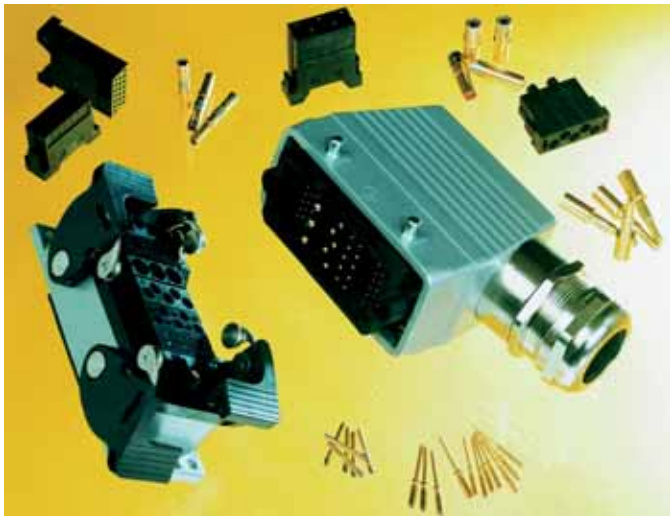


Heavy Duty Modular Connectors

- Heavy duty modular rectangular connector for signal, power, fiber optics, databus and coaxial contacts.
- From 1 mm to 3.5 mm nominal pin DIA crimp contacts; 3, 5, 10 and 20 module contact positions, 2, 3, 5, 7, 10 and 14 modules per connector.
- Different housing and hoods, single or double locking system, available. Floating rack and panel frame available on request. Side or top cable entry options.
- Special high creepage and clearance modules and housing with metallic levers for railways application.
- 3-way fiber optics modules according to DIN 41626-3 available on request.
- IP67 standard aluminium shells; IP68 screw mountable hoods for special applications with higher electromagnetic compatibility; special shells for harsh environment also available
- High shock and vibration proof, EMI and RFI protection.
- Conforms to DIN 43652 standards. NF F61-030 railways approved. UL approval in progress.
- For Mass Transit, Industrial and Robotics applications

Technical Characteristics

Contact Number	6 to 280
Contact Diameter	1 mm to 3.5 mm nominal pin DIA
Current Rating	5A to 60A
Contact Resistance	0.3 to 7.0 mΩ
Rated Voltage (1)	63 to 630 V depending on module
Rated Impulse Withstanding Voltage (2)	1.5 to 8 kV depending on module
Contact Life Cycle	>1.000
Installation Category (1)	III
Temperature Range	-40 °C to +125 °C
Insulation Resistance	$>10^{10}$ Ω
Insulator	Polyammide VO per UL94 conforming to NF-F-16102 Es.3
Contact - Material - Plating	 Brass Gold Plate
Sealing	IP67

(1) According to DIN VDE0110T2/1.89
(2) According to IEC 512/3 (80% derating)

Ordering Information

Standard hardware for industrial applications

ST1070	HM	* *	* *	*	/	*	/	* * *	*	* * *	*	T

HYPERTAC SPEC.

SERIES

Contact plating

Cable seal

No cable seal	**0**
Min wire size	**P**
Max wire size	**G**

Connector type

Receptacle - male frame	**EM**
Receptacle - female frame	**EF**
Plug - male frame	**PM**
Plug - female frame	**PF**
Extension - male frame	**RM**
Extension - female frame	**RF**

Cable entry*

For housing hoods and coupler hoods:	
1 entry for PG13.5	**113**
1 entry for PG16	**116**
1 entry for PG21	**121**
1 entry for PG29	**129**
1 entry for PG36	**136**
Only for housings: bottom entry	**000**
2 entry for PG16	**216**
2 entry for PG21	**221**
2 entry for PG29	**229**
No housing or hood	**000**

** Metric version available*

Number of modules

02, 03, 05, 07, 10, 14

Shielding degree

Standard housings/hoods	
Not shielded	**N**
Electrical continuity	**C**
Shielded	**S**
Special (harsh environments) housings/hoods	
Special not shielded	**R**
Special electrical continuity	**K**
Special shielded	**Z**

Housings & hoods

Housings:
A*, B*, C, D, E, F, G, H
Hoods:
K*, I, L*, M*, N*, O, P*, Q, R*, S*, T, U, V*
Coupler hoods:
Y*, Z*
No housing or hood
0

*special version for harsh environments available

Element progression *(see module section)*

20 ways	
insulator without contacts	**V0F-V0M**
insulator with female contacts HC1	**VAF-VEF**
insulator male contacts ø1	**VAM-VEM**
10 ways	
insulator without contacts	**D0F-D0M**
insulator with female contacts HC1.5	**DAF-DEF**
insulator with male contacts ø1.5	**DAM-DEM**
10 ways (higher creepage and clearance)	
insulator without contacts	**B0F-B0M**
insulator with female contacts HC1.5	**BEF**
insulator with male contacts ø1.5	**BEM**
05 ways	
insulator without contacts	**C0F-C0M**
insulator with female contacts HC2.5	**CAF-CEF-CIF**
insulator with male contacts ø2.5	**CAM-CEM-CIM**
03 ways	
insulator whitout contacts	**T0F-T0M**
insulator with female contacts HC3.5	**TAF-TEF**
insulator with male contacts ø3.5	**TAM-TEM**
03 ways	
insulator without contacts	**T0X-T0Y**
insulator with female coaxial contacts	**TAX**
insulator with male coaxial contacts	**TAY**

Polarization

Not polarized	**C00**
With coding pins	**C01÷C12**
With guiding pins and sleeves	**D01÷D31**

Example

ST1070 HMEF03N/2VEF-1TEF/C00E129PT

"EF"	Description for a receptacle connector with female frame
"03"	Three modules
"N"	Not shielded
"2VEF-1TEF"	Two elemnts VEF (2x20 ways) end an element TEF (1x3 ways)
"C00"	Not codified
"E129"	Wall mount housing with double locking system and with 1 entry for cable seal Pg29
"P"	Cable seal Pg29 for min. wire size
"T"	Contact gold plated (standard)

Ordering Information

Floating hardware

ST1070	HM	* *	* *	*	/	*	/	C00	0 000	0	T

HYPERTAC SPEC.

SERIES

Connector type

Floating plug - male frame	1M
Floating plug - female frame	1F
Floating receptacle - male frame	2M
Floating receptacle - female frame	2F

Number of modules

02, 03, 05, 07

Shielding degree

Not shielded	N
Electrical continuity	C

Contact plating

Cable seal
No cable seal

Housings, hoods & cable entry
No housing or hood

Polarization
Not polarized

Element progression
See standard series ST1070

Ordering Information

Hardware for railways applications *(NF F61-030 approved)*

ST1080	HM	* *	* *	*	/	*	/	* * *	*	* * *	*	T

HYPERTAC SPEC.

SERIES

Connector type

Receptacle - male frame	EM
Receptacle - female frame	EF
Plug - male frame	PM
Plug - female frame	PF
Extension - male frame	RM
Extension - female frame	RF

Number of modules

02, 03, 05, 07, 10, 14

Shielding degree

Not shielded	N
Special not shielded	R

Contact plating

Cable seal
See standard series ST1070

Cable entry
See standard series ST1070

Housings & hoods
See standard series ST1070

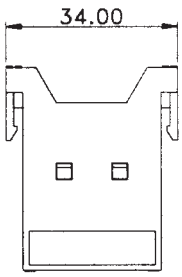
Polarization
See standard series ST1070

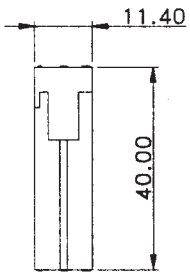
Element progression
See standard series ST1070

Available modules

20 ways (1mm HC contacts)

Module for female socket contacts

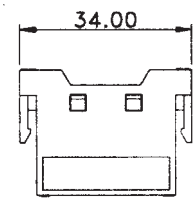


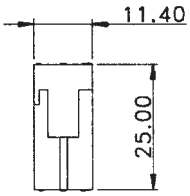


Conductor size AWG28-24	0.08-0.20 mm²	**Code Ref.** VAF*
Conductor size AWG24-20	0.20-0.62 mm²	**Code Ref.** VEF*
Insulator without contacts		**Code Ref.** VOF

*20 crimp contacts supplied not assembled

Module for male pin contacts





Conductor size AWG28-24	0.08-0.20 mm²	**Code Ref.** VAM*
Conductor size AWG24-20	0.20-0.62 mm²	**Code Ref.** VEM*
Insulator without contacts		**Code Ref.** VOM

*20 crimp contacts supplied not assembled

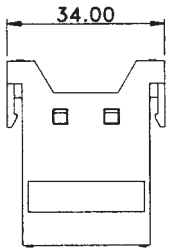
Rated Voltage DIN 0110	63V
Rated Impulse Withstanding voltage DIN 0110	1.5KV
Current Rating (max wire ref. 25° C)	9A
Current UL Rating	5A
Creepage DIN 0110	1.8mm

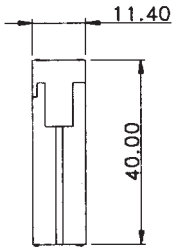
Dimensions are in mm

Available modules

10 ways (1.5 mm HC contacts)

Module for female socket contacts

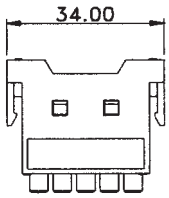


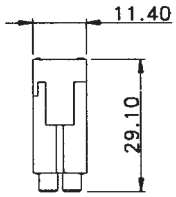


Conductor size AWG24-20	0.20-0.62 mm²	**Code Ref.** DAF*
Conductor size AWG20-16	0.62-1.30 mm²	**Code Ref.** DEF*
Insulator without contacts		**Code Ref.** DOF

*10 crimp contacts supplied not assembled

Module for male pin contacts





Conductor size AWG24-20	0.20-0.62 mm²	**Code Ref.** DAM*
Conductor size AWG20-16	0.62-1.30 mm²	**Code Ref.** DEM*
Insulator without contacts		**Code Ref.** DOM

*10 crimp contacts supplied not assembled

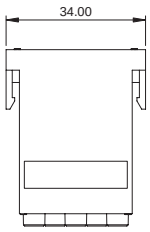
Rated Voltage DIN 0110	250V
Rated Impulse Withstanding voltage DIN 0110	2.5KV
Current Rating (max wire ref. 25° C)	20A
Creepage DIN 0110	3.6mm

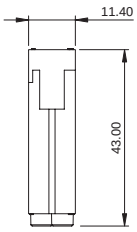
Dimensions are in mm

Available modules

10 ways higher creepage and clearance (1.5 mm HC contacts)

Module for female socket contacts

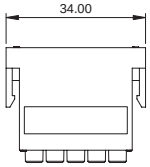


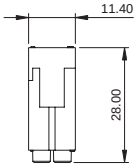


Conductor size AWG24-14	0.22-1.91 mm^2	**Code Ref.** BEF*
Insulator without contacts		**Code Ref.** BOF

*10 crimp contacts supplied not assembled

Module for male pin contacts





Conductor size AWG24-14	0.22-1.91 mm^2	**Code Ref.** BEM*
Insulator without contacts		**Code Ref.** BOM

*10 crimp contacts supplied not assembled

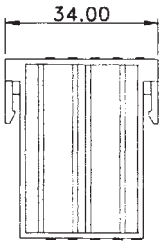
Rated Voltage DIN 0110	250V
Rated Impulse Withstanding voltage DIN 0110	2.5KV
Current Rating (max wire ref. 25° C)	20A
Current UL Rating	8A
Creepage DIN 0110	9.25mm

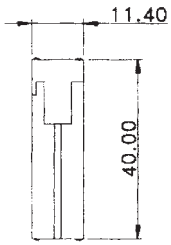
Dimensions are in mm

Available modules

5 ways (2.5 mm HC contacts)

Module for female socket contacts

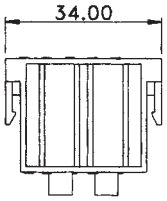


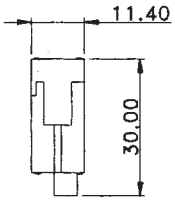


Conductor size AWG20-16	0.50-1.22 mm²	**Code Ref.** CAF*
Conductor size AWG16-14	1.22-2.10 mm²	**Code Ref.** CEF*
Conductor size AWG14-10	2.10-5.40 mm²	**Code Ref.** CIF*
Insulator without contacts		**Code Ref.** COF

*5 crimp contacts supplied not assembled

Module for male pin contacts





Conductor size AWG20-16	0.50-1.22 mm²	**Code Ref.** CAM*
Conductor size AWG16-14	1.22-2.10 mm²	**Code Ref.** CEM*
Conductor size AWG14-10	2.10-5.40 mm²	**Code Ref.** CIM*
Insulator without contacts		**Code Ref.** COM

*5 crimp contacts supplied not assembled

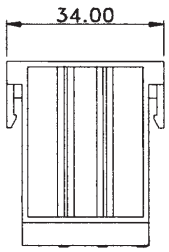
Rated Voltage DIN 0110	400V
Rated Impulse Withstanding voltage DIN 0110	4KV
Current Rating (max wire ref. 25° C)	30A
Current UL Rating	25A
Creepage DIN 0110	5.6mm

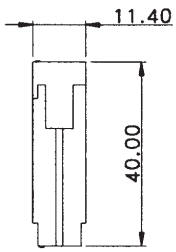
Dimensions are in mm

Available modules

3 ways (3.5 mm HC contacts)

Module for female socket contacts

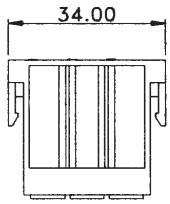


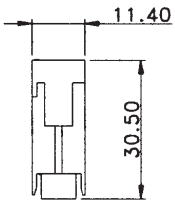


Conductor size AWG12-10	3.0-5.4 mm²	**Code Ref.** TAF*
Conductor size AWG8	10 mm²	**Code Ref.** TEF*
Insulator without contacts		**Code Ref.** TOF

*3 crimp contacts supplied not assembled

Module for male pin contacts





Conductor size AWG12-10	3.0-5.4 mm²	**Code Ref.** TAM*
Conductor size AWG8	10 mm²	**Code Ref.** TEM*
Insulator without contacts		**Code Ref.** TOM

*3 crimp contacts supplied not assembled

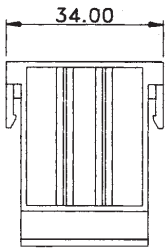
Rated Voltage DIN 0110	630V
Rated Impulse Withstanding voltage DIN 0110	8KV
Current Rating (max wire ref. 25° C)	60A
Current UL Rating	50A
Creepage DIN 0110	12.5mm

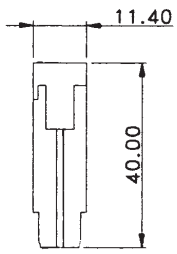
Dimensions are in mm

Available modules

3 ways (coaxial contacts)

Module for female socket contacts

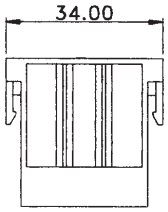


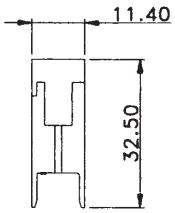


Insulator with contacts **Code Ref.** TAX*
Insulator without contacts **Code Ref.** TOX

*3 coax contacts supplied not assembled

Module for male pin contacts





Insulator with contacts **Code Ref.** TAY*
Insulator without contacts **Code Ref.** TOY

*3 coax contacts supplied not assembled

Characteristic impedence	50 Ohm
Working frequency	
• Optimum	0-10 GHz
• Maximum	30 GHz

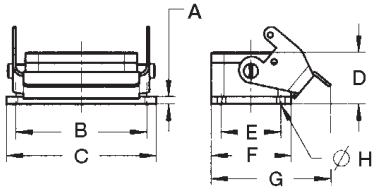
Note
Hyperboloid Coaxial Contacts available on request, ask to the factory for details
Fiber Optics Contacts available on request, ask to the factory for details

Dimensions are in mm

Housing and Hoods Styles

Receptacles

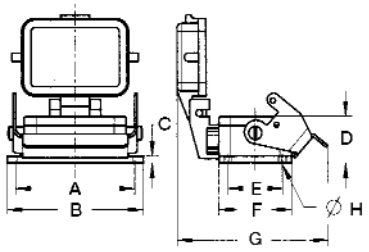
Panel housing with single locking system



Dimensions	2 Modules	3 Modules	5 Modules	7 Modules	14 Modules
A	4	4	5	5	9
B	70	83	103	130	148
C	80	93	114	140	165
D	27	27	27	27	41
E	32	32	32	32	70
F	43	43	43	43	90
G	65	67	67	67	157
H	4.5	4.5	4.5	4.5	6.3
Code Ref.*	B000	B000	B000	B000	B000

Note
Special panel housing for harsh environment with single locking system available on request

Panel housing with spring cover and single locking system



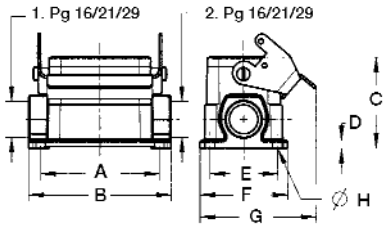
Dimensions	2 Modules	3 Modules	5 Modules	7 Modules	14 Modules
A	70	83	103	130	148
B	80	93	114	140	165
C	4	4	4	5	9
D	27	27	27	27	41
E	32	32	32	32	70
F	43	43	43	43	90
G	90	92	92	67	173
H	4.5	4.5	4.5	4.5	6.3
Code Ref.*	D000	D000	D000	D000	D000

Dimensions are in mm
*See ordering information - sections housing & hoods and cable entry - for description of code references
For railway applications NF F61-030 requires housing and metallic hoods with metalic levers

Housing and Hoods Styles

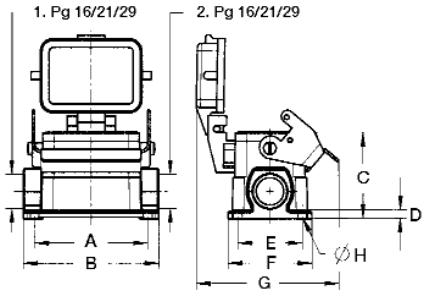
Receptacles

Wall mount housing with single locking system



Dimensions	2 Modules	2 Modules	3 Modules	3 Modules	5 Modules	5 Modules	7 Modules	7 Modules	14 Modules
A	70	70	82	82	105	105	132	132	111
B	84	84	93	93	117	117	144	144	152
C	52	74	52	74	68	84	68	84	100
D	5	5	5	5	5	5	5	5	10
E	40	45	40	45	45	45	45	45	106
F	52	57	52	57	57	57	57	57	120
G	69	73	71	71	74	74	74	74	157
H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	6.3
Code Ref.*	B116	F121	B116	F121	B121	F121	B121	F121	B129
	B216	F221	B216	F221	B221	F221	B221	F221	B229
		F129		F129		F129		F129	
		F229		F229		F229		F229	

Wall Mount housing with Spring Cover and Single Locking System



Dimensions	2 Modules	2 Modules	3 Modules	3 Modules	5 Modules	5 Modules	7 Modules	7 Modules	14 Modules
A	70	70	82	82	105	105	132	132	111
B	84	84	93	93	117	117	144	144	153
C	52	74	52	74	68	84	68	84	100
D	5	5	5	5	5	5	5	5	10
E	40	45	40	45	45	45	45	45	106
F	52	57	52	57	57	57	57	57	120
G	90	90	92	92	92	92	92	92	173
H	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	6.3
Code Ref.*	D116	H121	D116	H121	D121	H121	D121	H121	D129
	D216	H221	D216	H221	D221	H221	D221	H221	D229
		H129		H129		H129		H129	
		H229		H229		H229		H229	

Dimensions are in mm

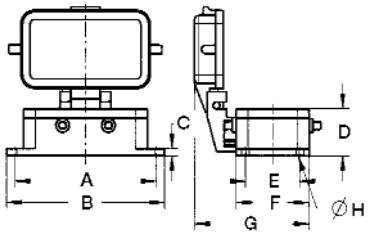
*See ordering information - sections housing & hoods and cable entry - for description of code references

For railway applications NF F61-030 requires housing and hoods with metallic levers

Housing and Hoods Styles

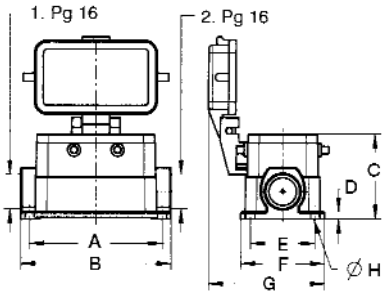
Receptacles

Panel housing with spring cover for double locking system



Dimensions	3 Modules	5 Modules	7 Modules
A	83	103	130
B	93	114	140
C	4	5	5
D	27	27	27
E	32	32	32
F	43	43	43
G	68.5	68.5	68.5
H	4.5	4.5	4.5
Code Ref.*	C000	C000	C000

Wall mount housing with spring cover for double locking system



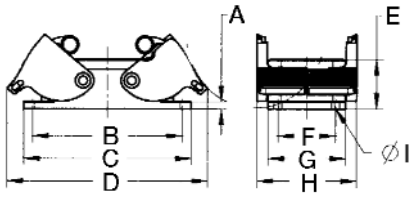
Dimensions	3 Modules	3 Modules	5 Modules	5 Modules	7 Modules	7 Modules
A	82	82	105	105	132	132
B	93	93	117	117	144	144
C	52	74	68	84	68	84
D	5	5	5	5	5	5
E	40	45	45	45	45	45
F	52	57	57	57	57	57
G	73	75.5	75.5	75.5	75.5	75
H	5.5	5.5	5.5	5.5	5.5	5.5
Code Ref.*	C116 C216	G121 G221 G129 G229	C121 C221	G121 G221 G129 G229	C121 C221	G121 G221 G129 G229

Dimensions are in mm
*See ordering information - sections housing & hoods and cable entry - for description of code references

Housing and Hoods Styles

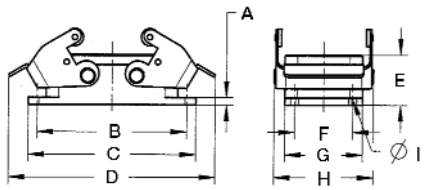
Receptacles

Panel housing with double locking system



Dimensions	3 Modules	5 Modules	7 Modules
A	4	5	5
B	83	103	130
C	93	114	140
D	110	131	157
E	27	27	27
F	32	32	32
G	43	43	43
H	58	58	58
I	4.5	4.5	4.5
Code Ref.*	A000	A000	A000

Panel housing with double locking system and metallic levers *(NF F61-030 approved)*



Dimensions	3 Modules	5 Modules	7 Modules	10 Modules
A	4	5	5	5
B	83	103	130	110
C	93	114	140	124
D	115	138	164	134
E	27	27	27	30
F	32	32	32	65
G	43	43	43	79
H	57	57	57	92
I	4.5	4.5	4.5	5.5
Code Ref.*	A000	A000	A000	A000

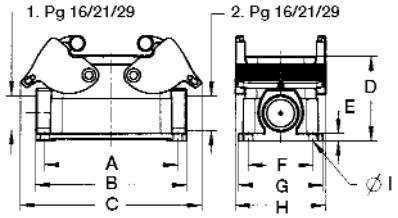
Dimensions are in mm

*See ordering information - sections housing & hoods and cable entry - for description of code references

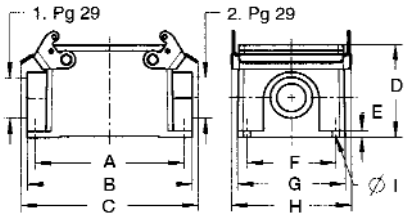
Housing and Hoods Styles

Receptacles

Wall mount housing with double locking system



Modules 2, 3, 5, 7



Modules 10

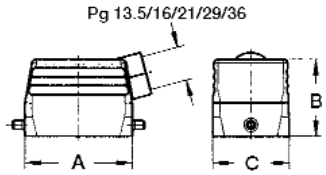
Dimensions	3 Modules	3 Modules	5 Modules	5 Modules	7 Modules	7 Modules	10 Modules
A	82	82	105	105	132	132	112
B	93	93	117	117	144	144	124
C	110	110	131	131	157	157	134
D	52	74	68	84	68	84	72
E	5	5	5	5	5	5	5
F	40	45	45	45	45	45	67
G	52	57	57	57	57	57	81.5
H	58	58	58	58	58	58	92
I	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Code Ref.*	A116 A216	E121 E221 E129 E229	A121 A221	E121 E221 E129 E229	A121 A221	E121 E221 E129 E229	A129 A229

Dimensions are in mm
*See ordering information - sections housing & hoods and cable entry - for description of code references
For railway applications NF F61-030 requires housing and hoods with metallic levers

Housing and Hoods Styles

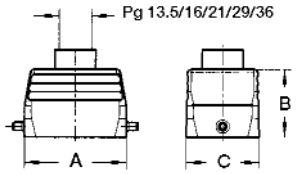
Plugs

Hood for single locking system side cable entry



Dimensions	2 Modules	2 Modules	3 Modules	3 Modules	5 Modules	5 Modules	5 Modules	7 Modules	7 Modules	14 Modules
A	60	60	73	73	94	94	94	120	120	131.5
B	43	72	52	72	60	65	76	60	76	96
C	43	43	43	43	43	43	43	43	43	89
Code Ref.*	S113	U121 U129	S116	U121 U129	S121	T121	U121 U129	S121 S129	U121 U129	U129 U136

Hood for single locking system top cable entry



Dimensions	2 Modules	2 Modules	3 Modules	3 Modules	5 Modules	5 Modules	5 Modules	7 Modules	7 Modules	14 Modules
A	60	60	73	73	94	94	94	120	120	131,5
B	40	72	45	72	45	65	76	56	76	96
C	43	43	43	43	43	43	43	43	43	89
Code Ref.*	V113	X121 X129	V116	X121 X129	V121	W121	X121 X129	V121	X121 X129	X129 X136

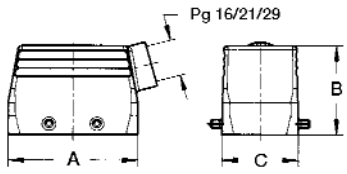
Dimensions are in mm

*See ordering information - sections housing & hoods and cable entry - for description of code references

Housing and Hoods Styles

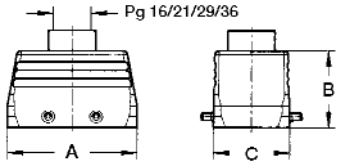
Plugs

Hood for double locking system side cable entry



Dimensions	3 Modules	3 Modules	5 Modules	5 Modules	5 Modules	7 Modules	7 Modules	10 Modules
A	73	73	94	94	94	120	120	94
B	52	72	60	65	76	60	76	80
C	43	43	43	43	43	43	43	79
Code Ref.*	K116	M121 M129	K121	L121	M121 M129	K121 K129	M121 M129	M121 M129

Hood for double locking system top cable entry



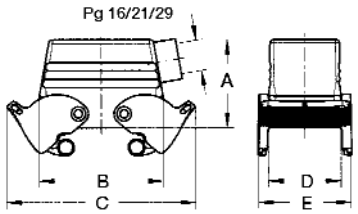
Dimensions	3 Modules	3 Modules	5 Modules	5 Modules	5 Modules	7 Modules	7 Modules	10 Modules
A	73	73	94	94	94	120	120	94
B	45	72	45	65	76	56	76	80
C	43	43	43	43	43	43	43	79
Code Ref.*	N116	R121 R129	N121	P121	R121 R129	N121	R121 R129	R121 R129 R136

Dimensions are in mm
*See ordering information - sections housing & hoods and cable entry - for description of code references

Housing and Hoods Styles

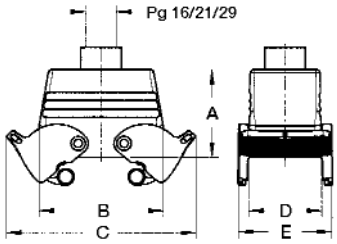
Plugs

Hood with double locking system side cable entry



Dimensions	3 Modules	3 Modules	5 Modules	5 Modules	7 Modules
A	48	72	65	76	76
B	73	73	94	94	120
C	110	110	131	131	157
D	43	43	43	43	43
E	58	58	58	58	58
Code Ref.*	I116	J121 J129	I121	J121 J129	J121 J129

Hood with double locking system top cable entry



Dimensions	3 Modules	3 Modules	5 Modules	5 Modules	7 Modules
A	48	72	65	76	76
B	73	73	94	94	120
C	110	110	131	131	157
D	43	43	43	43	43
E	58	58	58	58	58
Code Ref.*	O116	Q121 Q129	O116	Q121 Q129	Q121 Q129

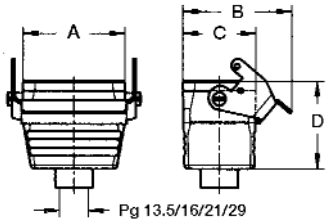
Dimensions are in mm

*See ordering information - sections housing & hoods and cable entry - for description of code references

Housing and Hoods Styles

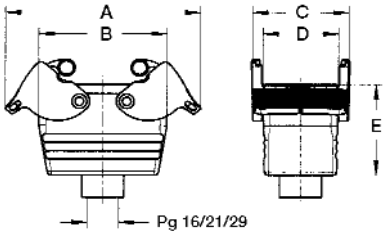
Extensions

Coupler hood with single locking system

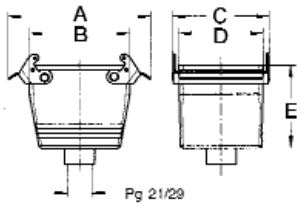


Dimensions	2 Modules	2 Modules	3 Modules	3 Modules	5 Modules	5 Modules	7 modules
A	60	60	73	73	94	94	120
B	65	65	67	67	67	67	67
C	43	43	43	43	43	43	43
D	51.5	73	51.5	73	69	80	80
Code Ref.*	Z113	Z121 Z129	Z116	Z121 Z129	Z121	Z129	Z121 Z129

Coupler hood with double locking system



Modules 3, 5, 7



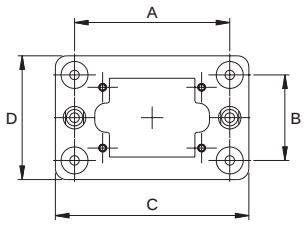
Modules 10

Dimensions	3 Modules	3 Modules	5 Modules	7 Modules	10 Modules
A	110	110	131	157	134
B	73	73	94	120	94
C	58	58	58	58	92
D	43	43	43	43	79
E	51.5	73	80	80	82
Code Ref.*	Y116	Y121 Y129	Y121 Y129	Y121 Y129	Y121 Y129

Dimensions are in mm
*See ordering information - sections housing & hoods and cable entry - for description of code references
For railway applications NF F61-030 requires housing and hoods with metallic levers

Housing and Hoods Styles

Floating Rack and Panel Application



Dimensions	2 Modules	3 Modules	5 Modules	7 Modules
A	69	82	102,5	146
B	38	38	38	38
C	86	99	119,5	129
D	55	55	55	55

Code Ref.*	See order information section

Dimensions are in mm
*See ordering information - sections housing & hoods and cable entry - for description of code references

Cross reference table

Hood single locking system side/top cable entry

	Plug / *Receptacle Extension*	*2 modules* S113 U121 U129 V113 X121 X129	*3 modules* S116 U121 U129 V116 X121 X129	*5 modules* S121 T121 U121 U129 V121 W121 X121 X129	*7 modules* S121 S121 S129 U121 U129 V121 X121 X129	*14 modules* U129 U136 X129 X136
	**Housing** *2, 3, 5, 7, 14 modules* **B000**	▲	▲	▲	▲	▲
	*2, 3, 5, 7, 14 modules* **D000**	▲	▲	▲	▲	▲
	*2, 3 modules* **B116 B216 F121 F221 F129 F229** *5 modules, 7 modules* **B121 B221 F121 F221 F129 F229** *14 modules* **B129 B229**	▲ ▲	▲ ▲	▲ ▲	▲ ▲	▲
	*2, 3 modules* **D116 D216 H121 H221 H129 H229** *5, 7 modules* **D121 D221 H121 H221 H129 H229** *14 modules* **D129 D229**	▲ ▲	▲ ▲	▲ ▲	▲ ▲	▲
	**Coupler Hood** *2 modules* **Z113 Z121 Z129** *3 modules* **Z116 Z121 Z129** *5, 7 modules* **Z121 Z129**	▲ ▲	▲ ▲	▲	▲	

Dimensions are in mm

Cross reference table

Hood double locking system side/top cable entry

	Plug / *Receptacle Extension*	*3 modules* K116 M121 M129 N116 R121 R129	*5 modules* K121 L121 M121 M129 N121 P121 R121 R129	*7 modules* K121 K129 M121 M129 N121 R121 R129	*10 modules* M121 M129 R121 R129 R136
	*3, 5, 7 modules* A000	▲	▲	▲	
	Railway Application *3, 5, 7, 10 modules* A000	▲	▲	▲	▲
	*3 modules* A116 A216 E121 E221 E129 E229 *5, 7 modules* A121 A221 E121 E221 E129 E229	▲ ▲	▲ ▲	▲ ▲	
	*10 modules* A129 A229				▲
	*3 modules* Y116 Y121 Y129 *5, 7 modules* Y121 Y129	▲	▲	▲	
	*10 modules* Y121 Y229				▲

Dimensions are in mm

Cross reference table

Hood double locking system side/top cable entry

Plug / Receptacle	*3 modules* I116 J121 J129 O116 Q121 Q129	*5 modules* I121 J121 J129 O121 Q121 Q129	*7 modules* J121 J129 Q121 Q129
 *3, 5 , 7 modules* C000	▲	▲	▲
 *3 modules* C116 C216 G121 G221 G129 G229 *5, 7 modules* C121 C221 G121 G221 G129 G229	▲ ▲	▲ ▲	▲ ▲

Hypermod Tools

	Extraction Tool	Crimping Basic Tool	Crimping Positioner	Removal Tool for Modules
Module Type		**Order Reference**		
20 ways module	20264	AFM8 *(Code Daniels)*	M0572	20367
10 ways module	20265	AF8 *(Code Daniels)*	M0573	20367
10 ways higher creepage and clearance module	20653(sockets) SD_0150000008 (pins)	Astro Tools TGV101 AF8 *(M22520/1-01)* Code Daniels	Daniels M22520/1-05 15938 Hypertac	20367
5 ways module	20266 (sockets) 20421 (pins)	M310	M0574	20367
3 ways module	20267 (sockets) 20266 (pins)	20490 *(crimping pneumatic tool)*	M0601 *(sockets)* M0575 *(pins)*	20367 20367
3 ways coax module	M0578	M0576 *(for inner/outer conductor)*	M0577 *(for inner/outer conductor)*	20367

Ordering information
For railways applications (NF F61-030 approved)

SERIES	HM	EM	07	N	009	C00	0	000	0	T

CONNECTOR TYPE

EM	Male receptacle	RF	Female extension
EF	Female receptacle	PM	Male plug
RM	Male extension	PF	Female plug

NUMBER OF MODULES

02	03	05	07	10	14

SHIELDING DEGREE

N	Unshielded
R	Unshielded (special paint option for harsh environment)

ELEMENT PROGRESSION

001	VOF 20 ways female module without contact	002	VOM 20 ways male module without contact
003	VAF 20 ways female module with contact 0.08 to 0.20mm²	005	VAM 20 ways male module with contact 0.08 to 0.20mm²
004	VEF 20 ways female module with contact 0.20 to 0.62mm²	006	VEM 20 ways male module with contact 0.20 to 0.62mm²
007	BOF 10 ways female module without contact	008	BOM 10 ways male module without contact
010	BEF 10 ways female module with contact 0.22 to 1.91mm²	009	BEM 10 ways male module with contact 0.22 to 1.91mm²
011	COF 5 ways female module without contact	012	COM 5 ways male module without contact
013	CAF 5 ways female module with contact 0.50 to 1.22mm²	016	CAM 5 ways male module with contact 0.50 to 1.22mm²
014	CEF 5 ways female module with contact 1.22 to 2.10mm²	017	CEM 5 ways male module with contact 1.22 to 2.10mm²
015	CIF 5 ways female module with contact 2.10 to 5.40mm²	018	CIM 5 ways male module with contact 2.10 to 5.40mm²
019	TOF 3 ways female module without contact	020	TOM 3 ways male module without contact
021	TAF 3 ways female module with contact 3 to 5.40mm²	023	TAM 3 ways male module with contact 3 to 5.40mm²
022	TEF 3 ways female module with contact 10mm²	024	TEM 3 ways male module with contact 10mm²
025	TOX 3 ways module for female coaxial contacts	026	TOY 3 ways module for male coaxial contacts
027	TAX 3 ways module with loose female coaxial contacts	028	TAY 3 ways module with loose male coaxial contacts

POLARIZATION

C00	Not polarized
C01 to C12	With coding pins
D01 to D31	With guiding pins & sleeves

HOUSINGS or HOODS

Housings	A*	B*	C	D	E	F	G	H
Hoods	I	L*	K*	M*	N*	O	P	Q	R*	S*	T	U	V*
Extention hoods	Y*	Z*						

*Special paint option for harsh environment

CABLE ENTRY

000	Only for housing	121	1 entry PG21	216	2 entry PG16
113	1 entry PG13.5	129	1 entry PG29	221	2 entry PG21
116	1 entry PG16	136	1 entry PG36	229	2 entry PG29

CABLE SEAL

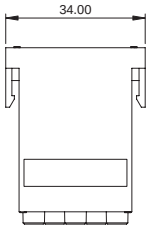
0	No cable seal
P	Min wire size
G	Max wire size

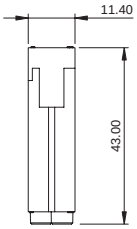
CONTACT PLATING

Available modules for railways applications (NF F61-030 approved)

10 ways higher creepage and clearance (1.5 mm HC contacts)

Module for female socket contacts

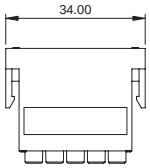


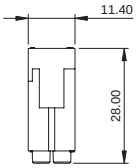


Conductor size AWG24-14	0.22-1.91 mm^2	**Code Ref.** 010
Insulator without contacts		**Code Ref.** 007

10 crimp contacts supplied not assembled, ref: 0150902-20RG0

Module for male pin contacts





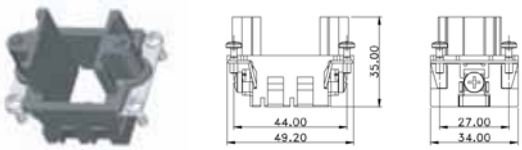
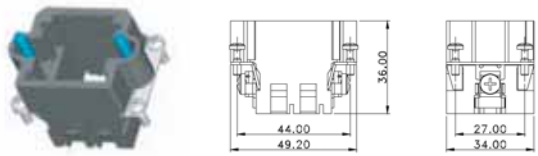
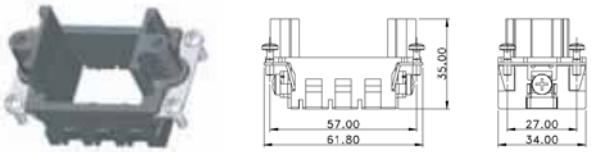
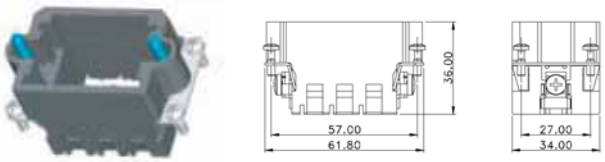
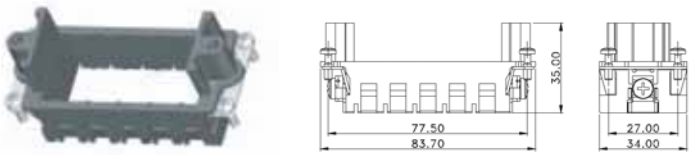
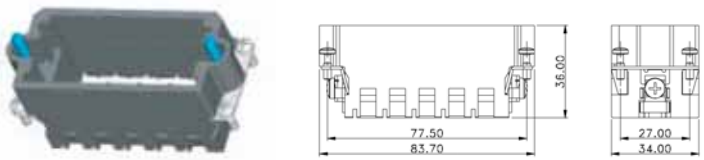
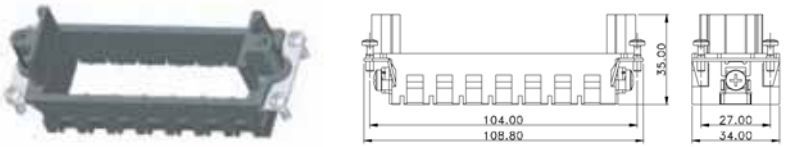
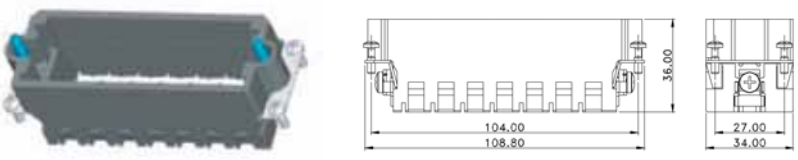
Conductor size AWG24-14	0.22-1.91 mm^2	**Code Ref.** 009
Insulator without contacts		**Code Ref.** 008

10 crimp contacts supplied not assembled, ref: 0151601-20XOG

Rated Voltage DIN 0110	220V
Rated Impulse Withstanding voltage DIN 0110	2.5KV
Current Rating (max wire ref.)	8A
Creepage DIN 0110	9.25mm

Dimensions are in mm

Frame for 2, 3, 5, 7 modules for railways applications (NF F61-030 approved)

Description	Shape & dimensions	Order Ref.
Female frame for 2 modules for socket or pin contacts. Connector shiekding degree code N o R.		21723
Male frame for 2 modules for socket or pin contacts with guiding pins. Connector shielding degree code N o R.		21724
Female frame for 3 modules for socket or pin contacts. Connector shiekding degree code N o R.		21725
Male frame for 3 modules for socket or pin contacts with guiding pins. Connector shielding degree code N o R.		21726
Female frame for 5 modules for socket or pin contacts. Connector shiekding degree code N o R		21727
Male frame for 5 modules for socket or pin contacts with guiding pins. Connector shielding degrre code N o R		21728
Female frame for 7 modules for socket or pin contacts. Connector shiekding degree code N o R		21729
Male frame for 7 modules for socket or pin contacts with guiding pins. Connector shielding degrre code N o R		21730

Dimensions are in mm