

PRODUCT INFORMATION PACKET

Model No: E3TN3006223B35D41100

Catalog No: E3TN3006223B35D41100

Made in Italy TCN Series, General Purpose Low Voltage IEC motor, Increased Safety, 30,00 kW,
3 phase, 987 RPM, D400/Y690V 50Hz, 225MA Frame B35, 6 Poles, IC411



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Nameplate Specifications

Output HP	40 Hp	Output KW	30.0 kW
Frequency	50 Hz	Voltage	400/690 V
Current	55.9 A	Speed	987 rpm
Service Factor	1	Phase	3
Efficiency	92.9 %	Power Factor	0.83
Duty	S1	Insulation Class	F
Frame	225MA	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	40 °C	Drive End Bearing Size	6313
Opp Drive End Bearing Size	6213	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	6	Rotation	Bi-Directional
Mounting	B35	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	862.00 mm	Frame Length	425.00 mm
Shaft Diameter	60.000 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	SC-01-T-1v-1a	Outline Drawing	B3A04T8220011D01

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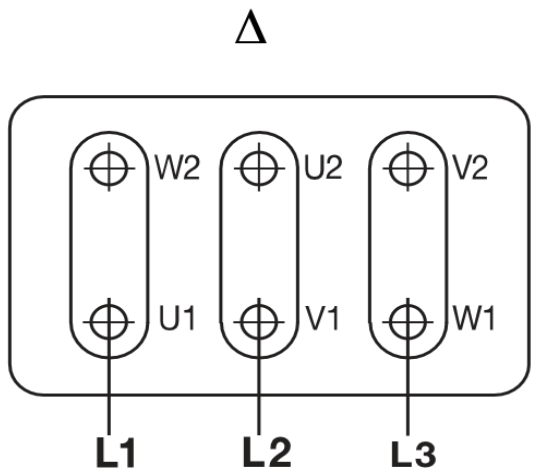
Schema di collegamento - *Connection diagram*
Schemas de branchement - *Schaltplan*
Esquemas de conexión



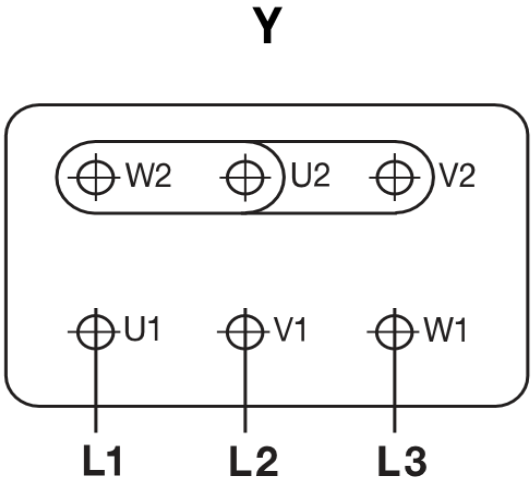
DTE 01/01/2004
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**Motori trifase una velocità - *Single speed, three phase motors* - Moteurs triphasé une vitesse
Drehstrommotor Eine Drehzahlstufe - Motores trifásico una velocidad**

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	-
Offerta / Offer	-
Impianto / Plant	-

DATI DI PROGETTO - DESIGN DATA

Modo di protezione	II3G	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 +/- 10%	

Ex ec IIB T3 Gc	IP55
Ex ec IIB Gc	IP55
Tem. Amb. Max. / Max Amb. Temp.	40 °C
Altitudine / Altitude	< 1000 mslm / masl
Frequenza / Frequency	50 Hz +/- 3%

DATI FUNZIONALI E COSTRUTTIVI - PERFORMANCE AND CONSTRUCTION DATA

1	Quantità / Quantity		01
2	Motore tipo / Motor type		TCN 225MA6
3	Numero di serie / Serial Number		
4	Forma costruttiva / Shape		B35
5	Certificato / Certificate	TÜV IT	20 ATEX 103X
6			
Dati nominali / Rated data			
7	Poli / Pole	n°	6
8	Potenza nominale / Rated power	kW	30,00
9	Corrente nominale / Rated current	A	55,89
10	Velocità nominale / Full Load speed	1/min	987
11	Collegamento / Winding connection		D
12	Isolamento / Insulation class		F
13	Sovratemperatura / Temperature rise		DT80K
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
18	Giri / Speed	1/min	987
19	Corr. / Curr.	A	55,89
20	Rend / Eff	%	92,9
21	cos φ	-	0,84
Performances all'avviamento / Starting performances			
22	Ia/In - LRC/FLC	%	680
23	Cosphi a rotore bloccato / LR power factor		0,44
	Tempo a rotore bloccato / LRWT		
24	100% Un (A caldo / Warm)	sec	10
25	(A freddo / Cold)	sec	22
26	80% Un (A caldo / Warm)	sec	15
27	(A freddo / Cold)	sec	35
	Tempo di avviamento ammissibile / ART		
28	100% Un	sec	19
29	80% Un	sec	30
Curva di coppia / Speed-torque values			
30	Coppia nominale / Rated Torque	Nm	290,27
31	Ca/Cn - LRT/FLT	%	215
32	Cmax/Cn - BDT/FLT	%	280
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	-	6313 C3
45	Cuscinetto post / NDE bearing	-	6213 C3
46	Carico radiale max / Max radial load in X1	N	4646
47	Carico assiale max / Max axial load	N	3514
48	Tipo grasso / Grease type	LGHP2 SKF or equivalent	
49	Intervallo lubrificazione / Lubrication	h	10000
50	Quantità grasso / Quantity grease	gr	24
Caratteristiche meccaniche / mechanical specification			
51	Massa / Mass	kg	374
52	Momento d'inerzia / Moment of inertia	kgm2	1,0179
53	Rumore a vuoto / Noise at no load (1 m)	Lp dB(A)	70
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	IEC 60423	2xM40+1xM16
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	PTC
73	Sonde termiche / Temperature detector	bearing	-
74	Scaldiglie / Heaters	V / W	-
75	Preparation for SPM sensor		-
76	Pressacavi / Cable glands		NO
77			

Documento preliminare - Preliminary data sheet

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

Cliente / Customer

-

Impianto / Plant

-

ITEM

-

Numero d'offerta / Offer Number

-

Motore / Motor

TCN 225MA6

Potenza nominale / Rated power

30,00

kW

Poli / Pole

6

Tensione - Frequenza / Voltage - Frequency

400 - 50

V - Hz

Corrente / Rated current

55,89

A

Velocità / Speed

987

rpm

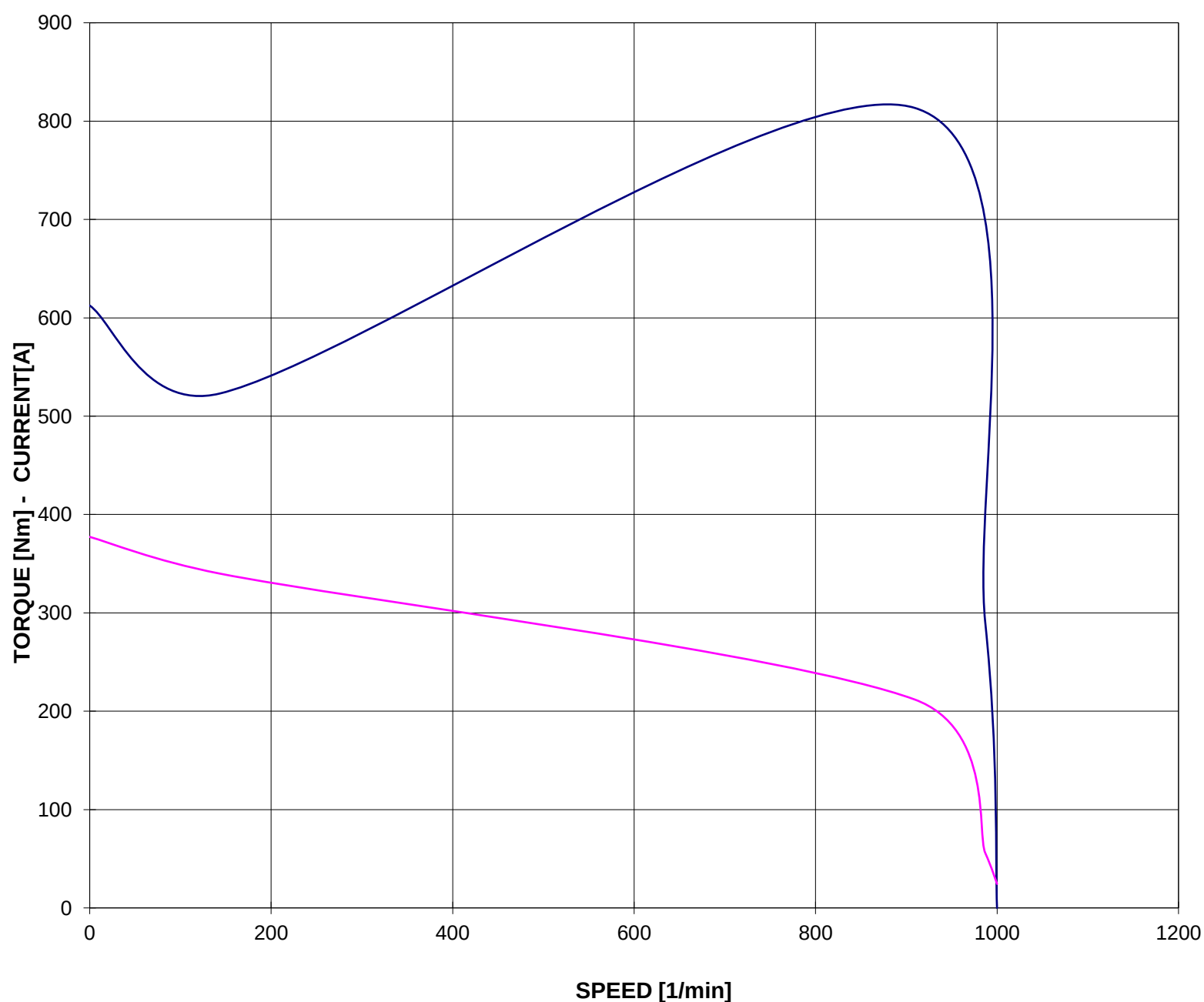
Coppia / Torque

290,27

Nm

— COPPIA - TORQUE

— CORRENTE - CURRENT



Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 29-giu-22

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

Cliente / Customer

-

Impianto / Plant

-

ITEM

-

Numero d'offerta / Offer Number

-

Motore / Motor

TCN 225MA6

Potenza nominale / Rated power

30,00

kW

Poli / Pole

6

Tensione - Frequenza / Voltage - Frequency

400 - 50

V - Hz

Corrente / Rated current

55,89

A

Velocità / Speed

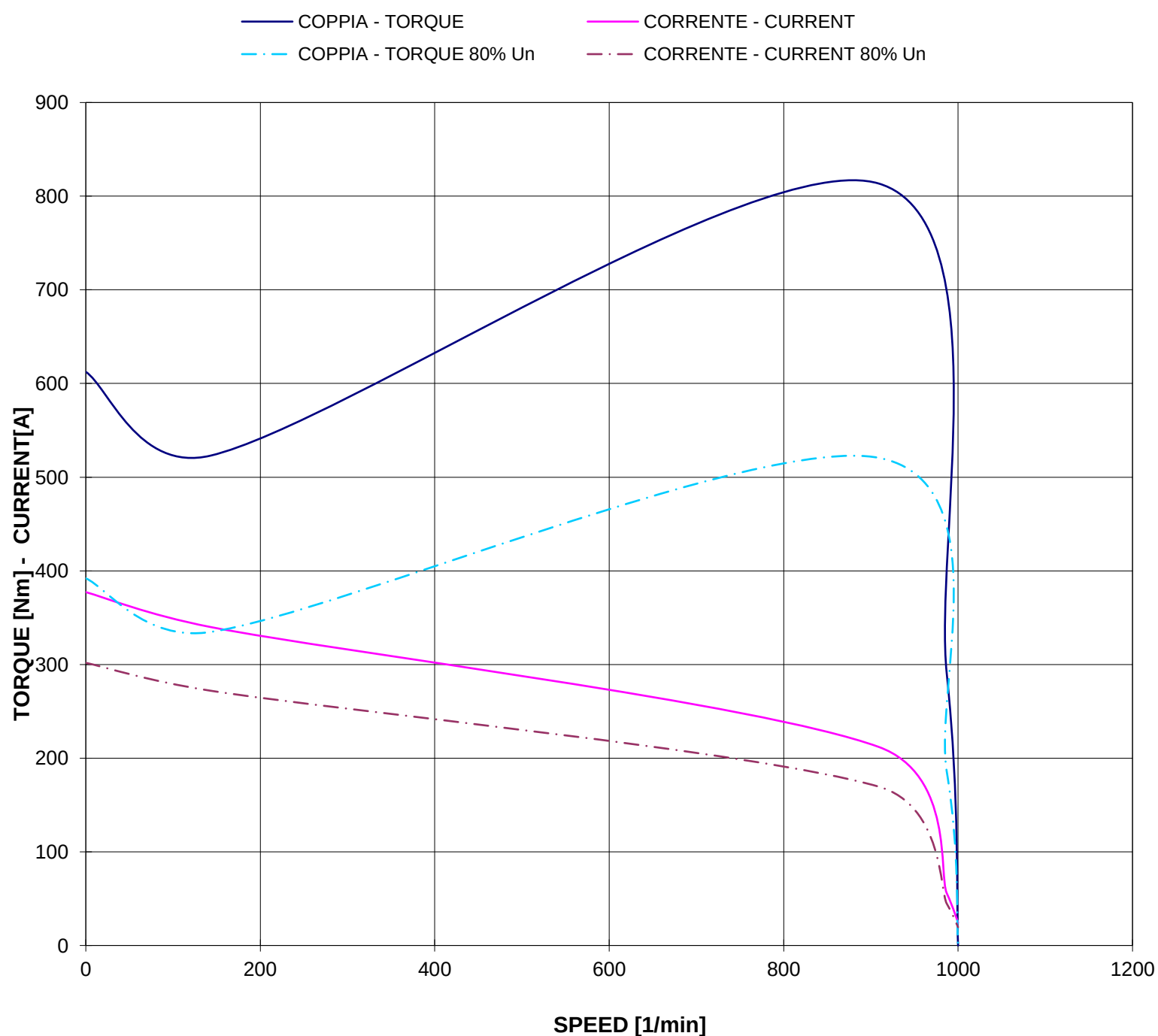
987

rpm

Coppia / Torque

290,27

Nm



Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 29-giu-22

CURVE CARATTERISTICHE PERFORMANCE CURVES

Cliente / Customer

-

Impianto / Plant

-

ITEM

-

Numero d'offerta / Offer Number

-

Motore / Motor

TCN 225MA6

Potenza nominale / Rated power

30,00

kW

Poli / Pole

6

Tensione - Frequenza / Voltage - Frequency

400 - 50

V - Hz

Corrente / Rated current

55,89

A

Velocità / Speed

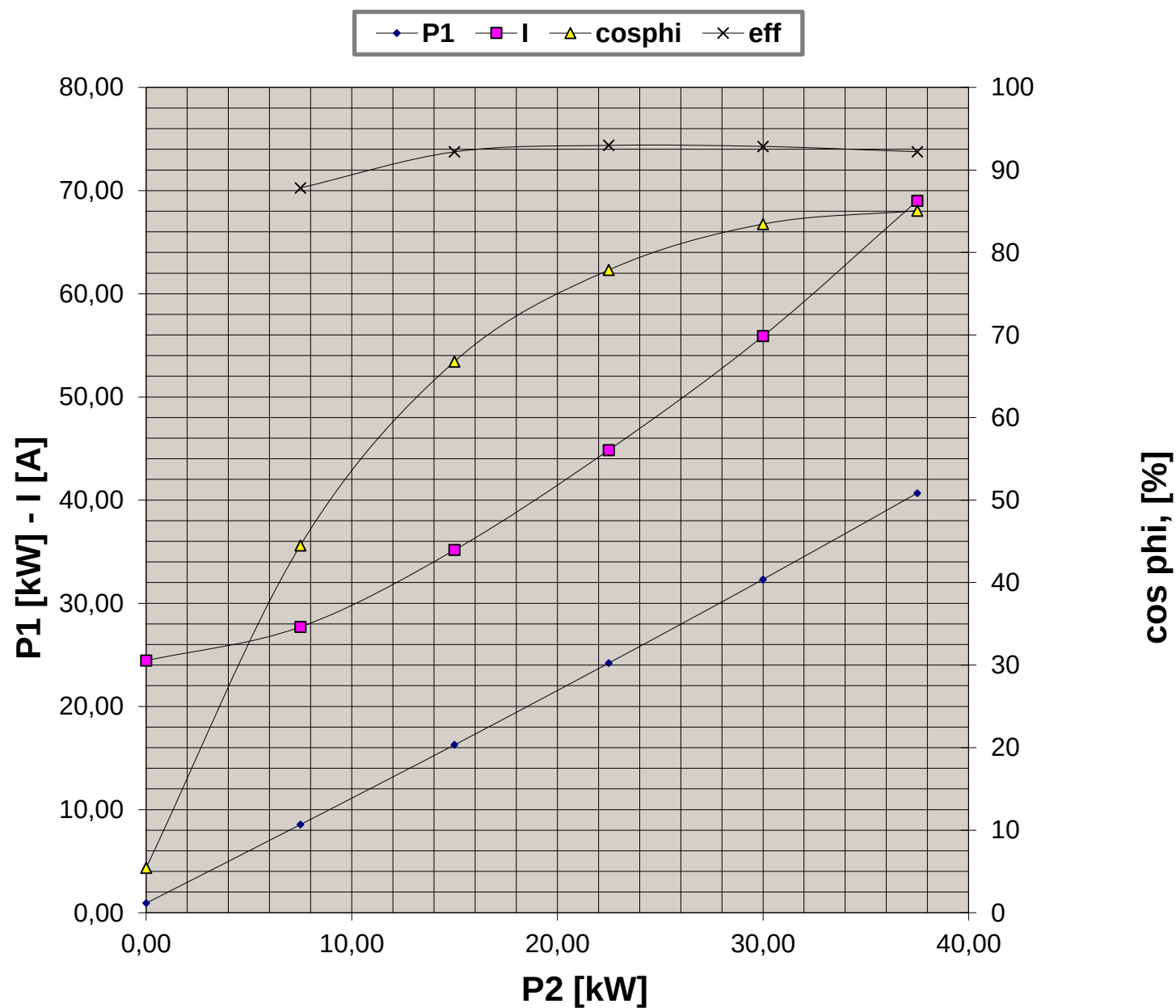
987

rpm

Coppia / Torque

290,27

Nm



Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 29-giu-22

CURVA LIMITE CORRENTE TEMPO
THERMAL WITHSTAND CURVE

Cliente / Customer

-

Impianto / Plant

-

ITEM

-

Numero d'offerta / Offer Number

-

Motore / Motor

TCN 225MA6

Potenza nominale / Rated power

30,00

kW

Poli / Pole

6

Tensione - Frequenza / Voltage - Frequency

400 - 50

V - Hz

Corrente / Rated current

55,89

A

Velocità / Speed

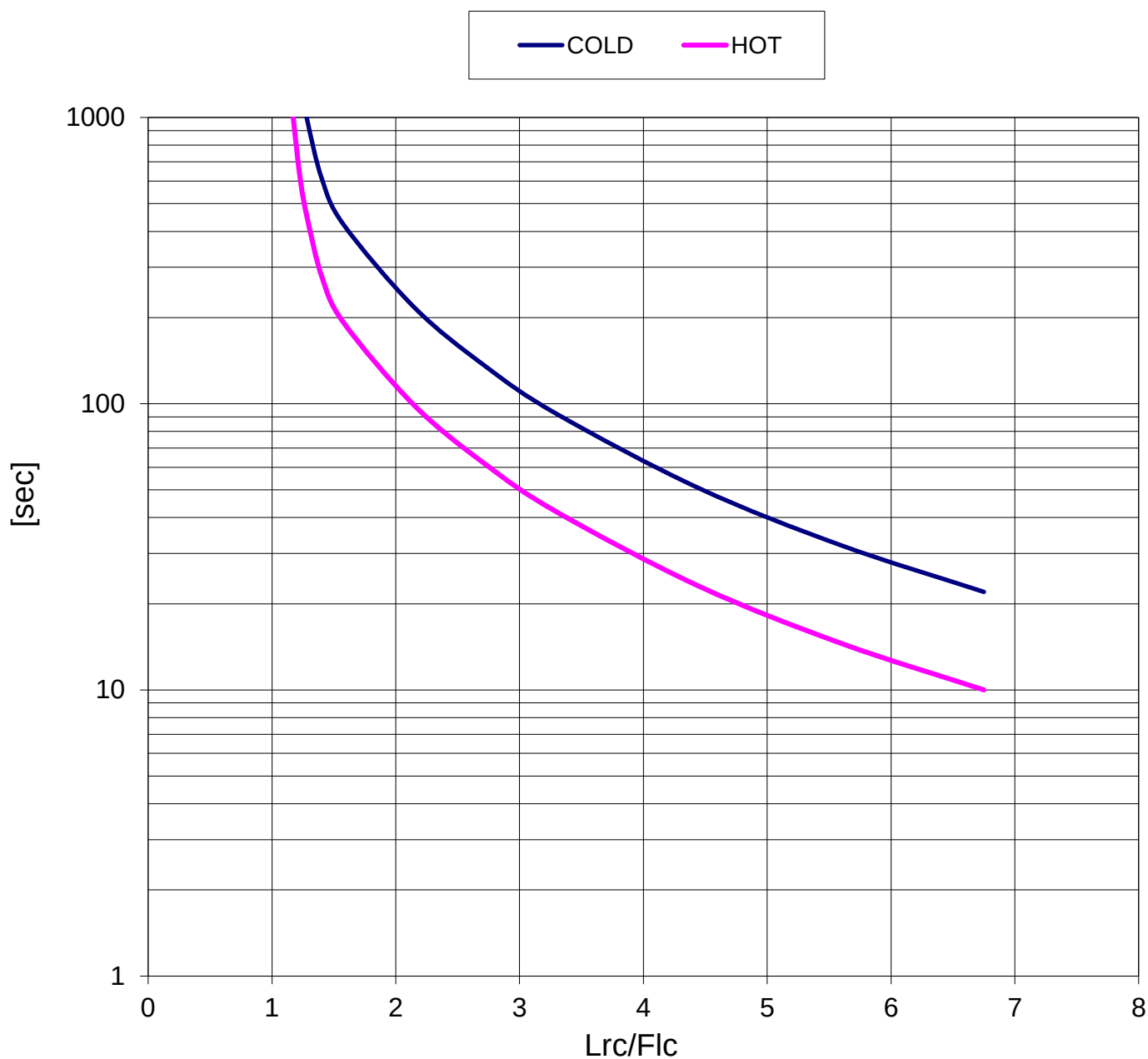
987

rpm

Coppia / Torque

290,27

Nm



Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 29-giu-22

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

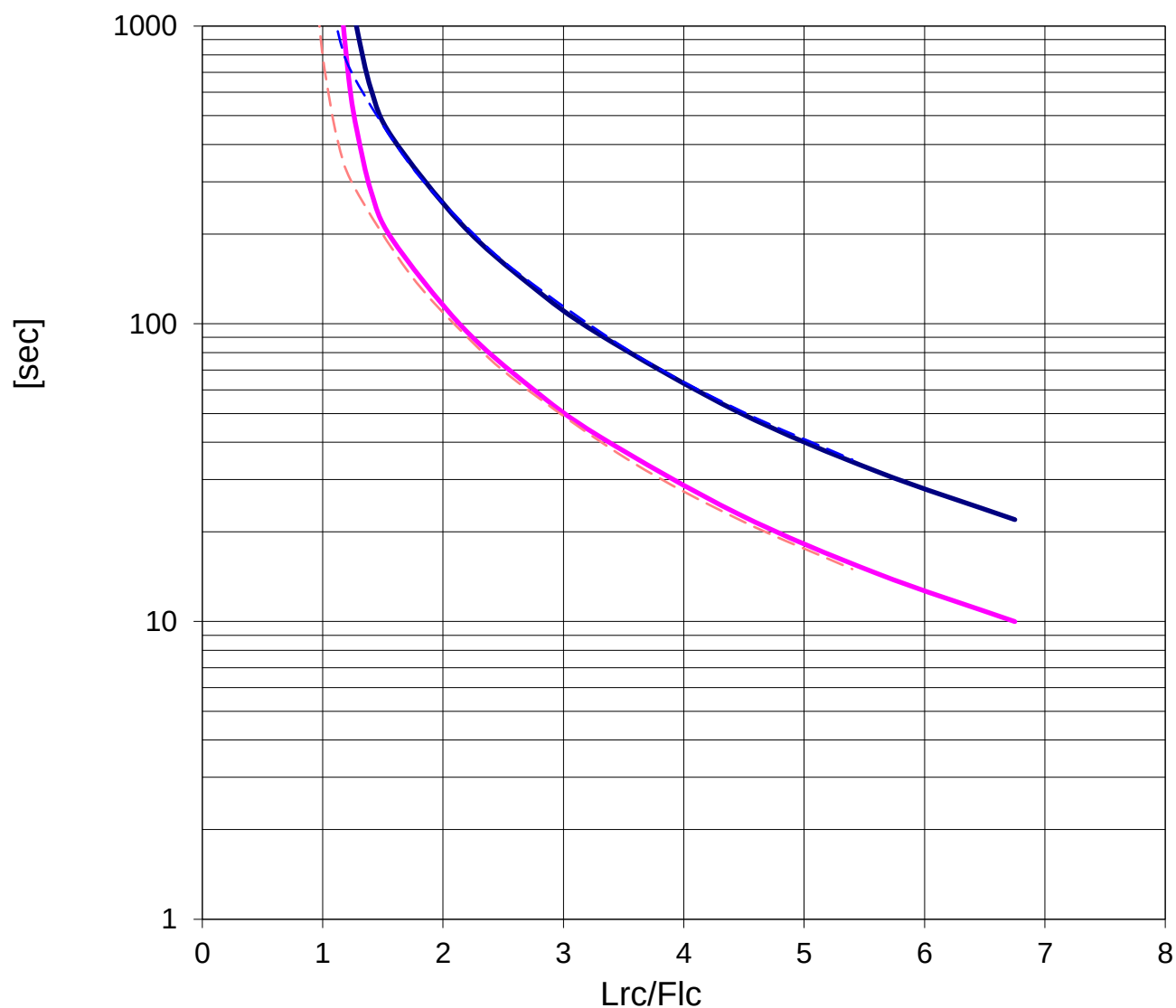
Cliente / Customer -
Impianto / Plant -
ITEM -
Numero d'offerta / Offer Number -

Motore / Motor

TCN 225MA6

Potenza nominale / Rated power	30,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	55,89	A
Velocità / Speed	987	rpm
Coppia / Torque	290,27	Nm

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



Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 29-giu-22