

As at: Nov 2010

Product and functional description

CM EIB/KNX is a communication module (CM) for connecting the LOGO! to the EIB. It is implemented as a slave module for the logic module LOGO! (12/24 or 115/240 volt). The CM EIB/KNX is a bus device on the EIB and enables the LOGO! to communicate with other EIB devices through the exchange of EIB data points. It transfers EIB data points to the LOGO! and LOGO! functions to the EIB. CM EIB/KNX makes the current states of the configured EIB data points available to the LOGO! so that it is able to link them with its logic functions and timing elements. The EIB data points can thus also be linked with those of the local LOGO! inputs and outputs. The CM EIB/KNX then transfers each change in the status of the output signals on the EIB.

The combination of the LOGO! and CM EIB/KNX provides the user with a distributed controller functionality for the EIB with the possibility of carrying out settings or modifying parameters or logic operations quickly, simply and without a programming device.

Application programs

See Siemens product database from version J onwards
https://www.hqs.sbt.siemens.com/LowVoltage/gamma_product_data/data/search_find_en.htm?te1=6BK1

or:
<http://www.automation.siemens.com/mcms/programmable-logic-controller/en/logic-module-logo/Pages/Default.aspx>

Technical data

Power supply

- Supply voltage: 24 V AC / 24 V DC
- Permitted range: -15% ... +10% / -15% ... +20%
- Power consumption from power supply: max. 70 mA / 30 mA
- Power consumption via bus: 5 mA
- EIB data transmission rate: 9600 baud

Operating elements

- EIB/KNX programming button (A9)
- Bus slide switch (A2)

Display elements

- "RUN/STOP" LED: Communication with the LOGO! (A3)
- "BUS" LED: EIB bus state (A4)

RUN/STOP LED lights up (A3)		
green (RUN)	red (STOP)	orange
CM EIB/KNX is communicating with the device on the left	CM EIB/KNX is not communicating with the device on the left	Initialisation phase of the CM EIB/KNX

BUS LED lights up (A4)		
green	red	orange
Bus connection OK, communication OK, no programming mode	Bus connection interrupted	Programming mode active and bus connection OK

Connections

- LOGO! interface, standard extension interface for LOGO! 12/24 V and 115/240 V
- EIB bus connection (TP 256)
- Power supply
- Virtual digital inputs (I): max. 16
- Virtual digital outputs (Q): max. 12
- Virtual analog inputs (AI): max. 8
- Virtual analog outputs (AA): max. 8
- Max. group addresses: 64
- Max. associations: 64

Mechanical data

- Housing: plastic
- Weight: approx. 107 g
- Dimensions (WxHxD): 36 (2 modules) x 90 x 55 mm
- Installation: DIN rail 35 mm or wall-mounted

Electrical safety

- Type of protection (in accordance with EN 60529): IP20
- Interference suppression EN 55011 (limit value class B)
- Certification:
 - CE
 - EIB/KNX
 - UL508
 - VDE 0631
 - IEC 61131-2
- Overvoltage protection: Slow-blowing fuse 80 mA (recommended)

EMC requirements

Complies with EN 61000-6-1 and EN 61000-6-2

Environmental conditions

- Climatic withstand capability: EN 50090-2-2
- Ambient operating conditions: 0°C to +55°C
Natural convection
- Storage and transport temperature: -40°C to +70°C
- Rel. humidity (not condensing): 95 % at +25°C

Approval: FM

CE mark

In accordance with the EMC guideline (residential and functional buildings), low voltage guideline

Location of the connection and operating elements

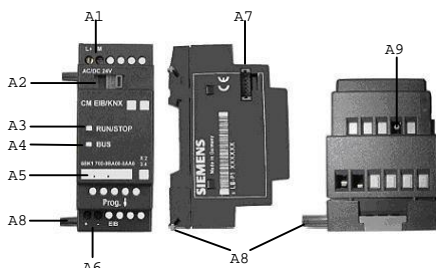


Figure 1: Location of the connection and operating elements

- A.1 Power supply
- A.2 Bus slide switch. Interface to the LOGO!
- A.3 LED for indicating operating state
- A.4 LED for status display of EIB/KNX
- A.5 Labelling field for physical address
- A.6 EIB bus connection
- A.7 Extension interface to the LOGO!
- A.8 Mechanical coding – pins
- A.9 Programming button „I“

Installation notes

- General guidelines
 - The following guidelines must be observed when installing and wiring the CM EIB/KNX:
 - Ensure that you follow all the valid and binding norms when wiring the CM EIB/KNX. Observe the corresponding national and regional regulations during the installation and operation of the devices. Ask the local authorities about any norms and regulations that need to be followed in your particular case.
 - Make sure that the device is de-energised.
 - Only use approved bus cables.
 - The EIB bus cable may also be laid in parallel to other cables.
 - CM EIB/KNX must always be installed as the last module on the right-hand side of the LOGO! as no further interface modules may be connected to the CM EIB/KNX.
- The CM EIB/KNX must have its own power supply (24 V).
- Observe the notes regarding assembly and dismantling in the LOGO! manual.



The insertion and withdrawal of the extension modules may only take place in the de-energised state.

- The device may only be installed and commissioned by an authorised electrician.
- The relevant safety and accident regulations must be noted.
- The mains voltage may only be connected once the device has been fully assembled.
- Electrical separation must be ensured between the bus cable and supply voltage.

Installation and wiring

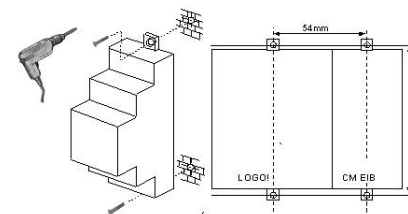


Figure 2: Wall mounting of the CM EIB/KNX

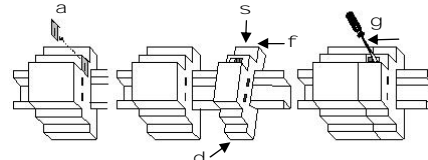


Figure 3: DIN rail mounting of the CM EIB/KNX

- Remove the cover of the extension interface
- Suspend the extension module from the top in the DIN rail
- Swivel the extension module backwards until it audibly clicks in place
- Press the LOGO! and extension module together
- Push the bus slide switch to the left with a screwdriver to latch together the LOGO! and extension module

NOTE

- To protect the CM EIB/KNX adequately against non-permissible contact with live parts, the country-specific norms must be complied with.
- CM EIB/KNX is a totally insulated device. A protective conductor terminal is not necessary.

Connecting the power supply

The CM EIB/KNX has been designed as a slave module for the LOGO! controller and must be supplied with a mains voltage of 12/24 V AC/DC.

- 2-pole screw terminal (0.5 – 2.5 mm²)
- Max. torque: 0.5 Nm
- Protection with 80 mA/slow-blowing fuse (recommended).

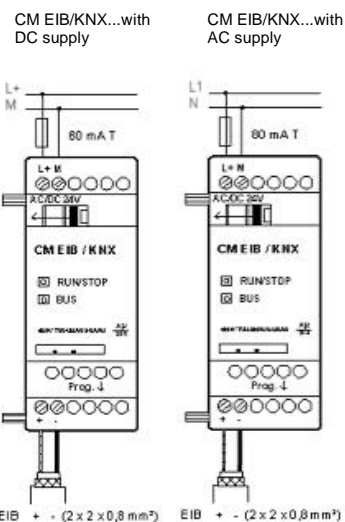


Figure 4: Wiring of the CM EIB/KNX

Connecting the bus cable

The connection is carried out via the two-pole screw terminal (+ and -).

- 2-pole screw terminal (0.5 – 2.5 mm²)
- Max. torque: 0.5 Nm

Only the red-black core pair is used, the white-yellow core pair is not connected. Bus cable to be used: YCYM or J-Y(STY) (2 x 2 x 0.8 mm²)

Commissioning the CM EIB/KNX

- Bus voltage and supply voltage must be present.
 - Connect the PC to the serial EIB interface.
 - Start ETS, using ETS2 version 1.2.
 - Configure the application program in ETS2, V 1.2.
 - The application program is loaded into the devices via the EIB interface. The application program is available on the LOGO! home page (<http://www.automation.siemens.com/mcms/programmable-logic-controller/en/logic-module-logo/Pages/Default.aspx>).
 - Click on "Program Physical Address" in ETS.
 - Press the button of the CM EIB/KNX to switch the CM EIB/KNX to programming mode; LED lights up orange.
- NOTE**
The button "Prog I" should not be pressed too firmly. If the bus connection is OK, the LED lights up green. In programming mode, the LED lights up orange.
- If the LED is extinguished, the programming of the physical address has finished. You can now mark the physical address on the device. Composition of the physical address: Area / Line / Device XX / XX / XXX
 - The application program can now be run. The device is then ready for operation.
 - If several CM EIB/KNX are installed in an EIB system, steps 1 to 9 must be repeated for each CM EIB/KNX.
 - Any further details about EIB commissioning can be found in the corresponding documentation.

Behaviour on communication failure

LOGO! voltage failure

If there is a power failure of the LOGO! or a disruption in the communication to the LOGO! master or to the communication partner on the left-hand side, the outputs are set to 0. The RUN/STOP LED lights up red after a second.

LOGO! voltage recovery

LOGO! starts up again, CM EIB/KNX sends the parameterised states.

CM EIB/KNX voltage failure

All the inputs of the LOGO! master on the EIB are set to 0 by the LOGO! master.

CM EIB/KNX voltage recovery

All the outputs of the LOGO! master on the EIB are updated. The inputs are read by the EIB depending on the parameterisation.

Short circuit on the bus or bus interruption

The behaviour can be parameterised in the LOGO! configuration window. After 5 sec., the red LED is set.

Bus recovery

The behaviour can be parameterised in the LOGO! configuration window.

Available functions

The CM EIB/KNX takes over the communication between the LOGO! and EIB and makes communication available via EIB inputs/outputs.

EIB inputs/outputs

The application of the CM EIB/KNX fills the complete Logo process image i.e. inputs or outputs which are not occupied on the LOGO! can be occupied via the EIB.