



POWER DISTRIBUTION UNIT

CONTROLLED POWER DISTRIBUTION FOR SATELLITE TEST ENVIRONMENTS

The Terma's Power Distribution Unit (PDU) supplies, protects and monitors AC power during spacecraft Assembly, Integration and Test.

It combines AC distribution, DC-Supplies, electrical protection, emergency stop functions, power monitoring and customer-defined output interfaces in one rack-mounted unit. The same platform can be configured for single-phase, three-phase or hybrid power setups.

You can use the PDU across:

- Satellite Assembly, Integration and Test (AIT)
- Electrical Ground Support Equipment (EGSE)
- Payload integration
- Battery testing
- Environmental testing
- Production and acceptance testing
- Engineering and Qualification Models
- Flight Model verification
- Spacecraft system integration

Heritage

Terma has more than **30 years of experience in testing and simulating satellite power systems**. Its space power heritage includes major ESA missions such as **Rosetta, HERA, BepiColombo and Euclid**, as well as **classified military missions**.

If you have questions, please contact our team terma.space@terma.com

Technical Advantages You Benefit From

Modular Design

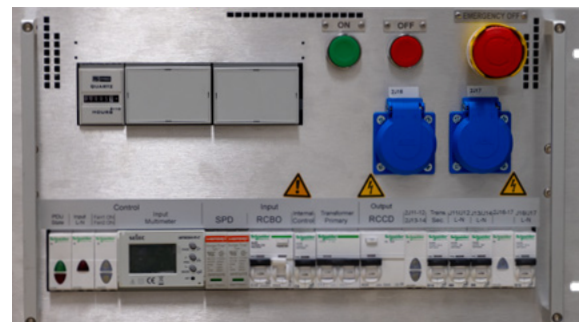
The PDU is built from standardized electrical, mechanical and safety modules. Supply type, output layout, monitoring level, protection level and emergency-loop setup can be configured for each AIT rack.

Real-time power monitoring

Integrated voltage, current, energy and system status monitoring give operators live visibility of connected loads during test runs. Abnormal consumption can be seen early, helping teams stop or adjust the test before equipment is exposed to the wrong power condition.

Coordinated Emergency Shutdown

Separate emergency and safety loops give operators controlled shutdown behavior. The emergency loop can shut down the defined power path across daisy-chained units, while the safety loop allows dangerous voltage to the test device to be switched off without cutting extra-low voltage or measurement equipment supplies that need to stay active.



PDU's TECHNICAL CAPABILITIES

	Standard	Optional
Electrical	AC input voltage up to 600 VAC Single-phase, three-phase and hybrid operation Transformer-based voltage adaptation Multiple integrated DC power supplies Variable DC power supplies	Multiple DC Power Supplies (5 VDC / 12 VDC / 24 VDC / 48 VDC) Variable DC Power Supplies Transformer Expansion Additional AC Outputs Redundant Power Inputs
Safety & Protection	SIL3 Emergency Loop Emergency Stop Daisy Chain capability Safety Loop support Overcurrent protection Short-circuit protection Surge protection Integrated safety concept	Emergency Daisy Chain Safety Loop Extension Automatic Voltage Detection Two-stage Power Sequencing
Monitoring	Integrated power monitoring Voltage monitoring Current monitoring Energy measurement System status indication Real-time monitoring	Integrated Power Meter Voltage Monitoring Current Monitoring Energy Measurement
Interfaces & Control	Configurable AC output interfaces Various connector families Customer-specific interface configuration Flexible integration into EGSE systems Remote monitoring capability	
Mechanical	The PDU platform is available in three standardized enclosure sizes: • 4HU × 460 mm • 4HU × 650 mm • 6HU × 650 mm	Customer-specific connector configurations Various output connector families Customized backplate layouts Flexible internal module arrangement

Certification & Compliance

The Terma PDU platform is **developed in accordance with applicable European electrical safety and EMC requirements** and follows a phased international certification strategy.

Certification roadmap includes:

- CE Mark
- IEC / EN Electrical Safety
- EMC Compliance
- UL Certification Roadmap
- CSA Certification Roadmap



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