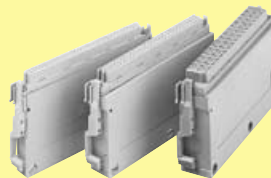


Shell housings

Page

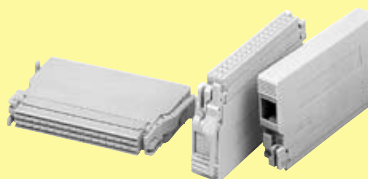
Summary of shell housings and accessories **20.02**

Shell housing C **20.04**



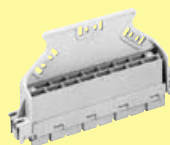
Shell housing A **20.08**

Shell housing B **20.10**



Shell housing D 15 **20.14**

Open hood G **20.17**



Junction element O **20.17**

Shell housings D 20/2 and D 20/4 **20.18**

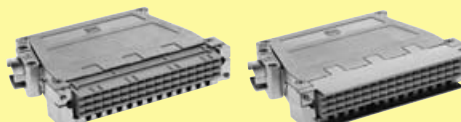


EMC housing **20.24**

Shell housings D 20/2 and D 20/4 metallised. **20.25**



Shell housings D 20 metal **20.28**



Electronic connectors in Heavy Duty Housings **20.30**

Summary shell housings and accessories



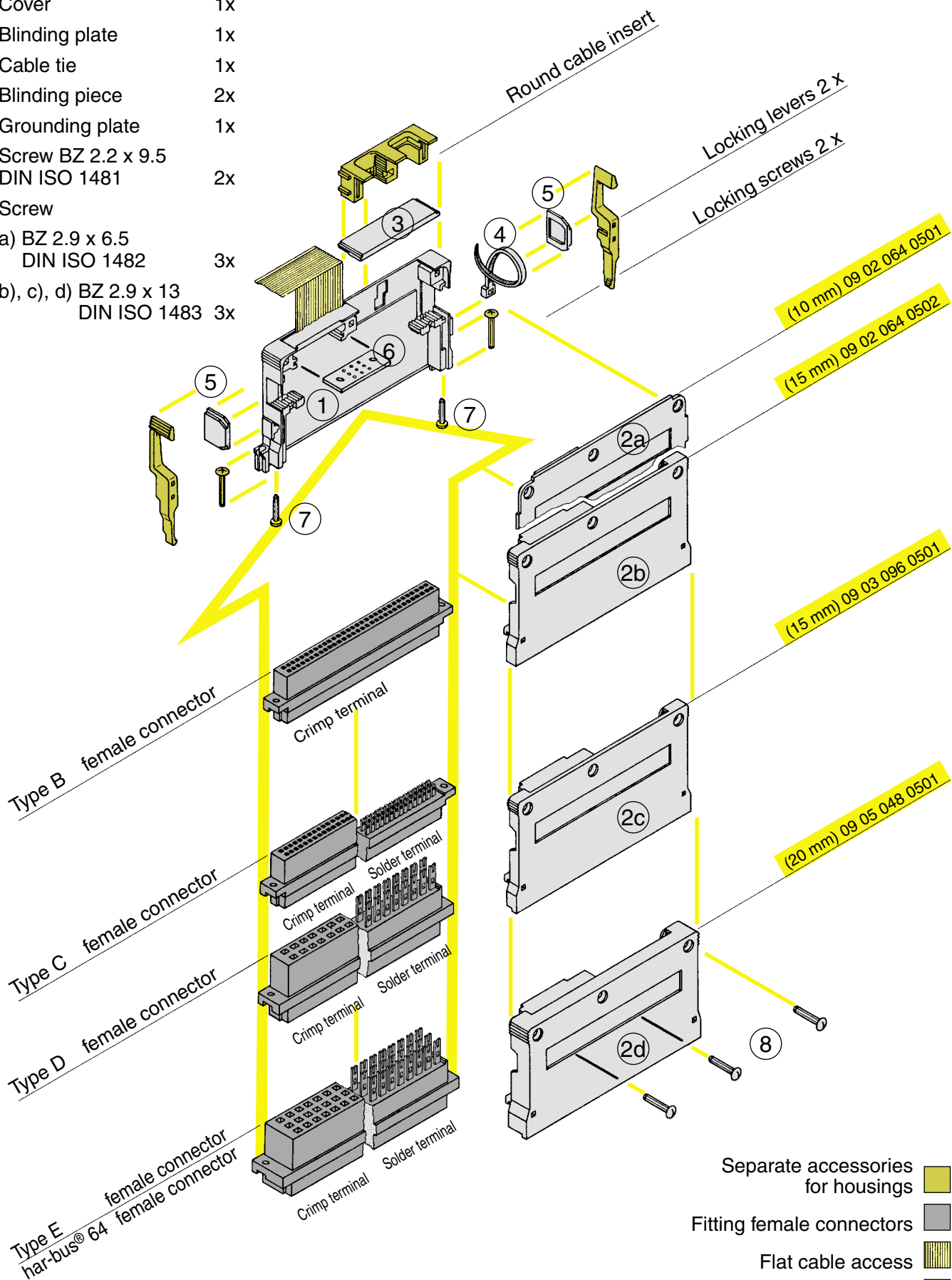
Appropriate connectors in shell housings	Types B, C, D, E	Type F	Types F, H, MH	Types E, F, H, MH	Types F, H, MH
Check list: How to order shell housings and accessories. The Part No. is stated.					... 9968 ... 9930
Shell housings	C 09 02 064 0501 09 02 064 0502 09 03 096 0501 09 05 048 0501	A 09 06 048 0501 09 06 048 0401 09 06 048 0402	B 09 06 048 0503 09 06 048 0504 09 06 048 0505	G 09 06 000 9957	O 09 06 000 9968 09 06 000 9930° ° order 2 pieces
Cable insert	09 02 000 9910 09 02 000 9911		09 06 000 9914 09 06 000 9915		
Insert for LED			09 06 000 9917		
Locking lever Order 2 pieces, in some cases each with different Part Nos. for left and right hand	09 02 000 9902 09 02 000 9903	Supplied with the shell housing	09 06 000 9913 09 06 000 9919		
Locking screws Order 2 sets for fixing elements with male connectors	09 02 000 9909 M 2.5 x 16 M 2.5	M 2.5 x 12 M 2.5	09 06 000 9926 M 2.5 x 20 M 2.5	Supplied with the shell housing	09 06 000 9926 M 2.5 x 20 M 2.5
for interface connectors U	09 02 000 9909 M 2.5 x 16 M 2.5	09 02 000 9909 M 2.5 x 16 M 2.5	09 06 000 9926 M 2.5 x 20 M 2.5	Supplied with the shell housing	—
for interface connectors I	09 02 000 9909 M 2.5 x 16 M 2.5	M 2.5 x 22 Supplied with the interface connector I	09 06 000 9955 M 2.5 x 26	Supplied with the shell housing	—
Fixing brackets for 19" racks for male connectors	C 	A 	B 	B 	B
Multiple fixing left	09 02 000 9919 09 02 000 9920	09 06 000 9901 09 06 000 9902	09 06 000 9907 09 06 000 9966 09 06 000 9908 09 06 000 9967	09 06 000 9907 09 06 000 9966 09 06 000 9908 09 06 000 9967	09 06 000 9907 09 06 000 9966 09 06 000 9908 09 06 000 9967
Single fixing left right	09 02 000 9921 09 02 000 9922	09 06 000 9905 09 06 000 9906	09 06 000 9909 09 06 000 9910	09 06 000 9909 09 06 000 9910	09 06 000 9909 09 06 000 9910
for female connectors			B 		B
Multiple fixing left right			09 06 000 9933 09 06 000 9933		only ... 9930 09 06 000 9933 09 06 000 9933
Fixing brackets for inverse male connectors on pcb	R 				
R 1 R 32	09 02 000 9953 09 02 000 9954				
Distance fixing brackets for piggyback connectors					
Type D top	09 04 000 9907			09 04 000 9907	
Type E bottom	09 04 000 9906			09 04 000 9906	
Type F top	09 06 000 9936			09 06 000 9936	
Type F bottom	09 06 000 9937			09 06 000 9937	
Protection strip for 20 mm shell housing			09 06 000 9929		
Protection and fixing strip for 20 mm shell housing			09 06 001 9909		

Female connectors
 Male connectors

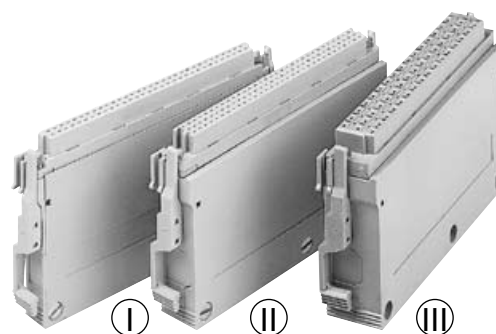
Detailed system description see chapter 00

Appropriate connectors in shell housings	Types F, H, MH	Types F, H, MH	Types F, H, MH	Types F, H, MH
Check list: How to order shell housings and accessories. The Part No. is stated.				
Shell housings	D 15 09 06 048 0515	D 20 09 06 048 0521 09 06 048 0522	D 20 metallised 09 06 948 0521 09 06 948 0522	D 20 metal 09 06 848 0550 09 06 848 0551
Cable insert		09 06 000 9988 09 06 000 9989	09 06 900 9988	
Insert for LED		09 06 000 9986 09 06 000 9987	09 06 900 9986 09 06 900 9987	
Locking lever Order 2 pieces, in some cases each with different Part Nos. for left and right hand	Supplied with the shell housing			
Locking screws Order 2 sets for fixing elements with male connectors	09 06 000 9926 M 2,5 x 16 M 2,5	Supplied with the shell housing	Supplied with the shell housing	Supplied with the shell housing
for interface connectors U	—	—	—	—
for interface connectors I	—	—	—	—
Fixing brackets for 19" racks for male connectors Multiple fixing left	B 	B 	B 	B
right	09 06 000 9907 09 06 000 9966	09 06 000 9907 09 06 000 9966 09 06 000 9995 09 06 000 9997	09 06 900 9907 09 06 900 9966 09 06 900 9995 09 06 900 9997	09 06 900 9997
Single fixing	09 06 000 9908 09 06 000 9967	09 06 000 9908 09 06 000 9967 09 06 000 9996 09 06 000 9998	09 06 900 9908 09 06 900 9967 09 06 900 9996	09 06 900 9996
left	09 06 000 9909	09 06 000 9909 09 06 001 9934	09 06 900 9909 09 06 901 9934	09 06 901 9924
right	09 06 000 9910	09 06 000 9910 09 06 001 9935	09 06 900 9910 09 06 901 9935	09 06 901 9925
for female connectors Multiple fixing left	B 			
right	09 06 000 9933 09 06 000 9933			
Protection and fixing strip for 20 mm shell housing		09 06 001 9909	09 06 001 9909	

- ① Shell 1x
- ② Cover 1x
- ③ Blinding plate 1x
- ④ Cable tie 1x
- ⑤ Blinding piece 2x
- ⑥ Grounding plate 1x
- ⑦ Screw BZ 2.2 x 9.5
DIN ISO 1481 2x
- ⑧ Screw
 - a) BZ 2.9 x 6.5
DIN ISO 1482 3x
 - b), c), d) BZ 2.9 x 13
DIN ISO 1483 3x



Shell housing C for types B, C, D, E and har-bus® 64

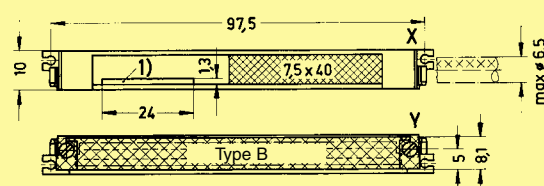


Identification	Part No.	Drawing	Dimensions in mm
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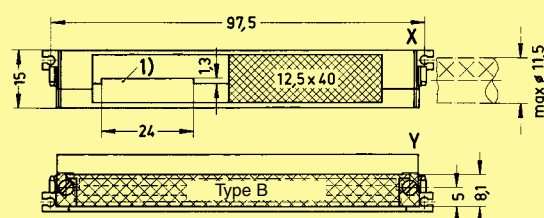
Shell housing C
for female connectors
type B

I

10 mm
09 02 064 0501



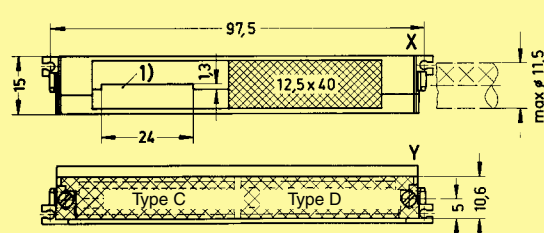
15 mm
09 02 064 0502



Shell housing C
for female connectors
types C, D

II

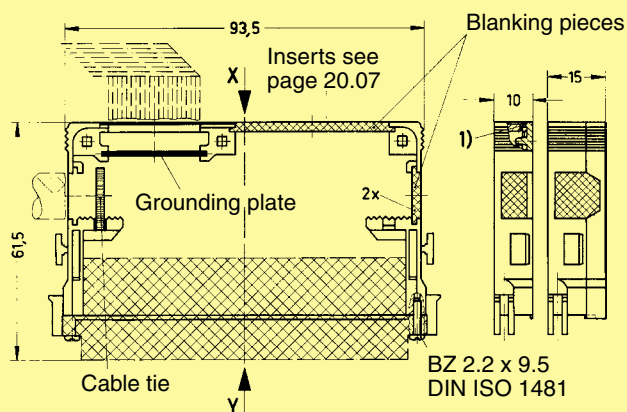
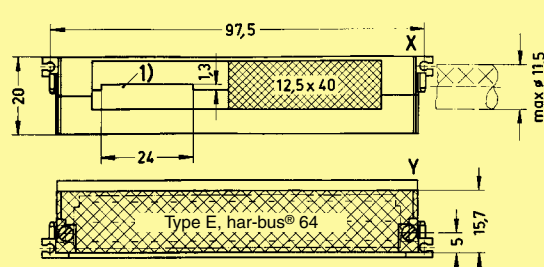
15 mm
09 03 096 0501



Shell housing C
for female connectors
type E,
har-bus® 64

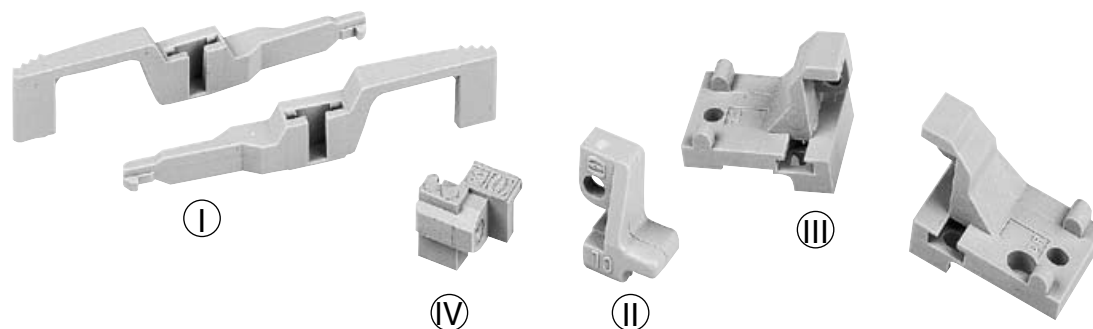
III

20 mm
09 05 048 0501



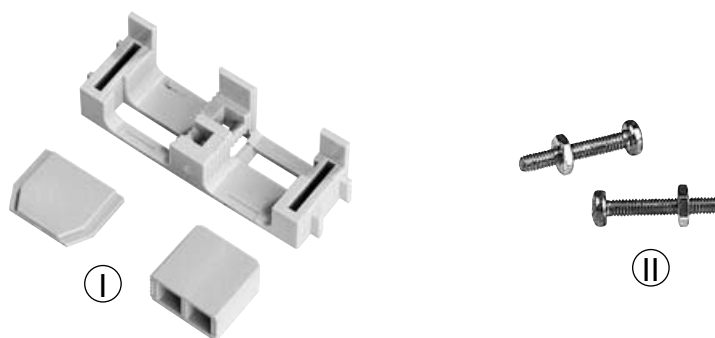
1) Possible access for flat cable (18 x Ø 1.27). Remove the blanking piece.

Shell
 housings



Accessories

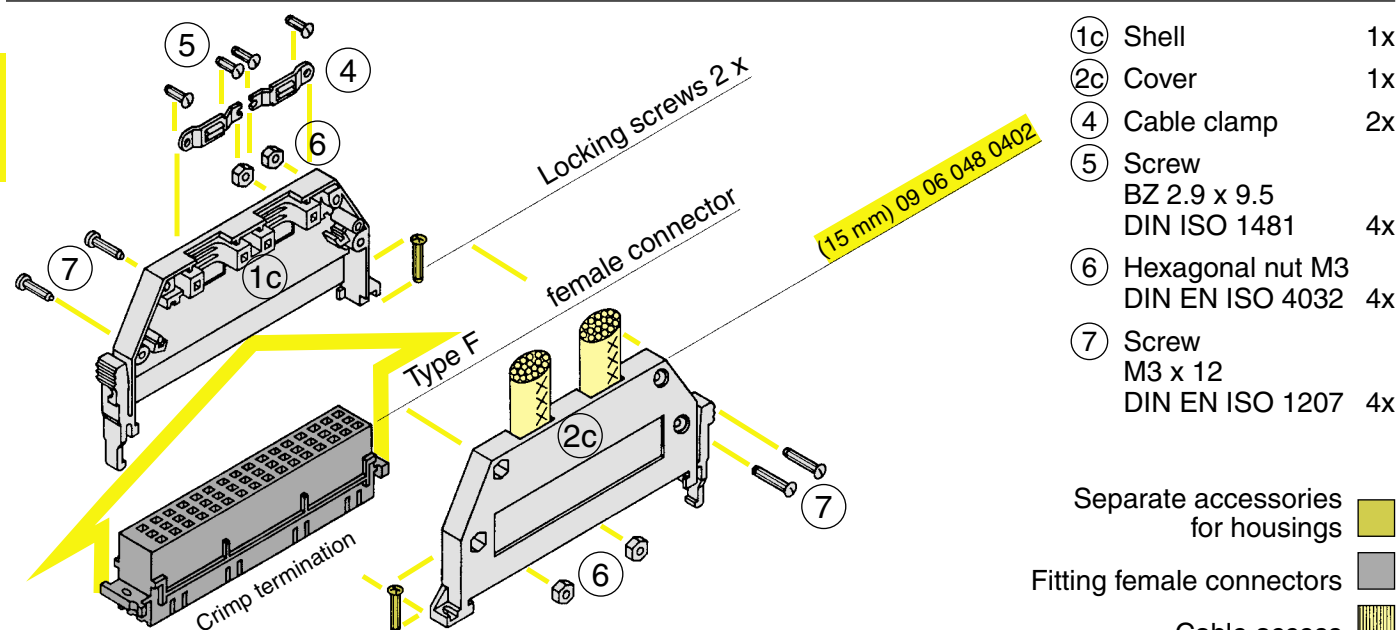
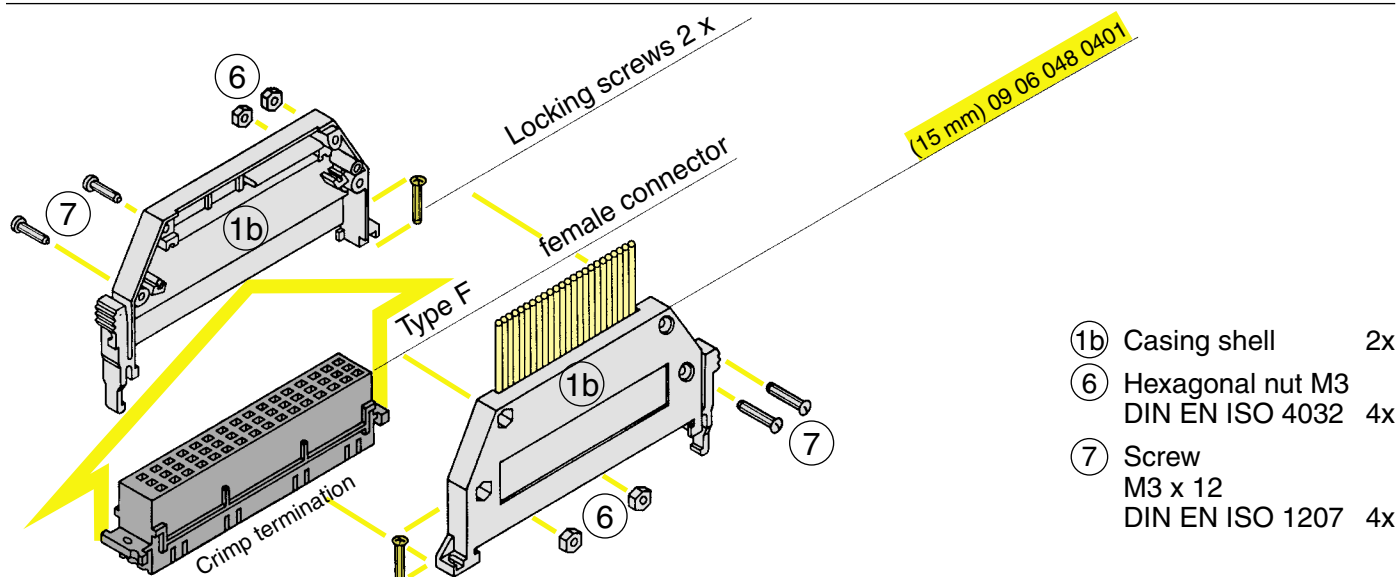
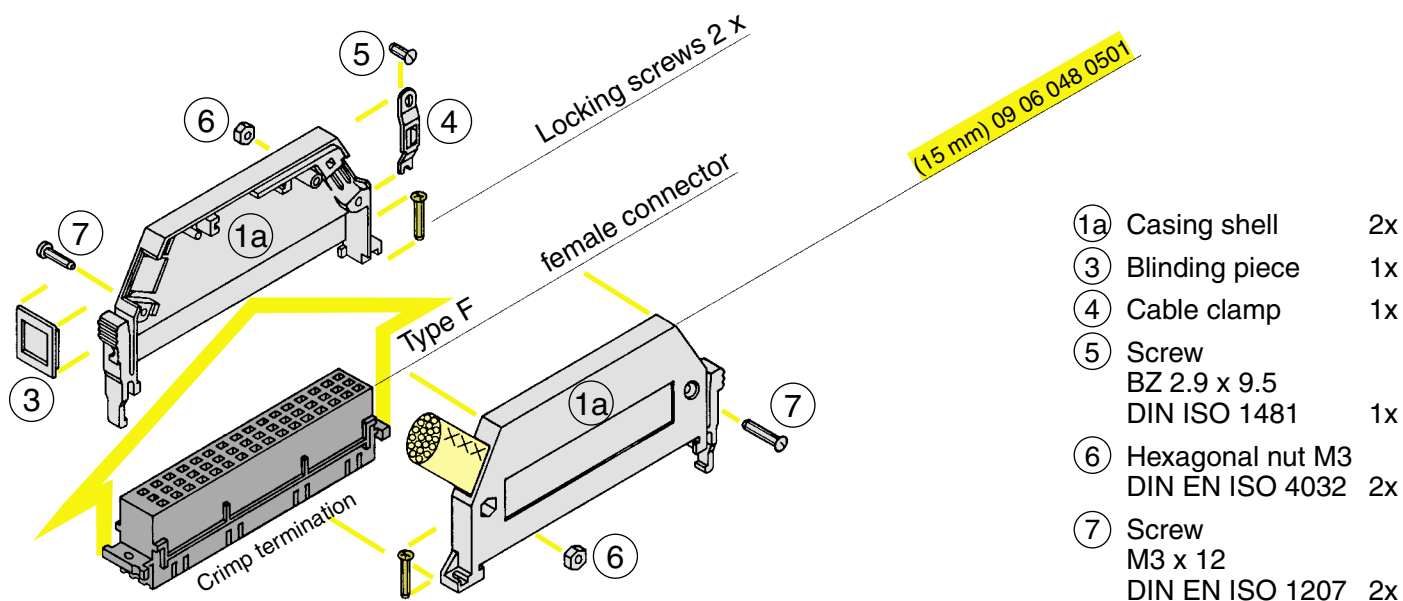
Identification	Part No.	Drawing	Dimensions in mm
Locking lever for shell housing C I	left 09 02 000 9902 right 09 02 000 9903		
Fixing brackets C for male connectors for 19" racks according to DIN EN 60 297, part 3-101 Multiple fixing II	left 09 02 000 9919 right 09 02 000 9920		
Single fixing III	left 09 02 000 9921 right 09 02 000 9922		
Fixing brackets R for inverse male connectors on pcb's IV	R 1 09 02 000 9953 R 32 09 02 000 9954		See application example 4, chapter 01



Accessories

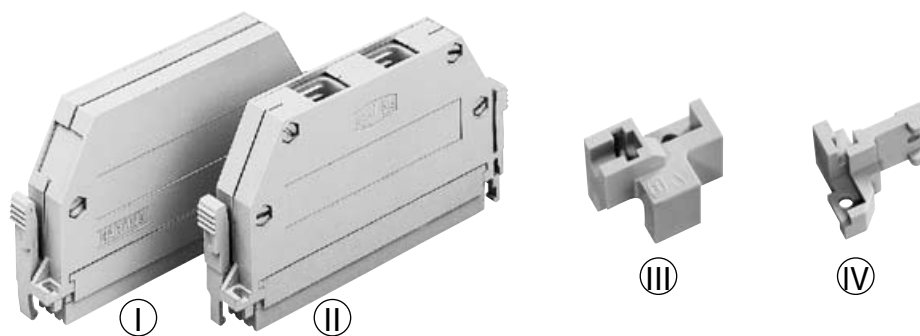
Identification	Part No.	Drawing	Dimensions in mm
Round cable insert 2 x $\varnothing 6.5$ for shell housing C 09 02 064 0501 Supplied with: Round cable insert 1x Blinding piece A 1x Blinding piece B 1x Cable tie 1x	09 02 000 9910		
Round cable insert 2 x $\varnothing 11.5$ for shell housings C 09 02 064 0502 09 03 096 0501 09 05 048 0501 Supplied with: Round cable insert 1x Blinding piece A 1x Blinding piece B 1x Cable tie 1x	09 02 000 9911		
Locking screws 	09 02 000 9909 ¹⁾		

¹⁾ Order 2 pieces for one shell housing



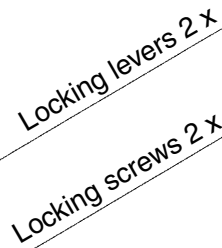
- Separate accessories for housings
- Fitting female connectors
- Cable access
- Housing parts supplied

Shell housing A for type F



Identification	Part No.	Drawing	Dimensions in mm
Shell housing A Side entry ①	15 mm 09 06 048 0501		
Flat cable entry ②	15 mm 09 06 048 0401		
Top entry ②	15 mm 09 06 048 0402		
Cable clamp incl. screw	09 00 000 5329	See ④ + ⑤ on page 20.08	
Fixing brackets A for male connectors for 19" racks according to DIN EN 60297, part 3-101	left 09 06 000 9901		
Multiple fixing ③	right 09 06 000 9902	1) nut and screw not supplied with bracket	
Single fixing ④	left 09 06 000 9905 right 09 06 000 9906		

- Inserts e. g. for LED
- Round cable insert



(15 mm) 09 06 048 0503

(20 mm) 09 06 048 0504

(20 mm) 09 06 048 0505

Separate accessories
for housings

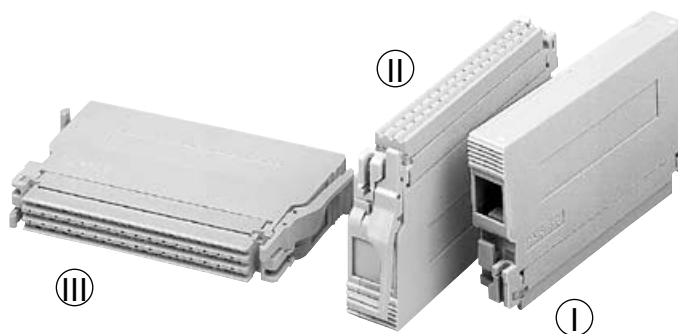
Fitting female connectors

Fitting male connectors

Flat cable access

Housing parts supplied

Shell housing B for types F, H and MH



Identification

Part No.

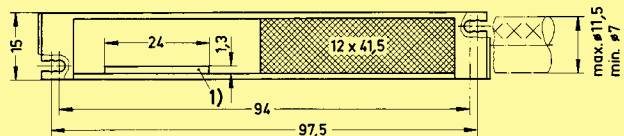
Drawing

Dimensions in mm

Shell housing B

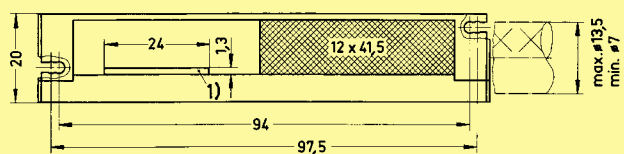
I

15 mm
09 06 048 0503



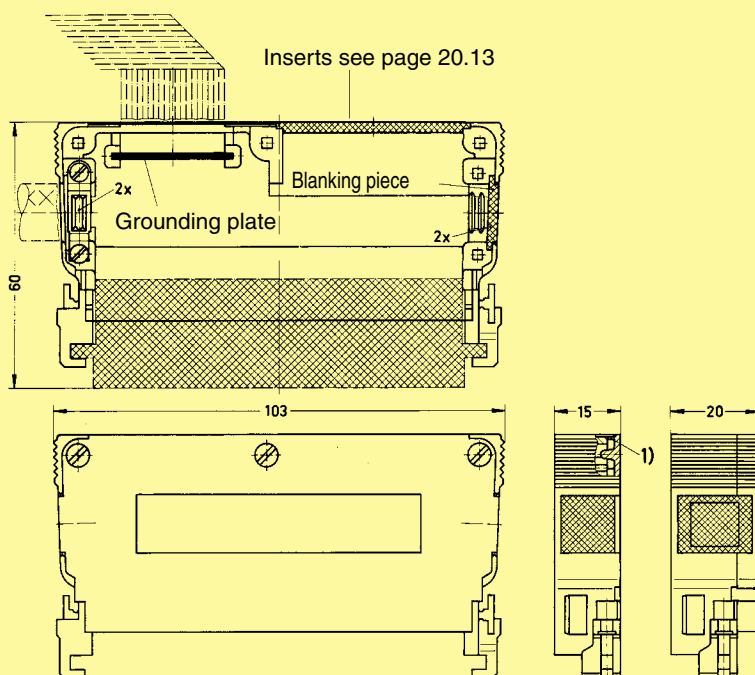
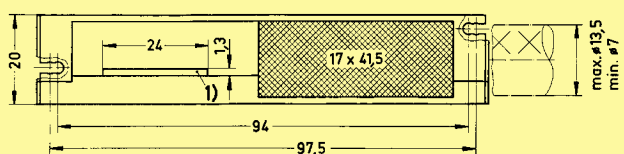
II

20 mm
09 06 048 0504



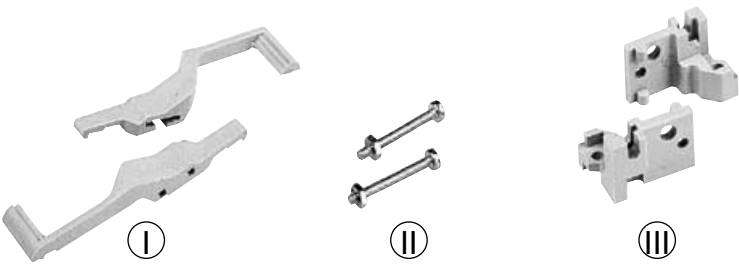
III

20 mm
09 06 048 0505



Shell
 housings

1) Possible access for flat cable (18 x 0.27). Remove the blanking piece

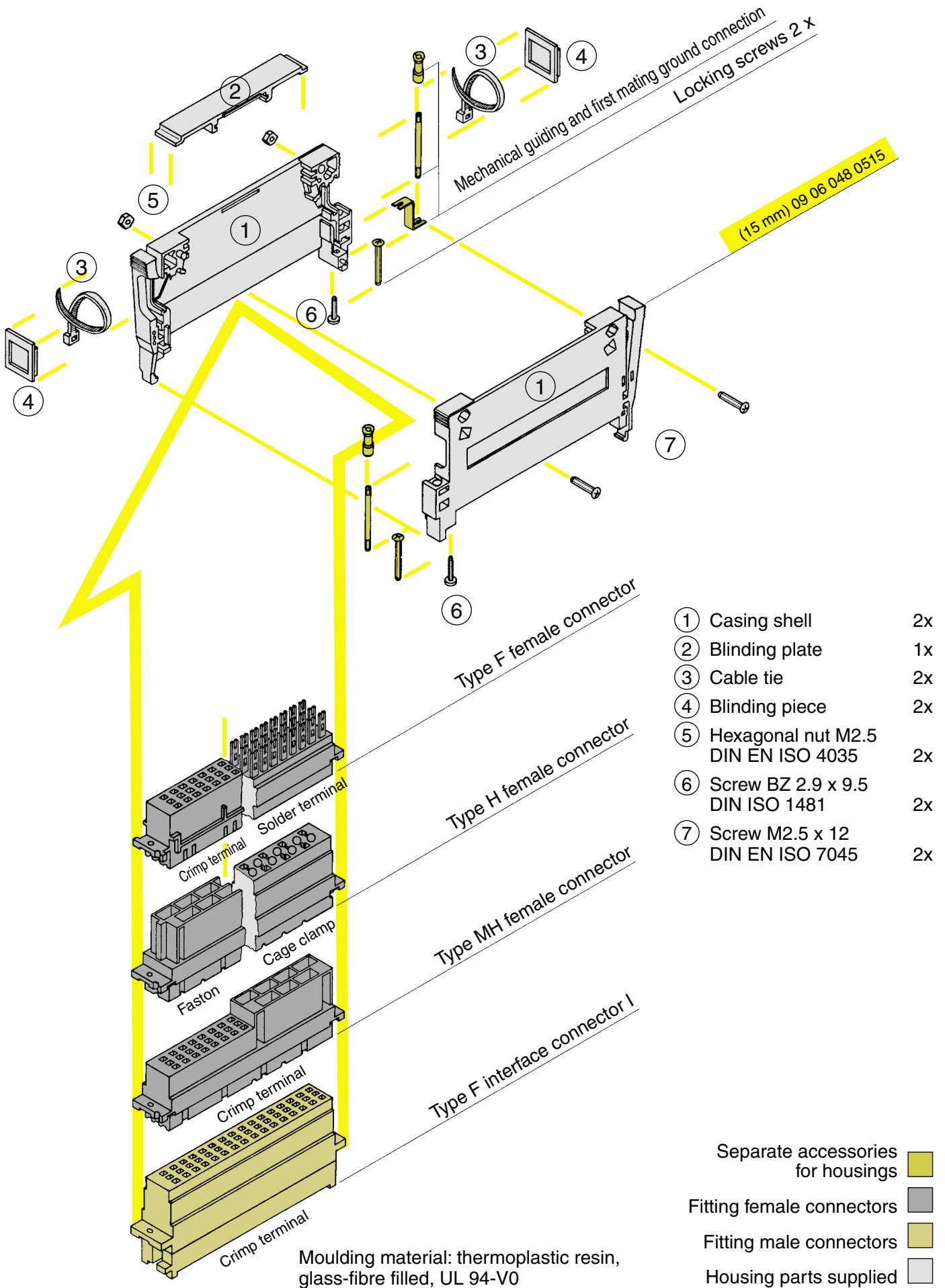


Accessories

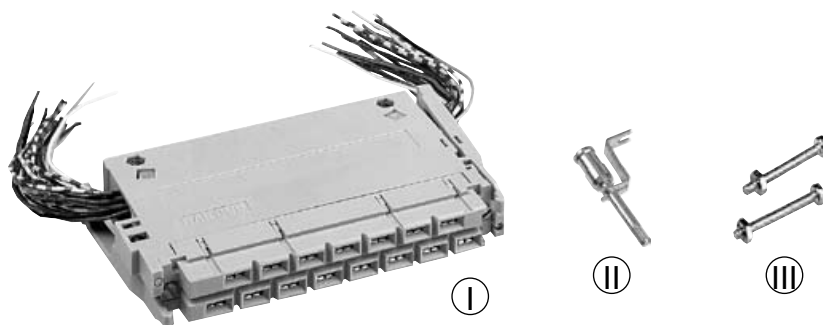
Identification	Part No.	Drawing	Dimensions in mm
Locking lever for shell housing B 09 06 048 0503 ① 09 06 048 0504 09 06 048 0505 1) Order 2 pieces for one shell housing	09 06 000 9913¹⁾ left 09 06 000 9913 right 09 06 000 9919		
Locking screws ② 1) Order 2 pieces for one shell housing	09 06 000 9926¹⁾		
Fixing brackets B for male connectors for 19" racks according to DIN EN 60297, part 3-101 Multiple fixing without nut with nut M 2.5 DIN 562 Single fixing without nut ③	left 09 06 000 9907 right 09 06 000 9908 left 09 06 000 9966 right 09 06 000 9967 left 09 06 000 9909 right 09 06 000 9910		



Shell housings



Shell housing D 15 for types F, H and MH



Identification

Part No.

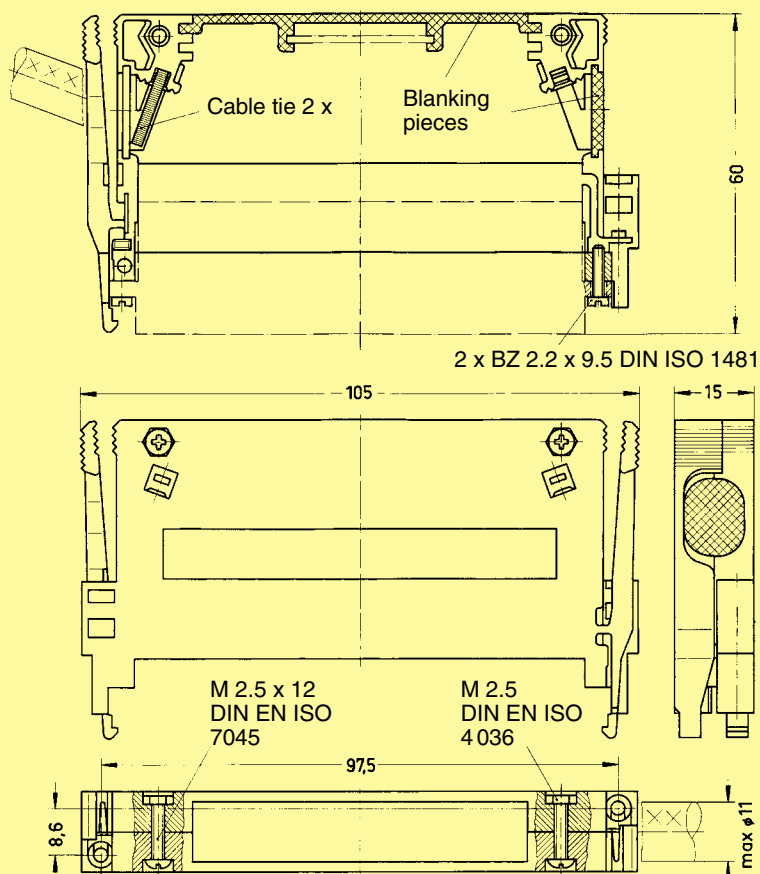
Drawing

Dimensions in mm

Shell housing D 15

I

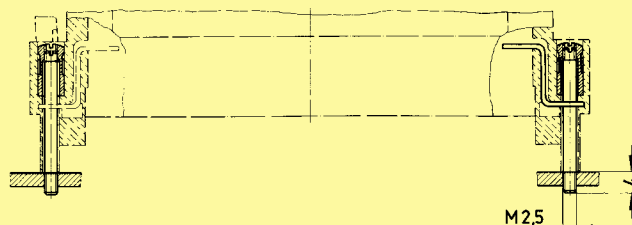
15 mm
09 06 048 0515



Mechanical guiding
and first mating
ground connection

II

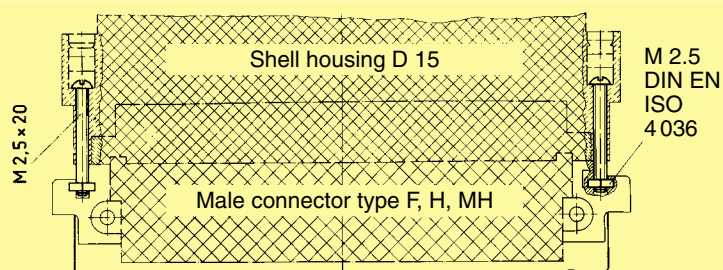
09 06 000 9961



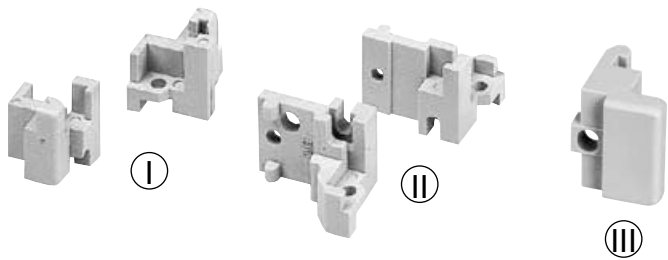
Locking screws

III

09 06 000 9926¹⁾



¹⁾ Order 2 pieces
for one shell housing

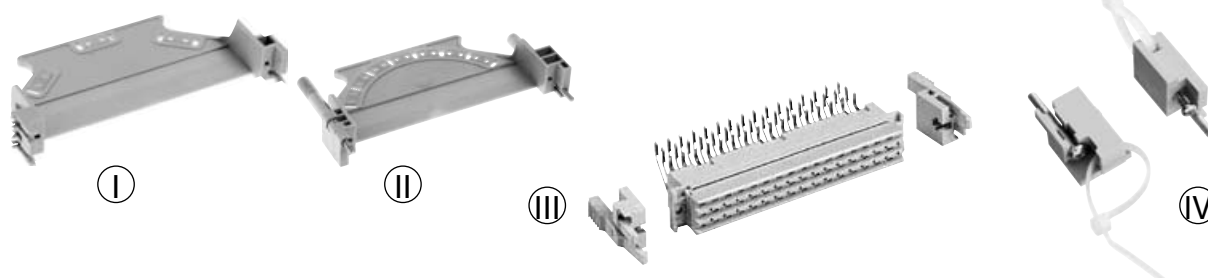


Accessories

Identification	Part No.	Drawing	Dimensions in mm
Fixing brackets B for male connectors for 19" racks according to DIN EN 60 297, part 3-101 Multiple fixing without nut ① with nut M 2.5 DIN 562	left 09 06 000 9907 right 09 06 000 9908 left 09 06 000 9966 right 09 06 000 9967		
Single fixing without nut ②	left 09 06 000 9909 right 09 06 000 9910		
Fixing brackets B for female connectors for 19" racks according to DIN EN 60 297, part 3-101 Multiple fixing ③	09 06 000 9933¹⁾		

¹⁾ Order 2 pieces for one female connector

²⁾ nut and screw not supplied with fixing brackets



Identification	Part No.	Drawing	Dimensions in mm
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Open hood G I

for types E, F, H and MH, for applications

A B C

Supplied with:

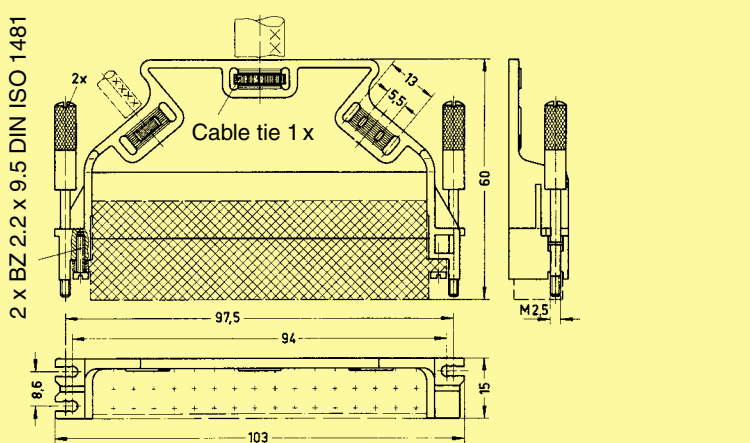
Open hood 1x

Locking screw 2x
(09 06 000 9958)

Cable tie 1x

Screw 2x

09 06 000 9957



Open hood G II

for types E, F, H and MH, for application

C

Supplied with:

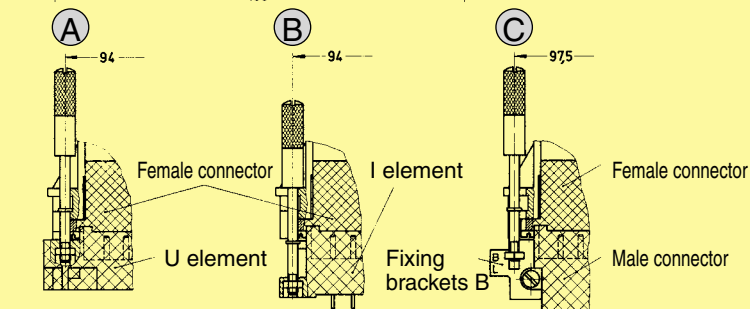
Open hood 1x

Pre-assembled, undetachable locking screw 2x

Cable tie 1x

Screw 2x

09 06 001 9939



Junction element O

for type F

IV

Supplied with:

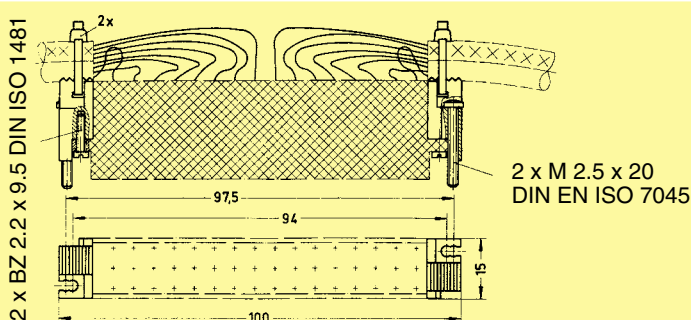
Junction element 2x

Cable tie 2x

Screw 2x

Screw M2.5 x 20 2x

09 06 000 9968



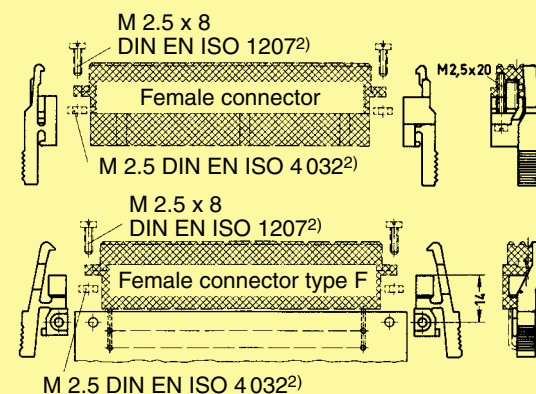
Locking lever

for type F, H and MH

III

09 06 000 9930¹⁾

09 06 000 9911¹⁾

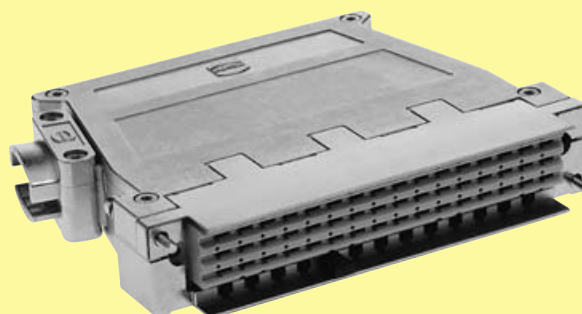
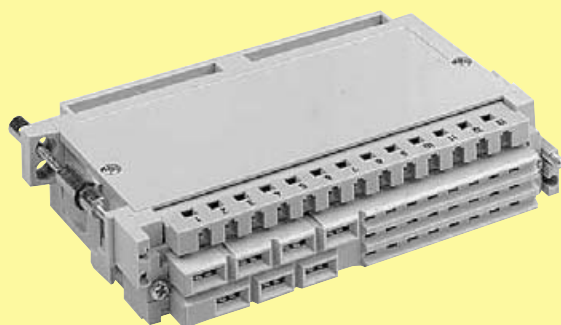


²⁾ nut and screw not supplied with locking levers

¹⁾ Order 2 pieces for one female connector



Moulding material: thermoplastic resin, glass-fibre filled, UL 94-V0



Fitting female connectors

Part-No.	Type	D 20/2	D 20/4	D 20 metal	D 20 metal HF
09 06 2__ _823	F with open solder lugs	X		X	X
09 06 2__ _853	F with closed solder lugs	X		X	X
09 06 248 3201	F moulding for crimp contacts	X	X	X	X
09 06 215 2871	H for faston	X		X	X
09 06 015 2813	H with cage clamps	X		X	X
09 06 231 2881	MH moulding for crimp contacts	X		X	X

Order example:

32 = 32 contacts
48 = 48 contacts

09 06 2__ _853



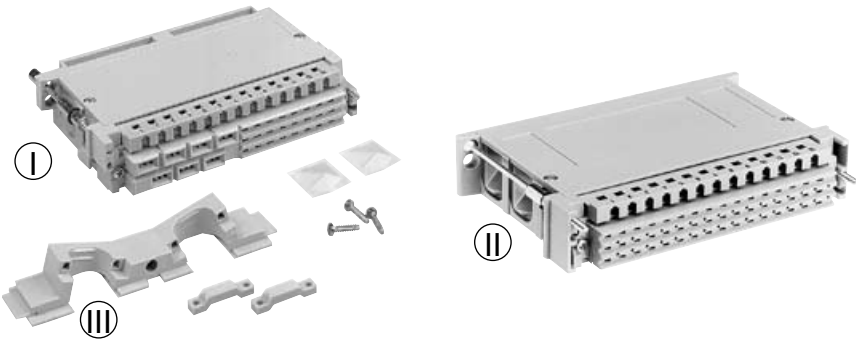
7 = performance level 3
6 = performance level 2
2 = performance level 1

Technical characteristics

	D 20/2	D 20/2 metallised ¹⁾	D 20/4	D 20/4 metallised ¹⁾	D 20 metal	D 20 metal HF
Part No.	09 06 048 0521	09 06 948 0521	09 06 048 0522	09 06 948 0522	09 06 848 0550	09 06 848 0551
Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Zinc alloy	Zinc alloy
Surface	none	nickel/copper	none	nickel/copper	nickel-plated	nickel-plated
Weight [g]	36	44	43	52	182	188
Cable entries	side (2 x), top (2 x)	side (2 x), top (2 x)	side (4 x)	side (4 x)	side (2 x), top (2 x)	side (2 x), top (2 x)
Protection	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20

¹⁾ upper temperature limit is +105 °C

Shell housing D 20 for types F, H and MH



Identification	Part No.	Drawing	Dimensions in mm
Shell housing D 20/2 Two side cable entries I	20 mm 09 06 048 0521		
Shell housing D 20/4 Four side cable entries II Supplied with: Shell 1x Cover 1x Locking screw 2x Locking washer 2.3 2x Screw BZ 2.2x9.5 12x Blinding piece 3x Cable clamp 2x	20 mm 09 06 048 0522		
Inserts e. g. for LED*			
for 55 mm height	09 06 000 9986		
for 60 mm height	09 06 000 9987		
Round cable insert* 2 x Ø 11 III	09 06 000 9988		
Flat cable insert*	09 06 000 9989		

* Fits D 20/2



Coding

Identification	Part No.	Drawing	Dimensions in mm
Code comb for shell housing³⁾ (can also be used as a blanking cover) I	09 06 000 9984		
Coding pin³⁾ II 1) Order 13 pieces per code comb	09 06 001 9905 ¹⁾		
Code comb for male connectors³⁾ III	09 06 000 9985		
Mounting possibilities for the code comb in the shell housing D 20/2		2) Use the lower slot when coding the male connector with fixing brackets Mounting example A max. cable entry $\varnothing$ 14 mm to the top, see page 20.23 Mounting example B max. cable entry $\varnothing$ 14 mm to the bottom, see page 20.23	

³⁾ Fits D 20/2 and D 20/4

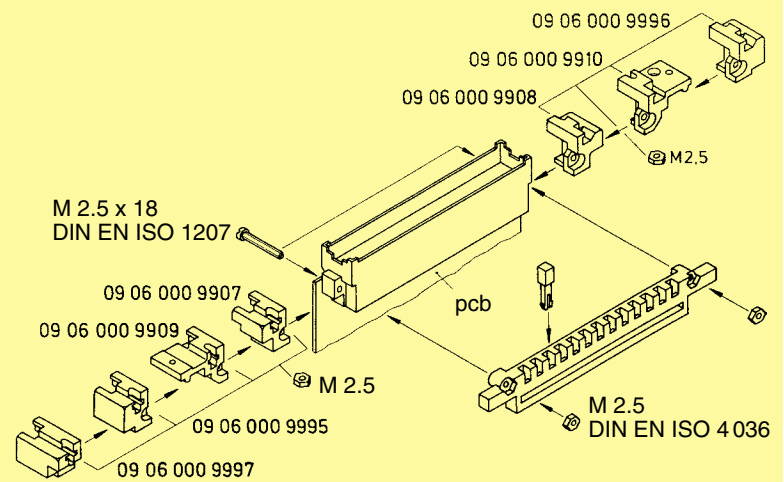
Identification

Part No.

Drawing

Dimensions in mm

Mounting possibilities
for code comb
at the male connector
with fixing brackets



Fixing brackets B
for male connectors*

for 19" racks according
to DIN EN 60 297,
part 3-101

Single fixing*
without nut

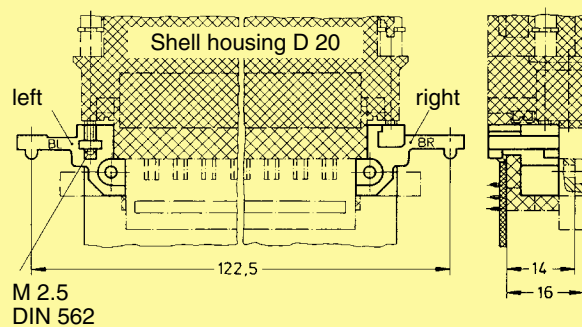
with nut
M 2.5 DIN 562

left
09 06 000 9909

right
09 06 000 9910

left
09 06 001 9934

right
09 06 001 9935



Multiple fixing*

without coding
at the fixing bracket
without nut

without coding
at the fixing bracket
with nut
M 2.5 DIN 562

left
09 06 000 9907

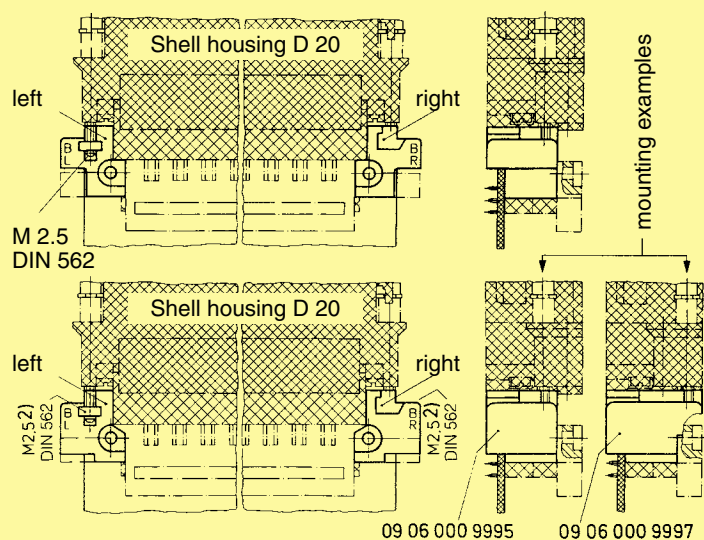
right
09 06 000 9908

left
09 06 000 9966

right
09 06 000 9967

left
09 06 000 9995
09 06 000 9997

right
09 06 000 9996
09 06 000 9998

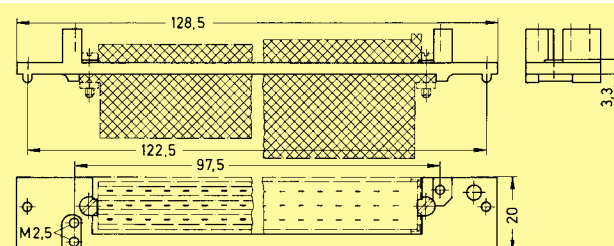


2) supplied with fixing

Protection and fi-
xing strip* for 20 mm
shell housing
Single fixing

fits female connectors
and I element crimp

09 06 001 9909



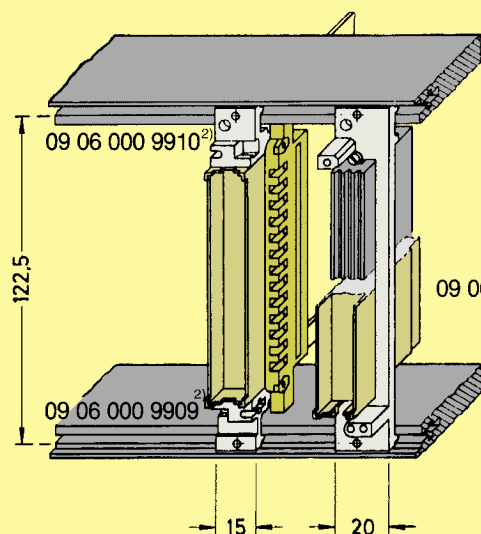
* Fits D 20/2 and D 20/4

1) Specific coding between the fixing bracket and the pcb guiding rail.
The guiding rail and corresponding coding pins are not scope of delivery

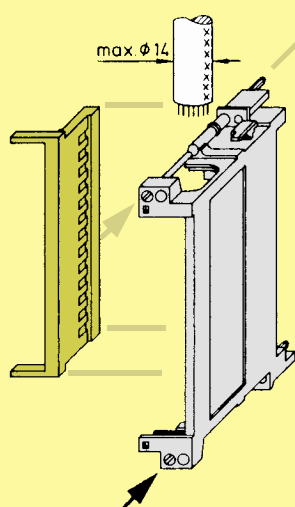
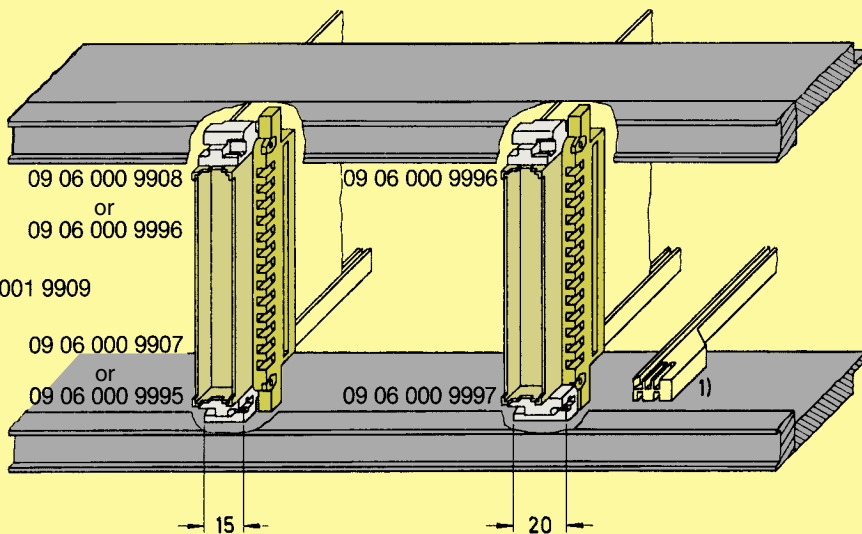
Mounting examples

Dimensions in mm

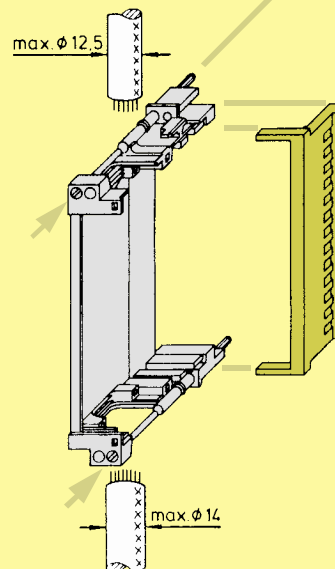
Single fixing



Multiple fixing



Mounting example A²⁾
max. cable entry to the top

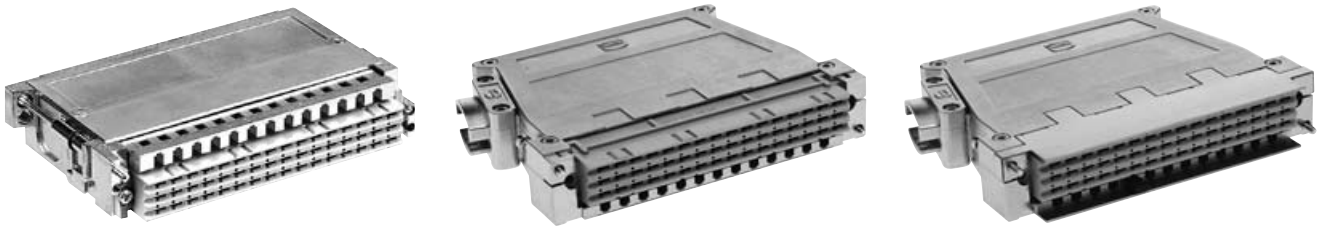


Mounting example B
max. cable entry
to the bottom

¹⁾ Specific coding between the fixing bracket and the pcb guiding rail

²⁾ Max. cable entry (Ø 14 mm) from the bottom with fixing brackets 09 06 901 9924/...9925 possible. See page 20.29.

- Separate accessories for housings
- Fitting female connectors
- Fitting male connectors
- Fixing brackets
- Housing parts supplied



EMC with HARTING connectors

HARTING offers metallised D 20 housings and full metal housings for EMC connectors according to IEC 60603-2. Its strong EMI characteristics and metallised fixing elements offers optimal shielding and grounding.

The connection of the cable braid to different types of connector housings, as well as the influence of the connector itself on EMC characteristics of an instrument application, were analysed in regard to **the shielding effectiveness against electromagnetic radiation**. The shielded signal data lines of a railway application were carried via two eurocard pcb's installed into a 19"-rack. The fixing of the cable braid was realised with different HARTING D 20 housings.

The application including the connectors was then exposed to RF signals, transient bursts and electrostatic discharges.

The standard plastic housings showed minimal EMC performance. The EMC performance of metallised and full metal housings showed significant improvements.

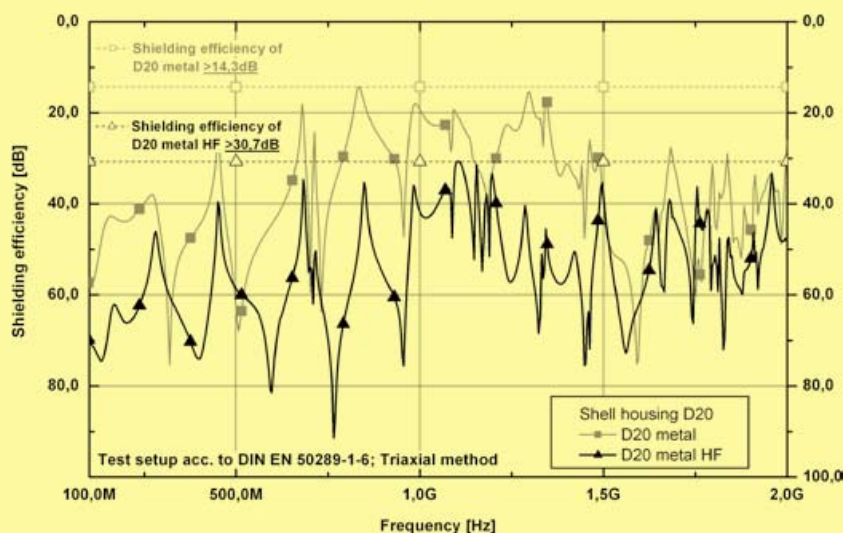
One advantage of metallised housings is their reduced weight (40 grams compared to 180 grams of a full metal housing). Therefore, minimal interference is applied to the pcb in applications where strong vibration is occurring. The HARTING housings are comparatively light through the use of metallised plastic.

The main advantages of a full metal housing are improved cable braid fixing, easy mounting and robustness.

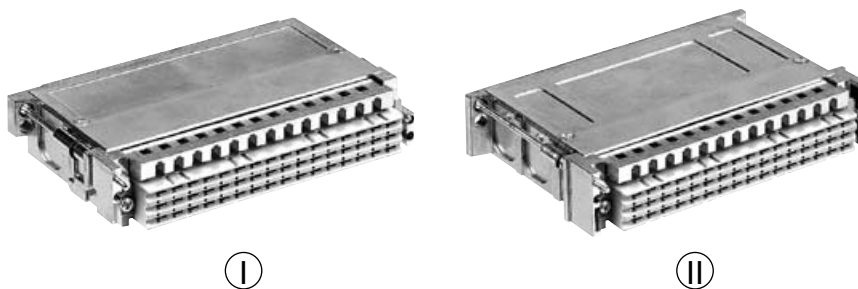
In general, one should keep in mind that an unshielded cable entry leads to loss of the shielding against electromagnetic interference.

"A high-resistance interruption of the cable shield (e.g. by using "pigtailed" via twisted stranded wires of the cable shield) may affect the EMC performance and therefore cause unacceptable effects to the electromagnetic environment."

These housings are applied in electronic installations of the railway vehicles of the GERMAN RAILWAY. They are also recommended for stationary installations of the GERMAN RAILWAY (see norm BN 74016, part 1 of December 1989).



Shell housing D 20 metallised for types F, H and MH

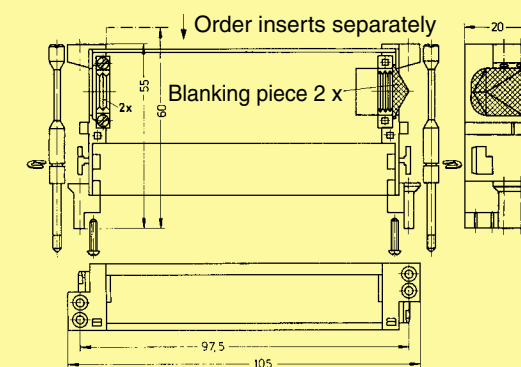


Identification	Part No.	Drawing	Dimensions in mm
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Shell housing
D 20/2 metallised
with two side
cable entries

I

20 mm
09 06 948 0521

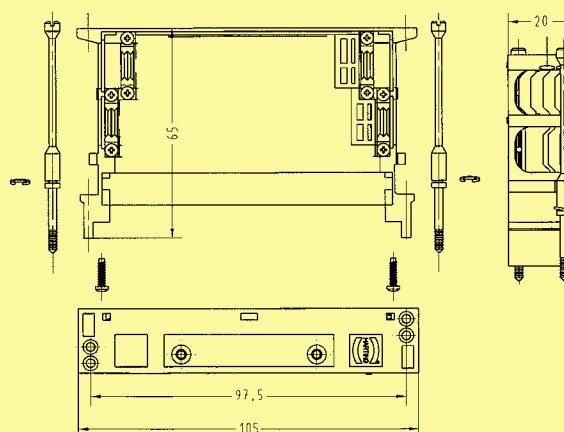


Supplied with:
see page 20.18

Shell housing
D 20/4 metallised
with four side
cable entries

II

20 mm
09 06 948 0522

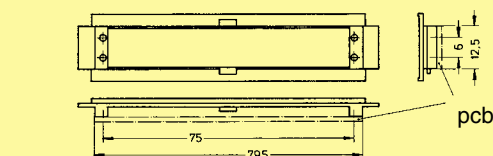


Supplied with:
Shell 1x
Cover 1x
Locking screw 2x
Locking washer 2.3 2x
Screw KA 22x7.5 12x
Blinding piece 3x
Cable clamp 4x

Metallised insert
e. g. for LED*

for 55 mm height

09 06 900 9986



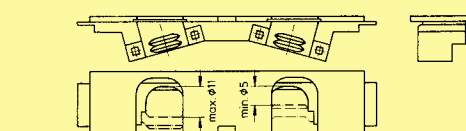
for 60 mm height

09 06 900 9987

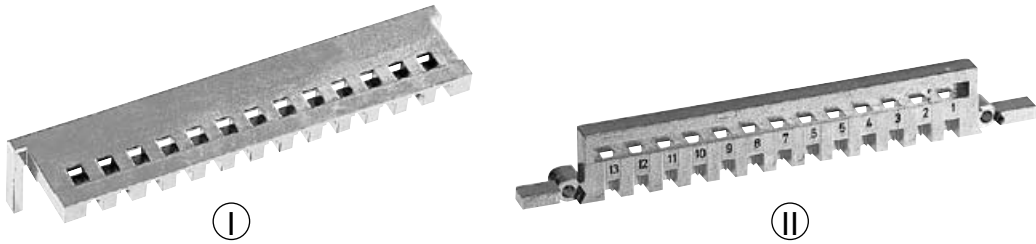


Metallised
round cable insert*
2 x Ø 11

09 06 900 9988



* Fits D 20/2 metallised



Coding

Identification	Part No.	Drawing	Dimensions in mm
Metallised code comb for shell housing³⁾ (can also be used as blanking cover) Ⓘ	09 06 900 9984		
Code pin³⁾ 1) Order 13 pieces per code comb	09 06 001 9905 ¹⁾		
Metallised code comb for male connector³⁾ Ⓢ	09 06 900 9985		
Mounting possibilities for the code comb in shell housing D 20/2 metallised		2) Use the lower slot when coding the male connector with fixing brackets Mounting example A max. cable entry $\varnothing$ 14 mm to the top, see page 20.23 Mounting example B max. cable entry $\varnothing$ 14 mm to the bottom, see page 20.23	

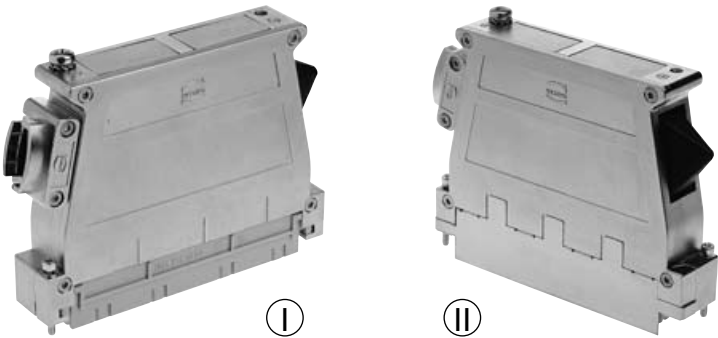
³⁾ Fits D 20/2 and D 20/4 metallised

Identification	Part No.	Drawing	Dimensions in mm
Mounting possibilities for coding at the male connector with fixing brackets			
Fixing brackets B metallised for male connectors* for 19" racks according to DIN EN 60 297, part 3-101 Single fixing* without nut with nut M 2.5 DIN EN ISO 4 036	left 09 06 900 9909 right 09 06 900 9910 left 09 06 901 9934 right 09 06 901 9935	M 2.5 DIN EN ISO 4 036	
Multiple fixing* without coding at fixing bracket without nut without coding at fixing bracket with nut M 2.5 DIN 562 with coding at fixing bracket ¹⁾ with nut M 2.5 DIN 562	left 09 06 900 9907 right 09 06 900 9908 left 09 06 900 9966 right 09 06 900 9967 left 15 mm 09 06 900 9995 20 mm 09 06 900 9997 right 15 mm 09 06 900 9996	M 2.5 DIN 562 mounting examples 09 06 900 9995 09 06 900 9997	
Protection and fixing* strip for 20 mm shell housing Single fixing fits female connectors and I element crimp	09 06 001 9909		

* Fits D 20/2 and D 20/4 metallised

¹⁾ Specific coding between the fixing bracket and pcb guiding rail

Shell housing D 20 metal for types F, H and MH



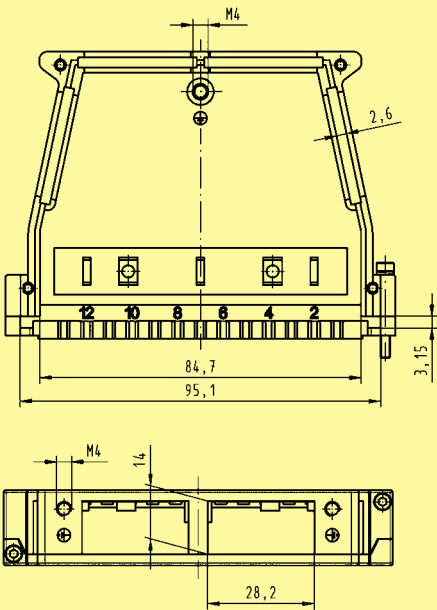
Identification	Part No.	Drawing	Dimensions in mm
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Shell housing
D 20 metal

I

- Supplied with:
- | | |
|---|----|
| Shell with coding | 1x |
| Cover | 1x |
| Locking screw
(hexagonal)
M2.5 x 22 | 2x |
| Screw (torx)
M2.5 x 10 | 4x |
| Earth screw
M4 x 8 | 2x |

09 06 848 0550

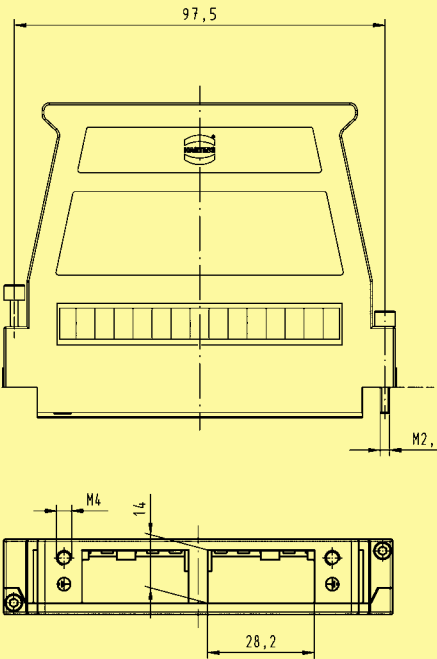


Shell housing
D 20 metal HF
with nickel-plated
surface

II

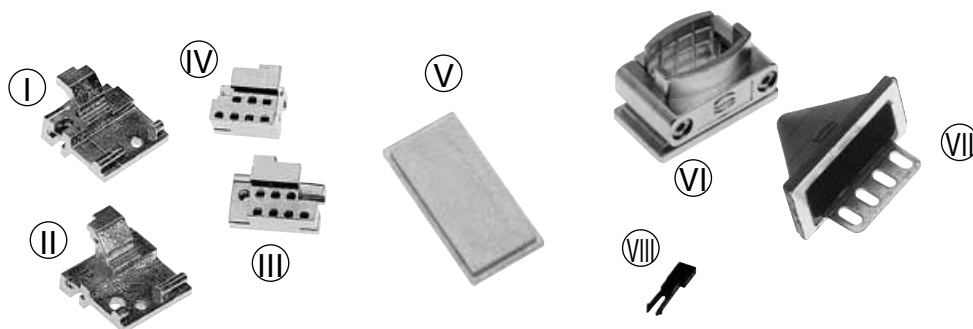
- Supplied with:
- | | |
|--|----|
| Shell with coding
and HF-sealing spring | 1x |
| Cover
with shielding plate | 1x |
| Locking screw
(hexagonal)
M2.5 x 22 | 2x |
| Screw (torx)
M2.5 x 10 | 4x |
| Earth screw
M4 x 8 | 2x |

09 06 848 0551



Shell
 housings

Shell housing D 20 metal HF for types F, H and MH



Identification	Part No.	Drawing	Dimensions in mm
Fixing brackets B metallised for male connectors for 19" racks according to DIN EN 60 297, part 3-101 Single fixing with nut M 2.5 DIN EN ISO 4 036	left 20 mm 09 06 901 9924 right 20 mm 09 06 901 9925		
Multiple fixing with coding at fixing bracket with nut M 2.5 DIN 562	left 20 mm 09 06 900 9997 right 15 mm 09 06 900 9996		
Blinding piece	09 06 800 9951		
Cable clamp	09 06 800 9955		
Cable grommet with strain relief	09 06 800 9950		
Code pin	09 06 001 9906	Order 13 pieces per code comb 	
Earth screw	09 06 800 9958		

For applications where robust, high density, splash-proof connectors are required, e.g. in the automated control and industrial processing systems, HARTING have combined the proven reliability of DIN 41 612 connectors with standard Han® 24 B heavy duty hoods and housings, to bring forward a connector system with up to 96 ways and various contact plating thicknesses to suit the individual requirements.

Advantages

- The combination enhances design flexibility, as it permits an identical wiring interface between the standard 19" racking systems and the peripheral equipment.
- Simplified stock-holding, identical operating tools.

Inserts

Female	2 x 48 way type F female connectors with crimp contact elements see chapter 02
Male	2 x 48 way type F interface connectors I with crimp contact elements see chapter 02

Hoods and housings

see catalogue "Heavy Duty Han® Connectors"

chapter 30
size 24 B

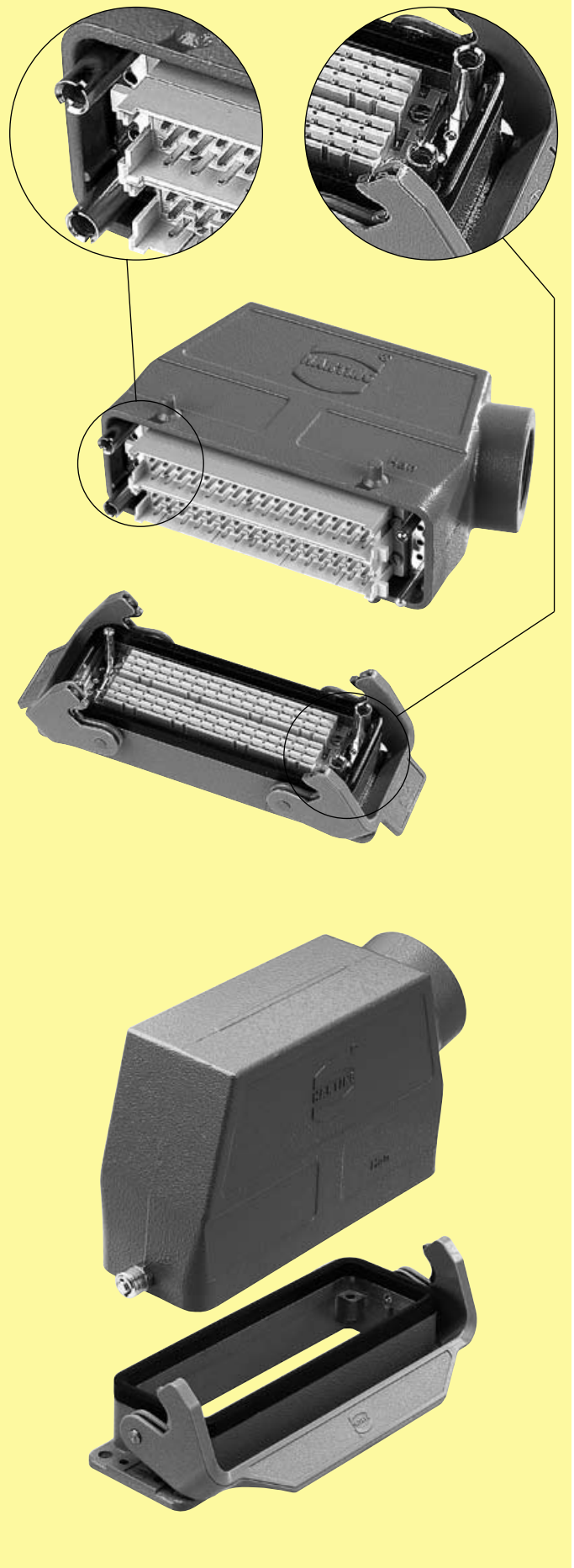
Degree of protection for hoods and housings: IP 65

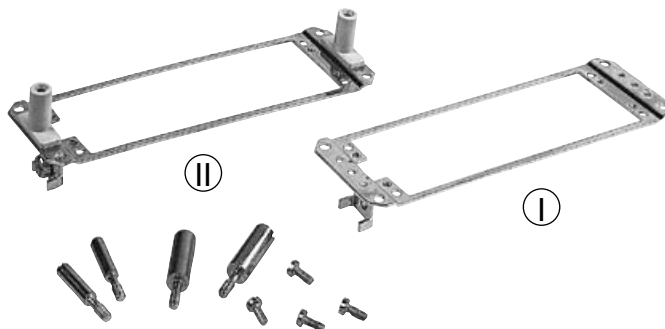
Retaining frames

For fixing the inserts into the housing.

Alternative versions with pre-mating contacts and ground termination.

If the working voltages are in excess of 42 V (50 V) it is essential to use retaining frames which have pre-mating ground contacts.





Identification	Part No.	Drawing	Dimensions in mm
Retaining frame without contact elements I	09 06 001 9904		
Retaining frame with 2 contact pins and ground termination	09 06 001 9902		
Retaining frame with 2 contact sockets and ground termination II	09 06 001 9903		
Mounting example		Each retaining frame is supplied with 4 fixing screws for mounting the inserts and with 2 guide pins and sockets that provide mechanical protection for the contacts during mating and disconnection. These can also be used as a coding system to prevent cross plugging of adjacent connectors. Connectors in the retaining frame with contact sockets	

Shell housings

