

Data Sheet

eDrive ED-DT130-PT930/1089

Low voltage power system

FEATURES

- Compact drive design allows for quick and easy installation
- High torque allows for gradeability up to 30 % and speeds up to 6 km/h (application-specific)
- IP67 enclosure class to maximize reliability in extreme environments
- Robust gearbox design for minimal oil leakage
- Durable and replaceable brake system



TYPICAL APPLICATIONS

- Scissor lift
- Boom lift
- Crawler chassis

GENERAL

Danfoss ED-DT130-PT930/1089-24V-1M90 eDrive is designed to provide customers with superior driving experience.

ED-DT130 is intended to be used in combination with EC-C24-D180.

Its integrated and compact design combines a PMSM, electronic braking, and a reduction gearbox for high durability, reliability, and efficiency, while also making installation and debugging quick and easy.

SPECIFICATIONS

| General | |
|----------------------------------|--|
| Motor rated power (S2-60 min) | 850 W |
| Motor rated power (S2-2 min) | 1900 W |
| Rated voltage | 24 V _{DC} |
| Control mode | Speed |
| Gearbox ratio | 51.875 |
| Duty | S2-60 min |
| Maximum speed | 4700 rpm |
| Motor peak torque (S2-2 min) | ED-DT130-PT930: 18 Nm ED-DT130-PT1089: 21 Nm |
| Gearbox maximum output torque | ED-DT130-PT930: 930 Nm ED-DT130-PT1089: 1089 Nm |
| Peak current | 180 A _{RMS} |
| Rated torque (S2-60 min) | 2.8 Nm |
| Gearbox rated torque (S2-60 min) | 550 Nm |
| Rated current (S2-60 min) | 43 A _{RMS} |
| Insulation class | H |
| Thermal protection | KTY 84-150 |
| Encoder type | Sin/cos encoder |

| Mechanical Brake | |
|-----------------------------|---|
| Brake torque | ED-DT130-PT930: 22 Nm ED-DT130-PT1089: 25 Nm |
| Brake control power | 28 W |
| Brake release voltage level | 16.5 V |
| Brake close voltage level | 1.5 V |

| Mechanical | |
|------------------------|--------------------|
| Dimensions (W x H x L) | 184 x 210 x 242 mm |
| Weight | 27 kg |
| Main materials | Cast iron |

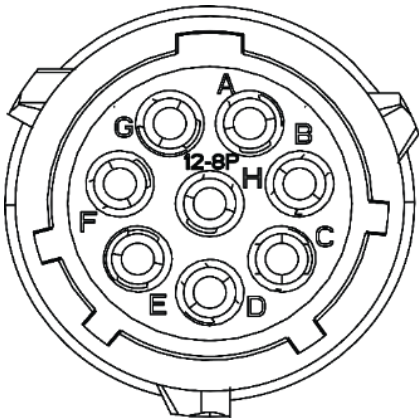
| Cooling | |
|----------------|---------------------|
| Cooling method | Passive air-cooling |

| Ambient Conditions | |
|--|---------------|
| Storage temperature range | -40°C - +85°C |
| Operating temperature range | -40°C - +65°C |
| Absolute maximum device internal temperature | Motor +150°C |
| Altitude | Up to 2000 m |
| Relative humidity | < 95 % |
| Enclosure class | IP67 |

| Connections | |
|----------------------------------|---|
| Motor phase cable cross section | Up to 10 mm ² (Cu) |
| Motor 1 connections | 3x M6 threaded terminal connection (U1, V1, W1) |
| Motor 2 connections | 3x M6 threaded terminal connection (U2, V2, W2) |
| Power connections cable lug size | 10-6 (U1, V1, W1) |
| Recommended cable lug | 10 mm ² : Druseidt 03204 (straight), 03822 (right-angled 90°) https://druseidt.de |
| LV connector | 8-pin Amphenol https://www.amphenol-sine.com |
| LV connector type | RT00128PN03 |
| LV connector pin configuration | See section SIGNAL CONNECTOR PINOUT |
| LV mating connector type | RT06128SNHEC03 |
| LV mating connector pin type | 0.5 mm ² : SS16M1F |

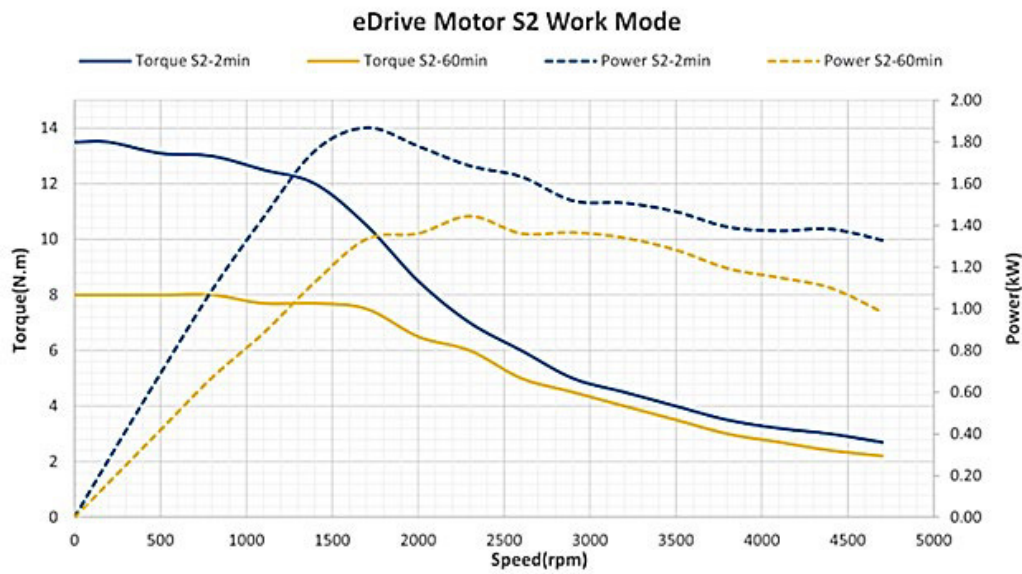
SIGNAL CONNECTOR PINOUT

| PIN | Signal name | Description | Note |
|-----|-------------|---------------------------------|---|
| A | Sin+ | Speed sensor Sin | Output Vpp: 3±0.5 V _{DC} |
| B | Cos+ | Speed sensor Cos | |
| C | VCC (5V) | Speed sensor, power supply 5 V+ | < 20 mA |
| D | GND | Speed sensor GND | |
| E | Brake + | Motor brake + | Pull-in voltage (release brake) >= 16.5 V _{DC} |
| F | Brake - | Motor brake - | Pull-out voltage <= 1.5 V _{DC} |
| G | NTC+ | Temp sensor (KTY 84-150) + | -40°C - +200°C |
| H | NTC- | Temp sensor (KTY 84-150) - | |



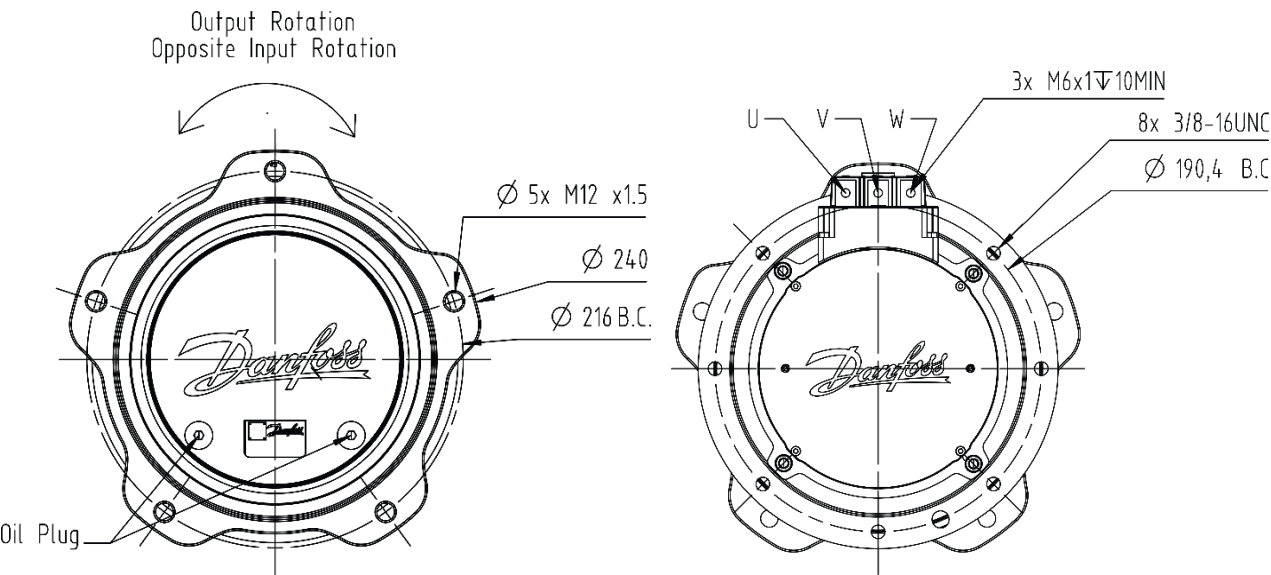
Picture 1 Connector

PERFORMANCE CURVES

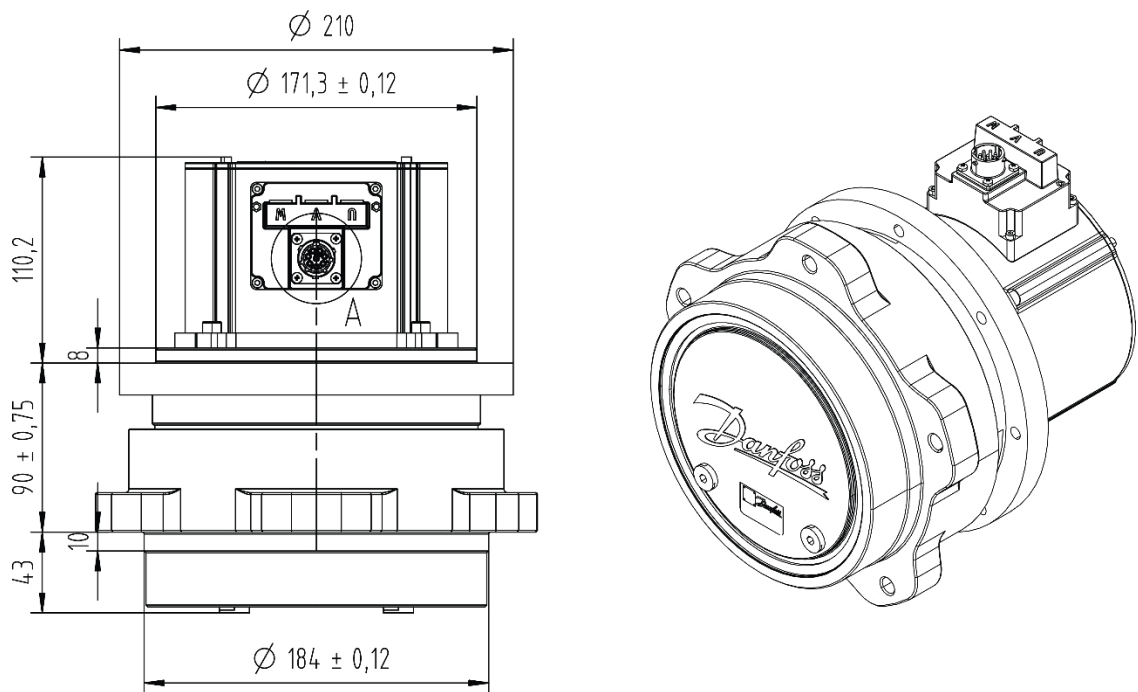


Picture 2 Performance curve for ED-DT130-930

DIMENSIONS



Picture 3 Connection dimensions for ED-DT130-PT930/1089



Picture 4 Dimensions for ED-DT130-PT930/1089

| Dimension | Length |
|-----------|--------|
| L | 242 mm |
| W | 184 mm |
| H | 210 mm |

Table 1 Dimensions for ED-DT130-PT930/1089

PRODUCT CODE AND OPTIONS

| Product code | Description |
|---|--|
| ED-DT130-PT930-24V-1M90 / ED-DT130-PT1089-24V-1M90 | ED - electric sub-system/system products |
| | DT130 - drivetrain system |
| | PT930 - peak torque of 930 Nm PT1089 - peak torque of 1089 Nm |
| | 24V - 24 V _{DC} voltage |
| | 1M90 - 1 gear with 90 rpm gear box speed |

Table 2 Product code

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.