

HYPERMOD NG SERIES

Monobloc Insulator Rectangular Connectors



- ▶ **Compliant with DIN 43652**
- ▶ **Up to 500 mating cycles**
- ▶ **Quadrax contacts grounding**
- ▶ **IP50 & IP66 sealing**

IDEAL FOR RAIL APPLICATIONS

The HyperMod NG series is the new generation of monobloc insulator rectangular connectors, ideal for trains, intercity trains, trams and locomotives. They are specifically designed for applications requiring a safe, fast and removable electrical connection, such as electrical control panels, cable harnesses, and sensors.

The range includes 3 connector versions:

- 64 ways, 16A power contacts, 2mm pin dia.
- 108 ways, 10A signal contacts, 1.5mm pin dia
- 7 ways, 1.2GHz high speed quadrax contacts

HIGH RELIABILITY

The HyperMod NG connectors use the proven Hypertac hyperboloid technology, that improves system reliability by eliminating contact fretting, hence reducing wear rates and avoiding system failure.

They also benefit from a very low contact resistance and offer a minimum of 500 mating cycles. In addition, the metal insert for the 7 high speed contacts version allows for direct ground quadrax contacts, thus avoiding the use of connecting sleeves and reducing the time and cost of installation.

COMPETITIVE SOLUTION

Their plastic housing ensures the IP50 sealing according to NF F 61-030 (dust protection) and allows for a 30% reduction of the connector's weight. The housing's design ensures easier wiring and maintenance, quick access to contacts with the ability to test without disconnecting them, flexible position of the cable clamp in three possible locations and locking system comprising of one central lever.

The Hypermod NG Series allows a reduction of supply chain, maintenance and cabling costs: one contact only is used for cross section cables of 0.5 mm² to 2.5 mm² according to NFF 63-808 and EN 50-306, using standard tooling.

TECHICAL CHARACTERISTICS

	Contacts	High speed quadrax	Ø 1.5 mm	Ø 2.0 mm
ELECTRICAL	Current rating	3 A	10 A	16 A
	Voltage rating	30 V	110 V	220V
	Withstanding voltage	750 V	1500 V	2550 V
	Insulation resistance		≥ 5x10 ³ M	
	Contact resistance	< 3 m	< 2.5 m	< 1.5 m
	Creepage distance	1.7 mm	5 mm	12 mm
	Clearance	1.5 mm	4.5 mm	5 mm
MECHANICAL	Contact retention	200 N	70 N	90 N
	Mating cycles		> 500	
	Locking force		< 170 N	
	Weight of the connector (<i>without contacts</i>)	319 g (P01) - 355 g (A1)	266 g	256 g
	Weight of the contact (<i>male</i>)	35 g	1.5 g	2.5 g
ENVIRONMENTAL	Temperature range	-40° +100°C - 21 days according to NF C 20-711		
	Salt spray	96h - 5% NaCl according to NF C 20-711		
	Fire standards	According to NF F 16-101, NF F 16-102, EN 45545-2:HL3		
	<i>Environmental level</i>	IP50 with the 2 plastic part hood - IP66 with the metallic hood		

ORDERING INFORMATION

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1	2	3	4	5	6	7	8	9

1 ▶ CONNECTOR FAMILY

2 ▶ CONNECTOR TYPE

EM MALE RECEPTACLE **PM** FEMALE PLUG

3 ▶ NUMBER OF MODULES

4 ▶ ENVIRONMENT

5 ▶ ARRANGEMENT

P01 RECEPTACLE - 7 QUADRAX MALE + 4 PIN CONTACTS

P02 PLUG - 7 QUADRAX FEMALE + 4 SOCKET CONTACTS

P03 RECEPTACLE - 108 PIN CONTACTS

P04 PLUG - 108 SOCKET CONTACTS

P05 RECEPTACLE - 64 PIN CONTACTS

P06 PLUG - 64 SOCKET CONTACTS

A01 RECEPTACLE - 7 QUADRAX MALE, METAL FRAME

6 ▶ POLARIZATION

C00 NOT POLARIZED **C01** POLARIZED

7 ▶ HOUSING - HOOD

- - - 1 PLUG PLASTIC HOOD, DOUBLE LOCKING SYSTEM

- - - 2 PLUG PLASTIC HOOD, SINGLE LOCKING SYSTEM

E000 RECEPTACLE METALIC HOOD, SINGLE LOCKING SYSTEM **A000** RECEPTACLE METALIC HOOD, DOUBLE LOCKING SYSTEM

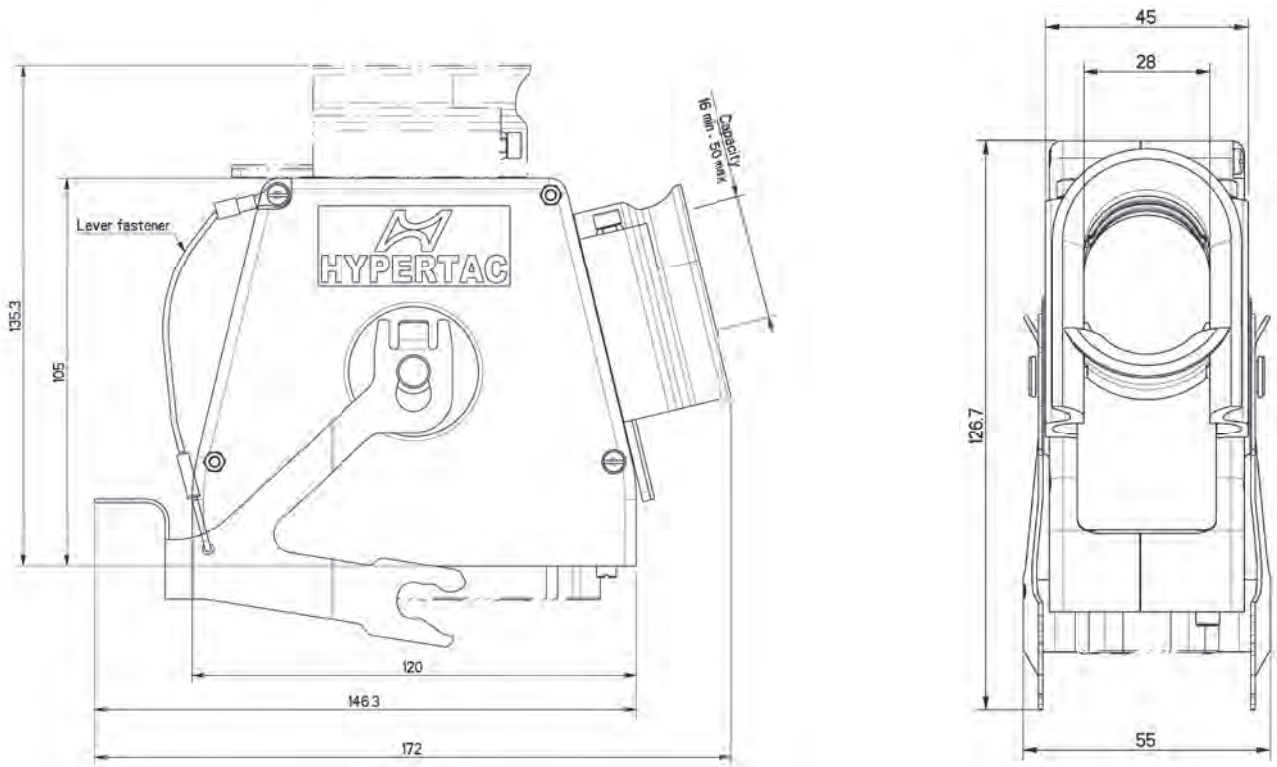
8 ▶ CABLE CLAMP

0 WITHOUT CABLE CLAMP **1** SINGLE CABLE CLAMP **2** DOUBLE CABLE CLAMPS

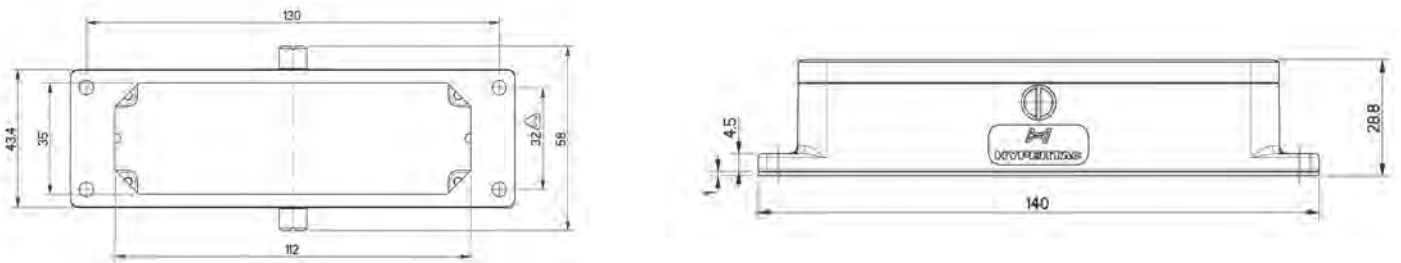
9 ▶ GOLD CONTACT PLATING

DRAWINGS & DIMENSIONS - SINGLE LEVER

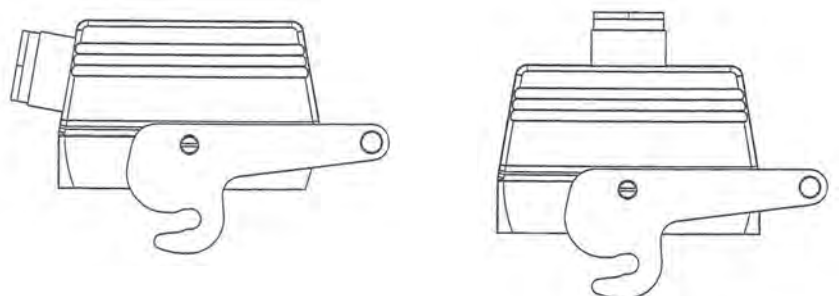
Plug connector (plastic hood)



Receptacle connector (metallic hood)

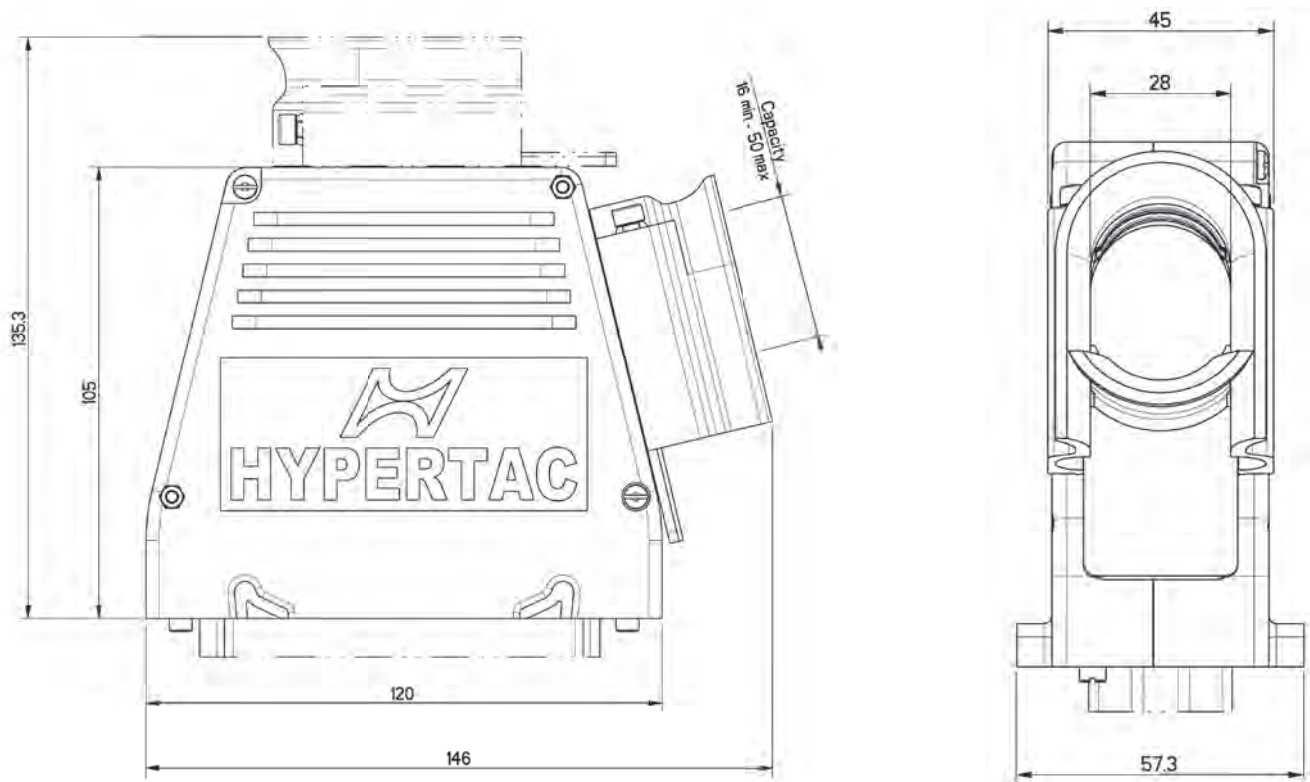


Note: Other housing and hood styles are available from the HyperMod modular range and can be mounted with the insulator frame. Please contact us.

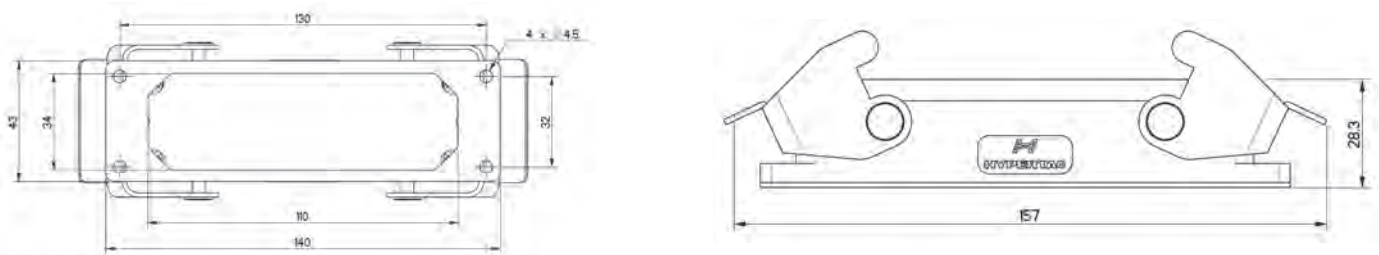


DRAWINGS & DIMENSIONS - DOUBLE LEVERS

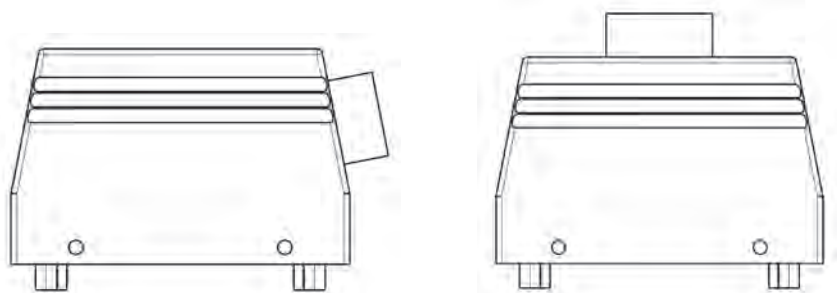
Plug connector (plastic hood)



Receptacle connector (metallic hood)



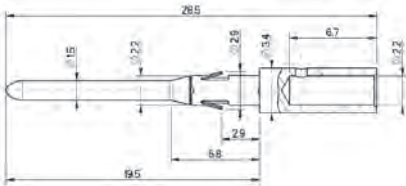
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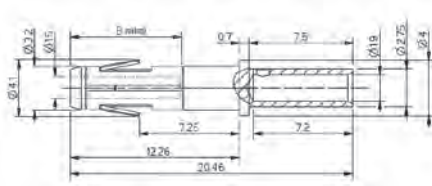
CONTACTS

Contacts		Crimping Tool			Tools	
Arrangement	Part number	Crimping tool	Tool turret	Position & Wire section	Insertion	Extraction
P01 & A01	1230121-QAR01	Astro-tool TGV 101	TGV 210	High speed quadrax contact Positionner: S.055	High speed quadrax contact	S.132
		Daniels FT8	TP 945			
P02	1230122-QAR01	Astro-tool TGV 101	TGV 210	Internal contact 2 - 0.22 mm ² (24 AWG) 3 - 0.38 mm ² (22 AWG) 4 - 0.50 mm ² to 0.75 mm ² (20 AWG) 5 - 1 mm ² (18 AWG)	Internal contact	S.069
		Daniels FT8	TP 945			
	0150902-20RG0	Astro-tool TGV 101	TGV 201 Red		not necessary	SD-0150000005
		Daniels FT8	SH 462 Red			
P01 & P03	0151601-20XOG	Astro-tool TGV 101	TGV 201 Red	2 - 0.22mm ² (24WG) 4 - 0.50mm ² to 0.75mm ² (22-20 AWG) 5 - 1mm ² (18AWG) 6 - 1.50mm ² (16AWG) 7 - 2.50mm ² (14AWG)	not necessary	SD-0150000008
		Daniels FT8	SH 462 Red			
P04	0151862-20RG0	Astro-tool TGV 101	TGV 201 Red		SE-0150000001	SD-0150000000
		Daniels FT8	SH 462 Red			
P05	0201111-20XOG	Daniels FT8	SH 463 Yellow		not necessary	consult us
		Daniels M317	TP 909			
P06	0200422-20RN1	Astro-tool TGV 515	TGV 501	not necessary	SD-0200000001	
		Daniels M317	TP 909			

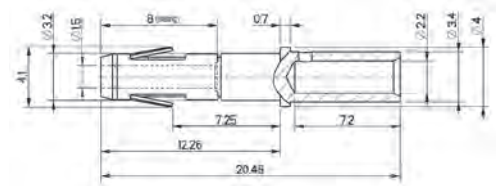
Contact - Ø 1.5 mm



Male - Ref: 015 160 1- 20X OG

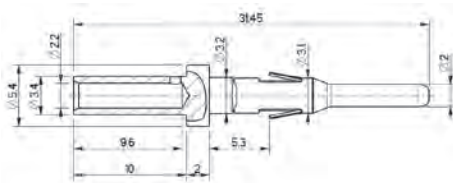


Female - Ref: 015 090 2- 20R G0

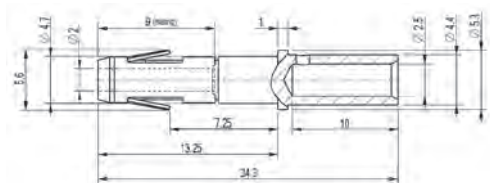


Female - Ref: 015 186 2- 20R G0

Contact - Ø 2.0 mm

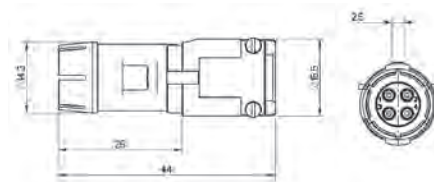


Male - Ref: 020 111 1- 20X OG

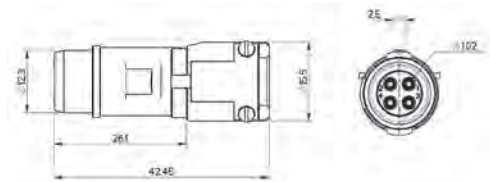


Female - Ref: 020 042 2- 20R N1

Contact - High speed quadrax



Male - Ref: 123 012 1- QAR 01

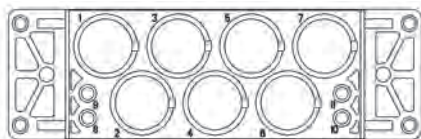


Female - Ref: 123 012 2- QAR 01

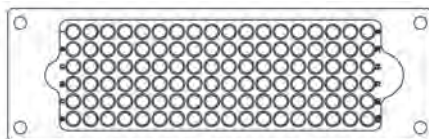
LAYOUT ARRANGEMENTS

Arrangement with socket contacts

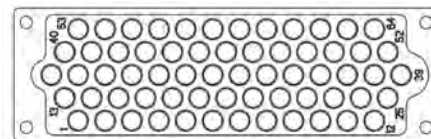
Plastic frame



P02 - 7 quadrax contacts + 4 contacts \varnothing 1.5



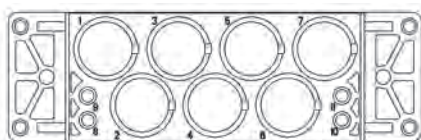
P04 - 108 contacts \varnothing 1.5



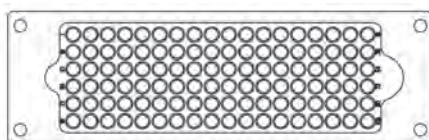
P06 - 64 contacts \varnothing 2

Arrangement with pin contacts

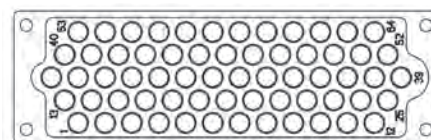
Plastic frame



P01 - 7 quadrax contacts + 4 contacts \varnothing 1.5

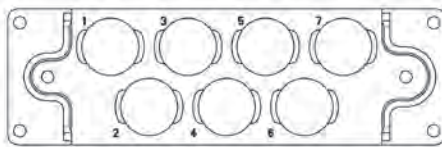


P03 - 108 contacts \varnothing 1.5



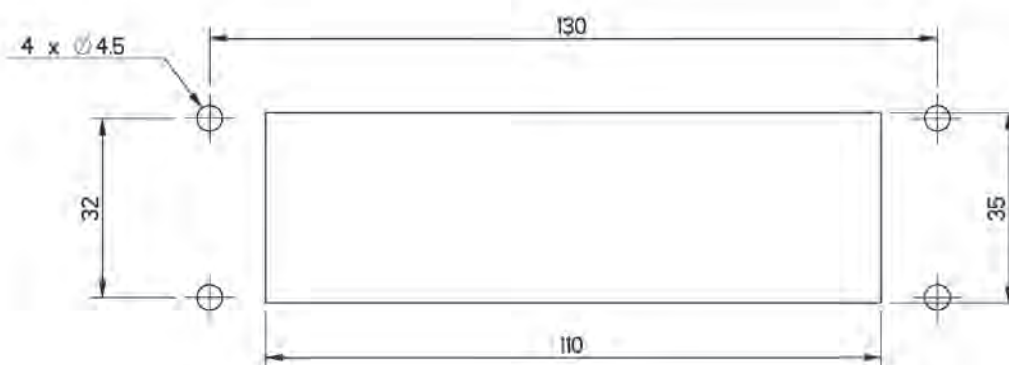
P05 - 64 contacts \varnothing 2

Metallic frame (for direct grounding)



A01 - 7 quadrax contacts

PANEL MOUNTING



The receptacle is interchangeable based on dimensions of panel cut out from DIN43652 standard

Dimensions are in mm