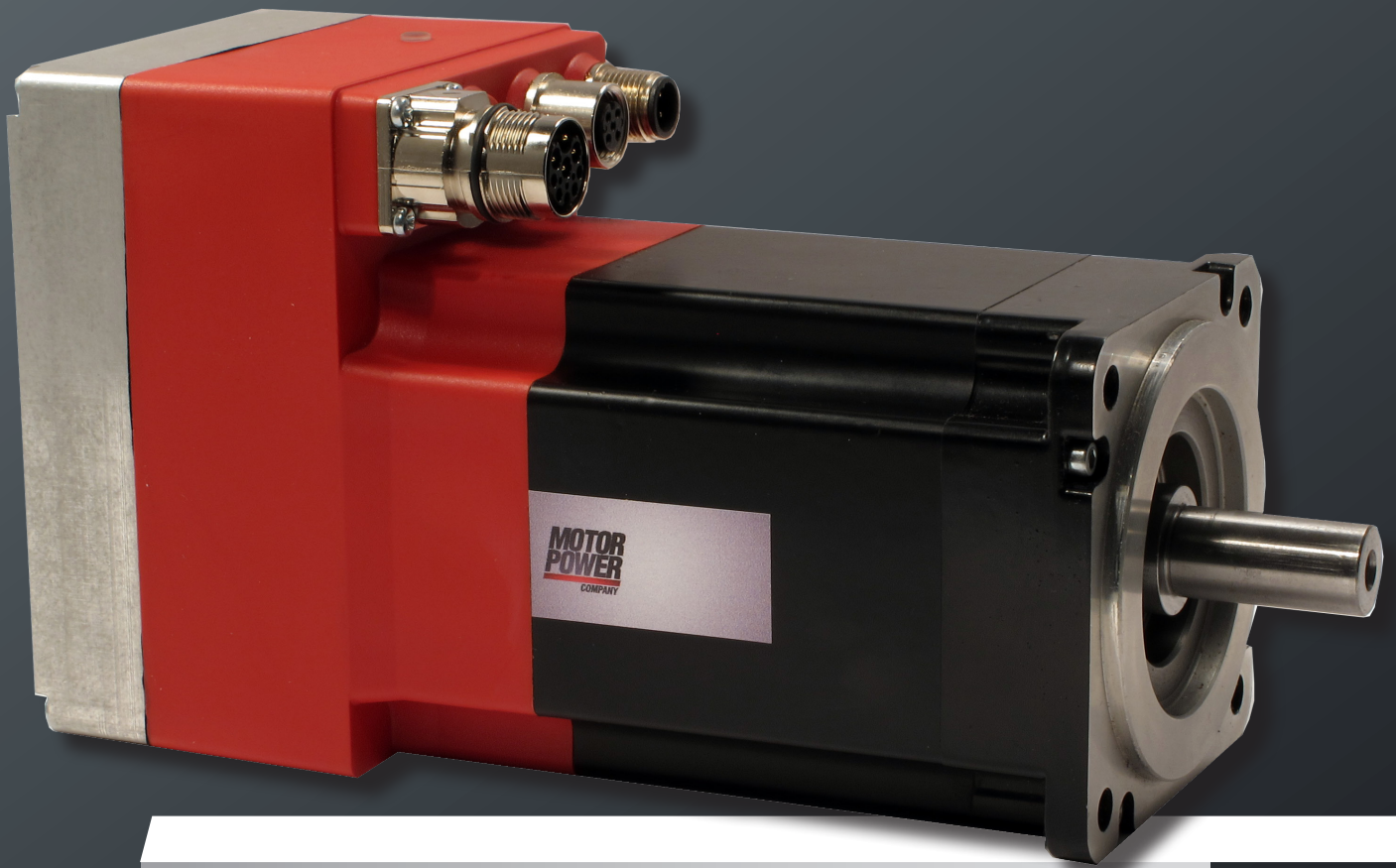


DUET, DUET FLEXI, DUET AD and DUET HV
DRIVE INTEGRATED SERVOMOTORS

MOTION CONTROL

***MOTOR
POWER***
COMPANY



Motor Power Company
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**MOTOR
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CONTENTS

| | |
|--|---------|
| Duet features and benefits | pag. 4 |
| Product lineup | pag. 8 |
| Duet type designation | pag. 9 |
| Duet 40 ratings and specifications | pag. 13 |
| Duet 40 dimensions | pag. 14 |
| Duet 40 torque/speed charts | pag. 15 |
| Duet 60 ratings and specifications | pag. 16 |
| Duet 60 dimensions | pag. 17 |
| Duet 60 torque/speed charts | pag. 18 |
| Duet Flexi 60 ratings and specifications | pag. 20 |
| Duet Flexi 60 dimensions | pag. 21 |
| Duet Flexi 60 torque/speed charts | pag. 22 |
| Duet Flexi 80 ratings and specifications | pag. 23 |
| Duet Flexi 80 dimensions | pag. 24 |
| Duet Flexi 80 torque/speed charts | pag. 25 |
| Duet AD 80 ratings and specifications | pag. 26 |
| Duet AD 80 dimensions | pag. 27 |
| Duet AD 80 torque/speed charts | pag. 32 |
| Duet HV 60 ratings and specifications | pag. 34 |
| Duet HV 80 ratings and specifications | pag. 35 |
| Duet HV 100 ratings and specifications | pag. 36 |
| Duet HV 142 ratings and specifications | pag. 37 |
| Duet HV dimensions | pag. 38 |
| Duet HV torque/speed charts | pag. 40 |
| Duet wiring connections | pag. 42 |
| Duet Flexi wiring connections | pag. 43 |
| Duet AD wiring connections | pag. 44 |
| Duet HV wiring connections | pag. 48 |
| Duet and Duet Flexi cable specifications | pag. 50 |
| Duet AD cable specifications | pag. 51 |
| Duet HV cable specifications | pag. 52 |
| Feedback features | pag. 54 |
| Brake features | pag. 56 |
| Connectors specifications | pag. 57 |
| Connectors and accessories | pag. 58 |

DUET, DUET AD AND DUET FLEXI

LOW VOLTAGE INTEGRATED BRUSHLESS DRIVE

Cutting edge technology for decentralized architecture: **drive integrated servomotor DUET** series is the result of the wide-ranging experience that Motor Power Company has built over 30 years as marketing oriented player in the motion control market, gathering exceptional expertise in understanding and fulfilling customer needs. Everything you need for moving and controlling an axis is built directly into these highly compact single component: servomotor, feedback and intelligent servo drive featuring CANopen or Ethercat networking.

Either **Duet, Duet AD and Duet Flexi** include user friendly software tools enabling easy set up and tuning, ensure huge room saving in cabinet along with cables cutback between motor and drive and offer fast connectivity with plug in power connectors.



- > **ACCESSORIES FOR DUET, DUET AD AND DUET FLEXI**
- > **CABLES**
- > **CONNECTORS**

FEATURES AND BENEFITS

- > **SYNCHRONOUS BRUSHLESS SERVO MOTOR, PERMANENTLY EXCITED**
- > **BUILT-IN DIGITAL DRIVE**
- > **RATED OUTPUT POWER FROM 60W TO 520W**
- > **SUPPLY VOLTAGE 48 VDC**
- > **MAXIMUM SERVO MOTOR SPEED UP TO 5000RPM**
- > **TORQUE, VELOCITY AND POSITION MODE**
- > **USER PROGRAMMABILITY**
- > **INSULATION CLASS F (155 °C)**
- > **IP 65 ON MOTOR BODY**
- > **RAL 9005 BLACK POWDER COATING**
- > **SHAFT BALANCING CLASS G 2,5 ACCORDING ISO 1940**
- > **BUILT-IN FEEDBACK 2 POLES RESOLVER, ABSOLUTE MULTITURN ENCODER (HIPERFACE), INCREMENTAL ENCODER, ABSOLUTE SINGLE TURN ENCODER**
- > **OPTIONAL ELECTROMAGNETIC PERMANENT-HOLDING BRAKE. ZERO BACKLASH**
- > **OPTIONAL SHAFT SEALING**

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c **UL**® US

CE

CANopen

Ether**CAT**™

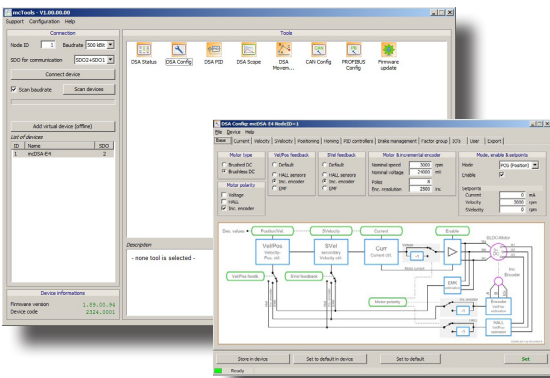
PROFI®
NET

DUET AND DUET FLEXI LOW VOLTAGE INTEGRATED BRUSHLESS DRIVE

DUET

The early range features unique performance potential thanks to extremely compact design and superior thermal dissipation characteristics, this allowing the units to be operated at full peak currents, with no need of power derating or extra ventilation. The execution is available either with network position or velocity mode functionalities.

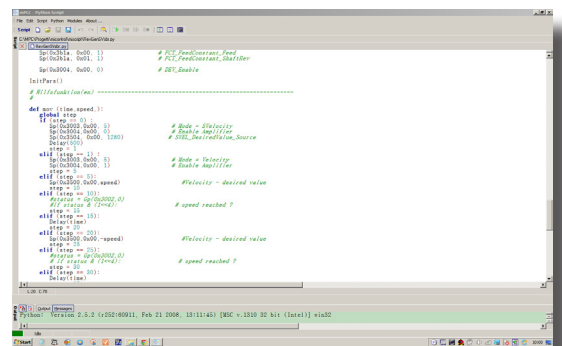
- > **48 VDC CONTINUOUS SUPPLY VOLTAGE**
- > **24VDC LOGIC BACKUP**
- > **NOMINAL SPEED 3000RPM**
- > **IP 65 PROTECTION DEGREE (OPTIONAL OIL SEAL)**
- > **TORQUE, VELOCITY AND POSITION MODE**
- > **4096 CPR INCREMENTAL ENCODER**
- > **PERMANENT MAGNET SAFETY BRAKE OPTION**
- > **CANopen DS 301, DS402 CONNECTIVITY**
- > **CE, UL SERVO MOTOR**
- > **EASY AND INTUITIVE PC SOFTWARE ALLOWS A FAST PARAMETERIZATION**
- > **SIMPLE SCOPE**
- > **SCRIPT EDITING**
- > **USB PROGRAMMING KEY**



DUET FLEXI

The Duet FLEXI line is the most up-to-date product range extension and responds to a rising demand of integrated products with advanced features. This range incorporates all the characteristics of the early DUET series and introduces options such as absolute encoder feedback and Ethercat or Profibus connectivity.

- > **48 VDC CONTINUOUS SUPPLY VOLTAGE**
- > **24VDC LOGIC BACKUP**
- > **NOMINAL SPEED 3000RPM**
- > **IP 65 PROTECTION DEGREE (OPTIONAL OIL SEAL)**
- > **FEEDBACK: MULTI TURN ABSOLUTE ENCODER, RESOLVER**
- > **TORQUE, VELOCITY AND POSITION MODE**
- > **PERMANENT MAGNET SAFETY BRAKE OPTION**
- > **CANopen DS301-DS402, OR EtherCAT™ CONNECTIVITY**
- > **CE, UL SERVO MOTOR**



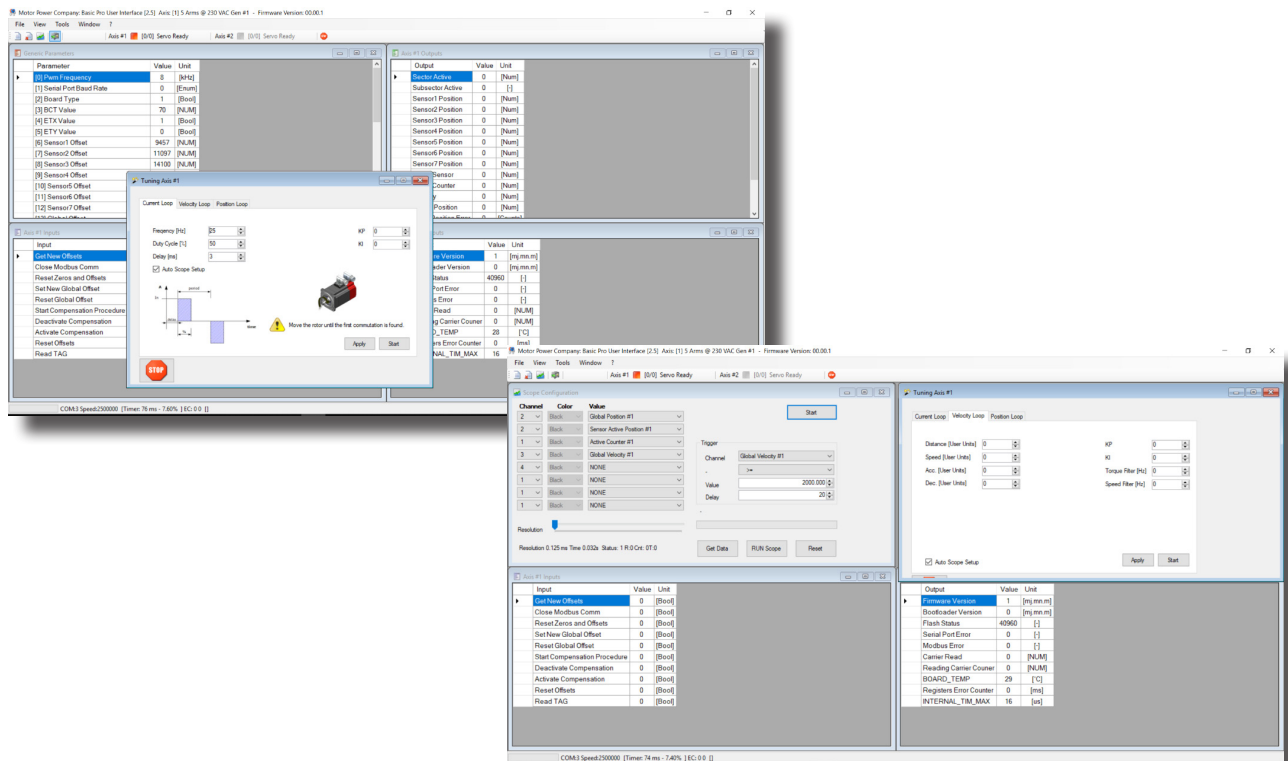
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DUET AD LOW VOLTAGE INTEGRATED BRUSHLESS DRIVE

DUET AD models are the result of a design optimization conceived by Motor Power Company. A drive integrated servomotor with all features and benefits of Duet series, with more attention to business budget obtained with encoder embedding and an original integration design.

- > **48 VDC CONTINUOUS SUPPLY VOLTAGE**
- > **24VDC LOGIC BACKUP**
- > **NOMINAL SPEED 3900RPM**
- > **IP 65 PROTECTION DEGREE (OPTIONAL OIL SEAL)**
- > **TORQUE, VELOCITY AND POSITION MODE**
- > **14 BIT ABSOLUTE SINGLETURN ENCODER**
- > **PERMANENT MAGNET SAFETY BRAKE OPTION**
- > **CANopen DS 301, DS402 AND MODBUS RTU CONNECTIVITY**
- > **EtherCAT**
- > **PROFINET**
- > **GE, UL SERVO MOTOR**
- > **EASY AND INTUITIVE PC SOFTWARE**
- > **EXTERNAL BRAKING RESISTOR**
- > **4 CONFIGURABLE 24VDC INPUTS**
- > **2 CONFIGURABLE 24VDC OUTPUTS**
- > **1 ANALOG INPUT FOR SPEED CONTROL**



DUET HV HIGH VOLTAGE INTEGRATED BRUSHLESS DRIVE

DUET HV is the new high voltage DUET series, a line consisting of brushless servomotor with integrated drive - featuring models from 1,3 to 14Nm - incorporating as well absolute encoder for uncompromised precision in positioning.

This device can either work via Ethercat connectivity through the control of a master controller or as a stand alone unit wherever synchronized motion between axes is not mandatory for application operation. When used in this configuration, DUET HV can manage machine cycle with its internal PLC. Full programmability allows to perform application in a very efficient way and permits the creation of sophisticated architectures with complex trajectories, allowing decentralized motion distribution and high optimization in cabling and cabinet design.



DUET HV FEATURES AND BENEFITS

- > Synchronous brushless servomotor permanently excited
- > Nominal power supply 560Vdc
- > Stall torque 1,3 - 2,8 - 4 - 5,6 - 8 - 14 Nm
- > Nominal speed 3000 rpm
- > Absolute multi and singleturn encoder
- > STO SIL 3 (safe torque off)
- > IP65 protection
- > Internal optional brake
- > Integrated movement features: device profile DS402, interpolated mode, positioning, extended gearing function, homing, capture
- > Stand alone programmability according to the standard IEC61131, ST language
- > Capture input
- > PC parametrization tool
- > I2t, Overload, Short circuit, Overtemperature, Overvoltage Protection
- > Optional cables, power supply
- > On board I/Os:
 - 4 digital IN 24Vdc general purpose, configurable as PSTOP, NSTOP, Enable, Home, Capture, Step/Direction
 - 3 digital OUT 24Vdc 250mA, general purpose
 - 2 digital IN 24Vdc or 1 RTO OUT
 - 1 digital IN/OUT 24Vdc with configurable function
 - 3 differential I/O's configurable as master incremental encoder or absolute encoder input
 - Encoder emulation output
 - PWM IN or OUT
 - Auxiliary rs485
 - I/O extension port
 - 1 Analogue IN $\pm 10V$



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PRODUCT LINEUP

| Type | Rated Output Power [W] | Rated Torque [Nm] | Peak Torque [Nm] | Rated Voltage [Vdc] | Rated Speed [rpm] | Feedback | Fieldbus |
|-----------------------|---------------------------|----------------------|---------------------|------------------------|----------------------|--|--|
| DUET 40 0,16 00 | 60 | 0,19 | 0,48 | 48 | 3000 | 4096 cpr incremental encoder | CanOpen |
| DUET 40 0,32 01 | 100 | 0,32 | 0,96 | 48 | 3000 | 4096 cpr incremental encoder | CanOpen |
| DUET 60 0,65 01 | 190 | 0,60 | 1,95 | 48 | 3000 | 4096 cpr incremental encoder | CanOpen |
| DUET 60 1,3 02 | 370 | 1,17 | 2,4 | 48 | 3000 | 4096 cpr incremental encoder | CanOpen |
| DUET FLEXI 60 0,65 01 | 200 | 0,64 | 1,95 | 48 | 3000 | <ul style="list-style-type: none"> • resolver • absolute multiturn encoder | <ul style="list-style-type: none"> • CanOpen • Ethercat |
| DUET FLEXI 60 1,3 01 | 310 | 1,18 | 3,75 | 48 | 2500 | <ul style="list-style-type: none"> • resolver • absolute multiturn encoder | <ul style="list-style-type: none"> • CanOpen • Ethercat |
| DUET FLEXI 80 1,5 03 | 390 | 1,5 | 4,5 | 48 | 2500 | <ul style="list-style-type: none"> • resolver • absolute multiturn encoder | <ul style="list-style-type: none"> • CanOpen • Ethercat |
| DUET FLEXI 80 2 03 | 520 | 2 | 5,6 | 48 | 2500 | <ul style="list-style-type: none"> • resolver • absolute multiturn encoder | <ul style="list-style-type: none"> • CanOpen • Ethercat |
| DUET AD 1,5 03 | 480 | 1,53 | 4,5 | 48 | 3000 | Singleturn absolute encoder 14 bit | <ul style="list-style-type: none"> • CanOpen • Modbus RTUY 485 • Ethercat • Profinet |
| DUET AD 2,8 02 | 630 | 2 | 5,36 | 48 | 3000 | Singleturn absolute encoder 14 bit | <ul style="list-style-type: none"> • CanOpen • Modbus RTUY 485 • Ethercat • Profinet |
| DUET HV 60 1,3 15 | 370 | 1,18 | 3,9 | 560 | 3000 | Multi and singleturn absolute encoder | Ethercat |
| DUET HV 80 2,8 | 800 | 2,55 | 8,4 | 560 | 3000 | Multi and singleturn absolute encoder | Ethercat |
| DUET HV 80 4 | 1068 | 3,4 | 12 | 560 | 3000 | Multi and singleturn absolute encoder | Ethercat |
| DUET HV 100 5,6 | 1320 | 4,2 | 22 | 560 | 3000 | Multi and singleturn absolute encoder | Ethercat |
| DUET HV 100 8 | 1570 | 5 | 22 | 560 | 3000 | Multi and singleturn absolute encoder | Ethercat |
| DUET HV 142 16,5 17 | 3500 | 11,1 | 42 | 560 | 3000 | Multi and singleturn absolute encoder | Ethercat |

SEE IT BEFORE IT HAPPENS

DUET TYPE

DUET 40 0,16 E1 1 C 1 XXX

DUET

Model

Feedback

Brake

Fieldbus

Mechanical arrangement

Optional

1

2

3

4

5

6

1

Model

40 0,16
40 0,32
60 0,65
60 1,3

2

Feedback

E1 = 4096 cpr incremental encoder

3

Brake

0 = without brake
1 = with brake

4

Fieldbus

C = CanOpen

5

Mechanical Arrangement

0 - Shaft with key / without oil seal (front flange side IP 54)
1 - Shaft with key / with oil seal (front flange side IP 65)
2 - Shaft without key / without oil seal (front flange side IP 54)
3 - Shaft without key / with oil seal (front flange side IP 65)

N.B.: All motor body are IP 65

DUET FLEXI TYPE

DUET FL 60 0,65 R1 0 C 1 1

DUET FLEXI

Model

Feedback

Brake

Fieldbus

Mechanical arrangement

Optional

1

2

3

4

5

6

1

Model

60 0,65
60 1,3
80 1,5
80 2,0

2

Feedback

R1 = Resolver 2p
A1 = Absolute multiturn encoder

3

Brake

0 = without brake
1 = with brake

4

Fieldbus

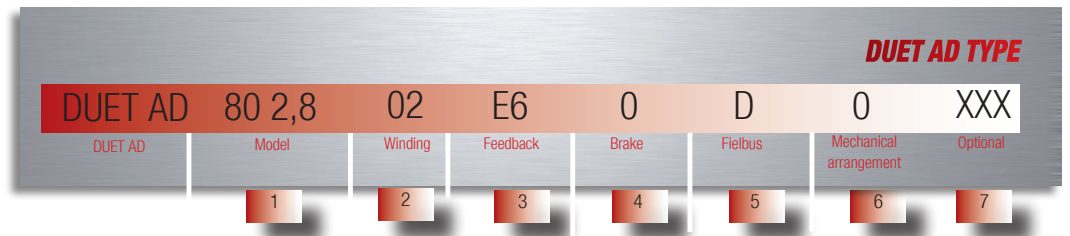
C = CanOpen
E = Ethercat

5

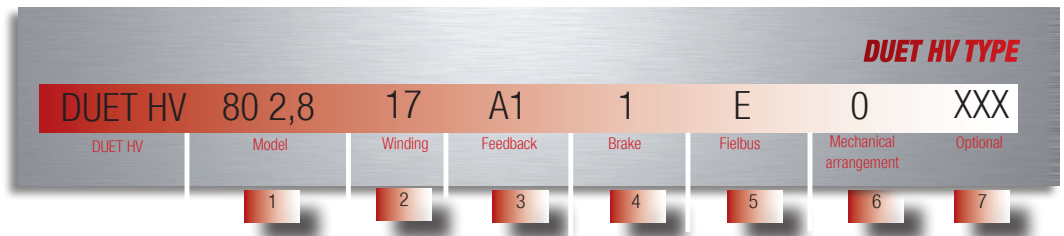
Mechanical Arrangement

0 - Shaft with key / without oil seal (front flange side IP 54)
1 - Shaft with key / with oil seal (front flange side IP 65)
2 - Shaft without key / without oil seal (front flange side IP 54)
3 - Shaft without key / with oil seal (front flange side IP 65)

N.B.: All motor body are IP 65



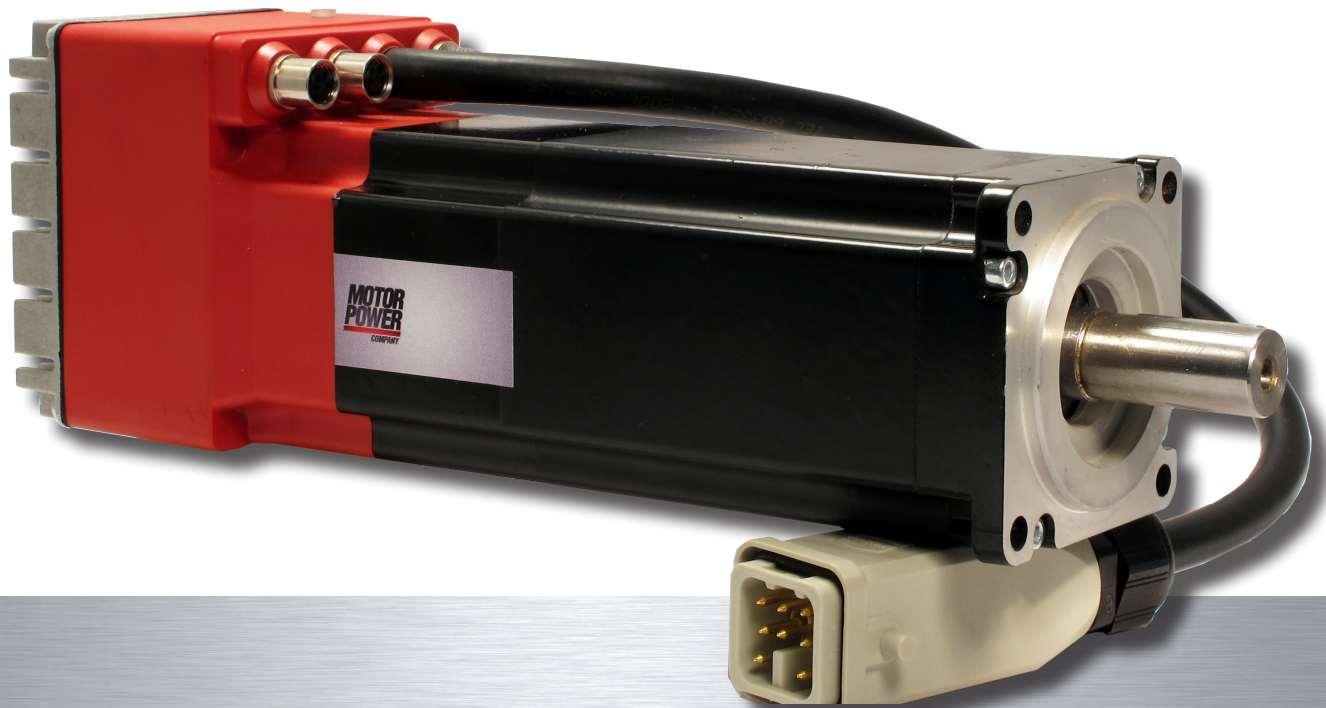
| | | |
|----------|------------------------|--|
| 1 | Model | 80 1,5 80 2,8 |
| 2 | Winding | Already specified in motor model |
| 3 | Feedback | E6 = 14 Bit absolute singleturn encoder |
| 4 | Brake | 0 = without brake 1 = with brake |
| 5 | Fielbus | C = Can Open D = Modbus RTU E = Ethercat P = Profinet |
| 6 | Mechanical Arrangement | 0 - Shaft with key / without oil seal (front flange side IP 54) 1 - Shaft with key / with oil seal (front flange side IP 65) 2 - Shaft without key / without oil seal (front flange side IP 54) 3 - Shaft without key / with oil seal (front flange side IP 65) |



| | | |
|---|------------------------|--|
| 1 | Model | 60 1,3 = Flange 60 mm - 1,3 Nm (8 poles) 80 2,8 = Flange 80 mm - 2,96 Nm (8 poles) 80 4 = Flange 80 mm - 4 Nm (8 poles) 100 5,6 = Flange 100 mm - 5,6 Nm (8 poles) 100 8 = Flange 100 mm - 8 Nm (8 poles) 142 16,5 = Flange 142 mm - 14 Nm (6 poles) |
| 2 | Winding | Already specified in motor model |
| 3 | Feedback | A1 = Absolute Multiturn Encoder 12+12 Bits 128 Sin/Cos revolution A3 = Absolute Multiturn Encoder 9+12 Bits 16 Sin/Cos revolution A5 = Absolute Singleturn Encoder 9 Bits 16 Sin/Cos revolution |
| 4 | Brake | 0 = without brake 1 = with brake |
| 5 | Fielbus | E = Ethercat |
| 6 | Mechanical Arrangement | 0 - Shaft with key / without oil seal (front flange side IP 54) 1 - Shaft with key / with oil seal (front flange side IP 65) 2 - Shaft without key / without oil seal (front flange side IP 54) 3 - Shaft without key / with oil seal (front flange side IP 65) |

DUET

LOW VOLTAGE INTEGRATED BRUSHLESS DRIVE



DUET 40 RATINGS AND SPECIFICATIONS

| | | | |
|---------------------------------|-----------------------------------|---------------------|---------------------------|
| INSULATION CLASS | F | AMBIENT TEMPERATURE | 0 to 40 °C |
| ENCLOSURE | Totally enclosed. Self-cooled | AMBIENT HUMIDITY | 5 to 85% (non-condensing) |
| PROTECTION CLASS | IP 65 standard on the body | POLES | 8 |
| MOTOR INSULATION SYSTEM UL /CSA | cURus , DV155J File nr. : E216686 | CE certified | |

DUET 40 0,16 00

DUET 40 0,32 01

| | | | |
|-------------------------------------|--------------------|-------------------------------------|-------|
| Rated Voltage | Vdc | 48 | 48 |
| Auxiliary Voltage (+6% -10%) | Vdc | 24 | 24 |
| Minimum Voltage | Vdc | 9 | 9 |
| Maximum Voltage | Vdc | 60 | 60 |
| Stall Torque | Nm | 0,21 | 0,34 |
| Peak Torque | Nm | 0,48 | 0,96 |
| Rated Torque | Nm | 0,19 | 0,32 |
| Rated Output Power | W | 60 | 100 |
| Stall Current | Arms | 2,84 | 3,6 |
| Peak Current | Arms | 6,5 | 10,2 |
| Rated Current | Arms | 2,6 | 3,5 |
| Rated Speed @48Vdc | rpm | 3000 | 3000 |
| Maximum Speed @48Vdc | rpm | 5000 | 5000 |
| Maximum Speed @24Vdc | rpm | 3200 | 2600 |
| Torque Constant (± 5%) | Nm/Arms | 0,074 | 0,094 |
| Voltage Constant (± 5%) | Vrms/Krpm | 4,5 | 5,7 |
| Phase/phase resistance (± 10%@25°C) | Ohm | 1,77 | 1 |
| Phase/phase inductance (± 10%) | mH | 1,6 | 1,42 |
| Electrical time constant | ms | 0,9 | 1,4 |
| Thermal Resistance | °C/W | 2,38 | 2,3 |
| Mechanical time constant | ms | 1,3 | 0,8 |
| Rotor Inertia (*) | Kg cm ² | 0,027 | 0,047 |
| Duet weight | Kg | 0,55 | 0,7 |
| Duet weight with brake | Kg | 0,7 | 0,85 |
| Axial Load | N | 30 (applied on the shaft's center) | |
| Radial Load | N | 180 (applied on the shaft's center) | |

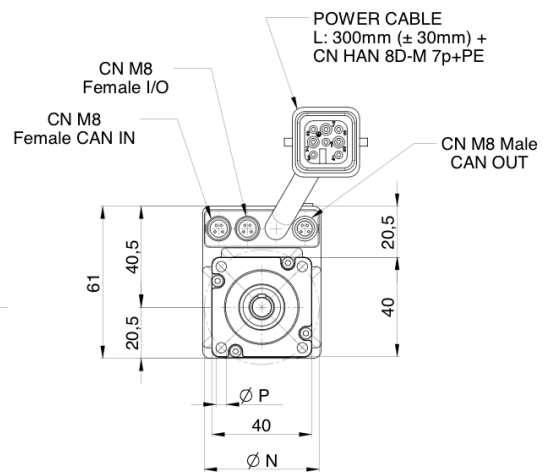
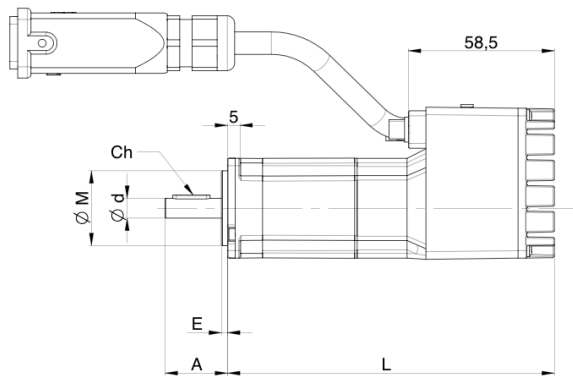
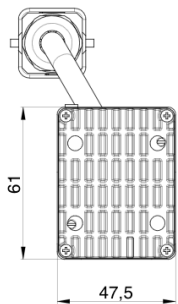
Rated output with 250 x 250 x 6 mm metallic heat sink flange coupling - Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing
(*) without brake and without feedback

DUET 40 DIMENSIONS

DUET 40 0,16 00

DUET 40 0,32 01

| | | | |
|-------------------|----|---------|---------|
| L (Without Brake) | mm | 131 | 149 |
| L (With Brake) | mm | 162 | 180 |
| A | mm | 25 | 25 |
| d | mm | 8 (h6) | 8 (h6) |
| ch | mm | 3x3x15 | 3x3x15 |
| M | mm | 30 (h7) | 30 (h7) |
| E | mm | 2,5 | 2,5 |
| N | mm | 46 | 46 |
| P | mm | 4,2 | 4,2 |

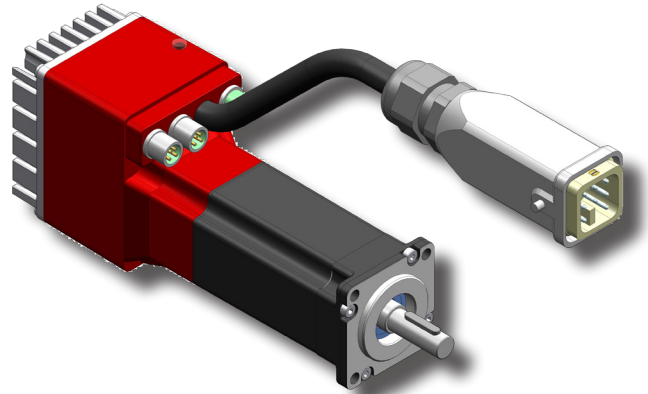


Dimensions in mm

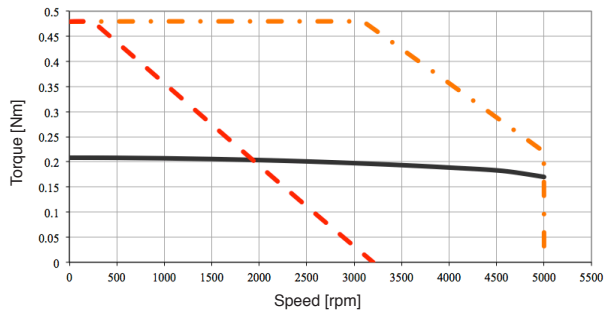
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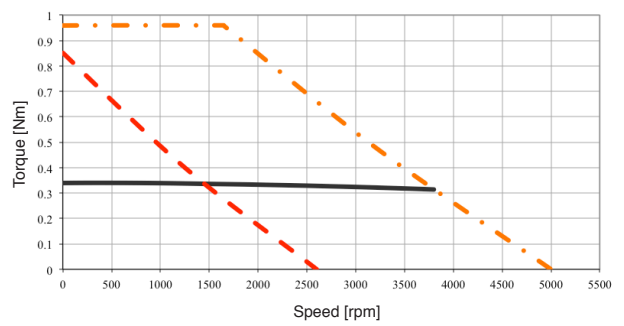
DUET 40 TORQUE / SPEED CHARTS



DUET 40 0,16 00



DUET 40 0,32 01



DUET 60 RATINGS AND SPECIFICATIONS

| | | | |
|---------------------------------|-----------------------------------|---------------------|---------------------------|
| INSULATION CLASS | F | AMBIENT TEMPERATURE | 0 to 40 °C |
| ENCLOSURE | Totally enclosed. Self-cooled | AMBIENT HUMIDITY | 5 to 85% (non-condensing) |
| PROTECTION CLASS | IP 65 standard on the body | POLES | 8 |
| MOTOR INSULATION SYSTEM UL /CSA | cURus , DV155J File nr. : E216686 | CE certified | |

DUET 60 0,65 01

DUET 60 1,3 02

| | | | |
|-------------------------------------|--------------------|-------------------------------------|---------------|
| Rated Voltage | Vdc | 48 | 48 |
| Auxiliary Voltage (+6% -10%) | Vdc | 24 | 24 |
| Minimum Voltage | Vdc | 9 | 9 |
| Maximum Voltage | Vdc | 60 | 60 |
| Stall Torque | Nm | 0,57 | 0,68 1,31* |
| Peak Torque | Nm | 1,95 | 2,4 |
| Rated Torque | Nm | 0,60 | 0,66 1,17* |
| Rated Output Power | W | 190 | 210 370* |
| Stall Current | Arms | 6,0 | 6,1 11,7* |
| Peak Current | Arms | 20,7 | 21,2 |
| Rated Current | Arms | 6,5 | 6,1 10,4* |
| Rated Speed @48Vdc | rpm | 3000 | 3000 |
| Maximum Speed @48Vdc | rpm | 5000 | 4500 |
| Maximum Speed @24Vdc | rpm | 2600 | 2200 |
| Torque Constant (± 5%) | Nm/Arms | 0,094 | 0,112 |
| Voltage Constant (± 5%) | Vrms/Krpm | 5,7 | 6,8 |
| Phase/phase resistance (± 10%@25°C) | Ohm | 0,38 | 0,2 |
| Phase/phase inductance (± 10%) | mH | 0,9 | 0,68 |
| Electrical time constant | ms | 2,4 | 3,4 |
| Thermal Resistance | °C/W | 1,9 | 1,4 |
| Mechanical time constant | ms | 0,83 | 0,57 |
| Rotor Inertia ^(a) | Kg cm ² | 0,13 | 0,24 |
| Duet weight | Kg | 1,2 | 1,6 |
| Duet weight with brake | Kg | 1,6 | 2 |
| Axial Load | N | 70 (applied on the shaft's center) | |
| Radial Load | N | 220 (applied on the shaft's center) | |

Rated output with 250 x 250 x 6 mm metallic heat sink flange coupling - Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing - Stall torque at switching frequency 12,5Khz

* Intermittent duty S2 10%/40*

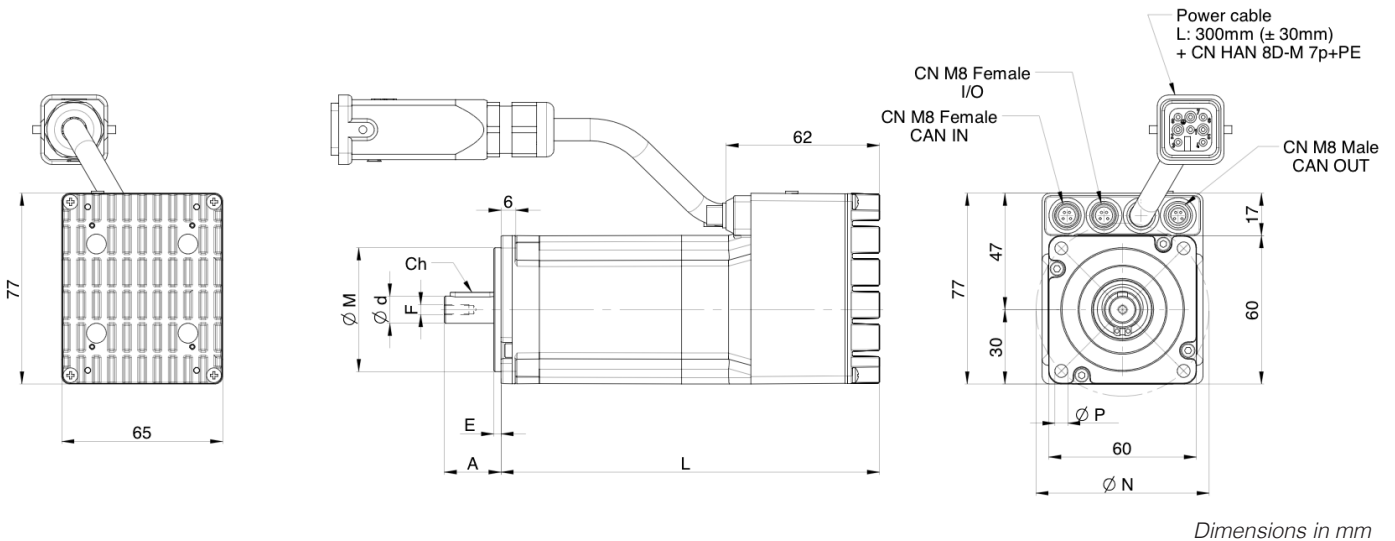
(*) without brake and without feedback

DUET 60 DIMENSIONS

DUET 60 0,65 01

DUET 60 1,3 02

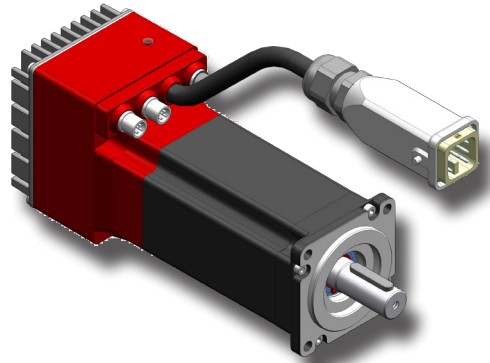
| | | | |
|-------------------|----|---------|---------|
| L (Without Brake) | mm | 153 | 178 |
| L (With Brake) | mm | 190 | 215 |
| A | mm | 23 | 30 |
| d | mm | 11 (h6) | 14 (h6) |
| ch | mm | 4x4x18 | 5x5x25 |
| M | mm | 50 (h7) | 50 (h7) |
| E | mm | 3 | 3 |
| N | mm | 70 | 70 |
| P | mm | 5,2 | 5,2 |



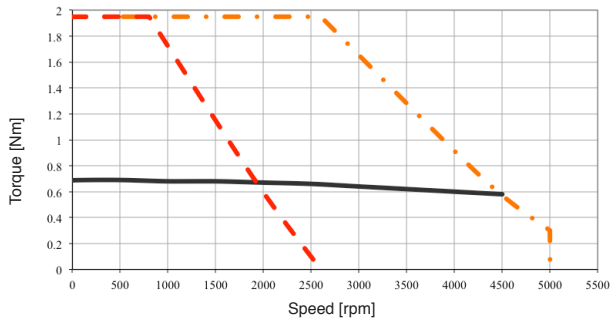
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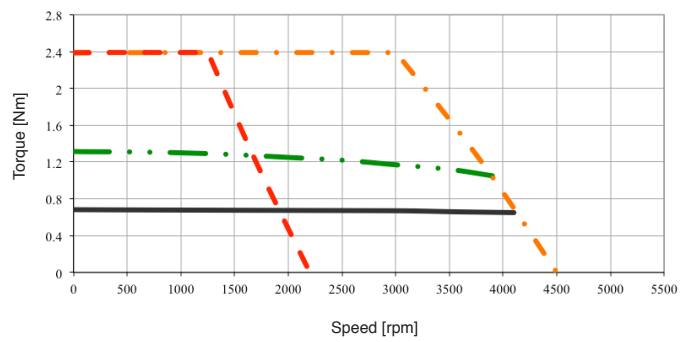
DUET 60 TORQUE /SPEED CHARTS



DUET 60 0,65 01



DUET 60 1,3 02



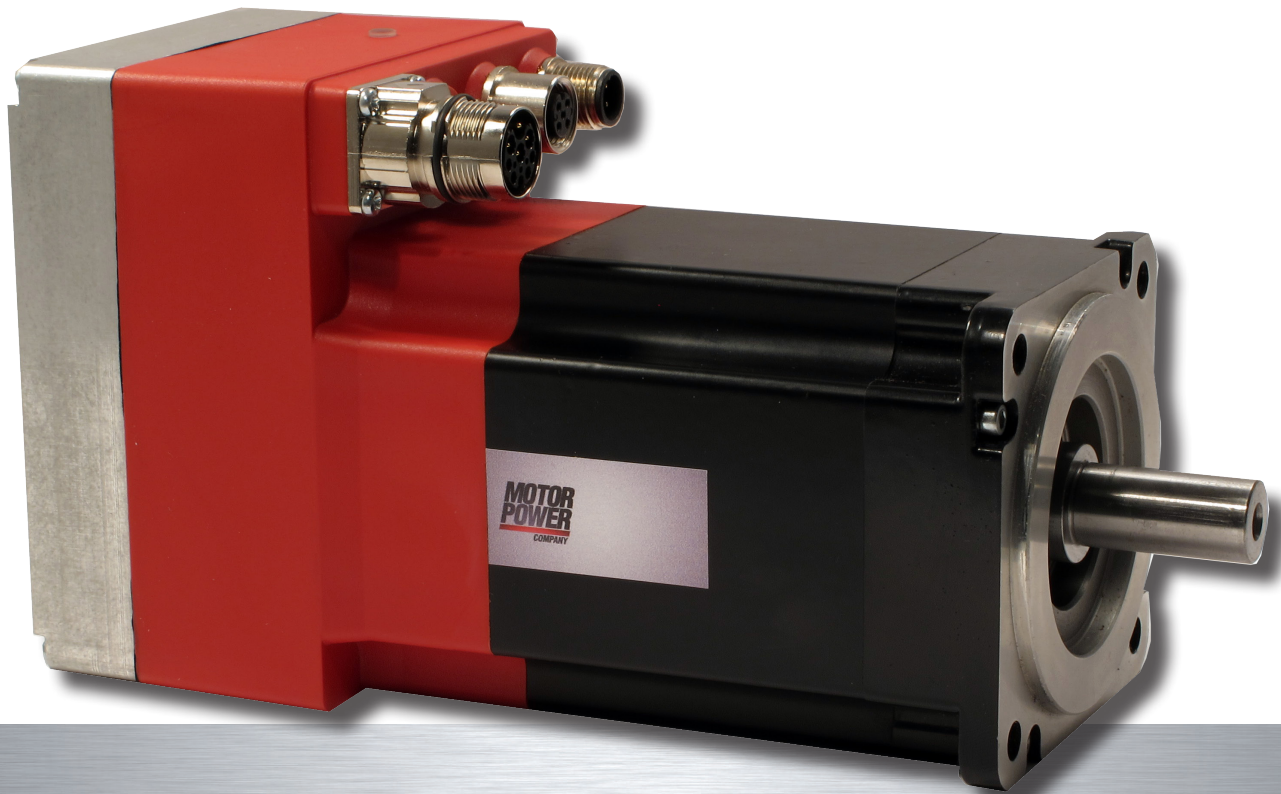
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- Continuous duty S1 @ rated voltage
- - - 24 Vdc
- . - . 48 Vdc
- . . . Intermittent duty S2 10%/40%

DUET FLEXI

LOW VOLTAGE INTEGRATED BRUSHLESS DRIVE



DUET FLEXI 60 RATINGS AND SPECIFICATIONS

| | | | |
|---------------------------------|-----------------------------------|---------------------|---------------------------|
| INSULATION CLASS | F | AMBIENT TEMPERATURE | 0 to 40 °C |
| ENCLOSURE | Totally enclosed. Self-cooled | AMBIENT HUMIDITY | 5 to 85% (non-condensing) |
| PROTECTION CLASS | IP 65 standard on the body | POLES | 8 |
| MOTOR INSULATION SYSTEM UL /CSA | cURus , DV155J File nr. : E216686 | CE certified | |

DUET FLEXI 60 0,65 01

DUET FLEXI 60 1,3 01

| | | | |
|-------------------------------------|--------------------|-------------------------------------|--------|
| Rated Voltage | Vdc | 48 | 48 |
| Auxiliary Voltage (+6% -10%) | Vdc | 24 | 24 |
| Minimum Voltage | Vdc | 24 | 24 |
| Maximum Voltage | Vdc | 60 | 60 |
| Stall Torque | Nm | 0,65 | 1,3** |
| Peak Torque | Nm | 1,95 | 3,75 |
| Rated Torque | Nm | 0,64 | 1,18** |
| Rated Output Power | W | 200 | 310** |
| Rated Output Power @ 10 Arms | W | - | 240 |
| Stall Current | Arms | 6,9 | 13,9** |
| Peak Current | Arms | 20,7 | 39,8 |
| Rated Current | Arms | 7 | 12,9** |
| Rated Speed @48Vdc | rpm | 3000 | 2500 |
| Maximum Speed @48Vdc | rpm | 5000 | 5000 |
| Maximum Speed @24Vdc | rpm | 2600 | 2600 |
| Torque Constant (± 5%) | Nm/Arms | 0,094 | 0,094 |
| Voltage Constant (± 5%) | Vrms/Krpm | 5,7 | 5,7 |
| Phase/phase resistance (± 10%@25°C) | Ohm | 0,38 | 0,16 |
| Phase/phase inductance (± 10%) | mH | 0,90 | 0,48 |
| Electrical time constant | ms | 2,4 | 3 |
| Thermal Resistance | °C/W | 1,9 | 1,4 |
| Mechanical time constant | ms | 0,83 | 0,65 |
| Rotor Inertia ^(a) | Kg cm ² | 0,13 | 0,24 |
| Duet weight | Kg | 1,4 | 1,8 |
| Duet weight with brake | Kg | 1,8 | 2,2 |
| Axial Load | N | 70 (applied on the shaft's center) | |
| Radial Load | N | 220 (applied on the shaft's center) | |

Rated output with 250 x 250 x 6 mm metallic heat sink flange coupling - Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing - Continuous duty (S1) operation with cooling system appropriately sized.

** @power stage temperature ≤ 50°C (rated current limited to 10 Arms @ power stage temperature > 50°C < 70°C)

(†) without brake and without feedback

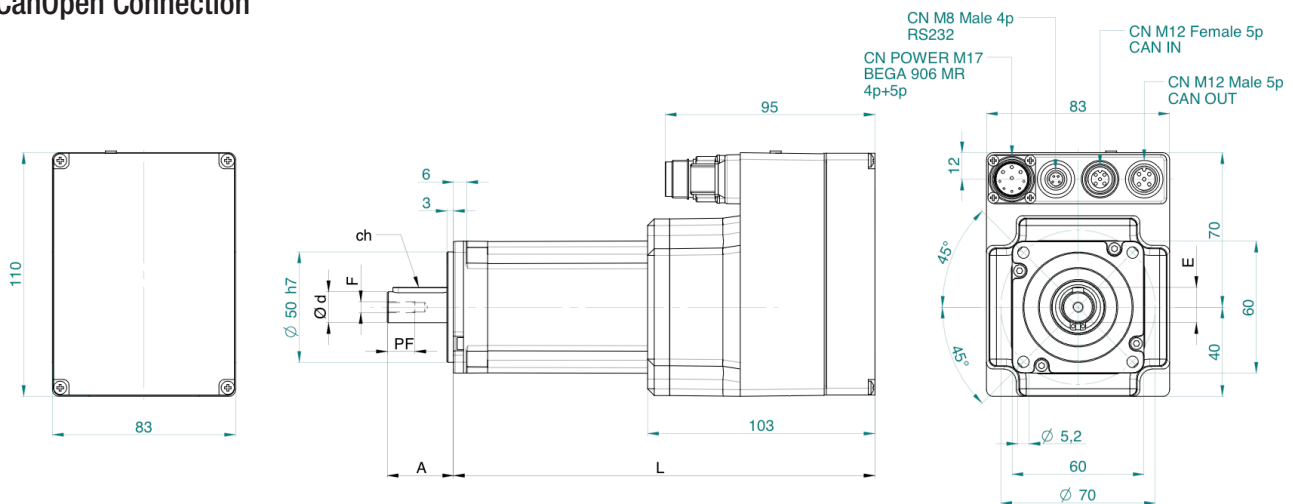
DUET FLEXI 60 DIMENSIONS

DUET FLEXI 60 0,65 01

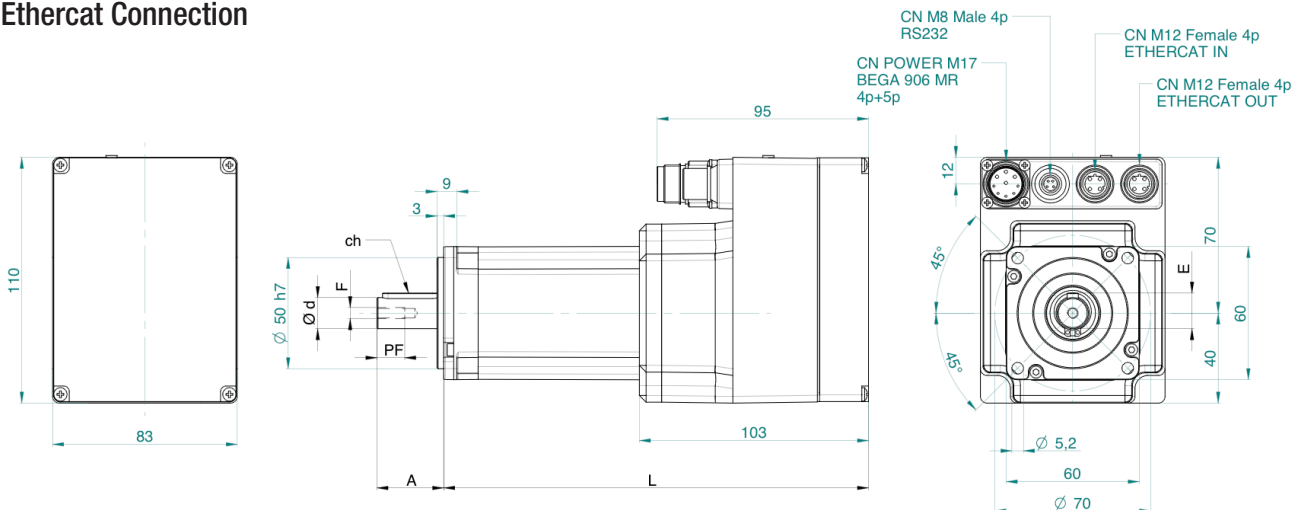
DUET FLEXI 60 1,3 01

| | | | |
|-------------------|----|---------|---------|
| L (Without Brake) | mm | 166 | 191 |
| L (With Brake) | mm | 203 | 228 |
| A | mm | 23 | 30 |
| d | mm | 11 (h6) | 14 (h6) |
| ch | mm | 4x4x18 | 5x5x25 |
| F | mm | M4 | M5 |
| PF | mm | 10 | 12,5 |
| E | mm | 12,5 | 16 |

CanOpen Connection

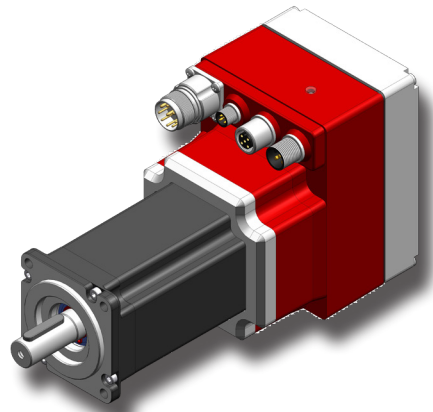


Ethercat Connection



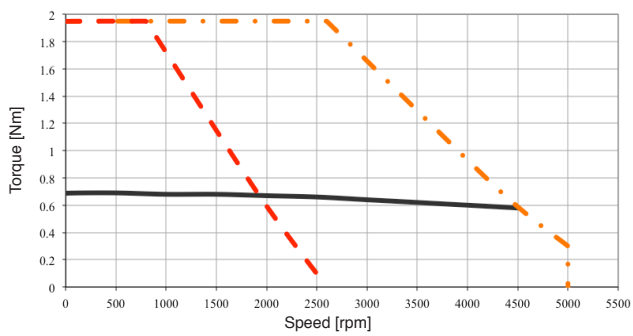
Dimensions in mm

DUET FLEXI 60 TORQUE /SPEED CHARTS

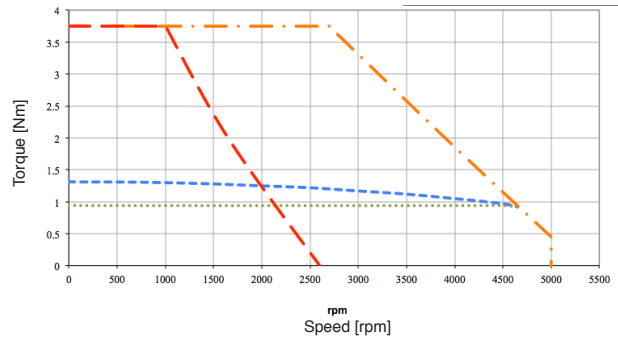


DUET FLEXI 60 0,65 01

DUET FLEXI 60 1,3 01



Continuous duty (S1) operation with cooling system appropriately sized.



Continuous duty (S1) operation with cooling system appropriately sized.

SEE IT BEFORE IT HAPPENS



- Continuous duty @ rated voltage
- - - 24 Vdc
- · - 48 Vdc
- - - Continuous duty @ T(power stage) ≤ 50°C
- · · Continuous duty @ T(power stage) ≤ 70°C

DUET FLEXI 80 RATINGS AND SPECIFICATIONS

| | | | |
|---------------------------------|---------------------------------|---------------------|---------------------------|
| TIME RATING | Continuous | AMBIENT TEMPERATURE | 0 to 40 °C |
| INSULATION CLASS | F | AMBIENT HUMIDITY | 5 to 85% (non-condensing) |
| ENCLOSURE | Totally enclosed. Self-cooled | POLES | 8 |
| PROTECTION CLASS | IP 65 standard on the body | CE certified | |
| MOTOR INSULATION SYSTEM UL /CSA | cURus , DV155J File nr.:E216686 | | |

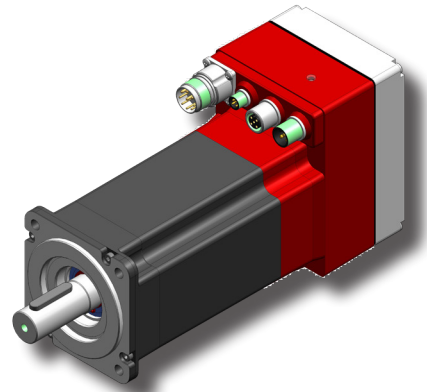
DUET FLEXI 80 1,5 03

DUET FLEXI 80 2 03

| | | | |
|-------------------------------------|--------------------|-------------------------------------|--------|
| Rated Voltage | Vdc | 48 | 48 |
| Auxiliary Voltage (+6% -10%) | Vdc | 24 | 24 |
| Minimum Voltage | Vdc | 24 | 24 |
| Maximum Voltage | Vdc | 60 | 60 |
| Stall Torque | Nm | 1,5** | 2** |
| Peak Torque | Nm | 4,5 | 5,6 |
| Rated Torque | Nm | 1,5** | 2** |
| Rated Output Power | W | 390** | 520** |
| Rated Output Power @ 10 Arms | W | 360 | 360 |
| Stall Current | Arms | 10,7** | 14,2** |
| Peak Current | Arms | 32 | 39,8 |
| Rated Current | Arms | 11** | 14,7** |
| Rated Speed @48Vdc | rpm | 2500 | 2500 |
| Maximum Speed @48Vdc | rpm | 3600 | 3600 |
| Maximum Speed @24Vdc | rpm | 1800 | 1800 |
| Torque Constant (± 5%) | Nm/Arms | 0,141 | 0,141 |
| Voltage Constant (± 5%) | Vrms/Krpm | 8,5 | 8,5 |
| Phase/phase resistance (± 10%@25°C) | Ohm | 0,14 | 0,12 |
| Phase/phase inductance (± 10%) | mH | 0,53 | 0,31 |
| Electrical time constant | ms | 3,9 | 2,6 |
| Thermal Resistance | °C/W | 1,7 | 1,3 |
| Mechanical time constant | ms | 0,66 | 1,06 |
| Rotor Inertia (°) | Kg cm ² | 0,64 | 1,16 |
| Duet weight | Kg | 2,4 | 3,2 |
| Duet weight with brake | Kg | 3,1 | 3,9 |
| Axial Load | N | 110 (applied on the shaft's center) | |
| Radial Load | N | 350 (applied on the shaft's center) | |

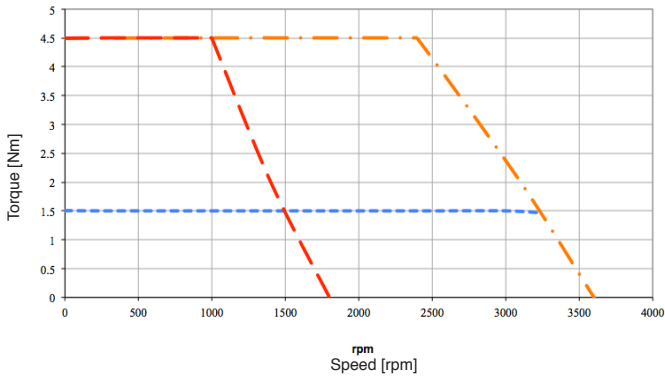
Rated output with 250 x 250 x 6 mm metallic heat sink flange coupling - Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing - Continuous duty (S1) operation with cooling system appropriately sized.
 ** @power stage temperature ≤ 50°C (rated current limited to 10 Arms @ power stage temperature > 50°C < 70°C).
 (*) without brake and without feedback

DUET FLEXI 80 TORQUE /SPEED CHARTS

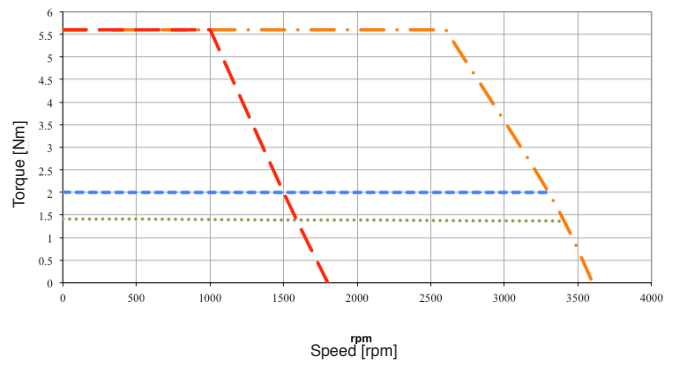


DUET FLEXI 80 1,5 03

DUET FLEXI 80 2 03



Continuous duty (S1) operation with cooling system appropriately sized.

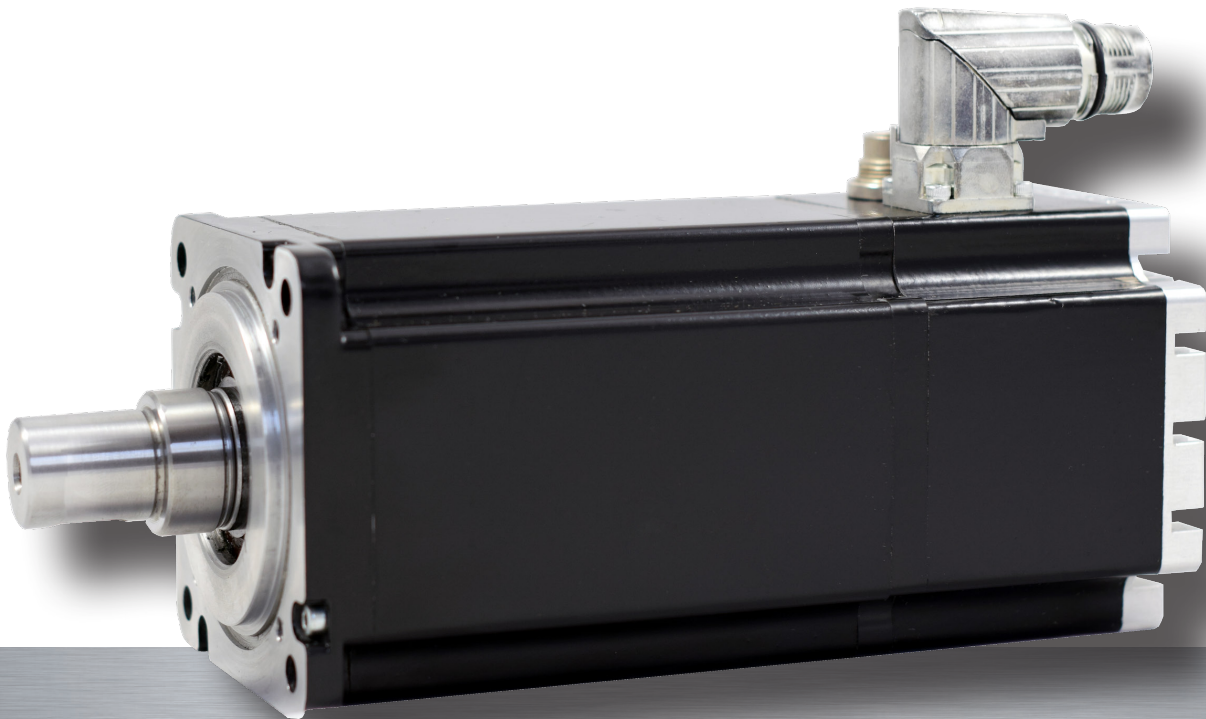


Continuous duty (S1) operation with cooling system appropriately sized.

- Continuous duty @ rated voltage
- 24 Vdc
- - - 48 Vdc
- - - Continuous duty @ T(power stage) ≤50°C
- Continuous duty @ T(power stage) ≤70°C

DUET AD

LOW VOLTAGE INTEGRATED BRUSHLESS DRIVE



DUET AD 80 RATINGS AND SPECIFICATIONS

| | | | |
|---------------------------------|---------------------------------|---------------------|---------------------------|
| TIME RATING | Continuous | AMBIENT TEMPERATURE | 0 to 40 °C |
| INSULATION CLASS | F | AMBIENT HUMIDITY | 5 to 85% (non-condensing) |
| ENCLOSURE | Totally enclosed. Self-cooled | POLES | 8 |
| PROTECTION CLASS | IP 65 standard on the body | CE certified | |
| MOTOR INSULATION SYSTEM UL /CSA | cURus , DV155J File nr.:E216686 | | |

DUET AD 80 1,5 03

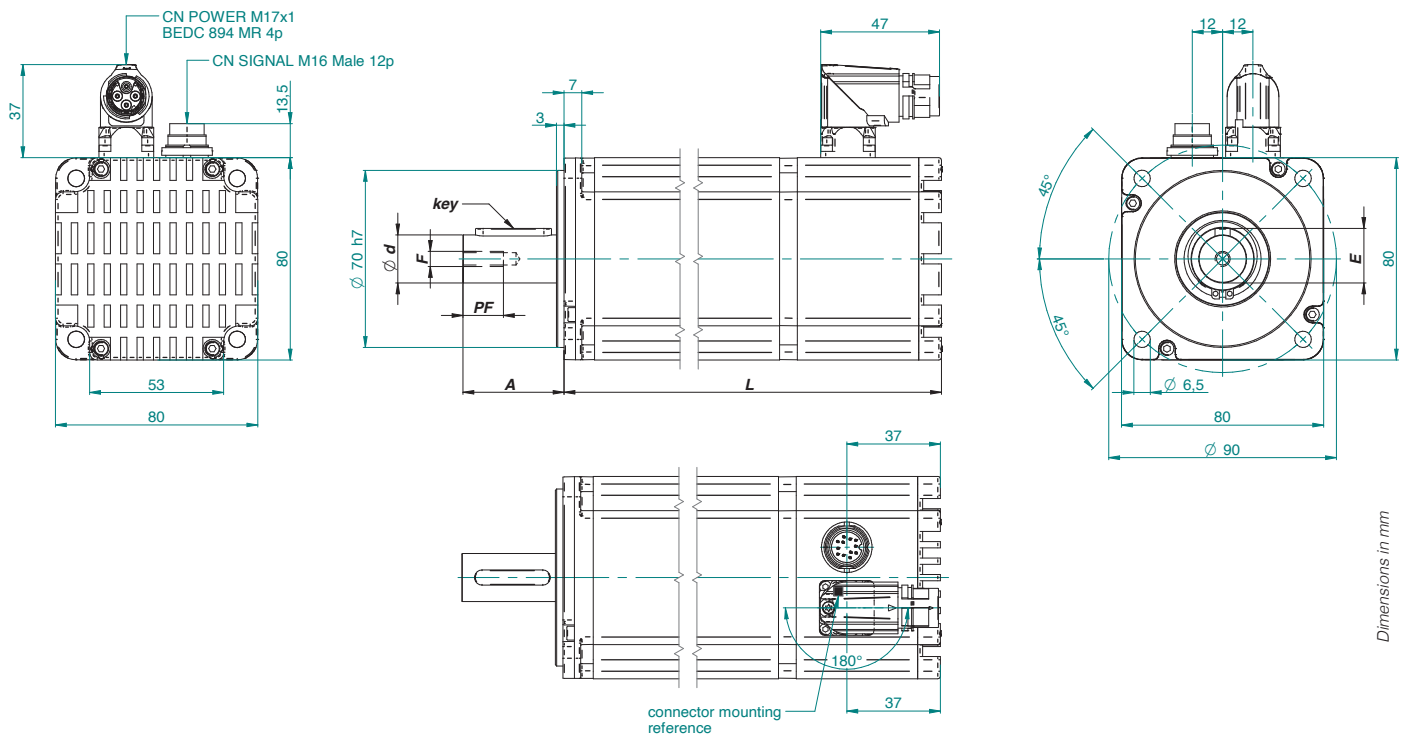
DUET AD 80 2,8 02

| | | | |
|-------------------------------------|--------------------|-------------------------------------|-------|
| Rated Voltage | Vdc | 48 | 48 |
| Auxiliary Voltage (+6% -10%) | Vdc | 24 | 24 |
| Minimum Voltage | Vdc | 40 | 40 |
| Maximum Voltage | Vdc | 48 | 48 |
| Stall Torque | Nm | 1,74 | 2,22 |
| Peak Torque | Nm | 4,5 | 5,36 |
| Rated Torque | Nm | 1,53 | 2 |
| Rated Output Power | W | 480 | 630 |
| Stall Current | Arms | 12,3 | 19,65 |
| Peak Current | Arms | 35,1 | 50 |
| Rated Current | Arms | 11 | 17,7 |
| Rated Speed @48Vdc | rpm | 3000 | 3000 |
| Maximum Speed @48Vdc | rpm | 3600 | 4500 |
| Torque Constant (± 5%) | Nm/Arms | 0,141 | 0,113 |
| Voltage Constant (± 5%) | Vrms/Krpm | 8,5 | 6,8 |
| Phase/phase resistance (± 10%@25°C) | Ohm | 0,136 | 0,064 |
| Phase/phase inductance (± 10%) | mH | 0,53 | 0,24 |
| Electrical time constant | ms | 3,9 | 3,75 |
| Thermal Resistance | °C/W | 1,67 | 1,4 |
| Mechanical time constant | ms | 0,8 | 0,65 |
| Rotor Inertia (*) | Kg cm ² | 0,64 | 1,16 |
| Duet weight | Kg | 2,6 | 3,3 |
| Duet weight with brake | Kg | 3,3 | 4 |
| Axial Load | N | 110 (applied on the shaft's center) | |
| Radial Load | N | 350 (applied on the shaft's center) | |

Rated output with 250 x 250 x 6 mm metallic heat sink flange coupling - Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing - Continuous duty (S1) operation with cooling system appropriately sized.
(*) without brake and without feedback

DUET AD 80 DIMENSIONS (MODBUS MODEL)

| | | DUET AD 80 1,5 | DUET AD 80 2,8 |
|-------------------|----|-----------------------|-----------------------|
| L (Without Brake) | mm | 166 | 191 |
| L (With Brake) | mm | 208 | 233 |
| A | mm | 30 | 40 |
| d | mm | 14 (h6) | 19 (h6) |
| ch | mm | 5x5x25 | 6x6x30 |
| F | mm | M5 | M6 |
| PF | mm | 12,5 | 16 |
| E | mm | 16 | 21,5 |



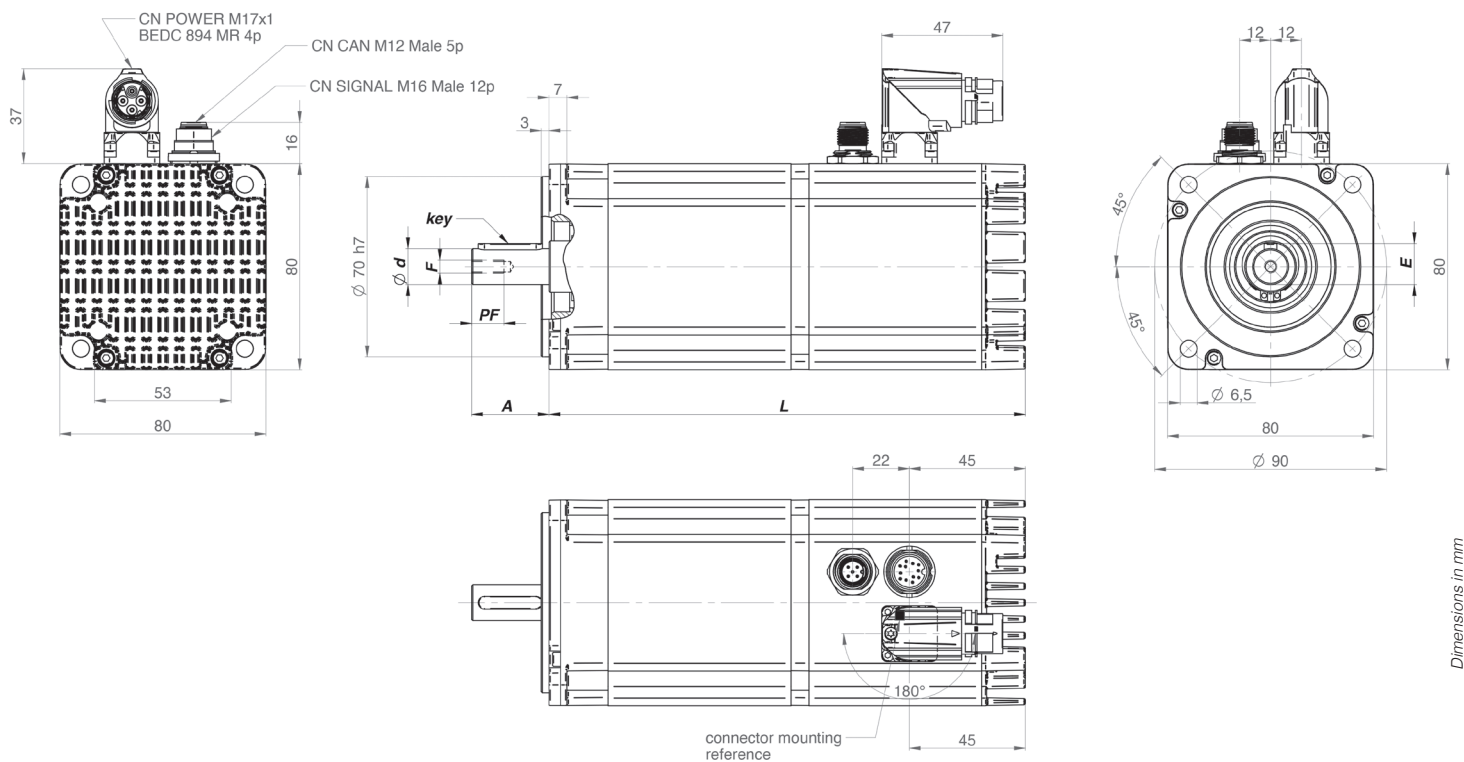
Dimensions in mm

SEE IT BEFORE IT HAPPENS

DUET AD 80 DIMENSIONS (CANOPEN MODEL)

| | | DUET AD 80 1,5 | DUET AD 80 2,8 |
|--|--|----------------|----------------|
|--|--|----------------|----------------|

| | | | |
|-------------------|----|---------|---------|
| L (Without Brake) | mm | 185 | 210 |
| L (With Brake) | mm | 227 | 252 |
| A | mm | 30 | 40 |
| d | mm | 14 (h6) | 19 (h6) |
| ch | mm | 5x5x25 | 6x6x30 |
| F | mm | M5 | M6 |
| PF | mm | 12,5 | 16 |
| E | mm | 16 | 21,5 |



Dimensions in mm

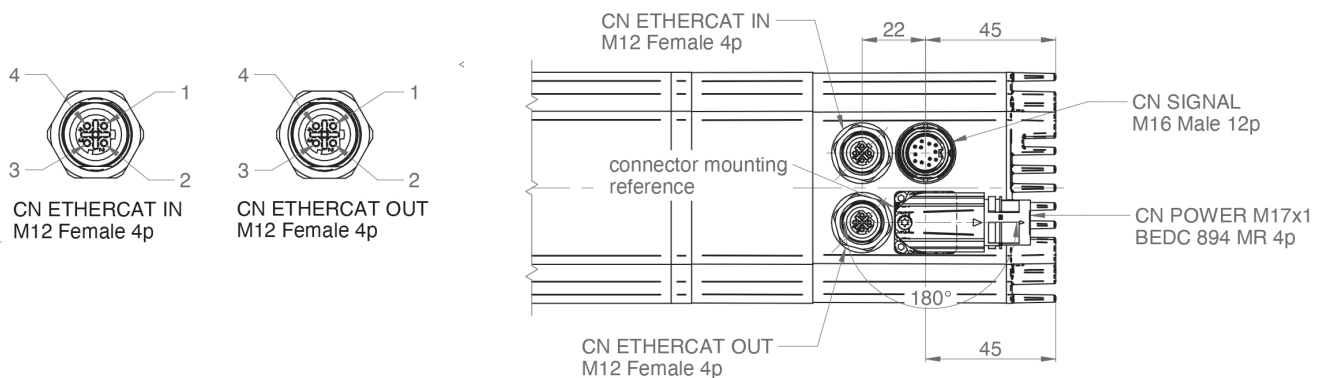
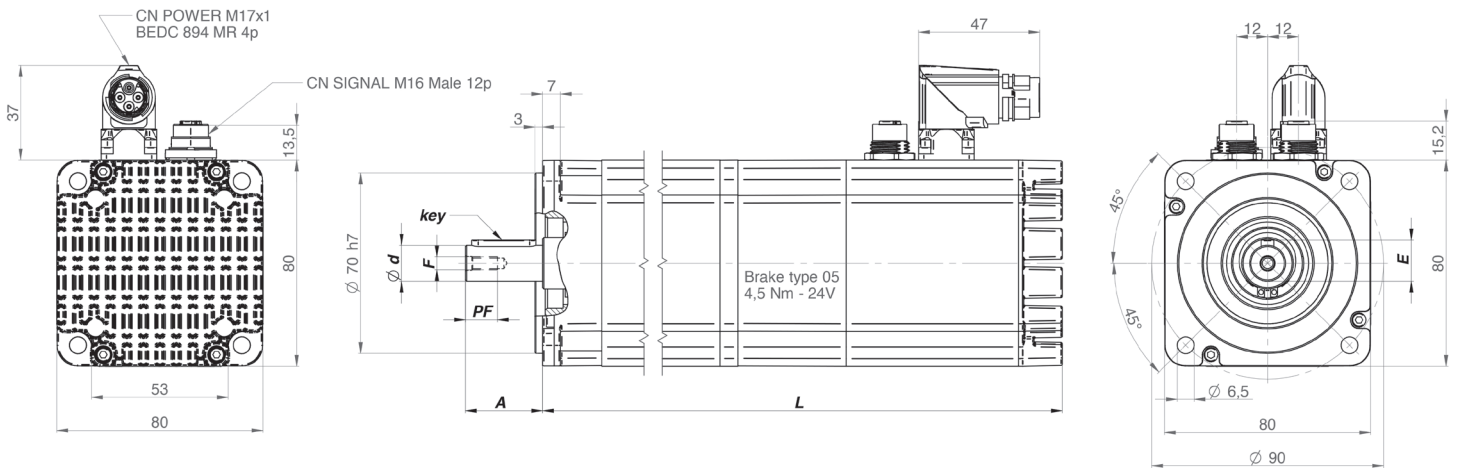
SEE IT BEFORE IT HAPPENS

**MOTOR
POWER**
COMPANY

DUET AD 80 DIMENSIONS (ETHERCAT MODEL)

| | | DUET AD 80 1,5 | DUET AD 80 2,8 |
|--|--|----------------|----------------|
|--|--|----------------|----------------|

| | | | |
|-------------------|----|---------|---------|
| L (Without Brake) | mm | 185 | 210 |
| L (With Brake) | mm | 227 | 252 |
| A | mm | 30 | 40 |
| d | mm | 14 (h6) | 19 (h6) |
| ch | mm | 5x5x25 | 6x6x30 |
| F | mm | M5 | M6 |
| PF | mm | 12,5 | 16 |
| E | mm | 16 | 21,5 |



Dimensions in mm

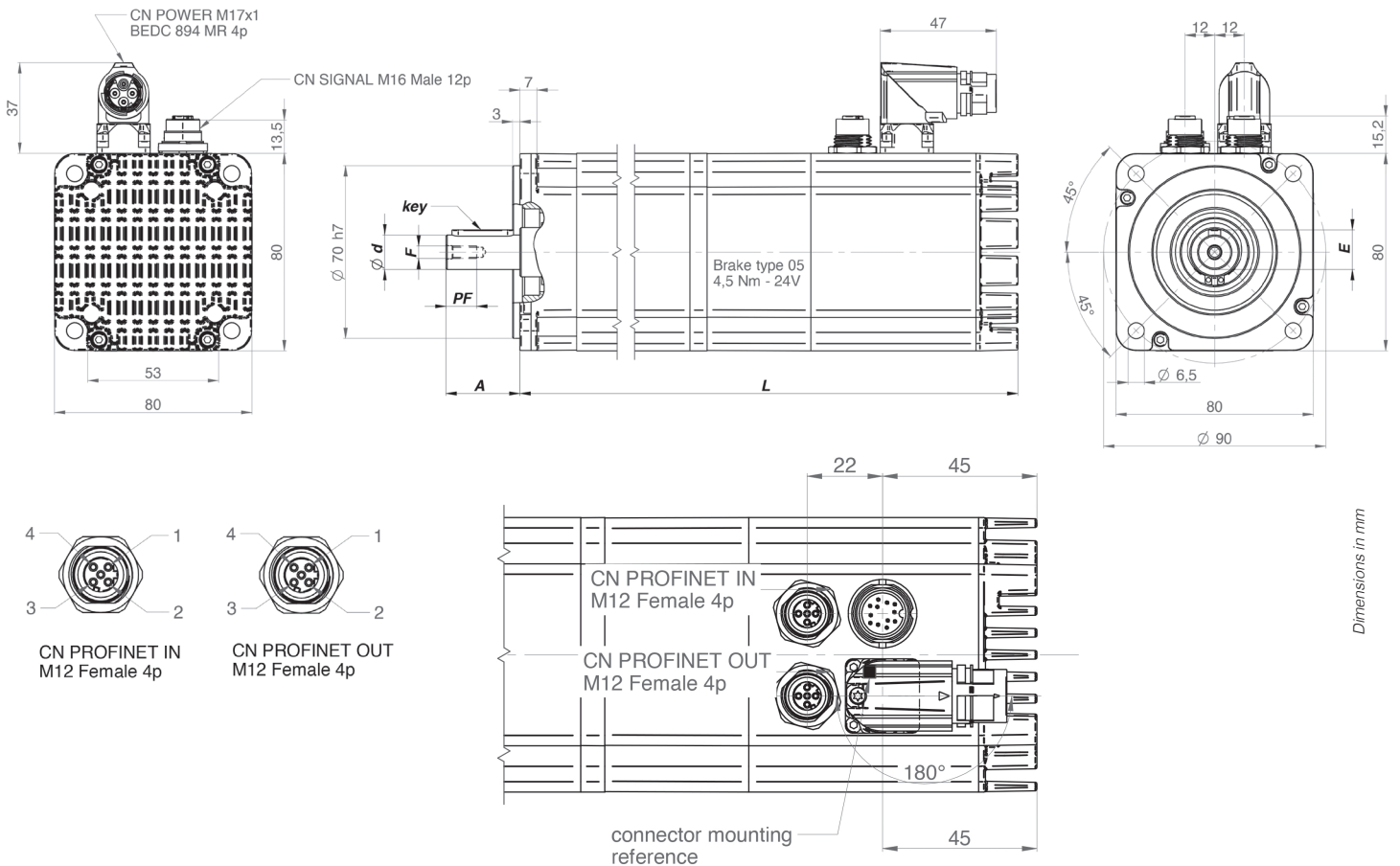
SEE IT BEFORE IT HAPPENS

**MOTOR
POWER**
COMPANY

DUET AD 80 DIMENSIONS (PROFINET MODEL)

| | | DUET AD 80 1,5 | DUET AD 80 2,8 |
|--|--|----------------|----------------|
|--|--|----------------|----------------|

| | | | |
|-------------------|----|---------|---------|
| L (Without Brake) | mm | 185 | 210 |
| L (With Brake) | mm | 227 | 252 |
| A | mm | 30 | 40 |
| d | mm | 14 (h6) | 19 (h6) |
| ch | mm | 5x5x25 | 6x6x30 |
| F | mm | M5 | M6 |
| PF | mm | 12,5 | 16 |
| E | mm | 16 | 21,5 |

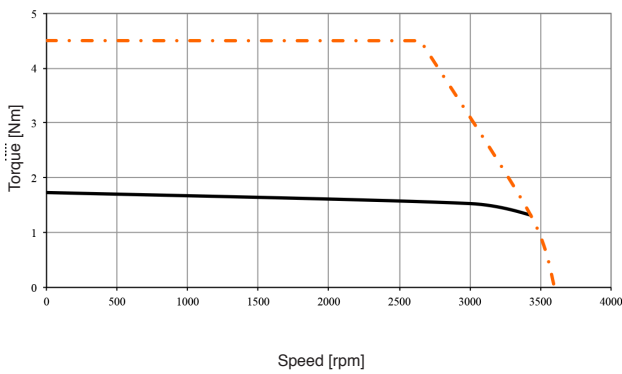


DUET AD 80 TORQUE /SPEED CHARTS

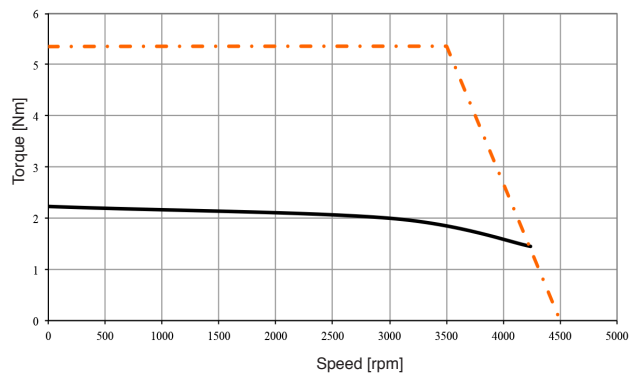


DUET AD 80 1,5 03

DUET AD 80 2,8 02



Continuous duty (S1) operation with cooling system appropriately sized.



Continuous duty (S1) operation with cooling system appropriately sized.

SEE IT BEFORE IT HAPPENS



- Continuous duty @ rated voltage
- 24 Vdc
- 48 Vdc
- Continuous duty @ T(power stage) ≤50°C
- Continuous duty @ T(power stage) ≤70°C

DUET HV

HIGH VOLTAGE INTEGRATED BRUSHLESS DRIVE



DUET HV 60 RATINGS AND SPECIFICATIONS

| | | | |
|---------------------------------|---------------------------------|---------------------|---------------------------|
| TIME RATING | Continuous | AMBIENT TEMPERATURE | 0 to 40 °C |
| INSULATION CLASS | F | AMBIENT HUMIDITY | 5 to 85% (non-condensing) |
| ENCLOSURE | Totally enclosed. Self-cooled | POLES | 8 |
| PROTECTION CLASS | IP 65 standard on the body | CE certified | |
| MOTOR INSULATION SYSTEM UL /CSA | cURus , DV155J File nr.:E216686 | | |

DUET HV 60 1,3 15

| | | |
|-------------------------------------|--------------------|-------------------------------------|
| Rated Voltage | Vdc | 560 |
| Auxiliary Voltage (+6% -10%) | Vdc | 24 |
| Minimum Voltage | Vdc | 275 |
| Maximum Voltage | Vdc | 740 |
| Stall Torque | Nm | 1,31 |
| Peak Torque | Nm | 3,9 |
| Rated Torque | Nm | 1,18 |
| Rated Output Power | W | 370 |
| Stall Current | Arms | 1,44 |
| Peak Current | Arms | 4,29 |
| Rated Current | Arms | 1,33 |
| Rated Speed @560Vdc | rpm | 3000 |
| Maximum Speed @560Vdc | rpm | 5000 |
| Torque Constant (± 5%) | Nm/Arms | 0,91 |
| Voltage Constant (± 5%) | Vrms/Krpm | 55 |
| Phase/phase resistance (± 10%@25°C) | Ohm | 14,4 |
| Phase/phase inductance (± 10%) | mH | 41,8 |
| Electrical time constant | ms | 2,90 |
| Thermal Resistance | °C/W | 1,41 |
| Mechanical time constant | ms | 0,63 |
| Rotor Inertia (°) | Kg cm ² | 0,24 |
| Duet weight | Kg | 1,9 |
| Duet weight with brake | Kg | 2,33 |
| Axial Load | N | 70 (applied on the shaft's center) |
| Radial Load | N | 220 (applied on the shaft's center) |

Rated output with 250 x 250 x 6 mm metallic heat sink flange coupling - Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing
 (*) without brake and without feedback

DUET HV 80 RATINGS AND SPECIFICATIONS

| | | | |
|---------------------------------|---------------------------------|---------------------|---------------------------|
| TIME RATING | Continuous | AMBIENT TEMPERATURE | 0 to 40 °C |
| INSULATION CLASS | F | AMBIENT HUMIDITY | 5 to 85% (non-condensing) |
| ENCLOSURE | Totally enclosed. Self-cooled | POLES | 8 |
| PROTECTION CLASS | IP 65 standard on the body | CE certified | |
| MOTOR INSULATION SYSTEM UL /CSA | cURus , DV155J File nr.:E216686 | | |

DUET HV 80 2,8 17

DUET HV 80 4 17

| | | | |
|-------------------------------------|--------------------|-------------------------------------|------|
| Rated Voltage | Vdc | 560 | 560 |
| Auxiliary Voltage (+6% -10%) | Vdc | 24 | 24 |
| Minimum Voltage | Vdc | 275 | 275 |
| Maximum Voltage | Vdc | 740 | 740 |
| Stall Torque | Nm | 2,96 | 4 |
| Peak Torque | Nm | 8,4 | 12 |
| Rated Torque | Nm | 2,55 | 3,4 |
| Rated Output Power | W | 800 | 1068 |
| Stall Current | Arms | 1,75 | 2,50 |
| Peak Current | Arms | 5,8 | 7,50 |
| Rated Current | Arms | 1,64 | 2,19 |
| Rated Speed @560Vdc | rpm | 3000 | 3000 |
| Maximum Speed @560Vdc | rpm | 4000 | 4000 |
| Torque Constant (± 5%) | Nm/Arms | 1,6 | 1,6 |
| Voltage Constant (± 5%) | Vrms/Krpm | 97 | 96 |
| Phase/phase resistance (± 10%@25°C) | Ohm | 7,9 | 6,5 |
| Phase/phase inductance (± 10%) | mH | 35,4 | 28,6 |
| Electrical time constant | ms | 4,48 | 4,40 |
| Thermal Resistance | °C/W | 1,32 | 1,0 |
| Mechanical time constant | ms | 0,53 | 0,60 |
| Rotor Inertia (*) | Kg cm ² | 1,16 | 1,58 |
| Duet weight | Kg | 4,1 | 5,1 |
| Duet weight with brake | Kg | 4,8 | 6,5 |
| Axial Load | N | 110 (applied on the shaft's center) | |
| Radial Load | N | 350 (applied on the shaft's center) | |

Rated output with 250 x 250 x 6 mm metallic heat sink flange coupling - Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing
(*) without brake and without feedback

DUET HV 100 RATINGS AND SPECIFICATIONS

| | | | |
|---------------------------------|---------------------------------|---------------------|---------------------------|
| TIME RATING | Continuous | AMBIENT TEMPERATURE | 0 to 40 °C |
| INSULATION CLASS | F | AMBIENT HUMIDITY | 5 to 85% (non-condensing) |
| ENCLOSURE | Totally enclosed. Self-cooled | POLES | 8 |
| PROTECTION CLASS | IP 65 standard on the body | CE certified | |
| MOTOR INSULATION SYSTEM UL /CSA | cURus , DV155J File nr.:E216686 | | |

DUET HV 100 5,6 17

DUET HV 100 8 17

| | | | |
|-------------------------------------|--------------------|-------------------------------------|-------|
| Rated Voltage | Vdc | 560 | 560 |
| Auxiliary Voltage (+6% -10%) | Vdc | 24 | 24 |
| Minimum Voltage | Vdc | 275 | 275 |
| Maximum Voltage | Vdc | 740 | 740 |
| Stall Torque | Nm | 5,6 | 8 |
| Peak Torque | Nm | 22 | 22 |
| Rated Torque | Nm | 4,2 | 5 |
| Rated Output Power | W | 1320 | 1570 |
| Stall Current | Arms | 3,50 | 5 |
| Peak Current | Arms | 13,8 | 13,8 |
| Rated Current | Arms | 2,71 | 3,22 |
| Rated Speed @560Vdc | rpm | 3000 | 3000 |
| Maximum Speed @560Vdc | rpm | 4000 | 4000 |
| Torque Constant (± 5%) | Nm/Arms | 1,6 | 1,6 |
| Voltage Constant (± 5%) | Vrms/Krpm | 97 | 97 |
| Phase/phase resistance (± 10%@25°C) | Ohm | 3,64 | 2,2 |
| Phase/phase inductance (± 10%) | mH | 19,7 | 13,13 |
| Electrical time constant | ms | 5,4 | 6,0 |
| Thermal Resistance | °C/W | 0,95 | 0,78 |
| Mechanical time constant | ms | 0,62 | 0,53 |
| Rotor Inertia (*) | Kg cm ² | 2,91 | 4,1 |
| Duet weight | Kg | 6,7 | 8,4 |
| Duet weight with brake | Kg | 7,9 | 9,6 |
| Axial Load | N | 225 (applied on the shaft's center) | |
| Radial Load | N | 626 (applied on the shaft's center) | |

Rated output with 300 x 300 x 6 mm metallic heat sink flange coupling - Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing
(*) without brake and without feedback

DUET HV 142 RATINGS AND SPECIFICATIONS

| | | | |
|---------------------------------|---------------------------------|---------------------|---------------------------|
| TIME RATING | Continuous | AMBIENT TEMPERATURE | 0 to 40 °C |
| INSULATION CLASS | F | AMBIENT HUMIDITY | 5 to 85% (non-condensing) |
| ENCLOSURE | Totally enclosed. Self-cooled | POLES | 6 |
| PROTECTION CLASS | IP 65 standard on the body | CE certified | |
| MOTOR INSULATION SYSTEM UL /CSA | cURus , DV155J File nr.:E216686 | | |

DUET HV 142 16,5 17

| | | |
|-------------------------------------|--------------------|-------------------------------------|
| Rated Voltage | Vdc | 560 |
| Auxiliary Voltage (+6% -10%) | Vdc | 24 |
| Minimum Voltage | Vdc | 275 |
| Maximum Voltage | Vdc | 740 |
| Stall Torque | Nm | 14 |
| Peak Torque | Nm | 42 |
| Rated Torque | Nm | 11,1 |
| Rated Output Power | W | 3500 |
| Stall Current | Arms | 8,7 |
| Peak Current | Arms | 26,2 |
| Rated Current | Arms | 7,3 |
| Rated Speed @560Vdc | rpm | 3000 |
| Maximum Speed @560Vdc | rpm | 3500 |
| Torque Constant (± 5%) | Nm/Arms | 1,6 |
| Voltage Constant (± 5%) | Vrms/Krpm | 97 |
| Phase/phase resistance (± 10%@25°C) | Ohm | 1,3 |
| Phase/phase inductance (± 10%) | mH | 6,9 |
| Electrical time constant | ms | 5,2 |
| Thermal Resistance | °C/W | 0,45 |
| Mechanical time constant | ms | 2,1 |
| Rotor Inertia (*) | Kg cm ² | 27 |
| Duet weight | Kg | 19,5 |
| Duet weight with brake | Kg | 21,3 |
| Axial Load | N | 240 (applied on the shaft's center) |
| Radial Load | N | 800 (applied on the shaft's center) |

Rated output with 350 x 350 x 20 mm metallic heat sink flange coupling - Derating must be considered if the oil seal is applied - IP 54 standard shaft bushing
(*) without brake and without feedback

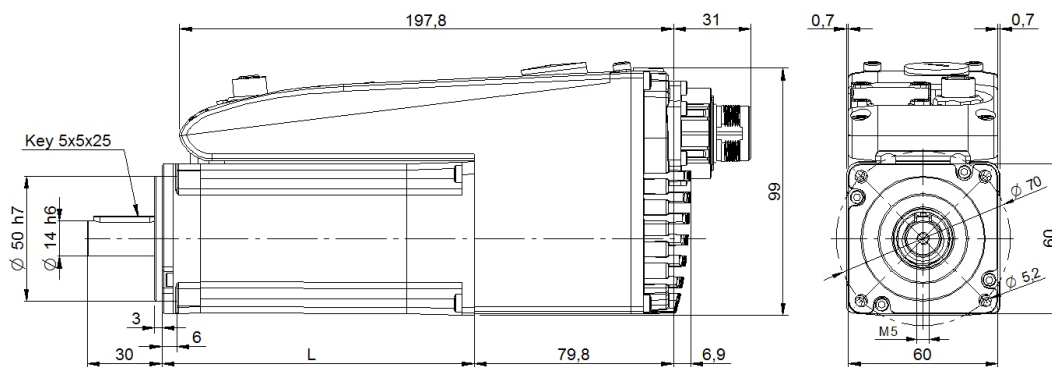
SEE IT BEFORE IT HAPPENS

**MOTOR
POWER**
COMPANY

DUET HV DIMENSIONS

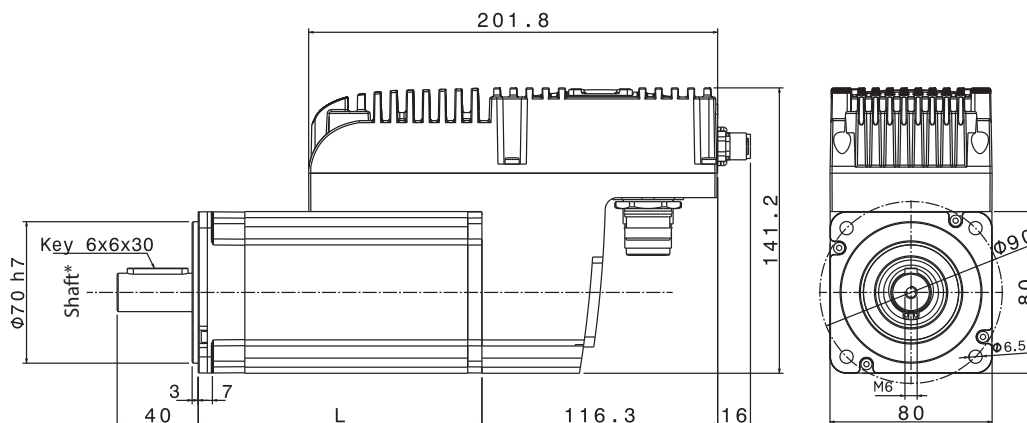
DUET HV 60

| Type | DUET HV 60 1,3 | |
|-----------------------------|----------------|--|
| Flange | 60 | |
| Lenght L without brake (mm) | 125 | |
| Lenght L with brake (mm) | 162 | |



DUET HV 80

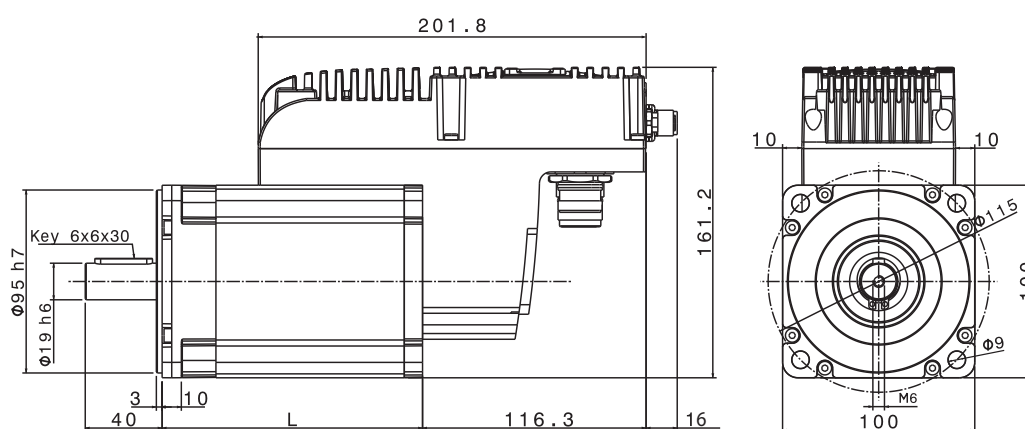
| Type | DUET HV 80 2,8 | DUET HV 80 4 |
|-----------------------------|----------------|--------------|
| Flange | 80 | 80 |
| Lenght L without brake (mm) | 115 | 140 |
| Lenght L with brake (mm) | 157 | 182 |



DUET HV DIMENSIONS

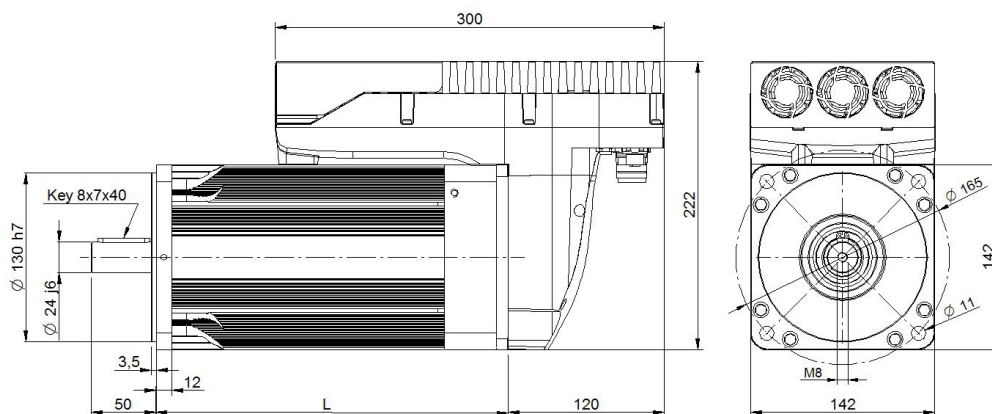
DUET HV 100

| Type | DUET HV 100 5,6 | DUET HV 100 8 |
|-----------------------------|-----------------|---------------|
| Flange | 100 | 100 |
| Lenght L without brake (mm) | 135 | 165,5 |
| Lenght L with brake (mm) | 186 | 216 |



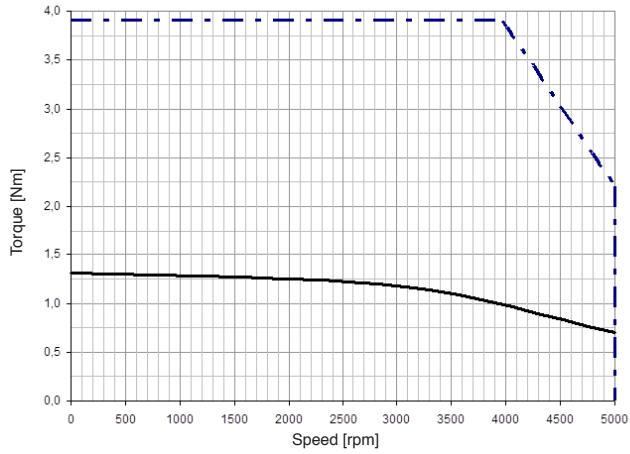
DUET HV 142

| Type | DUET HV 142 16,5 |
|-----------------------------|------------------|
| Flange | 142 |
| Lenght L without brake (mm) | 271,5 |
| Lenght L with brake (mm) | 331,5 |

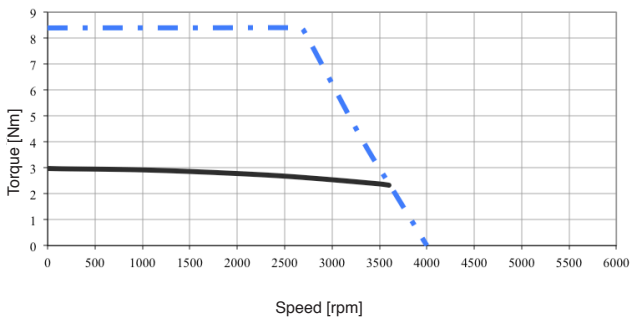


DUET HV TORQUE /SPEED CHARTS

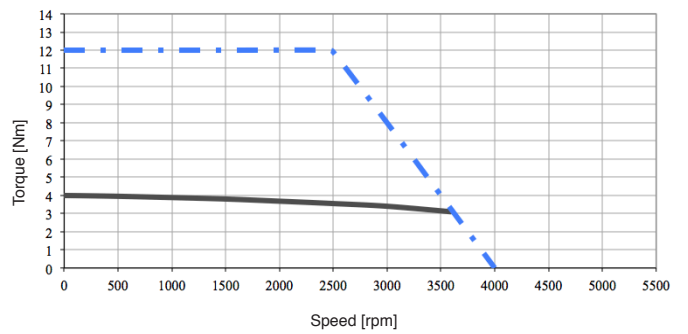
DUET HV 60 1,3 15



DUET HV 80 2,8 17



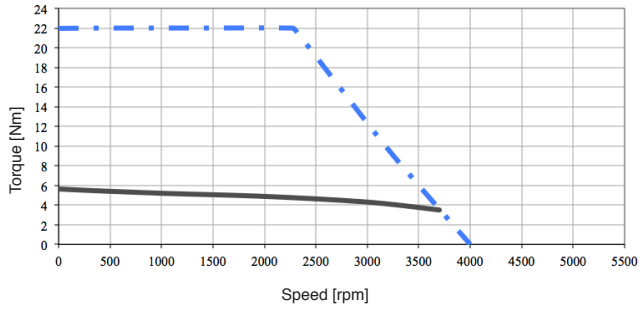
DUET HV 80 4 17



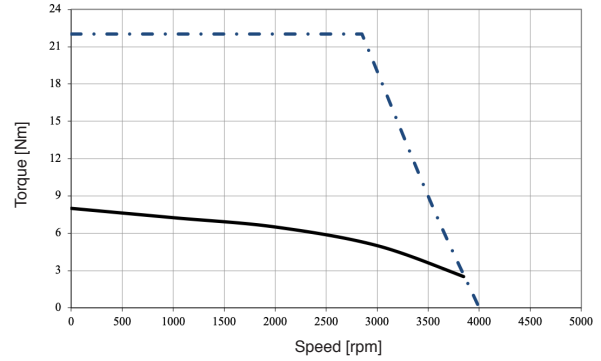
Continuous duty @ rated voltage
 Cmax 560Vdc

DUET HV TORQUE /SPEED CHARTS

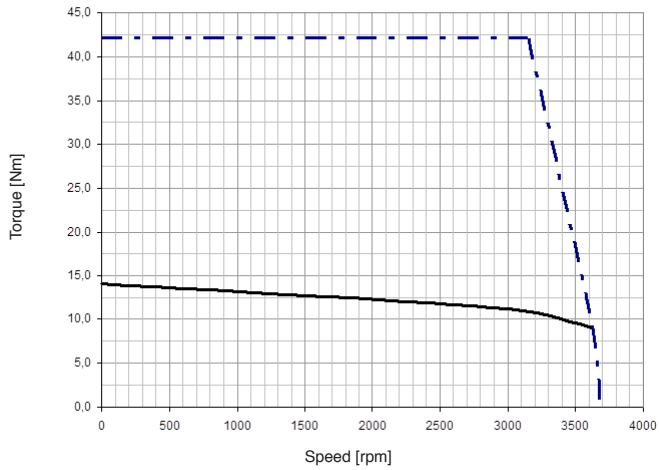
DUET HV 100 5,6 17



DUET HV 100 8 17



DUET HV 142 16,5 17



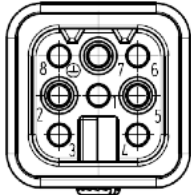
Continuous duty @ rated voltage
 Cmax 560Vdc

DUET WIRING CONNECTIONS

POWER CONNECTOR

for DUET 40

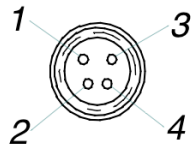
| PIN | FUNCTION |
|-----|-------------|
| 1 | +24 Vdc |
| 2 | 0 Vdc |
| 3 | 48 VP + |
| 4 | DOUT 0 |
| 5 | DIN 1 |
| 6 | DIN 2 |
| 7 | PR |
| 8 | PE + Shield |



HAN 8D-M Male

CAN IN

| PIN | FUNCTION |
|-----|----------|
| 1 | Comret |
| 2 | - |
| 3 | Can-High |
| 4 | Can-Low |

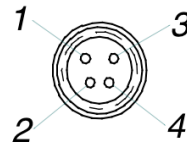


M8 Female

SIGNAL CONNECTOR for DUET 40

I/O

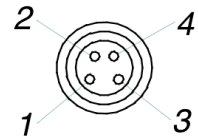
| PIN | FUNCTION |
|-----|----------------|
| 1 | 0 Vdc |
| 2 | +24 Vdc |
| 3 | AIN 0 0-10 Vdc |
| 4 | DIN 0 |



M8 Female

CAN OUT

| PIN | FUNCTION |
|-----|----------|
| 1 | Comret |
| 2 | - |
| 3 | Can-High |
| 4 | Can-Low |

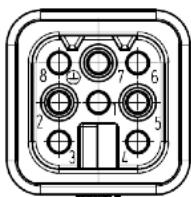


M8 Male

POWER CONNECTOR

for DUET 60

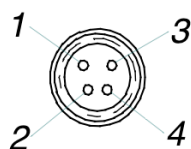
| PIN | FUNCTION |
|-----|-------------|
| 1 | +24 Vdc |
| 2 | 0 Vdc |
| 3 | 48 VP + |
| 5 | DOUT 1 |
| 6 | DIN 1 |
| 7 | PR |
| 8 | PE + Shield |



HAN 8D-M Male

CAN IN

| PIN | FUNCTION |
|-----|----------|
| 1 | Comret |
| 2 | - |
| 3 | Can-High |
| 4 | Can-Low |

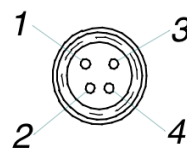


M8 Female

SIGNAL CONNECTOR for DUET 60

I/O

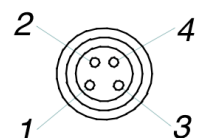
| PIN | FUNCTION |
|-----|------------------------|
| 1 | 0 Vdc |
| 2 | Analog - ($\pm 10V$) |
| 3 | Analog + ($\pm 10V$) |
| 4 | DIN 0 |



M8 Female

CAN OUT

| PIN | FUNCTION |
|-----|----------|
| 1 | Comret |
| 2 | - |
| 3 | Can-High |
| 4 | Can-Low |



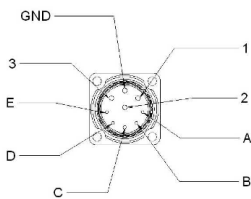
M8 Male

DUET FLEXI WIRING CONNECTIONS

POWER CONNECTOR

| PIN | FUNCTION |
|-----|-----------------------|
| 1 | +24 Vdc |
| 2 | 0 Vdc |
| 3 | +48 Vdc |
| GND | Protective ground |
| A | Motor brake + (#) |
| B | Motor brake - (#) |
| C | - (#) |
| D | Drive brake out + (#) |
| E | Drive brake out - (#) |

(#) Optional



M17 BEGA 906 MR Male

SIGNAL CONNECTOR

RS 232

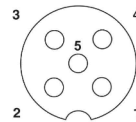
| PIN | FUNCTION |
|------|----------|
| 1 | Rx |
| 2 | Tx |
| 3 | Gnd |
| 4 | DIN7 |
| Case | Shield |



M8 Male

CAN IN

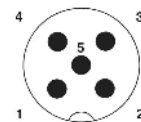
| PIN | FUNCTION |
|-----|----------|
| 1 | Shield |
| 2 | - |
| 3 | Can-Gnd |
| 4 | Can-high |
| 5 | Can-low |



M12 Female

CAN OUT

| PIN | FUNCTION |
|-----|----------|
| 1 | Shield |
| 2 | - |
| 3 | Can-gnd |
| 4 | Can-high |
| 5 | Can-low |

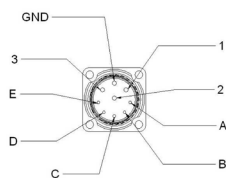


M12 Male

POWER CONNECTOR

| PIN | FUNCTION |
|-----|-----------------------|
| 1 | +24 Vdc |
| 2 | 0 Vdc |
| 3 | +48 Vdc |
| GND | Protective ground |
| A | Motor brake + (#) |
| B | Motor brake - (#) |
| C | - (#) |
| D | Drive brake out + (#) |
| E | Drive brake out - (#) |

(#) Optional



M17 BEGA 906 MR Male

SIGNAL CONNECTOR

RS 232

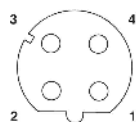
| PIN | FUNCTION |
|------|----------|
| 1 | Rx |
| 2 | Tx |
| 3 | Gnd |
| 4 | DIN7 |
| Case | Shield |



M8 Male

ETHERCAT IN

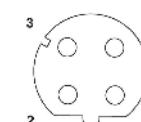
| PIN | FUNCTION |
|------|----------|
| 1 | TD + |
| 2 | RD + |
| 3 | TD - |
| 4 | RD - |
| Case | Shield |



M12 Female

ETHERCAT OUT

| PIN | FUNCTION |
|------|----------|
| 1 | TD + |
| 2 | RD + |
| 3 | TD - |
| 4 | RD - |
| Case | Shield |



M12 Female

DUET AD MODBUS WIRING CONNECTIONS

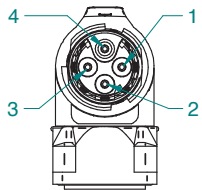
POWER CONNECTOR

SIGNAL CONNECTOR

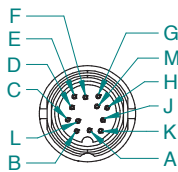
MODBUS RTU / RS485

| PIN | FUNCTION |
|-----|-----------|
| 1 | U power |
| 2 | Ballast |
| 3 | GND power |
| 4 | PE |

| PIN | FUNCTION |
|-----|-----------|
| A | In 0 |
| B | In 1 |
| C | In 2 |
| D | In 3 |
| E | Out 1 |
| F | Out 2 |
| G | AI + |
| H | AI - |
| J | +24 Vdc |
| K | GND (OV) |
| L | Service - |
| M | Service + |



CN POWER M17x1 BEDC 894 MR 4p

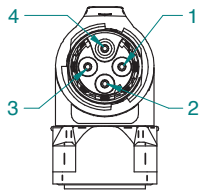


CN SIGNAL M16 Male 12 p

DUET AD CANOPEN WIRING CONNECTIONS

POWER CONNECTOR

| PIN | FUNCTION |
|-----|-----------|
| 1 | U power |
| 2 | Ballast |
| 3 | GND power |
| 4 | PE |

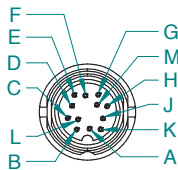


CN POWER M17x1 BEDC 894 MR 4p

SIGNAL CONNECTOR

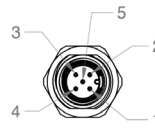
CANOPEN

| PIN | FUNCTION |
|-----|-----------|
| A | In 0 |
| B | In 1 |
| C | In 2 |
| D | In 3 |
| E | Out 1 |
| F | Out 2 |
| G | AI + |
| H | AI - |
| J | +24 Vdc |
| K | GND (OV) |
| L | Service - |
| M | Service + |



CN SIGNAL M16 Male 12p

| PIN | FUNCTION |
|-----|----------|
| 1 | n.c. |
| 2 | n.c. |
| 3 | CAN-GDN |
| 4 | CAN-HIGH |
| 5 | CAN-LOW |



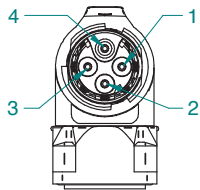
CN CAN
M12 Male 5p

CN CANOPEN M12 Male 5p Type A

DUET AD ETHERCAT WIRING CONNECTIONS

POWER CONNECTOR

| PIN | FUNCTION |
|-----|-----------|
| 1 | U power |
| 2 | Ballast |
| 3 | GND power |
| 4 | PE |

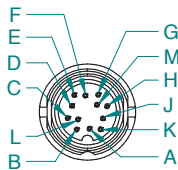


CN POWER M17x1 BEDC 894 MR 4p

SIGNAL CONNECTOR

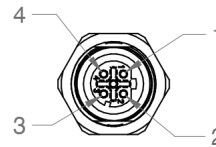
ETHERCAT

| PIN | FUNCTION |
|-----|-----------|
| A | In 0 |
| B | In 1 |
| C | In 2 |
| D | In 3 |
| E | Out 1 |
| F | Out 2 |
| G | AI + |
| H | AI - |
| J | +24 Vdc |
| K | GND (OV) |
| L | Service - |
| M | Service + |



CN SIGNAL M16 Male 12p

| PIN | FUNCTION |
|-----|----------|
| 1 | TD+ |
| 2 | RD+ |
| 3 | TD- |
| 4 | RD- |



CN ETHERCAT M12 Female 4p Type D

DUET AD PROFINET WIRING CONNECTIONS

POWER CONNECTOR

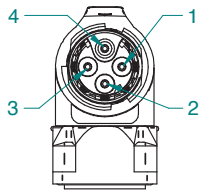
SIGNAL CONNECTOR

PROFINET

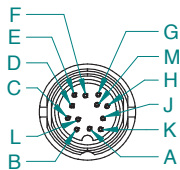
| PIN | FUNCTION |
|-----|-----------|
| 1 | U power |
| 2 | Ballast |
| 3 | GND power |
| 4 | PE |

| PIN | FUNCTION |
|-----|-----------|
| A | In 0 |
| B | In 1 |
| C | In 2 |
| D | In 3 |
| E | Out 1 |
| F | Out 2 |
| G | AI + |
| H | AI - |
| J | +24 Vdc |
| K | GND (OV) |
| L | Service - |
| M | Service + |

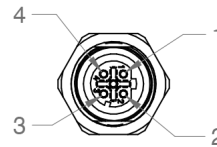
| PIN | FUNCTION |
|-----|----------|
| 1 | TX+ |
| 2 | RX+ |
| 3 | TX- |
| 4 | RX- |



CN POWER M17x1 BEDC 894 MR 4p



CN SIGNAL M16 Male 12p



CN PROFINET M12 Female 4p Type D

DUET HV 60 WIRING CONNECTIONS

POWER CONNECTOR

CN X1 PIN **CN X1 DC power and logic supply
STO M23 Male Hummel 4p+3p+PE**

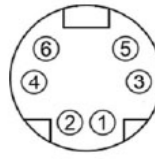
| | |
|------|---------------------|
| 1 | HV- |
| 2 | PE |
| 3 | Not connected |
| 4 | HV+ |
| A | /STO1 |
| B | GND (24 Vdc return) |
| C | /STO2 |
| D | CV (+24Vdc) |
| Case | PE |



SIGNAL CONNECTOR

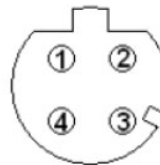
CN X4 PIN **CN X4 auxiliary bus (RS232) Minidin Female, 6p**

| | |
|------|---------------|
| 1 | Not connected |
| 2 | TX232 |
| 3 | GND_COM |
| 4 | Not connected |
| 5 | Not connected |
| 6 | RX232 |
| Case | PE |



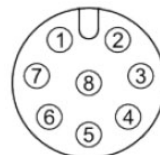
CN X2 - X3 PIN **CN X2 ETC out, CN X3 ETC in
M12, 4p female, D-code**

| | |
|------|-----------|
| 1 | TX Data+ |
| 2 | RX Data + |
| 3 | TX Data - |
| 4 | RX Data - |
| Case | PE |



CN X5 PIN **CN X5 input/output
CN M12 female 4p, A-code**

| | |
|------|---------------|
| 1 | IN/OUT0 |
| 2 | IN1 |
| 3 | IN2 |
| 4 | IN3 |
| 5 | Not connected |
| 6 | OUT1 |
| 7 | GND |
| 8 | OUT2 |
| Case | PE |

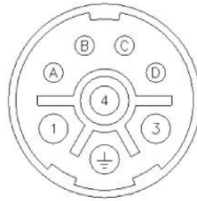


DUET HV 80 -100 -142 WIRING CONNECTIONS

POWER CONNECTOR

CN5
PIN CN5 DC POWER AND LOGIC SUPPLY,
STO, IN9 M23 Male Hummel 4p+3p+PE

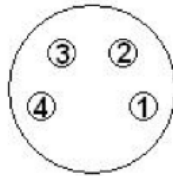
| | |
|------|---------|
| 1 | HV- |
| 3 | NC |
| 4 | HV+ |
| T | PE |
| A | /STO |
| B | GND_24 |
| C | IN9 |
| D | +24 Vdc |
| Case | PE |



SIGNAL CONNECTOR

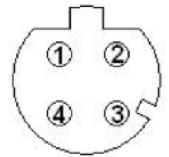
CN 1
PIN CN1 auxiliary Bus (RS232)
CN M8 4p female

| | |
|------|---------|
| 1 | TX232 |
| 2 | RX232 |
| 3 | NC |
| 4 | GND_COM |
| Case | PE |



CN 2 -3
PIN CN2 ETC out, CN3 ETC in
M12 4p female D-code

| | |
|------|-----------|
| 1 | TX Data + |
| 2 | RX Data + |
| 3 | TX Data - |
| 4 | RX Data - |
| Case | PE |



CN4
PIN CN4 input/output
CN M23 Male hummel 19p

| | |
|------|-----------|
| 1 | IN/OUT 1- |
| 2 | IN/OUT 2- |
| 3 | AN_IN - |
| 4 | AN_IN + |
| 5 | IN/OUT 2+ |
| 6 | GND_5V |
| 7 | +5 Vdc |
| 8 | IN 8 |
| 9 | OUT 5 |
| 10 | IN/OUT 3 |
| 11 | IN 7 |
| 12 | IN/OUT 0- |
| 13 | IN/OUT 0+ |
| 14 | IN/OUT 1+ |
| 15 | IN 4 |
| 16 | OUT 4 |
| 17 | OUT 6 |
| 18 | IN 6 |
| 19 | IN 5 |
| Case | PE |



80-100mm flange



142mm flange

CABLES SPECIFICATIONS

POWER CABLE for DUET

| PIN | COLOUR | FUNCTION | For cable order | |
|-----|----------|----------|-----------------|--------------|
| 1 | Red | VL + | | Lenght (mm) |
| 2 | Black | VL - | | |
| 3 | Brown | VP + | | Order code |
| 4 | Brown | Dout 0 | | 003108020082 |
| 5 | White | Din 1 | | |
| 6 | Blue | Din 2 | | |
| 7 | Blue | PR | | |
| 8 | Sh + G/V | Sh + PE | | |

POWER CABLE for DUET FLEXI

| PIN | COLOUR | FUNCTION | For cable order | |
|-----|--------------|---------------|-----------------|--------------|
| 1 | Red | 24V | | Lenght (mm) |
| 2 | Blue | 0V | | |
| 3 | Brown | 48V | | Order code |
| 4 | Yellow/Green | GND | | 003108012049 |
| A | White | Motor brake + | | |
| B | Black | Motor brake - | | |
| C | - | - | | |
| D | Brown | Drive brake + | | |
| E | Blue | Drive brake - | | |

RS 232 CABLE for DUET FLEXI

| M8 PIN | COLOUR | SUB-D 9 PIN | FUNCTION | For cable order | | |
|--------|--------|---------------|----------|-----------------|--------------|------|
| 1 | Brown | 3 | Rx | | Lenght (mm) | |
| 2 | White | 2 | Tx | | | 1000 |
| 3 | Blue | 5 | Gnd | | | 2000 |
| 4 | Black | - | DIN7 | | 3000 | |
| - | Shield | Metallic case | Shield | | Order code | |
| | | | | | 003108009974 | |
| | | | | | 003108009973 | |
| | | | | | 003108009975 | |

All cables are for static laying, power cables stand up to 10A stall current.
For dynamic laying cables, please, contact our front office.

SEE IT BEFORE IT HAPPENS

**MOTOR
POWER**
COMPANY

CABLES SPECIFICATIONS

POWER CABLE for DUET AD

| PIN | COLOUR | FUNCTION | For cable order | | |
|-----|--------------|-----------------------|-----------------|-------------|--------------|
| 1 | Black 1 | U Power | | Length (mm) | Order code |
| 2 | Black 2 | Ballast | | 1000 | 003108020575 |
| 3 | Black 3 | GND | | 5000 | 003108020546 |
| 4 | Yellow/Green | Earth PE | | | |
| 4 | Shield | External cable shield | | | |

SIGNAL CABLE for DUET AD

| LM MOTOR SIDE | COLOUR | FUNCTION | For cable order | | |
|---------------|-------------|------------|-----------------|-------------|--------------|
| A | White | IN0 | | Length (mm) | Order code |
| B | Brown | IN1 | | 1000 | 003108020576 |
| C | Green | IN2 | | 5000 | 003108009843 |
| D | Yellow | IN3 | | | |
| E | Grey | OUT1 | | | |
| F | Pink | OUT2 | | | |
| G | Blue | AI+ | | | |
| H | Red | AI- | | | |
| J | Brown/Green | Uc (24Vdc) | | | |
| K | White/Green | GND | | | |
| L | Black | Service- | | | |
| M | Violet | Service+ | | | |

SEE IT BEFORE IT HAPPENS

CABLES SPECIFICATIONS

I/O CABLE for DUET HV 80-100-142

| PIN | COLOUR | FUNCTION | For cable order | |
|------|--------|-----------|-----------------|--------------|
| | | | Lenght (mm) | Order code |
| 1 | Brown | IN/OUT 1- | | |
| 2 | Orange | IN/OUT 2- | | |
| 3 | Grey | AN_IN- | 1000 | 005108000505 |
| 4 | White | AN_IN+ | 3000 | 005108000511 |
| 5 | White | IN/OUT 2+ | 5000 | 005108000512 |
| 6 | Blue | GND_5V | 10000 | 005108000513 |
| 7 | Red | +5V | | |
| 8 | Red | IN8 | | |
| 9 | Red | OUT5 | | |
| 10 | Red | IN/OUT 3 | | |
| 11 | Red | IN 7 | | |
| 12 | Green | IN/OUT 0- | | |
| 13 | White | IN/OUT 0+ | | |
| 14 | White | IN/OUT 1+ | | |
| 15 | Orange | IN 4 | | |
| 16 | Green | OUT 4 | | |
| 17 | Brown | OUT 6 | | |
| 18 | Grey | IN 6 | | |
| 19 | White | IN 5 | | |
| Case | Black | PE | | |



POWER CABLE for DUET HV 80-100-142

| PIN | WIRE IDENTIFICATION | FUNCTION | For cable order | |
|------|---------------------|----------|-----------------|--------------|
| | | | Lenght (mm) | Order code |
| 1 | 1 | HV - | | |
| 3 | 3 | NC | | |
| 4 | 2 | HV + | 1000 | 005108000504 |
| T | Yellow/Green | PE | 3000 | 005108000507 |
| A | 5 | /STO | 5000 | 005108000508 |
| B | 6 | GND | 10000 | 005108000509 |
| C | 7 | IN9 | | |
| D | 8 | +24 V | | |
| Case | Black | PE | | |



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CABLES SPECIFICATIONS

RS 232 CABLE for DUET HV 80-100-142

| PIN | COLOUR | FUNCTION | For cable order | |
|------|--------------|----------|-----------------|--------------|
| 1 | Red | TXT232 | Lenght (mm) | Order code |
| 2 | Blue | RX232 | | |
| 3 | Brown | NC | 1000 | 005108000506 |
| 4 | Yellow/Green | GND_COM | | |
| Case | White | PE | | |



ETHERCAT RJ45/M12 CABLE for DUET HV 80-100-142

| RJ45 PIN | M12 PIN | FUNCTION | For cable order | |
|----------|---------|-----------|-----------------|--------------|
| 1 | 1 | TX Data+ | Lenght (mm) | Order code |
| 3 | 2 | RX Data + | | |
| 2 | 3 | TX Data - | 10000 | 005108000500 |
| 6 | 4 | RX Data - | | |
| Case | Case | PE | | |



ETHERCAT M12/M12 CABLE for DUET HV 80-100-142

| PIN | FUNCTION | For cable order | |
|------|-----------|-----------------|--------------|
| 1 | TX Data+ | Lenght (mm) | Order code |
| 2 | RX Data + | | |
| 3 | TX Data - | 3000 | 005108000503 |
| 4 | RX Data - | 5000 | 005108000502 |
| Case | PE | 10000 | 005108000501 |



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FEEDBACK FEATURES FOR DUET

| E1 TTL ENCODER | Motor size | | DUET 40-60 |
|----------------|--------------------------|--------|------------------------|
| | Nominal Voltage | V | 5±10% |
| | Nominal current | mA | 30 |
| | Electronic type | | LINE DRIVER AM 26 LS31 |
| | Zero impulse | | ONE AT A LAP |
| | N° of pulses revolution | ppr | 1024 |
| | Resolution | cpr | 4096 |
| | N° of commutation signal | | 3 (U, V, W) |
| | System accuracy | degree | ± 0,5 |

FEEDBACK FEATURES FOR DUET FLEXI

| R1 RESOLVER 2 poles | Motor size | | DUET FLEXI 60-80 |
|---------------------|-----------------------|--------------------|------------------|
| | Nominal Voltage | Vrms | 7±5% |
| | Nominal current | mA | 50 |
| | Phase shift | | +3° |
| | Minimum sin amplitude | mVrms | 20 |
| | Frequency | kHz | 10 |
| | Poles number | | 2 |
| | Trasformer ratio | | 0.5 ± 5% |
| | Input impedance | ohm | 130 + j280 |
| | Output impedance | ohm | 425 + j755 |
| | System accuracy | | ± 10' |
| | Rotor inertia | Kg cm ² | 0.03 |

| A1 ABSOLUTE MULTITURN ENCODER | Motor size | | DUET FLEXI 60 - 80 |
|-------------------------------|--|--------------------|--------------------|
| | Nominal Voltage | V | 7 ÷ 12 |
| | Maximum nominal current | mA | 60 |
| | Interface type | | Hiperface |
| | N° absolute singleturn steps | | 4096 (12 Bits) |
| | N° absolute multiturn steps | | 4096 (12 Bits) |
| | N° of sin/cos periods per revolution | | 128 |
| | Error limits for evaluating the sin/cos period | arc sec | ± 80 |
| | Rotor inertia | Kg cm ² | 0.0045 |

SEE IT BEFORE IT HAPPENS

FEEDBACK FEATURES FOR DUET AD

| | | | |
|---------------------------------------|-------------------------------|--|------------------|
| E6 ABSOLUTE SINGLETURN ENCODER | Motor size | | DUET AD 80 |
| | Type | | Magnetic encoder |
| | N° absolute single turn steps | | 16.384 (14 Bits) |
| | | | |

FEEDBACK FEATURES FOR DUET HV

| | | | |
|--------------------------------------|--|--------------------|-----------------------------|
| A1 ABSOLUTE MULTITURN ENCODER | Motor size | | DUET HV 60 - 80 - 100 - 142 |
| | Nominal Voltage | V | 7 ÷ 12 |
| | Maximum nominal current | mA | 60 |
| | Interface type | | Hiperface |
| | N° absolute singleturn steps | | 4096 (12 Bits) |
| | N° absolute multiturn steps | | 4096 (12 Bits) |
| | N° of sin/cos periods per revolution | | 128 |
| | Error limits for evaluating the sin/cos period | arc sec | ± 80 |
| | Rotor inertia | Kg cm ² | 0.0045 |

| | | | |
|--------------------------------------|--|--------------------|-----------------------------|
| A3 ABSOLUTE MULTITURN ENCODER | Motor size | | DUET HV 60 - 80 - 100 - 142 |
| | Nominal Voltage | V | 7 ÷ 12 |
| | Maximum nominal current | mA | 50 |
| | Interface type | | Hiperface |
| | N° absolute singleturn steps | | 512 (9 Bits) |
| | N° absolute multiturn steps | | 4096 (12 Bits) |
| | N° of sin/cos periods per revolution | | 16 |
| | Error limits for evaluating the sin/cos period | arc sec | ± 288 |
| | Rotor inertia | Kg cm ² | 0.001 |

| | | | |
|---------------------------------------|--|--------------------|-----------------------------|
| A5 ABSOLUTE SINGLETURN ENCODER | Motor size | | DUET HV 60 - 80 - 100 - 142 |
| | Nominal Voltage | V | 7 ÷ 12 |
| | Maximum nominal current | mA | 50 |
| | Interface type | | Hiperface |
| | N° absolute singleturn steps | | 512 (9 Bits) |
| | N° of sin/cos periods per revolution | | 16 |
| | Error limits for evaluating the sin/cos period | arc sec | ± 288 |
| | Rotor inertia | Kg cm ² | 0.001 |

BRAKE FEATURES

DUET

| | | DUET 40 0,16 | DUET 40 0,32 | DUET 60 0,65 ^(*) | DUET 60 1,3 ^(*) |
|---------------------|-----------------------------|--------------|--------------|-----------------------------|----------------------------|
| Static Torque @20°C | Nm | 0,4 | 0,4 | 2 | 2 |
| Moment of Inertia | Kg cm ² | 0,008 | 0,008 | 0,05 | 0,05 |
| Rated Current | A | 0,34 | 0,34 | 0,46 | 0,46 |
| Input Power | W | 8 | 8 | 11 | 11 |
| Engaging Time | ms | 6 | 6 | 6 | 6 |
| Release Time | ms | 10 | 10 | 25 | 25 |
| Operating Voltage | 24 Vdc +6% - 10% Stabilized | | | | |

^(*) Brake for DUET 60 is already parametrized by software function, any change to this parameter can compromise the brake operation

DUET FLEXI / DUET AD

| | | DUET FLEXI 60 0,65 | DUET FLEXI 60 1,3 | DUET FLEXI 80 1,5 DUET AD 80 1,5 | DUET FLEXI 80 2 DUET AD 80 2,8 |
|---------------------|-----------------------------|--------------------|-------------------|-------------------------------------|-----------------------------------|
| Static Torque @20°C | Nm | 2 | 2 | 4,5 | 4,5 |
| Moment of Inertia | Kg cm ² | 0,05 | 0,05 | 0,22 | 0,22 |
| Rated Current | A | 0,46 | 0,46 | 0,5 | 0,5 |
| Input Power | W | 11 | 11 | 12 | 12 |
| Engaging Time | ms | 6 | 6 | 7 | 7 |
| Release Time | ms | 25 | 25 | 35 | 35 |
| Operating Voltage | 24 Vdc +6% - 10% Stabilized | | | | |

DUET HV

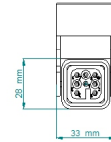
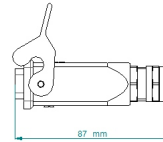
| | | DUET HV 60 1,3 | DUET HV 80 2,8 | DUET HV 80 4 | DUET HV 100 5,6 | DUET HV 80 2,8 | DUET HV 142 16,5 |
|---------------------|-----------------------------|----------------|----------------|--------------|-----------------|----------------|------------------|
| Static Torque @20°C | Nm | 2 | 4,5 | 4,5 | 9 | 9 | 18 |
| Moment of Inertia | Kg cm ² | 0,050 | 0,22 | 0,22 | 0,80 | 0,80 | 1,9 |
| Rated Current | A | 0,46 | 0,5 | 0,5 | 0,75 | 0,75 | 1 |
| Input Power | W | 11 | 12 | 12 | 18 | 18 | 24 |
| Engaging Time | ms | 6 | 7 | 7 | 7 | 7 | 10 |
| Release Time | ms | 25 | 35 | 35 | 40 | 40 | 50 |
| Operating Voltage | 24 Vdc +6% - 10% Stabilized | | | | | | |

CONNECTOR SPECIFICATIONS

FLYING CONNECTORS for DUET

Power connector
HAN Female M 250V/10A 3x1,5mm²+5x0,14mm²

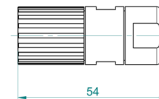
order code 007117000804



FLYING CONNECTORS for DUET FLEXI

Power connector
BSTA 908FR1186201A000 4+5p/FM

order code 005117001105



FLYING CONNECTORS for DUET AD

Power connector BSTA896FR0985202A000 4p/M17

order code 005117000356

Signal connector M16 12P FM 99 5630 75 12

order code 005117002496

Can Open connector M12 5P. FM IN PLASTICA 8A5000-325

order code 005117000580

TERMINAL CONNECTORS for DUET

M8 male CAN IN terminal connector 120Ω

order code 005117000970

M8 female CAN OUT terminal connector 120Ω

order code 005117000972

TERMINAL CONNECTORS for DUET FLEXI

M12 male CAN IN terminal connector 120Ω

order code 005803000256

M12 female CAN OUT terminal connector 120Ω

order code 005803000701

SEE IT BEFORE IT HAPPENS

**MOTOR
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CONNECTORS AND ACCESSORIES

FLYING CONNECTORS for DUET HV

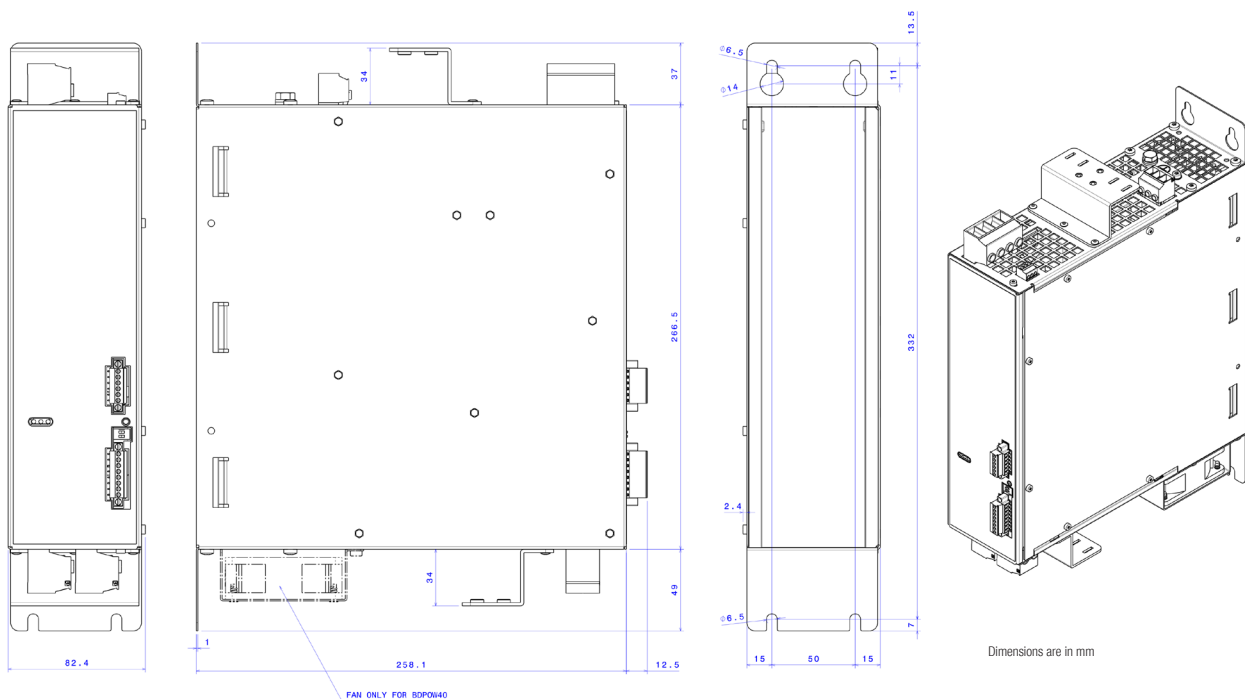
| | |
|----------------------------------|-------------------------|
| M23 Female 180° power connector | order code 005117001854 |
| M23 Female 90° power connector | order code 005117001855 |
| M23 Female 180° I/O connector | order code 005117001852 |
| M23 Female 90° I/O connector | order code 005117001853 |
| M12 Male 180° Ethercat connector | order code 005117001850 |
| M12 Male 90° Ethercat connector | order code 005117001851 |

CAPS for CONNECTORS for DUET HV

| | |
|----------------------|-------------------------|
| Cap for M23 | order code 005803000272 |
| Cap for M23 IP65 | order code 005803000274 |
| Cap for M12 Ethercat | order code 005803000270 |

POWER SUPPLIES for DUET HV

| | |
|-----------------|-------------------------|
| DPS 20 (20 Amp) | order code 005016001062 |
| DPS 40 (40 Amp) | order code 005016001064 |



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