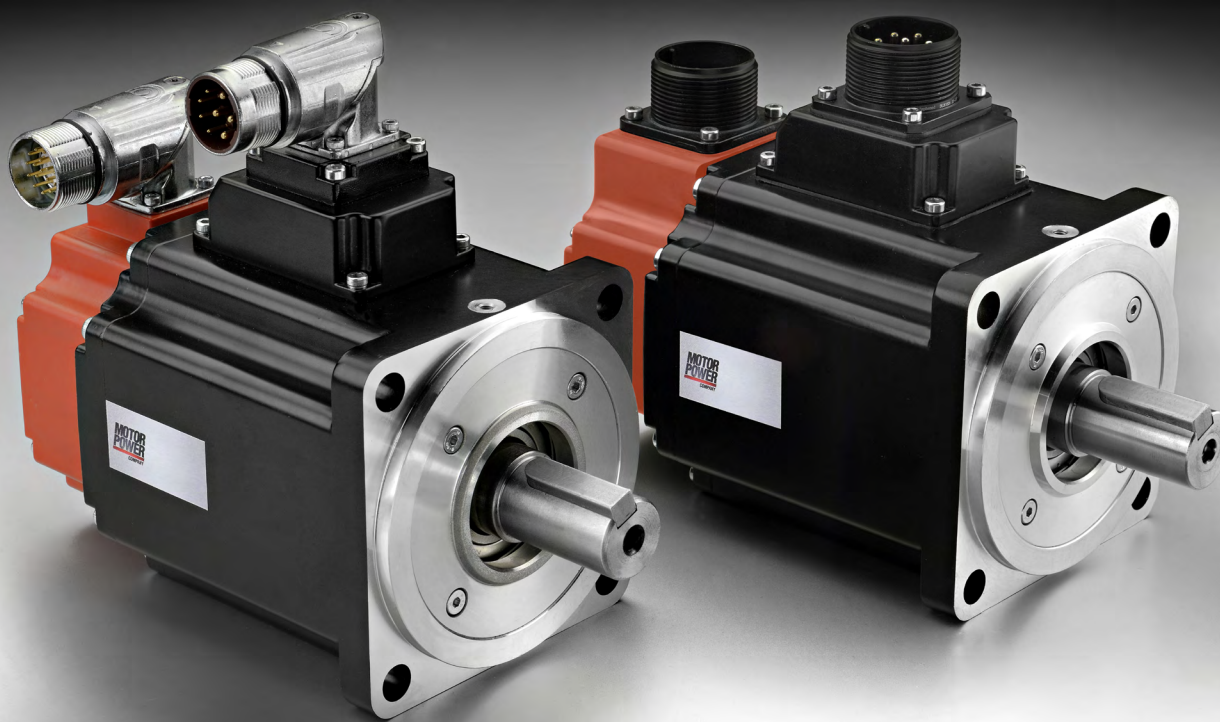




TETRA COMPACT - E

**THE ENHANCED BRUSHLESS
SERVOMOTORS**

**MOTOR
POWER**
COMPANY



Motor Power Company
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info@motorpowerco.it

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WELCOME TO MOTOR POWER COMPANY

Motor Power Company presents the new **TETRA COMPACT-ENHANCED** brushless servo motors, designed with the latest engineering and manufacturing technologies to deliver high dynamic performance for any automation requirement. Carefully selected components, strict quality standards, and international certifications ensure that this series provides precise, reliable, and responsive operation. These servo motors feature an innovative, patented 20-bit absolute magnetic encoder, combining compactness, high resolution, and accuracy to meet demanding application requirements. The **TETRA COMPACT-E** motors are the result of a completely new design approach and modern production concept: uncompromising quality, international certifications, and a wide range of power ratings make them ideal for achieving high performance in modern machinery.



BRUSHLESS

TECHNOLOGY

FEATURES AND BENEFITS

Synchronous brushless servomotor

Flange dimensions: 40 - 60 - 80 - 100 - 130 - 180 mm

0.16 Nm to 45 Nm rated torque

50 W to 7,5 kW rated output power

Rated winding voltage 230 Vac and 400 Vac

Maximum servomotor speed up to 6000rpm

Built-in 20 bit proprietary absolute magnetic encoder

TTL encoder, absolute multiturn encoder (Hiperface), also available.

Insulation class F (155 °C)

IP 65 (with oil seal)

Shaft balancing class G 2,5 according ISO 1940

Ambient operation temperature from -20° C to +40° C

Optional holding brake

Optional shaft sealing

Ral 9005 black powder coating

UL [UL 1004], CSA, CE, Rohs certified

Reach compliance



TETRA COMPACT-Enhanced

PRODUCT LINEUP

Servomotor Type	Nominal Power P_n	Nominal Torque M_n	Peak Torque M_{max}	Nominal Working Speed n_M	Maximum Working Speed n_{Max}	Moment of inertia
	[W]	[Nm]	[Nm]	[min ⁻¹]	[min ⁻¹]	
TC-E 40 1A	50	0,16	0,48	3000	6000	Medium
TC-E 40 1B	100	0,32	0,96	3000	6000	Medium
TC-E 60 2A	200	0,64	1,92	3000	6000	Low
TC-E 60 2B	400	1,27	3,81	3000	6000	Low
TC-E 80 3A	400	1,27	3,81	3000	6000	Low
TC-E 80 3B	750	2,39	7,16	3000	6000	Low
TC-E 100 4A	1000	3,18	9,54	3000	6000	Low
TC-E 100 4B	2000	6,37	19,11	3000	6000	Low
TC-E 130 5A	500	2,39	7,16	2000	3000	Medium
TC-E 130 5B	300	2,86	8,59	1000	2000	Medium
TC-E 130 5C	950 1000	4,77	14,3	2000	4000	Medium
TC-E 130 5D	810 850	5,39	13,8	1500	3000	Medium
TC-E 130 5E	600	5,73	17,19	1000	2000	Medium
TC-E 130 5F	870 900	8,59	25,77	1000	2000	Medium
TC-E 130 5G	1350 1500	7,16	21,48	2000	3000	Medium
TC-E 130 5H	2000	9,55	28,65	2000	5000	Medium
TC-E 180 6A	2000	9,55	28,65	2000	4000	Medium
TC-E 180 6B	3000	14,32	42,97	2000	4000	Medium
TC-E 180 6C	3000	19,1	57,29	1500	4000	Medium
TC-E 180 6D	3500	16,7	50,3	2000	4000	Medium
TC-E 180 6E	4500	28,65	71,62	1500	4000	Medium
TC-E 180 6F	5500	35,01	87,53	1500	4000	Medium
TC-E 180 6G	7500	47,75	119,37	1500	4000	Medium

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TETRA COMPACT-E SERVOMOTOR TYPE

TC-E	040 1B	C1	2	0	A2	0	D0	XX
Model		Winding Code	Winding Voltage	Mechanical Arrangement	Feedback	Brake	Connection	Optional
1		2	3	4	5	6	7	8



1	Model	See product lineup																						
2	Winding Code	B1	C1	D1	D2	D3	D4	D5	D6	E2	F1	F2	F3	F4	G1	G2	G3	G4	G5	H1	H3	L1	L2	M1
Motor																								
TC-E 040 1A		• & Δ																						
TC-E 040 1B		• & Δ																						
TC-E 060 2A		• & Δ																						
TC-E 060 2B		• & Δ																						
TC-E 080 3A		• & Δ																						
TC-E 080 3B		•																						
TC-E 100 4A		•																						
TC-E 100 4B		•																						
TC-E 130 5A		• & Δ																						
TC-E 130 5B		• & Δ																						
TC-E 130 5C		• & Δ																						
TC-E 130 5D		• & Δ																						
TC-E 130 5E		• & Δ																						
TC-E 130 5F		• & Δ																						
TC-E 130 5G		• & Δ																						
TC-E 130 5H		• & Δ																						
TC-E 180 6A		•																						
TC-E 180 6B		• & Δ																						
TC-E 180 6C		• & Δ																						
TC-E 180 6D		• & Δ																						
TC-E 180 6E		• & Δ																						
TC-E 180 6F		•																						
TC-E 180 6G		• & Δ																						
3	2 - • 230 Vac 4 - Δ 400 Vac																							
4	Mechanical Arrangement	0 - Smooth shaft 1 - Smooth shaft + oil seal 2 - Keyed shaft 3 - Keyed shaft + oil seal 4 (*) - High inertia smooth shaft 5 (*) - High inertia smooth shaft + oil seal 6 (*) - High inertia keyed shaft 7 (*) - High inertia keyed shaft + oil seal																						
(**) available for models TC-E 80 3B D4 2, TC-E 80 3B F3 4, TC-E 130 5C F1 2, TC-E 130 5C F1 4, TC-E 180 6A G2 2, TC-E 180 6A G3 4 only																								
5	Feedback	E1(*) - Encoder TTL 2500ppr A1 - Absolute multiturn encoder (Hiperface) A2 - Proprietary 20 bits absolute Single-Turn encoder A4 - Proprietary 16 bits absolute Multi-Turn encoder A6 (*) - Absolute multiturn encode (with battery box) 24 bit																						
(*) E1 and A6 not available for TC-E 40 models																								
6	Brake	0 - Without brake 1 - With brake																						
7	Connection	D0 - 300mm output cable lenght with plastic connector (TC-E 40, 60, 80) C2 - 90° M23 turnable connectors (TC-E 60, 80, 100, 130, 180 models 6A, 6B, 6C, 6D) C3 - MS connectors (TC-E 100, 130, 180)																						

TETRA COMPACT-E 40

230 Vac RATINGS AND SPECIFICATIONS

TIME RATING
INSULATION CLASS
ENCLOSURE
PROTECTION CLASS

Continuous
F
Totally enclosed. Self-cooled
IP 54 Standard
IP 65 with shaft sealing

AMBIENT TEMPERATURE
RELATIVE HUMIDITY
POLES
CERTIFICATION

-20 ... + 40 °C
5 ... 85% (non-condensing)
8
UL 1004, CSA, CE and Rohs approved
Reach compliance

TC-E 40 1A B1 2 TC-E 40 1B C1 2

Continuous stall torque	M_0	Nm	0,16	0,32
Peak torque	M_{max}	Nm	0,48	0,96
Nominal working speed	nN	min ⁻¹	3000	3000
Maximum working speed	nmax	min ⁻¹	6000	6000
Nominal torque	M_n	Nm	0,16	0,32
Nominal current	I_N	A _{rms}	0,59	0,89
Nominal power	P_N	kW	0,05	0,10
Rated winding voltage	Un	V _{ac}	230	230
Maximum winding voltage	U _{max}	V _{dc}	360	360
Maximum voltage to ground		V _{ac}	255	255
Maximum current	I _{max}	A _{rms}	1,80	2,70
Continuous stall current	I_0	A _{rms}	0,54	0,81
Voltage Constant	K_{eu-v}	Vrms/Krpm	18	24
Torque Constant	k_t	Nm/A _{rms}	0,30	0,40
Winding resistance	R_{20u-v}	Ohm	31,0	23,4
Winding inductance	L_{qu-v}	mH	26,4	21,5
Winding inductance	L_{du-v}	mH	24,7	20,6
Rotor inertia without holding brake	J_M	Kgcm ²	0,044	0,065
Rotor inertia with holding brake	J_M	Kgcm ²	0,045	0,066
Mass without holding brake	m	Kg	0,4	0,56
Mass with holding brake	m	Kg	0,6	0,77
Thermal time constant	Tth	min	10	15
Maximum radial shaft load		N	85	85
Maximum axial shaft load		N	40	40

Rated output with 185x185x8mm aluminum heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

TETRA COMPACT-E 40

400 Vac RATINGS AND SPECIFICATIONS

TIME RATING
INSULATION CLASS
ENCLOSURE
PROTECTION CLASS

Continuous
F
Totally enclosed. Self-cooled
IP 54 Standard
IP 65 with shaft sealing

AMBIENT TEMPERATURE
RELATIVE HUMIDITY
POLES
CERTIFICATION

-20 ... + 40 °C
5 ... 85% (non-condensing)
8
UL 1004, CSA, CE and Rohs approved
Reach compliance

TC-E 40 1A B1 4 TC-E 40 1B C1 4

Continuous stall torque	M_0	Nm	0,16	0,32
Peak torque	M_{max}	Nm	0,48	0,96
Nominal working speed	nN	min ⁻¹	3000	3000
Maximum working speed	nmax	min ⁻¹	6000	6000
Nominal torque	M_n	Nm	0,16	0,32
Nominal current	I_N	A _{rms}	0,59	0,89
Nominal power	P_N	kW	0,05	0,10
Rated winding voltage	Un	V _{ac}	400	400
Maximum winding voltage	U _{max}	V _{dc}	650	650
Maximum voltage to ground		V _{ac}	265	265
Maximum current	I _{max}	A _{rms}	1,80	2,70
Continuous stall current	I_0	A _{rms}	0,54	0,81
Voltage Constant	K_{eu-v}	Vrms/Krpm	18	24
Torque Constant	k_t	Nm/A _{rms}	0,30	0,40
Winding resistance	R_{20u-v}	Ohm	31,0	23,4
Winding inductance	L_{qu-v}	mH	26,4	21,5
Winding inductance	L_{du-v}	mH	24,7	20,6
Rotor inertia without holding brake	J_M	Kgcm ²	0,044	0,065
Rotor inertia with holding brake	J_M	Kgcm ²	0,045	0,066
Mass without holding brake	m	Kg	0,4	0,56
Mass with holding brake	m	Kg	0,6	0,77
Thermal time constant	Tth	min	10	15
Maximum radial shaft load		N	85	85
Maximum axial shaft load		N	40	40

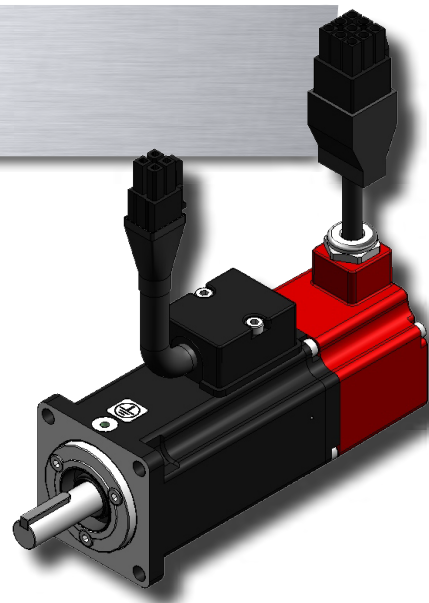
Rated output with 185x185x8mm aluminum heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

SEE IT BEFORE IT HAPPENS

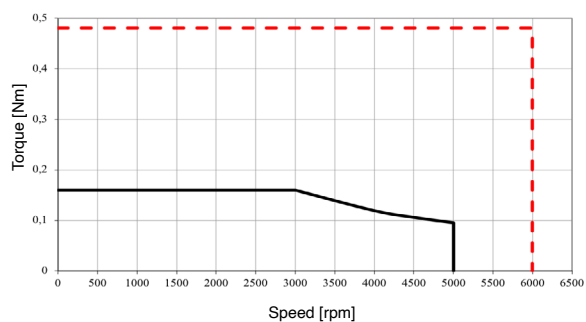
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TETRA COMPACT-E 40

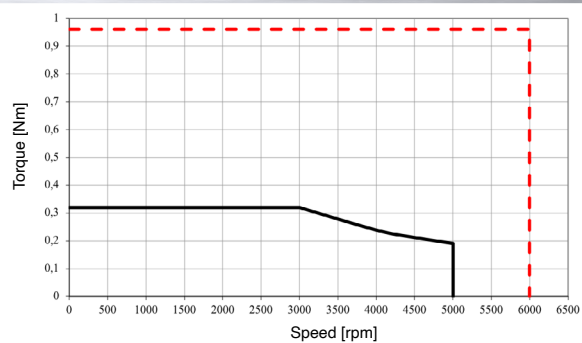
230-400 Vac TORQUE AND SPEED CHARTS



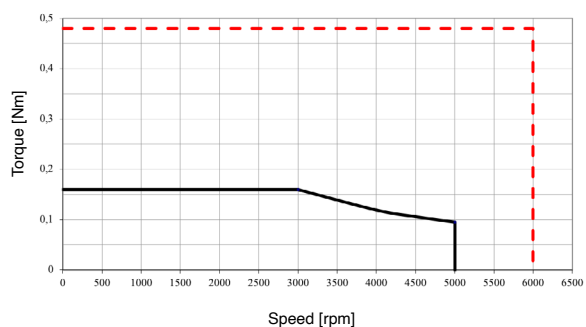
TETRA COMPACT-E 40 1A B1 2



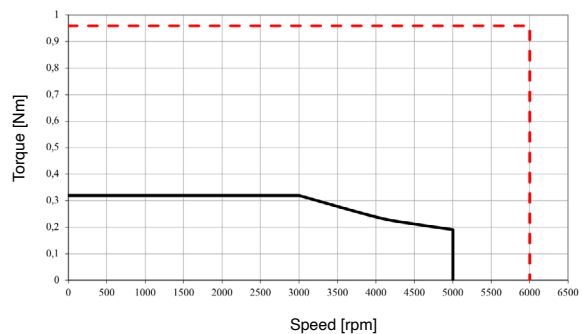
TETRA COMPACT-E 40 1B C1 2



TETRA COMPACT-E 40 1A B1 4



TETRA COMPACT-E 40 1B C1 4



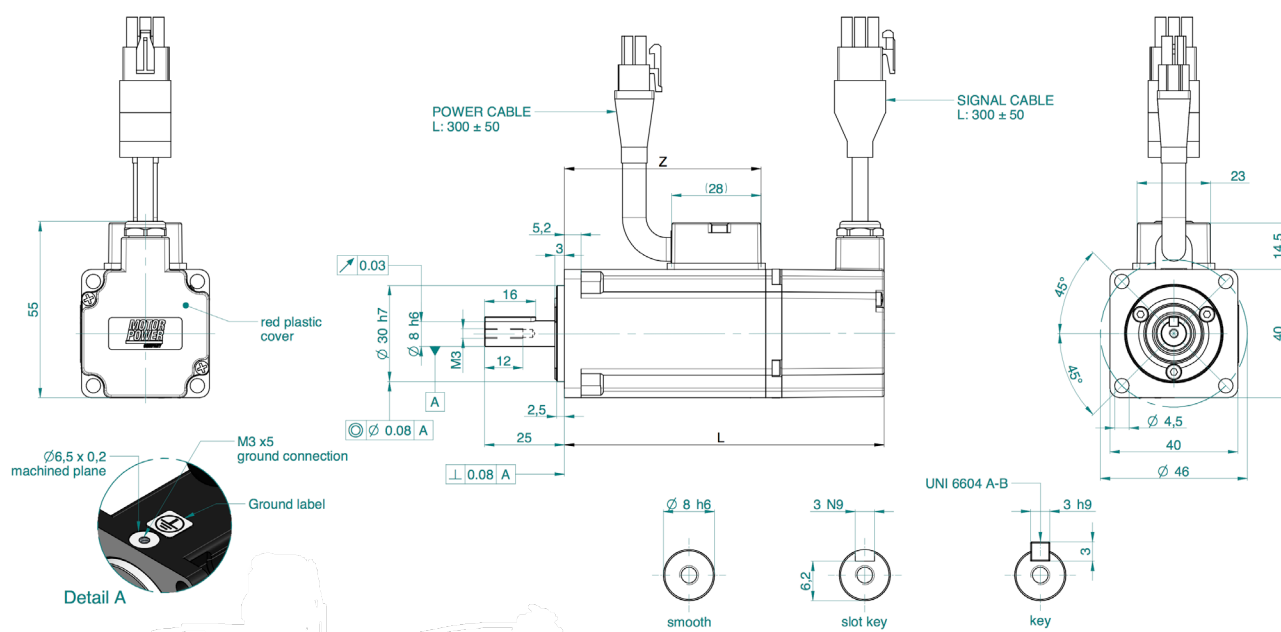
— Continuous torque
- - - Peak torque

TETRA COMPACT-E 40 DIMENSIONS

TC-E 40 1A

TC-E 40 1B

L without brake with feedback A2	mm	82	100
L with brake with feedback A2	mm	112	130
L without brake with feedback A1	mm	89,5	107,5
L with brake with feedback A1	mm	119,5	137,5
Z without brake	mm	43,5	61,5
Z with brake	mm	43,5	61,5



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TETRA COMPACT-E 60

230 Vac RATINGS AND SPECIFICATIONS

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	8
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 60 2A D3 2

TC-E 60 2B D3 2

Continuous stall torque	M_0	Nm	0,64	1,27
Peak torque	M_{max}	Nm	1,92	3,81
Nominal working speed	n_N	min ⁻¹	3000	3000
Maximum working speed	n_{max}	min ⁻¹	6000	6000
Nominal torque	M_n	Nm	0,64	1,27
Nominal current	I_N	A_{rms}	1,30	2,50
Nominal power	P_N	kW	0,20	0,40
Rated winding voltage	U_n	V_{ac}	230	230
Maximum winding voltage	U_{max}	V_{dc}	360	360
Maximum voltage to ground		V_{ac}	255	255
Maximum current	I_{max}	A_{rms}	4,50	7,80
Continuous stall current	I_0	A_{rms}	1,11	2,19
Voltage Constant	K_{eu-v}	Vrms/Krpm	35	35
Torque Constant	k_t	Nm/ A_{rms}	0,58	0,58
Winding resistance	R_{20u-v}	Ohm	12,2	5,2
Winding inductance	L_{qu-v}	mH	24,8	12,5
Winding inductance	L_{du-v}	mH	22,7	12
Rotor inertia without holding brake	J_H	Kgcm ²	0,15	0,26
Rotor inertia with holding brake	J_H	Kgcm ²	0,16	0,27
Mass without holding brake	m	Kg	1,02	1,45
Mass with holding brake	m	Kg	1,5	2
Thermal time constant	T_{th}	min	15	20
Maximum radial shaft load		N	200	200
Maximum axial shaft load		N	70	70

Rated output with 250x250x12mm aluminum heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

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TETRA COMPACT-E 60

400 Vac RATINGS AND SPECIFICATIONS

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	8
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 60 2A D3 4

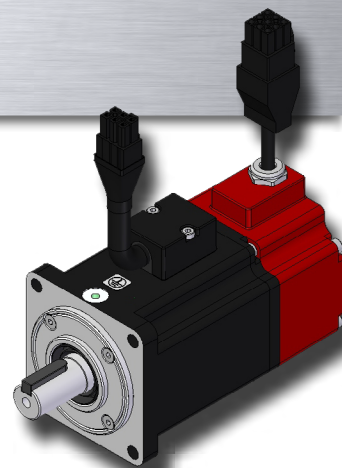
TC-E 60 2B D3 4

Continuous stall torque	M_0	Nm	0,64	1,27
Peak torque	M_{max}	Nm	1,92	3,81
Nominal working speed	nN	min ⁻¹	3000	3000
Maximum working speed	nmax	min ⁻¹	6000	6000
Nominal torque	M_n	Nm	0,64	1,27
Nominal current	I_N	A _{rms}	1,30	2,50
Nominal power	P_N	kW	0,20	0,40
Rated winding voltage	Un	V _{ac}	400	400
Maximum winding voltage	U _{max}	V _{dc}	650	650
Maximum voltage to ground		V _{ac}	265	265
Maximum current	I _{max}	A _{rms}	4,50	7,80
Continuous stall current	I ₀	A _{rms}	1,11	2,19
Voltage Constant	K _{eu-v}	Vrms/Krpm	35	35
Torque Constant	k _t	Nm/A _{rms}	0,58	0,58
Winding resistance	R _{20u-v}	Ohm	12,2	5,2
Winding inductance	L _{qu-v}	mH	24,8	12,5
Winding inductance	L _{du-v}	mH	22,7	12
Rotor inertia without holding brake	J _H	Kgcm ²	0,15	0,26
Rotor inertia with holding brake	J _H	Kgcm ²	0,16	0,27
Mass without holding brake	m	Kg	1,02	1,45
Mass with holding brake	m	Kg	1,5	2
Thermal time constant	Tth	min	15	20
Maximum radial shaft load		N	200	200
Maximum axial shaft load		N	70	70

Rated output with 250x250x12mm aluminum heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

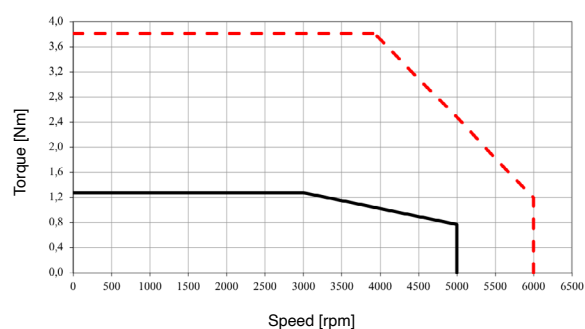
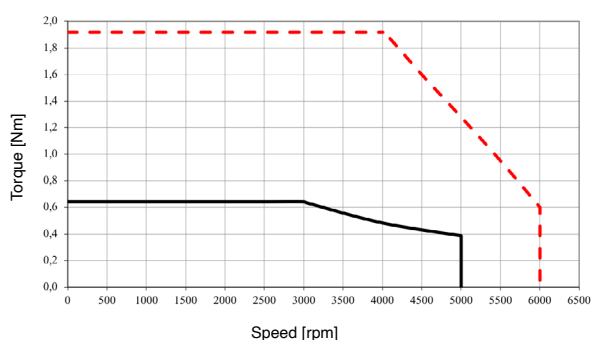
TETRA COMPACT-E 60

230-400 Vac TORQUE AND SPEED CHARTS



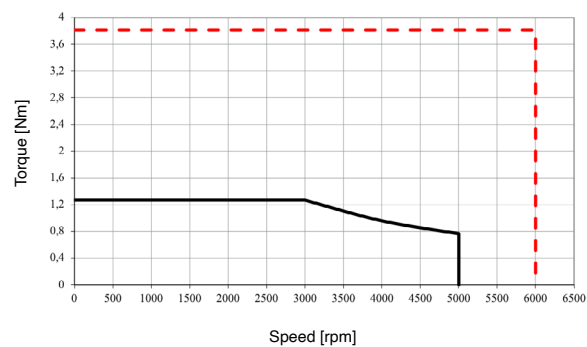
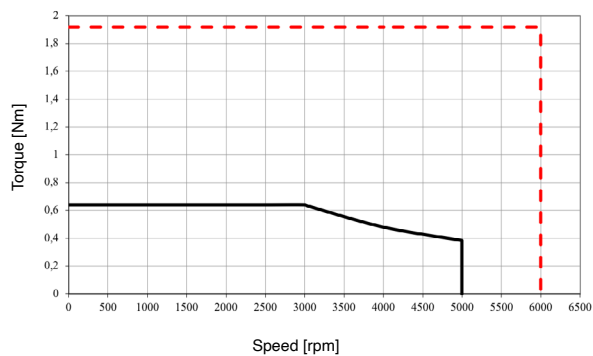
TETRA COMPACT-E 60 2A D3 2

TETRA COMPACT-E 60 2B D3 2



TETRA COMPACT-E 60 2A D3 4

TETRA COMPACT-E 60 2B D3 4



 Continuous torque
 Peak torque

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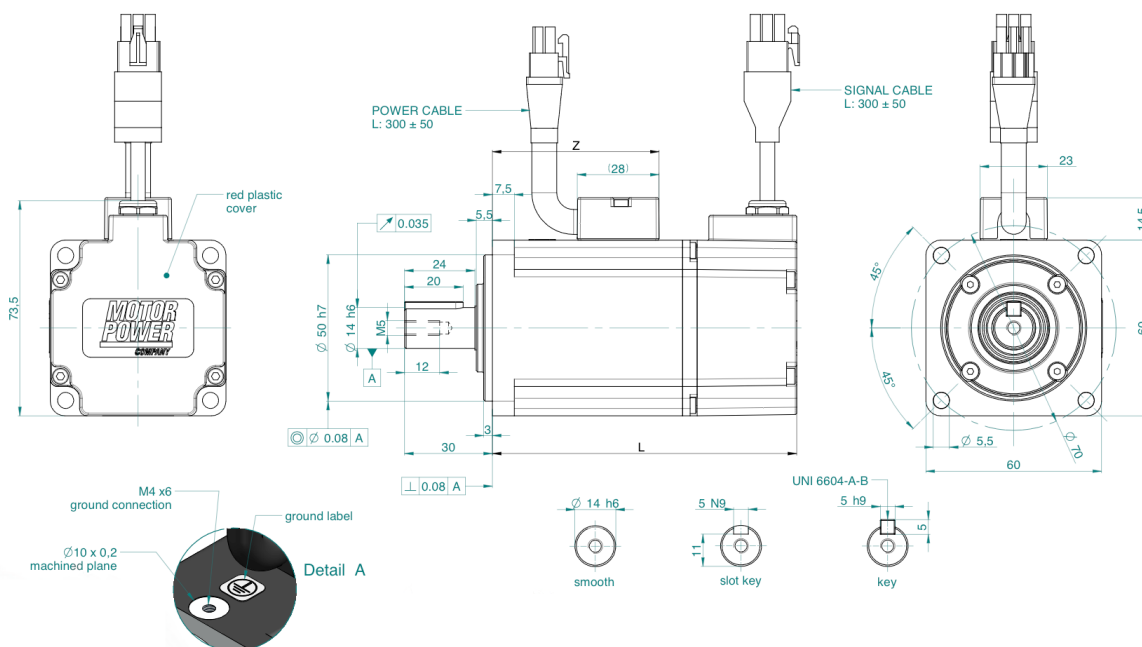
TETRA COMPACT-E 60 DIMENSIONS

TC-E 60 2A

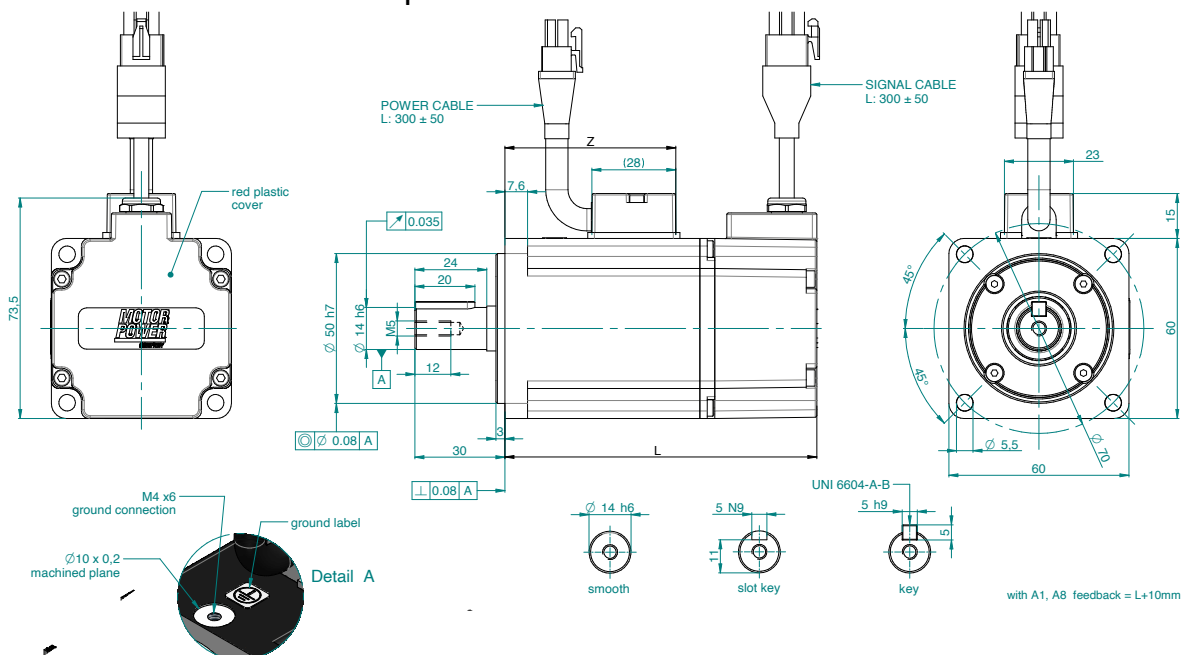
TC-E 60 2B

L without brake with feedback A2	mm	104	129
L with brake with feedback A2	mm	140	165
L without brake with feedback A1/E1/A6	mm	114	139
L with brake with feedback A1/E1/A6	mm	150	175
Z without brake	mm	57	82
Z with brake	mm	57	82

D0 connection with oil seal option



D0 connection without oil seal option



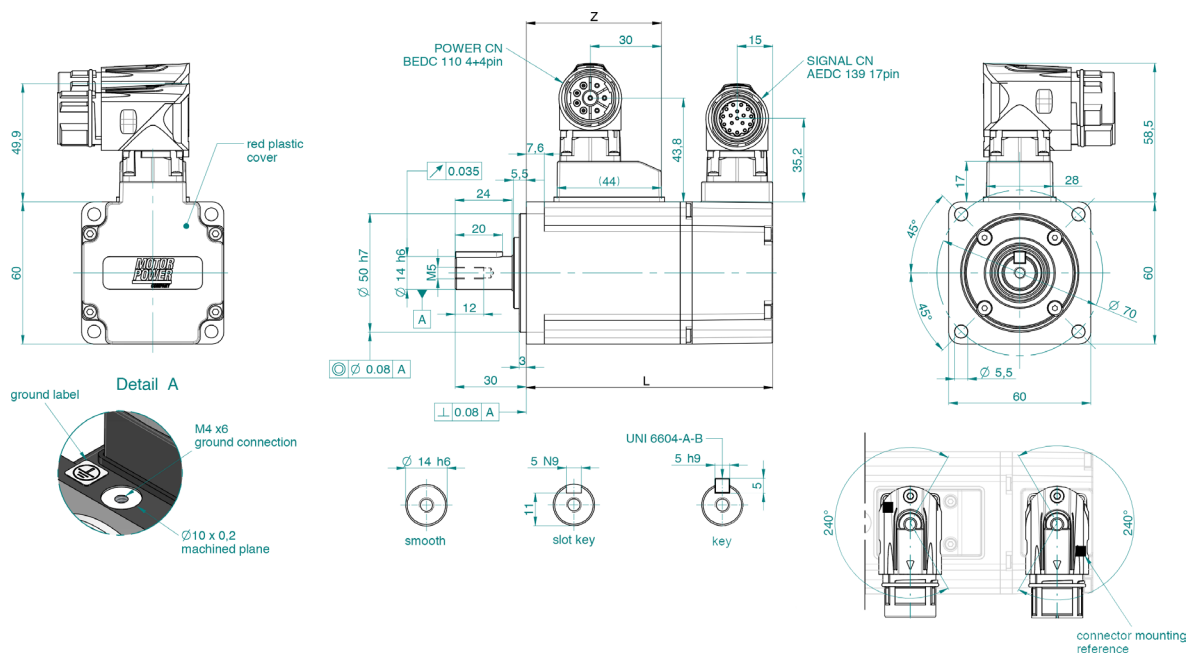
TETRA COMPACT-E 60 DIMENSIONS

TC-E 60 2A

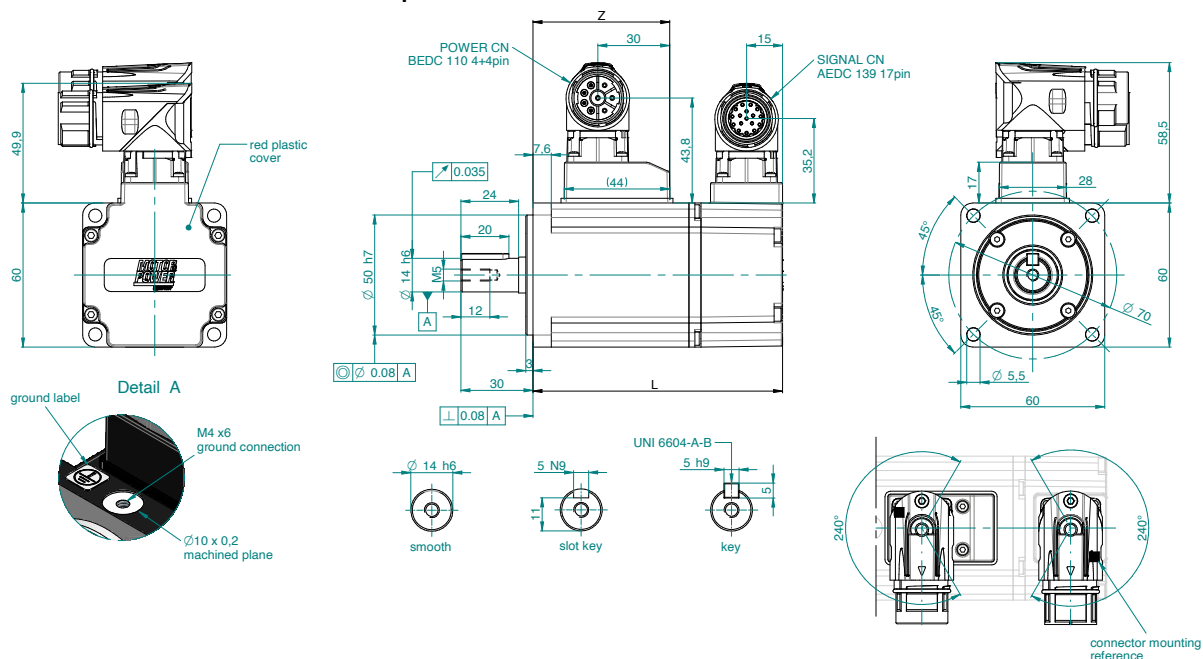
TC-E 60 2B

L without brake with feedback A2	mm	104	129
L with brake with feedback A2	mm	140	165
L without brake with feedback A1/E1/A6	mm	114	139
L with brake with feedback A1/E1/A6	mm	150	175
Z without brake	mm	57	82
Z with brake	mm	57	82

C2 connection with oil seal option



C2 connection without oil seal option



TETRA COMPACT-E 80

230 Vac RATINGS AND SPECIFICATIONS

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	8
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 80 3A D2 2

TC-E 80 3B D4 2

Continuous stall torque	M_0	Nm	1,27	2,39
Peak torque	M_{max}	Nm	3,81	7,16
Nominal working speed	nN	min ⁻¹	3000	3000
Maximum working speed	nmax	min ⁻¹	6000	6000
Nominal torque	M_n	Nm	1,27	2,39
Nominal current	I_N	A_{rms}	2,52	4,29
Nominal power	P_N	kW	0,40	0,75
Rated winding voltage	U_n	V_{ac}	230	230
Maximum winding voltage	U_{max}	V_{dc}	360	360
Maximum voltage to ground		V_{ac}	255	255
Maximum current	I_{max}	A_{rms}	7,80	13,50
Continuous stall current	I_0	A_{rms}	2,29	4,01
Voltage Constant	K_{eu-v}	V_{rms}/K_{rpm}	33,5	36
Torque Constant	k_t	Nm/ A_{rms}	0,55	0,60
Winding resistance	R_{20u-v}	Ohm	3,2	1,5
Winding inductance	L_{qu-v}	mH	12	6,6
Winding inductance	L_{du-v}	mH	11,3	6,1
Rotor inertia without holding brake	J_M	Kgcm ²	0,66	1,18
Rotor inertia with holding brake	J_M	Kgcm ²	0,71	1,23
Rotor high inertia without holding brake	J_M	Kgcm ²	-	1,53
Rotor high inertia with holding brake	J_M	Kgcm ²	-	1,58
Mass without holding brake	m	Kg	2	2,8
Mass with holding brake	m	Kg	2,8	3,6
High inertia mass without holding brake	m	Kg	-	2,9
High inertia mass with holding brake	m	Kg	-	3,7
Thermal time constant	Tth	min	25	28
Maximum radial shaft load		N	332	332
Maximum axial shaft load		N	115	115

Rated output with 250x250x12mm aluminum heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

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TETRA COMPACT-E 80

400 Vac RATINGS AND SPECIFICATIONS

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	8
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 80 3A D2 4

TC-E 80 3B F3 4

Continuous stall torque	M_0	Nm	1,27	2,39
Peak torque	M_{max}	Nm	3,81	7,16
Nominal working speed	nN	min ⁻¹	3000	3000
Maximum working speed	nmax	min ⁻¹	6000	6000
Nominal torque	M_n	Nm	1,27	2,39
Nominal current	I_N	A_{rms}	2,52	2,81
Nominal power	P_N	kW	0,40	0,75
Rated winding voltage	U_n	V_{ac}	400	400
Maximum winding voltage	U_{max}	V_{dc}	650	650
Maximum voltage to ground		V_{ac}	265	265
Maximum current	I_{max}	A_{rms}	7,80	8,66
Continuous stall current	I_0	A_{rms}	2,29	2,63
Voltage Constant	K_{eu-v}	V_{rms}/K_{rpm}	33,5	55
Torque Constant	k_t	Nm/ A_{rms}	0,55	0,91
Winding resistance	R_{20u-v}	Ohm	3,2	3,5
Winding inductance	L_{qu-v}	mH	12	15,4
Winding inductance	L_{du-v}	mH	11,3	14,2
Rotor inertia without holding brake	J_M	Kgcm ²	0,66	1,18
Rotor inertia with holding brake	J_M	Kgcm ²	0,71	1,23
Rotor high inertia without holding brake	J_M	Kgcm ²	-	1,53
Rotor high inertia with holding brake	J_M	Kgcm ²	-	1,58
Mass without holding brake	m	Kg	2	2,8
Mass with holding brake	m	Kg	2,8	3,6
High inertia mass without holding brake	m	Kg	-	2,9
High inertia mass with holding brake	m	Kg	-	3,7
Thermal time constant	Tth	min	25	28
Maximum radial shaft load		N	332	332
Maximum axial shaft load		N	115	115

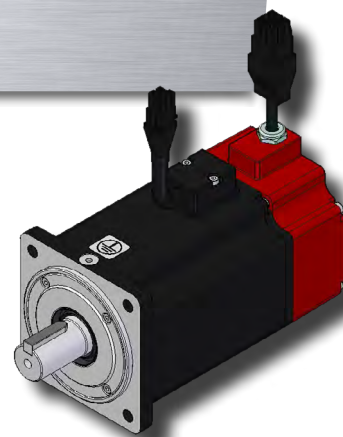
Rated output with 250x250x12mm aluminum heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

SEE IT BEFORE IT HAPPENS

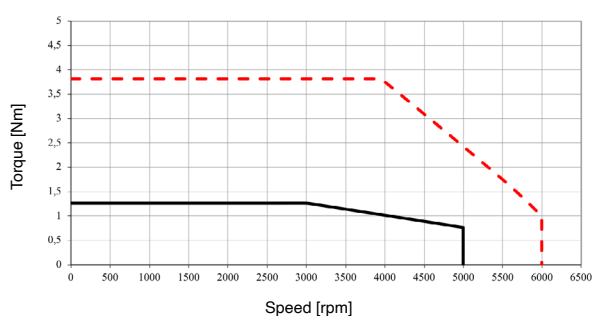
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TETRA COMPACT-E 80

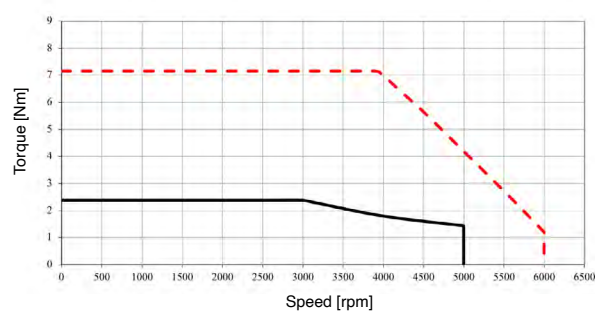
230-400 Vac TORQUE AND SPEED CHARTS



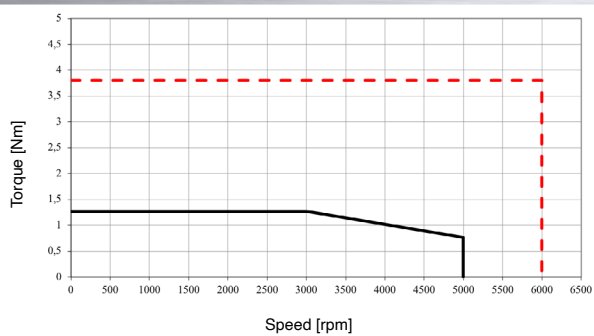
TETRA COMPACT-E 80 3A D2 2



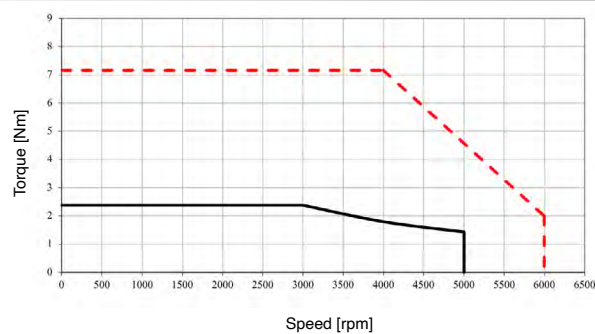
TETRA COMPACT-E 80 3B D4 2



TETRA COMPACT-E 80 3A D2 4



TETRA COMPACT-E 80 3B F3 4



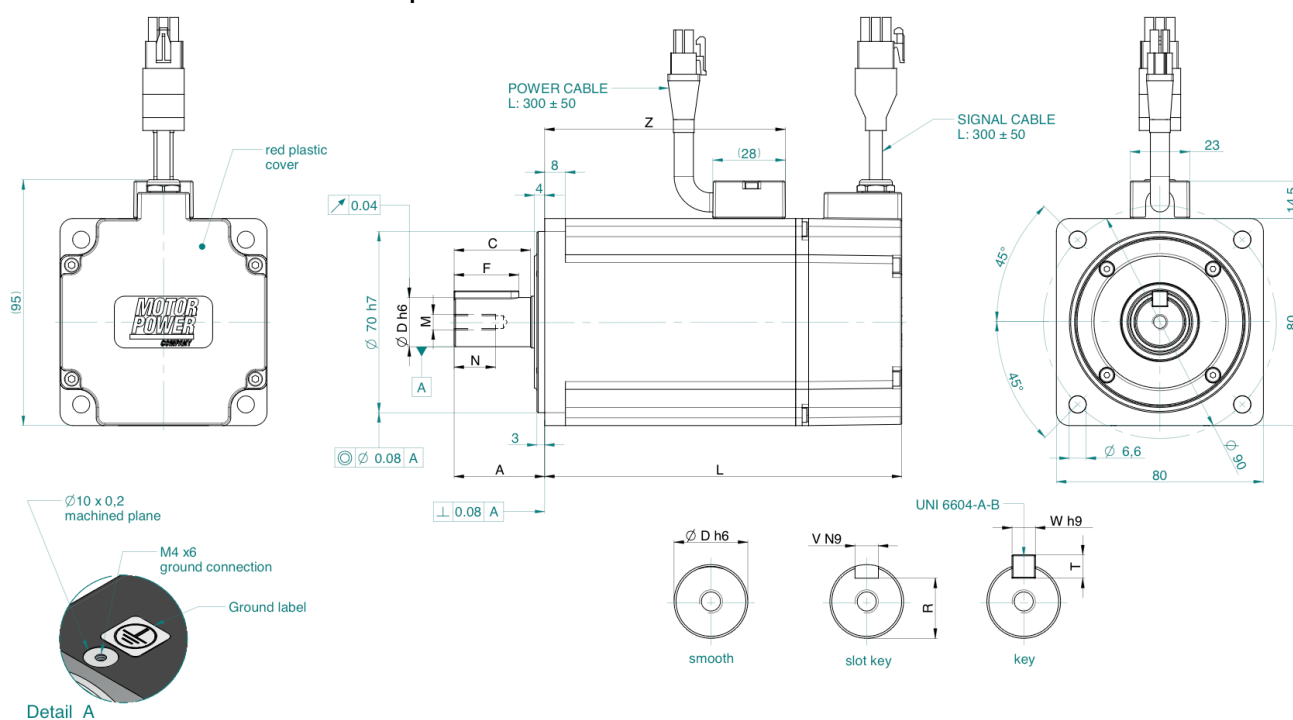
 Continuous torque
 Peak torque

TETRA COMPACT-E 80 DIMENSIONS

TC-E 80 3A TC-E 80 3B

L Without Brake with feedback A2	mm	112	138
L With Brake with feedback A2	mm	152	178
L Without Brake with feedback A1/E1/A6	mm	122	148
L With Brake with feedback A1/E1/A6	mm	162	188
Z Without Brake	mm	68	93
Z With Brake	mm	68	93
D	mm	14	19
A	mm	30	35
C	mm	24,5	29,5
M	mm	M5	M6
N	mm	12	16
F	mm	20	25
W	mm	5	6
T	mm	5	6
V	mm	5	6
R	mm	11	15,5

D0 connection with oil seal option



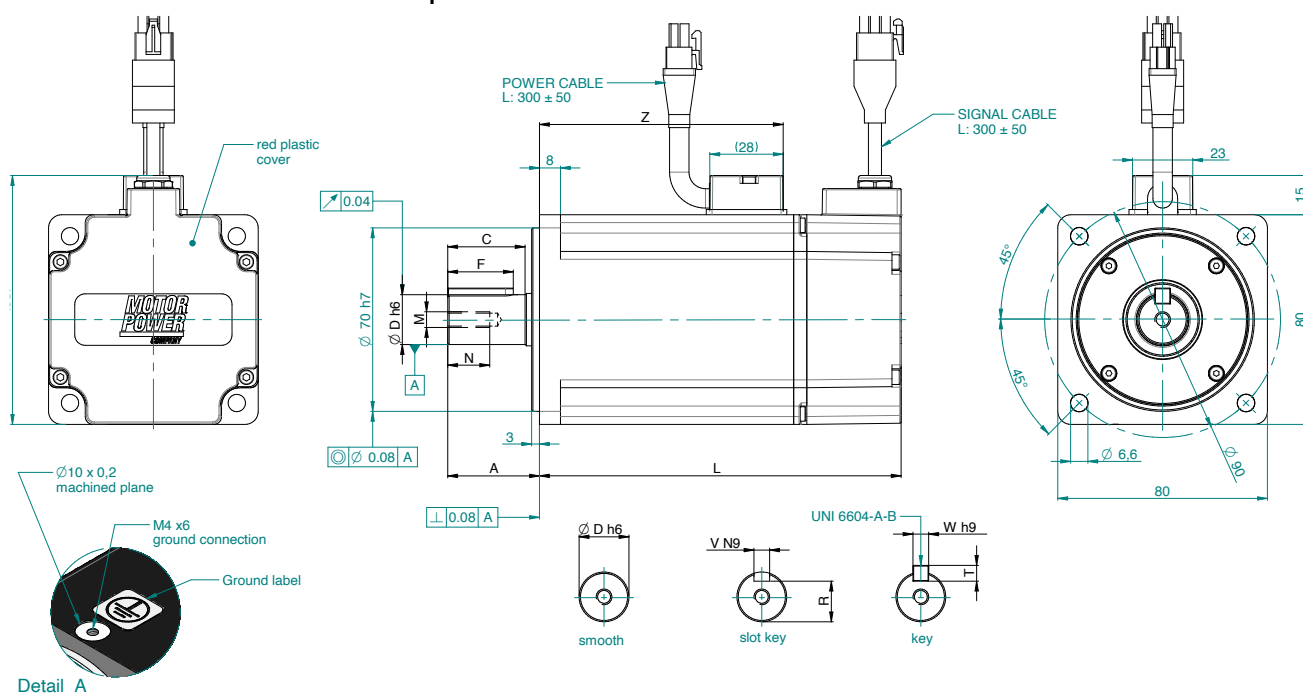
TETRA COMPACT-E 80 DIMENSIONS

TC-E 80 3A

TC-E 80 3B

L Without Brake with feedback A2	mm	112	138
L With Brake with feedback A2	mm	152	178
L Without Brake with feedback A1/E1/A6	mm	122	148
L With Brake with feedback A1/E1/A6	mm	162	188
Z Without Brake	mm	68	93
Z With Brake	mm	68	93
D	mm	14	19
A	mm	30	35
C	mm	24,5	29,5
M	mm	M5	M6
N	mm	12	16
F	mm	20	25
W	mm	5	6
T	mm	5	6
V	mm	5	6
R	mm	11	15,5

D0 connection without oil seal option

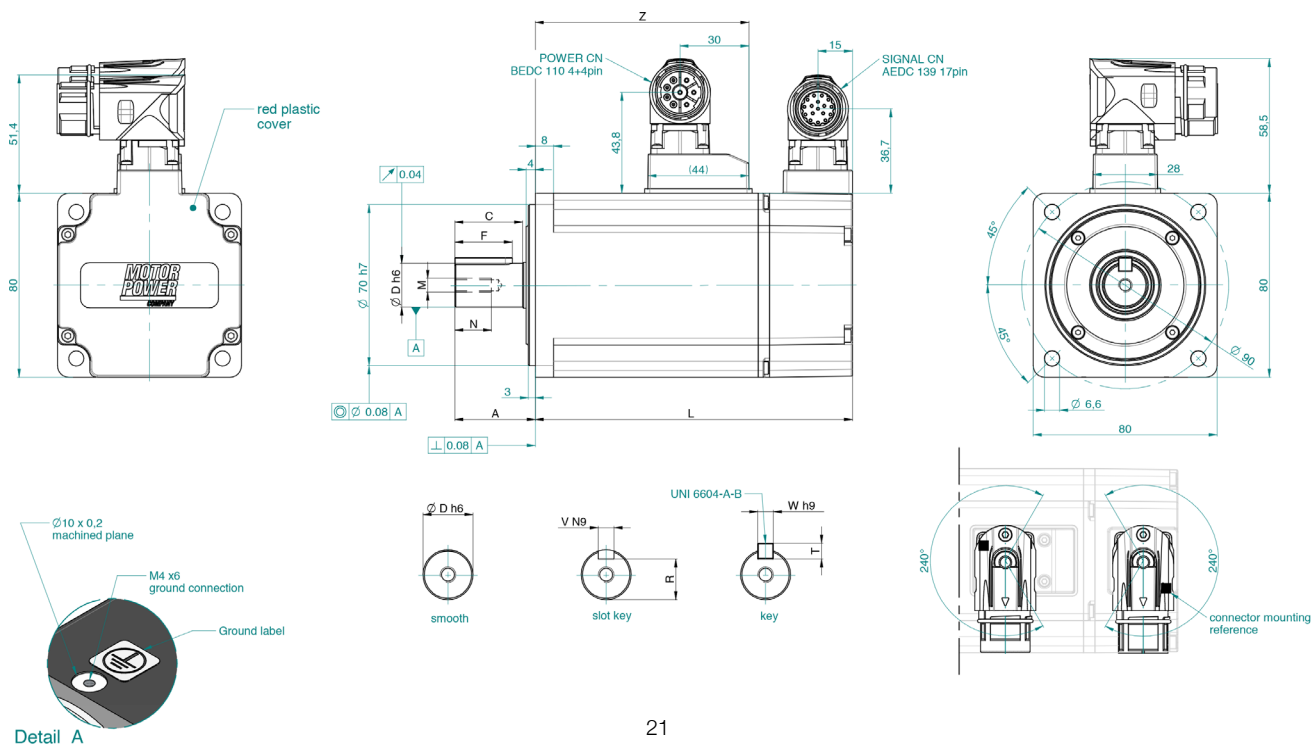


TETRA COMPACT-E 80 DIMENSIONS

TC-E 80 3A **TC-E 80 3B**

L Without Brake with feedback A2	mm	112	138
L With Brake with feedback A2	mm	152	178
L Without Brake with feedback A1/E1/A6	mm	122	148
L With Brake with feedback A1/E1/A6	mm	162	188
Z Without Brake	mm	68	93
Z With Brake	mm	68	93
D	mm	14	19
A	mm	30	35
C	mm	24,5	29,5
M	mm	M5	M6
N	mm	12	16
F	mm	20	25
W	mm	5	6
T	mm	5	6
V	mm	5	6
R	mm	11	15,5

C2 connection with oil seal option



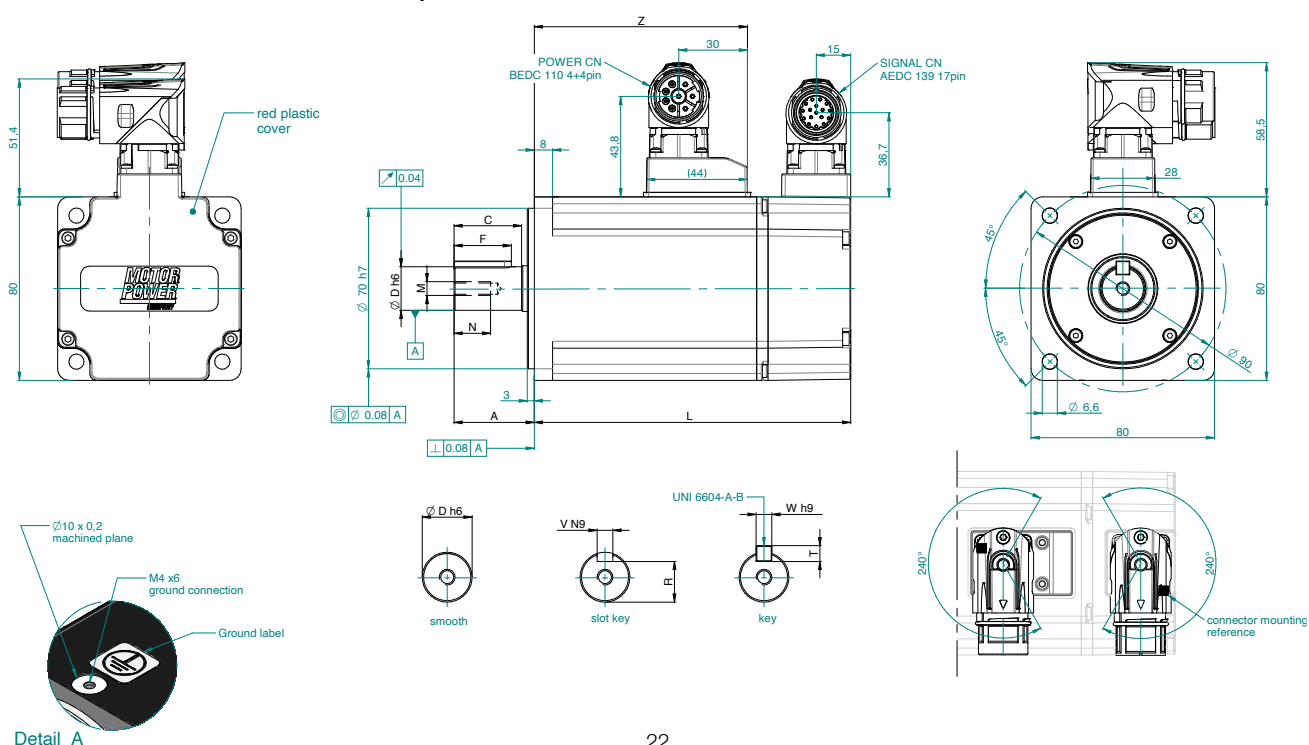
TETRA COMPACT-E 80 DIMENSIONS

TC-E 80 3A

TC-E 80 3B

L Without Brake with feedback A2	mm	112	138
L With Brake with feedback A2	mm	152	178
L Without Brake with feedback A1/E1/A6	mm	122	148
L With Brake with feedback A1/E1/A6	mm	162	188
Z Without Brake	mm	68	93
Z With Brake	mm	68	93
D	mm	14	19
A	mm	30	35
C	mm	24,5	29,5
M	mm	M5	M6
N	mm	12	16
F	mm	20	25
W	mm	5	6
T	mm	5	6
V	mm	5	6
R	mm	11	15,5

C2 connection without oil seal option



TETRA COMPACT-E 100

230 Vac RATINGS AND SPECIFICATIONS

TIME RATING
INSULATION CLASS
ENCLOSURE
PROTECTION CLASS

Continuous
F
Totally enclosed. Self-cooled
IP 54 Standard
IP 65 with shaft sealing

AMBIENT TEMPERATURE
RELATIVE HUMIDITY
POLES
CERTIFICATION

-20 ... + 40 °C
5 ... 85% (non-condensing)
10
UL 1004, CSA, CE and Rohs approved
Reach compliance

TC-E 100 4A D1 2

TC-E 100 4B D5 2

Continuous stall torque	M_0	Nm	3,18	6,37
Peak torque	M_{max}	Nm	9,54	19,11
Nominal working speed	nN	min ⁻¹	3000	3000
Maximum working speed	nmax	min ⁻¹	6000	6000
Nominal torque	M_n	Nm	3,18	6,37
Nominal current	I_N	A_{rms}	6,64	10,27
Nominal power	P_N	kW	1,00	2,00
Rated winding voltage	U_n	V_{ac}	230	230
Maximum winding voltage	U_{max}	V_{dc}	360	360
Maximum voltage to ground		V_{ac}	255	255
Maximum current	I_{max}	A_{rms}	20,0	35,0
Continuous stall current	I_0	A_{rms}	5,83	9,87
Voltage Constant	K_{eu-v}	V_{rms}/K_{rpm}	33	39
Torque Constant	k_t	Nm/ A_{rms}	0,55	0,65
Winding resistance	R_{20u-v}	Ohm	0,67	0,36
Winding inductance	L_{qu-v}	mH	4,3	2,6
Winding inductance	L_{du-v}	mH	4,2	2,59
Rotor inertia without holding brake	J_M	Kgcm ²	2,39	4,27
Rotor inertia with holding brake	J_M	Kgcm ²	2,44	4,34
Mass without holding brake	m	Kg	4,6	6,7
Mass with holding brake	m	Kg	5,1	7,2
Thermal time constant	Tth	min	28	30
Maximum radial shaft load		N	570	570
Maximum axial shaft load		N	155	155

Rated output with 300x300x20mm steel heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

TETRA COMPACT-E 100

400 Vac RATINGS AND SPECIFICATIONS

TIME RATING
INSULATION CLASS
ENCLOSURE
PROTECTION CLASS

Continuous
F
Totally enclosed. Self-cooled
IP 54 Standard
IP 65 with shaft sealing

AMBIENT TEMPERATURE
RELATIVE HUMIDITY
POLES
CERTIFICATION

-20 ... + 40 °C
5 ... 85% (non-condensing)
10
UL 1004, CSA, CE and Rohs approved
Reach compliance

TC-E 100 4A D6 4

TC-E 100 4B H3 4

Continuous stall torque	M_0	Nm	3,18	6,37
Peak torque	M_{max}	Nm	9,54	19,11
Nominal working speed	nN	min ⁻¹	3000	3000
Maximum working speed	nmax	min ⁻¹	6000	5500
Nominal torque	M_n	Nm	3,18	6,37
Nominal current	I_N	A_{rms}	5,77	5,56
Nominal power	P_N	kW	1,00	2,00
Rated winding voltage	U_n	V_{ac}	400	400
Maximum winding voltage	U_{max}	V_{dc}	650	650
Maximum voltage to ground		V_{ac}	265	265
Maximum current	I_{max}	A_{rms}	16,40	17,65
Continuous stall current	I_0	A_{rms}	5,06	5,35
Voltage Constant	K_{eu-v}	V_{rms}/K_{rpm}	38	72
Torque Constant	k_t	Nm/ A_{rms}	0,63	1,19
Winding resistance	R_{20u-v}	Ohm	0,89	1,23
Winding inductance	L_{qu-v}	mH	5,7	8,9
Winding inductance	L_{du-v}	mH	5,6	8,7
Rotor inertia without holding brake	J_M	Kgcm ²	2,39	4,27
Rotor inertia with holding brake	J_M	Kgcm ²	2,44	4,34
Mass without holding brake	m	Kg	4,6	6,7
Mass with holding brake	m	Kg	5,1	7,2
Thermal time constant	Tth	min	28	30
Maximum radial shaft load		N	570	570
Maximum axial shaft load		N	155	155

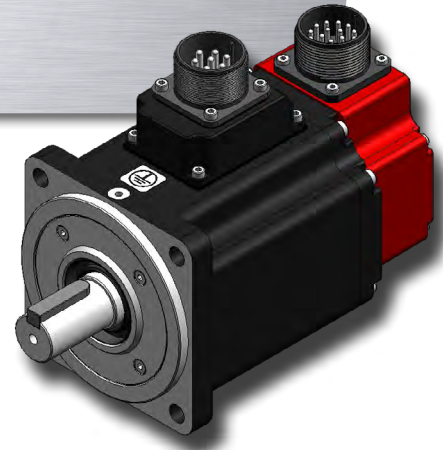
Rated output with 300x300x20mm steel heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

SEE IT BEFORE IT HAPPENS

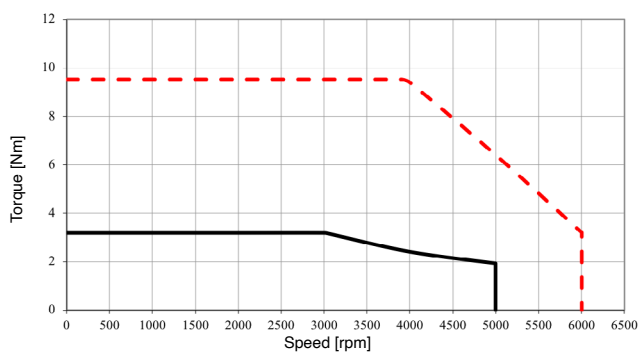
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TETRA COMPACT-E 100

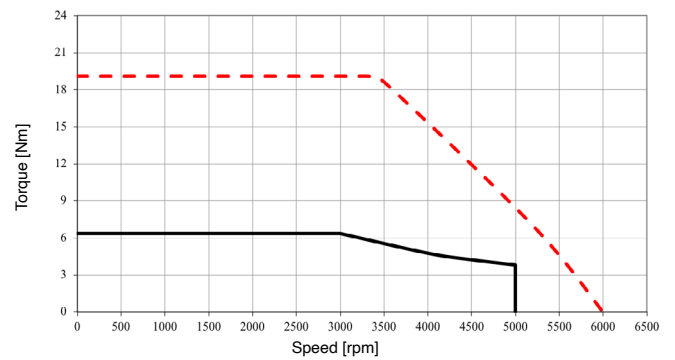
230-400 Vac TORQUE AND SPEED CHARTS



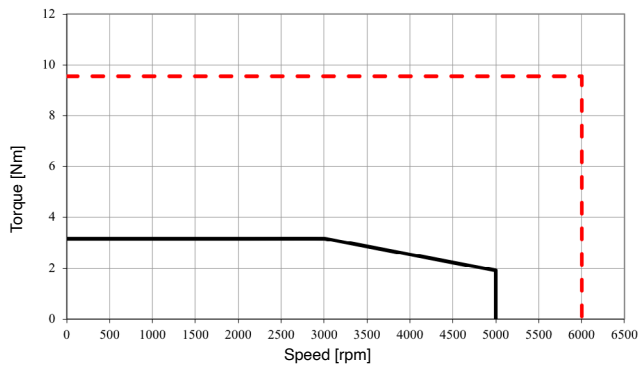
TETRA COMPACT-E 100 4A D1 2



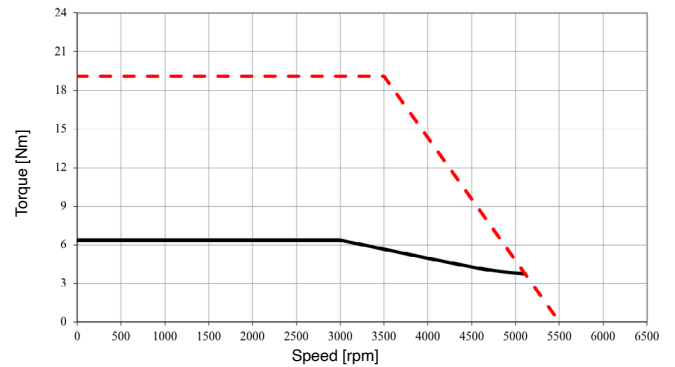
TETRA COMPACT-E 100 4B D5 2



TETRA COMPACT-E 100 4A D6 4



TETRA COMPACT-E 100 4B H3 4



— Continuous torque
- - - Peak torque

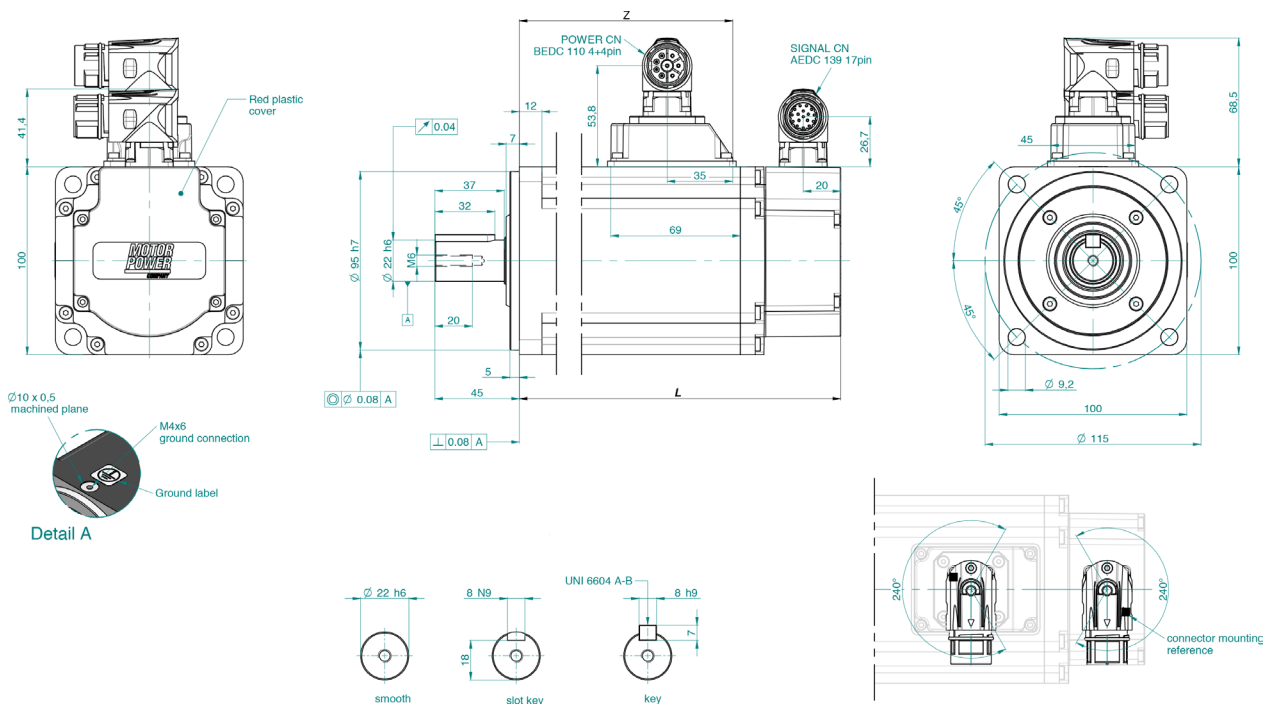
SEE IT BEFORE IT HAPPENS

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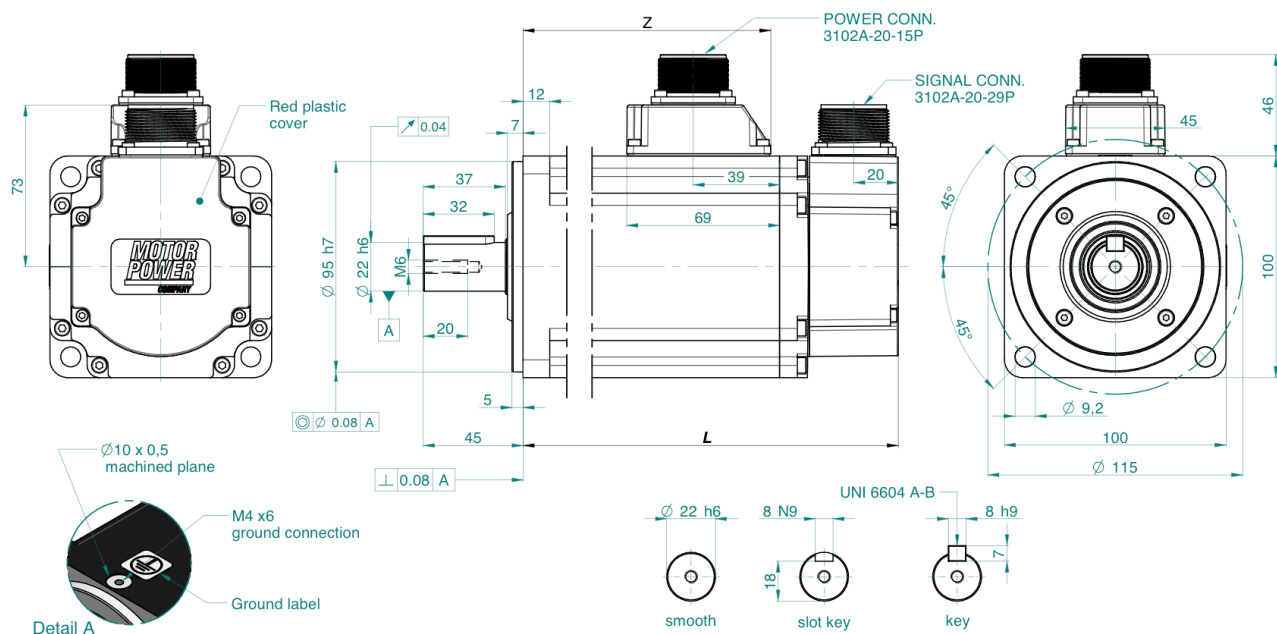
TC-E 100 4A TC-E 100 4B

L Without Brake with feedback A2	mm	153,5	198,5
L With Brake with feedback A2	mm	180,5	225,5
L Without Brake with feedback A1/E1/A6	mm	165,5	210,5
L With Brake with feedback A1/E1/A6	mm	192,5	237,5
Z Without Brake	mm	96	141
Z With Brake	mm	96	141

C2 connection



C3 connection



TETRA COMPACT-E 130

230 Vac RATINGS AND SPECIFICATIONS.1

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	10
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 130 5A F1 2 TC-E 130 5B L1 2 TC-E 130 5C F1 2 TC-E 130 5D F4 2

Continuous stall torque	M_0	Nm	2,39	2,86	4,77	5,39
Peak torque	M_{max}	Nm	7,16	8,59	14,3	13,8
Nominal working speed	n_N	min ⁻¹	2000	1000	2000	1500
Maximum working speed	n_{max}	min ⁻¹	3000	2000	3000	3000
Nominal torque	M_n	Nm	2,39	2,86	4,77	5,39
Nominal current	I_N	A _{rms}	3,24	2,09	6,29	6,29
Nominal power	P_N	kW	0,50	0,30	1,00	0,85
Rated winding voltage	U_n	V _{ac}	230	230	230	230
Maximum winding voltage	U_{max}	V _{dc}	360	360	360	360
Maximum voltage to ground		V _{ac}	255	255	255	255
Maximum current	I_{max}	A _{rms}	9,50	6,00	20,00	15,00
Continuous stall current	I_0	A _{rms}	2,89	1,88	5,77	5,62
Voltage Constant	K_{eu-v}	V _{rms} /K _{rpm}	50	92	50	58
Torque Constant	k_t	Nm/A _{rms}	0,83	1,52	0,83	0,96
Winding resistance	R_{20u-v}	Ohm	0,74	2,08	0,74	0,42
Winding inductance	L_{qu-v}	mH	7,84	26,25	7,84	4,70
Winding inductance	L_{du-v}	mH	7,14	23,91	7,14	4,30
Rotor inertia without holding brake	J_H	Kgcm ²	6,62	6,62	6,62	13,49
Rotor inertia with holding brake	J_H	Kgcm ²	6,9	6,9	6,9	14,09
Rotor high inertia without holding brake	J_H	Kgcm ²	-	-	8,4	-
Rotor high inertia with holding brake	J_H	Kgcm ²	-	-	8,53	-
Mass without holding brake	m	Kg	7	7	7	9,6
Mass with holding brake	m	Kg	8,2	8,2	8,2	10,9
High inertia mass without holding brake	m	Kg	-	-	7,1	-
High inertia mass with holding brake	m	Kg	-	-	8,3	-
Thermal time constant	T_{th}	min	30	30	33	35
Maximum radial shaft load		N	670	670	670	670
Maximum axial shaft load		N	200	200	200	200

Rated output with 400x400x20mm steel heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

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TETRA COMPACT-E 130

230 Vac RATINGS AND SPECIFICATIONS.2

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	10
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 130 5E L1 2

TC-E 130 5F L1 2

TC-E 130 5G H1 2

TC-E 130 5H F4 2

Continuous stall torque	M_0	Nm	5,73	8,59	7,16	9,55
Peak torque	M_{max}	Nm	17,19	25,77	21,48	28,65
Nominal working speed	n_N	min ⁻¹	1000	1000	2000	2000
Maximum working speed	n_{max}	min ⁻¹	2000	2000	3000	3000
Nominal torque	M_N	Nm	5,73	8,59	7,16	9,55
Nominal current	I_N	A _{rms}	4,10	6,15	6,74	11,25
Nominal power	P_N	kW	0,60	0,90	1,50	2,00
Rated winding voltage	U_N	V _{ac}	230	230	230	230
Maximum winding voltage	U_{max}	V _{dc}	360	360	360	360
Maximum voltage to ground		V _{ac}	255	255	255	255
Maximum current	I_{max}	A _{rms}	13,50	20,00	21,00	33,00
Continuous stall current	I_0	A _{rms}	3,77	5,64	6,18	9,95
Voltage Constant	K_{eu-v}	V _{rms} /K _{rpm}	92	92	70	58
Torque Constant	k_t	Nm/A _{rms}	1,52	1,52	1,16	0,96
Winding resistance	R_{20u-v}	Ohm	2,08	1,22	0,64	0,42
Winding inductance	L_{qu-v}	mH	26,25	16,4	7,20	4,70
Winding inductance	L_{du-v}	mH	23,91	14,90	6,40	4,30
Rotor inertia without holding brake	J_M	Kgcm ²	6,62	9,69	9,69	13,49
Rotor inertia with holding brake	J_M	Kgcm ²	6,9	9,99	9,99	14,09
Mass without holding brake	m	Kg	7	7,6	7,6	9,7
Mass with holding brake	m	Kg	8,2	8,8	8,8	11
Thermal time constant	T_{th}	min	33	35	35	35
Maximum radial shaft load		N	670	670	670	670
Maximum axial shaft load		N	200	200	200	200

Rated output with 400x400x20mm steel heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

TETRA COMPACT-E 130

400 Vac RATINGS AND SPECIFICATIONS.1

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	10
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 130 5A F1 4 TC-E 130 5B L1 4 TC-E 130 5C F1 4 TC-E 130 5D F4 4 TC-E 130 5D L3 4

Continuous stall torque	M_0	Nm	2,39	2,86	4,77	5,39	5,39
Peak torque	M_{max}	Nm	7,16	8,59	14,3	13,8	13,8
Nominal working speed	n_N	min ⁻¹	2000	1000	2000	1500	1500
Maximum working speed	n_{max}	min ⁻¹	3000	2000	4000	3000	3000
Nominal torque	M_n	Nm	2,39	2,86	4,77	5,39	5,39
Nominal current	I_N	A _{rms}	3,24	2,09	6,29	6,29	2,95
Nominal power	P_N	kW	0,50	0,30	1,00	0,85	0,85
Rated winding voltage	U_n	V _{ac}	400	400	400	400	400
Maximum winding voltage	U_{max}	V _{dc}	650	650	650	650	650
Maximum voltage to ground		V _{ac}	265	265	265	265	265
Maximum current	I_{max}	A _{rms}	9,50	6,00	20,00	15,00	7,00
Continuous stall current	I_0	A _{rms}	2,89	1,88	5,77	5,62	2,63
Voltage Constant	K_{eu-v}	V _{rms} /K _{rpm}	50	92	50	58	129
Torque Constant	k_t	Nm/A _{rms}	0,83	1,52	0,83	0,96	2,13
Winding resistance	R_{20u-v}	Ohm	0,74	2,08	0,74	0,42	1,78
Winding inductance	L_{qu-v}	mH	7,84	26,25	7,84	4,70	21,19
Winding inductance	L_{du-v}	mH	7,14	23,91	7,14	4,30	19,25
Rotor inertia without holding brake	J_H	Kgcm ²	6,62	6,62	6,62	13,49	13,49
Rotor inertia with holding brake	J_H	Kgcm ²	6,9	6,9	6,9	14,09	14,09
Rotor high inertia without holding brake	J_H	Kgcm ²	-	-	8,4	-	-
Rotor high inertia with holding brake	J_H	Kgcm ²			8,53		
Mass without holding brake	m	Kg	7	7	7	9,6	9,6
Mass with holding brake	m	Kg	8,2	8,2	8,2	10,9	10,9
High inertia mass without holding brake	m	Kg	-	-	7,1	-	-
High inertia mass with holding brake	m	Kg	-	-	8,2	-	-
Thermal time constant	T_{th}	min	30	30	33	35	35
Maximum radial shaft load		N	670	670	670	670	670
Maximum axial shaft load		N	200	200	200	200	200

Rated output with 400x400x20mm steel heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

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TETRA COMPACT-E 130

400 Vac RATINGS AND SPECIFICATIONS.2

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	10
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 130 5E L1 4 TC-E 130 5F L1 4 TC-E 130 5G H1 4 TC-E 130 5H F4 4

Continuous stall torque	M_0	Nm	5,73	8,59	7,16	9,55
Peak torque	M_{max}	Nm	17,19	25,77	21,48	28,65
Nominal working speed	nN	min ⁻¹	1000	1000	2000	2000
Maximum working speed	nmax	min ⁻¹	2000	2000	3000	5000
Nominal torque	M_n	Nm	5,73	8,59	7,16	9,55
Nominal current	I_N	A _{rms}	4,10	6,15	6,74	11,25
Nominal power	P_N	kW	0,60	0,90	1,50	2,00
Rated winding voltage	Un	V _{ac}	400	400	400	400
Maximum winding voltage	U _{max}	V _{dc}	650	650	650	650
Maximum voltage to ground		V _{ac}	265	265	265	265
Maximum current	I _{max}	A _{rms}	13,50	20,00	21,00	33,00
Continuous stall current	I_0	A _{rms}	3,77	5,64	6,18	9,95
Voltage Constant	K_{eu-v}	V _{rms} /K _{rpm}	92	92	70	58
Torque Constant	k_t	Nm/A _{rms}	1,52	1,52	1,16	0,96
Winding resistance	R_{20u-v}	Ohm	2,08	1,22	0,64	0,42
Winding inductance	L_{qu-v}	mH	26,25	16,4	7,2	4,70
Winding inductance	L_{du-v}	mH	23,91	14,90	6,40	4,30
Rotor inertia without holding brake	J_M	Kgcm ²	6,62	9,69	9,69	13,49
Rotor inertia with holding brake	J_M	Kgcm ²	6,9	9,99	9,99	14,09
Mass without holding brake	m	Kg	7,0	7,6	7,6	9,7
Mass with holding brake	m	Kg	8,2	8,8	8,8	11
Thermal time constant	Tth	min	33	35	35	35
Maximum radial shaft load		N	670	670	670	670
Maximum axial shaft load		N	200	200	200	200

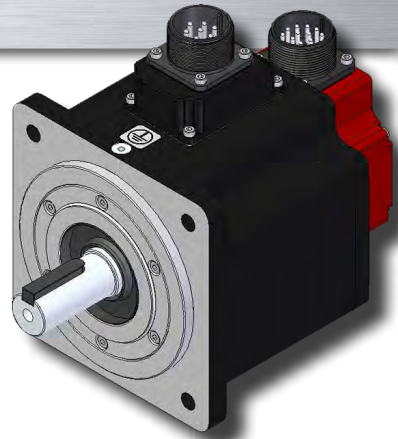
Rated output with 400x400x20mm steel heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

SEE IT BEFORE IT HAPPENS

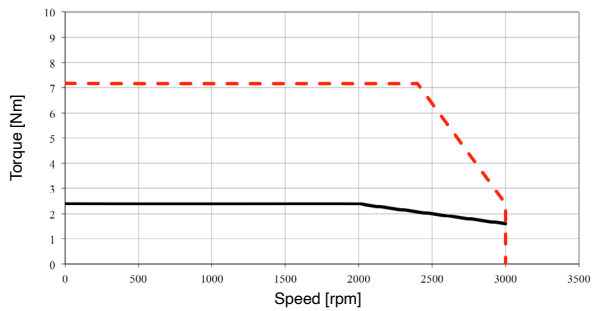
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TETRA COMPACT-E 130

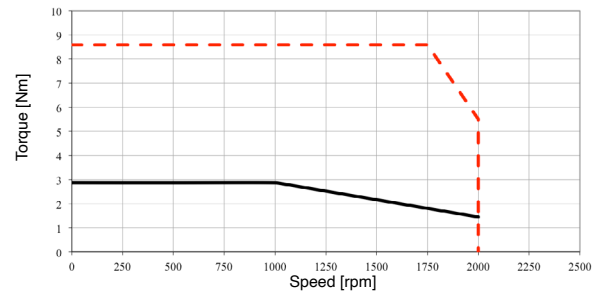
230 Vac TORQUE AND SPEED CHARTS .1



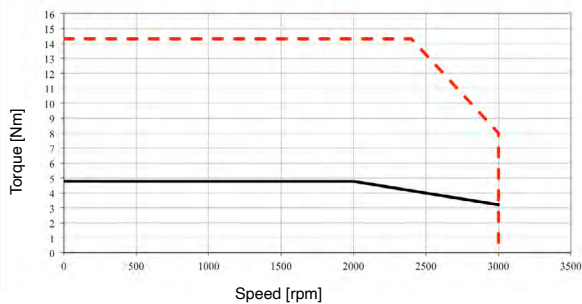
TETRA COMPACT-E 130 5A F1 2



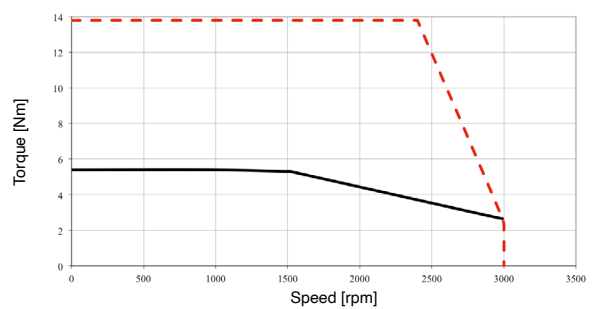
TETRA COMPACT-E 130 5B L1 2



TETRA COMPACT-E 130 5C F1 2



TETRA COMPACT-E 130 5D F4 2



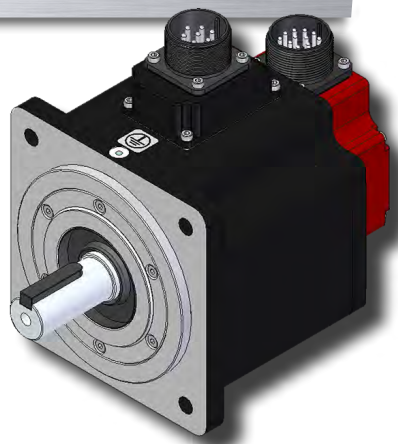
 Continuous torque
 Peak torque

SEE IT BEFORE IT HAPPENS

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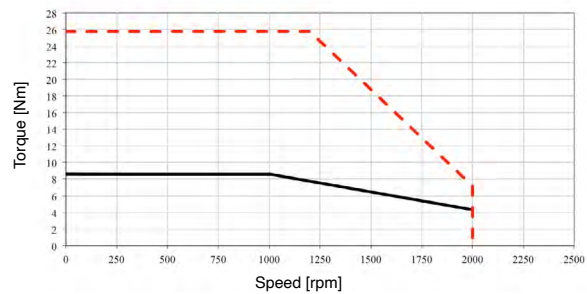
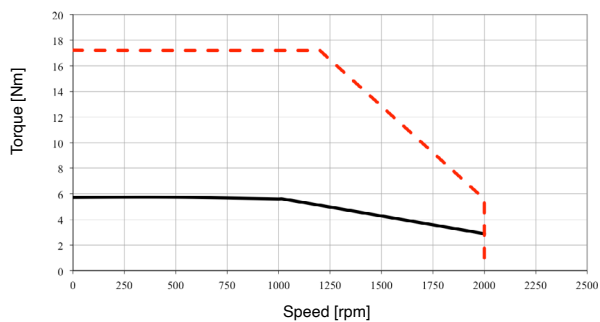
TETRA COMPACT-E 130

230 Vac TORQUE AND SPEED CHARTS .2



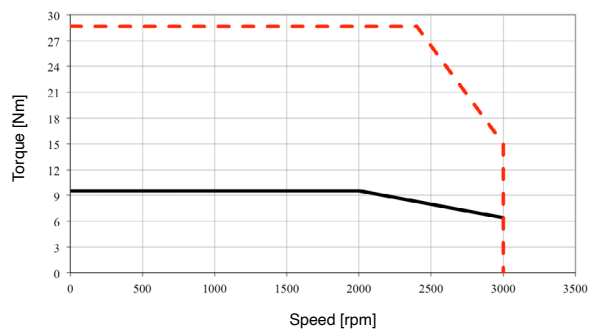
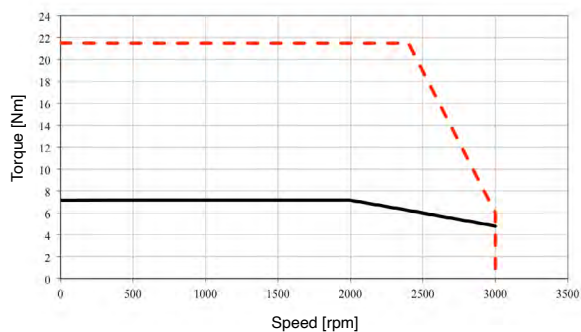
TETRA COMPACT-E 130 5E L1 2

TETRA COMPACT-E 130 5F L1 2



TETRA COMPACT-E 130 5G H1 2

TETRA COMPACT-E 130 5H F4 2



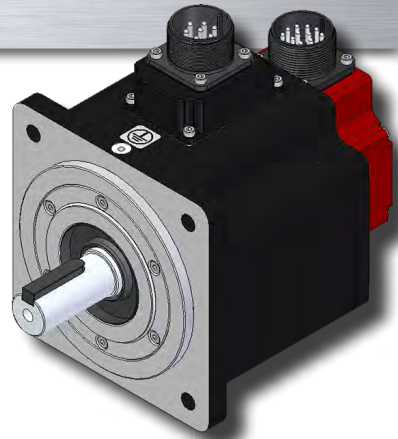
— Continuous torque
- - - Peak torque

SEE IT BEFORE IT HAPPENS

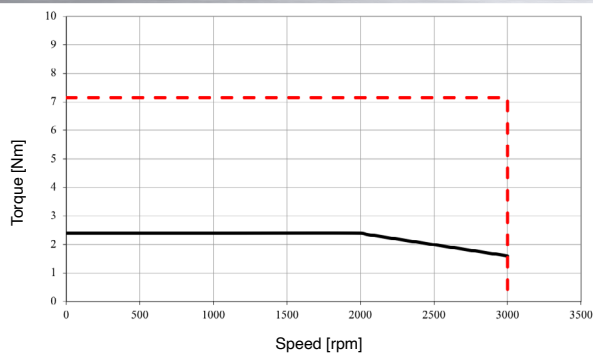
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TETRA COMPACT-E 130

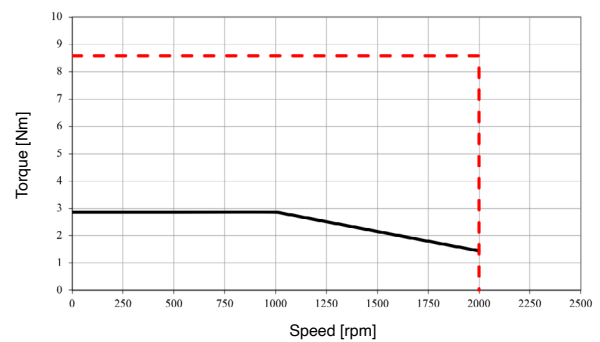
400 Vac TORQUE AND SPEED CHARTS .1



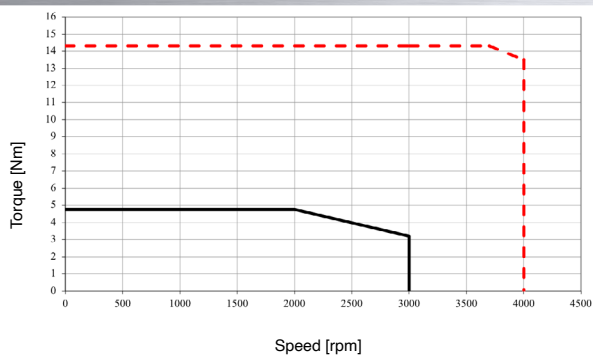
TETRA COMPACT-E 130 5A F1 4



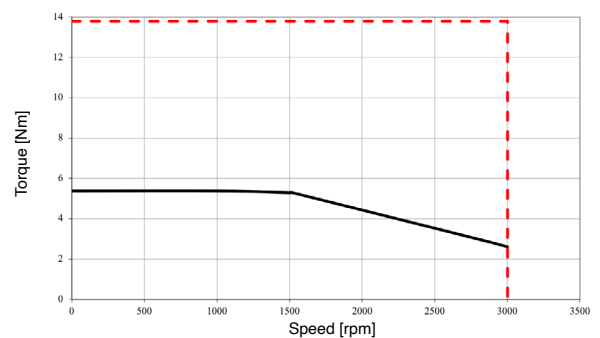
TETRA COMPACT-E 130 5B L1 4



TETRA COMPACT-E 130 5C F1 4



TETRA COMPACT-E 130 5D F4 4



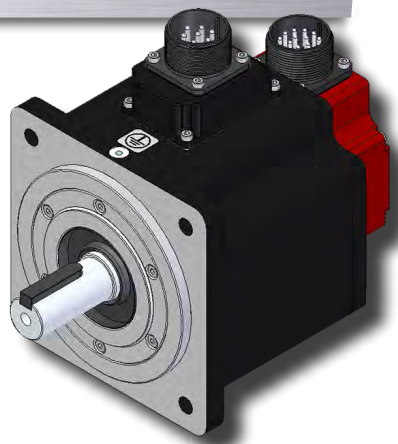
 Continuous torque
 Peak torque

SEE IT BEFORE IT HAPPENS

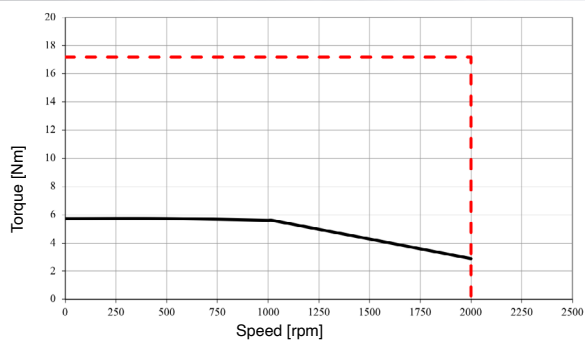
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TETRA COMPACT-E 130

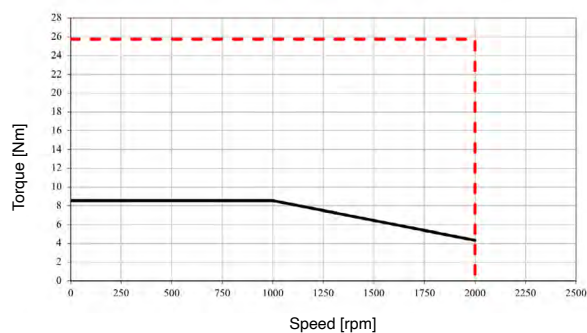
400 Vac TORQUE AND SPEED CHARTS .2



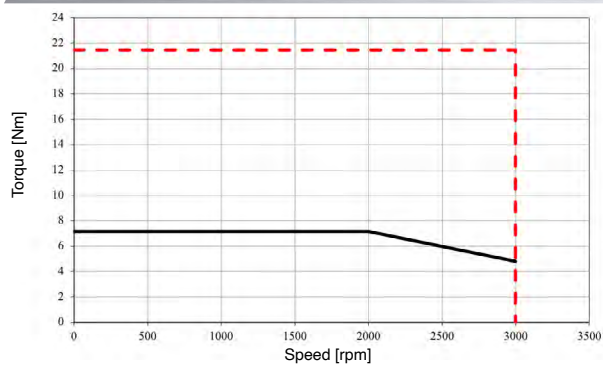
TETRA COMPACT-E 130 5E L1 4



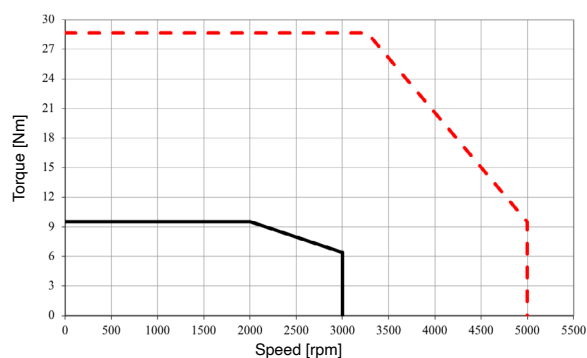
TETRA COMPACT-E 130 5F L1 4



TETRA COMPACT-E 130 5G H1 4



TETRA COMPACT-E 130 5H F4 4



— Continuous torque
- - - Peak torque

SEE IT BEFORE IT HAPPENS

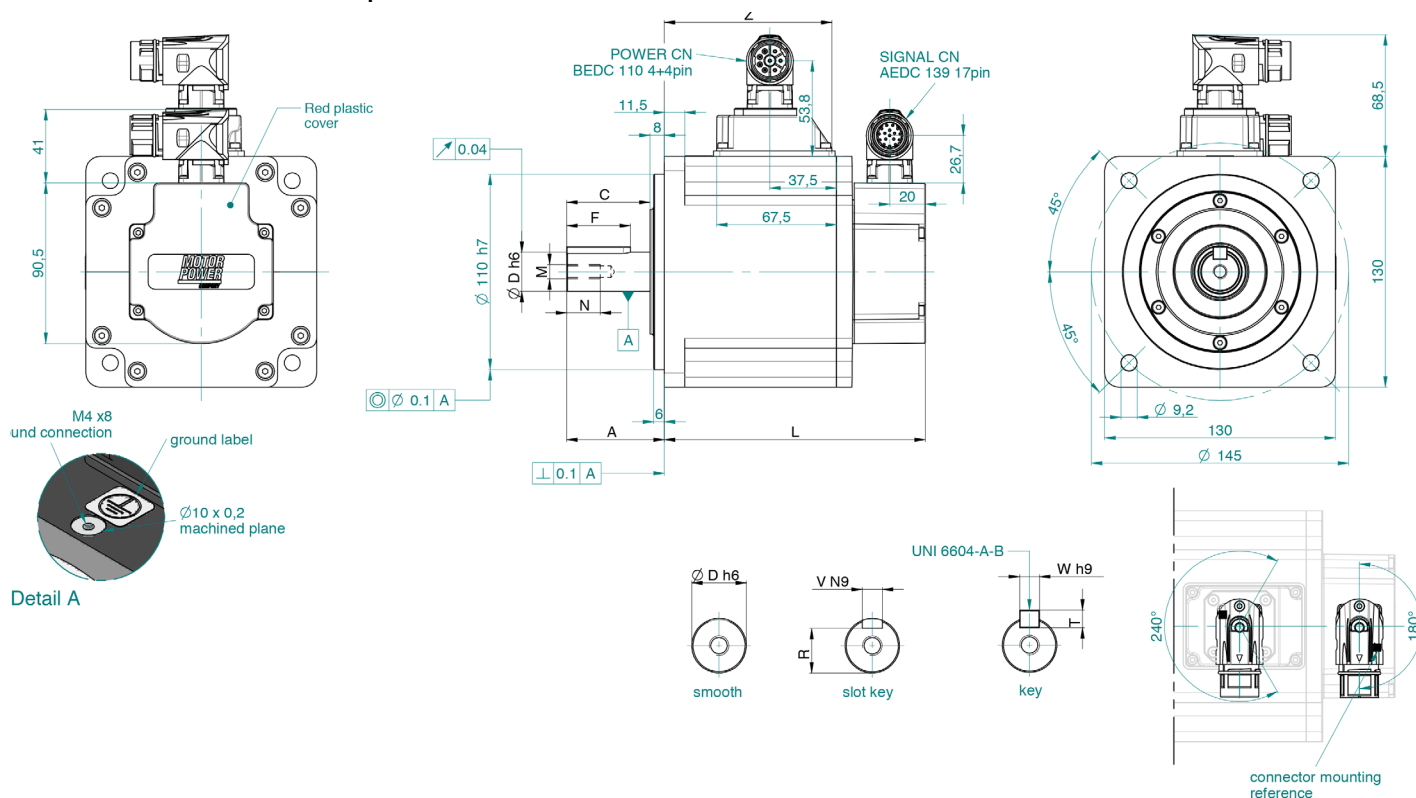
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TETRA COMPACT-E 130 DIMENSIONS

TC-E 130 5A TC-E 130 5B TC-E 130 5C TC-E 130 5D TC-E 130 5E TC-E 130 5F TC-E 130 5G TC-E 130 5H

L Without Brake with feedback A2	mm	147	147	147	187	147	163	163	187
L With Brake with feedback A2	mm	176	176	176	216	176	192	192	216
L Without Brake with feedback A1/E1/A6	mm	159	159	159	199	169	175	175	199
L With Brake with feedback A1/E1/A6	mm	188	188	188	228	188	204	204	238
Z Without Brake	mm	94,5	94,5	94,5	134,5	94,5	110,5	110,5	134,5
Z With Brake	mm	94,5	94,5	94,5	134,5	94,5	110,5	110,5	134,5
D	mm	22	22	22	19	22	22	22	22
A	mm	55	55	55	48	55	55	55	55
C	mm	47	47	47	40	47	47	47	47
M	mm	M8	M8	M8	M6	M8	M8	M8	M8
N	mm	19	19	19	16	19	19	19	19
F	mm	36	36	36	25	36	36	36	36
W	mm	8	8	8	6	8	8	8	8
T	mm	7	7	7	6	7	7	7	7
V	mm	8	8	8	6	8	8	8	8
R	mm	18	18	18	15,5	18	18	18	18

C2 connection with oil seal option

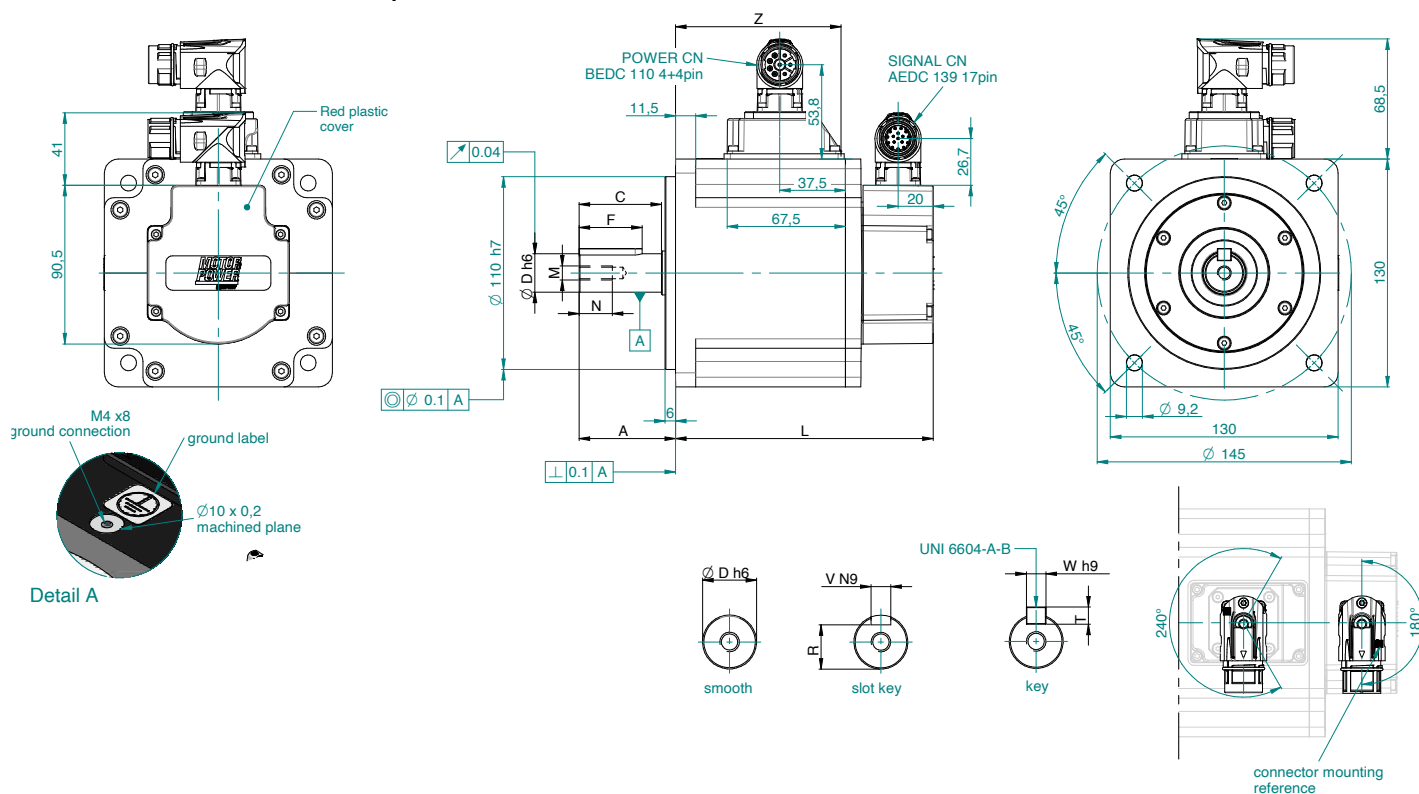


TETRA COMPACT-E 130 DIMENSIONS

TC-E 130 5A TC-E 130 5B TC-E 130 5C TC-E 130 5D TC-E 130 5E TC-E 130 5F TC-E 130 5G TC-E 130 5H

L Without Brake with feedback A2	mm	147	147	147	187	147	163	163	187
L With Brake with feedback A2	mm	176	176	176	216	176	192	192	216
L Without Brake with feedback A1/E1/A6	mm	159	159	159	199	169	175	175	199
L With Brake with feedback A1/E1/A6	mm	188	188	188	228	188	204	204	238
Z Without Brake	mm	94,5	94,5	94,5	134,5	94,5	110,5	110,5	134,5
Z With Brake	mm	94,5	94,5	94,5	134,5	94,5	110,5	110,5	134,5
D	mm	22	22	22	19	22	22	22	22
A	mm	55	55	55	48	55	55	55	55
C	mm	47	47	47	40	47	47	47	47
M	mm	M8	M8	M8	M6	M8	M8	M8	M8
N	mm	19	19	19	16	19	19	19	19
F	mm	36	36	36	25	36	36	36	36
W	mm	8	8	8	6	8	8	8	8
T	mm	7	7	7	6	7	7	7	7
V	mm	8	8	8	6	8	8	8	8
R	mm	18	18	18	15,5	18	18	18	18

C2 connection without oil seal option



SEE IT BEFORE IT HAPPENS

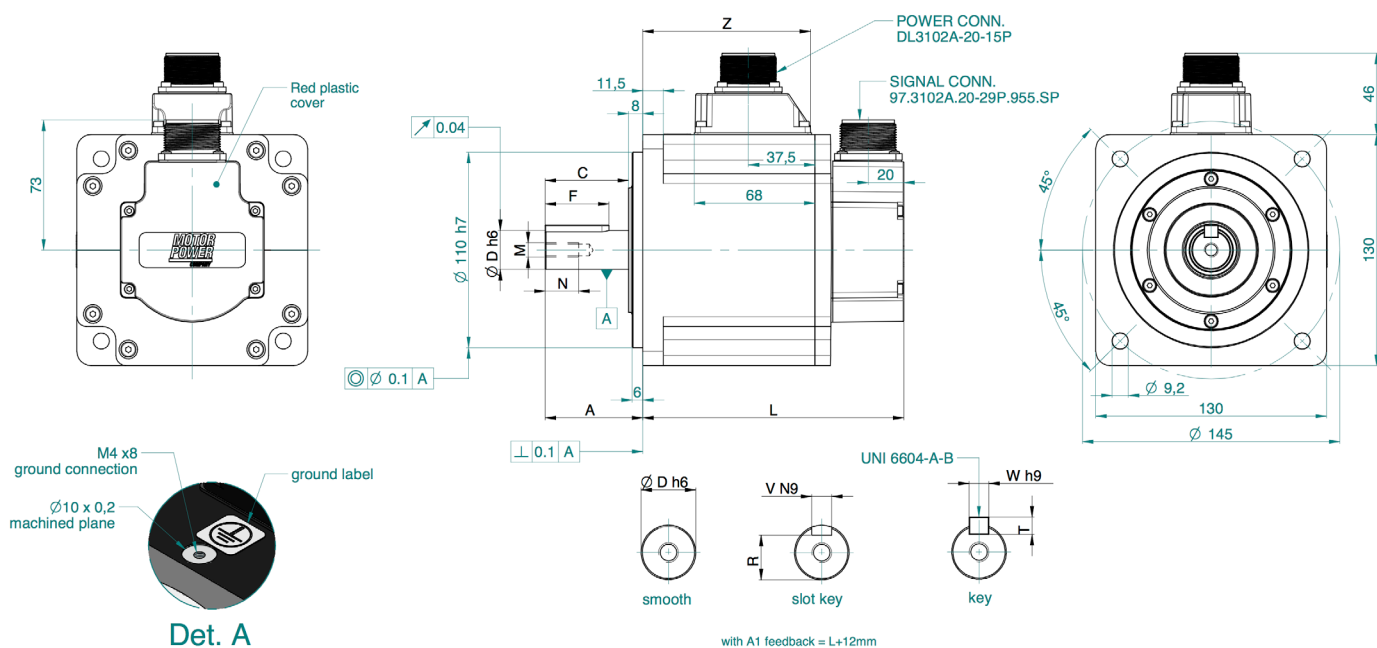
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TETRA COMPACT-E 130 DIMENSIONS

TC-E 130 5A TC-E 130 5B TC-E 130 5C TC-E 130 5D TC-E 130 5E TC-E 130 5F TC-E 130 5G TC-E 130 5H

L Without Brake with feedback A2	mm	147	147	147	187	147	163	163	187
L With Brake with feedback A2	mm	176	176	176	216	176	192	192	216
L Without Brake with feedback A1/E1/A6	mm	159	159	159	199	169	175	175	199
L With Brake with feedback A1/E1/A6	mm	188	188	188	228	188	204	204	238
Z Without Brake	mm	94,5	94,5	94,5	134,5	94,5	110,5	110,5	134,5
Z With Brake	mm	94,5	94,5	94,5	134,5	94,5	110,5	110,5	134,5
D	mm	22	22	22	19	22	22	22	22
A	mm	55	55	55	48	55	55	55	55
C	mm	47	47	47	40	47	47	47	47
M	mm	M8	M8	M8	M6	M8	M8	M8	M8
N	mm	19	19	19	16	19	19	19	19
F	mm	36	36	36	25	36	36	36	36
W	mm	8	8	8	6	8	8	8	8
T	mm	7	7	7	6	7	7	7	7
V	mm	8	8	8	6	8	8	8	8
R	mm	18	18	18	15,5	18	18	18	18

C3 connection with oil seal option

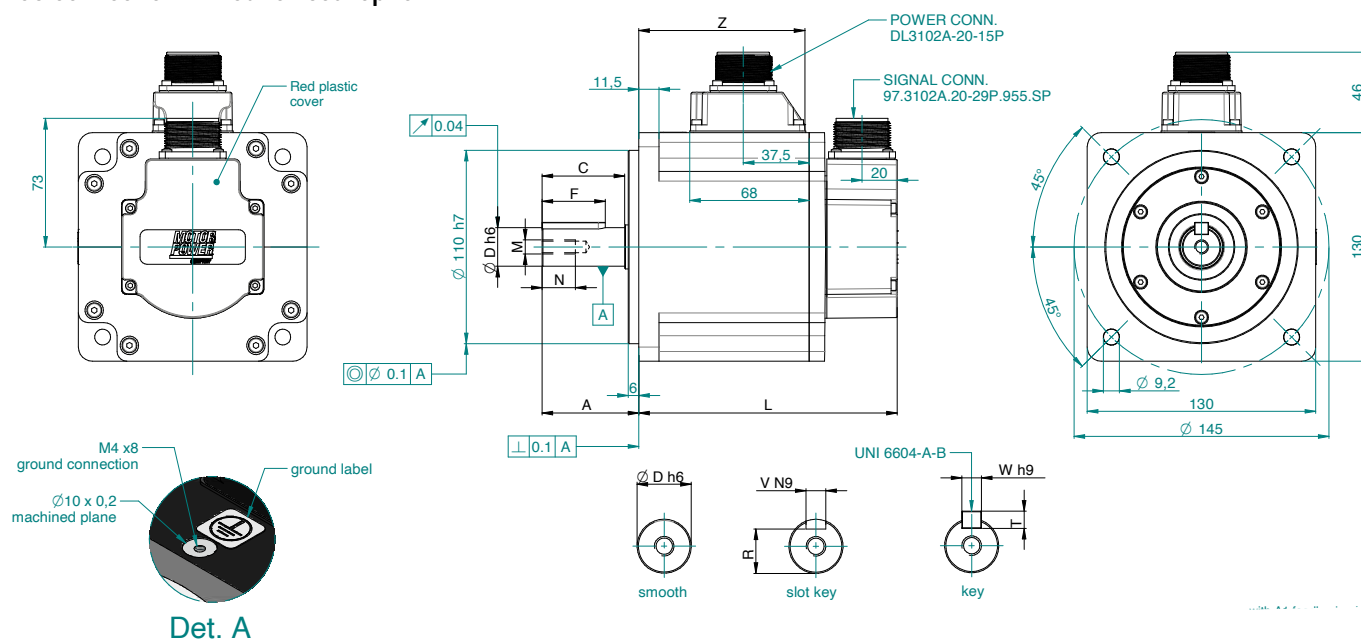


TETRA COMPACT-E 130 DIMENSIONS

TC-E 130 5A TC-E 130 5B TC-E 130 5C TC-E 130 5D TC-E 130 5E TC-E 130 5F TC-E 130 5G TC-E 130 5H

L Without Brake with feedback A2	mm	147	147	147	187	147	163	163	187
L With Brake with feedback A2	mm	176	176	176	216	176	192	192	216
L Without Brake with feedback A1/E1/A6	mm	159	159	159	199	169	175	175	199
L With Brake with feedback A1/E1/A6	mm	188	188	188	228	188	204	204	238
Z Without Brake	mm	94,5	94,5	94,5	134,5	94,5	110,5	110,5	134,5
Z With Brake	mm	94,5	94,5	94,5	134,5	94,5	110,5	110,5	134,5
D	mm	22	22	22	19	22	22	22	22
A	mm	55	55	55	48	55	55	55	55
C	mm	47	47	47	40	47	47	47	47
M	mm	M8	M8	M8	M6	M8	M8	M8	M8
N	mm	19	19	19	16	19	19	19	19
F	mm	36	36	36	25	36	36	36	36
W	mm	8	8	8	6	8	8	8	8
T	mm	7	7	7	6	7	7	7	7
V	mm	8	8	8	6	8	8	8	8
R	mm	18	18	18	15,5	18	18	18	18

C3 connection without oil seal option



TETRA COMPACT-E 180

230 Vac RATINGS AND SPECIFICATIONS.1

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	10
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 180 6A G2 2 TC-E 180 6B F2 2 TC-E 180 6C H1 2 TC-E 180 6D E2 2

Continuous stall torque	M_0	Nm	9,55	14,32	19,1	16,7
Peak torque	M_{max}	Nm	28,65	42,97	57,29	50,3
Nominal working speed	n_N	min ⁻¹	2000	2000	1500	2000
Maximum working speed	n_{max}	min ⁻¹	3000	3000	3000	3000
Nominal torque	M_n	Nm	9,55	14,32	19,1	16,7
Nominal current	I_N	A_{rms}	9,6	18,8	18,8	19,3
Nominal power	P_N	kW	2,00	3,00	3,00	3,50
Rated winding voltage	U_n	V_{ac}	230	230	230	230
Maximum winding voltage	U_{max}	V_{dc}	360	360	360	360
Maximum voltage to ground		V_{ac}	255	255	255	255
Maximum current	I_{max}	A_{rms}	35,5	56,0	61,0	61,0
Continuous stall current	I_0	A_{rms}	8,75	16,33	16,49	16,83
Voltage Constant	K_{eu-v}	V_{rms} / K_{rpm}	66	53	70	60
Torque Constant	k_t	Nm/ A_{rms}	1,09	0,88	1,16	0,99
Winding resistance	R_{20u-v}	Ohm	0,572	0,168	0,234	0,168
Winding inductance	L_{qu-v}	mH	6,70	2,88	3,78	2,80
Winding inductance	L_{du-v}	mH	6,10	2,71	3,45	2,57
Rotor inertia without holding brake	J_M	Kgcm ²	26,49	53,55	53,55	53,55
Rotor inertia with holding brake	J_M	Kgcm ²	26,99	54,09	54,09	54,09
Rotor high inertia without holding brake	J_M	Kgcm ²	34,67	-	-	-
Rotor high inertia with holding brake	J_M	Kgcm ²	35,12	-	-	-
Mass without holding brake	m	Kg	13	18,5	18,5	18,5
Mass with holding brake	m	Kg	18	23	23	23
Mass without holding brake	m	Kg	14,3	-	-	-
Mass with holding brake	m	Kg	19,3	-	-	-
Thermal time constant	T_{th}	min	35	38	38	38
Maximum radial shaft load		N	1200	1200	1200	1200
Maximum axial shaft load		N	497	497	497	497

Rated output with 550x550x20mm steel heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

SEE IT BEFORE IT HAPPENS

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TETRA COMPACT-E 180

230 Vac RATINGS AND SPECIFICATIONS.2

TIME RATING	Continuous	AMBIENT TEMPERATURE	-20 ... + 40 °C
INSULATION CLASS	F	RELATIVE HUMIDITY	5 ... 85% (non-condensing)
ENCLOSURE	Totally enclosed. Self-cooled	POLES	10
PROTECTION CLASS	IP 54 Standard IP 65 with shaft sealing	CERTIFICATION	UL 1004, CSA, CE and Rohs approved Reach compliance

TC-E 180 6E G1 2

TC-E 180 6F G5 2

TC-E 180 6G G4 2

Continuous stall torque	M_0	Nm	28,65	35	47,75
Peak torque	M_{max}	Nm	71,62	87,53	119,37
Nominal working speed	nN	min ⁻¹	1500	1500	1500
Maximum working speed	nmax	min ⁻¹	2500	2600	2700
Nominal torque	M_n	Nm	28,65	35	47,75
Nominal current	I_N	A_{rms}	22,8	28,8	41,5
Nominal power	P_N	kW	4,50	5,50	7,5 (*)
Rated winding voltage	Un	V_{ac}	230	230	230
Maximum winding voltage	U_{max}	V_{dc}	360	360	360
Maximum voltage to ground		V_{ac}	255	255	255
Maximum current	I_{max}	A_{rms}	61,0	74,2	106,9
Continuous stall current	I_0	A_{rms}	19,68	25,05	36,08
Voltage Constant	K_{eu-v}	V_{rms} / K_{rpm}	88	84,5	80
Torque Constant	k_t	Nm/ A_{rms}	1,46	1,40	1,32
Winding resistance	R_{20u-v}	Ohm	0,199	0,104	0,062
Winding inductance	L_{qu-v}	mH	4,00	2,25	1,3
Winding inductance	L_{du-v}	mH	3,80	2,07	1,22
Rotor inertia without holding brake	J_M	Kgcm ²	73,31	103,33	142,69
Rotor inertia with holding brake	J_M	Kgcm ²	73,99	120,19	158,69
Mass without holding brake	m	Kg	23,64	32	41,7
Mass with holding brake	m	Kg	28	36,5	46,2
Thermal time constant	Tth	min	40	50	60
Maximum radial shaft load		N	1200	1200	1200
Maximum axial shaft load		N	497	497	497

Rated output with 550x550x20mm steel heat sink flange coupling - Ambient temperature 40°C - Derating must be considered if the oil seal is applied

(*) TC-E 180 6G H1 2 with nominal power 75 kW is UL 1004, CE and Rohs approved and Reach compliance

(*) TC-E 180 6G H1 2 with nominal power 70 kW is UL 1004, CSA, CE and Rohs approved and Reach compliance

(*) TC-E 180 6G H1 2 with holding brake has nominal power 70 kW

TETRA COMPACT-E 180

400 Vac RATINGS AND SPECIFICATIONS.1

TIME RATING
INSULATION CLASS
ENCLOSURE
PROTECTION CLASS

Continuous
F
Totally enclosed, Self-cooled
IP 54 Standard
IP 65 with shaft sealing

AMBIENT TEMPERATURE
RELATIVE HUMIDITY
POLES
CERTIFICATION

-20 ... + 40 °C
5 ... 85% (non-condensing)
10
UL 1004, CSA, CE and Rohs approved
Reach compliance

TC-E 180 6A G3 4 TC-E 180 6B F2 4 TC-E 180 6C H1 4 TC-E 180 6D E2 4

Continuous stall torque	M_0	Nm	9,55	14,32	19,1	16,7
Peak torque	M_{max}	Nm	28,65	42,97	57,29	50,3
Nominal working speed	nN	min ⁻¹	2000	2000	1500	2000
Maximum working speed	nmax	min ⁻¹	4000	4000	4000	4000
Nominal torque	M_n	Nm	9,55	14,32	19,1	16,7
Nominal current	I_N	A_{rms}	7,50	18,8	18,8	19,30
Nominal power	P_N	kW	2,00	3,00	3,00	3,50
Rated winding voltage	Un	V _{ac}	400	400	400	400
Maximum winding voltage	U _{max}	V _{dc}	650	650	650	650
Maximum voltage to ground		V _{ac}	265	265	265	265
Maximum current	I _{max}	A_{rms}	23,0	56,0	61,0	61,0
Continuous stall current	I_0	A_{rms}	6,79	16,33	16,49	16,83
Voltage Constant	K_{eu-v}	V _{rms} /K _{rpm}	85	53	70	60
Torque Constant	k_t	Nm/A _{rms}	1,41	0,88	1,16	0,99
Winding resistance	R_{20u-v}	Ohm	1,156	0,168	0,234	0,168
Winding inductance	L_{qu-v}	mH	13,44	2,88	3,78	2,8
Winding inductance	L_{du-v}	mH	12,21	2,71	3,45	2,57
Rotor inertia without holding brake	J_M	Kgcm ²	26,49	53,55	53,55	53,55
Rotor inertia with holding brake	J_M	Kgcm ²	26,99	54,09	54,09	54,09
Rotor high inertia without holding brake	J_M	Kgcm ²	34,67	-	-	-
Rotor high inertia with holding brake	J_M	Kgcm ²	35,12	-	-	-
Mass without holding brake	m	Kg	13	18,5	18,5	18,5
Mass with holding brake	m	Kg	18	23	23	23
High inertia mass without holding brake	m	Kg	14,3	-	-	-
High inertia mass with holding brake	m	Kg	19,3	-	-	-
Thermal time constant	Tth	min	35	35	35	38
Maximum radial shaft load		N	1200	1200	1200	1200
Maximum axial shaft load		N	497	497	497	497

Rated output with 550x550x20 mm steel heat sink flange coupling - Ambient temperature 40°C. Derating must be considered if the oil seal is applied

SEE IT BEFORE IT HAPPENS

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TETRA COMPACT-E 180

400 Vac RATINGS AND SPECIFICATIONS.2

TIME RATING
INSULATION CLASS
ENCLOSURE
PROTECTION CLASS

Continuous
F
Totally enclosed, Self-cooled
IP 54 Standard
IP 65 with shaft sealing

AMBIENT TEMPERATURE
RELATIVE HUMIDITY
POLES
CERTIFICATION

-20 ... + 40 °C
5 ... 85% (non-condensing)
10
UL 1004, CSA, CE and Rohs approved
Reach compliance

TC-E 180 6E G1 4 TC-E 180 6F G5 4 TC-E 180 6F M1 4 TC-E 180 6G G4 4 TC-E 180 6G L2 4

Continuous stall torque	M_0	Nm	28,65	35	35	47,75	47,75
Peak torque	M_{max}	Nm	71,62	87,53	87,53	140	140
Nominal working speed	nN	min ⁻¹	1500	1500	1500	1500	1500
Maximum working speed	nmax	min ⁻¹	4000	4000	3100	4000	3500
Nominal torque	M_n	Nm	28,65	35	35	47,75	47,75
Nominal current	I_N	A _{rms}	22,8	28,8	18,8	41,5	28,40
Nominal power	P_N	kW	4,50	5,5	5,5	7,5 ^(*)	7,5 ^(*)
Rated winding voltage	Un	V _{ac}	400	400	400	400	400
Maximum winding voltage	U _{max}	V _{dc}	650	650	650	650	650
Maximum voltage to ground		V _{ac}	265	265	265	265	265
Maximum current	I _{max}	A _{rms}	61,0	74,2	48,3	129	88,4
Continuous stall current	I ₀	A _{rms}	19,68	25,05	16,3	36,08	27,48
Voltage Constant	K_{eu-v}	V _{rms} /K _{rpm}	88	84,5	130	80	110
Torque Constant	k_t	Nm/A _{rms}	1,46	1,4	2,15	1,32	1,82
Winding resistance	R _{20u-v}	Ohm	0,199	0,104	0,25	0,062	0,115
Winding inductance	L _{qu-v}	mH	4,00	2,25	5,3	1,3	2,8
Winding inductance	L _{du-v}	mH	3,80	2,07	4,9	1,22	2,63
Rotor inertia without holding brake	J _M	Kgcm ²	73,31	130,33	103,33	142,69	142,69
Rotor inertia with holding brake	J _M	Kgcm ²	73,99	120,19	120,19	158,69	158,69
Mass without holding brake	m	Kg	23,64	32	32	41,7	41,7
Mass with holding brake	m	Kg	28	36,5	36,5	46,2	46,2
Thermal time constant	Tth	min	40	50	50	60	60
Maximum radial shaft load		N	1200	1200	1200	1200	1200
Maximum axial shaft load		N	497	497	497	497	497

Rated output with 550x550x20 mm steel heat sink flange coupling - Ambient temperature 40°C. Derating must be considered if the oil seal is applied

(*) TC-E 180 6G L2 4 with nominal power 75 kW is UL 1004, CE and Rohs approved and Reach compliance

(*) TC-E 180 6G L2 4 with nominal power 70 kW is UL 1004, CSA, CE and Rohs approved and Reach compliance

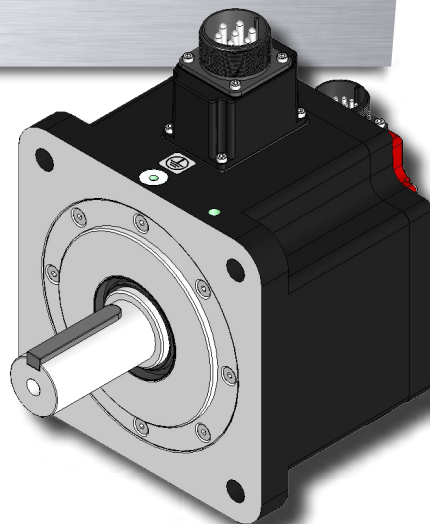
(*) TC-E 180 6G L2 4 with holding brake has nominal power 70 kW

SEE IT BEFORE IT HAPPENS

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COMPANY

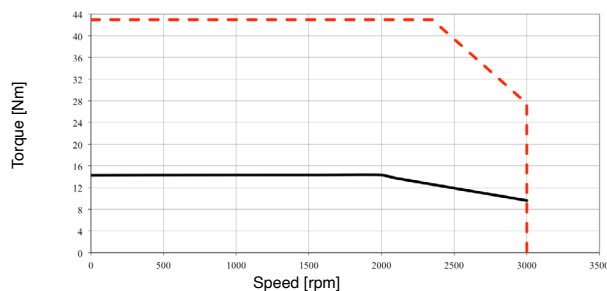
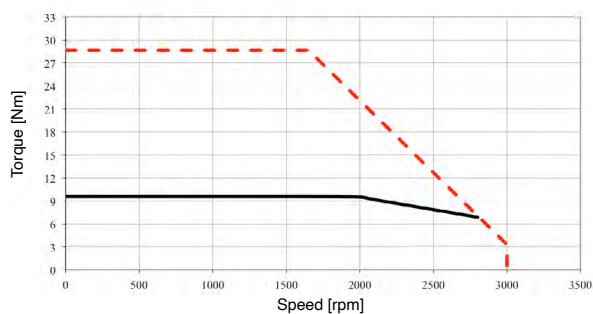
TETRA COMPACT-E 180

230 Vac TORQUE AND SPEED CHARTS.1



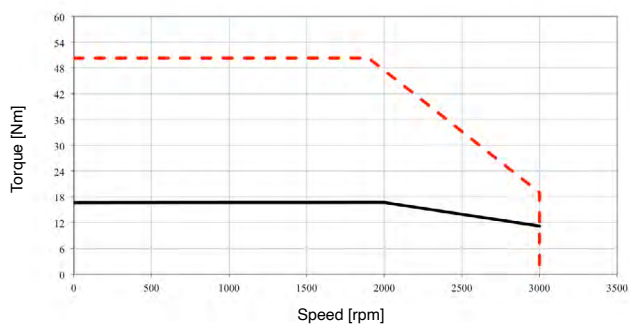
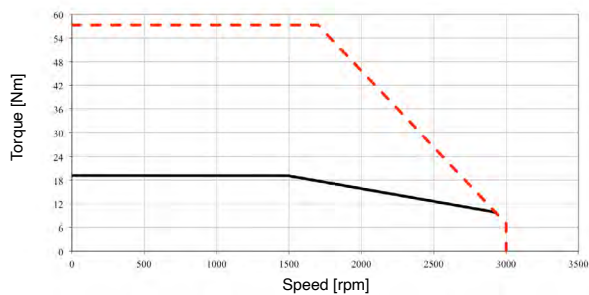
TETRA COMPACT-E 180 6A G2 2

TETRA COMPACT-E 180 6B F2 2



TETRA COMPACT-E 180 6C H1 2

TETRA COMPACT-E 180 6D E2 2



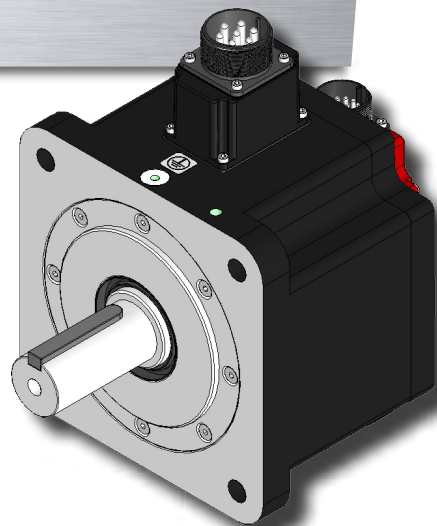
— Continuous torque
- - - Peak torque

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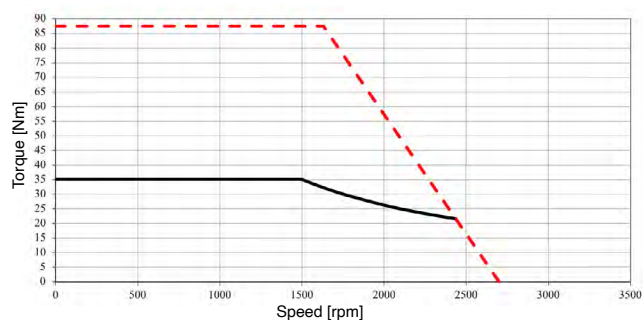
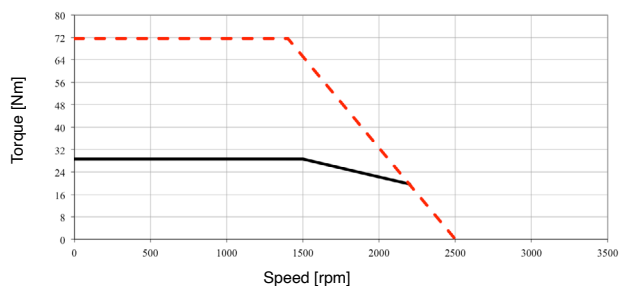
TETRA COMPACT-E 180

230 Vac TORQUE AND SPEED CHARTS.2



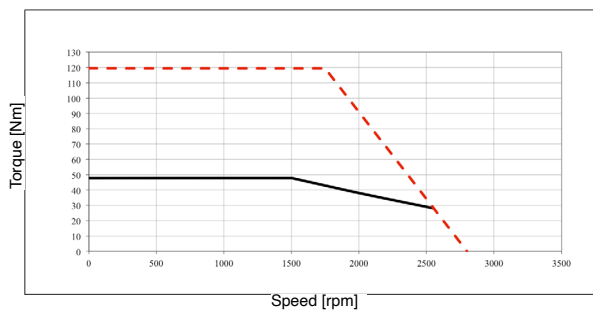
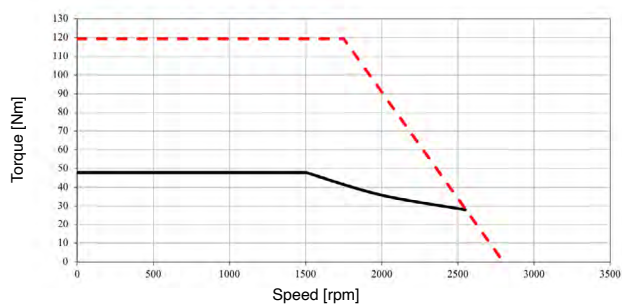
TETRA COMPACT-E 180 6E G1 2

TETRA COMPACT-E 180 6F G5 2



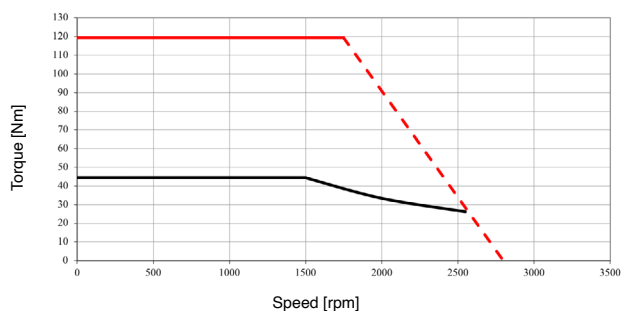
TETRA COMPACT-E 180 6G G4 2 7kW (*)

TETRA COMPACT-E 180 6G G4 2 7.5 kW (*)



(*) TC-E 180 6G HT 2 with nominal power 7.5 kW is UL 1004, CE and Rohs approved and Reach compliance
 (*) TC-E 180 6G HT 2 with nominal power 7.0 kW is UL 1004, CSA, CE and Rohs approved and Reach compliance

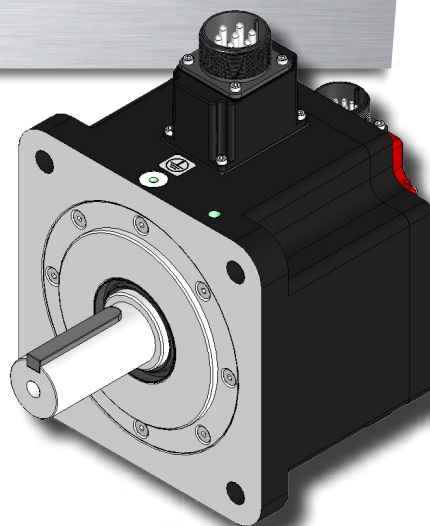
TETRA COMPACT-E 180 6G G4 2 with brake



— Continuous torque
 - - - Peak torque

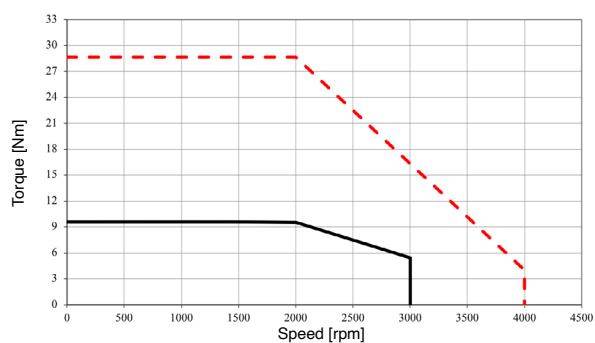
TETRA COMPACT-E 180

400Vac TORQUE AND SPEED CHARTS.1

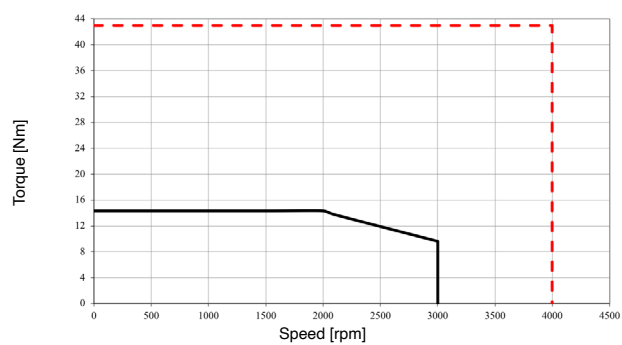


TETRA COMPACT-E 180 6A G3 4

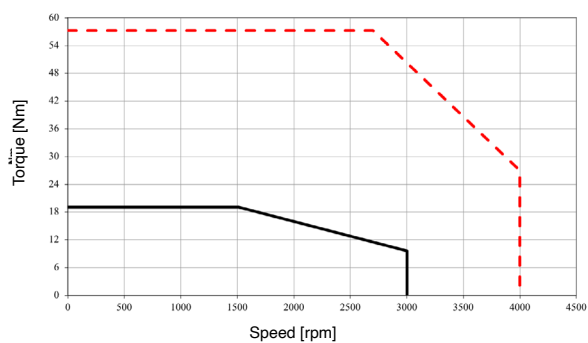
— Continuous torque
- - - Peak torque



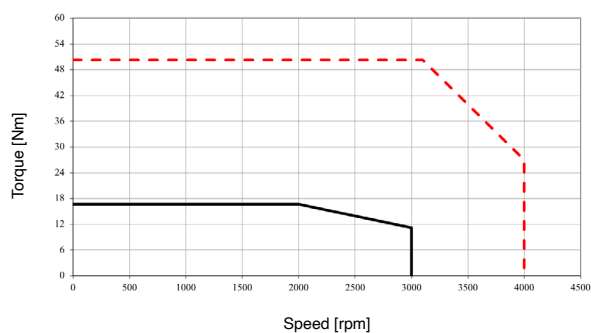
TETRA COMPACT-E 180 6B F2 4



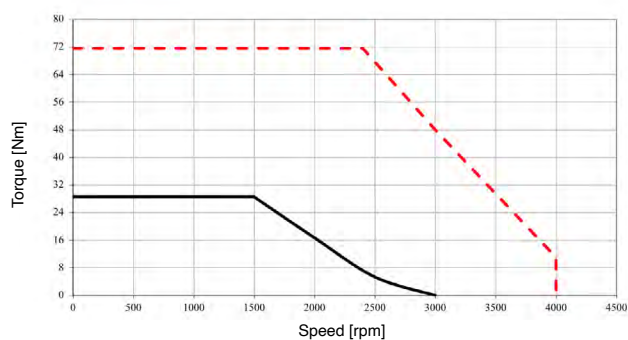
TETRA COMPACT-E 180 6C H1 4



TETRA COMPACT-E 180 6D E2 4

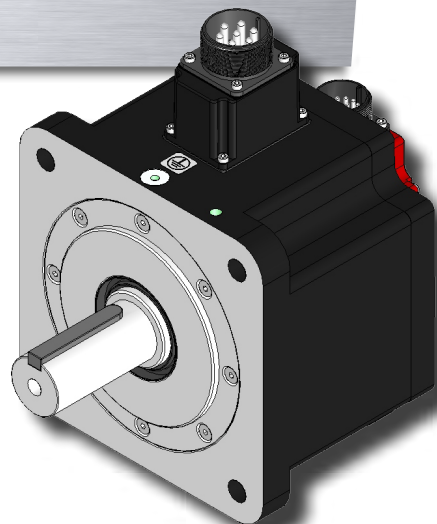


TETRA COMPACT-E 180 6E G1 4

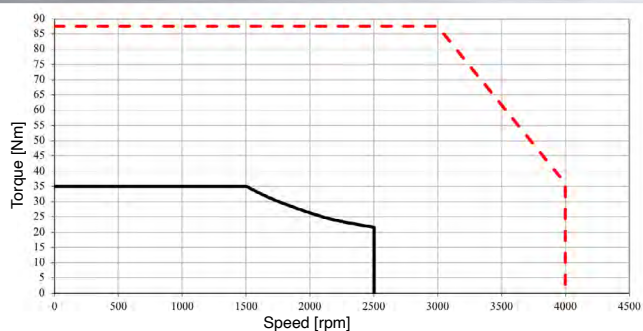


TETRA COMPACT-E 180

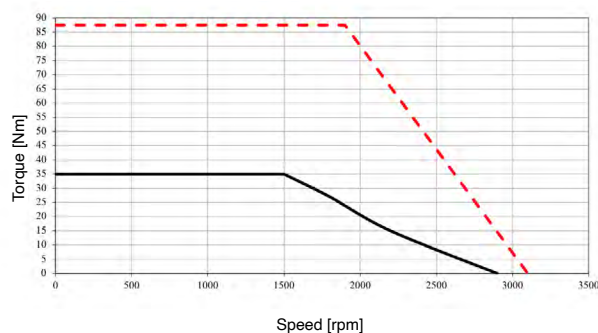
400 Vac TORQUE AND SPEED CHARTS.2



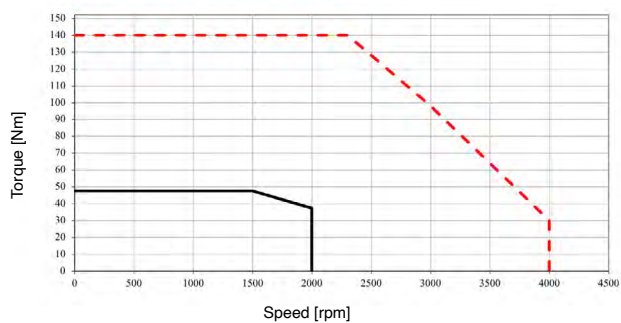
TETRA COMPACT-E 180 6F G5 4



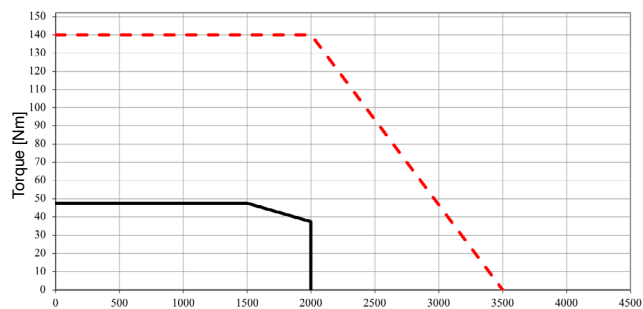
TETRA COMPACT-E 180 6F M1 4



TETRA COMPACT-E 180 6G G4 4



TETRA COMPACT-E 180 6G L2 4



— Continuous torque
- - - Peak torque

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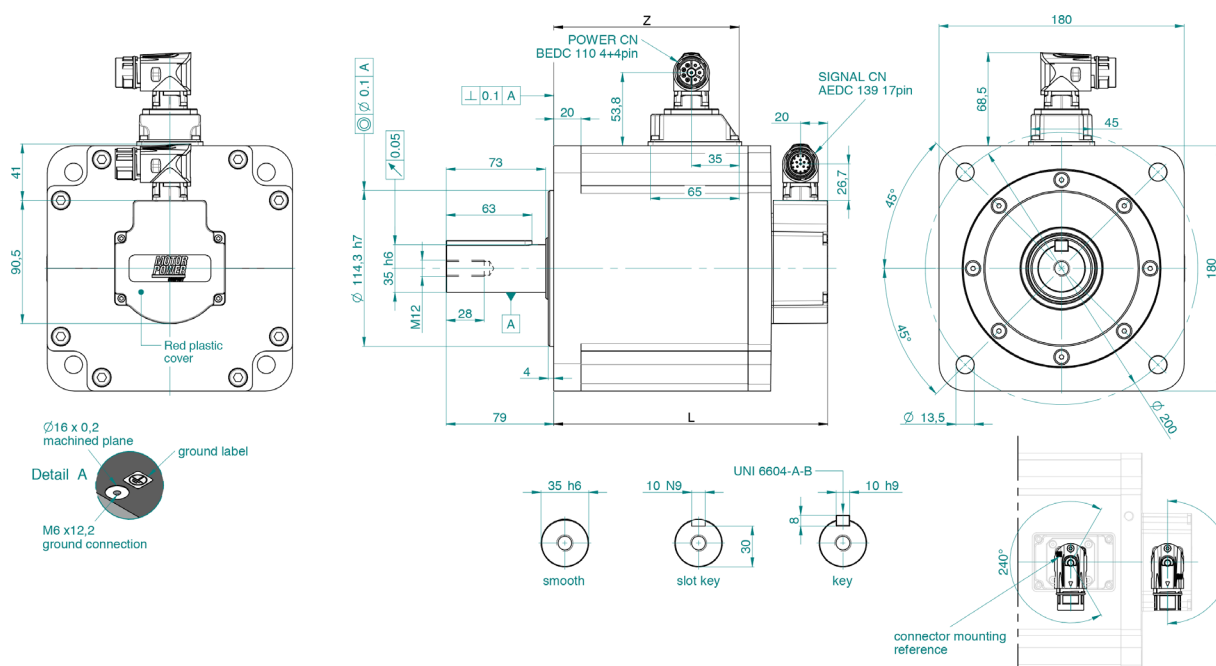
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TETRA COMPACT-E 180 DIMENSIONS

TC-E 180 6A TC-E 180 6B TC-E 180 6C TC-E 180 6D TC-E 180 6E TC-E 180 6F TC-E 180 6G

L Without Brake with feedback A2	mm	168	201	201	201	234	278	341
L With Brake with feedback A2	mm	203	236	236	236	269	313	376
L Without Brake with feedback A1/E1/A6	mm	180	213	213	213	246	290	353
L With Brake with feedback A1/E1/A6	mm	215	248	248	248	281	325	388
Z Without Brake	mm	103	136	136	136	169	213	276
Z With Brake	mm	103	136	136	136	169	213	276
D	mm	35	35	35	35	35	42	42
A	mm	79	79	79	79	79	113	113
C	mm	73	73	73	73	73	108,5	108,5
M	mm	M12	M12	M12	M12	M12	M16	M16
N	mm	28	28	28	28	28	40	40
F	mm	63	63	63	63	63	90	90
W	mm	10	10	10	10	10	12	12
V	mm	10	10	10	10	10	12	12
R	mm	30	30	30	30	30	37	37

C2 connection

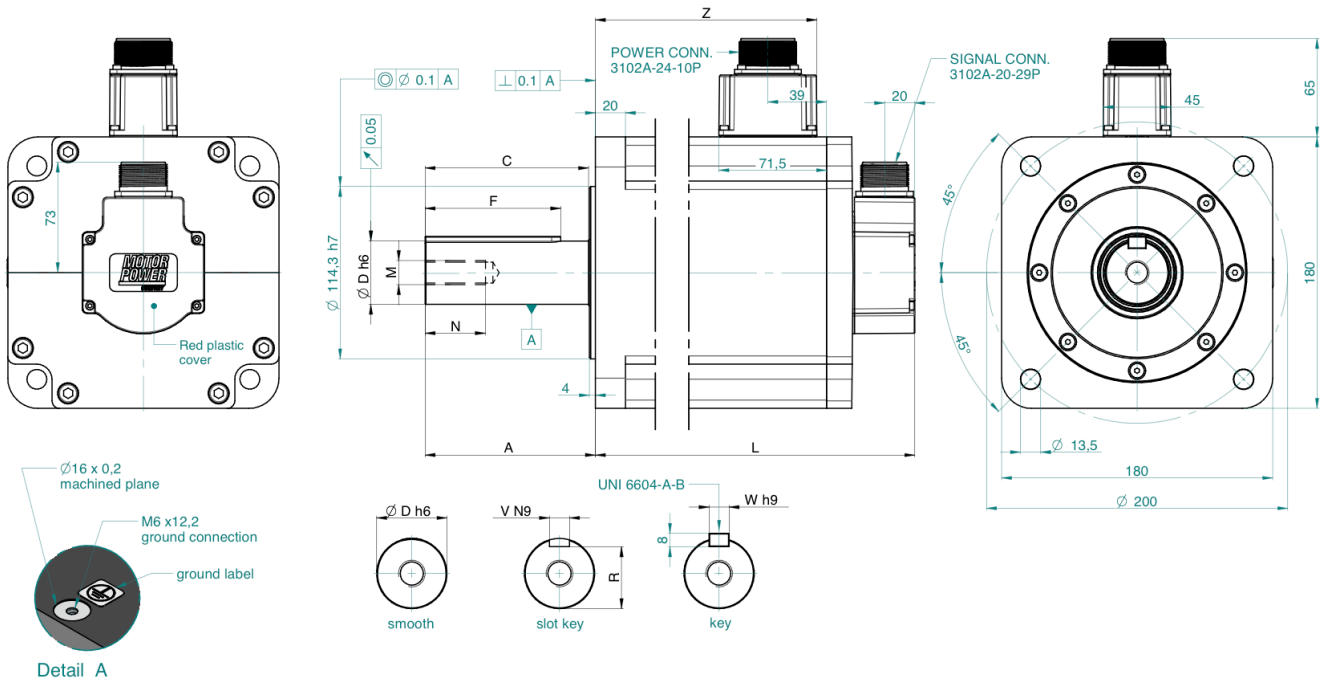


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TETRA COMPACT-E 180 DIMENSIONS

C3 connection



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FEEDBACK FEATURES

E1 TTL ENCODER

Motor size		TC-E 60 - 80	TC-E 100 - 130 - 180
Nominal Voltage	V	5±5 %	5±5 %
Nominal current	mA	200	200
Max Frequency	Khz	200	200
Electronic type		LINE DRIVER AM 26 LS31	LINE DRIVER AM 26 LS31
Zero impulse		ONE AT A LAP	ONE AT A LAP
N° of pulses revolution	ppr	2500	2500
Resolution	cpr	10000	10000
N° of commutation signal		3 DIFFERENTIAL	3 DIFFERENTIAL
System accuracy	arc sec	± 50	± 50
Rotor inertia	Kg cm ²	0.01	0.065
Maximum acceleration	rad/s ²	80.000	80.000

A1 ABSOLUTE MULTITURN ENCODER

Motor size		TC-E 40	TC-E 60-80-100-130-180
Nominal Voltage	V	7 ÷ 12	7 ÷ 12
Nominal current	mA	< 50	60
Max frequency for Sin Cos signal	Khz	65	65
Interface type		Hiperface	Hiperface
N° absolute singleturn steps		512 (9 Bits)	4096 (12 Bits)
N° absolute multiturn steps		4096 (12 Bits)	4096 (12 Bits)
N° of sin/cos periods per revolution		16	128
Integral non-linearity	arc sec	± 288	± 80
Rotor inertia	g cm ²	1	4,5
Maximum acceleration	rad/s ²	500.000	500.000

A2 - A4 PROPRIETARY ABSOLUTE ENCODER

The drive can access the electronic nameplate via the electronic interface for easy commissioning.

The signals meet the PELV requirements

Motor size		TC-E 40 - 60 - 80 - 100 - 130 - 180
Resolution		A2 20 bits - A4 16 bits
Accuracy		± 0.02° / 1.2' / 72"
Maximum rotational speed	rpm	10.000
Maximum angular acceleration	rad/s ²	100.000
Operating temperature range	°C	-20 to +115
Moment of inertia	kg m ²	2.8 x 10 ⁻⁶
Nominal voltage	V	4 - 5.25
Current consumption	mA	80
Standby period at power-on	ms	1500
Communication protocol		Motor Power Company protocol

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FEEDBACK FEATURES

A6 ABSOLUTE ENCODER (single and multiturn with battery box option)

Motor size		TC-E 60-80-100-130-180
Nominal Voltage	V	4,75 ÷ 5,25
Max current	mA	100
Interface type		Halfduplex RS485
Absolute singleturn bits		24 Bits
Absolute multiturn bits		16 Bits
Rotor inertia	kg m ²	3,8x10 ⁻⁷
Maximum acceleration	rad/s ²	1x10 ⁵
Maximum speed	rpm	6.000

PATENTED MAGNETIC ENCODER

The original magnetic encoder features a simple mechanical design that allows the same level of resolution and accuracy as optical absolute encoders whilst reducing complexity.

The simplicity is the key to achieving compactness, high resolution and accuracy at a competitive cost. This original encoder offers a resolution of 20 bit and an accuracy of $\pm 0.02^\circ$. Advanced signal processing applies a unique patented method.

Featuring only few mechanical components and no optical elements, the encoder is less sensitive to contamination and mechanical tolerance deviations. Furthermore, lifetime expectancy of the encoder is higher due to the elimination of both optical components and bearings.



BRAKE FEATURES

		TC-E 40	TC-E 60	TC-E 80	TC-E 100	TC-E 130	TC-E 180
Operating motor temperature	°C	-20 ...+120	-20 ...+120	-20 ...+120	-20 ...+120	-20 ...+120	-20 ...+120
External ambient temperature	°C	-20 ...+40	-20 ...+40	-20 ...+40	-20 ...+40	-20 ...+40	-20 ...+40
Standard brake duty		Stationary	Stationary	Stationary	Stationary	Stationary	Stationary
Minimum dry static torque (@-20...120°C) ^(*)	Nm	0,32	1,3	2,5	6,5	9,6	48
Nominal operation voltage	Vdc	24±10%	24±10%	24±10%	24±10%	24±10%	24±10%
Power consumption (@20°)	W	4,35±7%	11,2±7%	10,2±7%	10,4±7%	19,7±7%	49,6±7%
Release time	ms	22	58	46	49	71	120
Brake release time (pull in)	ms	77	25	58	30	39	37
Backlash (max)	degree	1,2	1,2	1,2	1,2	1,2	1,2

^(*) Brakes are tested according to motors continuous stall torque

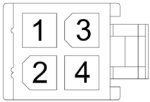
SEE IT BEFORE IT HAPPENS

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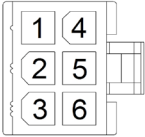
WIRING MOTOR CONNECTIONS

POWER CONNECTION

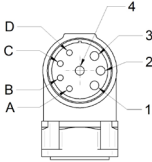
Function	D0	D0 + Brake	C2	C3
	PIN	PIN	PIN	PIN
U	1	1	1	E
V	2	2	4	G
W	3	4	3	B
PE	4	5	2	D
BRAKE_24V	-	3	A	F
BRAKE_0V	-	6	B	A



[D0]



[D0 + Brake]



[C2]



[C3 for mod. TC-E 100 and 130]



[C3 for mod. TC-E 180]

WIRING MOTOR CONNECTIONS

E1 FEEDBACK CONNECTION

D0 connection

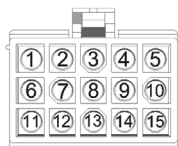
Function	PIN
A	1
A/	2
B	3
B/	4
Z	5
Z/	6
HALL U	7
HALL U/	8
HALL V	9
HALL V/	10
HALL W	11
HALL W/	12
+5V	13
0V	14
SHIELD	15

C2 connection

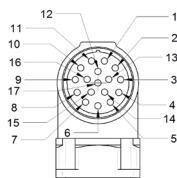
Function	PIN
HALL W	1
HALL U	2
0V	3
+5 Vdc	4
Ch /A	5
Ch A	6
Ch /z	7
Ch z	8
HALL V	9
SHIELD	10
Ch /B	11
Ch B	12
HALL /W	13
HALL /V	14
HALL /U	15

C3 connection

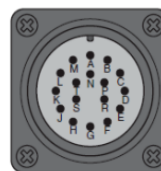
Function	PIN
A	A
A/	B
B	C
B/	D
Z	E
Z/	F
HALL U	G
HALL U/	H
HALL V	J
HALL /V	K
HALL W	L
HALL /W	M
+5 Vdc	N
GND	P
SHIELD	R



[D0]



[C2]



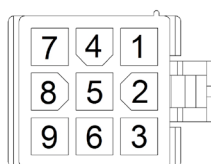
[C3]

WIRING MOTOR CONNECTIONS

A1 FEEDBACK CONNECTION

D0 connection

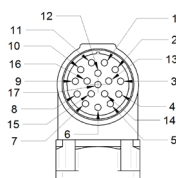
Function	PIN
DATA +	1
+ SIN	2
REFSIN	3
DATA -	4
+ COS	5
REFCOS	6
8V/ Us	7
GND	8
SHIELD	9



[D0]

C2 connection

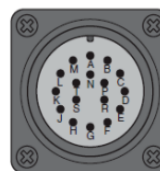
Function	PIN
GND	3
Us (+7Vdc ÷ +12Vdc)	4
REFSIN	5
+ SIN	6
DATA -	7
DATA +	8
SHIELD	10
REFCOS	11
+ COS	12



[C2]

C3 connection

Function	PIN
8V/ Us	A
+ SIN	B
REFSIN	C
+ COS	D
REFCOS	E
GND	F
DATA -	G
DATA +	H
SHIELD	J



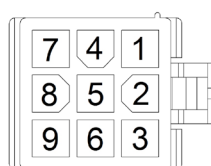
[C3]

A2 FEEDBACK CONNECTION

Function

D0 connection

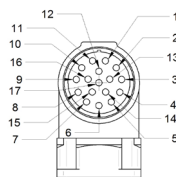
Function	PIN
DATA +	1
DATA -	4
-	2
-	3
-	5
-	6
DC +5V (BATTERY +)	7
GND (BATTERY -)	8
SHIELD	9



[D0]

C2 connection

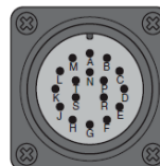
PIN
6
5
-
-
-
-
4
3
10



[C2]

C3 connection

PIN
A
B
C
D
F
G
S
R
L



[C3]

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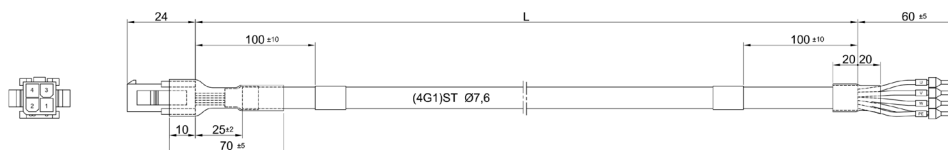
CABLES SPECIFICATIONS

Dynamic laying cable E83517 – c&Us AWM STYLE 21223 certified

POWER CABLES for models TC-E 40-60-80 without holding brake for D0 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black 1	Lenght (mm)	Order code
4	FASE V	Black 2	3000	003108015156
7	FASE W	Black 3	5000	003108015157
8	PE	Yellow-Green	10000	003108015155

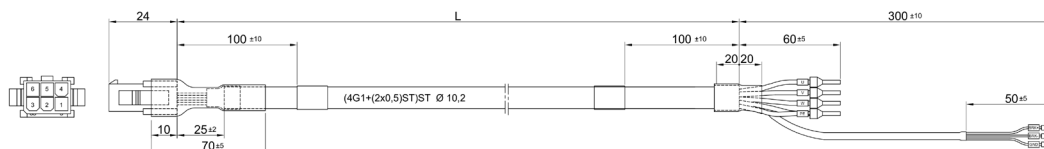
Power free wire cable for general purpose



POWER CABLES for models TC-E 40-60-80 with holding brake for D0 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black 1	Lenght (mm)	Order code
2	FASE V	Black 2	3000	003108015159
4	FASE W	Black 3	5000	003108015160
5	PE	Yellow-Green	10000	003108015158
3	BRAKE 1	Brown		
6	BRAKE 2	White		

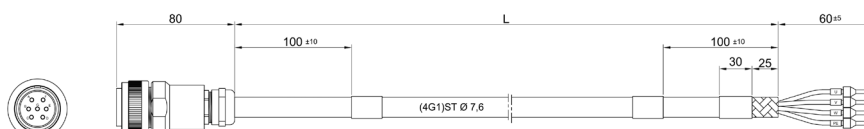
Power free wire cable for general purpose



POWER CABLES for models TC-E 100 4A - 130 5A - 130 5B - 130 5C - 130 5D - 130 5E - 130 5F - 130 5G without holding brake for C3 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
E	FASE U	White	Lenght (mm)	Order code
G	FASE V	Black	3000	003108015244
B	FASE W	Red	5000	003108015245
D	PE	Yellow-Green	10000	003108015246

Power free wire cable for general purpose



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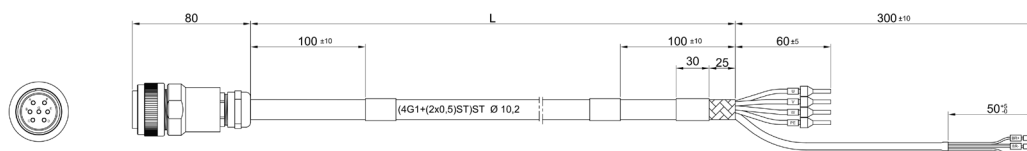
CABLES SPECIFICATIONS

Dynamic laying cable E83517 – c&Uus AWM STYLE 21223 certified

POWER CABLES for models TC-E 100 4A - 130 5A - 130 5B - 130 5C - 130 5D - 130 5E - 130 5F - 130 5G with holding brake for C3 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
E	FASE U	White	Lenght (mm)	Order code
G	FASE V	Black	3000	003108015247
B	FASE W	Red	5000	003108015248
D	PE	Yellow-Green	10000	003108015249
F	BK +	Red		
A	BK -	Black		

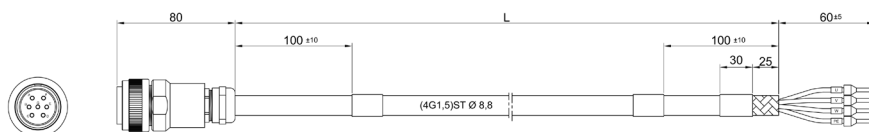
Power free wire cable for general purpose



POWER CABLES for models TC-E 100 4B - 130 5H without holding brake for C3 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
E	FASE U	White	Lenght (mm)	Order code
G	FASE V	Black	1500	003108015164
B	FASE W	Red	3000	003108015165
D	PE	Yellow-Green	5000	003108015166
			10000	003108015228

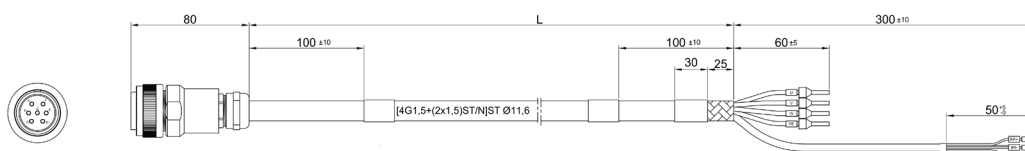
Power free wire cable for general purpose



POWER CABLES for models TC-E 100 4B - 130 5H with holding brake for C3 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
E	FASE U	White	Lenght (mm)	Order code
G	FASE V	Black	3000	003108015168
B	FASE W	Red	5000	003108015169
D	PE	Yellow-Green	10000	003108015167
F	BK +	Red		
A	BK -	Black		

Power free wire cable for general purpose



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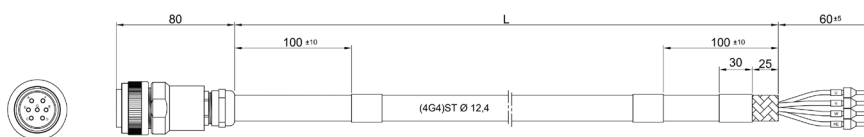
CABLES SPECIFICATIONS

Dynamic laying cable E83517 – c&Uus AWM STYLE 21223 certified

POWER CABLES for models TC-E 180 6A - 180 6B - 180 6C - 180 6D without holding brake for C3 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black 1	Lenght (mm)	Order code
4	FASE V	Black 2	3000	003108015177
7	FASE W	Black 3	5000	003108015178
8	PE	Yellow-Green	10000	003108015176

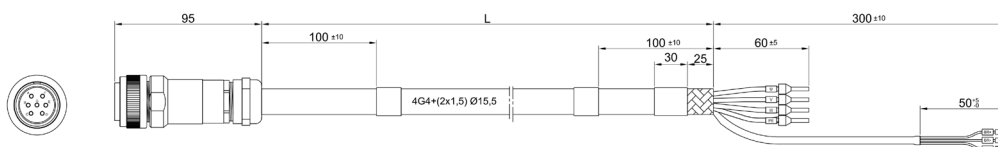
Power free wire cable for general purpose



POWER CABLES for models TC-E 180 6A - 180 6B - 180 6C - 180 6D with holding brake for C3 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
E	FASE U	White	Lenght (mm)	Order code
G	FASE V	Black	3000	003108015180
B	FASE W	Red	5000	003108015181
D	PE	Yellow-Green	10000	003108015179
F	BK +	Red		
A	BK -	Black		

Power free wire cable for general purpose



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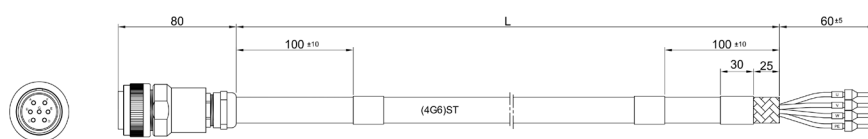
CABLES SPECIFICATIONS

Dynamic laying cable E83517 – c&Uus AWM STYLE 21223 certified

POWER CABLES for models TC-E 180 6E - 180 6F - 180 6G without holding brake for C3 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black 1	Lenght (mm)	Order code
4	FASE V	Black 2	3000	003108015183
7	FASE W	Black 3	5000	003108015184
8	PE	Yellow-Green	10000	003108015182

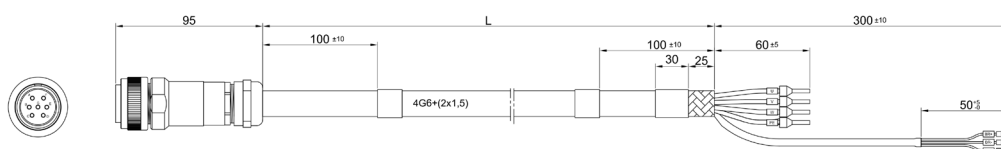
Power free wire cable for general purpose



POWER CABLES for models TC-E 180 6E - 180 6F - 180 6G with holding brake for C3 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
E	FASE U	White	Lenght (mm)	Order code
G	FASE V	Black	3000	003108015186
B	FASE W	Red	5000	003108015187
D	PE	Yellow-Green	10000	003108015185
F	BK +	Red		
A	BK -	Black		

Power free wire cable for general purpose



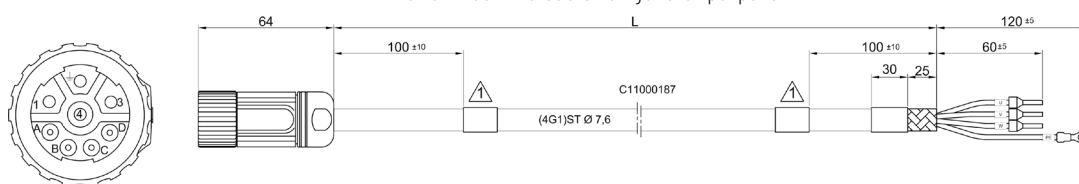
CABLES SPECIFICATIONS

Dynamic laying cable E83517 – c&Uus AWM STYLE 21223 certified

POWER CABLES for models TC-E 60- 80 -100 4A - 130 5A - 130 5B - 130 5C - 130 5D - 130 5E - 130 5F - 130 5G without holding brake for C2 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black	Lenght (mm)	Order code
4	FASE V	Black	3000	003108015250
3	FASE W	Black	5000	003108015251
2	PE	Yellow-Green	10000	003108015252

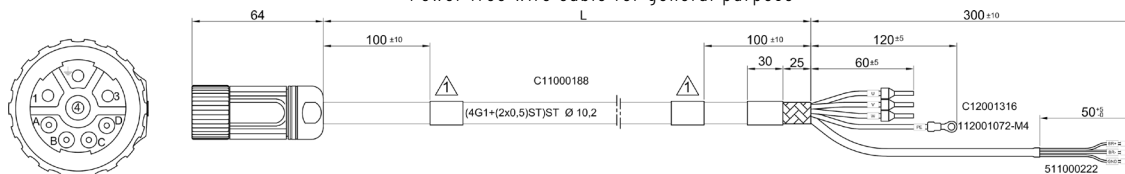
Power free wire cable for general purpose



POWER CABLES for models TC-E 60 - 80 - 100 4A - 130 5A - 130 5B - 130 5C - 130 5D - 130 5E - 130 5F - 130 5G with holding brake for C2 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black	Lenght (mm)	Order code
4	FASE V	Black	3000	003108015253
3	FASE W	Black	5000	003108015254
2	PE	Yellow-Green	10000	003108015255
A	BK +	Black		
B	BK -	White		

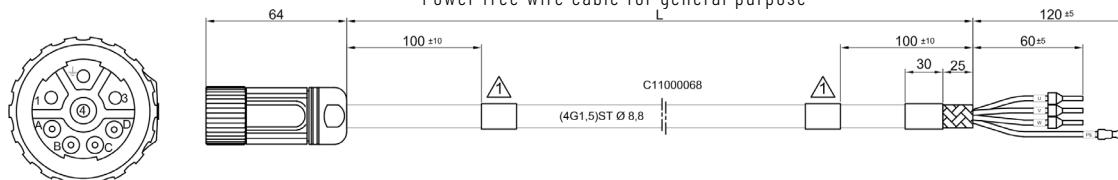
Power free wire cable for general purpose



POWER CABLES for models TC-E 100 4B - 130 5H without holding brake for C2 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black	Lenght (mm)	Order code
4	FASE V	Black	3000	003108015192
3	FASE W	Red	5000	003108015193
2	PE	Black	10000	003108015191

Power free wire cable for general purpose

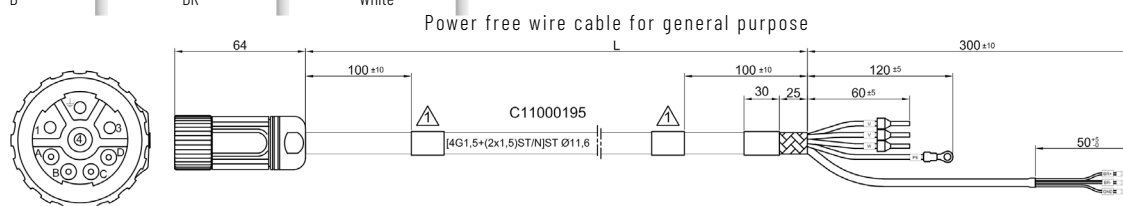


CABLES SPECIFICATIONS

Dynamic laying cable E83517 – c&Uus AWM STYLE 21223 certified

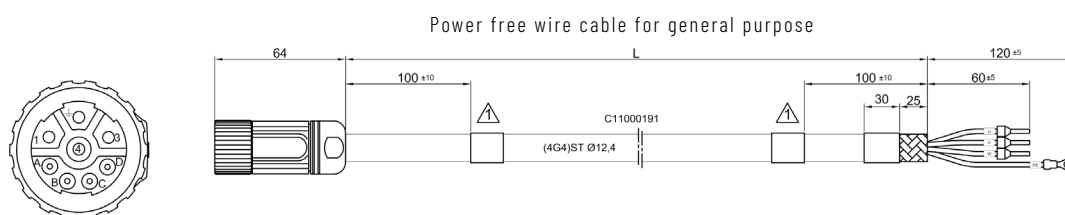
POWER CABLES for models TC-E 100 4B - 130 5H with holding brake for C2connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black	Lenght (mm)	Order code
4	FASE V	Black	3000	003108015195
3	FASE W	Black	5000	003108015196
2	PE	Yellow-Green	10000	003108015194
A	BK +	Black		
B	BK -	White		



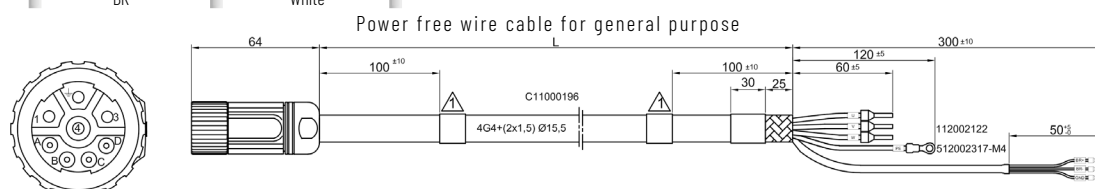
POWER CABLES for models TC-E 180 6A - 180 6B - 180 6C - 180 6D without holding brake for C2 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black	Lenght (mm)	Order code
4	FASE V	Black	3000	003108015204
3	FASE W	Black	5000	003108015205
2	PE	Yellow-Green	10000	003108015203



POWER CABLES for models TC-E 180 6A - 180 6B - 180 6C - 180 6D with holding brake for C2 connection

PIN motor side	FUNCTION	Cable wire colour	For cable order	
1	FASE U	Black	Lenght (mm)	Order code
4	FASE V	Black	3000	003108015207
3	FASE W	Black	5000	003108015208
2	PE	Yellow-Green	10000	003108015206
A	BK +	Black		
B	BK -	White		



CONNECTOR SPECIFICATIONS

FLYING CONNECTORS for D0 connection

Power Connector
for TC-E 40-60-80 Molex 4p

order code 007117000088

Power Connector
for TC-E 40-60-80 with brake Molex 6p

order code 007117000086

Signal Connector
for TC-E 40-60-80 Amp 9p

order code 007117000084

FLYING CONNECTORS FOR C2 connection

Power connector pin included
BSTA108NN00580236000 + 4 PIN 60.003.11 FM/2mm CRIMP.0,35-2,5
SPRING + 4 PIN 60.001.11 FM/1mm CRIMP.0,14-1 SPRING

order code 007117000472



Signal connector pin included
ASTA014NN00410235000 17p/FM + 17 PIN 60.011.11 FM/1mm CRIMP.0,14-1

order code 007117000462



FLYING CONNECTORS for C3 connection

Signal Connector for TC-E 100, 130, 180
97-3106AM120- 29S(417)(946)(M16)(A99)
cable gland included

order code 005117001770

Power Connector for TC-E 100 and 130
DL31.06A.20-15S (PG16)
cable gland not included

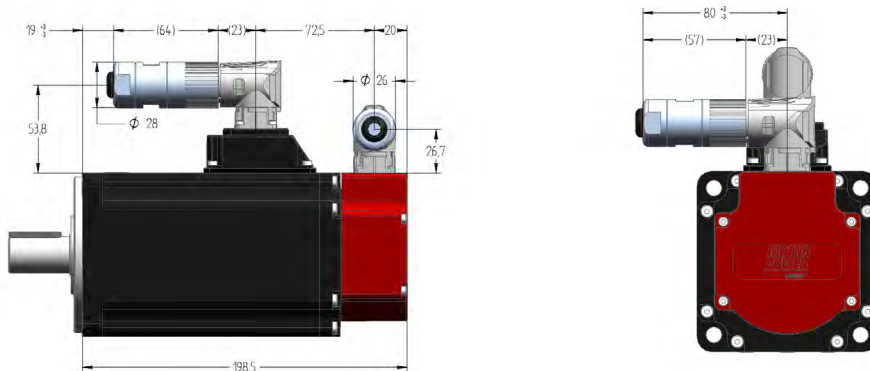
power connector order code 005117001766
cable gland order code 005603000170

Power Connector for TC-E 180
DLC31.06A.24-10S (PG21)
cable gland not included

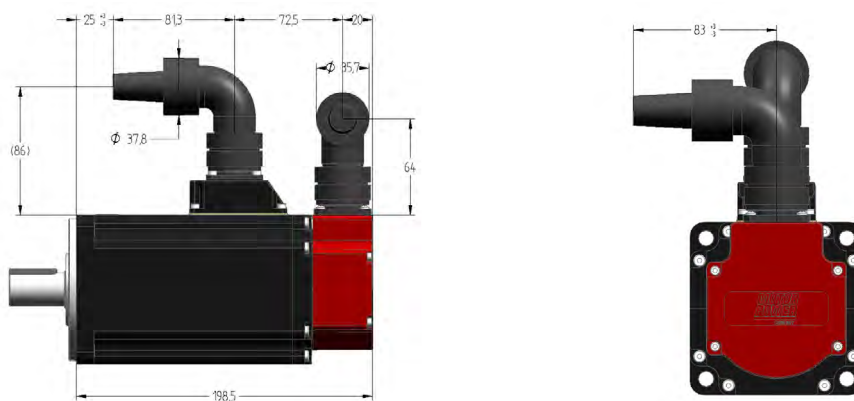
order code 005117001768
cable gland order code 005603000300

FLYING CONNECTOR DIMENSIONS

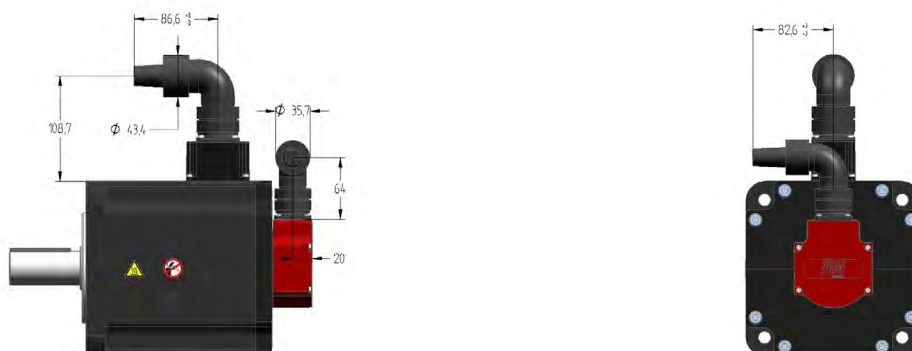
FLYING CONNECTORS for C2 connection (90° M23 turnable connectors)



FLYING CONNECTORS for C3 connection for TC-E 100-130 (90° MS connectors)



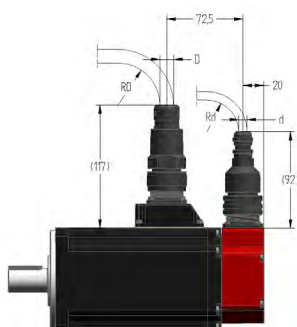
FLYING CONNECTORS for C3 connection for TC-E 180 (90° MS connectors)



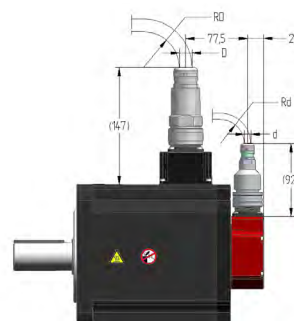
FLYING CONNECTORS for C3 connection for MS connectors

Radius curvature $RD=10 \times D$ and $Rd = 10 \times d$

TC-E 100 and 130



TC-E 180



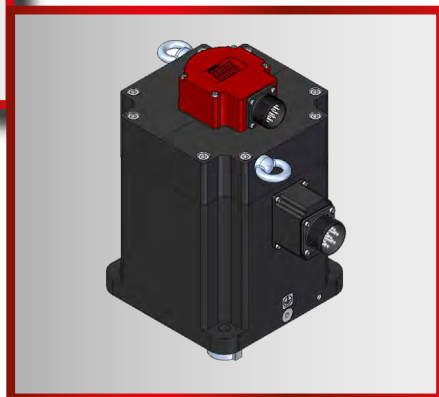
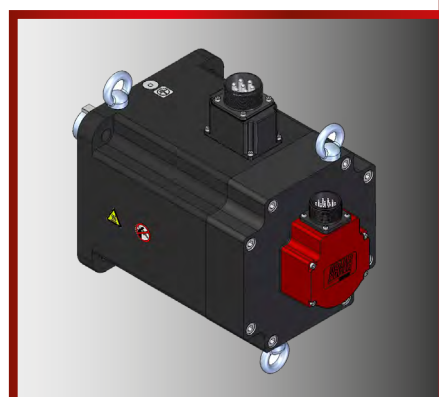
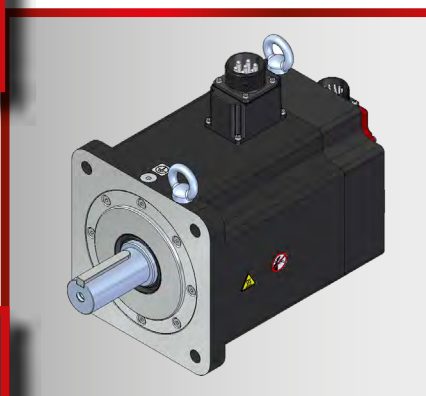
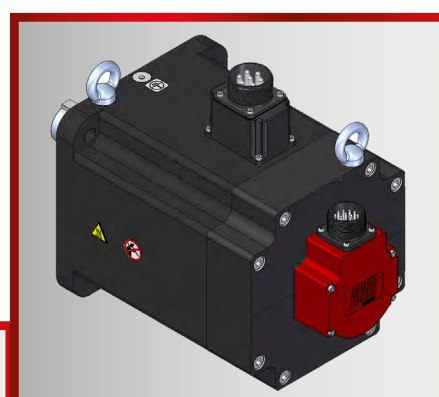
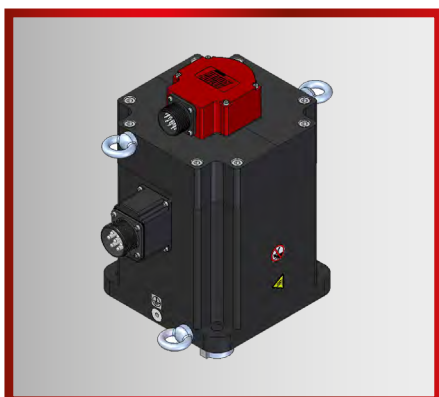
TRANSPORTATION AND STORAGE

The storage time is primarily limited by the service life of the lubricants in the bearings; do not store the product for more than 36 months. It is recommended to periodically operate the motor.

TOPIC	UNIT	VALUE
Temperature	[°C]	-40 ... 70
Relative humidity (non-condensing)	[%]	≤75
Set of class combinations as per IEC 60721-3-2		IE 21

HANDLING INSTRUCTION

Consider the mass of the product when mounting the motor. It may be necessary to use suitable lifting gear in two points.



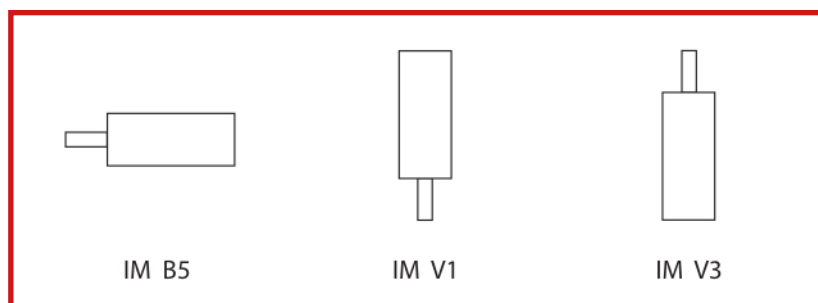
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PROTECTION CLASS

IP 54 Standard - IP 65 Option

The possible protection class at the machine depends on the position in which the motor will be mounted.
According to DIN 42950 part 1 (edition 08.77), the motors can be mounted on the machine as follows:



MOTOR PART	PROTECTION CLASS	MOUNTING POSITION / REMARK
Shaft	IP54	IMB5, IMV1
	IP50	IMV3
	IP65	in IMV3 shaft sealing required
Housing	Standard: IP54	Without shaft sealing
	Optional: IP65	IP65 with shaft sealing
Power / FDBK interface @ motor side	Standard: IP65	Flying leads & Military connector
Flying leads plug on cable	IP40 ¹⁾	
Cooling system	Standard convection: see housing	

¹⁾ Wires are protected by a heat shrink tubing

CLIMATIC ENVIRONMENTAL CONDITIONS OPERATION

TOPIC	UNIT	VALUE
Ambient temperature without holding brake ₁₎ (no icing, non-condensing)	[°C]	-20 ... 40
Motor with holding brake ambient temperature ₁₎ (no icing, non-condensing)	[°C]	-20 ... 40
Ambient temperature with current derating of 1% per °C ₁₎	[°C]	40 ... 60
Relative humidity (non-condensing)	[%]	5 ... 85
Class as per IEC 60721-3-3		3K3, 3Z12, 3Z2, 3B2, 3C1, 3M6
Installation altitude ₂₎	[m]	≤1000
Installation altitude with current derating of 1% per 100 m at altitudes of more than 1000 m ₂₎	[m]	1000 ... 3000

₁₎ Limit values with flanged motor.

₂₎ The installation altitude is defined as altitude above mean sea level.

OIL SEAL

Oil seal material is FPM (trade name Viton).

With shaft sealing ring the maximum speed of rotation is limited to 5000 rpm. Shaft sealing ring is provided with initial lubrication, if the sealing ring runs dry this increases friction and reduces service life. Derating must be considered if the oil seal is applied.

ADDITIONAL GROUND CONDUCTOR CONNECTION

Ground the motor via a grounding screw if grounding via the flange and the protective ground conductor of the motor cable is not sufficient. Use parts with suitable corrosion protection.



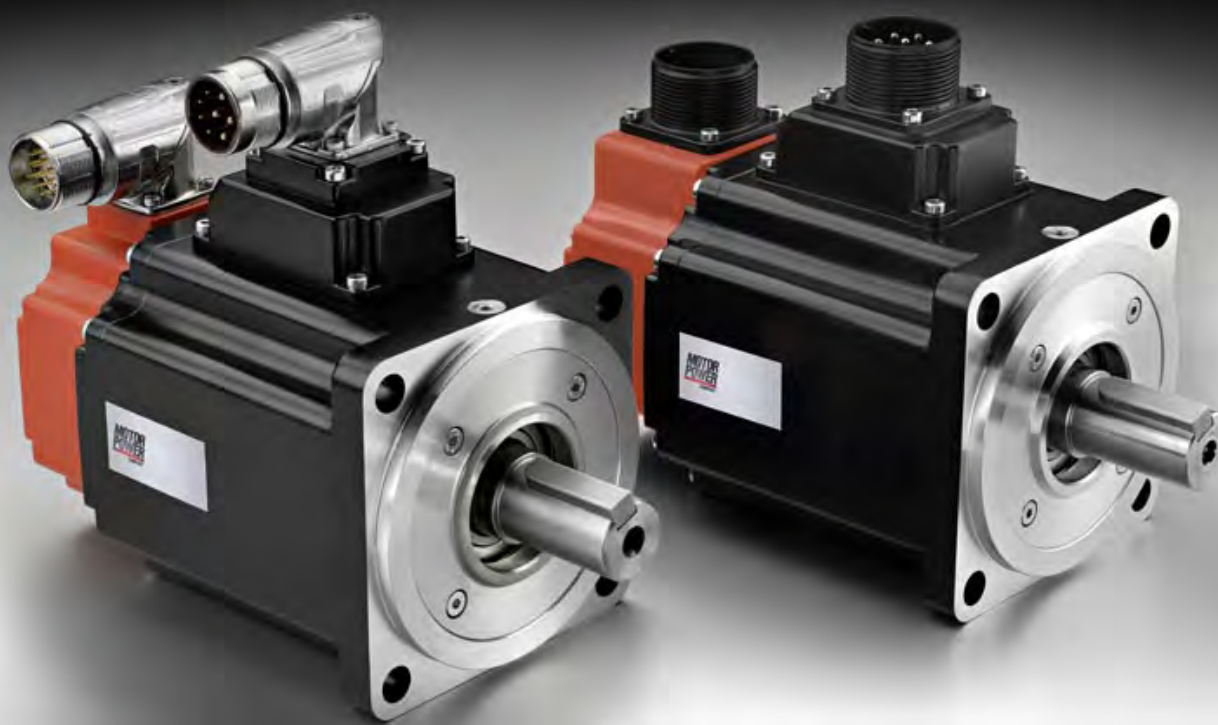
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