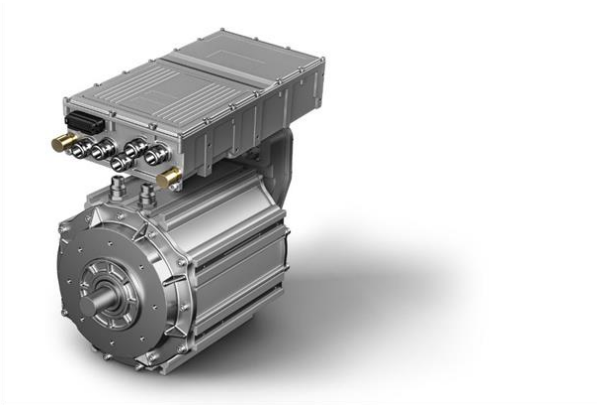


# Data sheet

## WEICHA System Traction Drive WED600

Art. Nr. WED600-18W0077-RH20065-021B



The illustration may contain optional equipment.

Drive package consists of WEICHA traction inverter WE600 and VECTOMOTOR VM600M

### Typical applications

Traction drive

For driving an electric motor in a vehicle or in a mobile working machine with regenerative braking energy

Auxiliary drive

For driving an electric motor for vehicle superstructures, such as the winch of a mobile crane

### Features

This inverter can output an effective peak current of up to 763 A<sub>eff</sub> for 1 minute.

Power connections with EMC cable glands

Signal connections with connectors

Rotor position sensor used: resolver

Radio interference suppression capacitors in the DC link

Stable construction against shocks and vibrations

### Software functions

Torque and speed control.

Field weakening possible.

### Certifications

Device according to UN ECE R10 and UN ECE R85

### Accessories

Benefit from our commissioning tools VEConfig and Analyser for commissioning and analysis of your application.

Mating connector and connecting cable between device and notebook.

Cooling connections for the system components.

Connectors and connecting cables between motor and inverter.

### DC link

Min./max. operating voltage, in V DC ..... 300...720

DC link switch-off threshold 1 (recommended) , in V ..... 750

DC link switch-off threshold 2, in V ..... 800

# Data sheet

## WEICHAI System Traction Drive WED600

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### System data

Thermal rated current and continuous power

*Reference values for rated thermal current and continuous power for inverter at DC link 540 VDC, PWM 6 kHz, volume flow of coolant 16 l/min at 65°C and ambient temperature 85°C.*

*Reference values for rated thermal current and continuous power at motor at volume flow of coolant 15 l/min at 35°C and ambient temperature 25°C.*

Continuous power, in kW .....	86
Nominal torque, in Nm .....	380
Continuous power loss inverter, in kW .....	1.95
Continuous power loss motor, in kW .....	3.2
Maximum speed, in rpm .....	6500
Nominal speed, in rpm .....	2150

Peak current AC

*Reference values for peak current at the inverter with DC link 540 VDC, PWM 2 kHz, coolant flow rate 16 l/min at 65°C and ambient temperature 85°C.*

*Reference values for the rated thermal current and the continuous power at the motor at volumetric coolant flow rate 15 l/min at 35°C and ambient temperature 25°C.*

Peak torque, in Nm .....	763
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### Control component inverter

Nominal voltage, in V DC .....	24
--------------------------------	----

### Interfaces inverter

Power connection  
Cable gland PG21 .

Connector signal part [X1]  
connector type 35pol. AMPSEAL SOC HSG  
ASSY,SLD,COD 1, protection class IP67, IP69K

### Communication interfaces

CAN

*The optional CAN Matrix from ARADDEX enables you to communicate actual and setpoint values cyclically.*

### Hardware interfaces

Number of analog inputs .....	1
Number of CAN interfaces.....	2
Temperature measurement Quantity parameterizable .....	2

### Mechanical connection

Shaft type .....	Cylindric with parallel key
Shaft length, in mm.....	66.5
Shaft diameter, in mm .....	38

### Operating conditions

The following ambient conditions apply to operation.

Max. humidity acc. to EN 61800-5-1, non-condensing, in % .....	93
Min. ambient temperature, in °C .....	-25
Max. ambient temperature with derating, in °C .....	65
Max. operating altitude for mains and battery operation, in m above sea level .....	2000
Overvoltage category .....	II
Max. operating altitude for battery operation, no mains operation possible, in m above sea level ...	4000
Overvoltage category .....	I
Pollution degree according to EN 61800-5-1 .....	2
Protection class inverter acc. to EN 60529 .....	IP67
Protection class motor acc. to EN 60529 .....	IP65

# Data sheet

## WEICHA System Traction Drive WED600

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### Cooling inverter

- Liquid cooling ..... yes
- Coolant connection ..... G 1/2"
- Flow rate, in l/min ..... 10..20
- Min. temperature of the coolant, in °C ..... -25
- Max. temperature of the coolant with derating, in °C ..... 75
- Max. temperature of the coolant without derating, in °C ..... 65
- Coolant..... water and glycol

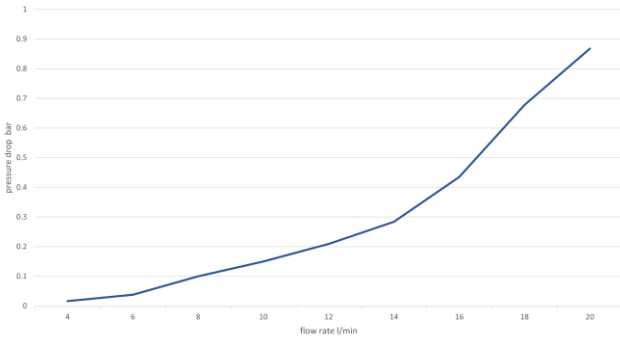


Figure 1: Pressure drop in the inverter

### Cooling motor

- Liquid cooling ..... yes
- Coolant connection ..... G 3/4"
- Flow rate, in l/min ..... 10..28
- Min. temperature of the coolant, in °C ..... -25
- Max. temperature of the coolant with derating, in °C ..... 65
- Max. temperature of the coolant without derating, in °C ..... 35
- Coolant..... water and glycol

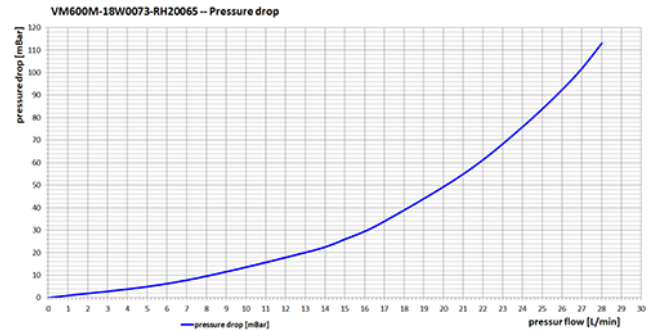


Figure 2: Pressure drop in the motor

### Protective measures

- Short circuit rating acc. to EN 62477-1 ..... 10 kA / 1 ms
- Control section: switch-off thresholds for undervoltage
- Thermal protection of inverter and motor by temperature monitoring
- Thermal monitoring of the motor by temperature inputs, warning and error thresholds
- Monitoring of overcurrent, short circuit and DC link voltage

### More information

- Reference reports can be found at [www.aradex.com](http://www.aradex.com)
- Detailed technical data can be found in the installation manual in the product description chapter.
- Installation manual, VEConfig, operating manual and VE operating manual can be requested by mail via [sales@aradex.com](mailto:sales@aradex.com).
- The VEConfig software is available as a download from the Microsoft Store:  
<https://www.microsoft.com/store/productId/9N1P7CFQT04S>

# Data sheet

## WEICHA System Traction Drive WED600

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### Location, dimensions and designation of the connections

L x W x H with sockets on the device, in mm ..... 244 x 488 x 110

Weight, in kg ..... 14

All dimensions in the drawings are in millimeters. The drawings may show optional accessories.

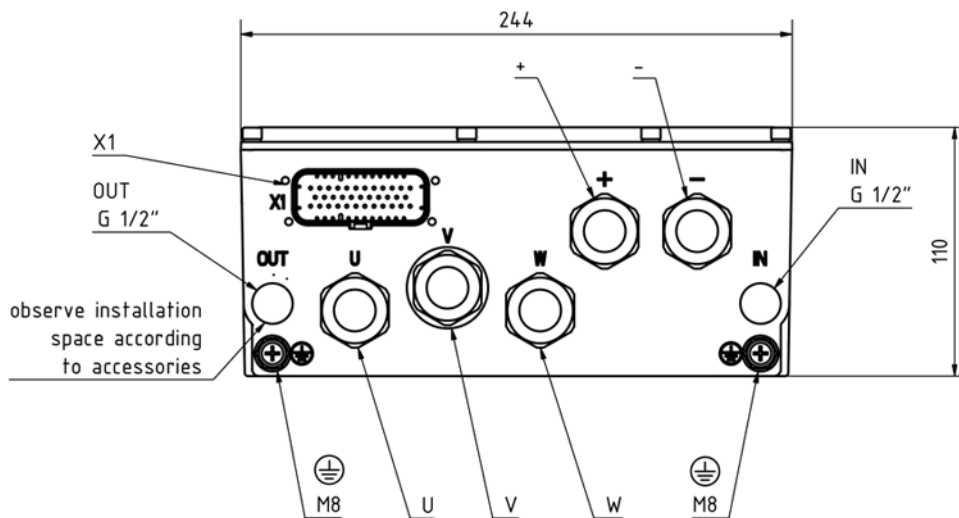


Figure 3: Front view, position of the connectors

- [+], [-]: Power connections for DC link
- [U], [V], [W]: Power connections for motor circuit
- ⊕: Protective conductor
- [X1]: Signal connection for CAN, supply voltage
- [IN]: Cooling flow
- [OUT]: Cooling return

# Data sheet

## WEICHA System Traction Drive WED600

Art. Nr. WED600-18W0077-RH20065-021B

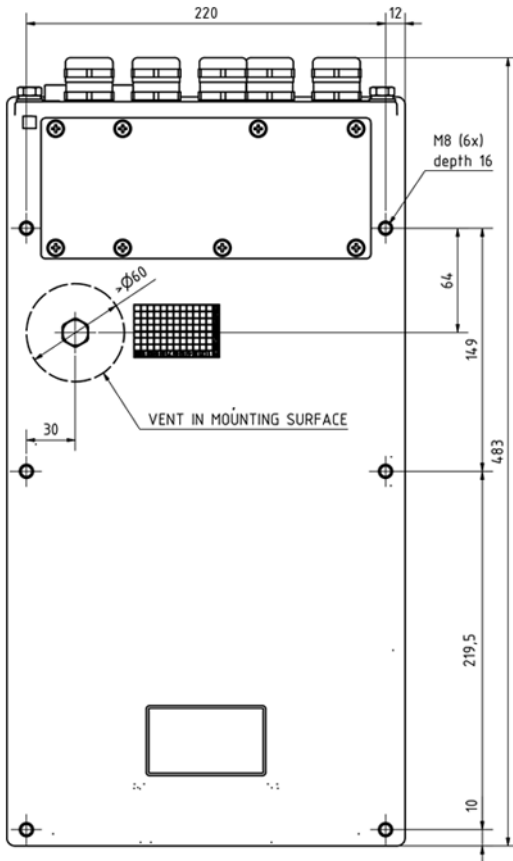


Figure 4: View from below with hole pattern

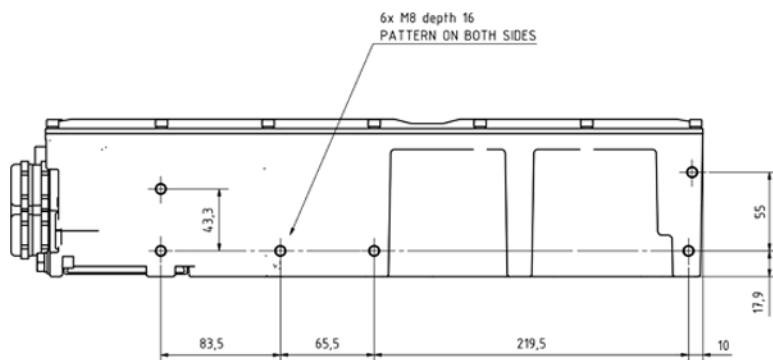


Figure 5: Side view with hole pattern

# Data sheet

## WEICHA System Traction Drive WED600

Art. Nr. WED600-18W0077-RH20065-021B

### Location, dimensions and designation of the motor connections

L x H with sockets on the device, in mm ..... 500.5 x 371

Weight, in kg ..... 105

All dimensions in the drawings are in millimeters. The drawings may show optional accessories.

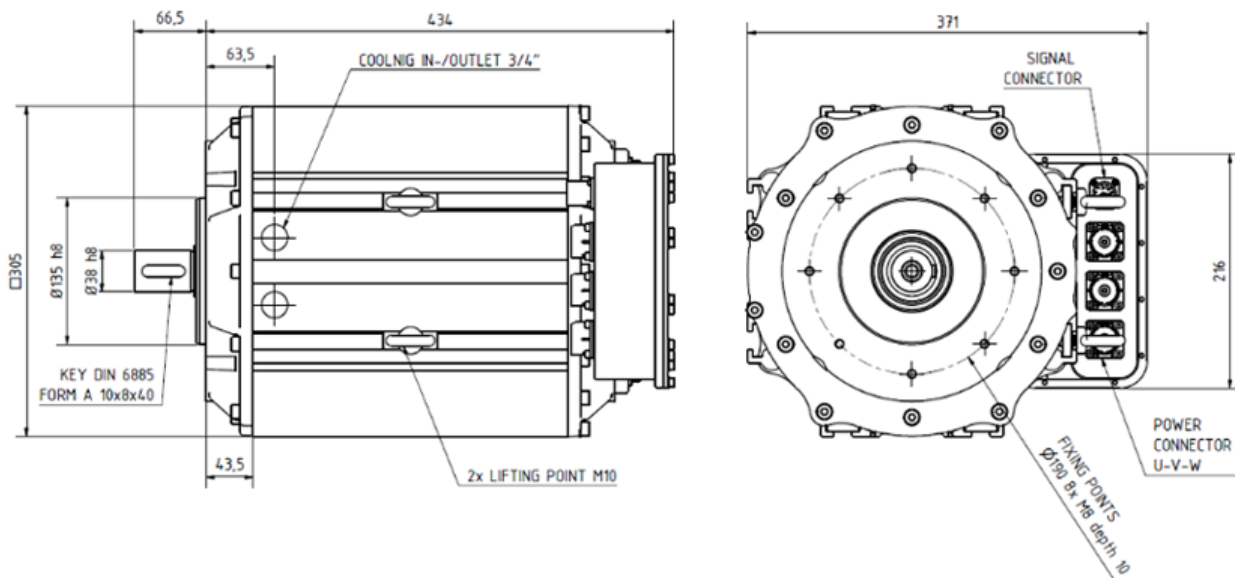


Figure 6: Front view, position of the connectors

- Signal connector: Connection for sensors and resolver
- [U], [V], [W]: Power connections for motor circuit
- Cooling [IN]: Cooling inlet
- Cooling [OUTLET]: Cooling outlet

# Data sheet

## WEICHA System Traction Drive WED600

Art. Nr. WED600-18W0077-RH20065-021B

### System characteristic curves

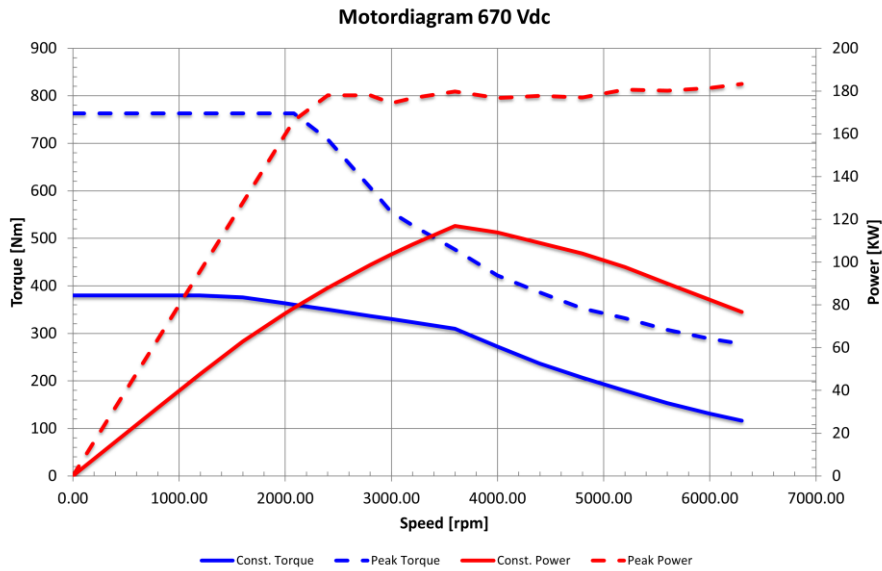


Figure 7: Motor characteristic curves 670 VDC