

# GIMOTA Modular Connectors GM

Solutions for highest flexibility

Suitable for  
railways



Gimota's GM modular connectors enable flexible connection options for power, signals and data – even under extreme environmental conditions such as rail vehicles. They comply with the most important railway standards, such as R22,R23 / HL1,HL2,HL3 of EN 45545-2, IP65 / IP67 and IP69 (high pressure cleaning) according to DIN EN 60529 and category 2 (bogie mounted) shock and vibration test of EN 61373.

They are designed to accommodate diverse module types for a wide range of applications. In this way, Ethernet can be combined with coaxial, fibre optic or current-carrying applications. They are available with seven, four or one module chamber. The modules are independent connectors in the connector and can be inserted separately into the modular connector, including separate EMC protection and individual cable termination. The Gimota modular connectors can be coded.

An independent shield connection is possible for each module; the EMC adapters are available in three connection versions: shield compression, IRIS spring or conical ring. The plug and socket module together form a unit that ensures optimum 360° EMC shielding; independent of the other modules. Theoretically, up to seven different shielding potentials can be conducted through one connector. Connection modules for SC-But joint contacts, hi-tech optical lens modules (EB) or coaxial contacts are also available. Each module is longitudinally sealed in its chamber. The connectors are therefore ideally suited for use in driver's cabins with increased internal pressure in high-speed trains.



## ADVANTAGES

- Suitable for railway applications
- Modular connector system
- Codable
- Various modules with shield connection
- Up to CAT 7A Ethernet data transmission
- Simple and fast exchange of modules
- High vibration, impact and shake resistance



## PROPERTIES

- Bayonet locking
- For 7/4/1 modules
- Operating temperature -60°C to +125°C
- Temperature shock -60°C to +125°C
- EN 45545 R22,R23/HL1,HL2,HL3
- EN 60529 Protection class up to IP69 DIN
- EN 61373 Cat. 2

## GIMOTA GM modular connector shell

The GM modular connectors are circular connectors for outdoor applications, with bayonet coupling. They have seven, four or one module chamber for various modules. The modules are autonomous connectors in a connector system.



### Codable

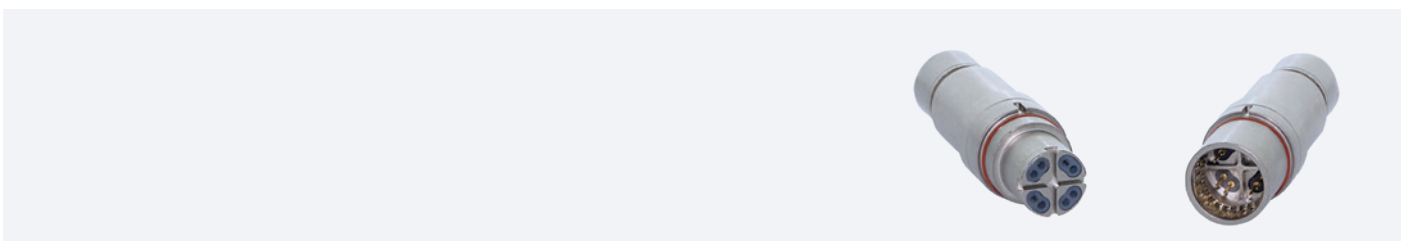
Coding is required to ensure the uniqueness of several connectors next to each other, which is why the GM connectors with 7 and 4 module chambers can be coded. Special coding pins are installed in the connector and in the receptacle. There are 8 combinations possible.

### Unique module position

The individual module chambers are marked with numbers. This facilitates the correct arrangement of the modules in the plug and receptacle. The modules have special guiding grooves. This guarantees precise positioning of the modules in the module chambers.

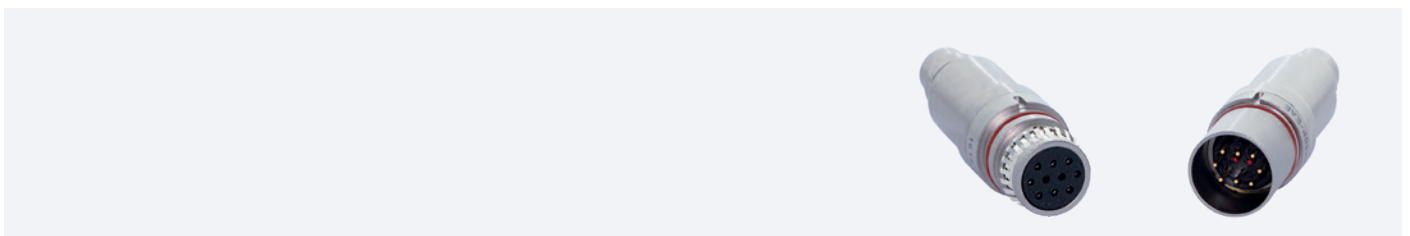
## GIMOTA - GM Module Ethernet CAT 7A / CAT 7 / CAT 6A

The modules meet the requirements of Ethernet CAT 7A. The contacts are over-moulded in pairs for better impedances. Each pair of strands is fully shielded from the adjacent pair to reduce crosstalk. 4 double contacts for AWG 23-24 are standard. AWG 26 is also available on request. Every module has an optimal 360° EMC shielding realized with spring contacts (grounding fingers) and individual cable termination.



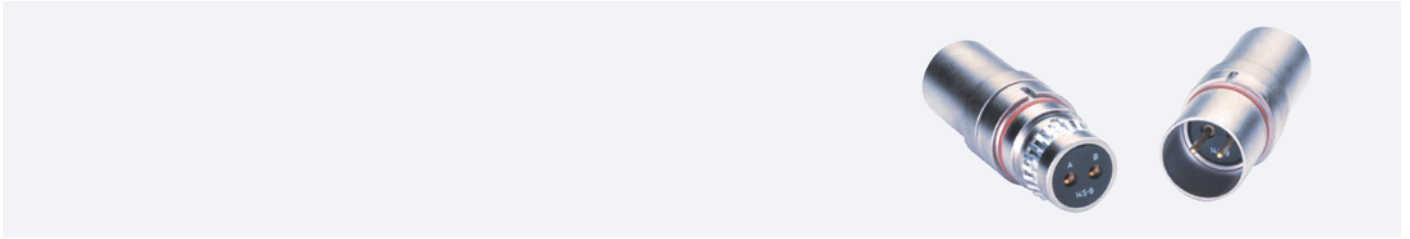
## GIMOTA - GM Module Ethernet CAT 6 / CAT 5e

The modules meet the requirements of Ethernet CAT 6 / 5e. They are equipped with 8 - 0.5mm<sup>2</sup> contacts and 2 fillers. Every module has an optimal 360° EMC shielding realized with spring contacts (grounding fingers) and individual cable termination.



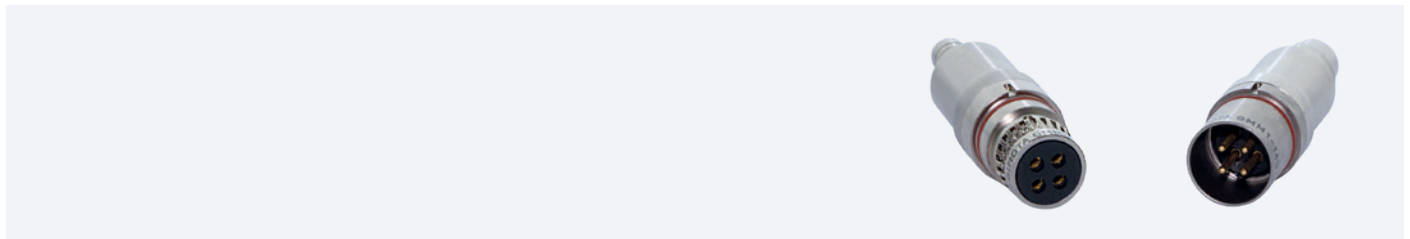
## GIMOTA - GM Module WTB

The modules are suitable for use on the Wire Train Bus (WTB). They are equipped with 2 - 0.5mm<sup>2</sup> contacts and have an optimal 360° EMC shielding realized with spring contacts (grounding fingers) and individual cable termination.



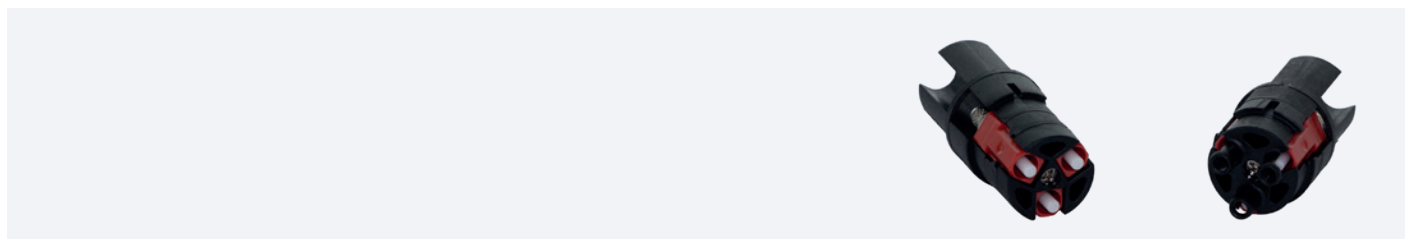
## GIMOTA - GM Module Ethernet CAT 5e / CAT 5 / MVB / RS485

The modules meet the requirements of Ethernet (max. 100Mbit) according to CAT 5e. They are also suitable for use on the Multifunction Vehicle Bus (MVB). They are equipped with 4 - 0.5mm<sup>2</sup> contacts. Every module has an optimal 360° EMC shielding realized with spring contacts (grounding fingers) and individual cable termination.



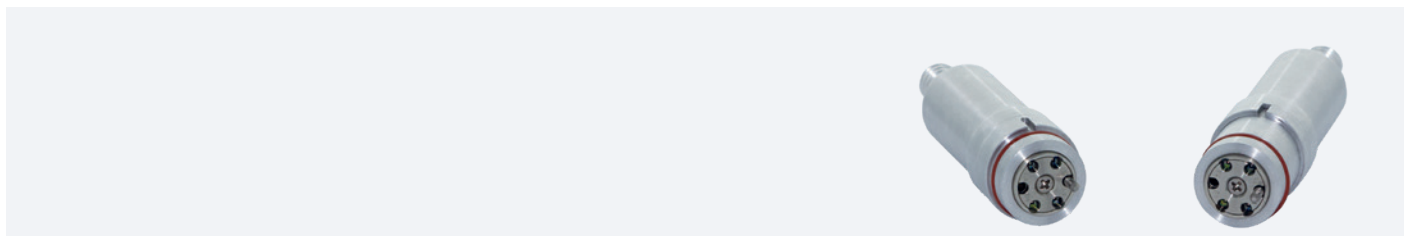
## GIMOTA - GM Module Fibre optic cable type SC (subscriber connector)

The modules are designed to accept 3 SC butt-joint connectors. The SC connector has a 2.5 mm ferrule, usually made of ceramic (metal versions are also possible), and can be used for multi and single-mode fibre's.



## GIMOTA - GM Module lens-optical fibre optic cable type EB (expanded-beam)

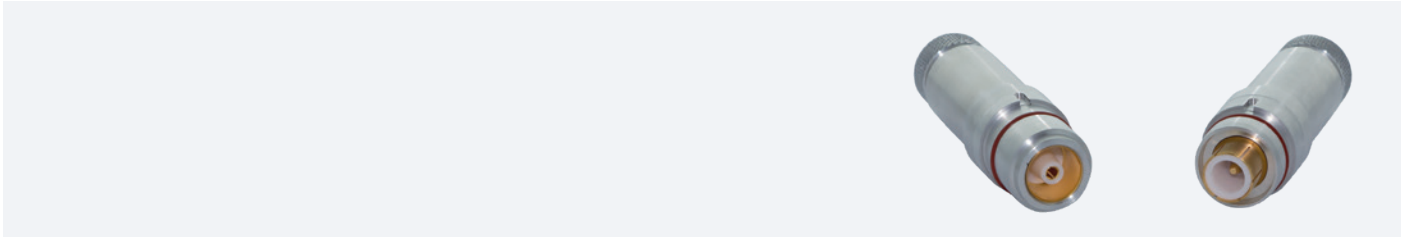
The modules are available as 2 or 4 channel, multi or single-mode. The expanded-beam connectors use a spherical lens to expand the light beam to a multiple of it's diameter. Due to this technology, the connectors are particularly resistant to dust, dirt, vibration and other adverse environmental influences. As the lenses do not touch each other, they achieve a long service life.



## GIMOTA - GM Module RF Coax

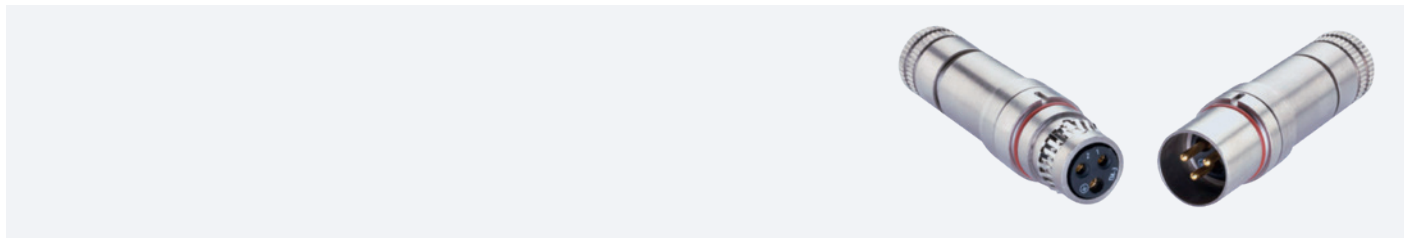
The coax modules are designed for use with the most common coaxial cables, as well as for special applications such as Wi-Fi or GPS signals.

Modules are available for the following cable types and applications: RG58 / RG59 / RG179 / RG187 / Wi-Fi 2.4GHz & 5 GHz / GSMR / GPS / WLAN



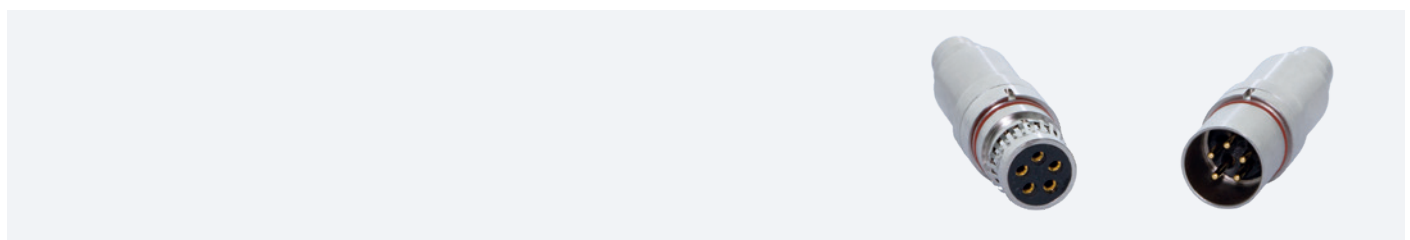
## GIMOTA - GM Module Power with earth contact

The modules are equipped with 2 contacts 2.5mm<sup>2</sup> and one earth contact. The earth contact is connected to the metal housing of the module. They are designed for max. 200V nominal voltage and 13A nominal current and have an optimal 360° EMC shielding realized with spring contacts (grounding fingers) and individual cable termination.



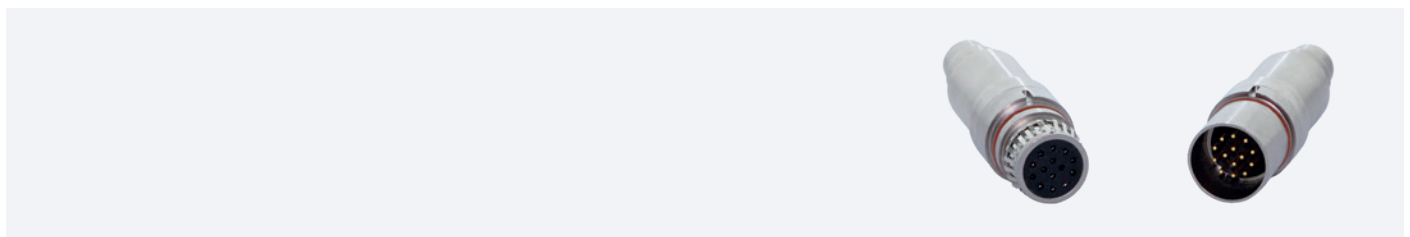
## GIMOTA - GM Modules multifunctional 13A

The modules are equipped with size 16 contacts for 0.15 - 1.5mm<sup>2</sup>. They are designed for max. 500V rated voltage and 13A rated current and have optimum 360° EMC shielding realized with spring contacts (grounding fingers) and individual cable termination. Modules with 3 / 5 / 6 / 7 contacts are available.



## GIMOTA - GM Module multifunctional 7.5A

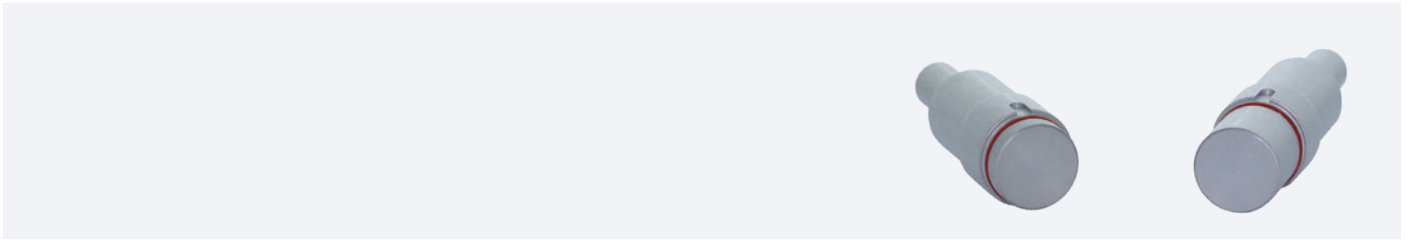
The modules are equipped with size 20 contacts for 0.6mm<sup>2</sup>. They are designed for 200V nominal voltage and 7.5A nominal current and have an optimal 360° EMC shielding realized with spring contacts (grounding fingers) and individual cable termination. Modules with 10 / 12 / 14 contacts are available.





## GIMOTA - GM Module Dummy

Blind or dummy modules are used when not all module chambers are used.



Connector for 1 module



Connector for 4 modules



Connector for 7 modules



For more information, visit our website:  
[www.gimota.com](http://www.gimota.com)

