

Digital optical transmission system
DOtech Type M
Basic Module:

Technical specification

Principle of transmission

The digital optical transmission system DOtech Type M consists of two pairs of transceiver circuits interconnected by two optical fibres. Each of these transceivers consists of a basic module (power supply, optics and control logic) and a submodule that transforms the incoming and outgoing data into an adequate form. The power supply is provided by an internal, rechargeable battery inside the basic module. The system serves for the unidirectional or bidirectional, non-reactive and potential free optical transmission of analogue and digital signals in harsh electromagnetic environments. It is usable both for emission and susceptibility tests.

Technical data basic module "BM"

Supplying module:	fits to all submodules
Rechargeable battery:	integrated
Minimum operating time:	> 8 h, in combination with every additional module
Optical fibre:	multimode duplex optical fibre, 62.5/125µm
Connector to optical fibre:	FSMA for both IN (RX) and OUT (TX)
Integrated switch:	on/off
Battery status:	displayed via three LED's
Charging connector:	2mm-plugs for both $U_{Akkü}$ and GND
Housing:	aluminium, nickel plated
Ambient temperature:	0°C – 70°C
Storage temperature:	-20°C – 85°C
Display:	"Module active" displayed by LED
Applicable for:	Immunity tests according to ISO 11452-x, ESD according to DIN EN-61000-4-2, ISO 10605 Emission tests according CISPR 25, 22

The optical transceiver are classified as AEL Class I(U.S. 21 CFR(J) and AEL Class 1 per EN 60825-1 (+A11). To avoid eye damage, never use the basic modules without interconnected optical fibres or protection plugs. Never look inside the invisible laser light!