# SIEMENS
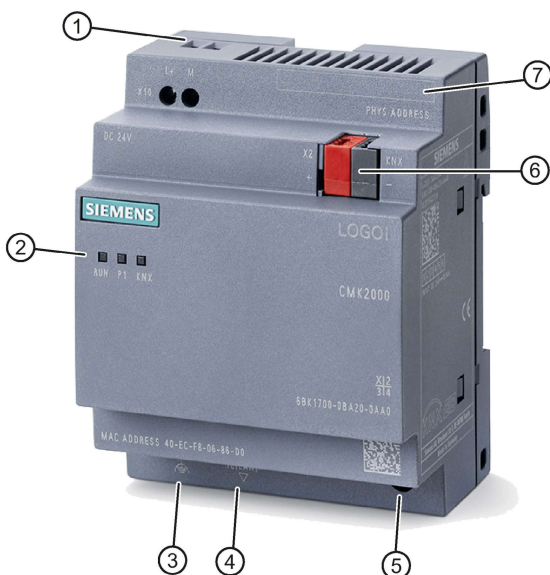## LOGO!

# CMK2000
## Compact Operating Instructions

## Application

The LOGO! CMK2000 is a communication module from the LOGO! family with a KNX interface.

This document is valid for the following products:

| LOGO! CMK2000 | 6BK1700-0BA20-0AA0 |
|---|---|

## Design



| ① | 24 V DC connection |
|---|---|
| ② | Status LEDs <br><br> • RUN: Status of the CMK2000 <br> • P1: Connection status with LOGO! <br> • KNX KNX connection status / programming mode / warm restart |
| ③ | FE functional grounding connection |
| ④ | Ethernet connection (LOGO! 8) |
| ⑤ | Programming/reset button |
| ⑥ | KNX bus connection |
| ⑦ | Labeling field for physical address: |

## Safety guidelines

This device corresponds to the approvals printed on the type plate. If you have questions about whether it is permissible to install the device in the planned environment, please contact your service representative.

| ⚠ WARNING |
|---|
| • The product/system described in this documentation may only be operated by personnel qualified for the specific task in hand. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems. <br><br> • Alterations to the devices are not permitted. Failure to observe these guidelines shall constitute a revocation of the approvals and manufacturer's warranty. |

| ⚠ WARNING |
|---|
| **Electric shock hazard** <br> **May cause death, serious injury or material damage.** |
| • Voltages > 60 V can occur in the control cabinet. Suitable safety precautions preventing contact must therefore be taken before and during commissioning and maintenance work. <br><br> • Switch off the power supply and secure against switching on again. All system components must be off-circuit during installation and connection. <br><br> • UL-approved cable types must be used for UL-certified systems (60/75°C). |

## ⚠ WARNING

**Connection to safety extra low voltage / protective extra low voltage only.**

**May cause death or serious injury**

The equipment is designed for operation with safety extra low voltage (SELV) with safe electrical isolation according to IEC 60950-1 / EN 60950-1 / VDE 0805-1.

The following applies for use in North America: The equipment power supply must comply with NEC Class 2 according to the National Electrical Code (ANSI/NFPA 70).

The supply terminals and the process and communication signals, including Ethernet, may only be connected to safety extra low voltage (SELV) with safe electrical isolation according to Class 2 Power Supply in North America.

## Legal information

### NOTICE

The device is subject to licensing regulations and specific operating conditions. Please observe the information underhttp://www.siemens.com/gamma-td (search text "LOGO").

## Status of the CMK2000

| RUN LED | P1 LED | KNX LED | Description |
|---|---|---|---|
| ■ | x | x | Error: Version conflict between firmware components |
| ■ | x | ■ | Device defective |
| ☀ | x | x | Communication error or LOGO! in STOP operating state |
| ☀ | x | x | Maintenance status: Firmware update in progress |
| ■ | x | x | Incomplete configuration or programming mode active |
| ■ | x | x | Error-free operating mode |

## Connection status with LOGO!

| RUN LED | P1 LED | KNX LED | Description |
|---|---|---|---|
| x | ☀ | x | LAN link established and LAN communication active |
| x | ■ | x | LAN link established |
| x | ■ | x | No LAN link established |

## KNX connection status / programming mode / warm restart

| RUN LED | P1 LED | KNX LED | Description |
|---|---|---|---|
| x | x | ■ | No KNX bus connected |
| x | x | ■ | KNX bus connected |
| x | x | ■ | Programming mode active |
| x | x | ☀ | Incomplete configuration |

## Meaning of the LED symbols

| Symbol | Description |
|---|---|
| ■ | LED is off |
| ■ | LED is permanently lit red, orange or green |
| ☀ | LED flashes in a single color (red, orange or green) |
| ☀ | LED flashes in two colors (orange/green) |
| x | LED state is irrelevant |

## Selecting the installation location / mounting position

The device is to be installed on a DIN rail or mounted on a wall.

- Permitted mounting positions: horizontal or vertical
- Ensure that the permissible ambient temperature range is not exceeded:
  - Horizontal installation: 0 °C to 55 °C
  - Vertical installation 0 °C to 45 °C
- Ensure that no condensation can form at a relative atmospheric humidity of between 10% and 95%.
- Ensure an air pressure of between 795 hPa and 1080 hPa.
- Maintain a minimum clearance distance of at least 35 mm above and below. Provide sufficient space for supply voltage, Ethernet and the KNX bus connection.

## Mounting the CMK2000: DIN rail mounting without tools
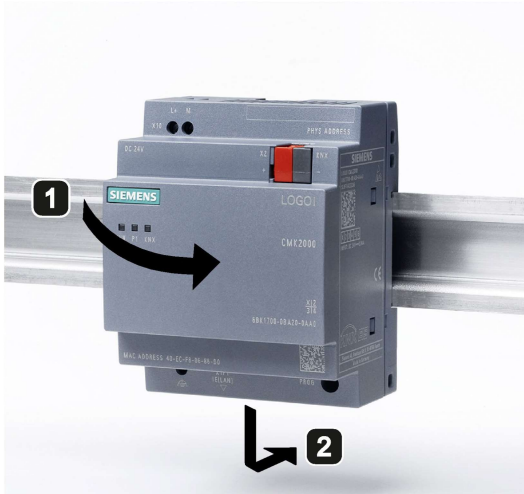


| 1 | Hook the device onto the DIN rail. |
| 2 | Press the bottom of the CMK2000 back until the device locks audibly into place. |

## Mounting the CMK2000: Wall mounting
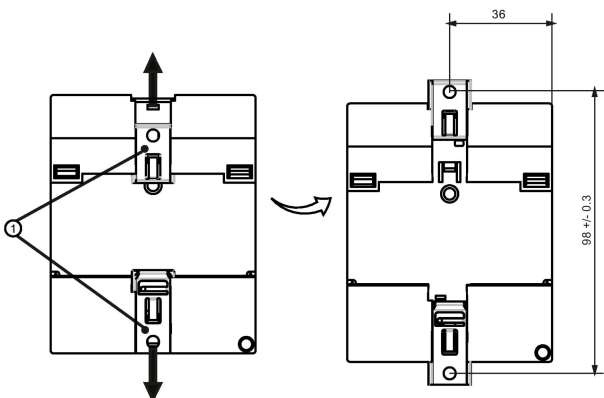


| 1 | Slide the mounting brackets ① out until they click into place. |
| 2 | See Fig. 3 for the drill hole dimensions. Hole for screw M4, torque 0.8 Nm to 1.2 Nm. |

## Connecting 24 V DC supply voltage

The power for the CMK2000 is supplied via an external 24 V DC SELV power supply.



① L+

② M (ground)

Connection via 2-pin screw terminal (0.5 ... 2.5 mm²), max. torque 0.5 Nm
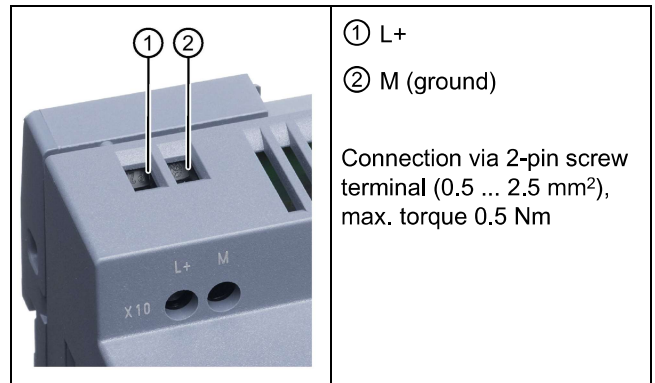
## Connecting to functional ground (FE)

Connect the functional ground (e.g. from the DIN rail) in order to discharge EMI such as bursts or surges to the FE terminal.

Conductor cross-section: 0.5 ... 6.0 mm²

**Note**
**EMC-compliant functional ground**
- Use as short a stranded-wire conductor as possible with a large cross section.
- Compliance with the technical specifications of the device can only be assured if a correct functional grounding is adhered to.

## Connecting LOGO! with CMK2000 via Ethernet

The connection between the LOGO! 8 and the CMK2000 is via Ethernet. Use a shielded Ethernet cable (CAT5e) with a shielded connector.
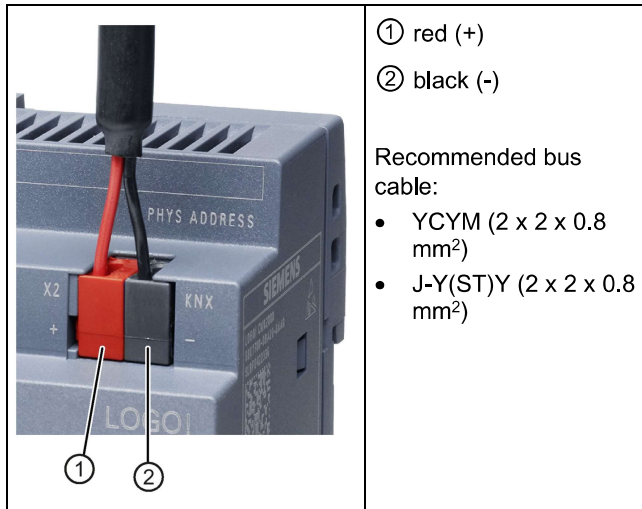
| NOTICE |
| --- |
| Do not violate the minimum bending radius limit of the Ethernet cable, otherwise this will result in attenuation of the shielding effect. Furthermore there is a danger that the cable shield will break. |

**Note**
We recommend using the RJ45 connector from the Siemens FastConnect system.

## Connecting CMK2000 to the KNX bus



① red (+)

② black (-)

Recommended bus cable:
- YCYM (2 x 2 x 0.8 mm$^2$)
- J-Y(ST)Y (2 x 2 x 0.8 mm$^2$)

## Note
- Only the red-black core pair is used; the white-yellow core pair is not connected.
- Do not connect the shield of the KNX cable.
- Only KNX-certified bus cables may be used.

## NOTICE

Do not use electrically conductive objects such as screwdrivers to lever out the KNX terminal. Otherwise there is a danger that the two KNX pins may short-circuit.

## Technical specifications

| Power supply | |
|---|---|
| Supply voltage | 24 V DC (19.2 V ... 28.8 V), external, SELV |
| Power loss, maximum | 1.1 W |
| Current consumption, maximum | 0.04 A |
| **Interfaces** | |
| Maximum transmission rate | 100 Mbps |
| Protocols | EIB/KNX, TCP/IP |
| LOGO! communication | Yes |

| Ambient conditions | |
|---|---|
| Ambient temperature in operation | |
| • Horizontal installation | 0 °C ... 55 °C |
| • Vertical installation | 0 °C ... 45 °C |
| Ambient temperature during storage and transport | -40 °C ... +70°C |
| Relative air humidity during operation and storage | 10 % ... 95 % at 25 °C, no condensation |
| Maximum height above sea level | 2000 m |
| **Mechanical specifications** | |
| Weight | Approx. 0.14 kg |
| Degree of protection | IP20 |
| Dimensions (W x H x D) | 71.5 mm x 90 mm x 58.5 mm |
| **EMC** | |
| Interference emission (residential areas) | According to EN 61000-6-3 |
| Immunity (industrial areas) | According to EN 61000-6-2 |
| **Standards, approvals, certificates** | |
| CE marking | Yes |
| UL approval | Yes |
| cULus | Yes |

## Additional documentation

For additional information (e.g. on configuration and commissioning), please refer to the operating instructionsSupport homepage (http://support.automation.siemens.com).

## ETS product database

The product database and the operating instructions for the CMK2000 KNX LOGO! module can be downloaded as a knxprod file as from ETS 4.

http://www.siemens.com/gamma-td (search text: "LOGO")

## Siemens Industry Online Support

Support homepage (http://support.automation.siemens.com)