

TheMotion | TheConnect

Power Distribution Unit

seamless power and connection



Technical Specification

Revision: 1.2
Date: 09/2019

Content

1	Intended Use.....	2
2	Highlights.....	2
3	Features.....	2
4	Technical Data.....	3
5	System Layout.....	5
6	Mechanical Design.....	6

1 Intended Use

- To be used as a Power Distribution Unit for electric buses, trucks and other electric vehicles equipped an in-wheel-motor powertrain

2 Highlights

- Developed to connect direct-drive in-wheel-motors within electric commercial vehicles.
- TheConnect PDU allows for hard-wired integration with TheControl PCM
- Allows for easy plug and play integration by means of an I/O adapter


3 Features

- Overcurrent protection
- Individual pre-charge capability
- Thermal protection mechanism
- Ensures full redundancy of the in-wheel powertrain
- High Voltage Inter lock (HVIL)
- Acts as an integral part of TheMotion system safety concept

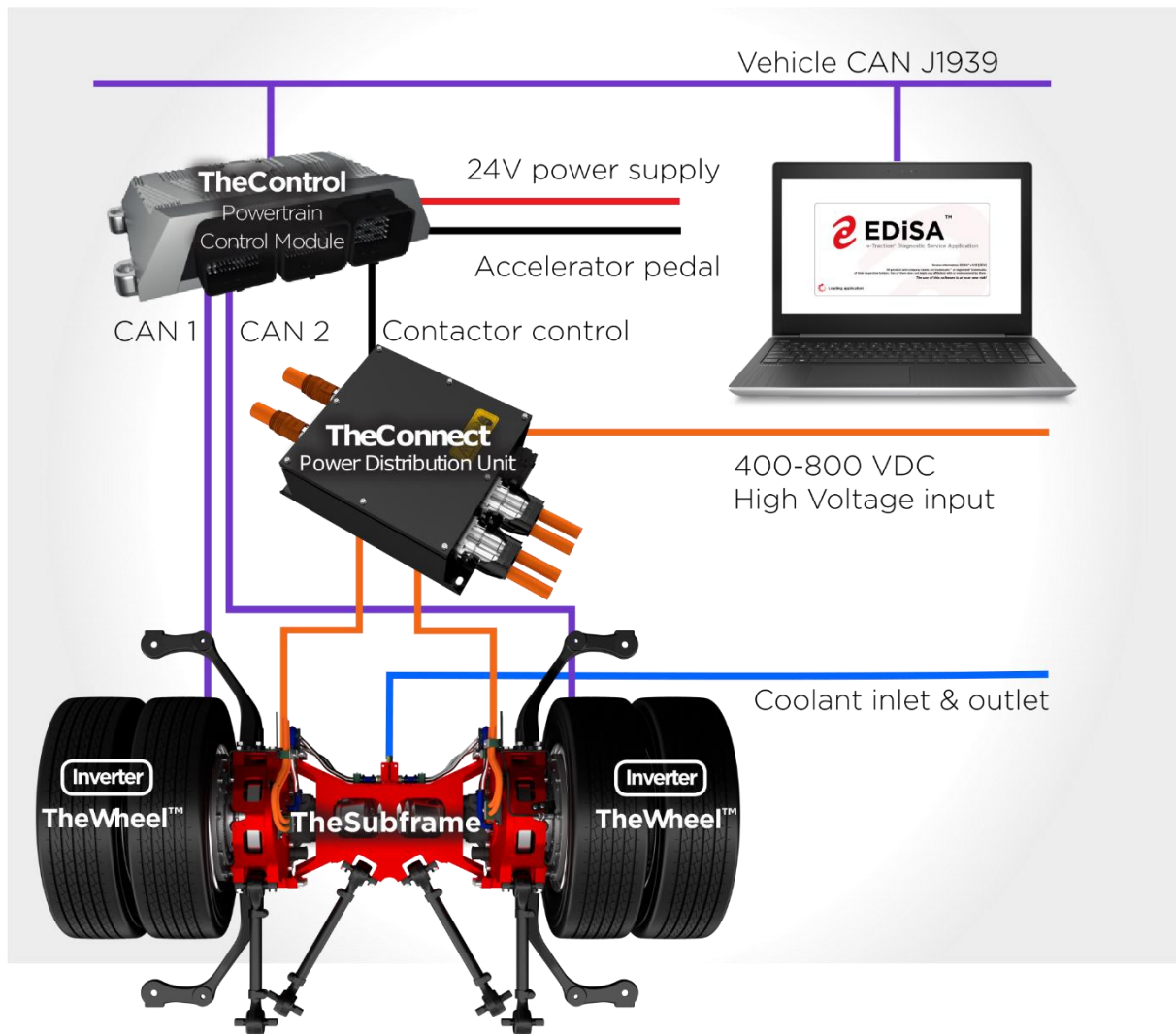
4 Technical Data

Specifications

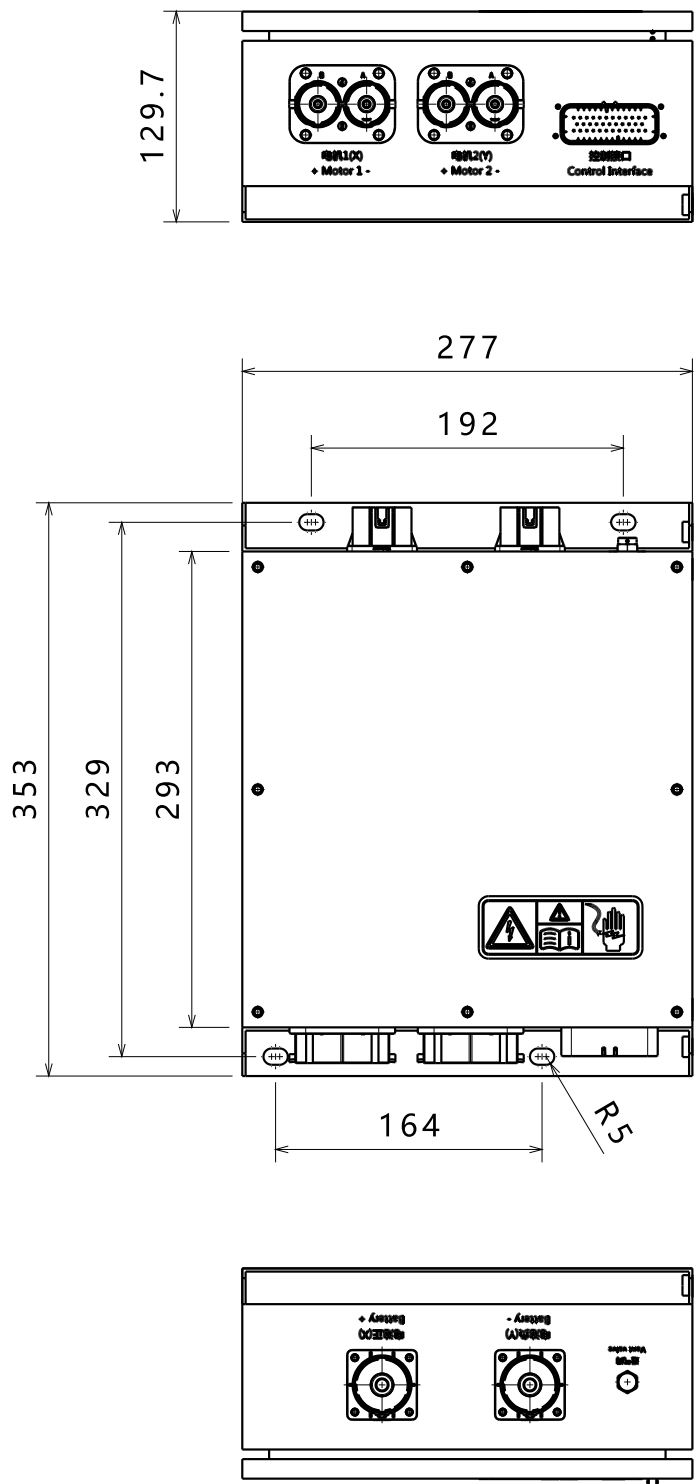
TheMotion TheConnect	
Product-line	TheMotion
Product ID	TheConnect (PDU)
Product Type	Power Distribution Unit
Functionality and key features	
Intended Use	PDU for In Wheel motor for heavy duty Automotive applications.
Control topology	By PCM
Technical Specifications	
Electrical performance	
Minimum operation voltage	400 [VDC]
Maximum operation voltage	800 [VDC]
Maximum Peak Voltage	1100 [VDC] for 10 seconds
Fuse	Fast acting fuse
Environmental conditions	
Operating temperature	-40 [°C] to 85 [°C]
IP rating	IP67
Other features	
	Designed to comply to Automotive Safety Integrity Level (ASIL) C
	Designed to comply to GB/T 18488:2015
Dimensions and Boundaries	
Dimensions	353 x 227 x 130 [mm]
Mass	10 [kg]

Connections	
Low Voltage Connector	35 pin TE
Input Connector	Amphenol Powerlok 500 series PL00X-501 PL00Y-501
Output Connector	Amphenol Powerlok 300 series PL082X-301 PL082Y-301
Compliance	
Quality Management System	ISO 9001:2015 TÜV Approved
System Overview	
<i>Appearance Impression</i>	
	
Product Accessories	
✓ Product Manual	

5 System Layout



6 Mechanical Design



A long history of proven technology

Founded in the Netherlands in an inventor's workshop, e-Traction offers bespoke solutions and superior technology in e-mobility that are based on solid expertise and hard-won experience.

Since 1981, we have developed electric traction technology, evolving to unique, award-winning, electric in-wheel powertrain technology. With our sustainable, integrated technology, only a bare minimum of components is required to reach the highest efficiency level. The simplicity of our drivetrain is the ultimate sophistication for full electric and hybrid vehicles.

By creating the most energy efficient electric powertrain solutions, environmental impacts, energy consumption and costs of ownership of mobility are lowered substantially. e-Traction develops, realizes and implements superior, distinguished and patented powertrain technology in e-mobility.

e-Traction is convinced that teaming up with the customer is the most efficient way to achieve the perfect solution. We offer development, implementation and services in a dedicated working method and also participate in prototype and demonstration projects.

“e-Traction and their next in-wheel motor technology platform offers a revolution in motion.”

e-Traction

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