

Gigabit Ethernet connectors for docking applications

DuraDock ready

EN



DuraDock ready – Introduction

Robots, efficient assembly technology and image processing are groundbreaking for Industry 4.0 and key technologies in many industries such as automotive engineering. Stäubli delivers suitable Gigabit Ethernet connectors for advanced automation technology.

The connectors guarantee safe and reliable transmission of signals, data and fieldbuses. DuraDock – the brand for connectors for the highest demands and applications with very high mating cycles.

With up to one million mating cycles, they can easily meet all the requirements of auto-

mated industry sectors such as automotive, electronics, testing and many more.

Areas of application:

- Automatic tool changers
- Automatic (multi) couplings
- Test benches
- Robotic aided manufacturing and production

DuraDock ready

“ready” – the name says it all. All connectors in this series are plug-and-play, i.e. suitable for immediate use. You save time and effort for wiring and connecting cables including stripping, crimping, soldering, etc.

The installation in docking plates or machine parts takes place after:

- Performing the drilling plan
- Inserting anti-rotation grooved pin
- Fixing the retaining ring
- Screwing on the M12 connecting cable

Gigabit Ethernet Connectors

Gigabit Ethernet connectors for signal and data transmission for applications with docked camera systems and components with field-bus communication:

Manufacturing:

- In automotive body shops and assembly for gap detection, parts positioning, etc.

Logistics and Material Handling:

- Pick-and-Place

Quality Assurance:

- Quality control with camera in milling-whead machines with integrated real-time-process analysis
- In automotive press-shops for crack detection after stamping
- In paint shops for quality control

Testing systems:

- Automatic and manual docking systems in test benches for transmission, engines or turbines

Image processing:

- Digital image processing and the required GigE-Vision interface

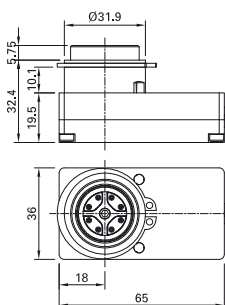
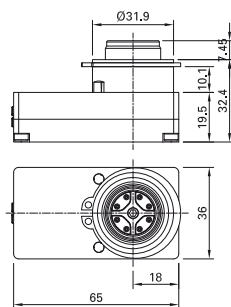
DuraDock ready – Giga10

Extremely compact connectors for the highest demands up to 10 GBit/s. All 8 poles of the Ethernet are available.

For mounting in docking plates with 6.6 mm and 13 mm spacing.

Note

- Degree of protection IP65



Assembly instructions MA203

www.staubli.com/electrical

Order No.	Type	Description	Plug connection	Suitable for
18.6667	Giga10-S90-S-M12X	Pre-assembled and tested connector	M12 socket x-coded	Network cable, Ethernet, CAT6A, 8 pin (10 GBit/s)
18.6666	Giga10-S90-B-M12X			

Giga10-...

Orientation of the M12 socket at 45° min. CAT6A (10 GBit/s)

Socket side



Pin side



M12 connector
IEC 61076-2-109, Ethernet, CAT6A,
CAT6, min. 1 or 10 GBit/s

DuraDock ready – Giga1

Robots, assembly technology and image processing are key technologies in modern vehicle manufacturing. Stäubli provides the appropriate gigabit Ethernet plug connectors for future-oriented automation technology.

Applications

- Automatic tool changing on the robot
- Docking systems on transmission or engine test benches
- Digital image processing using the GigE Vision interface

Note

- Degree of protection IP65

Giga1-IS...



Giga1-IS90...



Order No.	Type	Description	Plug termination	Fits	Cable outlet	
					Axial	90°
18.0184	Giga1-IS-S-M12X	Pre-wired connectors	M12 x-coded	Network cable, Ethernet, 8 pin min. CAT5e (1 GBit/s)	×	
18.0185	Giga1-IS-B-M12X					
18.0386	Giga1-IS90-S-M12X					×
18.0387	Giga1-IS90-B-M12X					



Assembly instructions MA203

www.staubli.com/electrical

DuraDock ready – Giga1

Stäubli Giga1 connectors are supplied ready for use for fitting into docking plates. Once assembled, they are easy to connect using the M12 8-pole Ethernet CAT6A network ca-

ble (e.g. Metz Connect M12 Ethernet connecting lead, CAT6, 8-pole, x-coded or M12 SPEEDCON /IP67/X).

Connecting lead:

The patch cable must be x-coded and is not included in the Stäubli delivery.

Giga1-...

min. CAT5e (1 GBit/s)

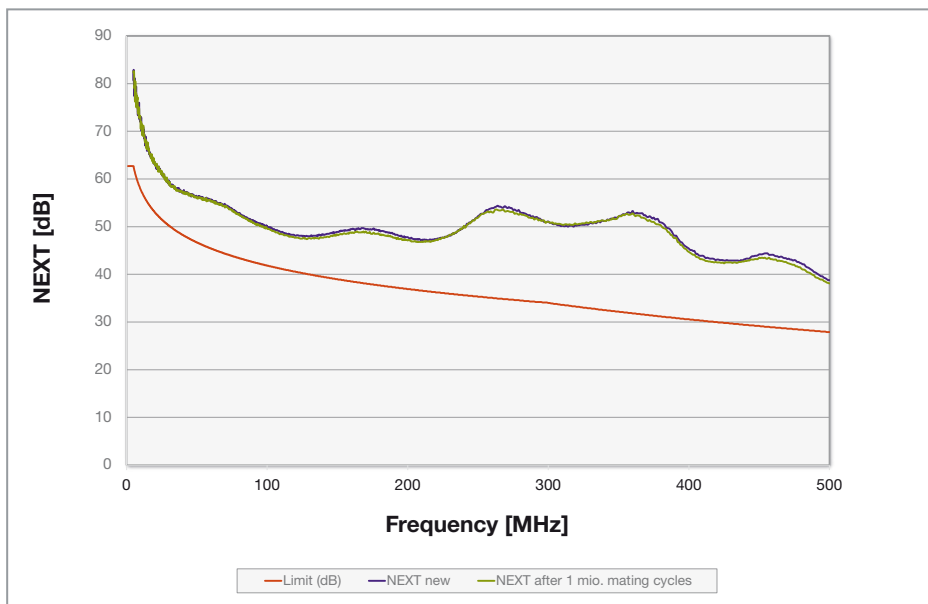


M12 connector
IEC 61076-2-109, Ethernet, CAT6A,
CAT6, min. 1 or 10 GBit/s

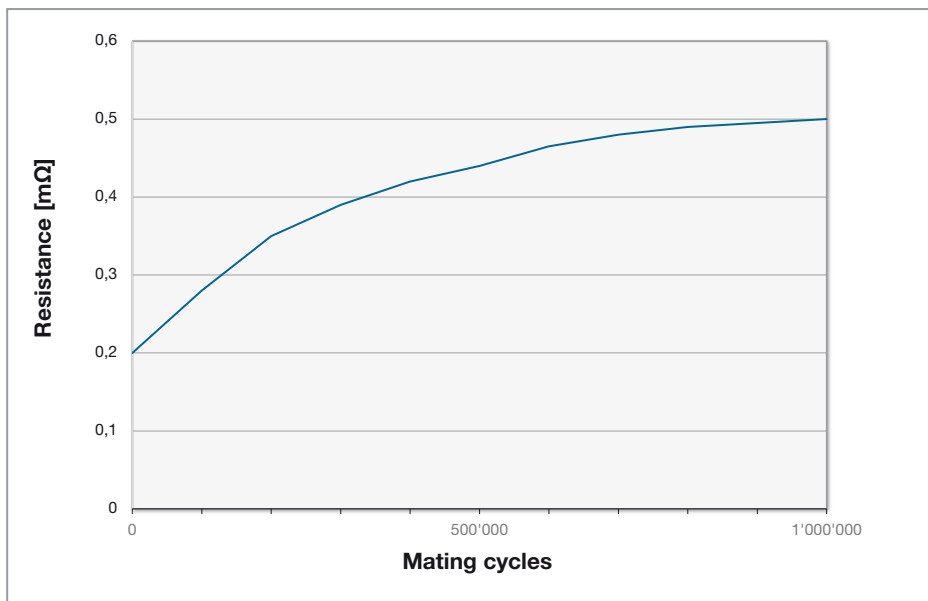
Giga10

Excellent transfer performance and long-term stability

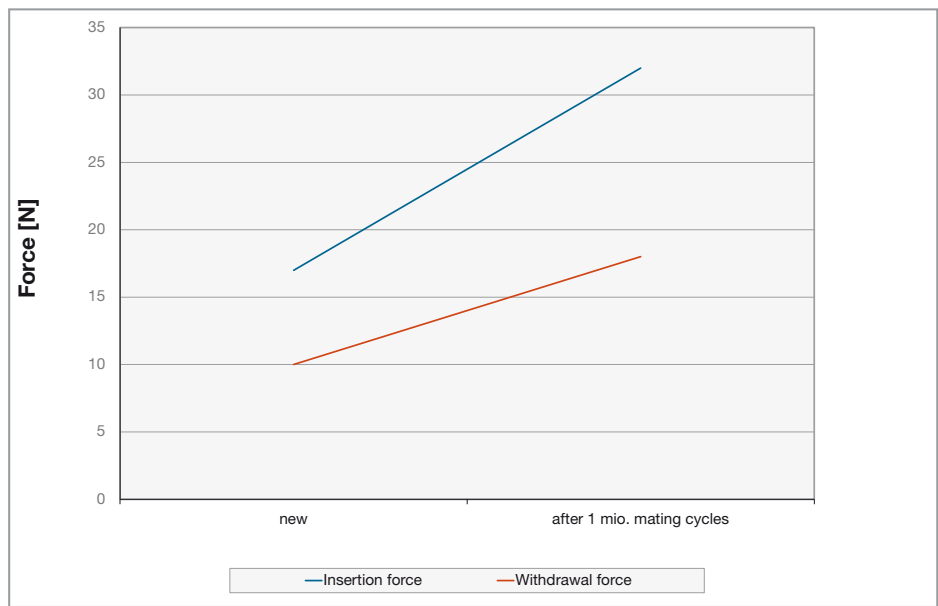
New signal transmission and after 1 million cycles, for example NEXT



Change in resistance during cycles



Insertion and pull-out forces during mating cycles





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