

Electrical Connections

General

The different types of electrical connection and cabling criteria are described in this chapter.

For details on the connectors Pin-Out refer to the chapter "Connectors Pin-Out" at the end of this section.

External Connection

In Tab. 2.4–1 are summarized the information regarding the connection of the necessary electrical and optical fiber cables (e.g. the cables for useful signals, the alarm signals, the supply voltages etc.), to be made between the rack and the exchange facilities.

END1	END2	Cable Type	Connector Type	Connectors kit
d (R1–R32)/d (T1–T32)	DDF	EV 1CH 0.315/1.95 coaxial cable	coaxial 1.0/2.3	131–8493/01
		ST–212		131–8493/01
c1 / c2	DDF	4 x 8 +1 screened pair cable	D 78 (male)	131–9013/01
FC/PC or SC/PC Optical connectors on MOST Units	DDF	Optical cable	FC/PC or SC/PC connectors	FC/PC or SC/PC already connected
f (1–8)	DDF	EV 1CH 0.49/2.95 coaxial cable	coaxial 1.0/2.3	131–6925/03
		ST–214 coaxial cable		131–6925/03
g(1–8)	DDF	EV 1CH 0.315/1.95 coaxial cable	coaxial 1.0/2.3	131–7800/05
		ST–212 coaxial cable		131–7800/01
a1/b1	Auxiliary DDF	12+1 twisted pairs shielded cable	D25 (female)	131–9012/01 or 131–9012/02
a7/b7	Alarm distribution frame	17+1 twisted pairs shielded cable	D37 (female)	131–9012/01 or 131–9012/02

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END1	END2	Cable Type	Connector Type	Connectors kit
a6/b5	Network Management Centre	12+1 twisted pairs shielded cable	D15 (female)	131-9012/01 or 131-9012/02
b2	DLC	12+1 twisted pairs shielded cable	D15 (female)	131-9012/02
b4	DLC	12+1 twisted pairs shielded cable	D15 (female)	131-9012/02
c1/c2	-48V Power Supply Sources	AWG12 shielded cable	D3 (male)	131-9012/01 or 131-9012/02
		AWG16 shielded cable		
a3	Service telephone channel equipment	12+1 twisted pairs shielded cable	D9 (female)	131-9012/01
a4/b6	Rack Alarm Unit	8 twisted pairs shielded cable	D9 (male)	131-9012/01 or 131-9012/02
a5/b3	F Interface cable	included	D9 (male)	TSR 475U203/6000 cable assembly
a9/a10/b10/b11	External synchronisation equipment	EV 1CH 0.315/1.95 coaxial cable	coaxial 1.0/2.3	131-9012/01 or 131-9012/02
		ST-212 coaxial cable		
a8/a11/b8/b9	External equipment to be synchronized	EV 1CH 0.315/1.95 coaxial cable	coaxial 1.0/2.3	131-9012/01 or 131-9012/02
		ST-212 coaxial cable		
d (L1-L4) / e (L1-L4) / f (5-8)	DDF	EV 1CH 0.49/2.95 coaxial cable	coaxial 1.0/2.3	131-6925/03
		0.8/3.7 coaxial cable		131-6925/04
h(1-6)	DDF	EV 1CH 0.315/1.95 coaxial cable	coaxial 1.0/2.3	131-7800/05
		ST-212 coaxial cable		131-7800/01

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END1	END2	Cable Type	Connector Type	Connectors kit
i1	DDF	EV 1CH 0.49/2.95 coaxial cable	coaxial 1.0/2.3	131-6925/03
i2	DDF	0.8/3.7 or 0.49/2.95 coaxial cable	coaxial 1.0/2.3	131-6925/04
Structural screw	Rack ground connector	–		131-9012/01 or 131-9012/02

Tab. 2.4-1 Types of cables used during installation

NOTE (1) For 1.5Mbit/s, **100Ω** /2Mbit/s, **120Ω** tributary signal refer to Appendix EN "Connecting the 1.5/2Mbit/s symmetric pairs cable"

Tab. 2.4-1 Types of cables used during installation

For cable connecting the ADM-1 and the Local Controller PC the maximum allowed length is 20m.

In Tab.2.4-2 and Tab.2.4-3 are displayed the pin to pin connection for a 9pins and 25pins Local Controller PC interface connection.

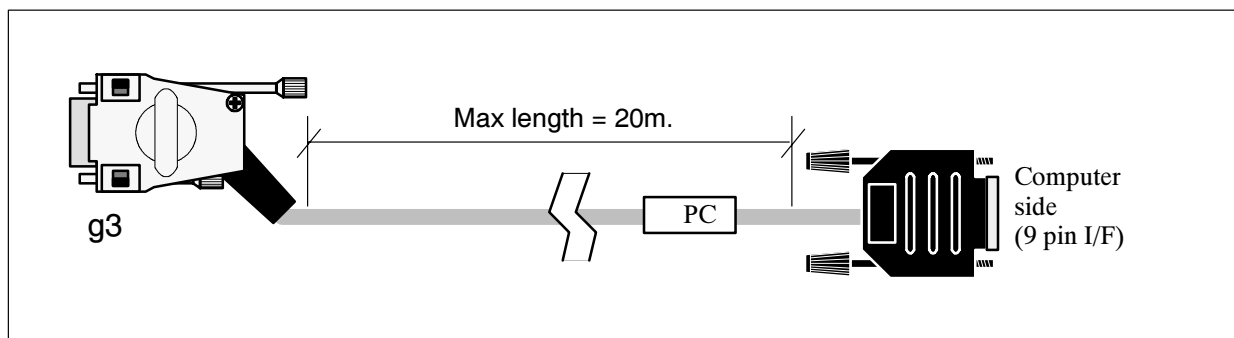


Fig. 2.4-1 Cable for connecting local operator computer and network element

Equipment side d5/e3 Pin Number	Computer side Pin Number
2	2
3	3
5	5

Tab. 2.4-2 PC cable connections (with 9 pin I/F connector on the computer side)

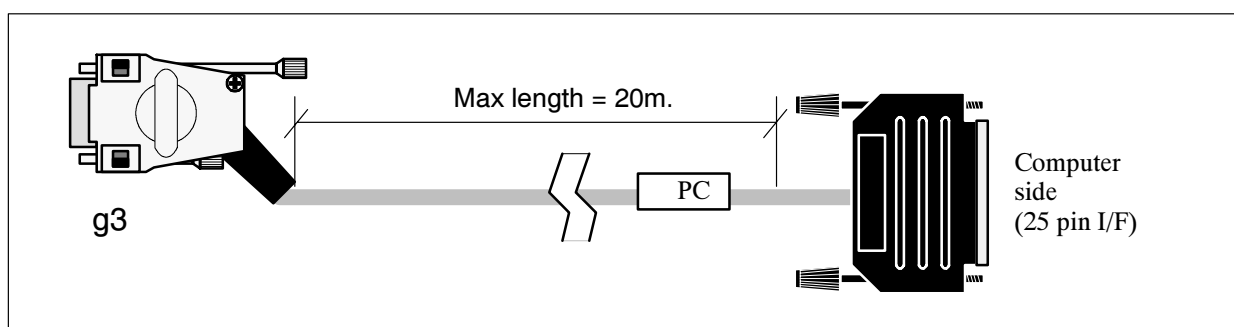


Fig. 2.4-2 Cable for connecting local operator computer and network element

Equipment side d5/e3 Pin Number	Computer side Pin Number
2	3
3	2
5	7

Tab. 2.4-3 PC cable connections (with 25 pin I/F connector on the computer side)

Cables Installation

In the next figures cable positioning in the cabinets or racks are illustrated. Fig.2.4-3 shows the positioning of the cable interconnecting the ADM-1 subrack. Rack dimensions and subracks positions are given in order to calculate the correct cables length.

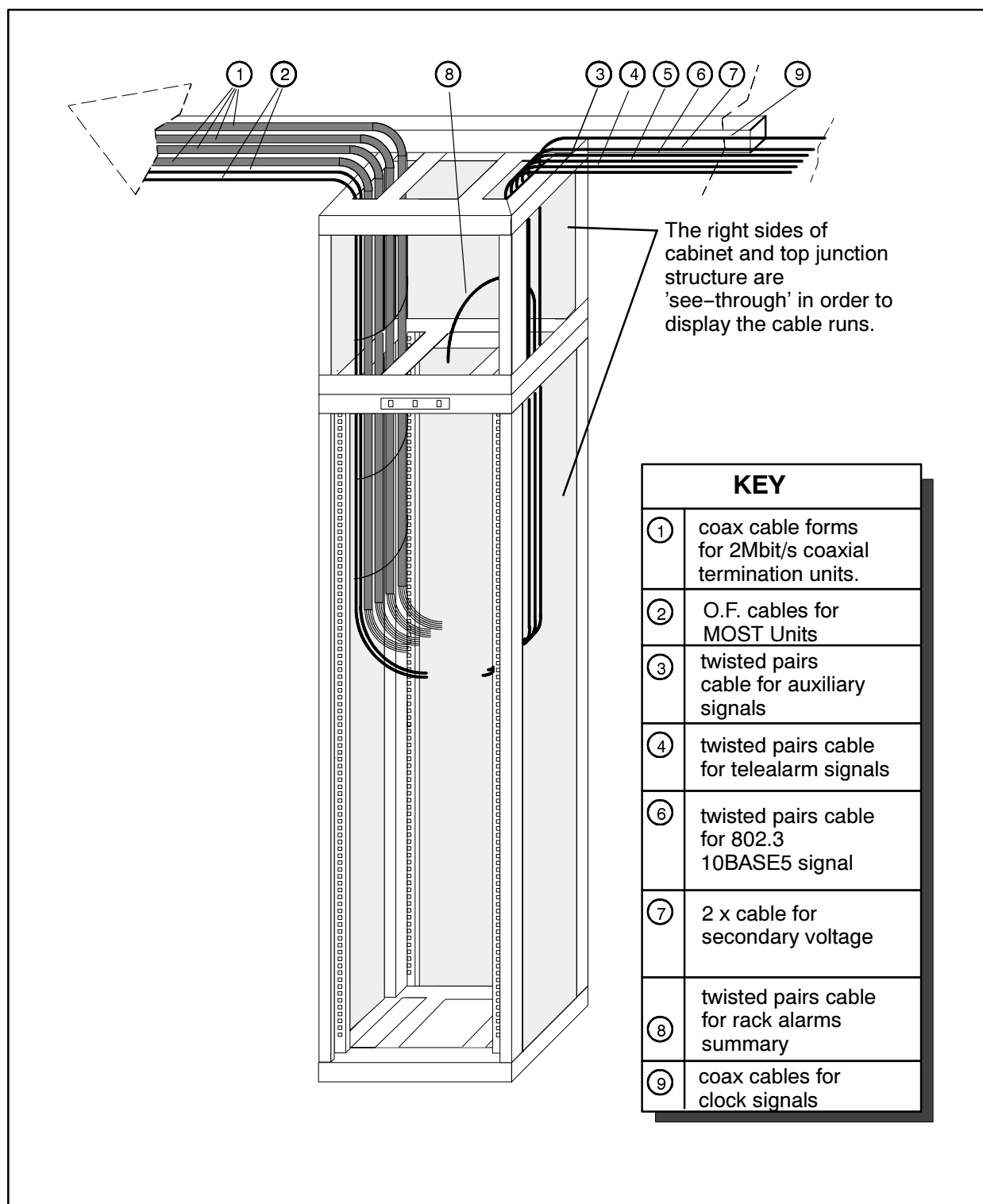


Fig. 2.4-3 Cable positioning in the rack

Fig.2.4-4 shows the correct positioning for the connection cable.

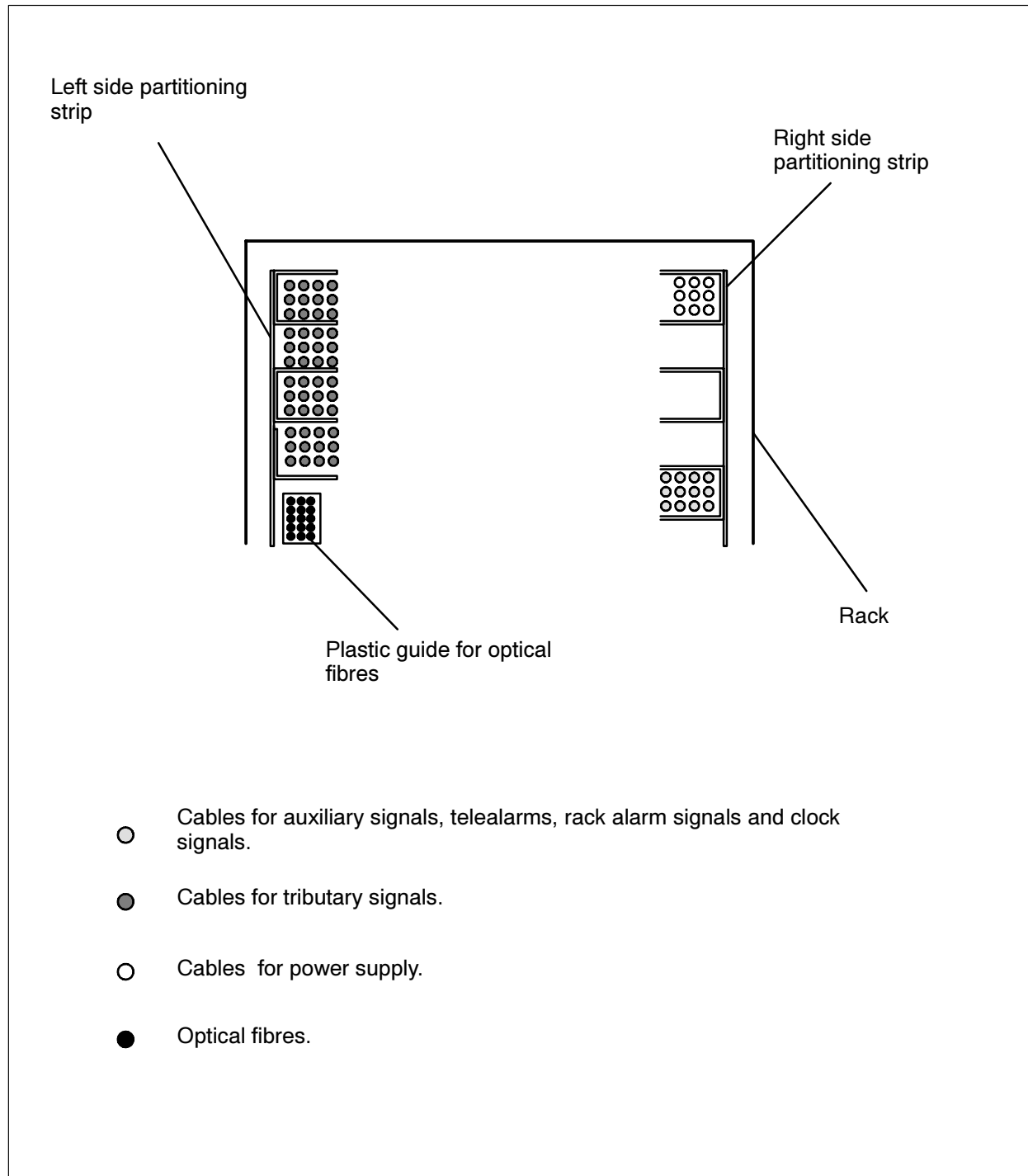


Fig. 2.4-4 Cable positioning (top view)

Sub-rack Ground Connection

Remove of the two structural screws, in the upper part of the right side of the sub-rack. Connect the sub-rack to ground fixing the eyelet of the ground cable to the right panel of the subrack, using the removed screw. Then insert the free side of the ground connection cable into one of the "faston" connectors located alongside right vertical support (see Fig. 2.4-5)

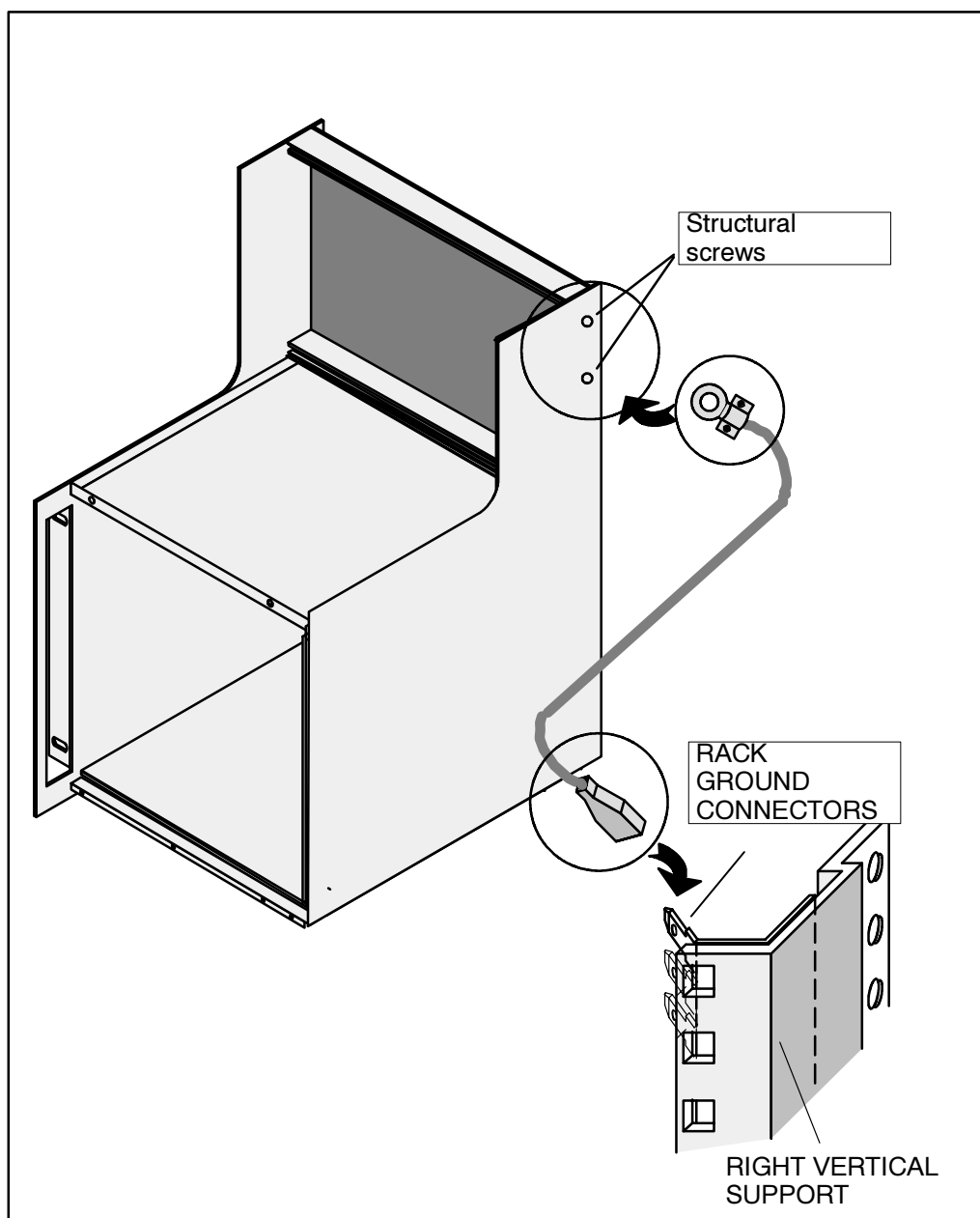


Fig. 2.4-5 *Ground connection*

Installation of Distribution Unit BMG 663 012/1 in cabinet type ETS 3001/9

(Cabinet INDBL 332 0224, -0304, -0289, -0466, -0236, -0309)

Mounting of Distribution Unit into the cabinet

Fasten the Distribution Unit in to the cabinet with four captive nut and screws in highest hole position in the cabinet, see Fig. 2.4–6.
(for 2200mm high cabinet hole position 78 and 83)

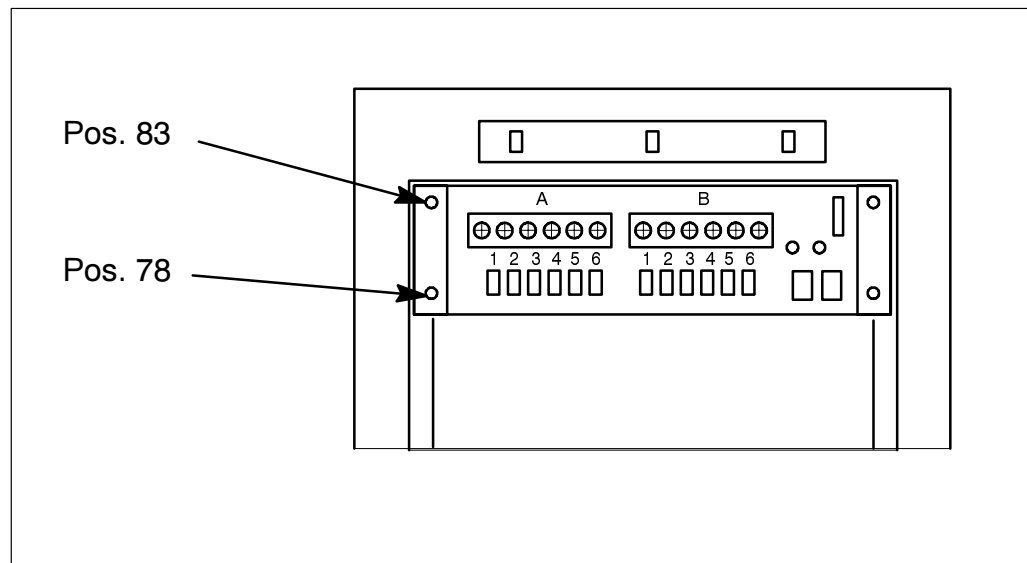


Fig. 2.4–6 Mounting the Distribution Unit into the cabinet

Power Cables

Remove the front panel and the panel in front of the screw connectors and the cable shelves before connecting the cable to the screw connectors.

Incoming central power connection

Connect the incoming central power cables to position 1, see Fig. 2.4–7 and Fig. 2.4–8.

Internal power connection

Internal power distribution cables are to be screw connected to position A1-6 or B1-6, see Fig. 2.4-7 and Fig. 2.4-9 (dismount the cables so the cable marking is visible).

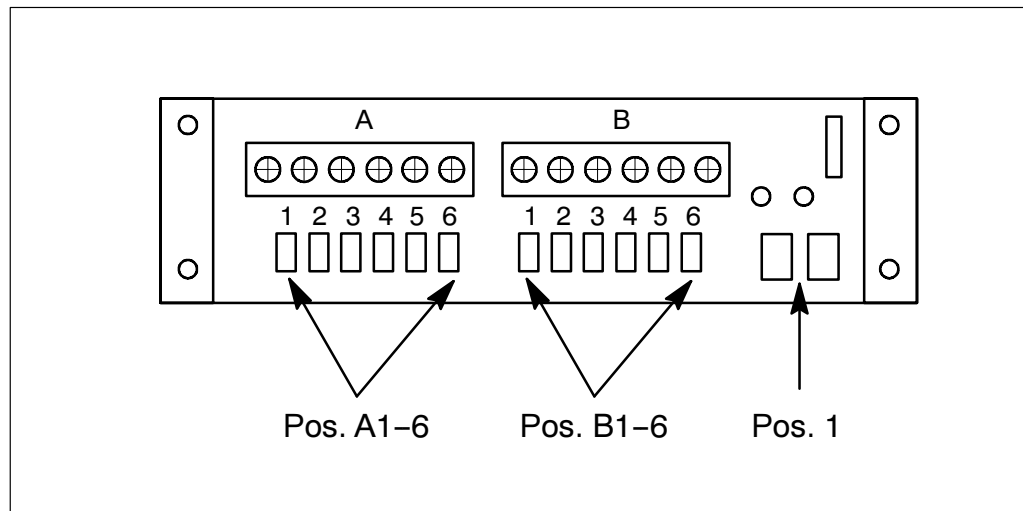


Fig. 2.4-7 Internal power distribution connectors

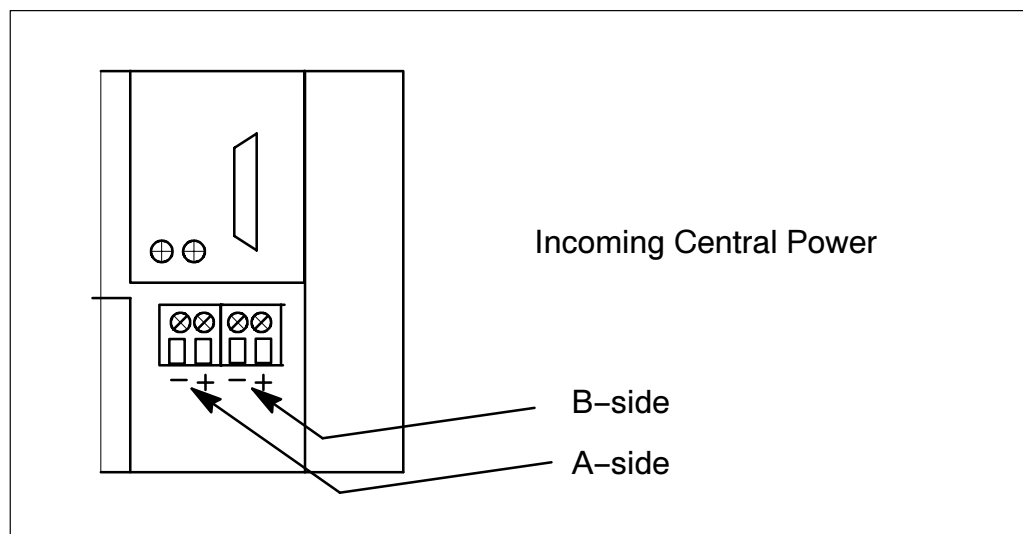


Fig. 2.4-8 Incoming Central Power connectors

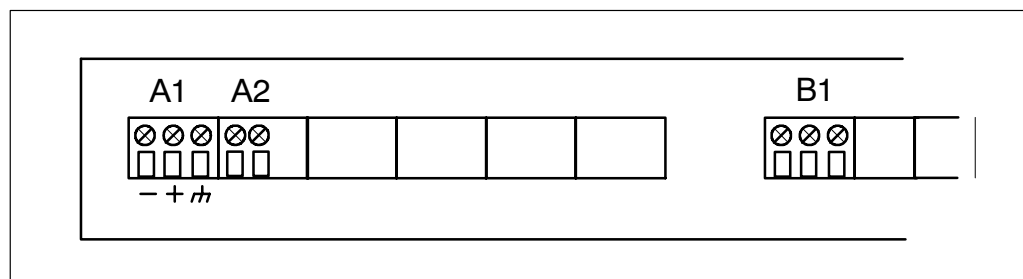


Fig. 2.4-9 Internal Power distribution connectors pin-out

Cable in the cabinet

Place the A-side cable to the left in the cabinet and the B-side cable to the right.

Cable and connector connection

Dismount the cable (dismount the cables so the cable marking is visible).

Split and twist the braid

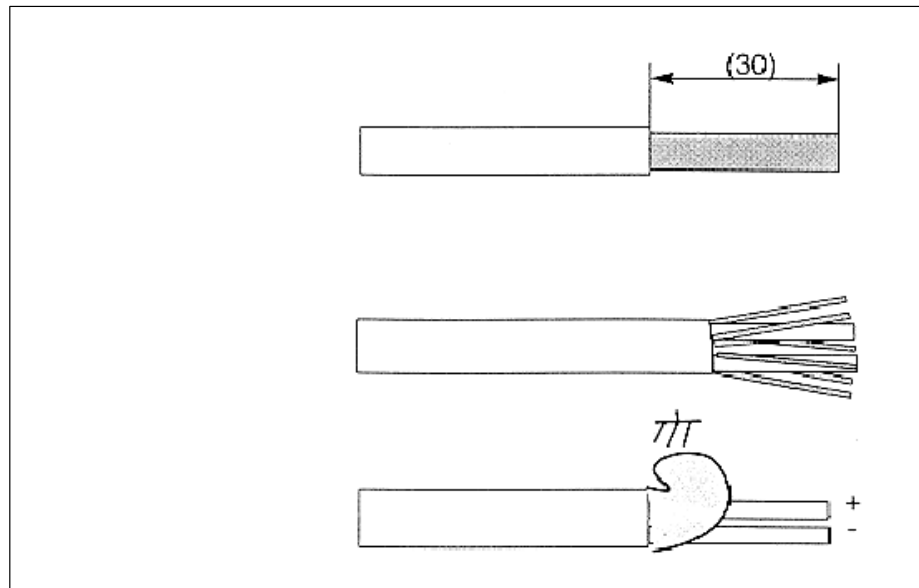


Fig. 2.4-10 Preparing the cable

Bend the twisted braid back and connect the braid to the connector shell throw one of the clips.

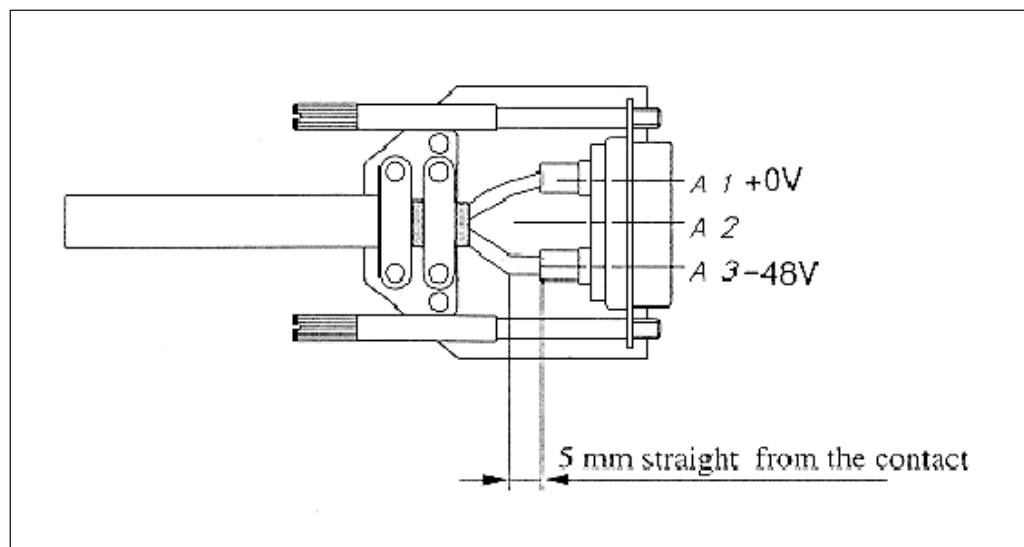


Fig. 2.4-11 Inserting the cable into the connector