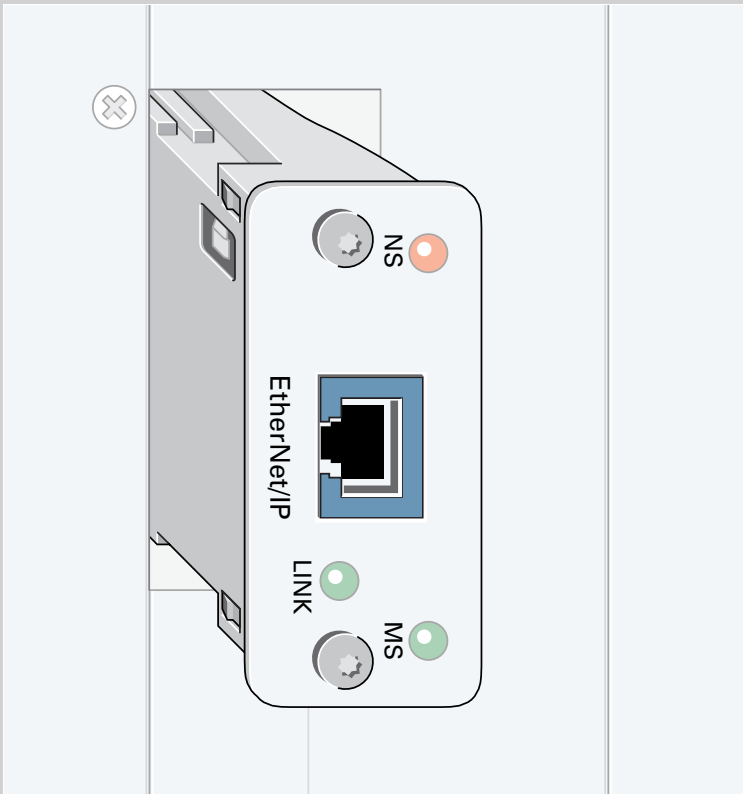


# IMenip

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The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.

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This document was written in German.

## 1 About this document

This manual contains important information on the safe and appropriate assembly, transportation, commissioning, operation, maintenance, disassembly and simple troubleshooting of the IMenip interface module.

Read these instructions completely, especially the chapter “2 General safety instructions” on page 16 before working with the IMenip interface module.

### Related documents

The IMenip interface module is a system component.

Also observe the instructions for the other system components.

Also observe the generally applicable, legal or otherwise binding regulations of the European or national legislation and the rules for the prevention of accidents and for environmental protection applicable in your country.

## 2 General safety instructions

The IMenip interface module has been manufactured according to the accepted rules of current technology. There is, however, still a danger of personal injury or damage to equipment if the following general safety instructions and the warnings before the steps contained in these instructions are not complied with.

- Read these instructions completely and thoroughly before working with the IMenip interface module.
- Keep these instructions in a location where they are accessible to all users at all times.

- Always include the operating instructions when you pass the IMenip interface module on to third parties.

### Intended use

The IMenip interface module is a component in terms of the machine directive 98/37/EC and is not a ready-for-use machine. The product is exclusively intended for being integrated in a machine or system or for being assembled with other components to form a machine or system.

The product may be commissioned only if it is integrated in the machine/system for which it is designed and the machine/system fully complies with the EC machine directive.

Observe the operating conditions and performance limits specified in the technical data.

The IMenip interface module is a work appliance and not designed for private use.

Intended use includes having read and understood these instructions, especially the chapter “2 General safety instructions”.

The IMenip interface module is intended for installation in components for the Tightening System 350.

### Improper use

Any use of the IMenip interface module other than described in chapter “Intended use” is considered as improper.

### Personnel qualifications

Assembly, commissioning and operation, disassembly, service (including maintenance and repair) require basic electrical and mechanical knowledge, as well as knowledge of the appropriate technical terms. In order to ensure operating safety, these activities may therefore only be carried out by qualified technical personnel or an instructed person under the direction and supervision of qualified personnel.

Qualified personnel are those who can recognize possible hazards and institute the appropriate safety measures due to their professional training, knowledge, and experience as well as their understanding of the relevant conditions pertaining to the work to be done. Qualified personnel must observe the rules relevant to the subject area.


### Safety instructions in this document


In this manual, there are safety instructions before the steps whenever there is a danger of personal injury or damage to the equipment. The measures described to avoid these hazards must be observed.

Safety instructions are set out as follows:


	 <b>SIGNAL WORD</b>
	<p><b>Type of RISK!</b></p> <p>Consequences</p> <p><b>Precautions</b></p>

- **Safety sign (warning triangle):** draws attention to the risk
- **Signal word:** identifies the degree of hazard
- **Type of risk:** identifies the type or source of the hazard
- **Consequences:** describes what occurs when the safety instructions are not complied with
- **Precautions:** states how the hazard can be avoided

	<p>This warning symbol cautions against dangers to your health. Observe all the safety instructions that follow this symbol to avoid possible injuries or death.</p>
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	<p>This warning symbol cautions against dangers to your health caused by electrical voltage or currents. Observe all the safety instructions that follow this symbol to avoid possible injuries or death.</p>
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The signal words have the following meaning:

 <b>CAUTION</b>
<p><b>CAUTION</b> indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or damage to equipment.</p>

### Adhere to the following instructions

#### General safety instructions

Only accessories and add-on units that have been approved for use in Rexroth tightening systems may be used therein. Non-approved components may neither be added nor connected to the system. The same applies to cables and lines which belong to the Rexroth tightening system. Otherwise, functional and system safety is jeopardized.

Observe the regulations for accident prevention and environmental protection for the country where the product is used and at the workplace.

Exclusively use Rexroth products in good technical order and condition.

Check the product for visible defects, for example damage to the circuit board, components, housing, and plug connectors or missing screws.

Only use the product within the performance range provided in the technical data.

Persons who assemble, operate, disassemble or maintain Rexroth products must not consume any alcohol, drugs or pharmaceuticals that may affect their ability to respond.

The warranty only applies to the delivered configuration.

The warranty will not apply if the product is incorrectly assembled or handled or not used as intended.

Do not expose the product to any mechanical loads under any circumstances. Do not place any objects on it.

#### **During assembly**

Make sure the relevant system component is not under pressure or voltage before assembling the product or when connecting and disconnecting plugs. Protect the system against being switched on.

Lay cables and lines so that they cannot be damaged, are in accordance with the bending radiuses, and no one can trip over them.

Before commissioning, make sure that all the plug connectors are installed correctly, undamaged, and that all screws are tightened.

#### **During commissioning**

Let the product acclimate itself for several hours before commissioning, otherwise water may condense in the housing.

Make sure that all electrical connections are either used or covered. Commission the product only if it is installed completely.

#### **During cleaning**

Cover all openings with the appropriate protective equipment in order to prevent detergents from penetrating the system.

Never use solvents or aggressive detergents. Only clean the product using a slightly damp, lint-free cloth. Only use water to do this and, if necessary, a mild detergent.

#### **Disposal**

Dispose of the product in accordance with the currently applicable national regulations in your country.

## 3 Delivery contents

The delivery contents include:

- 1 IMenip interface module
- 1 instruction manual for the IMenip interface module

## 4 Product description

#### **Performance description**

A tightening system is controlled by this interface. It can transfer cyclic I/O data.

The IMenip interface module is directly supplied with power via the components in the System 350.

## Device description

Transfer rates of 10 MBit/s or 100 MBit/s are supported.

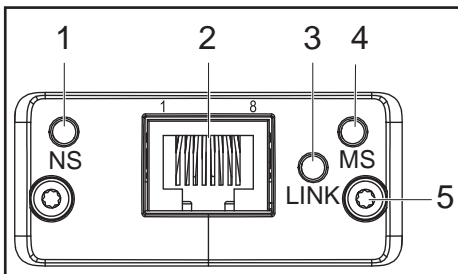


Fig. 1: IMenip interface module, front view (socket)

- 1 NS LED (network status)
- 2 Ethernet interface
- 3 LINK LED (connection/activity)
- 4 MS LED (module status)
- 5 Screws

## Interface connection assignment

The interface has an 8-pin RJ45 socket design.

Table 1

Pin	Signal	Description/function
1	Transmit +	Ethernet transmission cable
2	Transmit -	Ethernet transmission cable
3	Receive +	Ethernet reception cable
4	NC	
5	NC	
6	Receive -	Ethernet reception cable
7	NC	
8	NC	

## Suitable connection plugs

Use connection plugs in accordance with standard IEC 61158.

## Display elements

The NS LED indicates the Ethernet status.

Table 2 NS

LED display	Meaning
Off	No voltage, not initialized or invalid IP address
Green	Online, one or more connections to master established (CIP class 1 or 3), ready for operation
Flashing green	Online, no connection to master established
Red	Double IP address or blocking error
Flashing red	Timeout reached in one or more connections (CIP class 1 or 3)

The LINK LED indicates the connection or activity via Ethernet.

Table 3 LINK

LED display	Meaning
Off	No connection, no activity
Green	Connection established, ready for operation
Flashing green	Connection/activity

The MS LED indicates the interface module status.

**Table 4 MS**

LED display	Meaning
Off	No voltage or not initialized
Green	Module controlled by a scanner during operation
Flashing green	Not configured or scanner in idle mode
Red	Error (exception error or blocking error)
Flashing red	Self-acknowledged error

## 5 Transport and storage

For storing and transporting the product always observe the ambient conditions specified in the technical data (see "Technical data" on page 25).



## 6 Assembly



When installing the product always observe the ambient conditions specified in the technical data (see "Technical data" on page 25).

### Required tools

- TX9 screwdriver

## Assembling the IMenip interface module

 <b>CAUTION</b>	
	<p><b>Risk of damage to persons and property!</b></p> <p>Assembly of the IMenip interface module requires basic mechanical and electrical knowledge.</p> <ul style="list-style-type: none"> <li>▶ Only qualified personnel (see "Personnel qualifications" on page 16) are authorized to assemble the IMenip interface module.</li> <li>▶ Measures to prevent electrostatic discharge (ESD protection) must be undertaken to protect the module and system components during all assembly work.</li> </ul>

 <b>CAUTION</b>	
	<p><b>Risk of injuries when assembling under voltage!</b></p> <p>If you do not switch off the power supply before assembling the IMenip interface module, you may get injured or the device or system components may be damaged.</p> <ul style="list-style-type: none"> <li>▶ Always switch off the power supply to the relevant system component before assembling the IMenip interface module.</li> </ul>

1. Always switch off the power supply to the relevant system component before assembling the IMenip interface module.
2. Insert the IMenip interface module into the appropriate slot on the system component until it catches (example in Fig. 2).
3. Tighten the torx screws on the front until the front panel is flush. The circuit board is locked by turning the screw. This lock is only fully functional once the interface has been properly tightened (see Fig. 3).

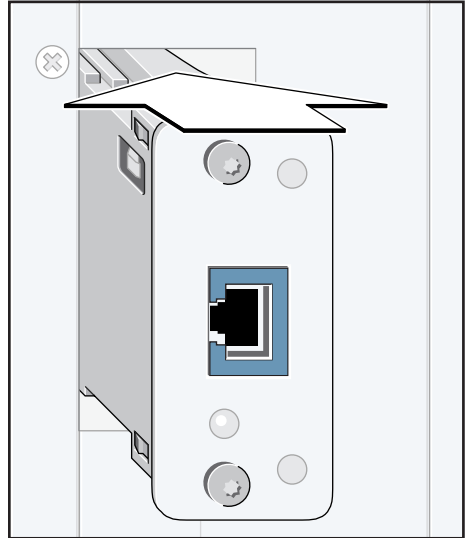


Fig. 2: Example: Inserting the interface module

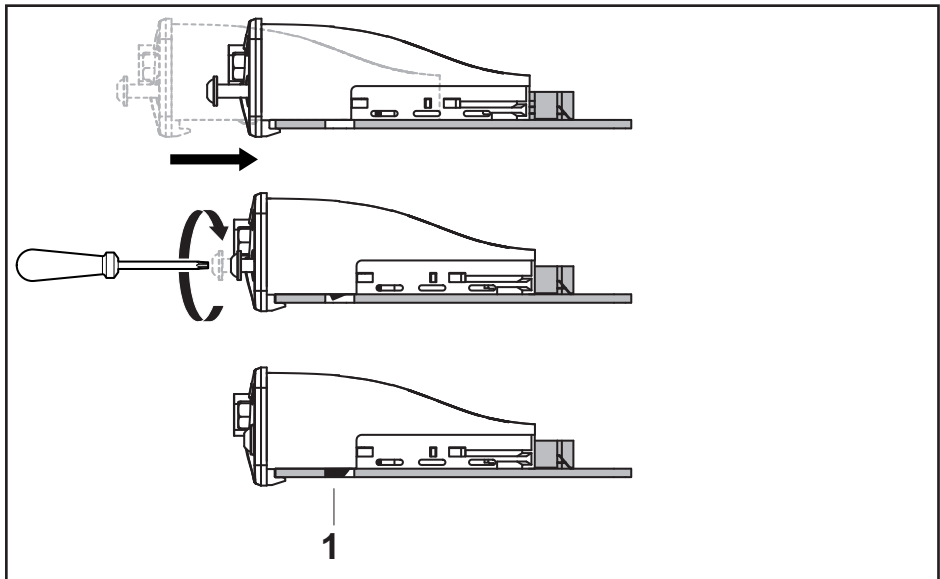



Fig. 3: Lock effect



## 7 Commissioning

	<b>⚠ CAUTION</b>
	<p><b>Risk of damage to persons and property!</b></p> <p>Commissioning of the IMenip interface module requires basic mechanical and electrical knowledge.</p> <p>► Only qualified personnel (see "Personnel qualifications" on page 16) are authorized to commission the system.</p>


- Before commissioning, check that all plug-in connections have the correct seat.
- Once the system has been switched on and the module has been initialized, it is then ready for communication on the network and waits to be connected by the Ethernet IP scanner.
- The NS LED and MS LED run through a test sequence following system boot up.
- The ESD file (device master data) corresponding to the interface module can be created with the BS350 operating software.

## 8 Operation

Operation is not necessary while the system is running.

## 9 Maintenance and repair

### Cleaning and care

	<b>⚠ CAUTION</b>
	<p><b>Any dirt or liquids penetrating the device lead to malfunctions!</b></p> <p>Safe function of the IMenip interface module is no longer ensured.</p> <p>► Always provide for absolute cleanness when working on the IMenip interface module.</p>

### Maintenance

The IMenip interface module is maintenance-free if used as intended.

### Spare parts

Please refer to the address directory under [www.boschrexroth.com](http://www.boschrexroth.com) and in chapter "16 Service and sales" on page 26 for the addresses of our foreign subsidiaries.

## 10 Decommissioning

For details about how to disassemble or replace your IMenip interface module please refer to chapter "11 Disassembly and replacement" on page 23.



## 11 Disassembly and replacement

### Required tools

- TX9 screwdriver

Proceed as follows to disassemble the IMenip interface module:

### Disassembling

	 <b>CAUTION</b>
	<p><b>Disconnecting the IMenip interface module while under voltage</b></p> <p>Damage to the IMenip interface module!</p> <p>► Always switch off the power supply to the relevant system component before removing the IMenip interface module.</p>

1. Make sure the relevant system components are not under voltage.
2. Loosen the front torx screws. The IMenip interface module may only be removed once the lock has been completely released (see Fig. 4).
3. Assemble a dummy panel, if necessary.

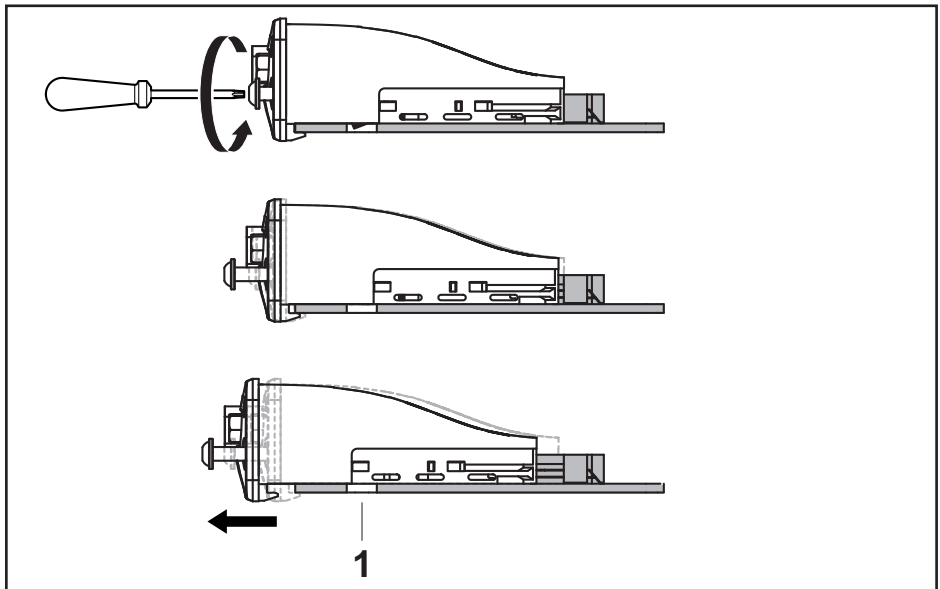


Fig. 4: Releasing the lock

1 Lock

## 12 Disposal

### Environmental protection

Careless disposal of the IMenip interface module could lead to pollution of the environment.

Therefore dispose of the device in accordance with the currently applicable regulations in your country.

You can also send the device to Bosch Rexroth for disposal.

## 13 Extension and conversion

Do not convert the IMenip interface module.

## 14 Troubleshooting

Malfunctions and information on errors are displayed in the tightening system, e.g. in the BS350.

The NS LED indicates the Ethernet status.

**Table 5 NS**

LED display	Meaning
Red	Double IP address or blocking error
Flashing red	Timeout reached in one or more connections (CIP class 1 or 3)

The MS LED indicates the interface module status.

**Table 6 MS**

LED display	Meaning
Red	Error (exception error or blocking error)
Flashing red	Self-acknowledged error

If you should not be able to remedy an occurring defect, please contact one of the addresses that you can find under [www.boschrexroth.com](http://www.boschrexroth.com) or in the address directory in chapter "16 Service and sales" on page 26.

## 15 Technical data

**Table 7**

General data	IMenip
Order number	0 608 830 271
Dimensions (width x height x depth)	50.1 x 22.3 x 56.8 mm
Weight	30 g
Operating temperature range	Designed for operation in System 350 components
Storage temperature range	-20 °C to 70 °C
Permissible humidity for application	20% - 90%, non-condensing
Permissible humidity for storage	20 - 95%
Protection class in acc. with EN 60529/IEC529	IP 20 (~NEMA 1) when installed
Mounting orientation	Any