# Customer information packet

ECR583004-PPN

M3BN 587MLA 4P B3 300HP

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Driven Motor:

| | | | | |
|---|---|---|---|---|
| Catalog Number | | **ECR583004-PPN** | | |
| Motor type code | | M3BN 587 MLA 4 | | |
| Motor product code | | 3GBN982410-ADKBA01 | | |
| Motor type | | Squirrel cage Motor | | |
| Mounting designation | | IM 1001 | | |
| Protected by enclosure | | IP66 | | |
| Method of cooling | | TEFC | | |
| Insulation | | Class F (Shock Resistant) | | |
| Service factor | | SF1.15 TEMP RISE CLASS B | | |
| Standards | | NEMA | | |
| International efficiency classification (IEC 60034-30) | | IE3 | | |
| Ambient temperature, max. | | 40 °C | | |
| Altitude, max. | | 3280 ft.a.s.l. | | |
| Duty type | | Continuous | | |
| Temp. rise | | Class B | | |
| Connection of stator winding | | Delta | | |
| Rated output | | 300 HP | | |
| Voltage | | 460 V | | |
| Frequency | | 60 Hz | | |
| Speed | | 1792 r/min | | |
| Current | | 343 Amps | | |
| Locked rotor Amps | | 770 % | Code H | |
| Locked rotor torque | | 250 % | | |
| Breakdown torque | | 310 % | | |
| No load current | | 123 Amps | | |
| Rated torque | | 880 lb-ft | | |
| Load characteristics | Load % | Current Amps | Efficiency % | Power Factor |
| | 100 | 343 | 96,2 | 0,85 |
| | 75 | 269 | 96,4 | 0,81 |
| | 50 | 202 | 95,7 | 0,72 |
| NEMA nominal efficiency | | | 96,2 % | |

Typical calculated values to NEMA. -

ABB Oy

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Motor type code: M3BN 587 MLA 4

| | | | |
|---|---|---|---|
| Rated output | 300 HP | Power Factor | 0,85 |
| Voltage | 460 V | Rated torque | 880 lb-ft |
| Frequency | 60 Hz | Locked rotor Amps | 770 % |
| Speed | 1792 r/min | Locked rotor torque | 250 % |
| Current | 343 Amps | Breakdown torque | 310 % |

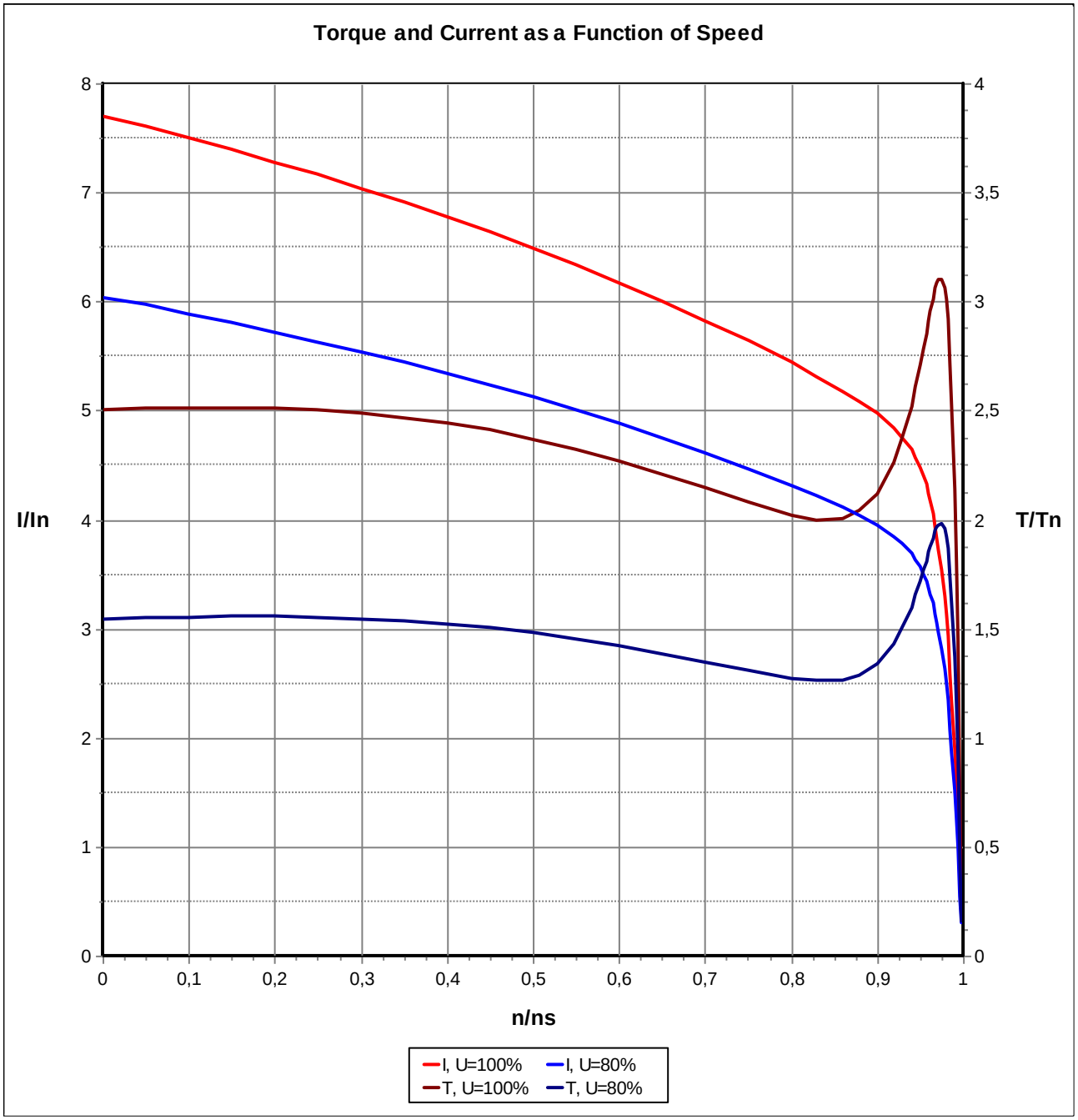



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PWM
Switch. freq. 3kHz
FWP 460VD 60Hz

Drive1

| | |
|---|---|
| Rated power | 75 HP |
| Rated voltage | 117 V |
| Nominal frequency | 15,3 Hz |
| Type of connection | Delta |
| Rated torque | 876 lb-ft |
| Speed | 450 rpm |
| Current | 345 Amps |

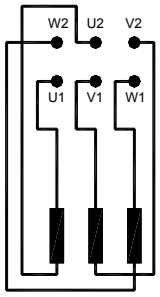
Drive2

| | |
|---|---|
| Rated power | 300 HP |
| Rated voltage | 460 V |
| Nominal frequency | 60,4 Hz |
| Type of connection | Delta |
| Rated torque | 876 lb-ft |
| Speed | 1800 rpm |
| Current | 377 Amps |

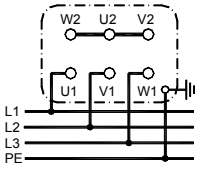
Constant torque 450 – 1800rpm


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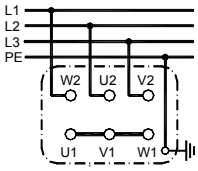
Diagram of connection
Anschluss-Schema
Schema de branchement

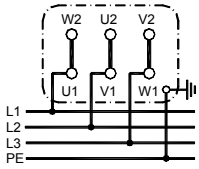



Connection of terminals
Anschluss des Motors
Branchement des bornes

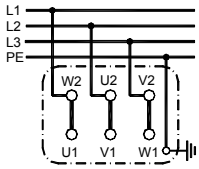



Y-connection
Y-Schaltung
Connection etoile




D-connection
D-Schaltung
Connection triangle





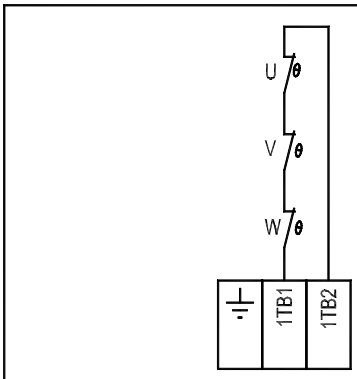

Direction of rotation with phase sequence shown in picture
Drehrichtung nach Schaltbild
Direction de rotation avec branchement ci-dessus



Direction of rotation with reversed phase sequence
Drehrichtung mit umgekehrter Phasenfolge
Direction de rotation avec sequence de phase reversée

| Motor No<br>Maschine Nr<br>No du moteur | |
|---|---|
| ABB Oy, Motors | 3GZF321100-1 E |

| | | | | | |
|---|---|---|---|---|---|
| **Connection Diagram** | | | | Document No: 3GZF321100-1 E | |
| Description: | 3-PHASE SQUIRREL-CAGE MOTOR | | | | |
| Unit: | Motors | Issued by: | M Prusi | Replaces: | |
| Date: | 21.09.2005 | Approved by: | Jari Raittila | Replaced by: | |
| **ABB Oy** | | Customer Reference: | | | |




BIMETAL DETECTORS, TYPE NCC
1TB1...1TB2 BIMETALL-THERMOSCHALTER, TYP NCC
SONDES BIMETALLIQUES, TYPE NCC

Motor No
Maschine Nr
Moteur No

| | |
|---|---|
| ABB Oy, Electrical Machines<br>LV Motors | 3GZF321200-35 B |

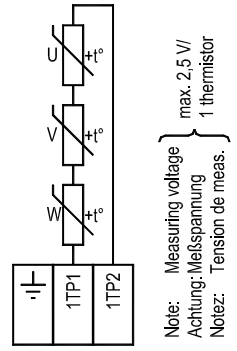
## Accessory Connection Diagram

Document No: 3GZF321200-35 B

Description: BIMETAL DETECTORS

| | | | | |
|---|---|---|---|---|
| Unit: | Electrical Machines, LV Motors | Issued by: | K.Högkvist | Replaces: |
| Date: | 16.01.2002 | Approved by: | M.Prusi | Replaced by: |

**ABB Oy** Customer Reference:




PTC-THERMISTORS
PTC-TEMPERATURFÜHLER
SONDES THERMIQUE PTC

Motor No
Maschine Nr
Moteur No

ABB Oy, Motors | 3GZF321200-1 D

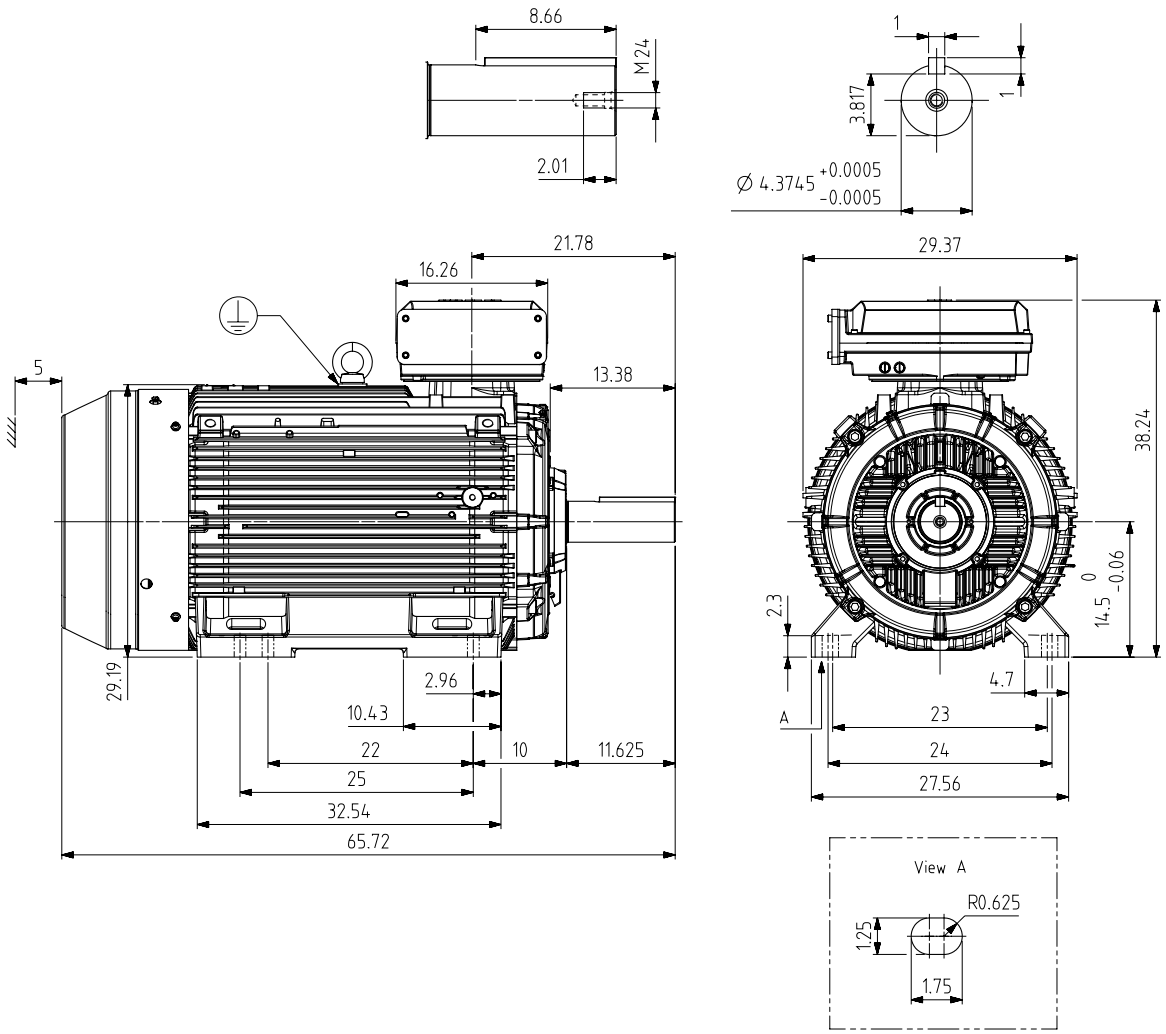
## Accessory Connection Diagram

Document No: 3GZF321200-1 D

Description: PTC-THERMISTORS

| | | | | |
|---|---|---|---|---|
| Unit: | Motors | Issued by: | K.Högkvist | Replaces: |
| Date: | 30.11.2005 | Approved by: | M.Prusi | Replaced by: |

**ABB Oy** | Customer Reference:




Additional information:

| | | |
|---|---|---|
| **Dimension Print** | Motor Type: M3BN 587ML_4.. B3, B6, B7, B8, V5, V6 | Document No: 3GZF500098-174 A<br>14 BN 587 A |
| Description: SQUIRREL CAGE MOTOR, CABLE ENTRY LHS, SPECIAL SHAFT, SLOTTED FEET HOLES. DIMENSIONS IN INCHES, MOTOR SIZES 586/587. | | |

| | | | | |
|---|---|---|---|---|
| Unit: | ABB Oy, Motors and Generators | Issued by: | N.Palokangas | Replaces: |
| Date: | 21.11.2019 | Approved by: | S.Tikkanen | Replaced by: |

| | | |
|---|---|---|
| **ABB Oy** | Customer Reference: | |