2 Correct use

CC-Link interface module is a CC-Link based gateway and a part of the MELSEC-WS system that communicates with primary control systems. It provides non-safety fieldbus data for control and diagnostic purposes. The gateway does not have its own power supply and can only be operated with a MELSEC-WS system.

Up to two gateways can be used in a MELSEC-WS system. These must be installed directly to the right of the W50-CPUX.

This gateway must be used only by qualified safety personnel and only on the machine where it has been installed and initialized by qualified safety personnel in accordance with the operating manuals.

4.3 Display elements

The CC-Link interface module is equipped with two LEDs: MS and L RUN/ L ERR.

- MS LED
  - Lights up Green: Executing (link process, data from/to CPU)
  - Flashes Green: Idle (CPU STOP)
  - Flashes Green/Red: Executing, but data link stopped or faulty

- L RUN/ L ERR.
  - Lights up Red: Power supply or data link stopped
  - Flashes Red: One of the following has been detected when data link is active.
  - Configuration of the station number setting switch
  - Terminating register not connected
  - Module or CC-Link dedicated cable affected by noise

5.1 Documents for the MELSEC-WS system

These manuals apply for the WS0-GCC100202 CC-link interface module WS0-GCC100202 (hereinafter, CC-link interface module) and only in combination with the corresponding user’s manual Safety Controller CC-link Interface Module User’s Manual. The installation, configuration and commissioning of the MELSEC-WS safety control system are described in the Safety Controller User’s Manual and Safety Controller Setting and Monitoring Tool Operating Manual.

In addition, mounting protective devices also requires specific technical skills which are not detailed in this documentation.

- output values (ON/OFF) for all MELSEC-WS input/output extension modules and EFI devices connected
- logic results
- the error and status information of all modules

For detailed description of the data set and configuration, please read the "Safety Controller CC-link Interface User’s Manual".

The occurrence of random or systematic faults within the module or its control does not impede the MELSEC-WS system’s safety function.

Do not use non-safety data from network modules for any other related applications.

Network modules only processes non-safety-related data which is not suitable for operation on a safety-related network.

L RUN/ L ERR. LED lights up in red.

Example: Setting the station number 11

Station number setting switch is out-of-range.

Station number setting switch is in-range.

Station number setting switch is in-range.

Station number setting switch is in-range.

Station number setting switch is in-range.
5 Mounting/Dismantling

The MELSEC-WS system is only suitable for mounting in a central cabinet with at least IP44 degree of protection. While supply voltage is applied, gateways must not be plugged to or be removed from the MELSEC-WS system.

To ensure full electromagnetic compatibility (EMC), the DIN mounting rail must be connected to conductive earth (FE).

Le système MELSEC-WS ne peut être installé que dans une armoire de commande avec un degré de protection IP 54 ou mieux.

Les passaerreines ne doivent pas être enfilées ou retirées du système MELSEC-WS quand la tension d'alimentation est appliquée.

Pour garantir totalement la compatibilité électromagnétique (EMC), le rail de fixation DIN doit être raccordé à la terre fonctionnelle (FE).

5.1 Steps for mounting the modules

- In a MELSEC-WS system the CPU module WS5-CPU0 or WS5-CPU1 is positioned at the extreme left, the two optional gateways follow directly. Only then do the expansion modules follow. The relays modules WS5-ARO have to be at the extreme right.
- The modules are located in a 22.5-mm wide modular system for 35 mm DIN rails to EN 60715.
- The connection between the modules is effected by means of the plug connection integrated in the housing.
- Mount the module in accordance with EN 50274.
- Ensure that suitable ESD protective measures are also taken during mounting. Otherwise the FLEXBUS+ bus may be damaged.

5.2 Steps for dismantling the modules

- Make sure that the voltage supply of the MELSEC-WS system is switched off.
- Hang the device onto the DIN rail 1)
- Ensure that the earthing spring contact 2) contacts the DIN rail such that it can electrically conduct.
- Latch the module onto the DIN rail by pressing it lightly in the direction of the arrow 3).
- Slide the modules together individually in the direction of the arrow until the side plug connection latches in.
- Install the end clips on the right and left.

6 Configuration and commissioning

Do not commission without a check by specialist personnel!

Ne pas procéder à la mise en service sans qu'un personnel spécialisé ait effectué un contrôle !

Before the initial commissioning of the system in which you are using a MELSEC-WS system, it must be checked and released by qualified safety personnel. The results of this check must be documented. La première mise en service d'un système utilisant un système MELSEC-WS ne doit être effectuée qu'après contrôle et autorisation délivrée par un personnel de sécurité qualifié. Les résultats de ce contrôle doivent être dûment documentés et suivis.

The CC-Link interface module can be configured using the MELSEC-WS Setting and monitor tool via the WS5-CPU0 module’s R0232 interface.

7 In the event of faults

In the event of unclear faults, cease operation! En présence d’anomalie d'origine indéterminée, interrompez la marche !

Stop the machine if you cannot clearly identify or allocate the error and if you cannot safely rectify the malfunction.

Arrêt de la machine si on ne parvient pas à identifier l’erreur, et ou si l’on ne peut pas rectifier la mauvaise marche.

Complete functional test after error rectification! Menez à bien les essais de fonctionnement après correction des erreurs !

Carry out a full functional test after an error has been rectified. Toujours effectuer des essais de fonctionnement complets après avoir corrigé une erreur.

8 Technical data

Supply circuits

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>24 V DC (16.8…30 V DC)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>Max. 1.4 W</td>
</tr>
</tbody>
</table>

Interfaces

<table>
<thead>
<tr>
<th>Fieldbus</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC-Link</td>
<td>Remote device station</td>
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</tbody>
</table>

Data transmission speed

<table>
<thead>
<tr>
<th>Fieldbus</th>
<th>CC-Link station type</th>
<th>CC-Link Version</th>
<th>Data transmission speed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Remote device station</td>
<td>Ver 1.10</td>
<td>156kbps/625kbps/2.3Mbps/96kbps/1Mbps (auto-sensing)</td>
</tr>
</tbody>
</table>

Station number

1 to 64 (factory default: 0)  

Number of occupied stations

1 station (RX/RY 32 points each, RW/RWm 4 points each)
2 stations (RX/RX 64 points each, RW/RWm 8 points each)
3 stations (RX/RX 96 points each, RW/RWm 12 points each)
4 stations (RX/RX 128 points each, RW/RWm 16 points each)  
(The last 16 points of RX/RX are for system use (reserved))

8.1 Specifications of the cables

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Specifications</th>
</tr>
</thead>
</table>
| CC-Link compatible cable | For the specifications and any inquiries on the CC-Link dedicated cables, refer to the following: CC-Link Partner Association website: www.cc-link.org  
Pour les caractéristiques des câbles dédiés CC-Link ou toute demande de renseignements, consulter le site internet de CC-Link Partner Association: www.cc-link.org |
| Câble dédié CC-Link compatible Ver 1/0 | Cable size (for CC-Link terminal and crimp tool)  
Bones sans soudure et outils de serrage |
| Stainless steel terminal | Mitsubishi Electric Co., Ltd  
Model: 20AWG  
Type of wire: Finely stranded  
Bar terminal model: PA-TVC125T9  
Crimp tool: PHC100SP |
| Stainless steel terminal (bar terminal) and crimp tool | Mitsubishi Electric Co., Ltd  
Model: 20AWG  
Type of wire: Finely stranded  
Bar terminal model: PA-TVC125T9  
Crimp tool: PHC100SP |
| Stainless steel terminal (for CC-Link terminal and crimp tool) | Mitsubishi Electric Co., Ltd  
Model: 20AWG  
Type of wire: Finely stranded |