

# PRODUCT INFORMATION PACKET

Model No: E3TN3004085B50S41100

Catalog No: E3TN3004085B50S41100

Made in Italy TCN Series, General Purpose Low Voltage IEC motor, Increased Safety, 0,75 kW,  
3 phase, 1428 RPM, D230/Y400V 50Hz, 80MB Frame B5, 4 Poles, IC411



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### Nameplate Specifications

|                            |               |                        |                                    |
|----------------------------|---------------|------------------------|------------------------------------|
| Output HP                  | <b>1 Hp</b>   | Output KW              | <b>0.75 kW</b>                     |
| Frequency                  | <b>50 Hz</b>  | Voltage                | <b>230/400 V</b>                   |
| Current                    | <b>1.7 A</b>  | Speed                  | <b>1428 rpm</b>                    |
| Service Factor             | <b>1</b>      | Phase                  | <b>3</b>                           |
| Efficiency                 | <b>82.9 %</b> | Power Factor           | <b>0.77</b>                        |
| Duty                       | <b>S1</b>     | Insulation Class       | <b>F</b>                           |
| Frame                      | <b>80MB</b>   | Enclosure              | <b>Totally Enclosed Fan Cooled</b> |
| Ambient Temperature        | <b>40 °C</b>  | Drive End Bearing Size | <b>6204</b>                        |
| Opp Drive End Bearing Size | <b>6204</b>   | UL                     | <b>No</b>                          |
| CSA                        | <b>No</b>     | CE                     | <b>Yes</b>                         |
| IP Code                    | <b>IP55</b>   | Number of Speeds       | <b>1</b>                           |

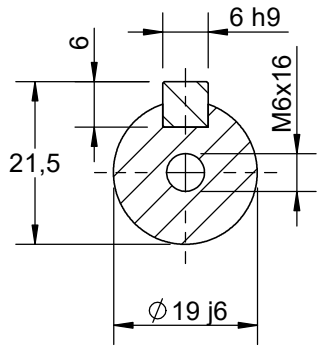
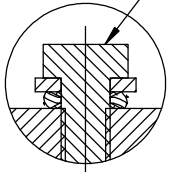
### Technical Specifications

|                       |                      |                       |                         |
|-----------------------|----------------------|-----------------------|-------------------------|
| Electrical Type       | <b>Squirrel Cage</b> | Starting Method       | <b>Direct On Line</b>   |
| Poles                 | <b>4</b>             | Rotation              | <b>Bi-Directional</b>   |
| Mounting              | <b>B5</b>            | Motor Orientation     | <b>Horizontal</b>       |
| Drive End Bearing     | <b>2z-C3</b>         | Opp Drive End Bearing | <b>2z-C3</b>            |
| Frame Material        | <b>Cast Iron</b>     | Shaft Type            | <b>Keyed</b>            |
| Overall Length        | <b>281.00 mm</b>     | Frame Length          | <b>140.00 mm</b>        |
| Shaft Diameter        | <b>19.000 mm</b>     | Shaft Extension       | <b>40 mm</b>            |
| Assembly/Box Mounting | <b>Top</b>           |                       |                         |
| Connection Drawing    | <b>SC-01-T-1v-1a</b> | Outline Drawing       | <b>B5A04T8080001B01</b> |

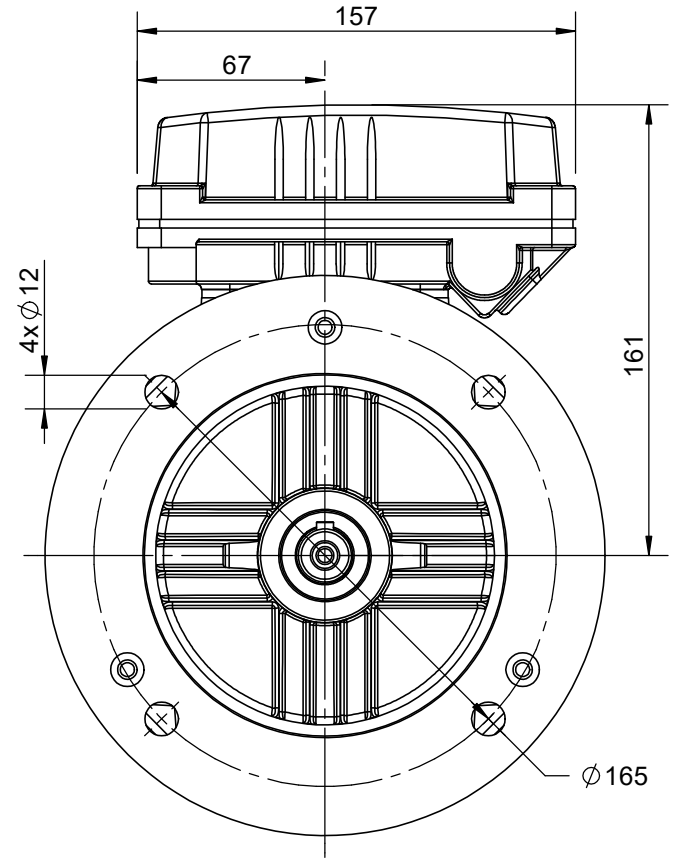
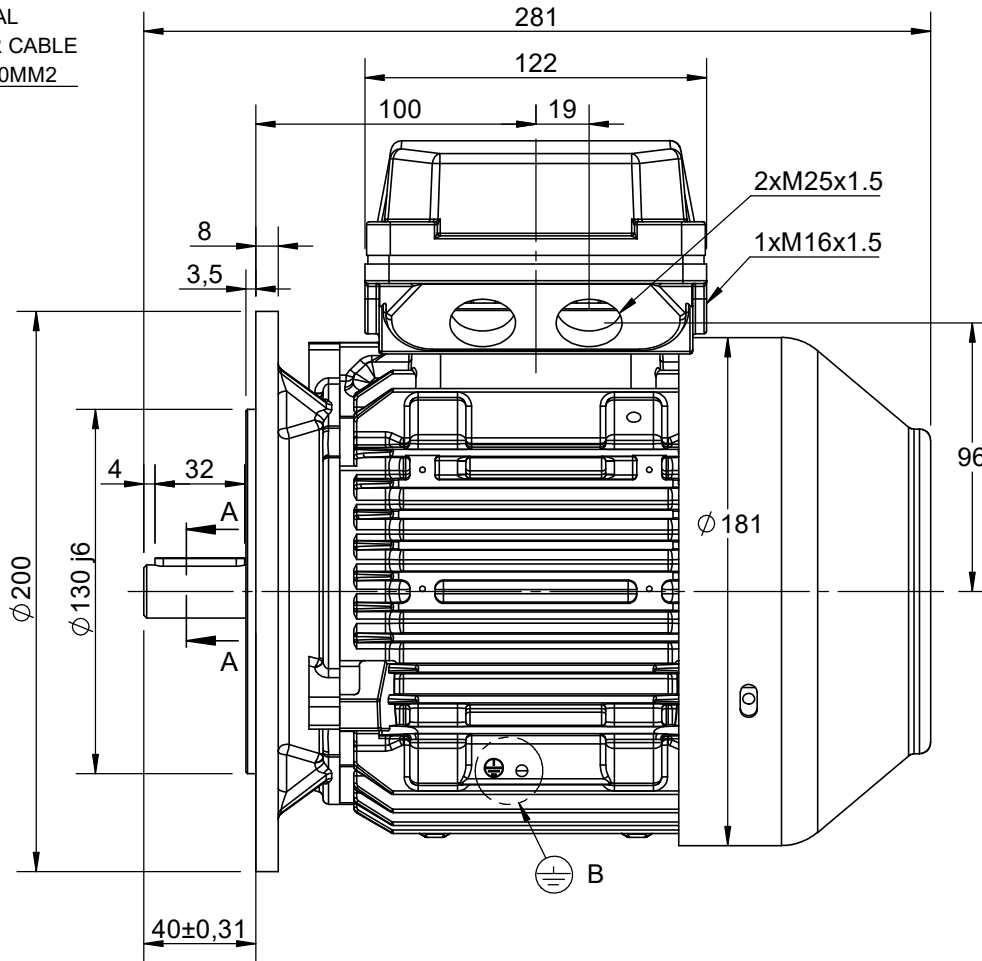
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DETAIL B

EARTH TERMINAL  
SUITABLE FOR CABLE  
SECTION 1.5-10MM<sup>2</sup>



SECTION A-A  
SCALE 1:1



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

CUSTOMER REFERENCE AND ADDITIONAL INFORMATION:

MOTOR TYPE AND DESCRIPTION:

|                       |                   |                    |
|-----------------------|-------------------|--------------------|
| DRAWING REVISION<br>1 | REVISION BY<br>TN | DATE<br>20/04/2022 |
| ECO                   | APPROVED BY<br>LP | DATE<br>21/04/2022 |

TOLERANCES (EXCEPT AS NOTED)  
TOLERANCES: ±2

DIMENSIONS ARE IN mm  
ACCORDING TO IEC 60072

|                    |
|--------------------|
| DRAWN BY<br>TN     |
| DATE<br>20/10/2021 |
| APPROVED BY<br>LP  |
| DATE<br>21/10/2021 |
| REFERENCE          |

|             |                           |
|-------------|---------------------------|
|             |                           |
| DESCRIPTION | <b>Motor 80 TC (L) B5</b> |

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SERIAL NUMBER

FIRST ANGLE  
PROJECTION

|                   |   |                 |
|-------------------|---|-----------------|
| SIZE<br><b>A4</b> | DRAWING NUMBER<br><b>B5A04T8080001B01</b> | SHEET<br>1 OF 2 |
|-------------------|---|-----------------|

Schema di collegamento - *Connection diagram*  
Schemas de branchement - *Schaltplän*  
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**



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

| <b>Marcatura Morsetti Ausiliari - <i>Additional terminals marking (IEC60034-8)</i></b> |  |   |
|--|--|---|
| <b>Marcatura<br/><i>Marking</i></b>  | <b>No.<br/>morsetti<br/><i>terminals</i></b> | <b>Morsetto ausiliare per:<br/><i>Additional terminal for:</i></b>        |
| 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  |   |
| R4 - R5 - R6 (II sensore - <i>sensor</i> )   | 3  | Termistore PT100 3 fili - <i>Thermistor PT 100 with 3 wires</i>           |
| R7 - R8 - R9 (III sensore - <i>sensor</i> )  | 3  |   |
| R11 - R12 - R13 (anteriore - <i>DE</i> )   | 3  |   |
| R21 - R22 - R23 (posteriore - <i>NDE</i> )   | 3  | Termistore PT100 su cuscinetto - <i>Thermistor PT 100 on bearing</i>      |
| TB1 - TB2 (allarme- <i>warning</i> )   | 2  | Protettore bimetallico normalmente chiuso -                               |
| TB3 - TB4 (intervento- <i>switch off</i> )   | 2  | <i>Normally closed bi-metallic switch (**)</i>                            |
| TB8 - TB9 (intervento- <i>switch off</i> )   | 2  | Protettore bimetallico del freno normalmente chiuso -                     |
|  |  | <i>NC brake bi-metallic switch (**)</i>                                   |
| TM1 - TM2 (allarme- <i>warning</i> )   | 2  | Protettore bimetallico normalmente aperto -                               |
| TM3 - TM4 (intervento- <i>switch off</i> )   | 2  | <i>Normally open bi-metallic switch (**)</i>                              |
| 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 -<br><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 80MB4    |
| 3  | Numero di serie / Serial Number            |           |              |
| 4  | Forma costruttiva / Shape                  |           | B5           |
| 5  | Certificato / Certificate                  | TÜV IT    | 20 ATEX 103X |
| 6  |  |           |              |
| <b>Dati nominali / Rated data</b>                          |  |           |              |
| 7  | Poli / Pole                                | n°        | 4            |
| 8  | Potenza nominale / Rated power             | kW        | 0,75         |
| 9  | Corrente nominale / Rated current          | A         | 1,70         |
| 10   | Velocità nominale / Full Load speed        | 1/min     | 1428         |
| 11   | Collegamento / Winding connection          |           | Y            |
| 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          |
| <b>Performances elettriche / Electrical performances</b>   |  |           |              |
|  | Carico / Load                              | 4/4       | 3/4          |
| 18   | Giri / Speed                               | 1/min     | 1428         |
| 19   | Corr. / Curr.                              | A         | 1,70         |
| 20   | Rend / Eff                                 | %         | 82,9         |
| 21   | cos φ                                      | -         | 0,77         |
| <b>Performances all'avviamento / Starting performances</b> |  |           |              |
| 22   | Ia/In - LRC/FLC                            | %         | 630          |
| 23   | Cosphi a rotore bloccato / LR power factor |           | 0,67         |
|  | Tempo a rotore bloccato / LRWT             |           |              |
| 24   | 100% Un (A caldo / Warm)                   | sec       | 11           |
| 25   | (A freddo / Cold)                          | sec       | 20           |
| 26   | 80% Un (A caldo / Warm)                    | sec       | 17           |
| 27   | (A freddo / Cold)                          | sec       | 31           |
|  | Tempo di avviamento ammissibile / ART      |           |              |
| 28   | 100% Un                                    | sec       | 17           |
| 29   | 80% Un                                     | sec       | 27           |
| <b>Curva di coppia / Speed-torque values</b>               |  |           |              |
| 30   | Coppia nominale / Rated Torque             | Nm        | 5,02         |
| 31   | Ca/Cn - LRT/FLT                            | %         | 280          |
| 32   | Cmax/Cn - BDT/FLT                          | %         | 280          |
| 33   |  |           |              |
| 34   |  |           |              |
| 35   |  |           |              |
| <b>Varie / Other</b>                                       |  |           |              |
| 36   |  |           |              |
| 37   |  |           |              |
| 38   |  |           |              |
| 39   |  |           |              |

|  |  |           |                         |
|--|--|-----------|-------------------------|
| <b>Servizio / Duty</b>   |  |           |                         |
| 40   | Servizio / Duty type                       | -         | S1                      |
| 41   | Intermittenza / Cyclic duration factor     | -         | -                       |
| 42   | Avviamenti-ora / Starting-hour             | -         | -                       |
| 43   | Tempo ciclo / Time                         |           | -                       |
| <b>Cuscinetti / Bearings</b>                                       |  |           |                         |
| 44   | Cuscinetto ant / DE bearing                | -         | 6204 ZZ C3              |
| 45   | Cuscinetto post / NDE bearing              | -         | 6204 ZZ C3              |
| 46   | Carico radiale max / Max radial load in X1 | N         | 598                     |
| 47   | Carico assiale max / Max axial load        | N         | 375                     |
| 48   | Tipo grasso / Grease type                  |           | LGHP2 SKF or equivalent |
| 49   | Intervallo lubrificazione / Lubrication    | h         | -                       |
| 50   | Quantità grasso / Quantity grease          | gr        | -                       |
| <b>Caratteristiche meccaniche / mechanical specification</b>       |  |           |                         |
| 51   | Massa / Mass                               | kg        | 23                      |
| 52   | Momento d'inerzia / Moment of inertia      | kgm2      | 0,0022                  |
| 53   | Rumore a vuoto / Noise at no load (1 m)    | Lp dB(A)  | 56                      |
| 54   | Vibrazioni / Vibration level               | IEC 34-14 | A                       |
| 55   | Limite norma / Vibration limit             | mm/sec    | 1,60                    |
| 56   |  |           |                         |
| 57   |  |           |                         |
| <b>Dati entrata cavi - verniciatura / Cable entry and painting</b> |  |           |                         |
| 63   | Entrata cavi / Cable entry                 | IEC 60423 | 2xM25+1xM16             |
| 64   | Ciclo verniciatura / Painting cycle        |           | STD                     |
| 65   | Colore finale / Final colour               | RAL       | 5010                    |
| 66   |  |           |                         |
| 67   |  |           |                         |
| 68   |  |           |                         |
| 69   |  |           |                         |
| 70   |  |           |                         |
| 71   |  |           |                         |
| <b>Ausiliari - Auxiliaries</b>                                     |  |           |                         |
| 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   |  |           |                         |

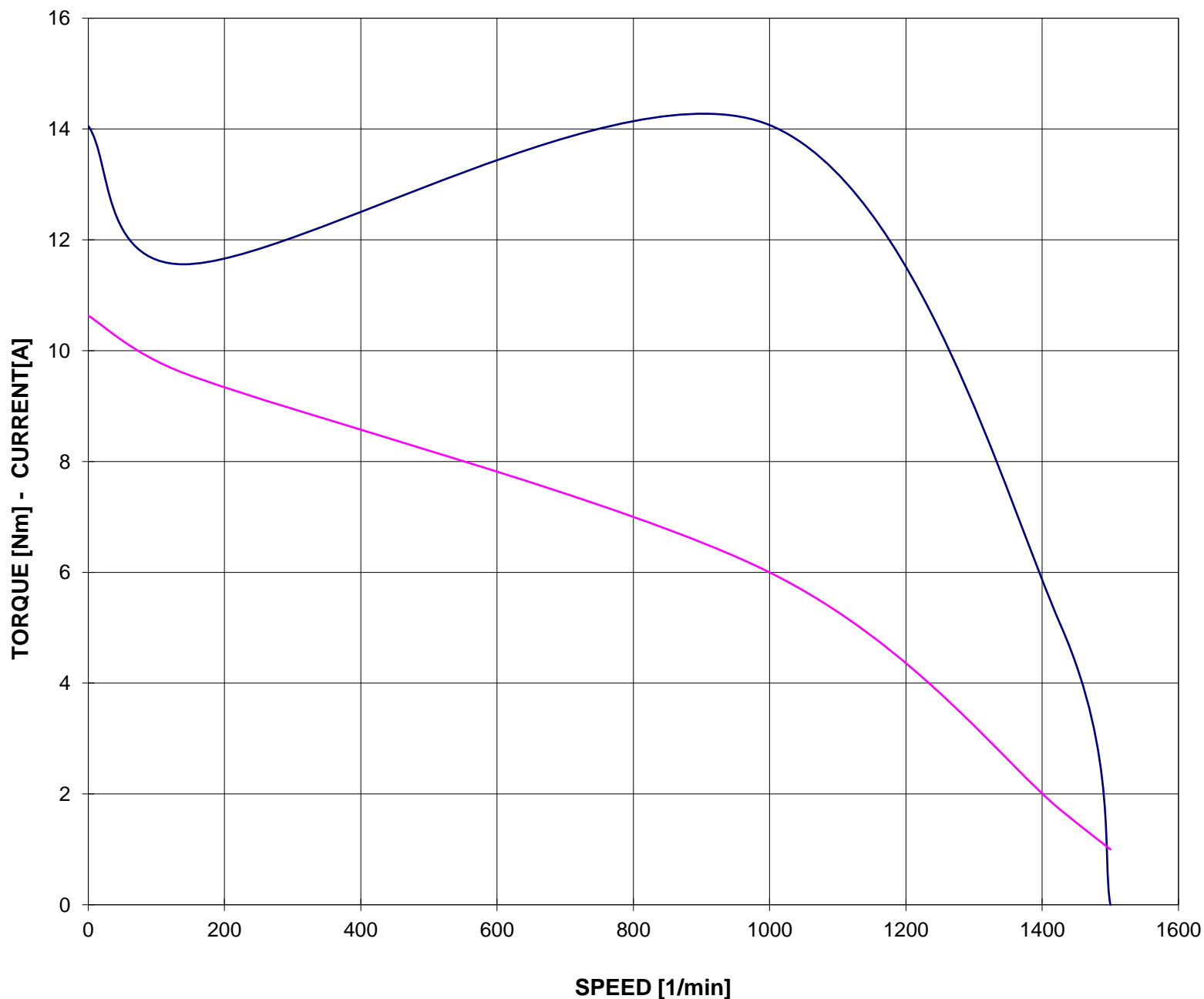
## Documento preliminare - Preliminary data sheet

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

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

**Motore / Motor** **TCN 80MB4**  
 Potenza nominale / Rated power 0,75 kW  
 Poli / Pole 4  
 Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz  
 Corrente / Rated current 1,70 A  
 Velocità / Speed 1428 rpm  
 Coppia / Torque 5,02 Nm

— COPPIA - TORQUE — CORRENTE - CURRENT



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

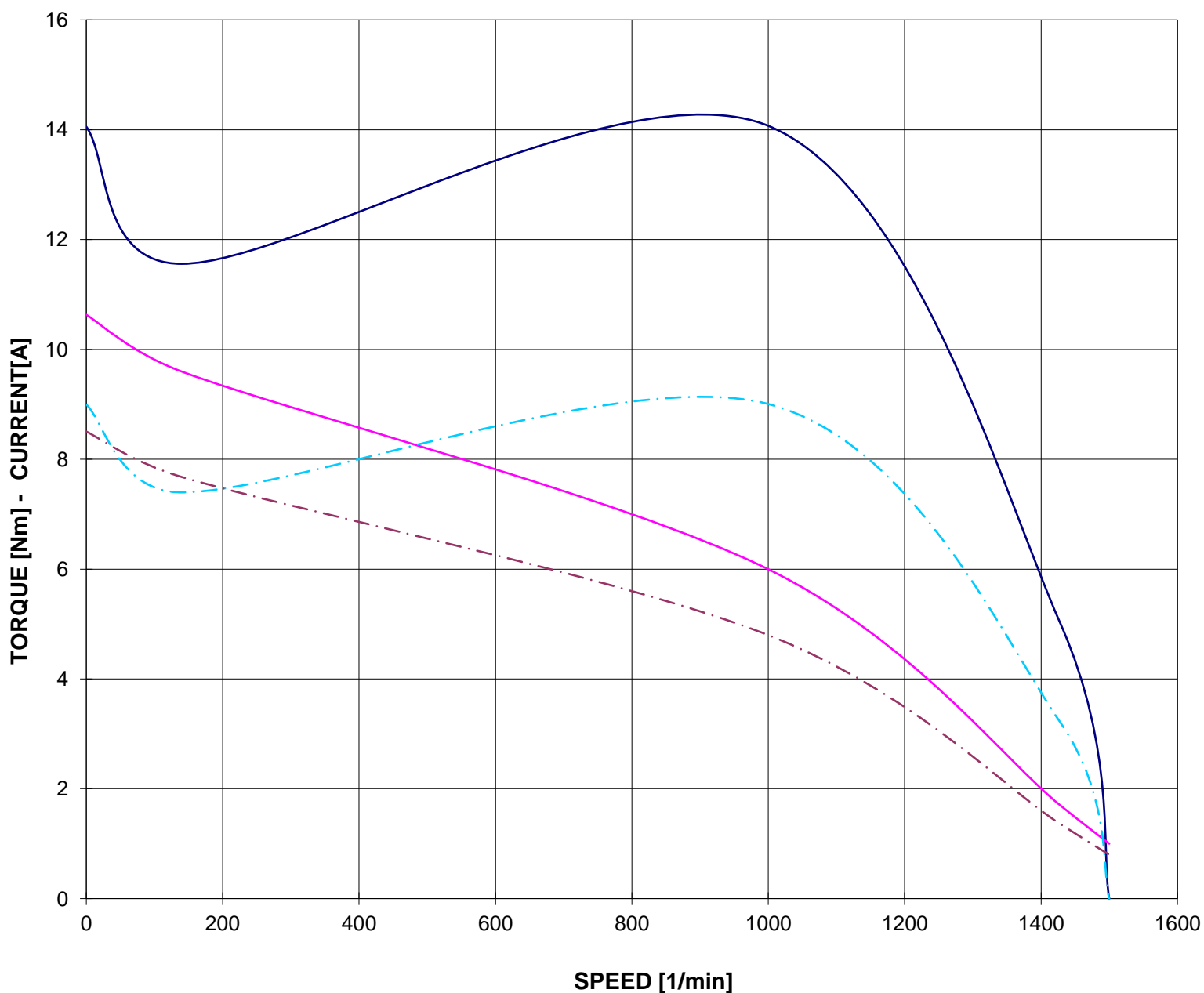
Data / Date 29-giu-22

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

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

|  |                  |        |
|--|------------------|--------|
| <b>Motore / Motor</b>                      | <b>TCN 80MB4</b> |        |
| Potenza nominale / Rated power             | 0,75             | kW     |
| Poli / Pole                                | 4                |        |
| Tensione - Frequenza / Voltage - Frequency | 400 - 50         | V - Hz |
| Corrente / Rated current                   | 1,70             | A      |
| Velocità / Speed                           | 1428             | rpm    |
| Coppia / Torque                            | 5,02             | Nm     |

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



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

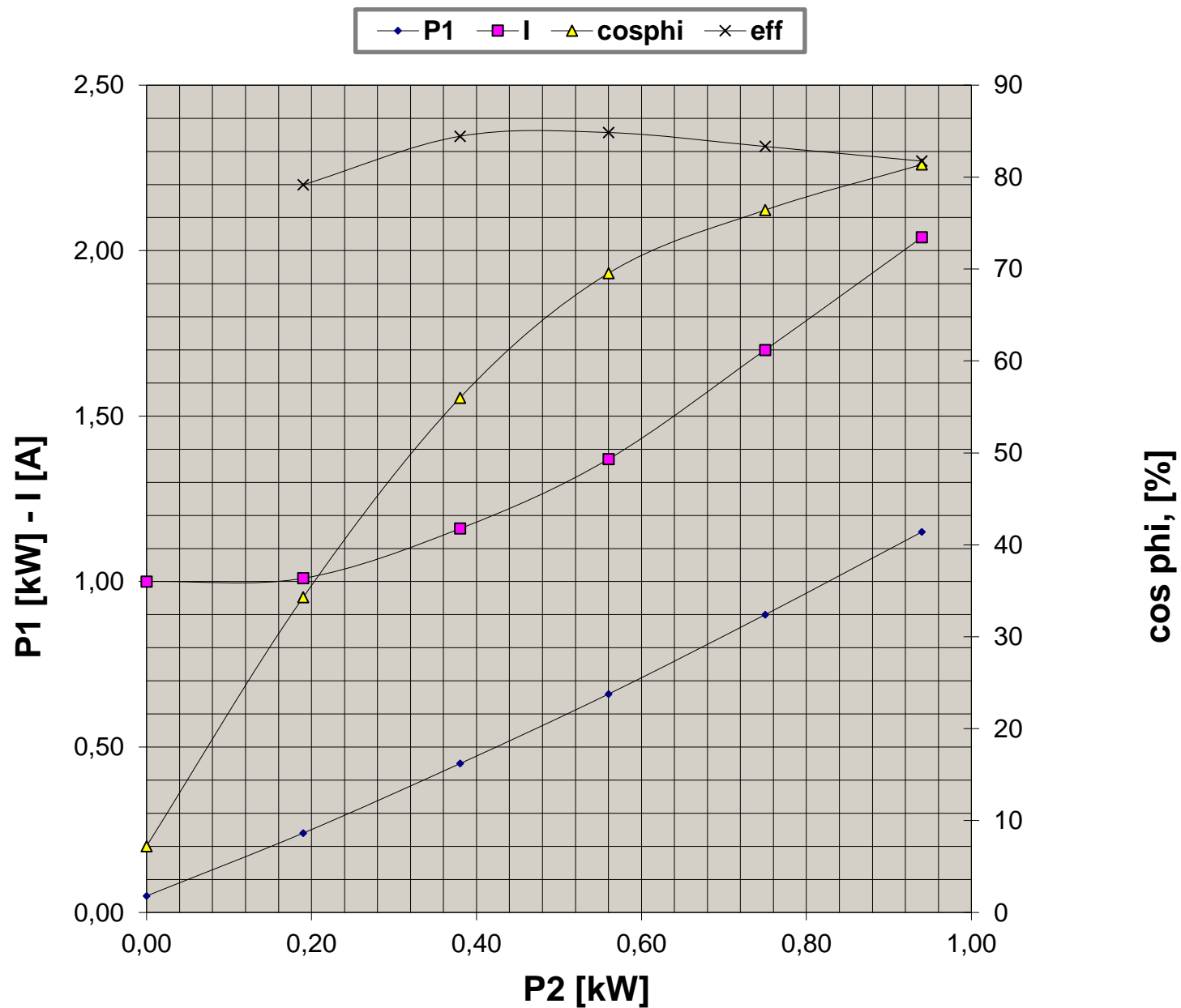
Data / Date 29-giu-22



### CURVE CARATTERISTICHE PERFORMANCE CURVES

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

|  |                  |        |
|--|------------------|--------|
| <b>Motore / Motor</b>                      | <b>TCN 80MB4</b> |        |
| Potenza nominale / Rated power             | 0,75             | kW     |
| Poli / Pole                                | 4                |        |
| Tensione - Frequenza / Voltage - Frequency | 400 - 50         | V - Hz |
| Corrente / Rated current                   | 1,70             | A      |
| Velocità / Speed                           | 1428             | rpm    |
| Coppia / Torque                            | 5,02             | Nm     |



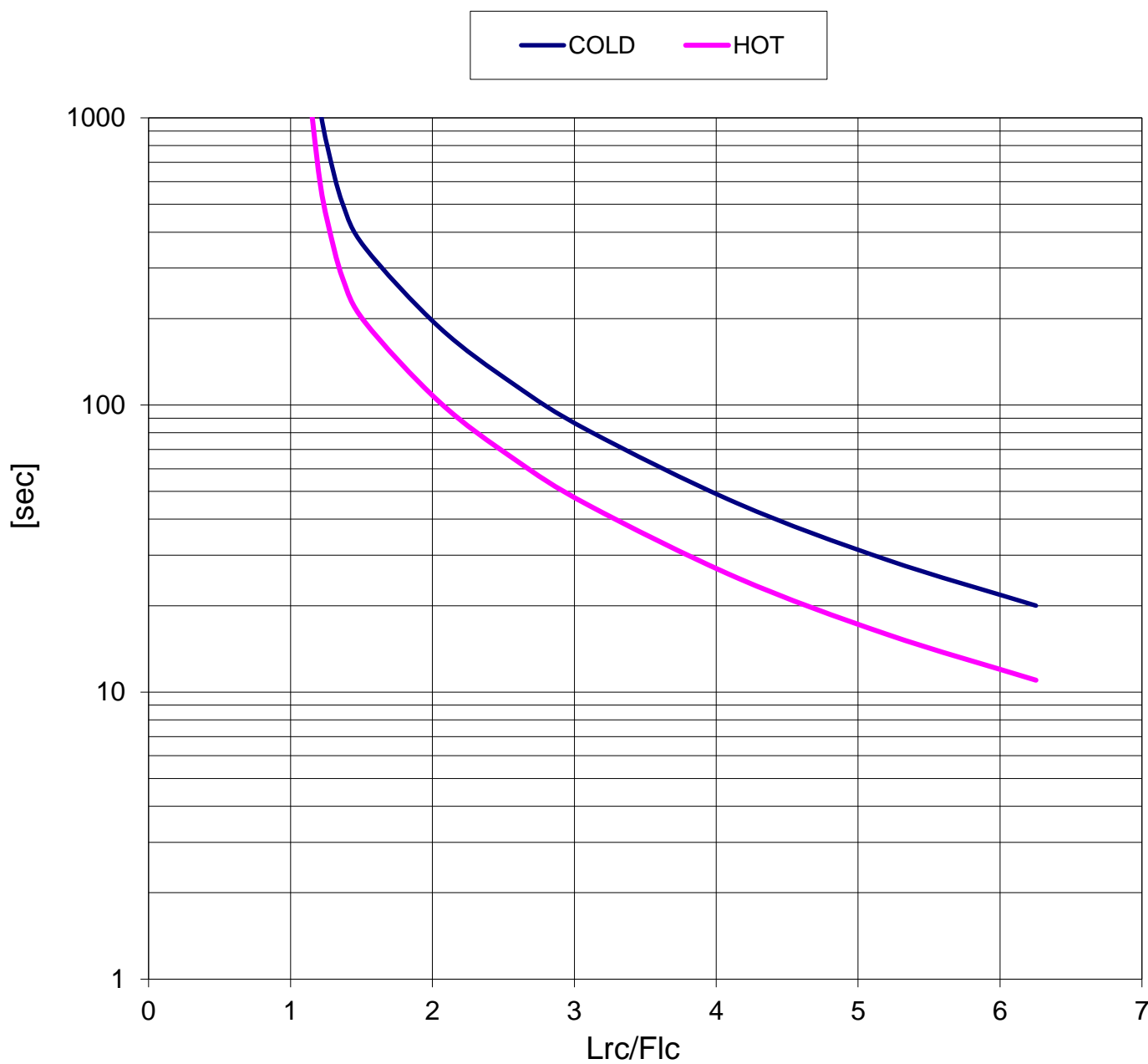
Valori calcolati - Data obtained by calculation method  
 Documento preliminare - Preliminary document

Data / Date 29-giu-22

**CURVA LIMITE CORRENTE TEMPO  
THERMAL WITHSTAND CURVE**

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

|  |                  |        |
|--|------------------|--------|
| <b>Motore / Motor</b>                      | <b>TCN 80MB4</b> |        |
| Potenza nominale / Rated power             | 0,75             | kW     |
| Poli / Pole                                | 4                |        |
| Tensione - Frequenza / Voltage - Frequency | 400 - 50         | V - Hz |
| Corrente / Rated current                   | 1,70             | A      |
| Velocità / Speed                           | 1428             | rpm    |
| Coppia / Torque                            | 5,02             | Nm     |



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

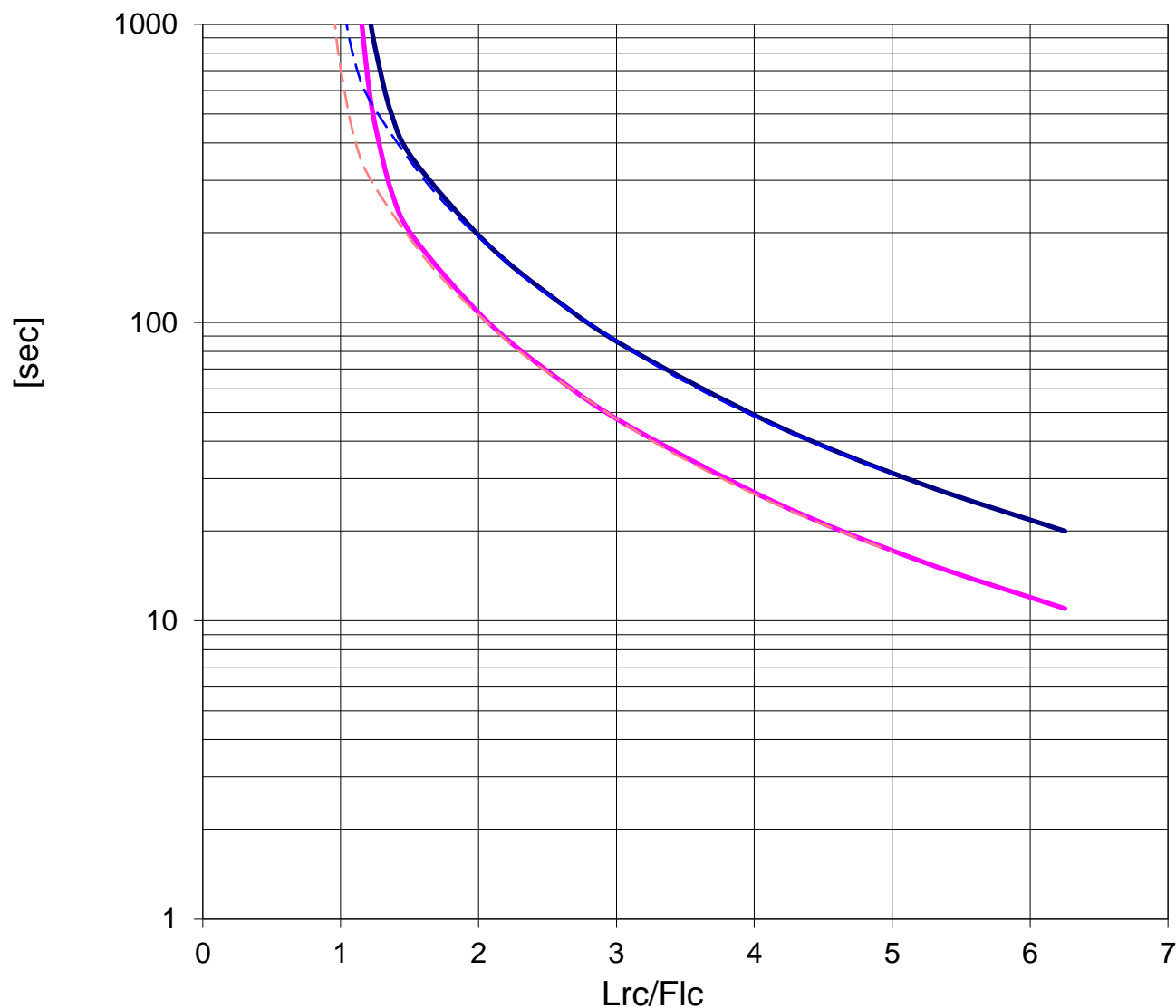
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**CURVA LIMITE CORRENTE TEMPO (Tensione ridotta)**  
**THERMAL WITHSTAND CURVE (Reduced voltage)**

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

|  |                  |        |
|--|------------------|--------|
| <b>Motore / Motor</b>                      | <b>TCN 80MB4</b> |        |
| Potenza nominale / Rated power             | 0,75             | kW     |
| Poli / Pole                                | 4                |        |
| Tensione - Frequenza / Voltage - Frequency | 400 - 50         | V - Hz |
| Corrente / Rated current                   | 1,70             | A      |
| Velocità / Speed                           | 1428             | rpm    |
| Coppia / Torque                            | 5,02             | Nm     |

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



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

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