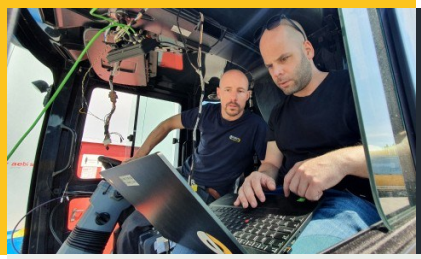


PDU-M15P

The power distribution unit (PDU) in an electric vehicle (EV) is an electrical component that manages the power flow from the battery to various systems and components in the vehicle that require electricity. All ports are using connectors to speed up vehicle production, provide easy integration, ensure process reliability and reduce the risk of exposed live high voltage parts.

Description

The PDU receives high-voltage DC power from the batteries and distributes it to the motor controller, battery charger, heating and cooling systems as well as other subsystems in the vehicle.

Technical Data

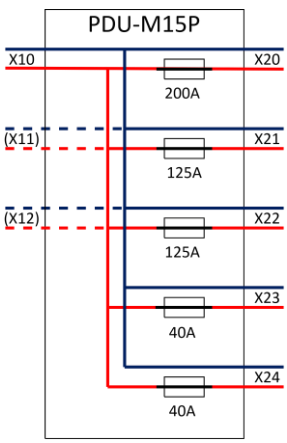
Norms and Regulations

- ISO 6469-3:2018 compliant
- ISO 20653 IP65

Specification Overview

- 400V system voltage (800V optional)
- 1x HV Battery input (up to 3 inputs optional)
- 5x parallel outputs, fused on HV+
- Interlock circuit integrated
- Safe measurement points for manual voltage measurement
- Operating temperature: −30 °C bis +45 °C
- Dimensions 422x286x111 (w/o mounting plate)
- Weight 9.0kg

Schematics



Order Information

PDU-M15P-40X1-A01

	Qualification and revision information
X1	Custom Configuration
40	Nominal Voltage 400V
80	Nominal Voltage 800V
P	Passive System (No integrated electronics)
15	1 unfused inputs, 5 fused outputs
25	2 unfused inputs, 5 fused outputs
35	3 unfused inputs, 5 fused outputs
M	Device size class (medium)
PDU	Device name (Power Distribution Unit)

Pinning LV Connector X1

Pin	Name	Description
1	-	
2	-	
3	Interlock_out	
4	-	
5	-	
6	-	
8	-	
9	Interlock_in	
10	-	
11	-	
12	-	

HV Connections

Name	Description	Standard Fuse	Possible Fuse Range
X10	ESS, Input w/o Fuse, 160A continuous	w/o Fuse	w/o Fuse
X20	Inverter A, Fused Output	200A	100A .. 400A
X21	Inverter B, Fused Output	125A	100A .. 250A
X22	OBC, Fused Output	125A	100A .. 250A
X23	DCDC, Fused Output	40A	5A .. 50A
X24	HVH, Fused Output	40A	5A .. 50A

Technical Drawing