

CLICK CPU

Insert Sheet

Please read and understand this information sheet prior to installation, operation and servicing of this equipment. Please refer to the CLICK User Manual for more detailed information.

General Safety

Please follow the instructions below for personal and operation safety.

In this Insert Sheet, the safety instruction levels are classified into "WARNING" and "CAUTION".

WARNING Assumes that incorrect handling may cause hazardous conditions, resulting in severe personal injury or death.

CAUTION Assumes that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury, or may cause physical equipment damage.

WARNING

- Don't use this equipment in flammable or explosive environments in order to avoid injury, accident or fire.
- Use external electromechanical devices independent of the PLC (Programmable Logic Controller) system to provide protection for any part of the system. Otherwise, malfunction or output failures may result in a hazardous accident.
- Connect the ground terminal of the Power Supply Unit (C0-00AC/01AC) to earth ground to avoid electric shock or equipment damage.
- Don't operate the equipment with a nonconforming external power supply, this may result in electric shock, equipment damage or fire.
- Don't wire incorrectly to avoid equipment damage or fire.
- Don't touch any terminal while the PLC power is on, this could result in electric shock; subsequent malfunctions may result in an accident.
- Don't put metals (e.g. Screw driver) into ventilation holes and be careful not to drop trash (e.g. cut off wire) into the device, either of which could result in electric shock or equipment damage.
- Dispose of battery in accordance with local regulations in order to avoid accidental injury or fire.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be compromised.

CAUTION

- Use and store the equipment in an environment as described in the specifications (regarding temperature, humidity, vibrations, shock, etc) in order to avoid equipment damage or fire.
- Ensure stress relief on wiring is in place when wiring module to avoid electric shock or fire.
- External power supply circuit should be independent of controlled system/equipment power source such that the system will never turn on before the PLC control program runs. Otherwise, malfunction or output failures may result in a hazardous accident.
- Don't block the ventilation holes. This could result in increased internal temperatures and subsequent equipment damage or fire.
- Don't disassemble or modify the equipment. This may result in electric shock, equipment damage or fire.
- Cut off all phases of external power supply prior to performing maintenance work in order to avoid electric shock or equipment damage.

1. Before Use

■ Environment Specifications

- Operating temperature: 0 to 55°C (Rapid change of temperature: IEC60068-2-14 test)
- Relative Humidity: 30 to 95% (no condensing)
- Environmental air: No corrosive gasses permitted (Environment pollution level 2)

* **Keep out iron powder, moisture, oil or chemicals. Keep away from shock or vibration. Keep out of direct sun light. Keep away from intense electric or ferromagnetic field.**

- Use: Indoor
- Altitude: Up to 2,000m
- Input Voltage Range: 20–28 VDC with less than 10% ripple.
- Maximum Power: 20W
- Inrush Current: 30A maximum (1ms maximum)
- Wire used: 16–28 AWG / Lead-free, heat resistant, polyvinylchloride insulated wire / 80°C

■ Safety Installation, Wiring and Handling

- Discharge static electricity before installation or wiring to avoid electric equipment damage.
- Clear the PLC Memory by executing the 'Reset to Factory Default' feature in the CLICK Programming Software before downloading the CLICK project file as the PLC memory is not initially defined.

2. Preface

This CLICK PLC unit is supported by CLICK Programming Software Ver2.20 or newer version.

3. Compliant Crimp-type terminal

■ For C0-00AC / 01AC Power Supply Terminal Block

These Terminal Blocks have regular (M3 size) screw terminal. The following crimping terminals are recommended.

Type	Supplier	Part No.	Compliant Wire
Ring terminal	JST Mfg. Co., Ltd	1.25-MS3	0.25–1.65 mm ² (14–26 AWG)
Fork terminal	Automationdirect.com	BM-00120	

Maximum tightening torque is **0.5 to 0.6 N·m** for 24VDC Power Supply terminals and I/O terminals

The following crimping terminals are recommended for 24VDC terminal and I/O terminals of PLC and expansion I/O modules.




Type	Supplier	Part No.	Compliant Wire
Ferrule	Automationdirect.com	V30AE000009 V30AE000041	0.2–0.5 mm ² (22–26 AWG)

Maximum tightening torque is **0.22 to 0.25 N·m**

※Take care not to make contact with adjacent terminals.

4. Symbols

Power supply symbols listed on the equipment are indicated by the symbols shown below.

DC	: Direct current	Symbol:		IEC60417 No.5031
G	: Functional earthing	Symbol:		IEC60417 No.5017
CAUTION	: Safety instruction for Battery replacement	Symbol:		ISO 7000 No.0434B

5. Safety Standards

To comply with safety standards, please observe and use the following information. (If you do not comply, you can not satisfy safety standards.)

■ Please use SELV and Limited Energy (as defined in UL 61010-1, 9.4).

* The following information applies to part numbers C0-12DRE*-D and C0-12ARE*-D.

■ CLICK PLC units C0-12DRE*-D

Basic Insulation is provided between DC input terminal and relay output terminal. In order to comply with IEC/UL 61010-2-201, if the output is connected to a circuit exceeding 30V, please provide an external isolation with basic insulation before the relay output terminal. Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500V rms.

■ CLICK PLC units C0-12ARE*-D

Basic Insulation is provided between AC input terminal and relay output terminal. In order to comply with IEC/UL 61010-2-201, if the output is connected to a circuit with 30VAC or less, please provide an external isolation with basic insulation before the AC input terminal. If the output is connected to a circuit exceeding 30VAC, please provide an external isolation with basic insulation before the relay output terminal. Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500VAC rms.

* Before installation, please be sure to check that the insulation class of this equipment meets your requirements. The insulation class of this equipment is as follows:

24 V power supply terminal	RS-232C
Internal power supply circuit	RS-485
Analog input / output	Internal circuit
Relay output	
AC/DC input	Ethernet

— : Non-insulation

— : Functional insulation

— : Basic insulation

*Insulation between output and input for relay output 240 V, AC input 120V / DC input 27 V. Insulation between output and analog input / output and internal circuit with respect to relay output 240 V. In order to comply with IEC 61010-2-201, insulation under the conditions described above is required.

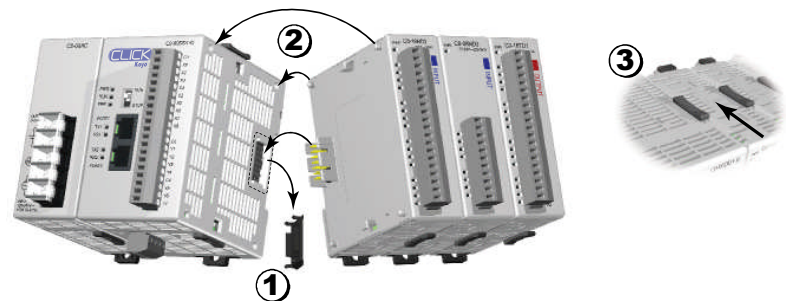
--- : Reinforced insulation

*Insulation from internal circuit / output for relay output 240 V, AC input 120 V / DC input 27 V.

6. Installation or Removal of Expansion I/O Modules

Installation Steps:

- ① Slide the LOCK lever (attachment of modules) to "UNLOCK" and remove bus cover.
- ② Align I/O module with right hand side of PLC, engaging bus connector so that modules are flush.
- ③ Slide the "LOCK" lever firmly towards rear of modules, locking them together.



■ When removing a module, work the installation steps in reverse.

■ Cut off all phases of external power source and wait **5 seconds** before installation or removal of running system expansion I/O modules.

7. Safety Installation

Use the following guidelines when installing modules:

- Mount the CLICK PLC horizontally to provide proper ventilation.
- There is a minimum clearance requirement of 2" (51mm) on all sides of components and the adjacent equipment and enclosure.
- There is a minimum clearance requirement of 3" (76mm) from the wiring ducts and the equipment.

* Please use this product in a metal or UL conform enclosure.

CAUTION: When mounting on DIN Rails use end brackets on both ends of assembly.

You should use 35 mm width DIN Rails.

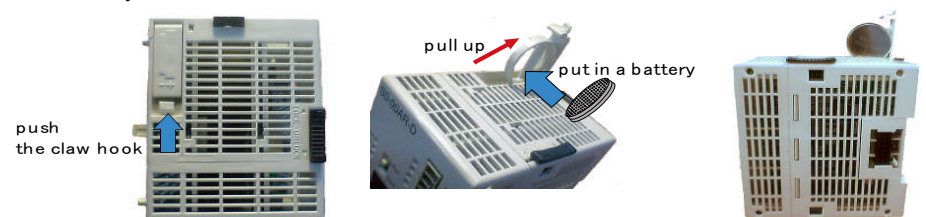
You should use the M4 size screws when you install without DIN Rails.

You should use a spring washer and a round small washer. Screws should be torqued at **0.5 to 0.6 N·m**.

CAUTION: Don't operate without the safety cover on Power Supply terminals.

8. Replacing Battery (except Basic PLC units: Battery is not included but optional).

- ① Power up the PLC unit for **at least 10 minutes** to charge PLC unit's capacitor prior to removing the battery. This will retain function memories. We recommend data backup (e.g. user data memory) before replacing the battery.
- ② Power off the PLC unit, push the claw hook and pull up the battery holder.
- ③ Put in a new battery paying attention to polarity ('+' and '-') indicated on the upside of battery holder.



- ④ Push down and close the battery holder, power on the PLC unit.

■ Battery life is about **3 years**.

■ Replace a battery **within 10 minutes after power off the PLC unit**.

■ Replacement battery is a lithium battery **D2-BAT-1** (CR2354).

WARNING and CAUTION

1. "For use in Pollution Degree 2 Environment" or equivalent;
2. "24VDC power is required from a secondary circuit or a specific power supply unit only" or equivalent;
3. "CAUTION, Battery May Explode If Mistreated. Do Not Recharge, Disassemble or Dispose of in fire."