

PRODUCT INFORMATION PACKET

Model No: E3AB3004183B50D41100

Catalog No: E3AB3004183B50D41100

Made in Italy E3AB30 Series, General Purpose Low Voltage IEC motor IE3, Flameproof, 18,50kW,
3 phase, 1477 RPM, D400/Y690V 50Hz, 180M Frame B5, 4 Poles, IC411



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Nameplate Specifications

Output HP	25 Hp	Output KW	18.5 kW
Frequency	50 Hz	Voltage	400/690 V
Current	35.0 A	Speed	1477 rpm
Service Factor	1	Phase	3
Efficiency	92.6 %	Power Factor	0.83
Duty	S1	Insulation Class	F
Frame	180M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	40 °C	Drive End Bearing Size	6310
Opp Drive End Bearing Size	6310	UL	No
CSA	No	CE	Yes
IP Code	IP55	Number of Speeds	1

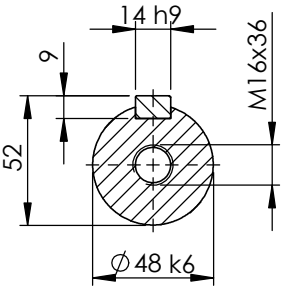
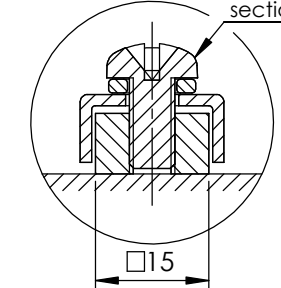
Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	Zz C3	Opp Drive End Bearing	Zz C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	934.00 mm	Frame Length	410.00 mm
Shaft Diameter	48.000 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Outline Drawing	B5A04E8185001B01	Connection Drawing	SC-01-T-1v-1a

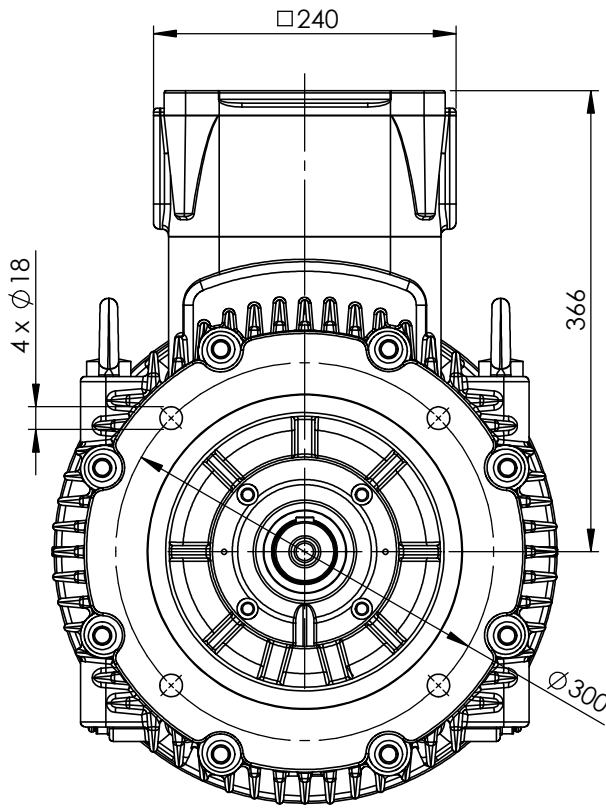
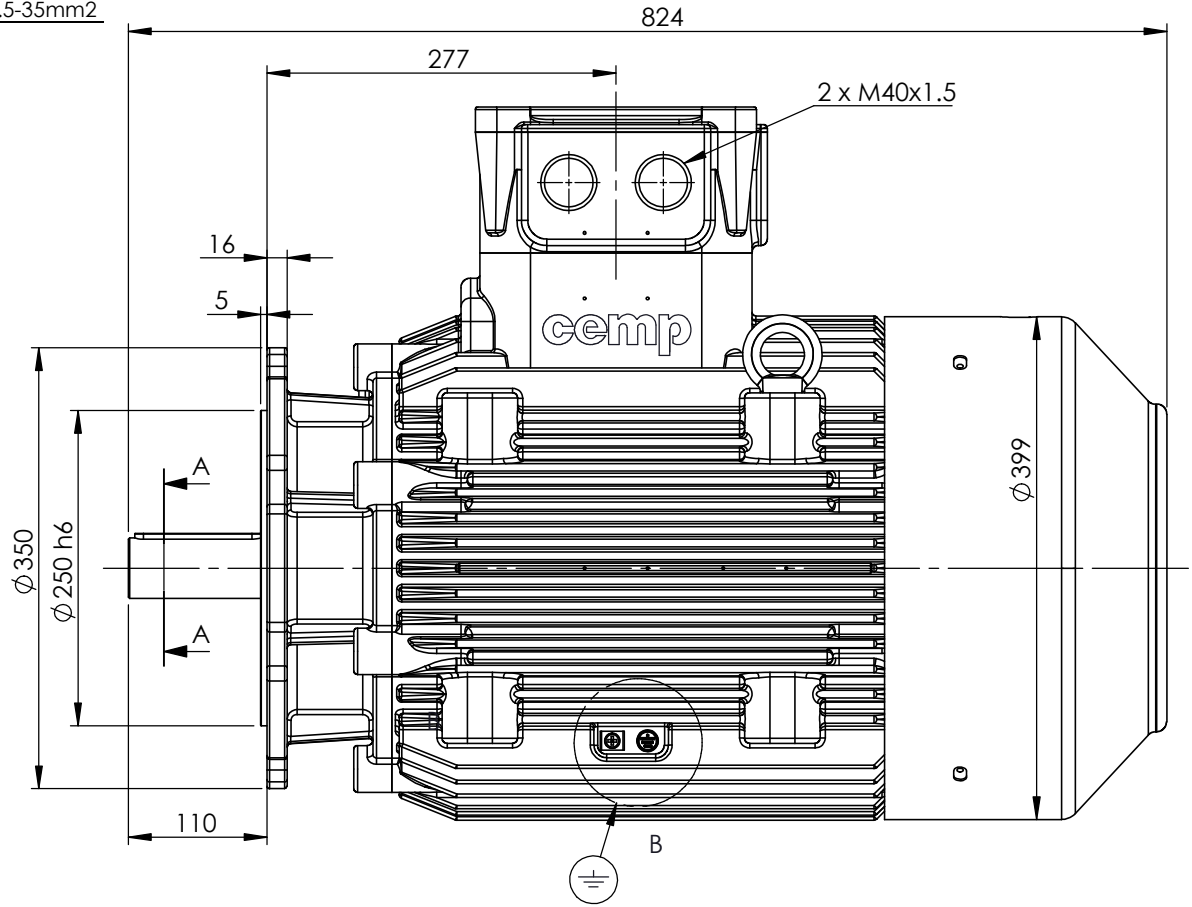
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DETAIL B
SCALE 1 : 1

Earth Terminal
suitable for cable
section 2.5-35mm²



SECTION A-A
SCALE 1 : 3



Earth terminal: 1 in the terminal box, 2 on the frame.

CUSTOMER REFERENCE AND ADDITIONAL INFORMATION: MOTOR TYPE AND DESCRIPTION:

DRAWING REVISION	REVISION BY	DATE	TOLERANCES (EXCEPT AS NOTED) TOLERANCES: ±2 * TOLERANCES: ±0.8	DRAWN BY DP	 			
ECO	APPROVED BY	DATE	DIMENSIONS ARE IN mm ACCORDING TO IEC 60072	DATE 29/12/2016	DESCRIPTION Motor A180 M (S) B5 IE3			
ECO DESCRIPTION				APPROVED BY DP				
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				REFERENCE				
			SERIAL NUMBER	FIRST ANGLE PROJECTION		SIZE A4	DRAWING NUMBER B5A04E8185001B01	SHEET 1 OF 2

Schema di collegamento - *Connection diagram*
Schemas de branchement - *Schaltplan*
Esquemas de conexión



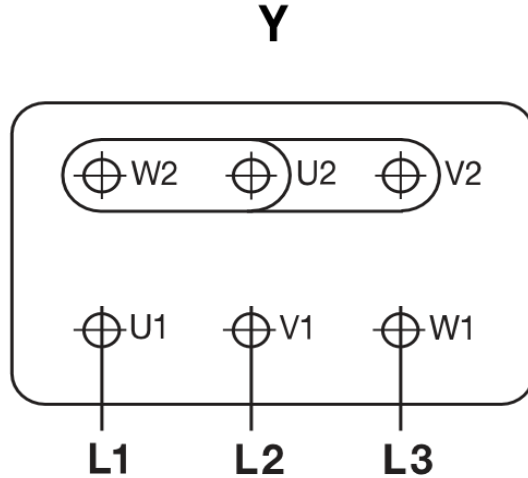
DTE 01/01/2004
SC - 01 - T - 1v.doc

**Motori trifase una velocità - *Single speed, three phase motors* - Moteurs triphasé une vitesse
Drehstrommotor Eine Drehzahlstufe - Motores trifásico una velocidad**

Collegamento - *Connection* - Connexion - *Schaltung* - Conexión



Collegamento - *Connection* - Connexion - *Schaltung* - Conexión



L1 - L2 - L3 = Linea - *Supply* - Reseau - *Netz* - Red

Per invertire la rotazione invertire due fasi - *To change the rotation reverse two phases* - Pour changer le sens de rotation inverser deux phases - *Zur Drehrichtungsänderung zwei Phasen vertauschen* - Para invertir el sentido de rotación invertir dos fases

Marcatura Morsetti Ausiliari - <i>Additional terminals marking (IEC60034-8)</i>		
Marcatura <i>Marking</i>	No. morsetti <i>terminals</i>	Morsetto ausiliare per: <i>Additional terminal for:</i>
TP1A - TP2A (allarme- <i>warning</i>)	2	Termistori PTC (alta velocità) - <i>Thermistor PTC (high speed) [*]</i>
TP1B - TP2B (allarme- <i>warning</i>)	2	Termistori PTC (bassa velocità) - <i>Thermistor PTC (low speed) [*]</i>
R1 - R2 - R3 (I sensore - <i>sensor</i>)	3	Termistore PT100 3 fili - <i>Thermistor PT 100 with 3 wires</i>
R4 - R5 - R6 (II sensore - <i>sensor</i>)	3	
R7 - R8 - R9 (III sensore - <i>sensor</i>)	3	
R11 - R12 - R13 (anteriore - <i>DE</i>)	3	Termistore PT100 su cuscinetto - <i>Thermistor PT 100 on bearing</i>
R21 - R22 - R23 (posteriore - <i>NDE</i>)	3	
TB1 - TB2 (allarme- <i>warning</i>)	2	Protettore bimetallico normalmente chiuso - <i>Normally closed bi-metallic switch (**)</i>
TB3 - TB4 (intervento- <i>switch off</i>)	2	Protettore bimetallico del freno normalmente chiuso - <i>NC brake bi-metallic switch (**)</i>
TB8 - TB9 (intervento- <i>switch off</i>)	2	
TM1 - TM2 (allarme- <i>warning</i>)	2	Protettore bimetallico normalmente aperto - <i>Normally open bi-metallic switch (**)</i>
TM3 - TM4 (intervento- <i>switch off</i>)	2	
HE1- HE2	2	Resistenze riscaldanti - <i>Space heaters</i>
U1 - U2	2	Ventilazione ausiliaria monofase - <i>Single phase forced ventilation</i>
U - V - W	2	Ventilazione ausiliaria trifase - <i>Three phase forced ventilation</i>
colori secondo schema del produttore - <i>colours according manufacturer</i>	9	Encoder
CA1 - CA2	2	Condensatore - <i>Capacitor</i>
PE	1	Conduttore di terra - <i>Earth cable</i>

[*] U nominale - *U rated* = 6V - max 30V

(**) U nominale - *U rated* = 250V

FOGLIO DATI PER MOTORI ELETTRICI ASINCRONI TRIFASI : SERIE IEC
DATA SHEET FOR ASYNCHRONOUS THREEPHASE INDUCTION MOTORS: IEC SERIES

Cliente / Customer	-
Ordine cliente / Customer order	-
Item	-

Conferma ordine / Acknowledgment	N° -
Impianto / Plant	-

DATI DI PROGETTO - DESIGN DATA

Modo di protezione	II2G	Motore / Frame
Type of protection		Scatola morsetti / Terminal box
Tem. Amb. Min. / Min Amb. Temp.	-20	°C
Umidità relativa / Relative humidity	90%	
Tensione nominale / Rated Voltage	400 V ± 5%	

Ex-db IIB T4 Gb	IP55
Ex-db IIB Gb	IP55
Tem. Amb. Max. / Max Amb. Temp.	40 °C
Altitudine / Altitude	< 1000 mslm / masl
Frequenza / Frequency	50 Hz ± 2%

DATI FUNZIONALI E COSTRUTTIVI - PERFORMANCE AND CONSTRUCTION DATA

1	Quantità / Quantity				01
2	Motore tipo / Motor type				E3AB30 180M 4
3	Numero di serie / Serial Number				-
4	Forma costruttiva / Shape				B5
5	Certificato / Certificate			TÜV CY	17 ATEX 0205845 X
6	Altro certificato / Other certificate				
Dati nominali / Rated data					
7	Poli / Pole			n°	4
8	Potenza nominale / Rated power			kW	18,50
9	Corrente nominale / Rated current			A	34,95
10	Velocità nominale / Full Load speed			1/min	1477
11	Collegamento / Winding connection				D
12	Isolamento / Insulation class				F
13	Sovratemperatura / Temperature rise				80K
14	Raffreddamento / Cooling type				IC411
15	Fattore di servizio / Service factor				1
16					
17	Classe di rendimento / Efficiency level			IEC 34-30	IE3
Performances elettriche / Electrical performances					
Carico / Load			4/4	3/4	2/4
18	Giri / Speed	1/min	1477	1484	1489
19	Corr. / Curr.	A	34,95	27,98	23,20
20	Rend / Eff	%	92,6	93,2	91,7
21	cos φ	-	0,83	0,77	0,63
Performances all'avviamento / Starting performances					
22	Ia/In - LRC/FLC			%	715
23	Cosphi a rotore bloccato / LR power factor				0,43
	Tempo a rotore bloccato / LRWT				
24	100% Un (A caldo / Warm)			sec	6
25	(A freddo / Cold)			sec	19
26	80% Un (A caldo / Warm)			sec	9
27	(A freddo / Cold)			sec	29
	Tempo di avviamento ammissibile / ART				
28	100% Un			sec	16
29	80% Un			sec	25
Curva di coppia / Speed-torque values					
30	Coppia nominale / Rated Torque			Nm	119,61
31	Ca/Cn - LRT/FLT			%	225
32	Cmax/Cn - BDT/FLT			%	310
33					
34					
35					
Varie / Other					
36					
37					
38					
39					

Servizio / Duty			
40	Servizio / Duty type	-	S1
41	Intermittenza / Cyclic duration factor	-	-
42	Avviamenti-ora / Starting-hour	-	-
43	Tempo ciclo / Time		-
Cuscinetti / Bearings			
44	Cuscinetto ant / DE bearing	-	6310 ZZ C3
45	Cuscinetto post / NDE bearing	-	6310 ZZ C3
46	Carico radiale max / Max radial load in X1	N	3350
47	Carico assiale max / Max axial load	N	880
48	Tipo grasso / Grease type	LGHP2 SKF or equivalent	
49	Intervallo lubrificazione / Lubrication	h	-
50	Quantità grasso / Quantity grease	gr	-
Caratteristiche meccaniche / mechanical specification			
51	Massa / Mass	kg	306,8
52	Momento d'inerzia / Moment of inertia	kgm2	0,1794
53	Rumore a vuoto / Noise at no load (1 m)	Lp dB(A)	67
54	Vibrazioni / Vibration level	IEC 34-14	A
55	Limite norma / Vibration limit	mm/sec	2,20
56			
57			
Dati entrata cavi - verniciatura / Cable entry and painting			
63	Entrata cavi / Cable entry		2xM40
64	Ciclo verniciatura / Painting cycle		STD
65	Colore finale / Final colour	RAL	5010
66			
67			
68			
69			
70			
71			
Ausiliari - Auxiliaries			
72	Sonde termiche / Temperature detector	winding	-
73	Sonde termiche / Temperature detector	bearing	-
74	Scaldiglie / Heaters	V / W	-
75	Preparation for SPM sensor		-
76	Pressacavi / Cable glands		NO
77			

CURVA COPPIA/CORRENTE-GIRI TORQUE/CURRENT-SPEED DIAGRAM

Cliente / Customer -
Ordine cliente / Customer order -
Impianto / Plant -
ITEM -

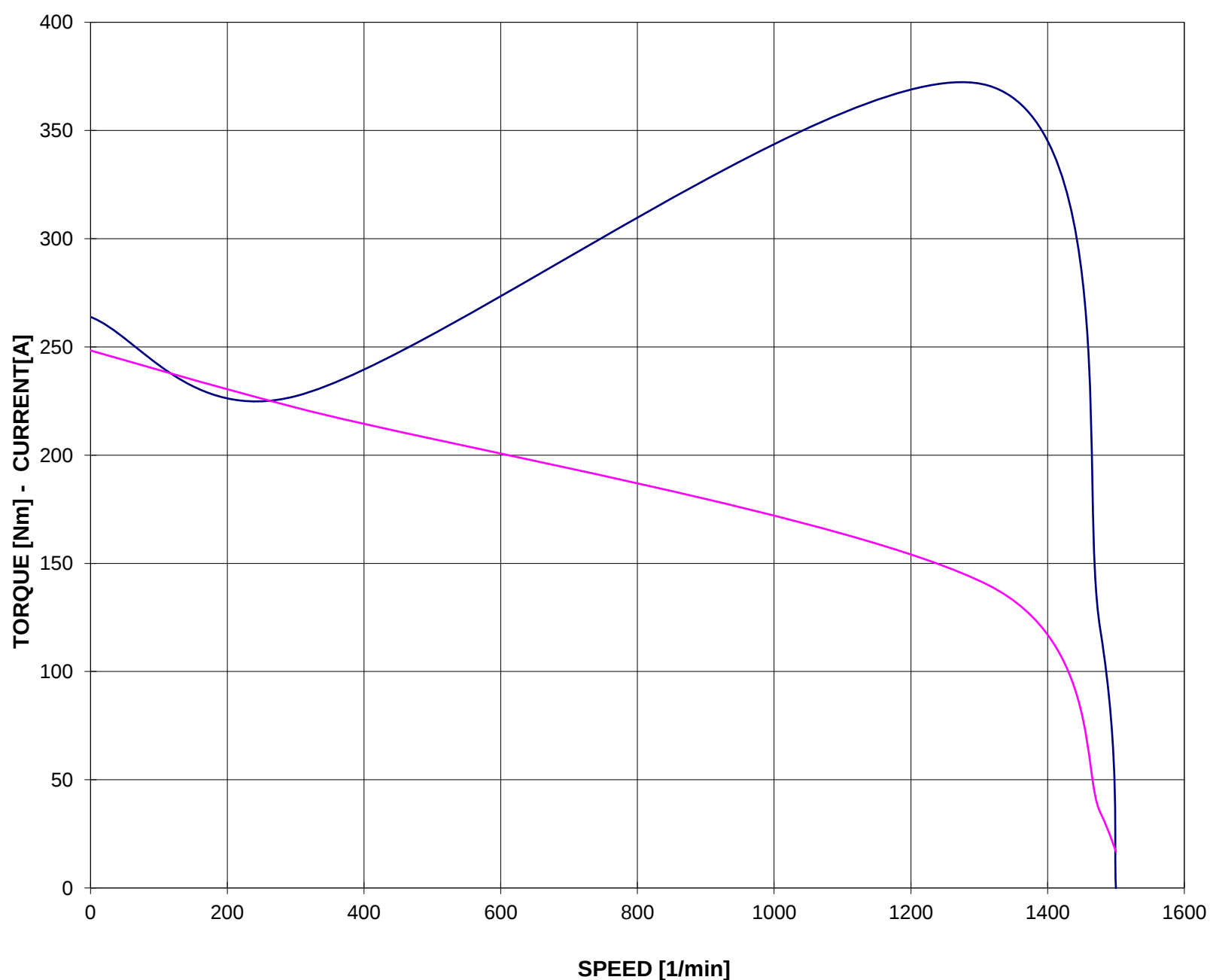
Conferma ordine / Acknowledgment -
Numero di serie / Serial Number -

Motore / Motor

E3AB30 180M 4

Potenza nominale / Rated power	18,50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	34,95	A
Velocità / Speed	1477	rpm
Coppia / Torque	119,61	Nm

— COPPIA - TORQUE — CORRENTE - CURRENT



Valori calcolati - Data obtained by calculation method

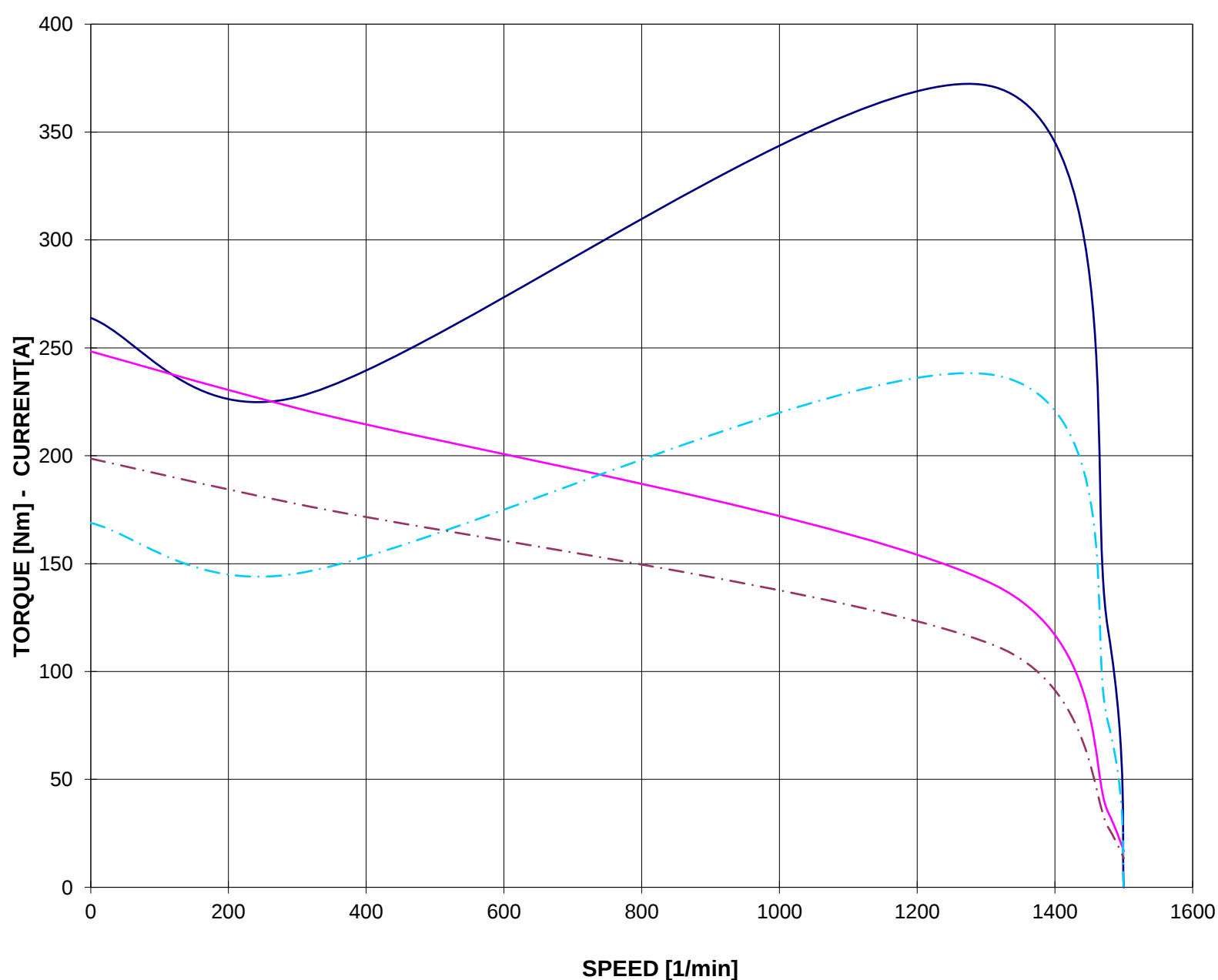
CURVA COPPIA/CORRENTE-GIRI (Tensione ridotta)
TORQUE/CURRENT-SPEED DIAGRAM (Reduced voltage)

Cliente / Customer -
Ordine cliente / Customer order -
Impianto / Plant -
ITEM -

Conferma ordine / Acknowledgment -
Numero di serie / Serial Number -

Motore / Motor **E3AB30 180M 4**
Potenza nominale / Rated power 18,50 kW
Poli / Pole 4
Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz
Corrente / Rated current 34,95 A
Velocità / Speed 1477 rpm
Coppia / Torque 119,61 Nm

— COPPIA - TORQUE — CORRENTE - CURRENT
- - - COPPIA - TORQUE 80% Un - - - CORRENTE - CURRENT 80% Un



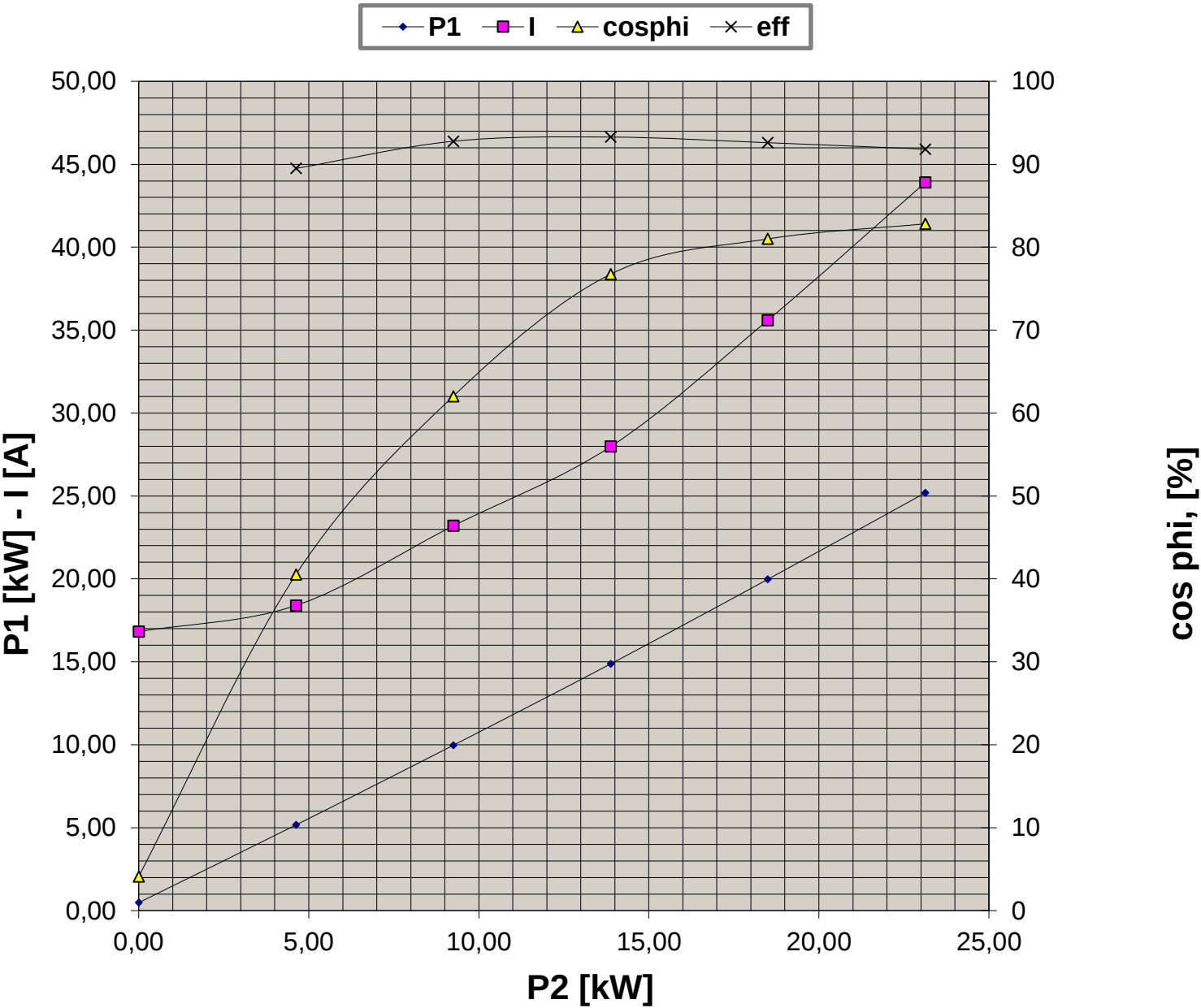
Valori calcolati - Data obtained by calculation method

CURVE CARATTERISTICHE
PERFORMANCE CURVES

Cliente / Customer -
Ordine cliente / Customer order -
Impianto / Plant -
ITEM -

Conferma ordine / Acknowledgment -
Numero di serie / Serial Number -

Motore / Motor	E3AB30 180M 4	
Potenza nominale / Rated power	18,50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	34,95	A
Velocità / Speed	1477	rpm
Coppia / Torque	119,61	Nm



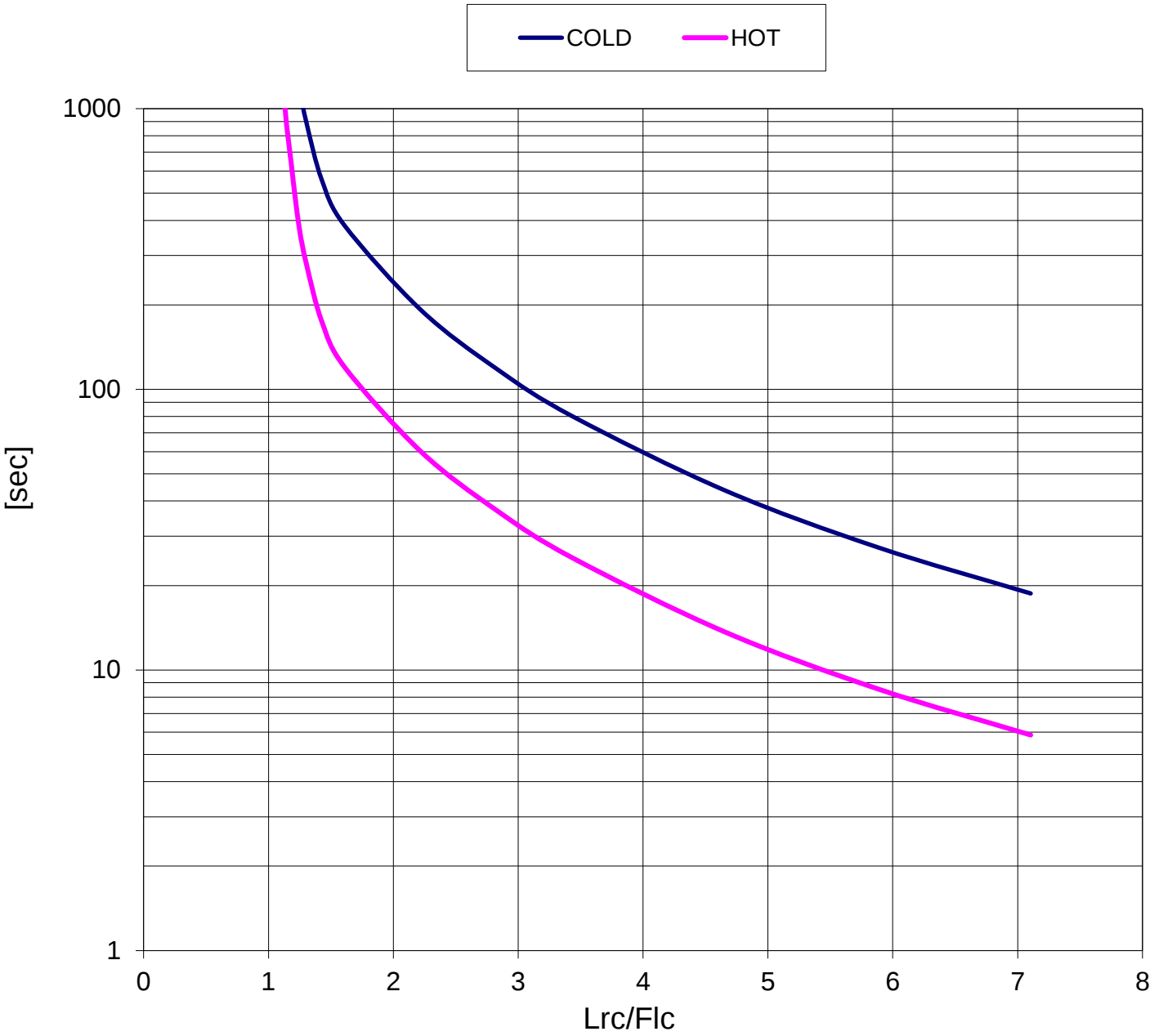
Valori calcolati - Data obtained by calculation method

CURVA LIMITE CORRENTE TEMPO
THERMAL WITHSTAND CURVE

Cliente / Customer -
Ordine cliente / Customer order -
Impianto / Plant -
ITEM -

Conferma ordine / Acknowledgment -
Numero di serie / Serial Number -

Motore / Motor	E3AB30 180M 4	
Potenza nominale / Rated power	18,50	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	34,95	A
Velocità / Speed	1477	rpm
Coppia / Torque	119,61	Nm



Valori calcolati - Data obtained by calculation method

Data / Date 25 January 2022

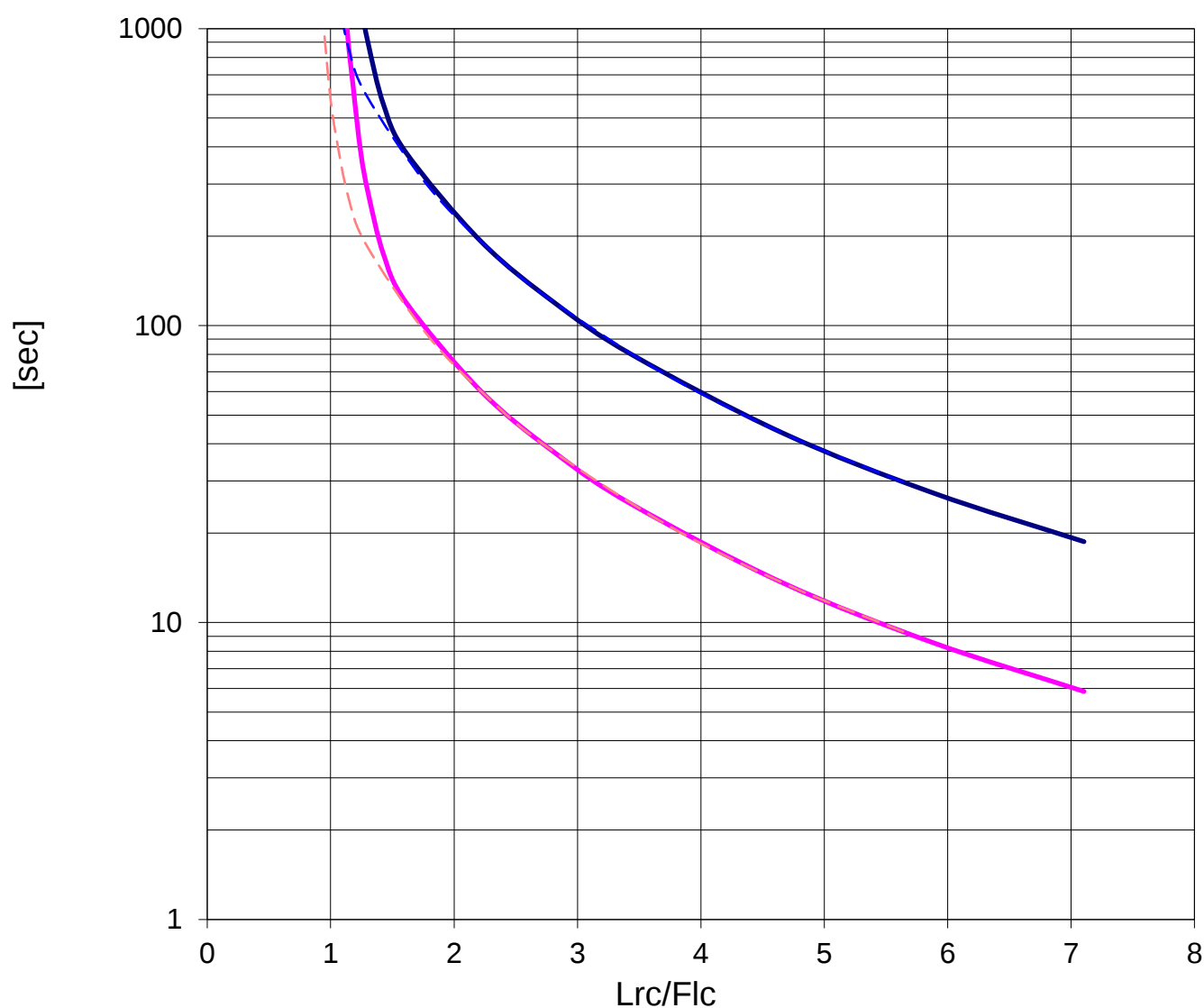
CURVA LIMITE CORRENTE TEMPO (Tensione ridotta)
THERMAL WITHSTAND CURVE (Reduced voltage)

Cliente / Customer -
Ordine cliente / Customer order -
Impianto / Plant -
ITEM -

Conferma ordine / Acknowledgment -
Numero di serie / Serial Number -

Motore / Motor **E3AB30 180M 4**
Potenza nominale / Rated power 18,50 kW
Poli / Pole 4
Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz
Corrente / Rated current 34,95 A
Velocità / Speed 1477 rpm
Coppia / Torque 119,61 Nm

— COLD (100% Un) — HOT (100% Un) - - COLD (80% Un) - - HOT (80% Un)



Valori calcolati - Data obtained by calculation method