ENGINEERING TOMORROW

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

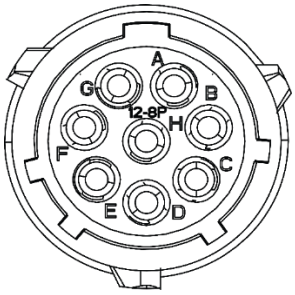
Cooling	
Cooling method	Passive air-cooling

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 mm² (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 mm²: 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 mm²: SS16M1F

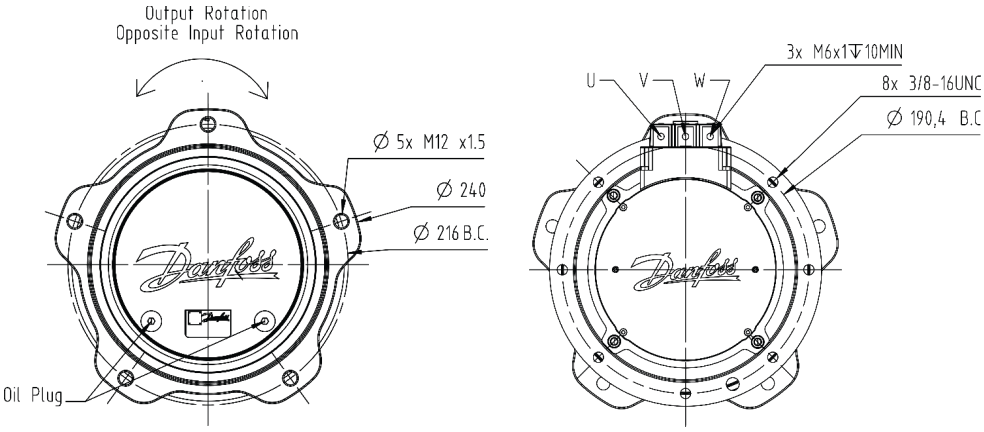
SIGNAL CONNECTOR PINOUT

PIN	Signal name	Description	Note
A	Sin+	Speed sensor Sin	Output Vpp: 3±0.5V_{DC}
B	Cos+	Speed sensor Cos	
C	VCC (5V)	Speed sensor, power supply 5V+	<20mA
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) -	

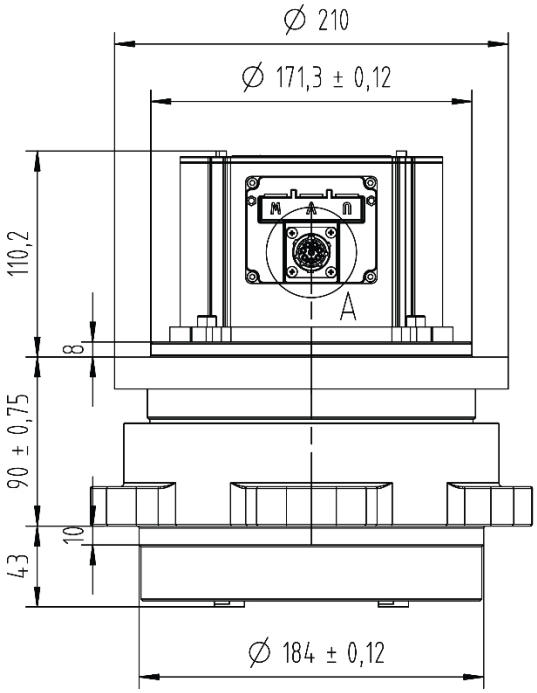


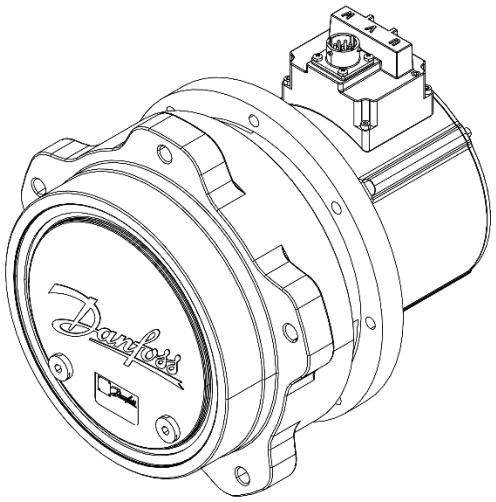
Picture 1 Connector

DIMENSIONS



Picture 2 Connection dimensions for ED-DT130-PT930/1089





Picture 3 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