



PDU-L38A

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

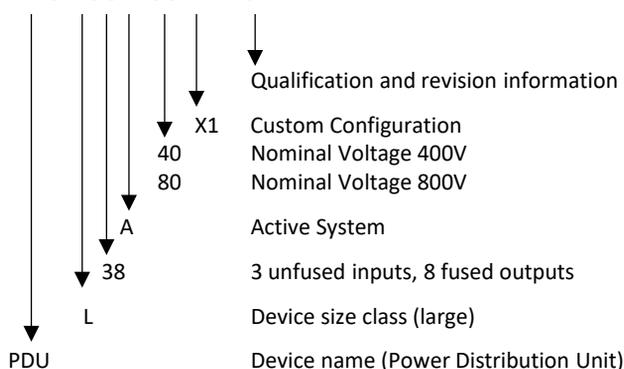
Specification Overview

- 800V system voltage (400V optional)
- 3x HV Battery input (up to 6 inputs optional)
- 8x parallel outputs, fused on HV+ (up to 10 outputs optional)
- DC Charge contactors integrated
- Interlock & Isolation measurement integrated
- Safe measurement points for manual voltage measurement
- Optional precharge circuit for 96V architecture
- Operating temperature: -30 °C bis +45 °C
- Dimensions 600x310x111 (w/o mounting plate)
- Weight 12.0kg



Order Information

PDU-L38A-80X1-A01



Schematics



Pinning LV Connector X1

Pin	Name
1	KL31
2	CCS Contactors Neg, LSDO
3	Interlock_out
4	IMD, EN
5	IMD, CAN L
6	-
7	CCS Contactors +24V
8	CCS Contactors Pos, LSDO
9	Interlock_in
10	IMD, HSDO Signal
11	IMD, CAN H
12	-

Connector Types

Connector	Type
X1	TE HDSCS 12 Pos
X01	Amphenol PL082X-301
X02	Amphenol PL082X-301
X03	Amphenol PL082X-301
X10	Amphenol PL082Y-301
X12	Amphenol PL082Y-301
X21	EMC Cable Gland
X22	TE HVA1200-2p code B
X31	TE HVA 280
X32	TE HVA 280
X33	TE HVA 280
X34	TE HVA 280

HV Connections

Name	Description	Standard Fuse	Possible Fuse Range
X01	ESS, Input w/o Fuse, 300A continuous	w/o Fuse	w/o Fuse
X02	ESS, Input w/o Fuse, 300A continuous	w/o Fuse	w/o Fuse
X03	ESS, Input w/o Fuse, 300A continuous	w/o Fuse	w/o Fuse
X10	Inverter A, Fused Output	600A	450A .. 800A
X12	Inverter B, Fused Output	600A	450A .. 800A
X21	DC Charge, Fused Output	400A	175A .. 400A
X22	OBC, Fused Output	60A	60A .. 150A
X31	DCDC, Fused Output	20A	5A .. 50A
X32	EAC, Fused Output	20A	5A .. 50A
X33	HVH, Fused Output	20A	5A .. 50A
X34	TMG, Fused Output	20A	5A .. 50A

Technical Drawing

