GDM Optical-Electrical Hybrid Underwater Connectors

Power + 4 optical fibers · 4.5 MPa mated · single-mode or multimode



Contacts	16 or 88 power + 4 optical
Pressure rating	4.5 MPa mated
Current rating	13 A (size 16), 33 A (size 10)
Optical insertion loss	≤ 1 dB
Temperature	−10 to +65 °C

Key features

- Power and data in one connector: power contacts plus 4 optical contacts, single-mode or multimode
- Radial and axial sealing, each rated 4.5 MPa; withstands 4.5 MPa hydrostatic pressure when mated
- Vulcanized watertight backshell
- Wet-mateable: can be mated with water on the contact faces, for quick installation
- Two sizes: M42 and M140 coupling threads
- Contact counts, fiber types and cable assemblies customized on request

Specifications

Pressure and sealing

Parameter	Value	Condition
Hydrostatic pressure, mated	4.5 MPa	
Sealing, radial and axial	4.5 MPa	

Electrical and optical

Parameter	Value	Condition
Current rating	33 A	Size 10 contacts
Current rating	13 A	Size 16 contacts
Dielectric withstanding voltage	6000 VAC	GDM140, size 10 contacts
Dielectric withstanding voltage	1500 VAC	GDM140, size 16 contacts
Dielectric withstanding voltage	1500 VDC	GDM42
Insulation resistance	≥ 1000 MΩ	
Optical insertion loss	≤ 1 dB	Wavelength and test method to your requirements

Mechanical and environmental

Parameter	Value	Condition
Durability	500 mating cycles	

Mechanical and environmental		
Parameter	**Value**	**Condition**
Vibration	10–500 Hz, 98 m/s²	
Bump	1000 bumps, 68.6 m/s²	
Operating temperature	−10 to +65 °C	
Salt spray	500 h	
Mold resistance	28 days, grade 1	

Versions

Series code	Version	Notes
GDM42	Small size, M42 coupling thread	
GDM140	Large size, M140 coupling thread	

How to order

GDM [size] [type] [power contacts] [pin/socket] [optical contacts] [fiber]

Example: **GDM140Z88P4E** — M140 size receptacle, 88 power pin contacts, 4 multimode optical contacts

Code segment	Options
Size	**140** M140 coupling thread
Size	**42** M42 coupling thread
Type	**Z** Receptacle
Type	**T** Plug
Power contacts	**16 / 88** 16 or 88 power contacts; other counts on request
Contact type	**P** Pin
Contact type	**S** Socket
Optical contacts	**4** 4 optical contacts
Fiber	**E** Multimode
Fiber	**F** Single-mode

Request a quote or drawing: https://sinoxh.com/request-a-quote/?product=GDM