





# CUR-07 OPERATING INSTRUCTIONS

Thank you for purchasing the communication interface unit, CUR-07. Make sure that the delivered unit conforms to your requirement, and also check for any missing or damaged parts. This manual for CUR-07 describes the product configuration and gives notes on safe usage, the mounting procedure. Before using the product, carefully read this manual and other related manuals and make sure you understand them.

## Product configuration

CUR-07 ..... 1 pce.

## Items

OPERATING INSTRUCTIONS (This manual) ..... 1 copy  
Mounting screws M3x12 ..... 3 pcs.  
Screw connector ..... 1 pce.  
FG wire ..... 1 pce.  
Ferrite Core ..... 1 pce.  
Cord band ..... 1 pce.

## Notes on Safe Usage

In this manual, you will find various notes categorized under the following levels with the signal words "DANGER," and "CAUTION."

**DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

**CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury and could cause property damage.

Note that there is a possibility that the item listed with **CAUTION** may have serious ramifications.

### DANGER

- Turn off the power supply when you set up the unit, connect cables or perform maintenance and inspection. Otherwise, electrical shock or damage may occur.
- Never touch any terminals while the power is on. Otherwise, electric shock may occur.

### CAUTION

- Check the appearance of the unit when it is unpacked. Do not use the unit if any damage or deformation is found. Failure to do so may lead to fire, damage or malfunction.
- For use in a facility or for a system related to nuclear energy, aerospace, medical, traffic equipment, or mobile installations, please consult your local distributor.
- Operate (or store) CUR-07 under the conditions indicated in this manual and related manuals. Failure to do so could cause fire, malfunction, physical damage or deterioration.
- Understand the following environmental limits for use and storage of the unit. Otherwise, fire or damage to the unit may result.
  - Avoid locations where there is a possibility that water, corrosive gas, flammable gas, solvents, grinding fluids or cutting oil can come into contact with the unit.
  - Avoid high temperature, high humidity, and outside weather conditions, such as wind, rain or direct sunlight.
  - Avoid locations where excessive dust, salt, and metallic particles are present.
  - Avoid installing the unit in a location where vibration or physical shock may be transmitted.
- Tighten mounting screws equally to a torque of 0.5 to 0.7 N•m. Improper tightening of screws may result in fall of this unit, short circuit, fire, malfunction, or trouble.
- Prevent any conductive particles from entering CUR-07. Failure to do so may lead to fire, damage, or malfunction.
- Do not attempt to repair, overhaul or modify CUR-07 at your site. Ask Hakko Electronics or the designated contractor for repair. Otherwise, it may cause a malfunction.
- Hakko Electronics Co., Ltd. is not responsible for any damages resulting from repair, overhaul or modification of CUR-07 that was performed by an unauthorized person.
- Only experts are authorized to set up the unit, connect the cables or perform maintenance and inspection.
- Take safety precautions during operations such as changing settings when the unit is running, forced output, and starting and stopping the unit. Any misoperations may cause unexpected machine movement, resulting in machine accidents or damage.
- In facilities where the failure of CUR-07 could lead to accidents that threaten human life or other serious damage, be sure that such facilities are equipped with adequate safeguards.
- At the time of disposal, CUR-07 must be treated as industrial waste.
- Before touching CUR-07, discharge static electricity from your body by touching grounded metal. Excessive static electricity may cause malfunction or trouble.

## [General Notes]

- Never bundle control cables or input/output cables with high-voltage and large-current carrying cables such as power supply cables. Keep control cables and input/output cables at least 200 mm away from high-voltage and large-current carrying cables. Otherwise, malfunction may occur due to noise.
- Be sure to terminal block or sockets of CUR-07 in the correct orientation. Failure to do so may lead to damage or malfunction.
- Do not use thinners for cleaning because it may discolor CUR-07 surface. Use commercially available alcohol.
- The V9 series or TS2060i is identified as a class-A product in industrial environments. In the case of use in a domestic environment, the unit is likely to cause electromagnetic interference. Preventive measures should thereby be taken appropriately.

## Type

Type	Network Name	Conformance Standards*
CUR-07	DeviceNet	CE : EN61000-6-2, EN61000-6-4, EN50581 UL/cUL : UL508 (File No. E313548)

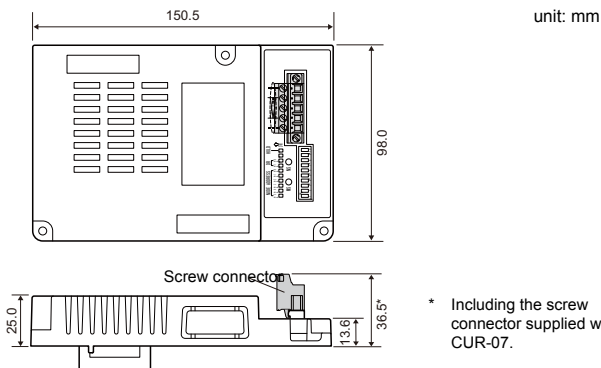
\* This unit is complied with these standards when using it to the V9/TS2060i model complied with the CE Marking or UL/cUL. For more information, refer to Hardware Specifications manual.

## Supported Types

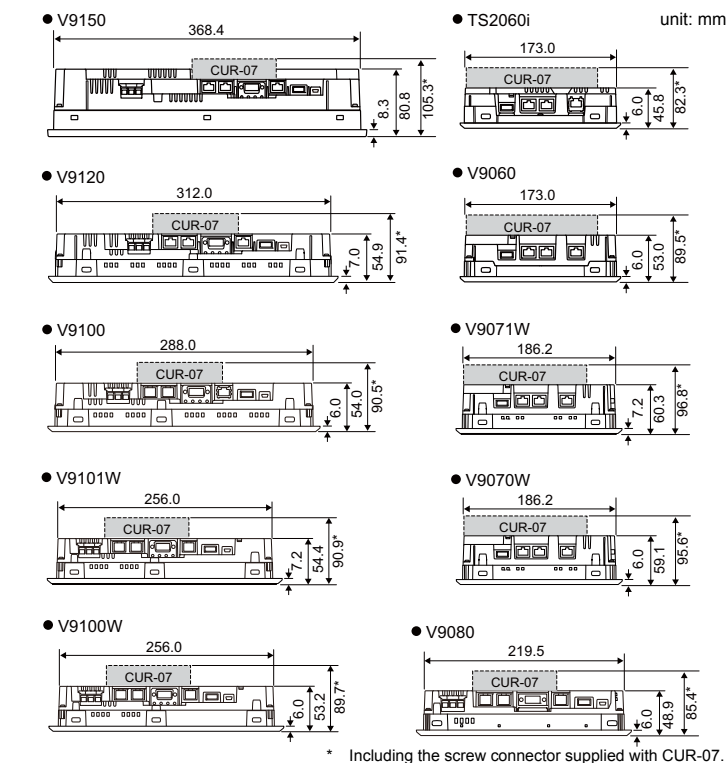
V9 series, TS2060i

## Dimensions

### CUR-07



### Touch panel + CUR-07



## Specifications

### General Specifications

Items	Specifications	
Rated Voltage	Power supply for CUR-07 (supplied from V9 series or TS2060i)	Power supply for the DeviceNet communication (supplied from the external equipment)
	5 VDC	11 VDC to 25 VDC
Power Consumption	0.55 W	2.0 W
Ambient Temperature	0 °C to +50 °C (0 °C to +40 °C for V915)	
Storage Ambient Temperature	-10 °C to +60 °C	
Ambient Humidity	85 % RH or less (without dew condensation)	
Atmosphere	No corrosive gas, not so much excessive dust, no conductive dust	
Weight	Approx. 150 g	
Dimensions W × H × D (mm)	98.0 × 150.5 × 25.0 (excluding the connector for V9 series or TS2060i connection and the screw connector supplied with CUR-07)	
Case Color	Light gray	
Material	PC resin	

## Performance Specifications

Items	Specifications				
Vendor ID	734				
Product Code	0001 (HEX)				
Used Connector	Screw connector				
I/O Specification	Compliant with DeviceNet communication standards				
Baud Rate	125 K/ 250 K/ 500 Kbps (Switching by Dip switch)				
Transmission Distance	Baud Rate	Maximum Network Length		Drop Line	Total Drop Line
		Thick Cable	Thin Cable		
		125 Kbps	500 m		
250 kbps	250 m	100 m	6 m	78 m	
500 kbps	100 m	100 m	6 m	39 m	
Communication Function	I/O messages: polling				

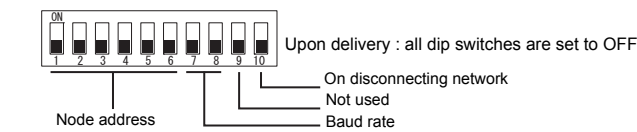
## LED

Item	Color	Status	Contents
MS	-	Off	The power not supplied
	Green	Blink	Shipped test mode
		On	Normally worked
Red	Blink	Initializing, or recoverable error occurred.	
	On	Initialization Error	
NS	-	Off	Initialization Error or Network Error (Off line)
	Green	Blink	Network Error (Connection not established)
		On	Normally worked
	Red	Blink	Network Error (Time out)
		On	Node address duplication Error or BUS OFF Error

For the solution to each error, refer to "Specifications of Communication Unit DeviceNet."

## Dip Switch

**CAUTION** Turn off the power supply when you set up the Dip switch.



### DIPSW1 to 6: Node Address

Set the node address : 0 to 63.

Node address	DIPSW					
	1	2	3	4	5	6
0	OFF	OFF	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	OFF	OFF	ON
2	OFF	OFF	OFF	OFF	ON	OFF
:	:	:	:	:	:	:
62	ON	ON	ON	ON	ON	OFF
63	ON	ON	ON	ON	ON	ON

### DIPSW7, 8: Baud Rate

Set the baud rate.

Baud rate	DIPSW	
	7	8
125 Kbps	OFF	OFF
250 Kbps	OFF	ON
500 Kbps	ON	OFF

### DIPSW9: not Used

Set the off position.

### DIPSW10: on Disconnecting Network

Specify the way of data process when the network is shut down.

Data	DIPSW10
Clear	OFF
Keep	ON *

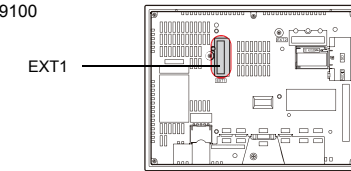
\* This switch is valid only when you select the "Continuous" is selected as [Comm. Error Handling] in the [Hardware Setting] → [Communication Setting] of V-SFT.

## Mounting Procedure

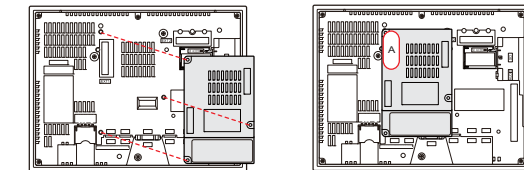
**CAUTION** Turn off the power supply for V9 series or TS2060i when you mount CUR-07 to it. Tighten mounting screws equally to a torque of 0.5 to 0.7 N•m.

- Remove the connector cover ("O" mark in the illustration below) from the EXT1 on the back of the V9 series or TS2060i.

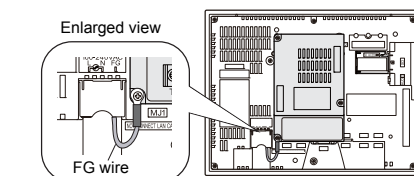
e.g. V9100



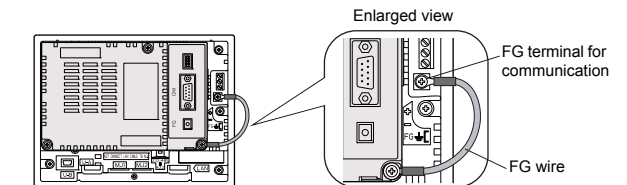
- Align the three mounting screw holes on the CUR-07 with the holes on the V9 series or TS2060i, and lightly press section "A" of the CUR-07. Check if the unit fits in the connector.



- Fix the CUR-07 on the V9 series or TS2060i using the three mounting screws supplied with the CUR-07. Also, connect the CUR-07 (the metal in the lower left) and the V9 series or TS2060i frame ground (FG) using the provided FG wire.



\* In the case of TS2060i, connect the provided FG wire to the FG terminal for communication on TS2060i.



- Wire the communication cable. For more information about the communication cable, refer to "Specifications of Communication Unit DeviceNet."

## Wiring

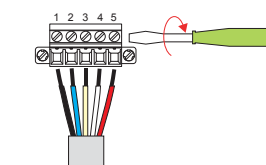
### Cable

**CAUTION** Be sure to use the dedicated cables for DeviceNet. Failure to do so may lead to malfunction.

## Wiring Procedure

**DANGER** Turn off the power supply when you connect the cables.

- Wire the dedicated cables (AWG 24 to 12) for DeviceNet to the screw connector supplied with CUR-07, and tighten them with a torque of 5.31 lbf-in (0.6 N•m) by using a flatblade screwdriver.



Pin No.	Color	Contents
1	Black	0 V (V-)
2	Blue	Data Low (CAN_L)
3	Shield	Drain
4	White	Data High (CAN_H)
5	Red	24 VDC (V+)

- Mount the screw connector to CUR-07, and tighten it with a torque of 5.31 lbf-in (0.6 N•m) by using a flatblade screwdriver.

## Notes

### CE Marking

When using this unit as the model with CE marking, be sure to attach the ferrite core supplied with this unit onto the communication cable near to the CUR-07.

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