



AD-4411-CCL
Weighing Indicator

INSTRUCTION MANUAL



WARNING DEFINITIONS

The warnings described in this manual have the following meanings:

 WARNING	A potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	A potentially hazardous situation which, if not avoided, may result in minor or moderate injury or damage to the instrument.

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1. Introduction

The AD-4411-CCL is a weighing indicator that converts signals from strain gauge load cells and supports connection to CC-Link. It contributes to an efficient system by connecting weighing instruments to industrial control systems in plants and factories.

- 7-segment green LED display with a character height of 10 mm and display resolution of ± 999999 .
- High-speed AD conversion of 1200 times/second and a digital filter enable high speed and accurate weighing.
- The panel-mount type has DIN dimensions of 96 × 48 mm and a front-panel protection rating of IP65.
- Settings can be updated with a PC via a USB port.

1.1. Safety precautions

If the indicator is used in a manner not specified by the manufacturer, the protection provided by the indicator may be impaired.

Please read the following precautions carefully before using the indicator.

[Design considerations]

WARNING

- Provide an external safety circuit for the indicator so that the safety of the whole system can be secured even if errors occur in the external power supply or the indicator.

[Installation precautions]

WARNING

- The indicator must be used indoors. Do not use the indicator in the following environments:
 - where the temperature and the humidity exceed the specifications
 - where there are corrosive or flammable gases
 - where the indicator could be subjected to oil, chemicals, or water
 - places exposed to direct sunlight

Please note that securing the indicator to the control panel provides IP65 protection to the outside of the control panel.

- Turn off all external power supplies when installing or removing the indicator.

[Wiring precautions]

WARNING

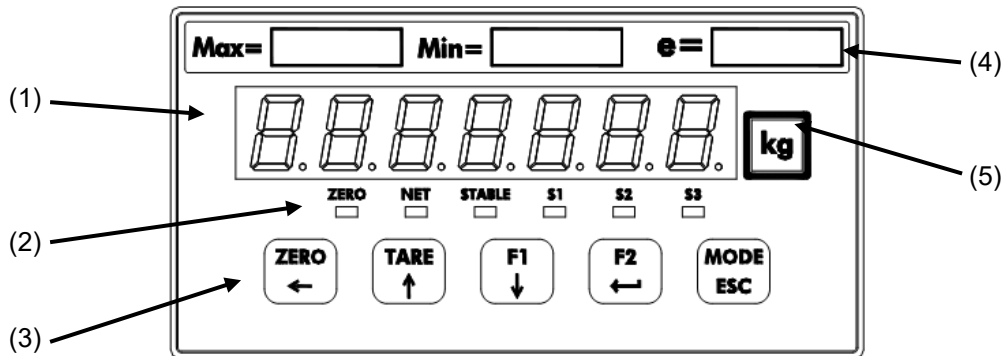
- Turn off all external power supplies when wiring the indicator.
- Be sure to ground the indicator.

CAUTION

- Do not clamp control wires or communication cables with power lines, and do not position them close to power lines.
- Position the load cell cable a sufficient distance away from high frequency circuits such as high voltage power lines or inverter load circuits.
- When the front panel becomes dirty, wipe it with a soft cloth lightly moistened with water. Do not use organic solvents such as benzine, thinner, or alcohol. Doing so may cause deformation or discoloration.
- Suitable for use at pollution degree of 2 or less.
- Use within an altitude of 0 to 2000 m.
- The indicator shall be supplied from a 24 V DC power source that meets the limited energy circuit requirements or LPS or NEC/CEC Class 2 (US/Canada), isolated from mains by reinforced or double insulation.

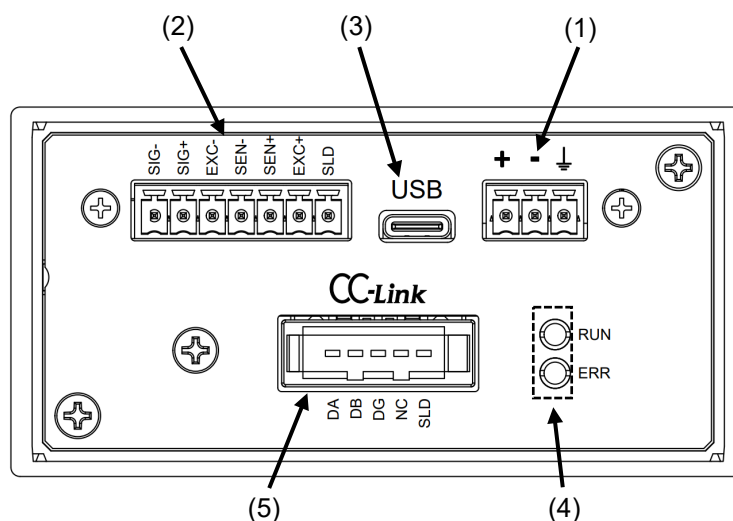
2. Part names

2.1. Front panel



No.	Name	Description	
(1)	Main display	Displays the measured value and various settings.	
(2)	Status LEDs	ZERO	The LED is ON when the measured value is within 1/4 of the minimum division.
		NET	The LED is ON when the net value is displayed.
		STABLE	The LED is ON when the measured value is stable.
		S1	The LED is ON when the S1 status ON condition (FncF07) is met.
		S2	The LED is ON when the S2 status ON condition (FncF08) is met.
(3)	Key switches	ZERO/←	Zeros the gross value. Moves the blinking digit to the left when not in measurement mode.
		TARE/↑	Performs tare. Increases the blinking digit by one when not in measurement mode.
		F1/↓	Performs the function set for the F1 key function (FncF05). Decreases the blinking digit by one when not in measurement mode.
		F2/ENTER	Performs the function set for the F2 key function (FncF06). Updates the setting value entered when not in measurement mode.
		MODE/ESC	Changes the operation mode. Cancels the setting value entered when not in measurement mode.
(4)	Capacity label	Attach the included capacity label if necessary.	
(5)	Unit label	Attach the included unit label if necessary.	

2.2. Rear panel



No.	Name	Description
(1)	DC power input terminals	Terminal for connecting the DC24V power supply
(2)	Load cell input terminals	Terminal for connecting the load cell
(3)	USB connector	Connector for connecting the setup PC (Type-C)
(4)	Status LEDs	Indicates Industrial CC-Link status
(5)	CC-Link connection port	CC-Link port for connection. Daisy-chaining is possible using an optional accessory (sold separately).

2.3. Accessories

Name	A&D part number	Qty.
Waterproof packing	1064053659	1
Panel mounting bracket	1073035116	2
Capacity label	1084054808	1
Unit label	1084023456A	1
Power connector	1JIMC1.5/3-ST	1
Load cell connector	1JIMC1.5/7-ST	1
CC-Link connector (insulation displacement type)	AX-35505-B	1

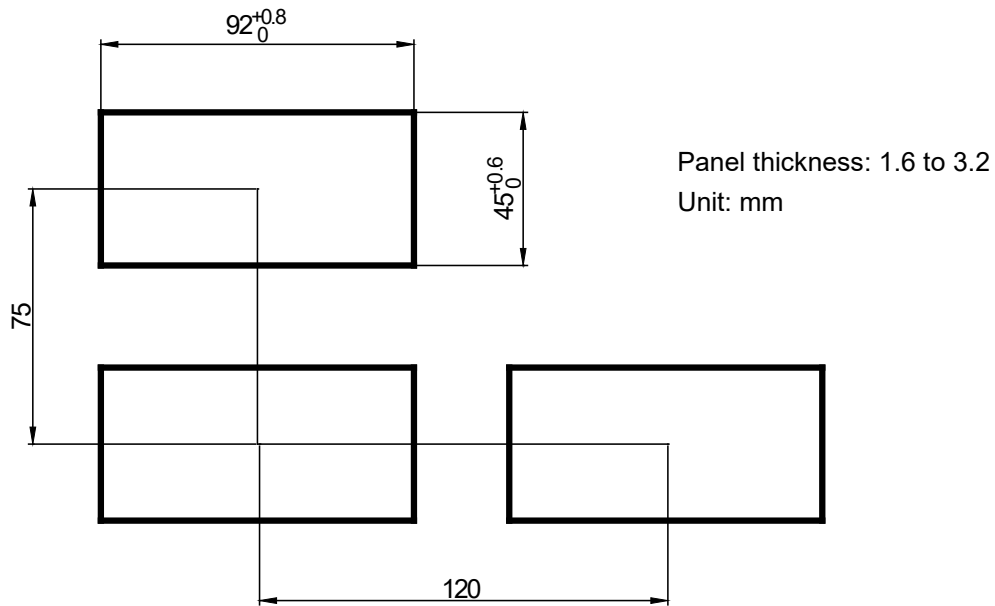
2.4. Optional accessories (sold separately)

Name	A&D part number
CC-Link terminating resistor connector	AX-35T05-B
CC-Link connector (insulation displacement type)	AX-35505-B
CC-Link Y-branch connector	AX-35715-B

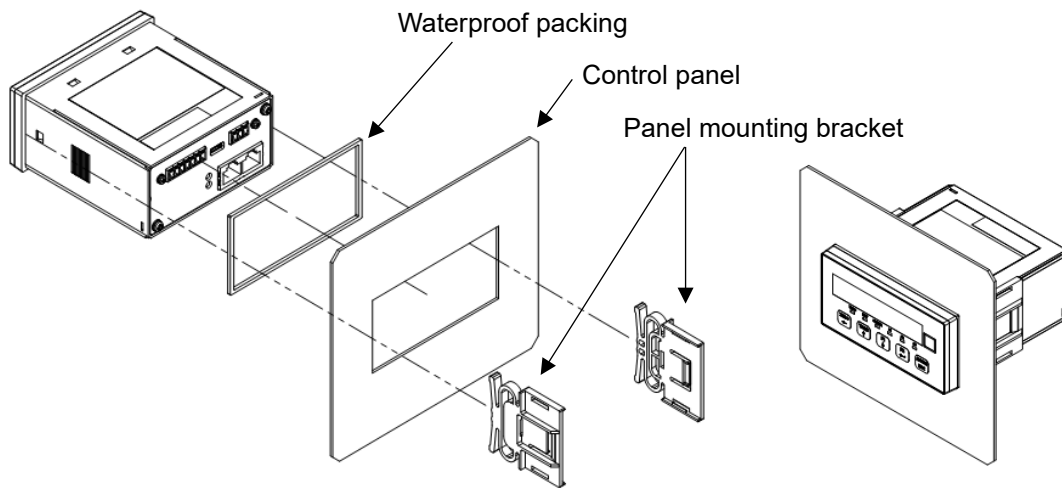
3. Installing to the control panel

3.1. Installing to the control panel

Make a hole in the control panel of the dimensions shown in the figure below. When installing more than one indicator, make sure there is sufficient space around each unit for heat dissipation.

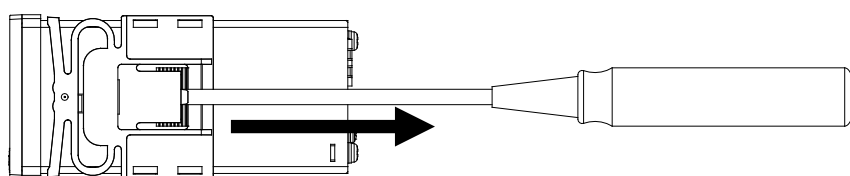


Attach the waterproof packing to the main body, then insert the main body into the control panel from the front. Fit the left and right mounting brackets into the grooves of the case and slide them all the way into the panel.



3.2. Removing the indicator from the control panel

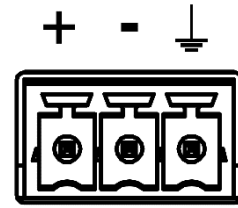
While pushing up the tabs of the panel mount bracket from the case with a flathead screwdriver, and slide the bracket towards the rear of the case.



4. Connection to power supply

4.1. DC power supply assignment

Symbol	Description
+	DC power input + (24 V)
-	DC power input - (0 V)
⏚	Functional ground

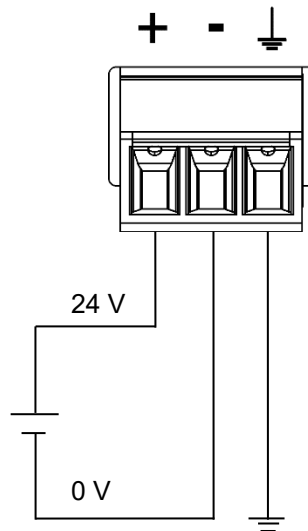


Applicable wire

Item	Specifications
Wire size	0.14 to 1.5 mm ² (AWG 26 to 16)
Wire strip length	7 mm
Tightening torque	0.22 to 0.25 Nm

4.2. Connection diagram

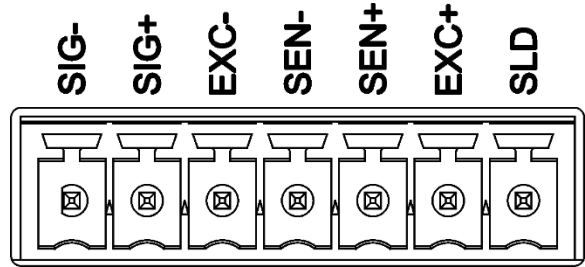
Attach the included power connector accessory and wire them as shown below.



5. Connection to load cell

5.1. Load cell input terminal assignment

Symbol	Name
SIG-	Load cell signal input -
SIG+	Load cell signal input +
EXC-	Load cell excitation voltage -
SEN-	Sensing input -
SEN+	Sensing input +
EXC+	Load cell excitation voltage +
SLD	Shield



Applicable wire

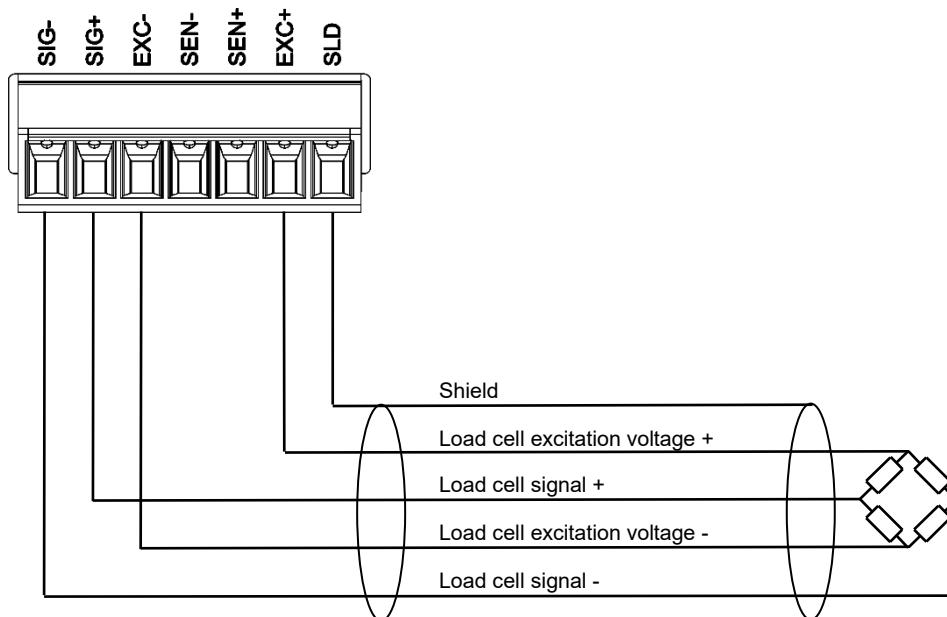
Item	Specifications
Wire size	0.14 to 1.5 mm ² (AWG 26 to 16)
Wire strip length	7 mm
Tightening torque	0.22 to 0.25 Nm

5.2. Connection diagram

Attach the included load cell connector accessory and wire them as shown below.

4-wire type

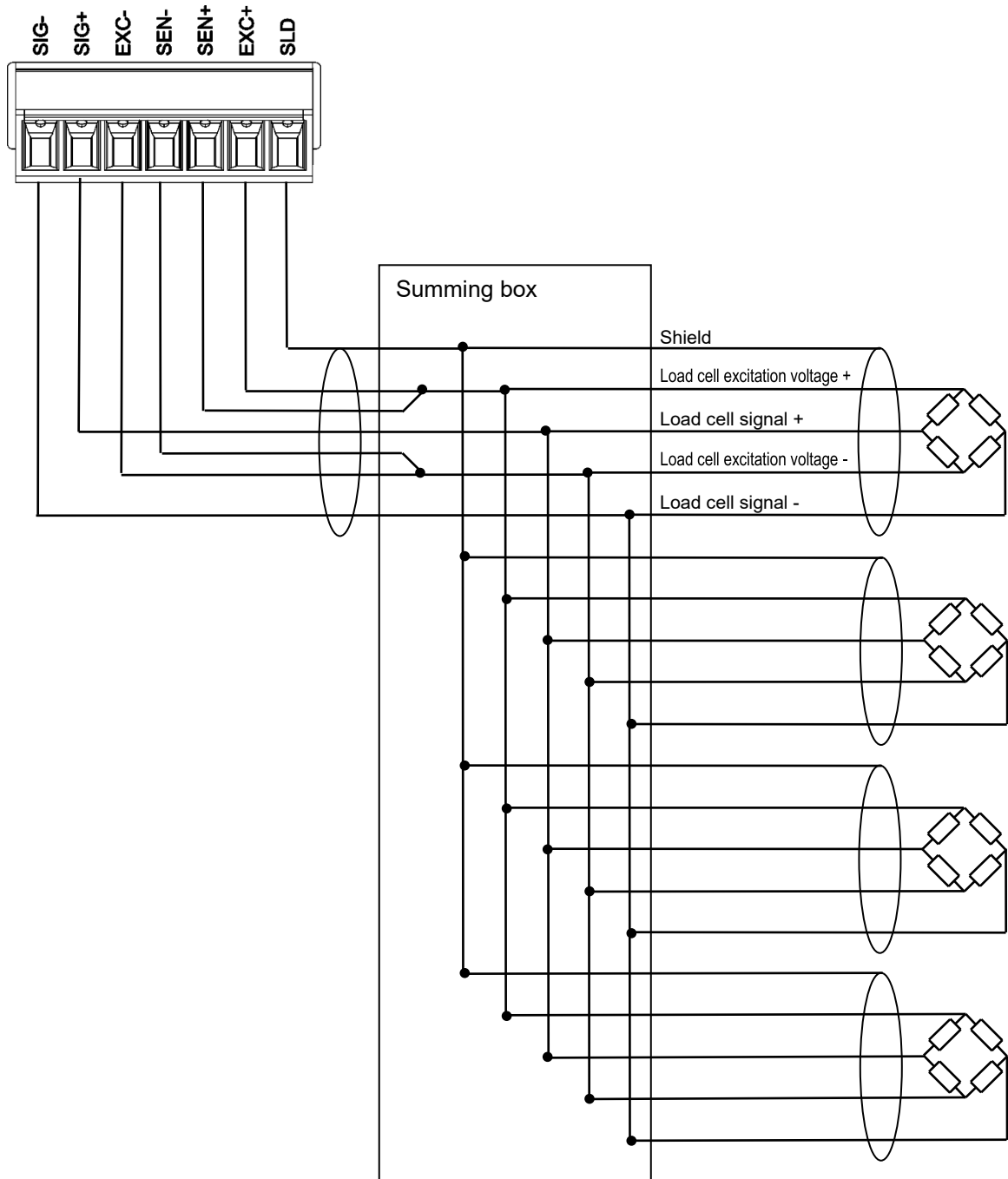
Set load cell connection type (CALF17) to 0: 4-wire type (default = 1: 6-wire type).



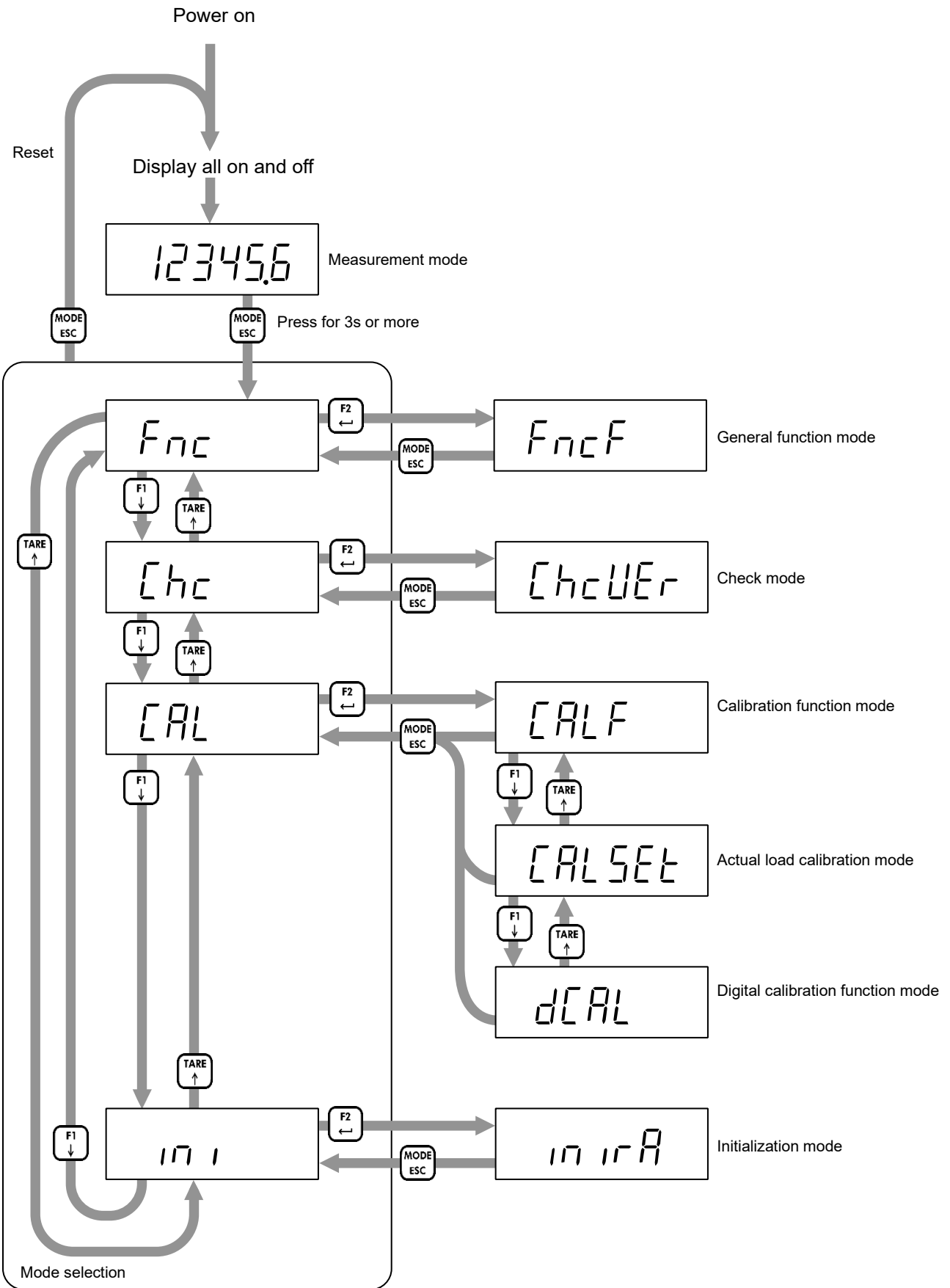
6-wire connection

Set load cell connection type (CALF17) to 1: 6-wire type (default).

When you connect the load cells in parallel, use a summing box. Connecting AD-4411-CCL to four load cells is as shown below.



6. Operation mode



7. Calibration

Calibrate the indicator so that it can properly convert the signal from the load cell to a load value.
Prepare calibration weights.

7.1. Settings required before calibration

Before calibration, the following settings are required.

- Select the measurement unit (CALF01).
The set unit is only used for external communication. Attach the unit label to the main display.
0: None / 1: g / 2: kg (default) / 3: t
- Select decimal point position (CALF02).
0: 0 (None) (default)
1: 0.0
2: 0.00
3: 0.000
4: 0.0000
5: 0.00000
- Set the minimum division (CALF03).
1: 1d (default) / 2: 2 d / 3: 5 d / 4: 10 d / 5: 20 d / 6: 50 d
- Set the maximum capacity (CALF04). (Default = 999999)

7.2. Digital calibration

After calibration using calibration weights is completed, digital calibration function settings are automatically updated.

It is recommended to make a note of the settings. If the indicator is replaced, calibration can be performed without applying an actual load by setting the recorded values.

- Load cell input signal at zero calibration (dCAL01)
- "Load cell input signal at span calibration" - "Load cell input signal at zero calibration" (dCAL02)
- The calibration weights at span calibration (dCAL03)

7.3. Actual load calibration

Refer to "6. Operation mode" to move to actual load calibration mode, then press the [F2/ENTER] key.

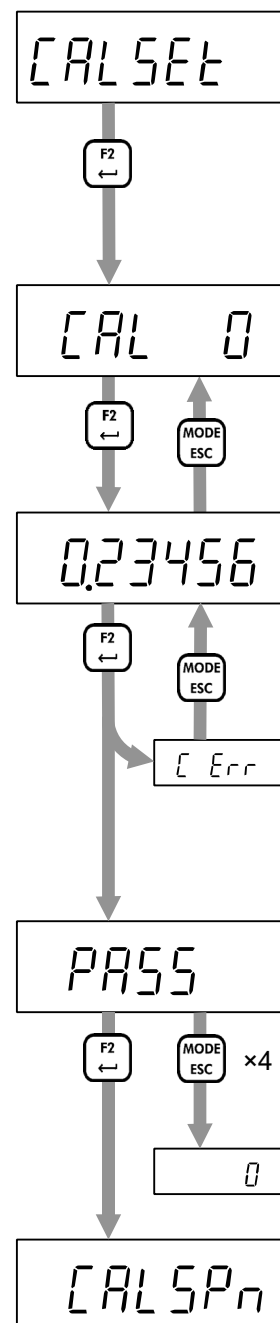
7.3.1. Zero calibration

Press the [F2/ENTER] key.
If the [F1/↓] key is pressed, the indicator skips zero calibration and enters span calibration.

The current load cell input signal (mV/V) is displayed.
Check that the STABLE status is ON.
Press the [F2/ENTER] key to execute zero calibration.

If span calibration fails, "C ErrX" is displayed.
Refer to "7.3.3. Error in actual load calibration" for error details.

If zero calibration is successful, "PASS" is displayed, and zero calibration is completed.
Press the [F2/ENTER] key to enter span calibration.
Or press the [MODE/ESC] key four times to return to measurement mode.



7.3.2. Span calibration

Press the [F2/ENTER] key.

If the [F1/↓] key is pressed, the indicator skips span calibration and enters zero calibration.

Set a calibration weight value by the following key operations:

[ZERO/←] key: Moves the blinking digit to the left.

[TARE/↑] key: Increases the blinking digit by one.

[F1/↓] key: Decreases the blinking digit by one

[F2/ENTER] key: Confirm the setting value.

The current load cell input signal (mV/V) is displayed.

Place the calibration weight or apply load to the load cell.

Check that STABLE status is ON. Press the [F2/ENTER] key to execute span calibration.

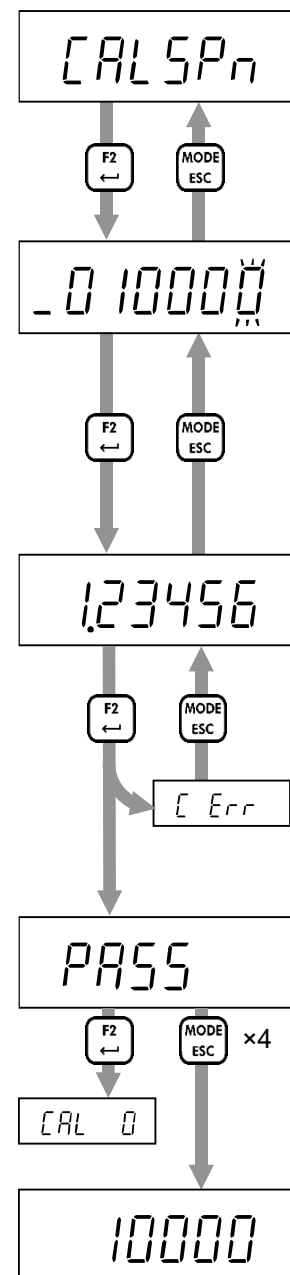
If span calibration fails, "C ErrX" is displayed.

Refer to "7.3.3. Error in actual load calibration" for error details.

If span calibration is successful, "PASS" is displayed, and span calibration is completed.

Press the [MODE/ESC] key four times to return to measurement mode.

Or press the [F2/ENTER] key to enter zero calibration again.



7.3.3. Error in actual load calibration

Error code	Description
[Err2	The load cell signal voltage at zero calibration exceeds 7.0 mV/V. Check that the load cell is connected correctly.
[Err3	The load cell signal voltage at zero calibration is less than -7.0 mV/V. Check that the load cell is connected correctly.
[Err4	The calibration weight value for span calibration exceeds the maximum capacity. Set the calibration weight value to the maximum capacity or less.
[Err5	The calibration weight value for span calibration is below the scale interval. Set the calibration weight value to the scale interval or more.
[Err7	The load cell input signal at span calibration is smaller one at zero calibration. Check that the load cell is connected correctly.
[Err8	The load cell signal voltage at span calibration exceeds 7.0 mV/V. Check that the load cell is connected correctly.

8. Basic functions

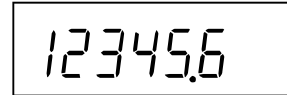
After the indicator is turned on, all segments of the display turn on / off to check the display. Then AD-4411-CCL enters measurement mode and starts measuring.

Refer to "14. Function Settings" for function setting methods.

8.1. Main display

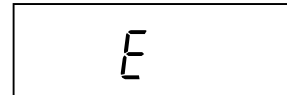
The following content is displayed in measurement mode.

- Measurement value:



- Positive overload:

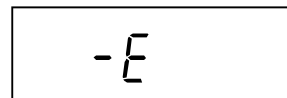
The gross value exceeds the maximum capacity by +8 d.



- Negative overload:

The gross value meets the negative overload condition (CALF15).

(Default = 0: Gross < - maximum capacity + 8 d)



8.2. Power-on zero

After power-on, the gross value is set to zero automatically when the gross value is within the maximum capacity $\pm 10\%$ and stable.

Set power-on zero (CALF14) to 1: Enable to use this function. (Default = 0: Disable)

If the condition is not met, "-----" is displayed until the condition is met.

Press the [MODE/ESC] key to skip power-on zero and enter measurement mode.

8.3. Zero-setting

Executing zero-setting

When the measurement value is within the zero-setting range (CALF05), press the [ZERO] key or send a request externally to save the gross value as the zero-setting value and set to zero.

Set the following to use this function.

- Set the zero-setting range (CALF05) to a value other than 0. (Default = 100%)
- Select the zero-setting at unstable (CALF10) from 0: Disable / 1: Enable (default).

Zero clear

Press a key to which zero clear function is assigned or request externally to clear the zero-setting value.

Set the following to use this function.

- Set the function of [F1] / [F2] key (FncF05 / Fnc06) to 2: zero clear. (Default = 0: None)
- Set zero clear (CALF13) to 1: Enable (default).

8.4. Zero-tracking

The gross value is set to zero automatically when the tracking time has passed while the gross value is maintained within the zero-tracking width.

Set the following to use this function.

- Set the zero-tracking time (CALF06) to a value other than 0.0 s (default).
- Set the zero-tracking width (CALF07) to a value other than 0: Disable (default).

8.5. Tare

Executing tare

Press the [TARE] key or request externally, to save the gross value as the tare value and set the net value to zero.

Set the following to use this function.

- Select taring at unstable (CALF11) from 0: Disable / 1: Enable (default).
- Select taring at the negative gross (CALF12) from 0: Disable / 1: Enable (default).

Tare clear

Press a key to which tare clear function is assigned or request externally to clear the tare value.

Set the following to use this function.

- Set the function of [F1] / [F2] key (FncF05 / Fnc06) to 1: tare clear. (Default = 0: None)

8.6. Gross / Net display selection

Press a key to which Gross / Net display selection function is assigned or request externally to switch the displayed value between gross and net. Net status is ON when the net value is displayed.

Set the following to use this function.

- Set the function of [F1] / [F2] key (FncF05 / Fnc06) to 3: Gross / Net display selection. (Default = 0: None)

8.7. Center-zero detection

The center of zero is detected and ZERO status turns ON when the gross value is within 1/4 of the minimum division.

8.8. Stability detection

Stability is detected and the stable status is ON when the stability detection time has passed while the measured value is maintained within the stability detection width.

Set the following to use this function.

- Set the stability detection time (CALF08) to a value other than 0.0 s. (Default =1.0 s)
- Set the stability detection width (CALF09) to a value other than 0: Disable. (Default = 2 d)

8.9. High resolution display selection

Press a key to which the high-resolution display selection function is assigned to switch the displayed value between high resolution display (10 times higher) and normal display.

Set the following to use this function.

- Set the function of [F1] / [F2] key (FncF05 / Fnc06) to 4: high resolution display selection. (Default = 0: None)

8.10. Comparator

The comparison value and the measured value are compared, and then Hi / OK / Lo is detected when the following conditions are met.

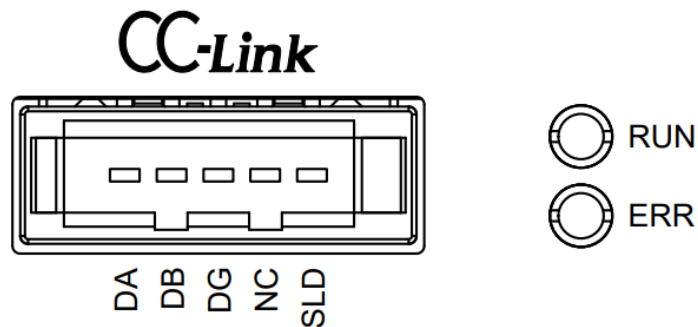
Hi	Measured value > Upper limit value
OK	Upper limit value \geq Measured value \geq Lower limit value
Lo	Lower limit value > Measured value

Set the following to use this function.

- Upper limit value (FncF11). (Default = 10)
- Lower limit value (FncF12). (Default = -10)
- Select the target for comparison (FncF13) from 1: Gross (default) / 2: Net.

9. CC-Link

9.1. Part names



9.2. Terminal assignment

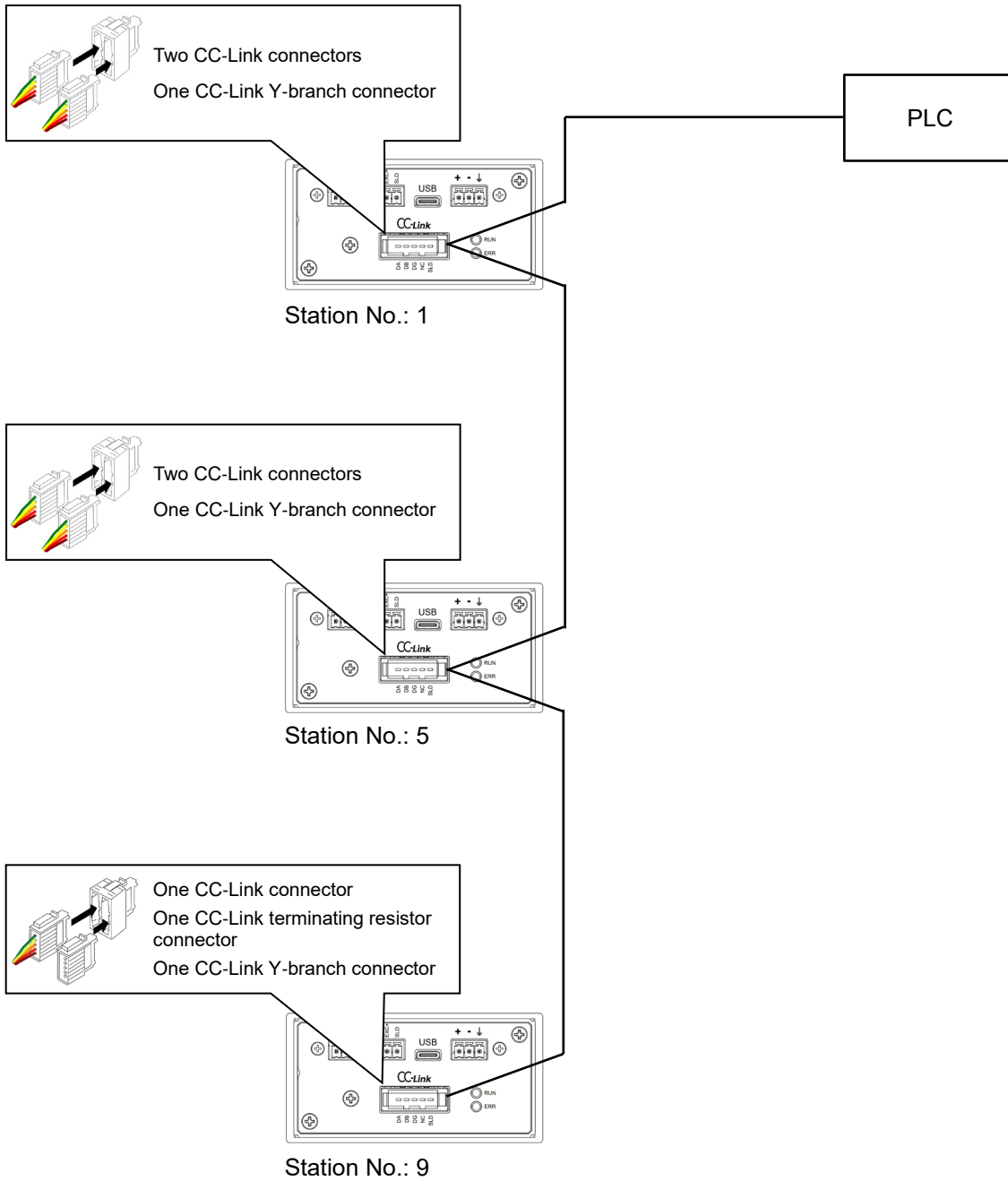
Terminal	Description
DA	Signal line DA
DB	Signal line DB
DG	Signal ground
NC	Not connected
SLD	Shield

9.3. Status LED operation

Name	Description
RUN	OFF Power off or resetting
	Green, ON Operating properly
	Red, ON Unrecoverable error
ERR	OFF Power off or no error
	Red, blinking Invalid settings or CRC error
	Red, ON Unrecoverable error

9.4. Connection diagram

Daisy-chaining is possible using the included connector or an optional connector (sold separately).
The following is an example when the number of occupied stations is set to 4.



9.5. Communication specifications

Communication is performed according to the following communication specifications. Note that communication is possible only in measurement mode.

Network specifications	CC-Link Ver.1.10 remote device station
Station number (CC F01)	1 - 64
Occupied stations (CC F02)	1, 2, 4
Baud rate (CC F03)	156 kbps, 625 kbps, 2.5 Mbps, 5 Mbps, 10 Mbps
Cable specifications	Use CC-Link dedicated cable compatible with Ver. 1.10.
Configuration file	CSP+ file (Please download the configuration file from A&D's website.)

9.6. Address map

9.6.1. Remote registers

Occupied stations: 4 stations (Addresses shown are for the case where the station number is set to 1.)

Station No.	Read data (AD-4411-CCL → PLC)				Write data (PLC → AD-4411-CCL)			
	Remote register	Buffer	Description	Data type	Remote register	Buffer	Description	Data type
1	RWr0000	2E0	Net value	Int32	RWw0000	1E0	Reserved	—
	RWr0001	2E1			RWw0001	1E1		
	RWr0002	2E2	Gross value	Int32	RWw0002	1E2		
	RWr0003	2E3			RWw0003	1E3		
2	RWr0004	2E4	Reserved	—	RWw0004	1E4	Reserved	—
	RWr0005	2E5			RWw0005	1E5		
	RWr0006	2E6			RWw0006	1E6		
	RWr0007	2E7			RWw0007	1E7		
3	RWr0008	2E8	Reserved	—	RWw0008	1E8	Reserved	—
	RWr0009	2E9			RWw0009	1E9		
	RWr000A	2EA			RWw000A	1EA		
	RWr000B	2EB			RWw000B	1EB		
4	RWr000C	2EC	Response value	Int32	RWw000C	1EC	Command value	Int32
	RWr000D	2ED			RWw000D	1ED		
	RWr000E	2EE	Response	UInt16	RWw000E	1EE	Command	UInt16
	RWr000F	2EF	Reserved	—	RWw000F	1EF	Reserved	—

Occupied stations: 2 stations (Addresses shown are for when the station number is set to 1.)

Station No.	Read data (AD-4411-CCL → PLC)				Write data (PLC → AD-4411-CCL)			
	Remote register	Buffer	Description	Data type	Remote register	Buffer	Description	Data type
1	RWr0000	2E0	Measurement value (CC F05)	Int32	RWw0000	1E0	Reserved	—
	RWr0001	2E1			RWw0001	1E1		
	RWr0002	2E2	Reserved	—	RWw0002	1E2		
	RWr0003	2E3		RWw0003	1E3			
2	RWr0004	2E4	Response value	Int32	RWw0004	1E4	Command value	Int32
	RWr0005	2E5			RWw0005	1E5		
	RWr0006	2E6	Response	UInt16	RWw0006	1E6	Command	UInt16
	RWr0007	2E7	Reserved	—	RWw0007	1E7	Reserved	—

Occupied stations: 1 station (Addresses shown are for when the station number is set to 1.)

Station No.	Read data (AD-4411-CCL → PLC)				Write data (PLC → AD-4411-CCL)			
	Remote register	Buffer	Description	Data type	Remote register	Buffer	Description	Data type
1	RWr0000	2E0	Measurement value (CC F05)	Int32	RWw0000	1E0	Reserved	—
	RWr0001	2E1			RWw0001	1E1		
	RWr0002	2E2	Reserved	—	RWw0002	1E2		
	RWr0003	2E3		RWw0003	1E3			

9.6.1.1. Command list

- Command to execute functions

The following functions can be executed.

Refer to "9.7.4. Command to execute functions" for command processing.

Command	Command value	Command name
0	1	Zero-setting
	2	Zero clear
	3	Tare
	4	Tare clear
	6	Switch net on the display
	7	Switch gross on the display
	94	Zero calibration
	95	Span calibration

- Read command

Refer to "15. Function setting lists" for commands for read setting values.

The following are commands for reading measured values.

Refer to "9.7.5. Read command" for command processing.

Command	Command value	Command name
201	N/A	Read gross value
202		Read net value
203		Read tare value
204		Read load cell input voltage (1nV/V)

The decimal point position is ignored when the setting value / measured value is read.

For example, the displayed value "123.4" is read as "1234".

- Write command

Refer to "15. Function setting lists" for commands for writing setting values.

Refer to "9.7.6. Write command" for command processing.

The decimal point position is ignored when the setting value / measured value is read.

For example, the displayed value "123.4" is read as "1234".

9.6.2. Remote input/output

Occupied stations: 4 stations (Addresses shown are for the case where the station number is set to 1.)

Station No.	Read data (AD-4411-CCL → PLC)			Write data (PLC → AD-4411-CCL)			
	Remote input	Buffer	Description	Remote output	Buffer	Description	
1	RX0000	0E0	Reserved	RY0000	160	Reserved	
	RX0001			RY0001			
	RX0002		Command response flag	RY0002		Command request flag	
	RX0003		R/#W response flag	RY0003		R/#W request flag	
	RX0004		Reserved	RY0004		Reserved	
	RX0005			RY0005			
	RX0006		CPU normal operation	RY0006		Reserved	
	RX0007		Reserved	RY0007		Reserved	
	RX0008		Decimal point 2 ⁰	*1		RY0008	Reserved
	RX0009		Decimal point 2 ¹			RY0009	Reserved
	RX000A		Decimal point 2 ²			RY000A	Reserved
	RX000B to RX000F			Reserved		RY000B to RY000F	Reserved
	RX0010		0E1	Reserved		RY0010	161
	RX0011	Reserved		RY0011	Zero clear		
	RX0012	Reserved		RY0012	Tare		
	RX0013	Reserved		RY0013	Tare clear		
	RX0014	Hi		RY0014	Reserved		
	RX0015	OK		RY0015	Net display		
	RX0016	Lo		RY0016	Gross display		
	RX0017	Stable		RY0017	Reserved		
RX0018	Reserved	RY0018		Reserved			
RX0019	Overload	RY0019		Reserved			
RX001A to RX001F		Reserved	RY001A to RY001F	Reserved			
2	RX0020 to RX003F	0E2 to 0E3	Reserved	RY0020 to RY003F	162 to 163	Reserved	
3	RX0040 to RX005F	0E4 to 0E5	Reserved	RY0040 to RY005F	164 to 165	Reserved	

Station No.	Read data (AD-4411-CCL → PLC)			Write data (PLC → AD-4411-CCL)		
	Remote input	Buffer	Description	Remote output	Buffer	Description
4	RX0060 to RX0065	0E6	Reserved	RY0060 to RY0065	166	Reserved
	RX0066		Center zero of net	RY0066		Reserved
	RX0067		Center zero of gross	RY0067		Reserved
	RX0068		In displaying net	RY0068		Reserved
	RX0069		In displaying gross	RY0069		Reserved
	RX006A		During tare	RY006A		Reserved
	RX006B		Reserved	RY006B		Reserved
	RX006C		Zero setting error	RY006C		Reserved
	RX006D		Taring error	RY006D		Reserved
	RX006E		Reserved	RY006E		Reserved
	RX006F			RY006F		
	RX0070 to RX0077	0E7	Reserved	RY0070 to RY0077	167	Reserved
	RX0078		Initial data processing request flag	RY0078		Initial data processing complete flag
	RX0079		Initial data setting complete flag	RY0079		Initial data setting request flag
	RX007A		Reserved	RY007A		Reserved
	RX007B		Remote READY	RY007B		Reserved
	RX007C to RX007F		Reserved	RY007C to RY007F		Reserved

*1: 3-bit binary format.

Occupied stations: 2 stations (Addresses shown are for when the station number is set to 1.)

Station No.	Read data (AD-4411-CCL → PLC)			Write data (PLC → AD-4411-CCL)			
	Remote input	Buffer	Description	Remote output	Buffer	Description	
1	RX0000	0E0	Reserved	RY0000	160	Reserved	
	RX0001			RY0001			
	RX0002		Command response flag	RY0002		Command request flag	
	RX0003		R/#W response flag	RY0003		R/#W request flag	
	RX0004		Reserved	RY0004		Reserved	
	RX0005			RY0005			
	RX0006		CPU normal operation	RY0006		Reserved	
	RX0007		Reserved	RY0007		Reserved	
	RX0008		Decimal point 2 ⁰	*1		RY0008	Reserved
	RX0009		Decimal point 2 ¹			RY0009	Reserved
	RX000A		Decimal point 2 ²			RY000A	Reserved
	RX000B to RX000F		Reserved	RY000B to RY000F		Reserved	
	RX0010		0E1	Reserved		RY0010	161
	RX0011	Reserved		RY0011	Zero clear		
	RX0012	Reserved		RY0012	Tare		
	RX0013	Reserved		RY0013	Tare clear		
	RX0014	Hi		RY0014	Reserved		
	RX0015	OK		RY0015	Net display		
	RX0016	Lo		RY0016	Gross display		
	RX0017	Stable		RY0017	Reserved		
	RX0018	Reserved		RY0018	Reserved		
	RX0019	Overload		RY0019	Reserved		
	RX001A to RX001F	Reserved		RY001A to RY001F	Reserved		

Station No.	Read data (AD-4411-CCL → PLC)			Write data (PLC → AD-4411-CCL)		
	Remote input	Buffer	Description	Remote output	Buffer	Description
2	RX0020 to RX0025	0E2	Reserved	RY0020 to RY0025	162	Reserved
	RX0026		Center zero of net	RY0026		Reserved
	RX0027		Center zero of gross	RY0027		Reserved
	RX0028		In displaying net	RY0028		Reserved
	RX0029		In displaying gross	RY0029		Reserved
	RX002A		During tare	RY002A		Reserved
	RX002B		Reserved	RY002B		Reserved
	RX002C		Zero setting error	RY002C		Reserved
	RX002D		Taring error	RY002D		Reserved
	RX002E		Reserved	RY002E		Reserved
	RX002F			RY002F		
	RX0030 to RX0037		0E3	Reserved		RY0030 to RY0037
	RX0038	Initial data processing request flag		RY0038	Initial data processing complete flag	
	RX0039	Initial data setting complete flag		RY0039	Initial data setting request flag	
	RX003A	Reserved		RY003A	Reserved	
	RX003B	Remote READY		RY003B	Reserved	
	RX003C to RX003F	Reserved		RY003C to RY003F	Reserved	

*1: 3-bit binary format.

Occupied stations: 1 station (Addresses shown are for when the station number is set to 1.)

Station No.	Read data (AD-4411-CCL → PLC)			Write data (PLC → AD-4411-CCL)		
	Remote input	Buffer	Description	Remote output	Buffer	Description
1	RX0000	0E0	Reserved	RY0000	160	Zero setting
	RX0001		Reserved	RY0001		Zero clear
	RX0002		Reserved	RY0002		Tare
	RX0003		Reserved	RY0003		Tare clear
	RX0004		Hi	RY0004		Reserved
	RX0005		OK	RY0005		Net display
	RX0006		Lo	RY0006		Gross display
	RX0007		Stable	RY0007		Reserved
	RX0008		Reserved	RY0008		Reserved
	RX0009		Overload	RY0009		Reserved
	RX000A to RX000F		Reserved	RY000A to RY000F		Reserved
	RX0010 to RX0017	0E1	Reserved	RY0010 to RY0017	161	Reserved
	RX0018		Initial data processing request flag	RY0018		Initial data processing complete flag
	RX0019		Initial data setting complete flag	RY0019		Initial data setting request flag
	RX001A		Reserved	RY001A		Reserved
	RX001B		Remote READY	RY001B		Reserved
	RX001C to RX001F		Reserved	RY001C to RY001F		Reserved

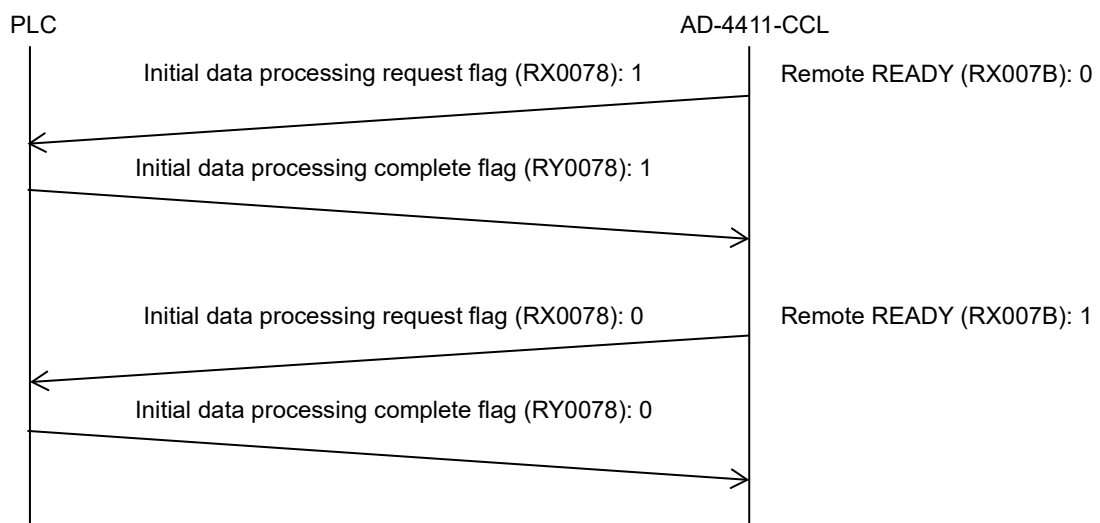
9.7. Timing chart

The following is an example when the station number is set to 1 and the number of occupied stations is set to 4.

9.7.1. At power-on

1. When power is turned on, AD-4411-CCL sets the Initial data processing request flag (RX0078) to "1".
2. The PLC must set the Initial data processing complete flag (RY0078) to "1".
3. AD-4411-CCL resets the Initial data processing request flag (RX0078) to "0" and sets the Remote READY (RX007B) to "1".
4. The PLC must reset the Initial data processing complete flag (RY0078) to "0".

Note: If CC F04 (initial processing) is set to 0: Not required, AD-4411-CCL skips the initial processing and sets the Remote READY (RX007B) to "1".

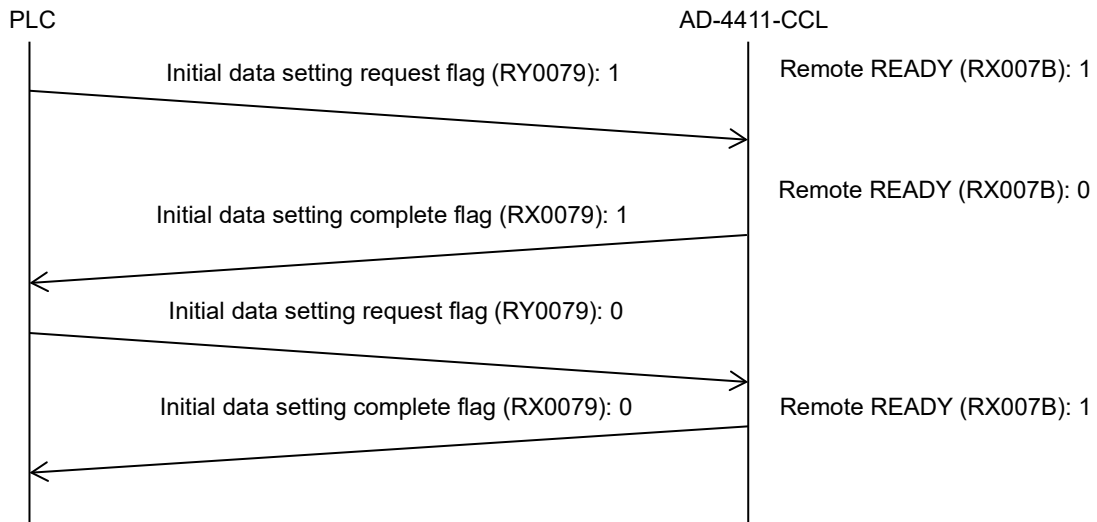


9.7.2. Resuming communication

When AD-4411-CCL is not in measurement mode, such as during function mode or calibration mode, it resets the Remote READY (RX007B) to "0". To resume communication, follow the same procedure as [9.7.1. At power-on](#).

9.7.3. Initial setting request from the PLC

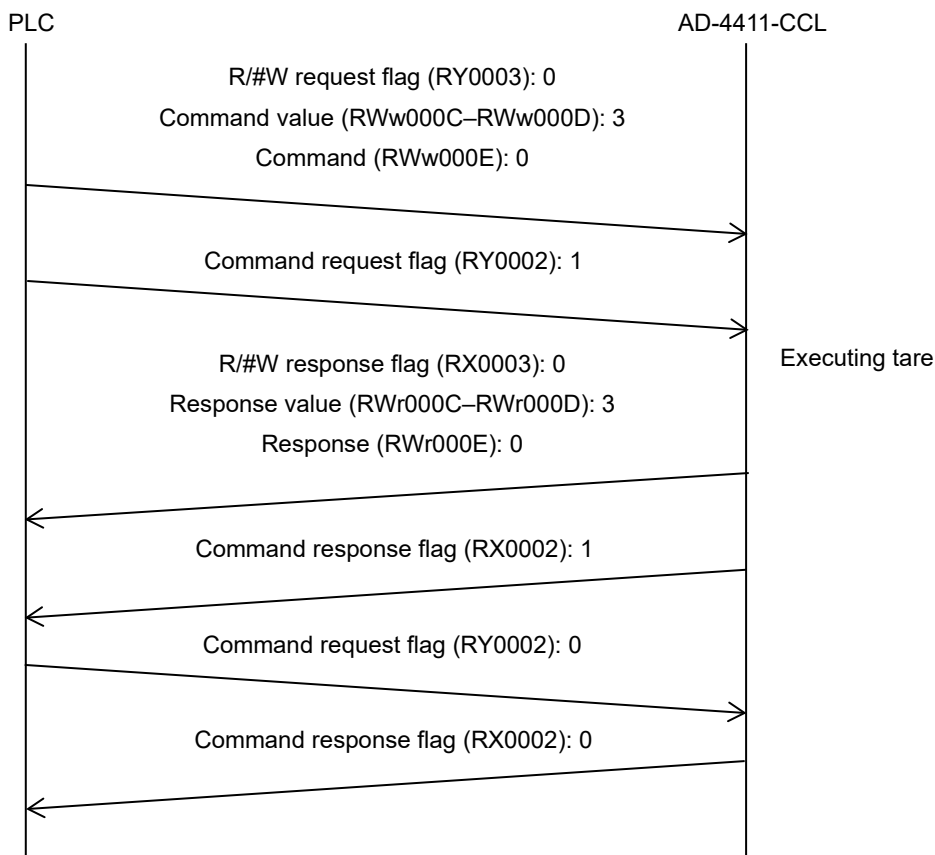
1. When the Remote READY (RX007B) is "1", the PLC must set the Initial data setting request flag (RY0079) to "1".
2. AD-4411-CCL resets the Remote READY (RX007B) to "0", and when the initial setting has completed, it sets the Initial data setting complete flag (RX0079) to "1".
3. The PLC must reset the Initial data setting request flag (RY0079) to "0".
4. AD-4411-CCL resets the Initial data setting complete flag (RX0079) to "0", and sets the Remote READY (RX007B) to "1".



9.7.4. Command to execute functions

1. The PLC must reset the R/#W request flag (RY0003) to "0", set Command (RWw000E) to "0", and set Command value (RWw000C–RWw000D) to the type of command to be executed.
2. The PLC must set the Command request flag (RY0002) to "1".
3. AD-4411-CCL resets the R/#W response flag (RX0003) to "0".
 If execution is successful: Response (RWr000E) echoes the content of Command (RWw000E) and Response value (RWr000C–RWr000D) echoes the content of Command value (RWw000C to RWw000D)
 If execution fails: Response (RWr000E) outputs 0xFFFF: Error and Response value (RWr000C–RWr000D) outputs 0x7FFF FFFF: Error
4. AD-4411-CCL sets the Command response flag (RX0002) to "1".
5. The PLC must reset the Command request flag (RY0002) to "0".
6. AD-4411-CCL resets the Command response flag (RX0002) to "0".

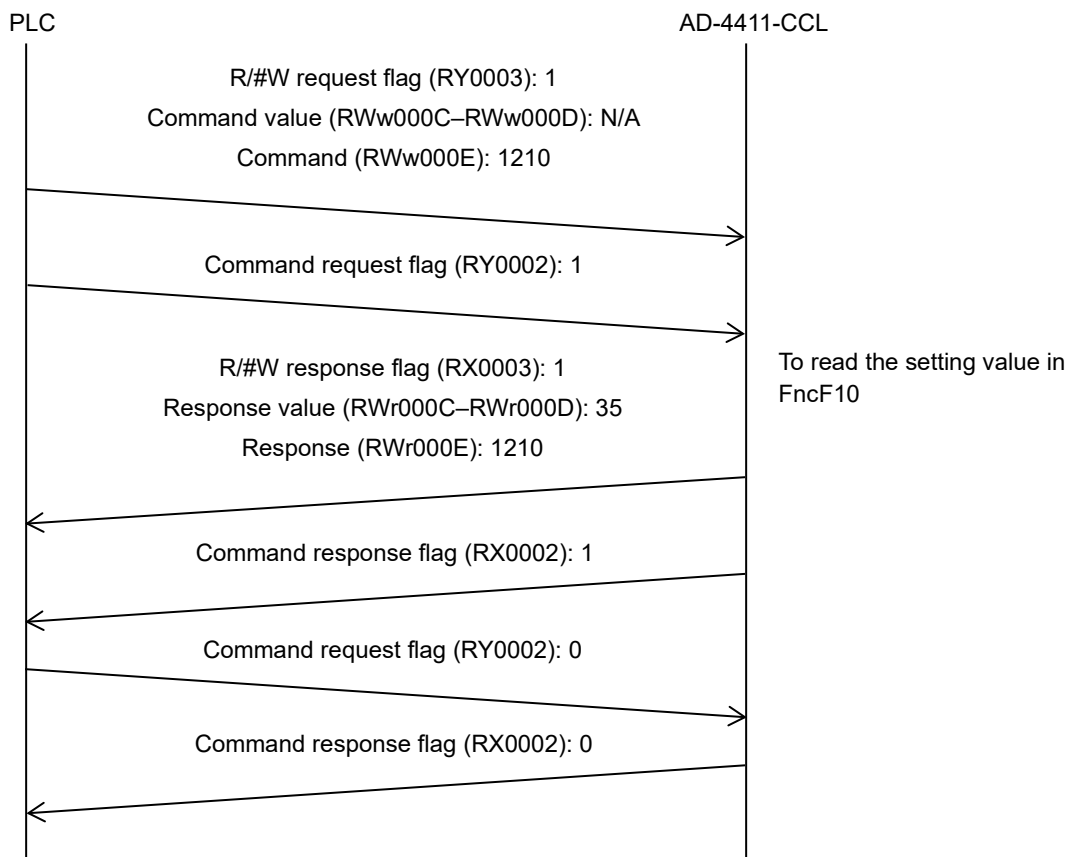
The following is an example of executing tare (Command value = 3).



9.7.5. Read command

1. The PLC must set the R/#W request flag (RY0003) to "1" and specify the type of data to be read in Command (RWw000E).
2. The PLC must set the Command request flag (RY0002) to "1".
3. AD-4411-CCL sets the R/#W response flag (RX0003) to "1".
 If the read operation succeeds: Response (RWr000E) echoes the content of Command (RWw000E) and Response value (RWr000C–RWr000D) outputs the data that was read.
 If the read operation fails: Response (RWr000E) outputs 0xFFFF: Error and Response value (RWr000C–RWr000D) outputs 0x7FFF FFFF: Error.
4. AD-4411-CCL sets the Command response flag (RX0002) to "1".
5. The PLC must reset the Command request flag (RY0002) to "0".
6. AD-4411-CCL resets the Command response flag (RX0002) to "0".

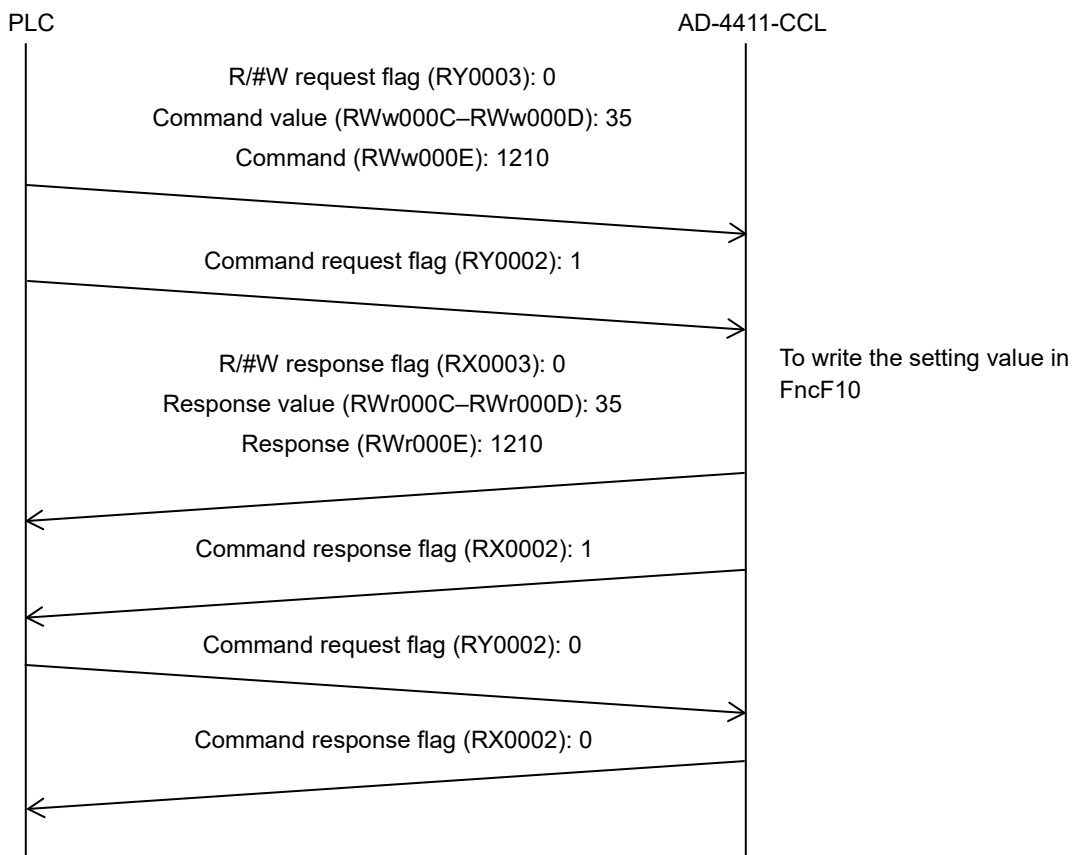
The following is an example of reading FncF10 (Command = 1210) and setting value "35".



9.7.6. Write command

1. The PLC must reset the R/#W request flag (RY0003) to "0", specify in Command (RWw000E) the type of data to be written, and specify in Command value (RWw000C–RWw000D) the value to be written.
2. The PLC must set the Command request flag (RY0002) to "1".
3. AD-4411-CCL resets the R/#W response flag (RX0003) to "0".
If the write operation succeeds: Response (RWr000E) echoes the content of Command (RWw000E) and Response value (RWr000C–RWr000D) echoes the content of Command value (RWw000C–RWw000D).
If the write operation fails: Response (RWr000E) outputs 0xFFFF: Error and Response value (RWr000C–RWr000D) outputs 0x7FFF FFFF: Error.
4. AD-4411-CCL sets the Command response flag (RX0002) to "1".
5. The PLC must reset the Command request flag (RY0002) to "0".
6. AD-4411-CCL resets the Command response flag (RX0002) to "0".

The following is an example of writing FncF10 (Command = 1210) and setting value "35".



9.7.7. Executing functions using remote output

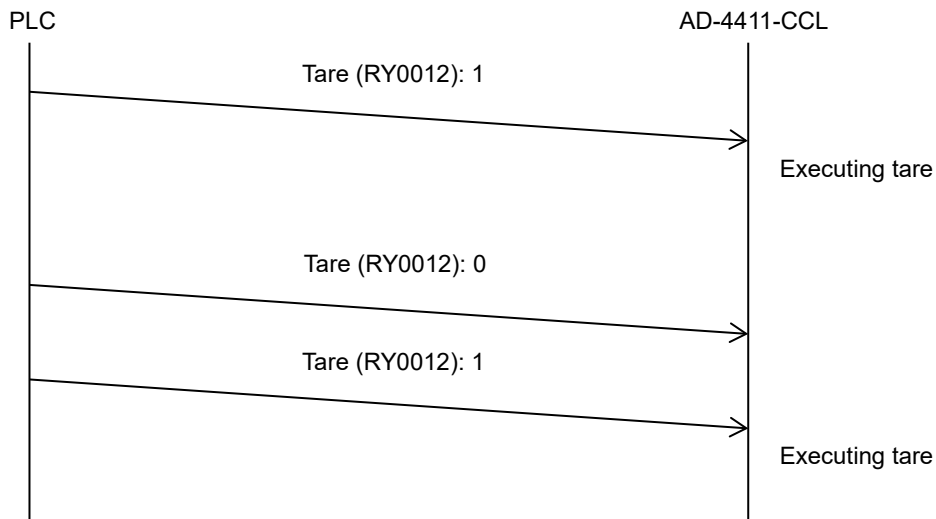
Functions such as zero-setting and tare can be executed by operating the remote output without using a write command.

Note: If multiple remote outputs are operated at the same time, they are executed in order of ascending address value.

The following is an example of executing tare.

1. The PLC must set the Tare (RY0012) to "1".
2. AD-4411-CCL executes tare.

Note: To execute tare again, the PLC must reset the Tare (RY0012) to "0."



9.7.8. CPU normal operation signal

CPU normal operation (RX0006) is a signal that confirms AD-4411-CCL is powered and operating normally. While operating normally, the signal toggles at intervals of 0.5 to 1 second.

10. USB

A PC can be used to read measured values and write setting values via USB (virtual COM port). AD-4411-CCL can be operated via USB bus power, but the USB circuit is not isolated, so noisy environments may affect measurement performance. For normal operation, use the 24 V power supply port.

10.1. Communication specifications

USB function is available in measurement mode.

USB Specification	Connector	Type-C
	Communication	USB 2.0 (Full-speed) virtual COM port
	Power	5 V 3.0 A when using bus power
Communication protocol		Modbus RTU
Slave address		1
Baud rate		115200 bps
Data length / Parity / Stop bit		8 bits / None / 1 bit

The supported function codes and their maximum quantities are as follows.

Function code and maximum quantity

Code	Function name	Maximum qty.
01	Read coils	100
03	Read holding registers	100
05	Write single coil	1
06	Write single register	1
15	Write multiple coils	1
16	Write multiple registers	100

10.2. Coil data address

Data address	R/W	Item	
000001-000011	R	-	
000012		Hi	
000013		OK	
000014		Lo	
000015		-	
000016		Stability	
000017		Gross "0" / Net "1"	
000018-000019		-	
000020		Overload	
000021		Zero-setting failed	
000022		Tare failed	
000023 - 000200		-	
000201		W *1	Zero-setting
000202			Tare
000203-000206	-		
000207	Tare clear		
000208-000211	-		
000212	Zero clear		
000213	Switch gross on the display		
000214	Switch net on the display		
000215-000300	-		
000301-000400	R/W		-
000401	W *1	Zero calibration	
000402		Span calibration	
000403-000500		-	

*1: When "1" is written, the operation is executed.

10.3. Holding register data address

All holding registers are DWORD. The first word is the low word of a 32-bit value.

The decimal point position is ignored when the setting value is read.

For example, the displayed value "123.4" is read as "1234".

Data address	R/W	Item
400001-400002	R	Displayed value
400003-400004		Gross value
400005-400006		Net value
400007-400008		Tare value
400009-400010		Status (See the next page for details)
400011-400094		-
400095-400096		Load cell input signal (1 count means 1 nV/V)
400097-400100		-
400101-400134		R/W
400135-400300	-	
400301-400326	Basic function *1	
400327-401400	-	
401401-401410	CC-Link function *1, *2	
401411-401500	-	
401501-401506	Digital calibration function *1	
401507-402000	-	

*1: Refer to "14. Function Settings".

*2: The new IP function settings take effect after restart.

Bits address details for status (40009–40010)

Data address	Item
40009.15-05	-
40009.04	Lo
40009.03	OK
40009.02	Hi
40009.01	-
40009.00	-
40010.15-10	-
40010.09	S3 status is ON.
40010.08	S2 status is ON.
40010.07	S1 status is ON.
40010.06	ZERO status is ON.
40010.05	STABLE status is ON.
40010.04	Displaying gross weight value
40010.03	Displaying net weight value
40010.02	-
40010.01	-
40010.00	-

10.3.1. Example message for coil

The following is an example of executing a tare (data address 000202).

Master -> Slave	0x01 05 00 C9 FF 00 5C 04	
Slave address	0x01	Set 0x01 (Slave address 01) in this example.
Function code	0x05	Set 0x05, which is a request to write the data address 000001~065535 (coil).
Data address	0x00 C9	The Modbus protocol specifies that the starting data address be set to the value of the coil data address minus 000001, so set 0x00C9 (= 000202 – 000001).
Write data	0xFF 00	Set 0xFF 00 (= ON).
CRC	0x5C 04	An error-checking field is based on a CRC method.

Slave -> Master	0x01 05 00 C9 FF 00 5C 04	
Slave address	0x01	In this example, the sent message is echoed back as is.
Function code	0x05	
Data address	0x00 C9	
Write data	0xFF 00	
CRC	0x5C 04	

10.3.2. Example message for holding register

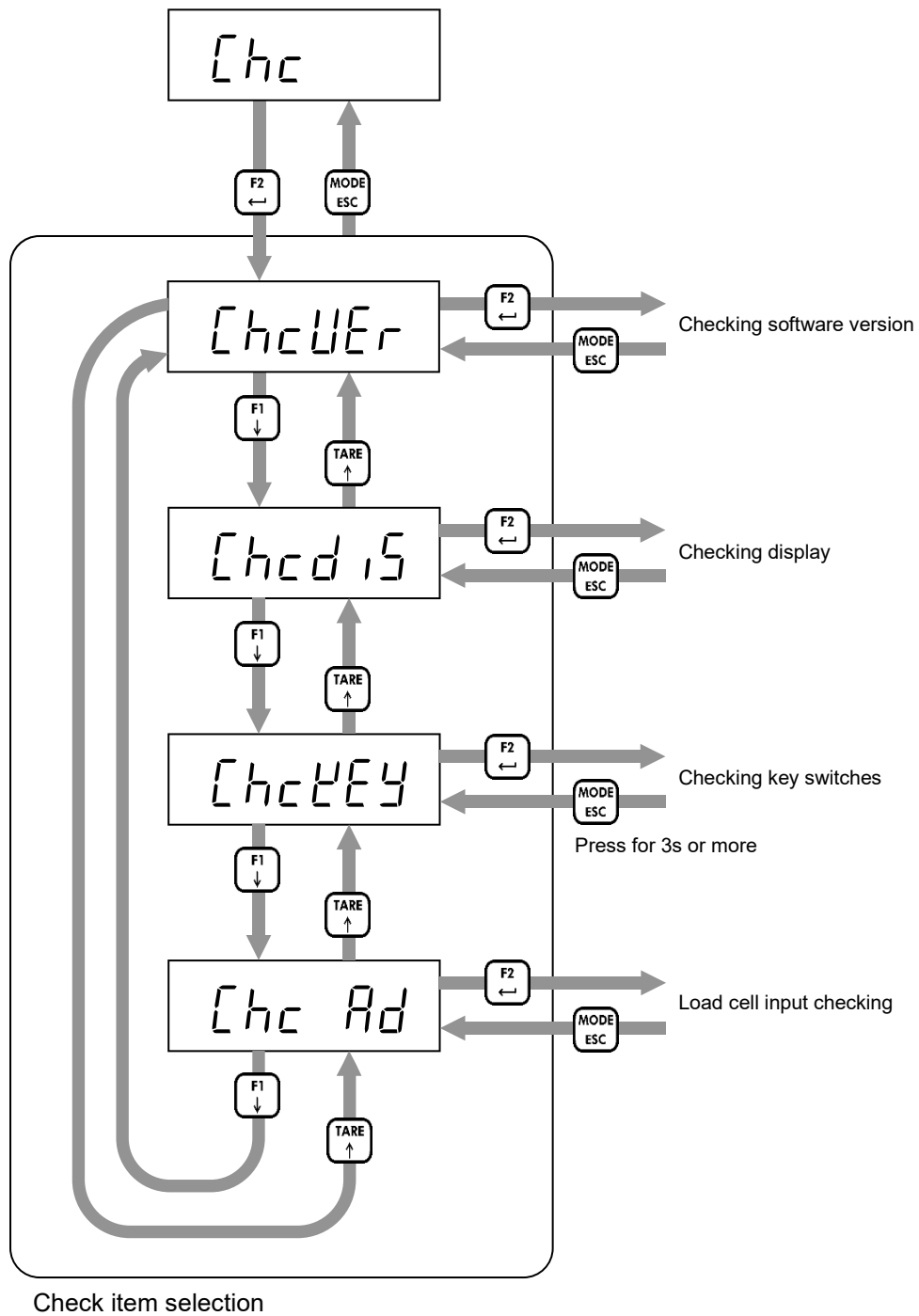
The following is an example reading contiguous data of the Gross value (data address 400003–400004) and Net value (data address 400005–400006).

Master -> Slave	0x01 03 00 02 00 04 E5 C9	
Slave address	0x01	Set 0x01 (Slave address 01) in this example.
Function code	0x03	Set 0x03, which is a request to read the data address 400001–465535 (holding registers).
Starting data address	0x00 02	The Modbus protocol specifies that the starting data address be set to the value of the holding register data address minus 400001, so in this example set 0x0002 (= 400003 – 400001)
Read data points	0x00 04	In this example, set 0x04 to read 4 data from 400003 to 400006.
CRC	0xE5 C9	An error-checking field is based on a CRC method.

Slave -> Master	0x01 03 08 86 9F 00 01 C3 4F 00 00 42 C7		
Slave address	0x01	The slave address is echoed back as is.	
Function code	0x03	The function code is echoed back as is.	
Number of bytes of data read	0x08	The number of bytes of data is set, not the number of data points.	
Data 1	0x86 9F	Data at 400003	The master reads the first 16-bit data as the lower-order data of the 32-bit value. In this example, the current gross value becomes 99999 (= 0x00 01 86 9F).
Data 2	0x00 01	Data at 400004	
Data 3	0xC3 4F	Data at 400005	The current net value becomes 49999 (= 0x00 00 C3 4F).
Data 4	0x00 00	Data at 400006	
CRC	0x42 C7	An error-checking field is based on a CRC method.	

11. Checking software version / hardware

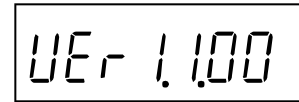
You can check the software version and make sure the hardware is operating properly in check mode. Refer to "6. Operation mode" to enter check mode. See below for check mode procedures.



11.1. Checking software version

Software version is displayed.

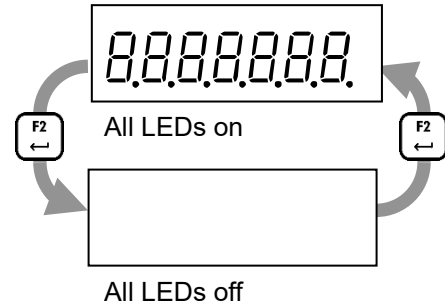
Press the [MODE/ESC] key to return to check item selection.



11.2. Checking display

Press the [F2/ENTER] key to switch between all LEDs on and off.

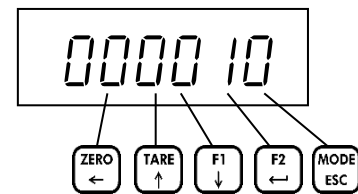
Press the [MODE/ESC] key to return to check item selection.



11.3. Checking key switches

Press any key to change from "0" to "1" in the corresponding digit.

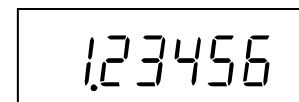
Press the [MODE/ESC] key for 3s or more to return to check item selection.



11.4. Load cell input checking

The current load cell input signal (mV/V) is displayed.

Press the [MODE/ESC] key to return to check item selection.



12. Troubleshooting

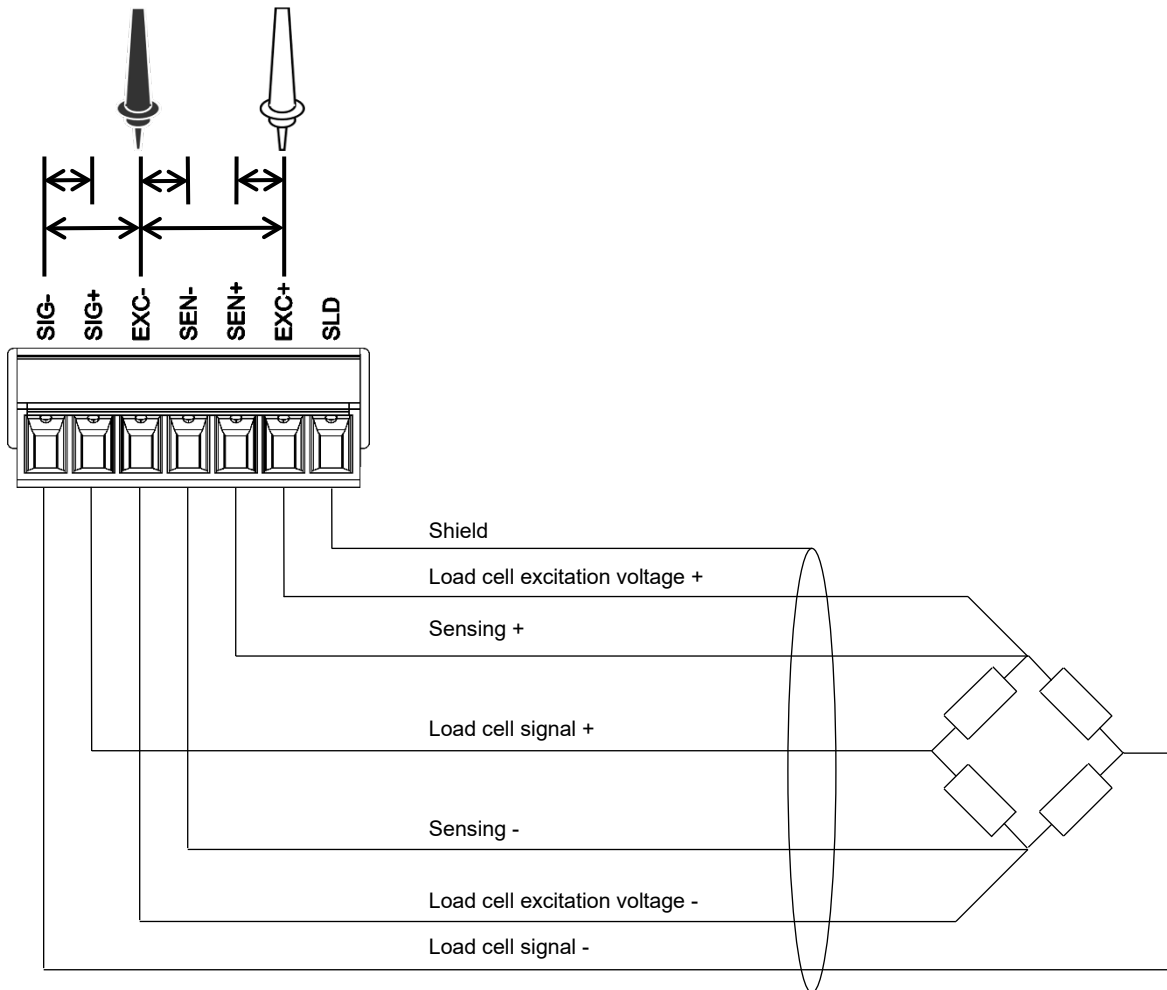
12.1. Hardware error

If the following error messages are displayed after power-on, the indicator may have failed. Please consult your local A&D representative.

Error code	Error description
<i>ErrH01</i>	A problem is detected in the memory (FRAM) on the main board.
<i>ErrH02</i>	A problem is detected in the AD converter on the main board.
<i>ErrH03</i>	A problem is detected in the network module on the Industrial Ethernet board.

12.2. Checking the connection to load cell with using a multimeter

If the load cell signal is not converted correctly, measure and check the voltage between the following points with a digital multimeter.



Measurement point		Item to be measured	Judging
EXC+	EXC-	Load cell power supply voltage	Normally 5 ± 0.25 V.
SIG+	SIG-	Load cell signal voltage	Normally 100 mV or less.
EXC+	SEN+	EXC+ voltage drop by load cell cable	Normally 0.2 V or less. The value may exceed 2 V when a long cable is used. For the 4-wire connection, it is 0 V.
EXC-	SEN-	EXC- voltage drop by load cell cable	Normally 0.2 V or less. The value may exceed 2 V when a long cable is used. For the 4-wire connection, it is 0 V.
SIG-	EXC-	Load cell middle point voltage	Normally 2.5 V, half of the load cell excitation voltage.

12.3. Check list

If AD-4411-CCL does not operate properly, please fill in the following table and consult your local A&D representative.

Check item		Example
Serial No.		S/N 3C9700101
Weighed product		plastic pellet, livestock feed
Capacity of the weighing instrument		20.00 kg
Minimum division of the weighing instrument		0.01 kg
Initial load on the weighing instrument (Weighing hopper, weighing platform, etc.)		30 kg
Load cell connection type	6-point type / 4-wire type	6-wire type
Length of the extension load cell cable	m	Approx. 100 m
Cross section of the load cell cable	mm ²	0.5 mm ²
Number of load cells connected		3 units
Summing box	Used / Not used	Used
Load cell model number and manufacturer		LC4221-K050 (A&D)
Load cell rated capacity		50.99 kg
Load cell rated output	mV/V	2.0394 mV/V
Load cell input resistance	Ω	400 Ω
Load cell output resistance	Ω	350 Ω
Load cell output at initial load *1	mV	approx. 4.0 mV
Load cell output at capacity or any load. *1	at mV	at 20.00 kg approx. 6.8 mV
Industrial Ethernet	Connected to	PLC

*1 Please refer to "[12.2. Checking the connection to load cell with using a multimeter](#)".

Digital multimeter measurement value

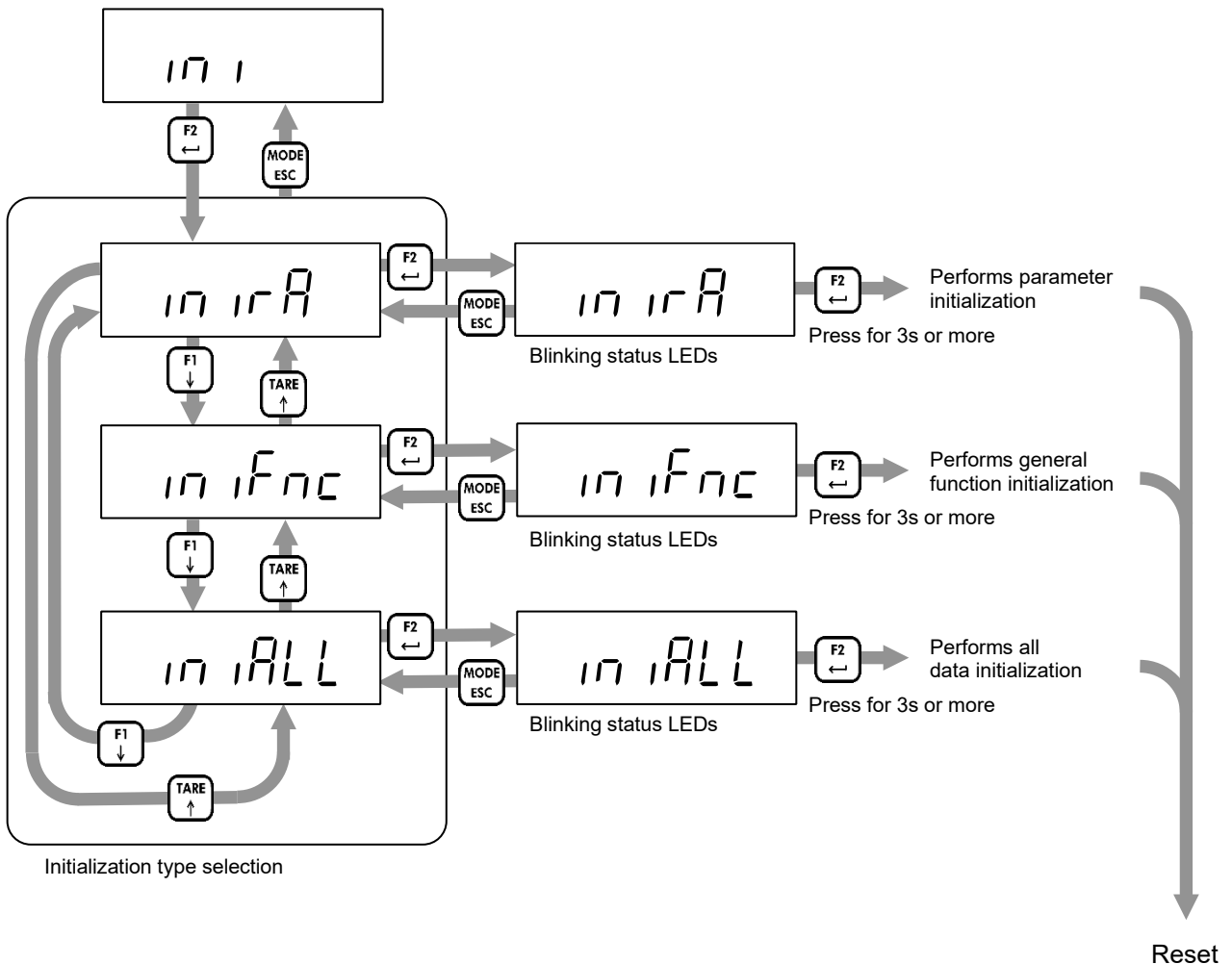
Measurement point		Measurement value
EXC+	EXC-	V
SIG+	SIG-	mV
EXC+	SEN+	V
EXC-	SEN-	V
SIG-	EXC-	V

13. Initialization

You can initialize the internal values to their factory defaults in initialization mode if necessary. There are three types of initializations, each affecting a different area. Please note that if all data is initialized, you must calibrate AD-4411-CCL again.

Initialization type	Initialization area		
	Zero-setting value, Tare value, Gross / Net display state	General function	Calibration function, Digital calibration function
Parameter initialization	✓		
General function initialization	✓	✓	
All data initialization	✓	✓	✓

Refer to "6. Operation mode" to enter initialization mode. See below for the procedure in initialization mode.



14. Function Settings

Functions for AD-4411-CCL are classified as follows.

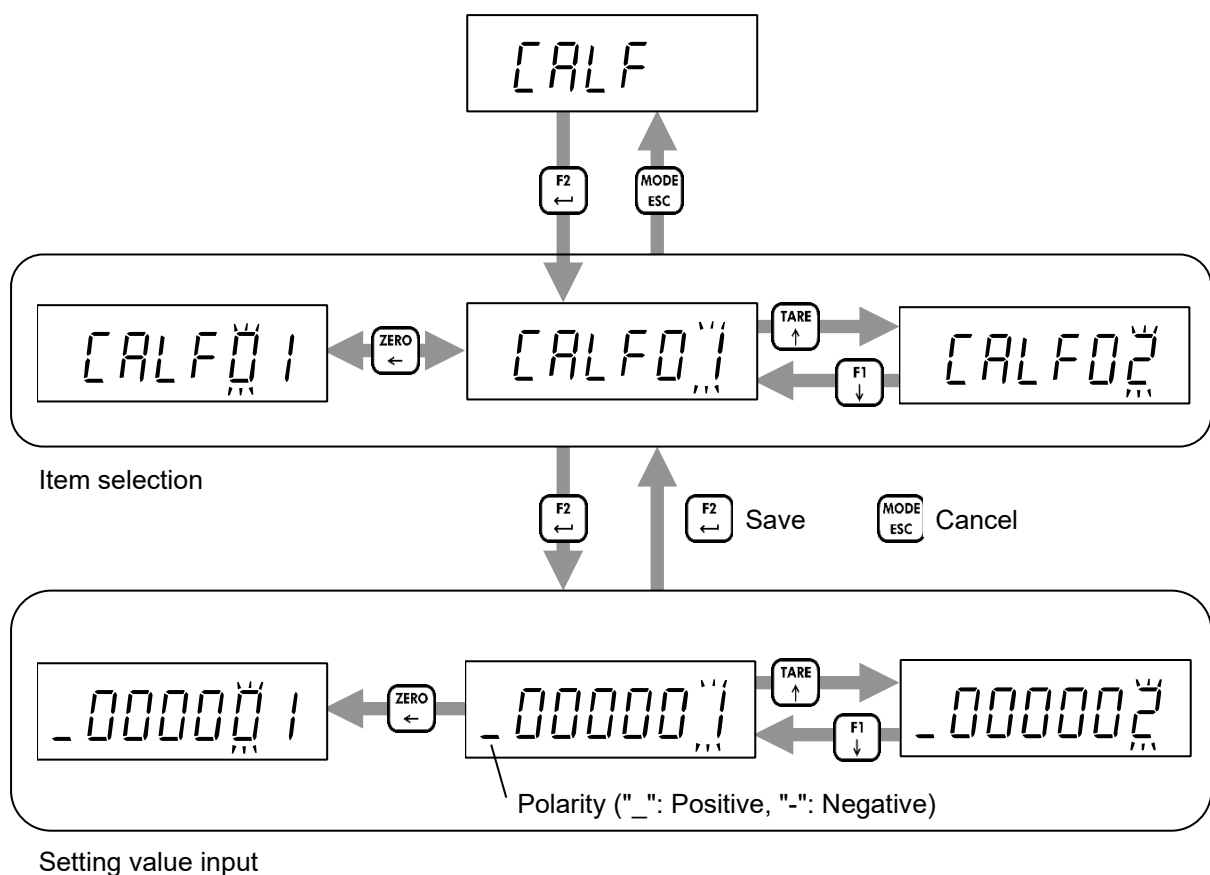
To change a setting value, go to the classification where that setting value is found.

Function name		Description
Calibration function		The setting values related to legally relevant parameters when AD-4411-CCL is used for such purposes.
Digital calibration function		The setting values related to calibration that depends on the individual instrument.
General function	Basic function	The setting values related to measurement functions.
	CC-Link function	The setting values related to communication.

14.1. Calibration function setting

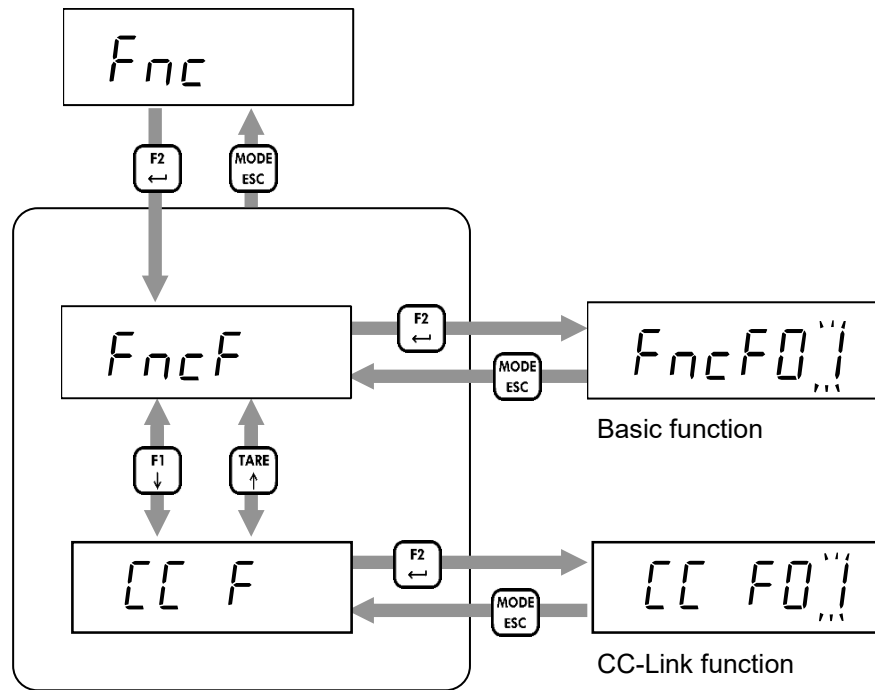
Refer to "6. Operation mode" to enter calibration function mode. The following explains how to change setting values.

Item selection	
[ZERO/←] key	Shifts the blinking digit to the left.
[TARE/↑] key	Increases the blinking digit by one.
[F1/↓] key	Decreases the blinking digit by one.
[F2/ENTER] key	Selects the displayed item and inputs the setting value.
[MODE/ESC] key	Returns to mode selection.
Setting value input	
[ZERO/←] key	Shifts the blinking digit to the left.
[TARE/↑] key	Increases the blinking digit by one. Use the leftmost digit to change the polarity. An underscore (_) indicates a positive value and a hyphen (-) indicates a negative value.
[F1/↓] key	Decreases the blinking digit by one. Use the leftmost digit to change the polarity. An underscore (_) indicates a positive value and a hyphen (-) indicates a negative value.
[F2/ENTER] key	Saves the input setting value and returns to item selection.
[MODE/ESC] key	Cancels the input setting value and returns to item selection.



14.2. General function settings

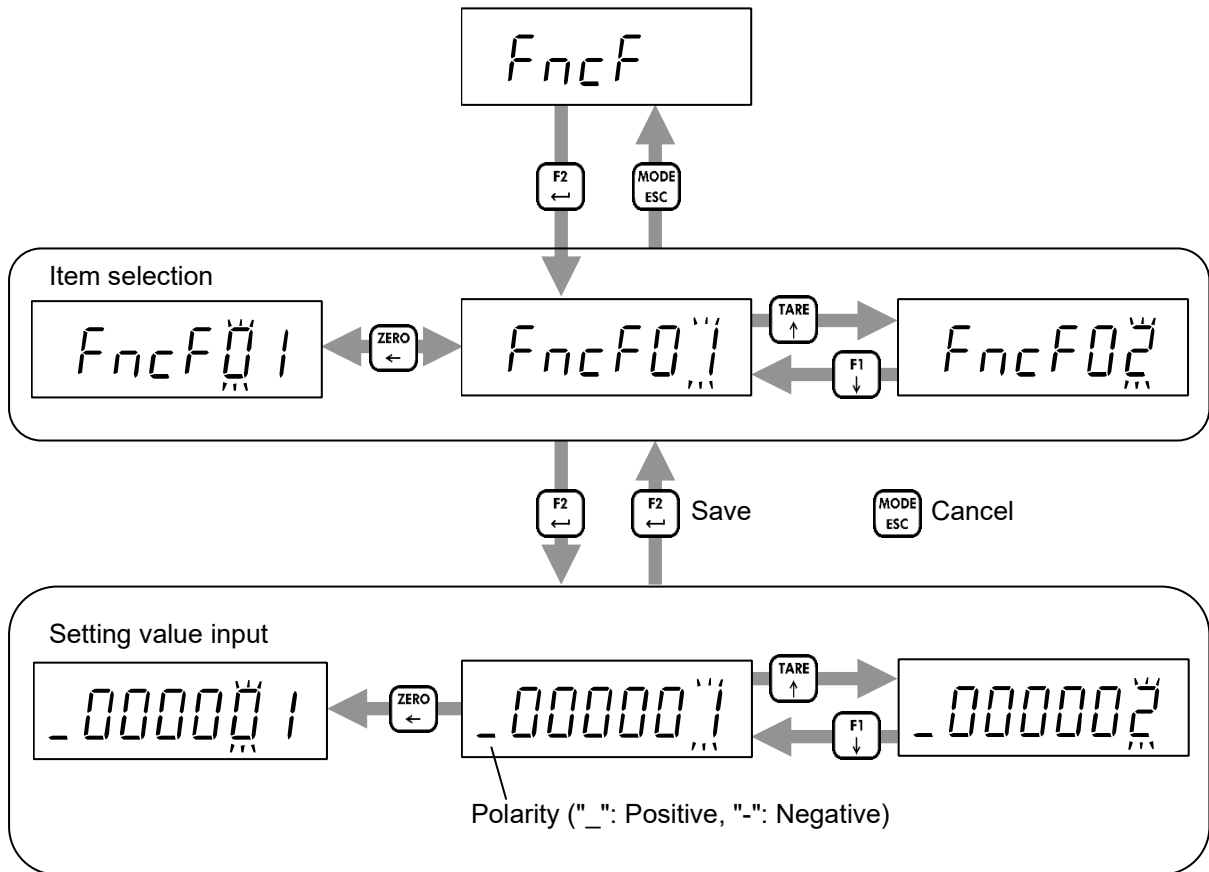
Refer to "6. Operation mode" to enter general function mode. The general functions are grouped according to their functions. The following explains how to select a group.



General function item selection

The following explains how to change setting values.

Item selection	
[ZERO/←] key	Shifts the blinking digit to the left.
[TARE/↑] key	Increases the blinking digit by one.
[F1/↓] key	Decreases the blinking digit by one.
[F2/ENTER] key	Selects the displayed item and inputs the setting value.
[MODE/ESC] key	Moves to the calibration function mode.
Setting value input	
[ZERO/←] key	Shifts the blinking digit to the left.
[TARE/↑] key	Increases the blinking digit by one. Use the leftmost digit to change the polarity. An underscore (_) indicates a positive value and a hyphen (-) indicates a negative value.
[F1/↓] key	Decreases the blinking digit by one. Use the leftmost digit to change the polarity. An underscore (_) indicates a positive value and a hyphen (-) indicates a negative value.
[F2/ENTER] key	Saves the input setting value and returns to item selection.
[MODE/ESC] key	Cancel the input setting value and returns to item selection.



15.1. Calibration function list

ERLF	Modbus	CC-Link command	Setting item	Setting value	Default	User setting
01	400101	1001	Unit	0: None / 1: g / 2: kg / 3: t	2	
02	400103	1002	Decimal point position	0: 0 (No decimal point) 1: 0.0 2: 0.00 3: 0.000 4: 0.0000 5: 0.00000	0	
03	400105	1003	Minimum division (d)	1: 1 d 2: 2 d 3: 5 d 4: 10 d 5: 20 d 6: 50 d	1	
04	400107	1004	Maximum capacity	1 to 999999	999999	
05	400109	1005	Zero setting range	0 to 100 %	100	
06	400111	1006	Zero tracking time (*1)	0.0 to 5.0 s	0.0	
07	400113	1007	Zero tracking width	0: Disable 4: 2.0 d 8: 4.0 d 1: 0.5 d 5: 2.5 d 9: 4.5 d 2: 1.0 d 6: 3.0 d 3: 1.5 d 7: 3.5 d	0	
08	400115	1008	Stability detection time (*1)	0.0: Not used (Always unstable) 0.1 to 9.9 s	1.0	
09	400117	1009	Stability detection width	0 to 100 d	2	
10	400119	1010	Zero-setting at unstable	0: Disable / 1: Enable	1	
11	400121	1011	Taring at unstable	0: Disable / 1: Enable	1	
12	400123	1012	Taring at the negative gross	0: Disable / 1: Enable	1	
13	400125	1013	Zero clear	0: Disable / 1: Enable	1	
14	400127	1014	Power-on zero	0: Disable / 1: Enable	0	
15	400129	1015	Condition of negative overload	0: Gross < -(Maximum capacity + 8 d) 1: Gross < -19 d	0	
16	400131	1016	NTEP	0: Disable / 1: Enable	0	
17	400133	1017	Load cell connection type (*2)	0: 4-wire / 1: 6-wire	1	

*1 When accessed via CC-Link, the decimal point position is ignored.

*2 After changing the setting via CC-Link or USB, it is necessary to cycle the power.

15.2. Digital calibration function list

dERL	Modbus	CC-Link command	Setting item	Setting value	Default	User setting
01	401501	1901	Load cell input signal at zero calibration (*1)	-7.00000 to 7.00000 mV/V	0.00000	
02	401503	1902	Load cell input signal at span calibration Load cell input signal at - zero calibration (*1)	-7.00000 to 7.00000 mV/V	2.00000	
03	401505	1903	Load value at span calibration	1 to 999999	20000	

*1 When accessed via CC-Link / USB, the decimal point position is ignored.

15.3. Basic function list

<i>F_{ncF}</i>	Modbus	CC-Link command	Setting item	Setting value	Default	User setting
01	400301	1201	[ZERO/←] key lock	0: Disable / 1: Enable	0	
02	400303	1202	[TARE/↑] key lock	0: Disable / 1: Enable	0	
03	400305	1203	[F1/↓] key lock	0: Disable / 1: Enable	0	
04	400307	1204	[F2/ENTER] key lock	0: Disable / 1: Enable	0	
05	400309	1205	Function of [F1/↓] key	0: None	0	
06	400311	1206	Function of [F2/ENTER] key	1: Tare clear 2: Zero clear 3: Gross / Net display selection 4: High resolution display selection	0	
07	400313	1207	Condition to turn S1 status ON	0: None	0	
08	400315	1208	Condition to turn S2 status ON	1: Hi	0	
09	400317	1209	Condition to turn S3 status ON	2: OK 3: Lo 4: Zero-setting failed 5: Tare failed 6: High resolution display selection	0	
10	400319	1210	Digital filter cut-off frequency [Hz]	0: 273.0 17: 8.4 31: 0.84 1: 120.0 18: 7.0 32: 0.70 2: 100.0 19: 6.8 33: 0.68 3: 84.0 20: 5.6 34: 0.56 4: 70.0 21: 4.8 35: 0.48 5: 68.0 22: 4.0 36: 0.40 6: 56.0 23: 3.4 37: 0.34 7: 48.0 24: 2.8 38: 0.28 8: 40.0 25: 2.4 39: 0.24 9: 34.0 26: 2.0 40: 0.20 10: 28.0 27: 1.7 41: 0.17 11: 24.0 28: 1.4 42: 0.14 12: 20.0 29: 1.2 43: 0.12 13: 17.0 30: 1.0 44: 0.10 14: 14.0 45: 0.08 15: 12.0 46: 0.07 16: 10.0	30	
11	400321	1211	Upper limit value	-999999 to 999999	10	
12	400323	1212	Lower limit value	-999999 to 999999	-10	
13	400325	1213	Comparison target for upper / lower limit value	1: Gross / 2: Net	1	

15.4. CC-Link function list

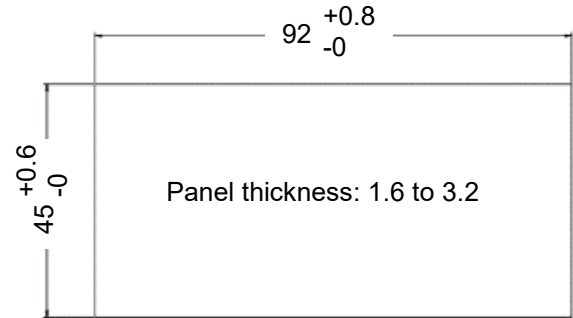
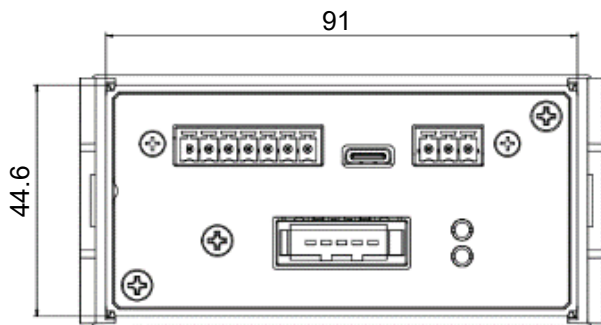
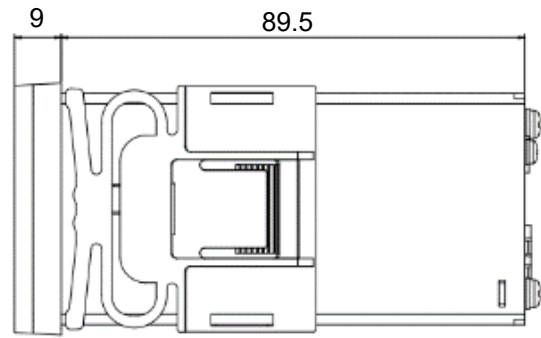
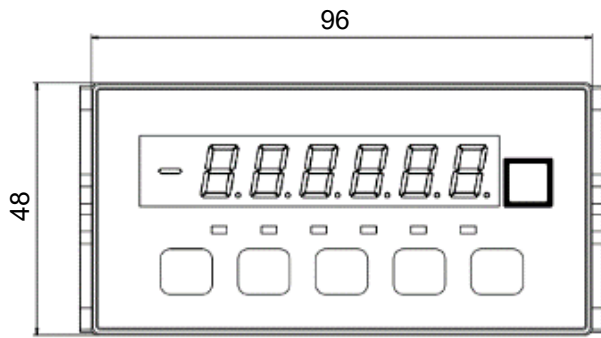
CC F	Modbus	CC-Link Command	Setting item	Setting value	Default	User setting
01	401401	1801	Station number *1	1 to 64	1	
02	401403	1802	Number of occupied stations *1	0: 1 station occupied 1: 2 stations occupied 2: 4 stations occupied	2	
03	401405	1803	Baud rate *1	0: 156 kbps 1: 625 kbps 2: 2.5 Mbps 3: 5 Mbps 4: 10 Mbps	4	
04	401407	1804	Initialization *1	0: Not required 1: Required	1	
05	401409	1805	Measurement value	0: Displayed value 1: Net value 2: Gross value	0	

*1 After changing the setting via CC-Link or USB, it is necessary to cycle the power.

16. Specifications

Dimensions	96(W) × 48(H) × 98.5(D) mm
Installation method	Panel mount
Operating temperature and humidity range	-10°C to +40°C Less than 85% RH, non-condensing
IP rating	When the indicator is installed to the control panel: Outside of the control panel: IP65 Inside of the control panel: IP2X
Power	
Power supply voltage	DC24V -15% to +10%
Power consumption	4.5 W max
Load cell input	
Excitation voltage	DC5V ±5% 90 mA Up to six 350 Ω load cells can be connected in parallel. 6-wire type with remote sensing
Signal input range	-7.0 mV/V to 7.0 mV/V
Minimum input sensitivity	0.15 μV/d or more (d = minimum division)
Nonlinearity	0.005% of F.S. max.
Temperature coefficient	Zero drift: ±0.02 μV/°C Typ. ±0.1 μV/°C max. Span drift: ±3 ppm/°C Typ. ±15 ppm/°C max.
Sampling rate	1200 times/s
Display	
Main display	7-digit LED (green) with character height of 10 mm
Status display	LED (red) x 6
Unit	Attach the g / kg / t label
Key switches	x 5
External interface	
Fieldbus	CC-Link Ver.1.10 remote device station
USB	Type-C connector, USB 2.0 (Full-speed)

External dimensions



Unit: mm

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