



MANUAL

Signal Distribution Unit

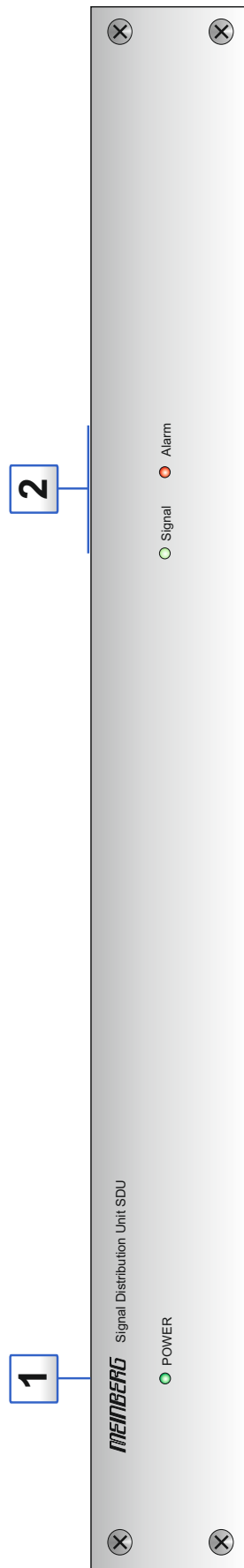
SDU/EFB/MP

SDU/EF/MP

11th December 2015

Meinberg Radio Clocks GmbH & Co. KG

Front view (Frontansicht) Signal Distribution Unit



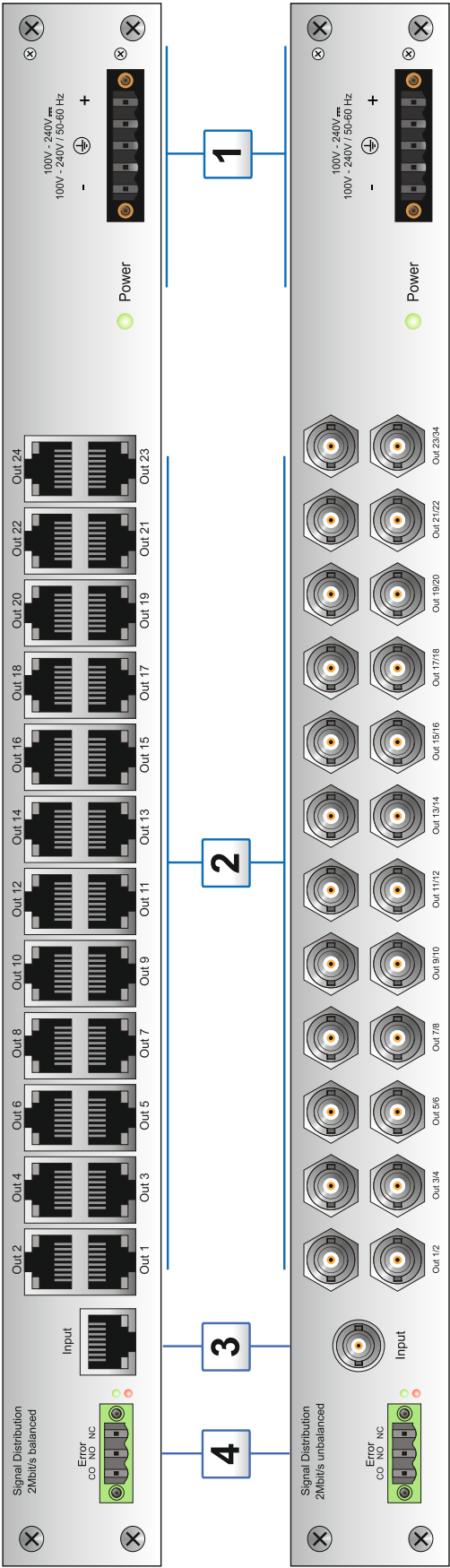
ENGLISH

1. Power LED / operating mode (green)
2. Status LEDs: Signal, Alarm

DEUTSCH

1. Power LED / Betriebsanzeige (grün)
2. Status LEDs: Signal, Alarm

Rear view (Rückansicht) Signal Distribution Unit



ENGLISH

1. Power supply connector
2. 2,048MBit/s outputs, RJ45 / BNC
3. 2,048MBit/s input, RJ45 / BNC
4. Error relay output, 3pin. DFK

DEUTSCH

1. Spannungsversorgung
2. 2,048MBit/s Ausgänge, RJ45 / BNC
3. 2,048MBit/s Eingang, RJ45 / BNC
4. Störmelderelaisausgang, 3pol. DFK

Table of Contents

1	Imprint	1
2	Safety Instructions for Building-in Equipment	2
2.1	Used Symbols	3
3	The Modular System SDU	4
4	Distribution SDU/EFB	5
5	Attachment: Technical Information	6
5.1	Technical Specifications SDU	6
5.2	Rear Panel Connectors	6
5.3	Power connect	7
5.4	2.048Mbit/s E1-Mode RJ45 Output	7
5.5	2.048Mbit/s E1-Mode RJ45 Input	7
5.6	2.048 Mbit/s Output	8
5.7	2.048 Mbit/s Input	8
5.8	Error Relay	9
6	Declaration of Conformity	10

1 Imprint

Meinberg Funkuhren GmbH & Co. KG

Lange Wand 9, 31812 Bad Pyrmont - Germany

Phone: + 49 (0) 52 81 / 93 09 - 0

Fax: + 49 (0) 52 81 / 93 09 - 30

Internet: <http://www.meinberg.de>

Mail: info@meinberg.de

Date: 2015-12-11

2 Safety Instructions for Building-in Equipment








This building-in equipment has been designed and tested in accordance with the requirements of Standard IEC60950-1 "Safety of Information Technology Equipment, including Electrical Business Equipment".

During installation of the building-in equipment in an end application (i.e. rack) additional requirements in accordance with Standard IEC60950-1 have to be taken into account.

- The building-in equipment is a class 1 - equipment and must be connected to an earthed outlet (TN Power System).
- The building-in equipment has been evaluated for use in office environment (pollution degree 2) and may be only used in this environment. For use in rooms with a higher pollution degree more stringent requirements are applicable.
- The building-in equipment may not be opened.
- Protection against fire must be assured in the end application.
- The ventilation opening may not be covered.
- The equipment/building-in equipment was evaluated for use in a maximum ambient temperature of 40°C.
- For safe operation the building-in equipment must be protected by max 16 A fuse in the power installation system.
- Disconnection of the equipment from mains is done by pulling the mains plug.



2.1 Used Symbols

Nr.	Symbol	Beschreibung / Description
1		IEC 60417-5031 Gleichstrom / <i>Direct current</i>
2		IEC 60417-5032 Wechselstrom / <i>Alternating current</i>
3		IEC 60417-5017 Erdungsanschluss / <i>Earth (ground) Terminal</i>
4		IEC 60417-5019 Schutzleiterklemme / <i>Protective Conductor Terminal</i>
5		Vorsicht, Risiko eines elektrischen Schlages / <i>Caution, possibility of electric shock</i>
6		ISO 7000-0434 Vorsicht, Risiko einer Gefahr / <i>Caution, Danger</i>
7		2002/96/EC Dieses Produkt fällt unter die B2B Kategorie. Zur Entsorgung muss es an den Hersteller übergeben werden. <i>This product is handled as a B2B category product. In order to secure a WEEE compliant waste disposal it has to be returned to the manufacturer.</i>

CE marking

This device follows the provisions of the directives 93/68/EEC



3 The Modular System SDU

The Signal Distribution Unit SDU is a set of equipment composed of one SDU module (E1/T1) and a power supply module, all installed in a metal desktop case and ready to operate. The input/output signals of the SDU are accessible via connectors in the back panel of the case. Details of the components are described below.



4 Distribution SDU/EFB

The Board SDU was designed for the distribution of the E1/T1 signals. The input signal (E1-mode 2.048MBit/s) is distributed to 24 outputs. The signal outputs are available via RJ-45 connectors.

Specification:

SDU/EFB/MP - balanced 120 Ω

Inputs: 1 x 2.048MBit/s (E1-mode) input, G.703, 120 Ohm balanced via RJ-45
Outputs: 24 x 2.048MBit/s (E1-mode) output, G.703, 120 Ohm balanced via RJ-45

Connectors: **Inputsignal** 1 x RJ-45 connector
Outputsignal 24 x RJ-45 connector

SDU/EF/MP - unbalanced 75 Ω

Inputs: 1 x 2.048MBit/s (E1-mode) input, G.703, 75 Ohm unbalanced via BNC
Outputs: 24 x 2.048MBit/s (E1-mode) output, G.703, 75 Ohm unbalanced via BNC

Connectors: **Inputsignal** 1 x BNC connector
Outputsignal 24 x BNC connector

5 Attachment: Technical Information

5.1 Technical Specifications SDU

HOUSING:	19 Inch Metal desktop case Front panel: 1U/84HP (43,6 mm high / 426,4 mm wide)
PROTECTION RATING:	IP20
POWER CONSUMPTION:	28W
INPUT VOLTAGE:	100...240VAC
INPUT FUSE:	Electronic
TEMPERATURE:	0...50°C
PHYSICAL DIMENSIONS:	483 mm wide x 43,7 mm high x 285 mm deep

5.2 Rear Panel Connectors

Name	Type	Signal	Cable
Power supply	5pin. DFK male	100-240VAC	5pin. MSTB clamp
Error	3pin. DFK male	relay	3pin. MSTB clamp
SDU/EFB/MP			
2.048MBit/s Out	RJ45	balanced 120 Ω	shielded data line
2.048MBit/s In	RJ45	balanced 120 Ω	shielded data line
SDU/EF/MP			
2.048MBit/s Out	BNC female	unbalanced 75 Ω	shielded data line
2.048MBit/s In	BNC female	unbalanced 75 Ω	shielded data line

5.3 Power connect

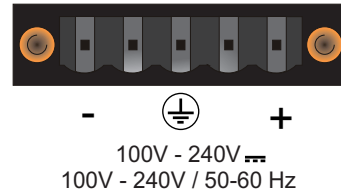
Input Voltage Range: 100-240 V AC / 50 - 60Hz
100-240 V DC

Input Current: 1 Amax

Input Fuse: UL/IEC127,
250 V AC S 3.15 A

Connectors: input IEC320 AC inlet

Pin Assignment:
1: VCC - (N ~)
2: not connected
3: GND (Ground)
4: not connected
5: VCC + (L ~)



5.4 2.048Mbit/s E1-Mode RJ45 Output

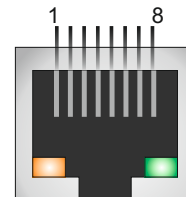
Mode: E1-Mode
120 Ohm, balanced

Connector Type: 8P8C (RJ45)

Cable: CAT 5.0

Assignment:

Pin 1: TX Ring
Pin 2: TX Tip



5.5 2.048Mbit/s E1-Mode RJ45 Input

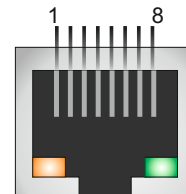
Mode: E1-Mode
120 Ohm, balanced

Connector Type: 8P8C (RJ45)

Cable: CAT 5.0

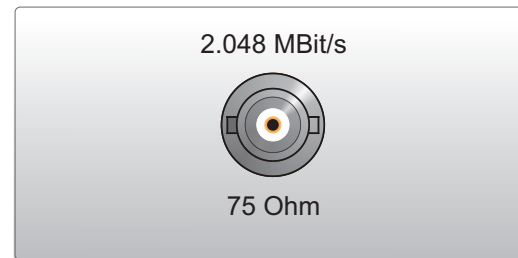
Assignment:

Pin 1: TX Ring
Pin 2: TX Tip



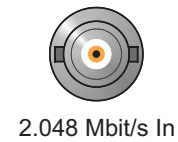
5.6 2.048 Mbit/s Output

Level:	75 Ohm
Type:	2.048 Mbit/s (E1-mode)
Connector:	BNC, female
Cable:	shielded coax line



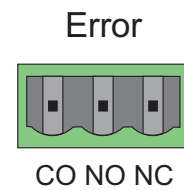
5.7 2.048 Mbit/s Input

Level:	75 Ohm
Type:	2.048 Mbit/s (E1-mode)
Connector:	BNC, female
Cable:	shielded coax line



5.8 Error Relay

There is a relay output that is labeled "Error" on the back of the unit. This is a potential free contact, which is directly controlled. Normally, when an input signal is applied, the relay and the relay contact "NO" is active. If the input is faulty or switched off the device, the relay contact "NC" is active.



Technical Specification

SWITCHING VOLTAGE max.: 125 V DC
150 V AC

SWITCHING CURRENT max.: 1A

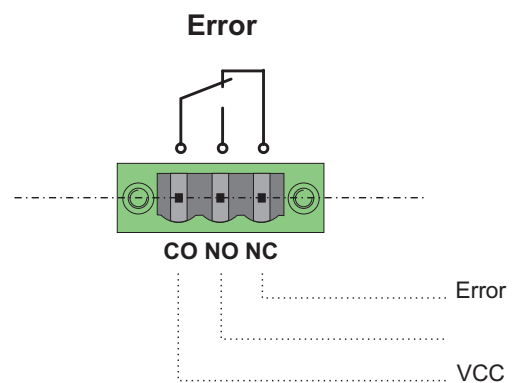
SWITCHING LOAD max.: DC 30 W
AC 60 VA

SWITCHING-CURRENT UL/CSA: 0.46A 150 V AC
0.46A 65 V DC
1A 30 V DC

RESPONSE TIME: ca. 2ms

Normal Operation: CO - NO connected

Error: CO - NC connected





SDU_EFB_MP_QSG_271114