BRUMIL 451 DPD – Data and Power Distributor
BRUMIL 451 OMC – Optical Media Converter

The Data and Power Distributor (DPD) is a field-deployable converter and distributor, designed for End-to-End connectivity. The DPD converts long-range and fast fiber optic to copper-based Ethernet at the same time as it distributes power to remote consumers with a fiber optic copper hybrid cable.
The 451 is available as data only and Data and Power Distributor: A hardened device for up to 10km fiber connections and up to 1km power distribution.

Applications:

- Temporary long-distance Ethernet-data-links e.g. between military checkpoints, command posts and headquarters in harsh environmental conditions
- Expanding an Ethernet connection over long distance with tactical fiber optical cable
- Distribution of power and data over long distances to remote power consumer
- DPD: Outdoor to indoor use
- OMC: For indoor and outdoor use
- Easy integration & operation

Description:

- The BRUMIL 451 is available in two different variants:
  - Optical Media Converter, converts optic to copper based communication.
  - Data and Power Distribution, converts optic to copper based communication and distributes power over the hybrid tactical field cable of up to 1kW over max. 1000m
- The BRUMIL 451 can be equipped to cover FO/electrical-media-converter function for TCP/IP protocols. The function is used to extend the data transmission of an Ethernet channel by fiber optical lines. It is especially designed for the use in harsh environmental conditions. At the front panel there are MIL-grade connectors available to interface with tactical optical-fiber-cable, copper-data-cable and power connections (AC or DC or both).
- The standard configuration includes one HMA compatible optical interface and one electrical MIL-grade-RJ-45-interface (10/100/1000BaseT) for bit rates up to 1 Gb/s, with automatic sensing. Crossed or uncrossed wire cables are detected automatically by the BRUMIL 451. The FO-interface is fixed to 1Gb/s bit rate.
- The maximal cable length:
  - 10 km data only
  - 1 km data and power

Technical data:

Power supply:
AC power: 100 … 240 VAC / 50…60 Hz +/- 10%
DC power: 12 … 45 VDC on (optional)
DC and AC power (one interface for both, DC or AC is automatically selected by the connecting cable type). This is an optional feature.
Power consumption: approx. 10W
Power cord with special ruggedized connector

Connections:

Ethernet port RJ-45
Port with auto-sensing 10/100/1000 BaseT
Fiber port 1000 Base-LX, single mode, 1310 nm
Fiber port 1000 Base-FX multi-mode 1300 nm (option).
Expanded beam bulkhead (HMA compatible) with two lenses for two optical fibers.
A1=Rx; B1=Tx
Expanded beam hybrid connectors with 4 optical fibers and 2+2 1.6mm² copper

Textile bag:

The textile bag is containing the media converter box to protect it during transportation and operation against shock and the effects of sun exposure. Side bags are made for grounding tools and adapting cables.

Environmental conditions:

Operation:	-35 … +50º C
Storage:	-40 … +85º C
Humidity:	5 … 95% relative humidity, non-condensing
Immersion Protection:	IP 65 (standard)
Upgradeable up to:	IP 67 (optional)

Options:

The BML 451 can be customized according to specific requirements and customer's needs, e.g. for multimode cables or for other fiber-optic connectors.

Optional as repeater with two fiber-optic interfaces and two copper-data interfaces.

A customized textile bag may contain customer specific accessories.

Extended Temperature range: -40…+60°C

Supported Standards:

IEEE 802.3 for 10BaseT
IEEE 802.3u for 100BaseT(X) and 100BaseFX
IEEE 802.3ab for 1000BaseT(X)
IEEE 802.3z for 1000BaseSX/LX/LHX/ZX/EZX
IEEE 802.3x for Flow Control

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Technical data:

Variant: BRUmil 451 FO – OMC Optical Media Converter

Mechanical data		**User Interface**	
Size (WxHxD)/mm	220x110x210	Electrical data	10/100/1000BaseT
Weight approx.	3kg (net) 4kg (gross)	Status indication	LEDs for: • Ethernet: data and link • FO: data and link • 230VAC: voltage
Power supply	230 VAC	**External I/O**	
Input voltage	230VAC/16A/50Hz ± 10%	Electrical Ethernet	10/100/1000BaseT M38999
Output voltage	230VAC/50Hz ± 3% (regulated)	230VAC In	Binder plug, series 693, 4pol pin
Max. output power	2.3 kVA permanent	230VAC Out	Binder plug, series 693, 4pol socket
Power consumption	10 W	Fiber optic	HMA compatible
Environment		**Options**	
Operation temperature	-35..+50°C	• Adapter cable Binder to country specific power supply • BRUmil 220/230 Lightning and EMP protection (LEMP and NEMP)	
Storage temperature	-40..+85°C		
Relative humidity (closed interfaces)	95%		
Waterproof	IP65		

Variant: BRUmil 451 Hyb – DPD Data and Power Distributor

Mechanical data		**User Interface**	
Size (WxHxD)/mm	220x110x210	Electrical data	10/100/1000BaseT
Weight approx.	3kg (net) 4kg (gross)	Status indication	LEDs for: • Ethernet: data and link • FO: data and link • 230VAC: voltage
Power supply	230 VAC	**External I/O**	
Input voltage	230VAC/16A/50Hz ± 10%	Electrical Ethernet	10/100/1000BaseT M38999
Output voltage	230VAC/50Hz ± 3% (regulated)	230VAC In	Binder plug, series 693, 4pol pin
Max. output power (master)	2.3 kVA permanent	230VAC Out	Binder plug, series 693, 4pol socket
Max. output power (remote)	1.2 kVA permanent	Fiber optic	HMA compatible
Max current for distribution	6A	FO-Cu hybrid	Similar HMA, 4 fibers 2+2 with 1.6mm²
Power consumption	16 W	Grounding	M12 grounding screw
Environment		**Options**	
Operation temperature	-35..+50°C	• Adapter cable Binder to country specific power supply • BRUmil 220/230 Lightning and EMP protection (LEMP and NEMP)	
Storage temperature	-40..+85°C		
Relative humidity (closed interfaces)	95%		
Waterproof	IP65		

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