



- › High-efficiency power supply for the WP4x00 MK II Control Concept - up to 15 WP-Line modules can be connected
- › Optical backbone Ethernet with optional redundancy
- › 2 RJ45 Ethernet plugs for display and service
- › Activity LED showing operational status
- › Fast and easy DIN-rail mounting
- › Supports removable LED matrix display
- › New flexible serial COM-port
- › Intelligent thermal control

#### The WP4x00 MK II Control Concept

The WP-Line 111 MK II Power Supply/Backbone module is part of the WP4x00 MK II Control Concept which has been specially designed to control large wind turbines - on- and offshore. The WP4x00 MK II Control Concept ensures optimal operation, high security, and advanced data collection.

The concept typically consists of a power supply/backbone module, a WP4100 MK II controller, a grid measurement module as well as an analog/digital I/O module dependent on the specific configuration task. The WP4x00 MK II Control Concept makes it possible to have redundant solutions. The concept is constructed as a plug-and-play system with automatic module detection and error reporting.

Advantages of the WP4x00 MK II Control Concept:

- › Corrosion robust construction
- › Robust WP-Line interconnection
- › Fast and easy DIN-rail mounting
- › Automatic node assignment of WP-Line modules
- › Simplified module status indication
- › Service-friendly

#### The WP-Line 111 MK II

The WP-Line 111 MK II Power Supply/Backbone module is an improvement of the older WP-Line 110 and functions as power supply for the single module blocks in the WP4x00 MK II Control Concept. The inter-block communication (backbone) in the WP4x00 MK II Control Concept is carried out by the WP-Line 111 MK II via an optical Ethernet. The backbone is constructed as a single ring. The fibre optic type is 62.5/125µm.

Furthermore, the WP-Line 111 MK II is equipped with 2 x 100Mbit Ethernet RJ45 plugs for connection of a graphical display/keypad or PC. This enables operating the complete WP4x00 MK II Control System at all available module blocks.

Specifications subject to change

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**Technical Data**

Supply Voltage 1	
Nominal	24 VDC
Allowed range	18 to 30 VDC
Current consumption	<0,3 A - 2,0 A

WP-Line BUS Supply	
Voltage delivered, nominal	12 VDC
Allowed range	11.5 to 12.75 VDC
Delivered current, maximum	3A/15 standard module loads*

BUS Port Connectors	
Ethernet	2 x RJ45
Ethernet	2 x SC
Serial COM-Port	1

ETHERNET RJ45 Communication Port	
Communication speed	10/100 mbit/s
Range, maximum recommended	50 m

ETHERNET Optical Communication Port	
Communication speed	100 mbit/s
Range, maximum recommended	2000 m
Fibre type	62.5/125 µm
Wave length	1300 nm

Port for RS232/RS422/RS485 Communication	
No. of ports	1
Isolation	Digital isolator (4000-V peak isolation, 560-Vpeak VIORM)
Communication speed	300 BAUD to 230.4 kBAUD (software configuration)
Max. cable length	RS422 max. 1200 meters @ 2 nodes RS485 max. 1200 meters @ 1.2K BAUD RS232 max. 30 m
Recommended cable type	Multi wire cable with shield
Termination	For RS422 and RS485 mount 120 Ω at line ends
Connector	6-pin 5.08 mm plugin terminal block with EARTH

Permissible Ambient Conditions	
Operation temperature	-30 to +60 °C (fanless operation)
Storage temperature	-40 to 85 °C
Relative humidity	max. 95% RH (non-condensing @ 40 °C)
Operation altitude	Max. 2000 m above sea level (up to 4000 m at derated temperature)

Mechanical Information	
Dimensions (WxHxD)	85 x 165 x 65 mm
Required gap (top/bottom)	Min. 25 mm
Weight	370 g
Degree of protection	IP30

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**Technical Data**

Applied Standards	
Damp heat	EN60068-2-78
Vibration	EN 60068-2-6
Bump	EN 60068-2-27
Shock	EN 60068-2-27
Temperature	EN 60068-2-1, EN 60068-2-2 and EN 60068-2-14
EMC	EN 61000-6-2 (Immunity standard for industrial environments) EN 61000-6-4 (Emission standard for industrial environments)

**Mita-Teknik Ordering Information**

Order Number	Order Name
978011102	WP-Line 111 MK II Power Backbone

Accessories	
9788080	WP-Line 80 LED module
978800101	WP-Line Bus Flat Cable 27 mm molded
978800202	WP-Line Bus Terminator MK II
9788102	Serial Cable RS485 WP-Line 111/351 - WP4086 10 m
9788103	Serial Cable RS485 WP-Line 111/351 - WP4059 2.5 m
9788104	Serial Cable RS232 WP-Line 111/351 - DP9 male (UPS) 2 m
9788105	Serial Cable RS232 WP-Line 111/351 - PC 2 m
9788106	Serial Cable RS232 WP4x00 / N-Port 5 m
978810601	Serial Cable RS232 WP4x00 / N-Port 1.5 m
9788108	Serial Cable RS232 WP4x00 / Modem 2 m
9788109	Serial Cable RS232 WP4x00 / PC 3 m
3389210	Ethernet Patch Cable 1 m
3389220	Ethernet Patch Cable 2 m
3389250	Ethernet Patch Cable 5 m
3370515	Fibre Optical Patch Cable 2X 62.5µm SC/SC-D 1 m
3370525	Fibre Optical Patch Cable 2X 62.5µm SC/SC 2 m
3370545	Fibre Optical Patch Cable 2X 62.5µm SC/SC-D 5 m
978911101	Connector Kit Screw Black WP-Line 111 MK II

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