1. Safety, Protection, and Modification of the Product

1.1) In order to protect the system controlled by this product and the product itself, and to ensure safe operation, observe the safety precautions described in the operation guide. Use of the instrument in a manner not prescribed herein may compromise the product’s functions and the protection features inherent in the device. We assume no liability for safety failure or responsibility for the product’s quality or performance functionality should users fail to observe these instructions when using the instrument.

1.2) Installation of protection and/or safety circuits with respect to a lightning protector, protective equipment for the electronic equipment, the product itself, and the product footprint; fail-safe design of a process or line using the system controlled by the product and the product itself, and/or the design and installation of other protective and safety circuits are to be appropriately implemented as the customer determines necessary.

1.3) Be sure to use the spare parts approved by YOKOGAWA when replacing parts or consumables.

1.4) This product is not designed or manufactured to be used in critical applications that directly affect or threaten human lives. Such applications include nuclear power equipment, devices using radioactivity, railway facilities, aviation equipment, air navigation facilities, aviation facilities, and medical equipment. If so used, it is the user’s responsibility to include in the system additional electronic and/or personal safety.

1.5) Modification of the product is strictly prohibited.

1.6) This product is intended to be handiwork trained personnel for electronic devices.

2. Power Supply

Ensure that the instrument’s supply voltage matches the voltage the power supply voltage. Do not use in an environment affecting the power supply.

3. Do Not Use in an Explosive Atmosphere

Do not operate the instrument in locations with combustible or explosive gases or steam. Operation in such environments constitutes a serious safety hazard. Use of the instrument in environments with high concentrations of corrosive gas (H₂S, SO₂, NO₂, Cl₂), or environments where the equipment or components (such as the instrument’s enclosure) are exposed to the effects of the environment for long periods of time may cause a failure.

4. Do Not Remove Internal Unit

The internal unit should not be removed by anyone other than YOKOGAWA’s service personnel. There are dangerous high voltage parts inside. Do not attempt to remove to fuse by yourself.

5. Damage to the Protective Construction

Do not install the instrument in a manner not specified in the operation guide as damage to the protective construction may damage its protective construction.

6. Power Supply

This instrument is an EMC class A product. In a domestic environment, this product may cause radio interference in which case the user should take adequate measures.

7. Customized Product

For customized product, the identification by the option code of ISK (where ‘a’ is a number). Contact your supplier in case your instrument has option ‘a’ and you are not in the possession of P-Model (Model code) or ISK (Model code) ‘a’ (where Model code means, for example, UT32A).

8. Accessories (sold separately)

The following is an accessory sold separately:

9. Protection of Environment

Waste Electrical and Electronic Equipment (WEEE), Directive

This Eco-design directive on how to dispose of this product based on Waste Electrical and Electronic Equipment (WEEE). This directive is only valid in the EU.

- Marking

This product complies with the WEEE Directive marking requirement. This marking indicates that you must not discard this electrical or electronic equipment at the end of its working life.

- Product Category

With reference to the equipment types in the WEEE directive, this product is classified as a “Small equipment” product.

- Disposal

Do not dispose of domestic household waste. When disposing products in the EU, contact your local Yokogawa Europe B.V. office.
Mounting the Instrument Main Unit

Provide an instrument panel steel sheet of 1.0 to 1.2 mm thickness. After opening the mounting hole on the panel, follow the procedures below to install the controller.

1) Insert the controller into the opening from the front of the panel so that the terminal board on the rear is at the far side.
2) Set the breakout place or top of the controller as shown in the illustration below, then tighten the screws of the brackets. Take care not to overtighten them.

Tighten the screws with appropriate tightening torque within 0.25 Nm. For the casing or back cover, use M2 screws.

Make sure that foreign materials do not enter into the inside of the instrument through the case's slot holes.

External Dimensions and Panel Cutout Dimensions

4. Hardware Specifications

This instrument is for Measurement Category No.1. Do not use it for measurements falling under Measurement Categories No.2, No.3, and No.4.

- Allowable signal source resistances:
  - TC or mV input: 250 Ω or less
  - Effects of signal source resistance: 0.1 µV/Ω or less
  - DC voltage input: 24 V or less
  - Effects of signal source resistance: 0.01% per 1 ohm

- Allowing wire resistances
  - RTD input: Max. 150Ω (The conductor resistance between the three wires shall be equalized.)
  - Wiring resistance effect: ±0.1% ID
  - Allowable input voltage range:
  - TC, mV, and RTD input ±10 V DC
  - V input: ±10 V DC
  - mV input: ±50 mV
  - Noise rejection ratio:
    - Normal mode: 40 dB or more (at 50Hz)
    - Common mode: 120 dB or more (at 50/60Hz)
  - For 100-240 V AC/DV, the power frequency can be set manually. Automatic detection is also available.
  - For 24 V AC/DV, the power frequency can be set manually.
  - Reference junction compensation error:
    - ±0.1°C/10°C (15 to 35°C, 1°C/10°C to ±15°C and ±15°C to ±25°C)
    - ±0.01°C/1°C (15°C to 35°C)

- Contact Input Specifications

- Number of inputs: See the table of Model and Suffix Codes.
  - Input type: No-voltage contact input or transistor contact input
  - Input contact rating: 12 V DC, 10 mA or more
  - Use a contact with a minimum on-current of 1 mA or more.
  - ON/OFF detection
  - No-voltage contact input:
    - Contact resistance of 1.0 Ω or less is deemed as "ON" and contact resistance of 50 Ω or more as "OFF".
  - Transistor contact input:
    - Input voltage of 2 V or less is deemed as "ON" and leakage current must not exceed 100 µA when "OFF".
    - Maximum static detection error: Control period ±50 ms
    - Use: SP switch, operation mode switch, and event input

- Analog Output Specifications

- Number of outputs: Control output
  - Cooling-side control output of Heating/cooling type (Refrigeration output terminals)
    - Output type: Current output or voltage output pulse
    - Output current: 4 to 20 mA DC or 0 to 20 mA DC/ load resistance of 600 Ω or less
    - Output current accuracy: ±0.1% of span (±5% for span of 1 mA or less)
    - Current accuracy is ±1% of the standard operating conditions: 23±2°C, 90±10%RH, and power frequency at 50/60 Hz.
    - Voltage pulse output
    - Use: Time proportional output
      - On-voltage: 12 V or more/ load resistance of 600 Ω or less
      - Off-voltage: 0 V/ DC or less
    - Use: Time proportional output
    - Time resolution: 10 ms or 0.1% of output, whichever is larger

- Retransmission Output Specifications

- Number of outputs: Retransmission output; 1, shared with 15 V DC loop power supply or Cooling-side control output
  - Output type: 4 to 20 mA DC or 0 to 20 mA DC/ load resistance of 600 Ω or less
  - Output current accuracy (currents from 0 to 4 mA) from 0 to 100%: ±0.1% of span (±5% for span of 1 mA or less)
  - Output current accuracy (currents from 4 to 20 mA) from 0 to 100%: ±0.5% of span (±2.5% for span of 1 mA or less)
  - Use: Time proportional output
    - Time proportional output:
      - Time resolution: 10 ms or 0.1% of output, whichever is larger

- 15 V DC Loop Power Supply Specifications

(Shared with Retransmission output or Cooling-side control output)

- Maximum supply current: About 25 mA (with short-circuit current limiting circuit)

- Step Response Time Specifications

Within 1.5s of analog output response time when a step change of 10 to 90% of input signal is applied.

- Relay Contact Output Specifications

- Contact type and number of outputs:
  - Control output: contact point 1c t 1 point
  - Heating/cooling type: open, contacts a t 1 point, determined to have occurred if it is 0.1 V or 0.4 mA or less.
  - Contact rating: 0.05 µA/for 24VDC or 0.3µA/ for 24VDC
  - Measured current (RTD): About 0.16 mA

- External dimensions (mm)
  - UT3A: 96 (W) x 96 (H) x 55 (depth from the panel face)
  - UT32A: 48 (W) x 96 (H) x 65 (depth from the panel face)

Note: The control output should always be used with a load of 10 Ω or more. The alarm output should always be used with a load of 1 mA or more.

- Transistor Contact Output Specifications

- Number of outputs: See the table of Model and Suffix Codes.
  - Output type: Open collector (NPN current)
  - Output contact rating: Max. 24 V DC, 50 mA
  - Output time resolution: Max. 200 ms
  - Use: Alarm output, FAIL output, etc.

- Position Proportional Output Specifications

- Position signal input:
  - Slide resistance: 100Ω to 2.5 kΩ of total resistance
  - 100% side and side line with disconnection detection (side: without disconnection detection) Current input: 4 to 20 mA (with disconnection detection)
  - Sampling period: 50 ms
  - Measurement resolution: 0.1% of input span
  - Position proportional relay output:
    - UT32A: contact point 1a, 2 points, 250 V A, 3 A or 30 V DC, 3 A (resistance load)
    - UT32A: contact point 1a, 2 points, 250 V A, 3 A or 30 V DC, 3 A (resistance load)

Note: This should always be used with a load of 1 mA or more.

Heater Break Alarm Specifications

- Number of inputs: 2
- Number of outputs: 2 (transistor contact output)
- Use: Monitoring of melting metal current external current transformer (CT) and generates a heater break alarm when the measured value is less than the break detection value.
- Current transformer input resistance: About 4.9 Ω
- Current transformer input range: 0 to 1.0 A rms (0.2 A rms or more cannot be applied.)
- Heater current measured value display range: 0 to 360.0 A rms
- Heater current measurement period: 200 ms
- Heater current measurement accuracy: ±5% of current transformer input range span ±1°C (CT error is not included.)
- Heater current detection resistor: 125Ω of current transformer input range span
- Break detection On-time: Min. 0.2 second (for time proportional output)

24 V DC Loop Power Supply Specifications

- Use: Power is supplied to a 2-wire transmitter.
- Power supply: 21.6 to 30.0 V DC
- Rated current: 4 to 20 mA
- Maximum supply current: About 30 mA (with short-circuit current limiting circuit)

Safety and EMC Standards

- Safety:
  - Compliant with IEC/EN 61010-1 (IEC), IEC/EN 61010-2-031 (IEC), IEC/EN 61010-2-200 (IEC), certified by CAN/CSA C22.2 No. 61010-1 (CSA), approved by UL 61010-1
  - Installation category II
  - Pollution degree: 2
  - Measurement category (CAT I) (UL, CSA)
  - Other (CE)
- Rated measurement input: 12 V DC or 10 V DC
- Rated transient overvoltage: 1500 V (D)
- Availability of measurement category for UT3A: 61010-1-031 (IEC), the value is not necessarily a guarantee of instrument performance

EMC Standards

- Compliance with CE marking
  - EN 61326-1: Class A, Table 2 (For use in industrial locations)
  - EN 61326-2-3: The instrument continues to operate at a measurement accuracy within ±0.5% of the range during testing
  - Power supply: 14.5 to 16.5 V DC
  - EN 61003-2-2 Class A
  - EN 61003-3 Class A
  - EMC Regulatory Authority in Australia and New Zealand (for all models including LI3000)
  - EN 55011 Class A, Group 1
  - EN 61000-3-3 Class A

Electromagnetic wave interference prevention standard, electromagnetic wave protection standard compliance

Construction, Installation, and Wiring

- Dust-proof and drip-proof, IP66 (for front panel) (Not available for side-by-side close mounting.)
- Material: Polycarbonate (Flame retardancy: UL94V-0)
- Case color: White (Light grey) or Black (Light gray)
- Weight: 3.5 kg
- External dimensions (mm)
  - UT3A: 96 (W) x 96 (H) x 55 (depth from the panel face)
  - UT32A: 48 (W) x 96 (H) x 65 (depth from the panel face)

Depth (except the projection on the rear panel)


5. How to Connect Wires

### Wiring work must be carried out by a person with basic electrical knowledge and practical experience.

- Be sure to turn OFF the power supply to the controller before wiring to avoid an electric shock. Use a tester or similar device to ensure that no power is being supplied to a cable to be connected.
- For the wiring cable, the temperature rating is 75°C or more.
- As a safety measure, always install a circuit breaker (an NEC 60947-compatible product, 5 A, 100 V or 220 V AC) in an easily accessible location near the instrument. Make sure the indication that the switch is a device for turning off the power to the instrument.
- Install the power cable keeping a distance of more than 1 cm from other signal wires.
- The power cable is required to meet the NEC standard or the requirement of the area in which the instrument is being installed.
- Wiring should be installed to conform to NEC (National Electrical Code: ANSI/NFPA-70) or the wiring construction standards in countries or regions where wiring is installed.
- Since the insulation provided to each relay output terminal is functional insulation, provide reinforced insulation between the external of the device as necessary. (Refer to the drawing below.)

### Environmental Conditions

**Normal Operating Conditions:**
- Ambient temperature: 
  - 10°C to 50°C (side-by-side mounting, -10°C to 40°C)
  - 0°C to 50°C (mounting altitude up to 30 meters above the horizontal. No downwardtilting allowed)
- Power supply: 24 V AC/DC (primary power: 24 V DC specified)
- Rated input: 100-240 V AC (side-by-side mounting)
- Humidity: 5% to 95% (no condensation allowed)
- Vibration: 1.0g at 14.7 Hz, less than 1 oct/min
- Shock: 2g in any direction
- Dust: None
- Operation: 10000 hours (10°C to 40°C, at 20°C to 22°C, 80% RH)
- Installation: 20 Ml or more at 509°C

**Transportation and Storage Conditions:**
- Temperature: -20°C to 70°C
- Temperature change rate: 20°C/h or less
- Humidity: 5% to 95% (no condensation allowed)

### Operating Effects

- Effect of ambient temperature:
  - Voltage or TC input: ±0.01% or ±0.01% of F.S., whichever is larger
  - RTD input: ±0.01% (ambient temperature) or less
- Ambient output at 50°C, 0% to 100% (no condensation allowed)
- Effect of power supply voltage fluctuation:
  - Analog input: ±0.05% of F.S. or less
  - Analog output: ±0.05% of F.S. or less (Within each input rated range)

### Recommended Crimp-on Terminal Lug

#### UT35A

- Wiring: twist the adjacent lug together
- Application size: 1.5mm² for 0.13mm² to 1.5mm²

### Terminal Wiring Diagrams

#### UT35A

**AC Relay Wiring**

- UT5A
  - Relay (Use one with a relay coil rating less than the UT5A's contact rating)
- UT35A
  - Relay (Use one with a relay coil rating less than the UT35A's contact rating)

**DC Relay Wiring**

- UT5A
  - Relay (Use one with a relay coil rating less than the UT5A's contact rating)
- UT35A
  - Relay (Use one with a relay coil rating less than the UT35A's contact rating)

**Transistor Output Wiring**

- UT5A
  - Power supply
  - Power supply
  - Contact output
  - Contact output
  - Contact output
  - Contact output
- UT35A
  - Power supply
  - Power supply
  - Contact output
  - Contact output
  - Contact output
  - Contact output

---

**Environmental Conditions**

- Ambient temperature: 
  - 10°C to 50°C (side-by-side mounting, -10°C to 40°C)
  - 0°C to 50°C (mounting altitude up to 30 meters above the horizontal. No downwardtilting allowed)
- Power supply: 24 V AC/DC (primary power: 24 V DC specified)
- Rated input: 100-240 V AC (side-by-side mounting)
- Humidity: 5% to 95% (no condensation allowed)
- Vibration: 1.0g at 14.7 Hz, less than 1 oct/min
- Shock: 2g in any direction
- Dust: None
- Operation: 10000 hours (10°C to 40°C, at 20°C to 22°C, 80% RH)
- Installation: 20 Ml or more at 509°C

**Transportation and Storage Conditions:**

- Temperature: -20°C to 70°C
- Temperature change rate: 20°C/h or less
- Humidity: 5% to 95% (no condensation allowed)

**Operating Effects**

- Effect of ambient temperature:
  - Voltage or TC input: ±0.01% or ±0.01% of F.S., whichever is larger
  - RTD input: ±0.01% (ambient temperature) or less
- Ambient output at 50°C, 0% to 100% (no condensation allowed)
- Effect of power supply voltage fluctuation:
  - Analog input: ±0.05% of F.S. or less
  - Analog output: ±0.05% of F.S. or less (Within each input rated range)

### Recommended Crimp-on Terminal Lug

**UT35A**

- Wiring: twist the adjacent lug together
- Application size: 1.5mm² for 0.13mm² to 1.5mm²

### Terminal Wiring Diagrams

**AC Relay Wiring**

- UT5A
  - Relay (Use one with a relay coil rating less than the UT5A's contact rating)
- UT35A
  - Relay (Use one with a relay coil rating less than the UT35A's contact rating)

**DC Relay Wiring**

- UT5A
  - Relay (Use one with a relay coil rating less than the UT5A's contact rating)
- UT35A
  - Relay (Use one with a relay coil rating less than the UT35A's contact rating)

**Transistor Output Wiring**

- UT5A
  - Power supply
  - Power supply
  - Contact output
  - Contact output
  - Contact output
  - Contact output
- UT35A
  - Power supply
  - Power supply
  - Contact output
  - Contact output
  - Contact output
  - Contact output

---

**Environmental Conditions**

- Ambient temperature: 
  - 10°C to 50°C (side-by-side mounting, -10°C to 40°C)
  - 0°C to 50°C (mounting altitude up to 30 meters above the horizontal. No downwardtilting allowed)
- Power supply: 24 V AC/DC (primary power: 24 V DC specified)
- Rated input: 100-240 V AC (side-by-side mounting)
- Humidity: 5% to 95% (no condensation allowed)
- Vibration: 1.0g at 14.7 Hz, less than 1 oct/min
- Shock: 2g in any direction
- Dust: None
- Operation: 10000 hours (10°C to 40°C, at 20°C to 22°C, 80% RH)
- Installation: 20 Ml or more at 509°C

**Transportation and Storage Conditions:**

- Temperature: -20°C to 70°C
- Temperature change rate: 20°C/h or less
- Humidity: 5% to 95% (no condensation allowed)

**Operating Effects**

- Effect of ambient temperature:
  - Voltage or TC input: ±0.01% or ±0.01% of F.S., whichever is larger
  - RTD input: ±0.01% (ambient temperature) or less
- Ambient output at 50°C, 0% to 100% (no condensation allowed)
- Effect of power supply voltage fluctuation:
  - Analog input: ±0.05% of F.S. or less
  - Analog output: ±0.05% of F.S. or less (Within each input rated range)
1. Names and Functions of Display Parts

No. In Screen Name Description
1) No particular
2) No particular
3) No particular
4) No particular
5) No particular
6) No particular

Note: The communication controller (maintenance port) for LLSA Parameter Setting Software is at the top of the unit.

2. Setup Procedure

The following flowchart shows the setup procedure for UT35A and UT32A.

3. Quick Setting Function (Setting of Input and Output)

The quick setting function is a function to easily set the basic function of the controller.

To change and set the parameter, press the SET/ENTER key to start the quick setting function. Change NO to YES and press the SET/ENTER key to complete the setup of the basic function. Press the SET/ENTER key to register the settings.

- Making Settings Using Quick Setting Function

Example: Setting to PID control, thermocouple type K (range of 0.0 to 580.0°C), and current output for PID control. For detail procedures and switching of displays, see "Flow of Quick Setting Function" below. For the parameters to set, see the next page.

1) Press the SET/ENTER key while YES for QSM (Quick setting mode) is displayed.
2) Set the control type parameter (CNT) to PID (PID control).
3) Set the PV input type parameter (IN) to K1 (270.0 to 1370.0°C).
4) Set the set value parameter (R) to C (Degree Celsius).
5) Set the maximum value of PV input range parameter (RH) to 500.0.
6) Set the minimum value of PV input range parameter (RL) to 0.0.
7) Set the output type selector parameter (OT) to OUT terminals (current=0.02).
8) Set the next parameter to complete the setup. Operation Display appears.

- Flow of Quick Setting Function

In quick setting mode, the parameter appears on the display. This guide can be turned on/off with the Fn key.

1. The PV input unit parameter (UNIT) is displayed. Initial value: C (Degree Celsius).
2. Press the SET/ENTER key to start the quick setting function.
3. The PV input parameter (UNIT) is displayed. Initial value: PID (PID control).
4. Press the SET/ENTER key to complete the setup.
5. Press the SET/ENTER key to return to the Operation Display.
6. K1 is displayed.
7. Press the SET/ENTER key.
8. Press the DOWN arrow key to select the next parameter.
9. The last digit of the upper limit value blinks.
10. Change the setpoint using the Up/Down arrow keys to increase and decrease the value of the Left/Right arrow keys to move between digits.
11. Press the SET/ENTER key to complete the setup.
12. The setpoint for the parameter RH has been registered.

- Operation Display

Display the measured input value (PV).
Display the measured input value (PV).
Display the measured input value (PV).
1. Show the Operation Display.

2. Press the SET/ENTER key.

3. The parameter A1 (alarm type) is displayed.

4. Press the SET/ENTER key.

5. The last digit of the setpoint blinks.

6. Press the Right arrow key until the A1 menu appears.

7. Press the SET/ENTER key.

The following operation procedure shows an example of changing the alarm-1 type (factory default: PV high low limit) to PV low limit alarm (setpoint: 02).

1. Show the Operation Display.

2. Hold down the key for 3 seconds.

3. The parameter PV low limit (setpoint: 04) is displayed.

4. Press the SET/ENTER key.

5. Press the SET/ENTER key.

6. Press the Down arrow key until A1 appears.

7. Press the SET/ENTER key.

Each parameter and group can be changed in the Parameter Setting Displays of alarms using arrow keys. Press the Up/Down arrow keys: parameters in this region can be increased and decreased the value and the Left/Right arrow keys to move between groups.

Display the parameter and group that need to be changed.

Press the SET/ENTER key.

Blinks during the change.

Change the setpoint using the Up/Down arrow keys to increase and decrease the value and the LeftRight arrow keys to move between digits.

Press the SET/ENTER key.

The setpoint has been registered. After the setup is completed, press the DISPLAY key or DISP key once to return to the Operation Display.

The following operation procedure describes how to input feedback signals from the control valve and adjust the fully-opened and fully-closed positions of the control valve automatically. The fully-opened and fully-closed positions of the control valve can be adjusted automatically by inputting feedback signals from the control valve. To adjust the valve position, you need to carry out the connection and bring the controller into manual mode. For details, see "3. Switching between AUTO and MAN in Operation."
1. Monitoring-purpose Operation Displays Available during Operation

- **Operation Display Switching Diagram for Standard and Position Proportional Types**
  - **SP Display**
    - Displays the measured input value on PV display.
  - **OUT Display**
    - Displays the measured output value on PV display.
  - **Control Output Display (OUT)**
    - When the communication is ON, it displays the control output value in "Auto-tuning" (Out can be changed in manual mode).
  - **Manual Operation Display (SP)**
    - Displays the value’s feedback input value (up to 100 value opening) in Position proportional control.

2. Setting Target Setpoint (SP)

3. Performing/Cancelling Auto-tuning

4. Selecting Target Setpoints Numbers (SPNO.)

5. Switching between AUTO and MAN

6. Switching between RUN and STOP

7. Display in STOP mode

8. Display in STOP mode

9. Troubleshooting

---

**Display in STOP mode**

"STOP" is displayed on Symbol display and "preset output value" is displayed on Data display.

---

**Display in STOP mode**

When AUTO is switched to MAN, the control output value in AUTO mode is held.

The controller can be operated manually from the hold value.

For details, see User’s Manual (M-05P01031-01EN).

---

**Auto-tuning** should be performed after setting a target setpoint. Make sure that the controller is in automatic mode (AUTO) and in run mode (RUN) before starting the setpoint setting to AUTO. Switching between AUTO and MAN and setting to RUN, see "6. Setting between AUTO and MAN." Switching between AUTO and MAN does not find any appropriate PID constants, set the PID manually. For setting the PID manually, see User’s Manual (M-05P01031-01EN).

---

**Troubleshooting**

If you cannot remember how to carry out an operation during setting, press the "5." (Remote) to Auto-tuning. Although the display of UT35A is used in this guide, UT32A can be operated similarly.

This operation guide describes key entries for operating the UT35A and UT32A.
Remote and local switching can be performed using any of the following:
1. Contact input, Parameter, Communication, and User function key.
2. Press the SET/ENTER key.

When the input contact is ON, operation cannot be performed using the parameter, communication, or key, and the last switch operation is performed.

<table>
<thead>
<tr>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Show the Operation Display.</td>
</tr>
<tr>
<td>2. Hold-down the PARAMETER key or PR/A key for 3 seconds to display MODE menu.</td>
</tr>
<tr>
<td>3. Press the SET/ENTER key.</td>
</tr>
<tr>
<td>4. Change the operation mode using the Up/Down arrow keys. Blink during the change.</td>
</tr>
<tr>
<td>5. The REM lamp is lit.</td>
</tr>
</tbody>
</table>

## 7. Switching between REM (Remote) and LCL (Local)

Remote and local switching can be performed using any of the following:
- 1. Contact input
- 2. Parameter
- 3. Communication
- 4. User function key

When the contact input is ON, operation is performed using the parameter, communication, or key.

### REM (Remote)
- Control is performed using a switch via communication for the target set point.
- The following shows an example of switching from local to remote using the parameter. (Depends on where the communication is specified.)

### LCL (Local)
- Control is performed using the manual switch.

### Example
- The PID group for the local SP number is used as PID in remote mode.

## 8. Manipulating Control Output in Manual Mode

### Manual operation in Heating/cooling control

#### Symbol of cooling side output

<table>
<thead>
<tr>
<th>Symbol of cooling side output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating side control output</td>
</tr>
<tr>
<td>Cooling side control output</td>
</tr>
<tr>
<td>Target setpoint (SP) number</td>
</tr>
</tbody>
</table>

**Up arrow key:**
- Converges cooling side control output and increases heating side control output.
- Increases input to the heater by pressing a key. (PV with SP increases)
- The REM lamp is lit.

**Down arrow key:**
- Converges cooling side control output and decreases heating side control output.
- Decreases input to the heater by pressing a key. (PV with SP decreases)
- The REM lamp is lit.

#### Output manipulation in Position proportional control

- Output manipulation is performed in Position proportional control output (I/O, CL, CTL, LG).

## 9. Troubleshooting Flow

### Troubleshooting Flow

If the Operation Display does not appear after pressing the controller’s power, check the procedures in the following flowchart. If a problem appears to be complicated, contact our sales representatives.

### Remedies if Power Failure Occurs during Operations
- In the event of power failure within 20 ms, a power failure is not detected. Normal operation continues.
- Power failure for less than about 5 seconds, or for about 5 seconds or more.

### Remedies at Power On

- When the Set point display is OFF, the control output value changes according to the displayed value.

### In step mode (when the STOP lamp is lit), control output cannot be manipulated.

---

**Note:** If the SET/ENTER key is not pressed, the control output value changes according to the displayed value. When the STOP lamp is lit, control output cannot be manipulated.

---

**Note:** When an error occurs in input shown in Analog input display (Operation display), Setpoint display shows the value of the PV display.
### Operation Parameters

Hold down the PARAMETER key or PARA key for 3 seconds to move from the Operation Display to the Operation Parameter Setting Display. Press the DISPLAY key or DISIP key to return to the Operation Display.

- **Display**: Press the DISPLAY key to move to the Display settings.
- **Set/Enter**: Press the SET/ENTER key to move to the Set/Enter function.
- **SEL**: Press the SEL key to move to the Selection function.

### Operation Setting

- To select the parameter setting displayed as the initial value, press the Down arrow key to move to the next parameter.
- To change and set the parameter setting, press the SET/ENTER key to start the set-point blocking. The blinking state allows you to make changes to the setting mode. Use the Up/Down or Right arrow keys to change the setpoint. Press the SET/ENTER key to register the setting.

Note: There are some parameters which are not displayed depending on the model and suffix codes. Control type (CRT), etc. The parameters for proess control setting (LEVEL PRO) are not described in this manual. See User’s Manual (IM SP01031-01EN).

### Operation Mode

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>Upper setting</th>
<th>Lower setting</th>
<th>Message level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP (1960)</td>
<td>STOP/ON switch</td>
<td>ON/OFF</td>
<td>ON</td>
<td>OFF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1961)</td>
<td>AUTO/LOCAL switch</td>
<td>LOCAL</td>
<td>LOCAL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1962)</td>
<td>Auto-timer switch</td>
<td>STOP</td>
<td>STOP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1963)</td>
<td>SP number selection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1964)</td>
<td>PID parameter selection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SELECT Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>Upper setting</th>
<th>Lower setting</th>
<th>Message level</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>SELECT parameter 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>SELECT parameter 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>SELECT parameter 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>SELECT parameter 13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>SELECT parameter 14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>SELECT parameter 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SP and Alarm Setpoint Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>Upper setting</th>
<th>Lower setting</th>
<th>Message level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP (1965)</td>
<td>Target setpoint</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1966)</td>
<td>Sub-target point (in proportional band level control)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1967)</td>
<td>PID number selection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1968)</td>
<td>Alarm-1 to 4 alarm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alarm Function Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>Upper setting</th>
<th>Lower setting</th>
<th>Message level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP (1969)</td>
<td>Alarm-1 to 4 time delay 1 to 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1970)</td>
<td>Alarm-1 to 4 time delay 5 to 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1971)</td>
<td>Alarm mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PV-related Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>Upper setting</th>
<th>Lower setting</th>
<th>Message level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP (1972)</td>
<td>PV input bias</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP (1973)</td>
<td>PV input filter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PID Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>Upper setting</th>
<th>Lower setting</th>
<th>Message level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP (1974)</td>
<td>PID control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For the PID setting parameter, 4 groups are displayed for the factory default. The number of groups can be changed by the setup parameter SPGR (number of SP groups). To change the number of PID groups, see User’s Manual (IM SP01031-01EN).
### Zone Control Parameter

**Parameter symbol:** ZON

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1 to P2</td>
<td>Reference point 1 to 3</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
<td>STD</td>
</tr>
</tbody>
</table>

### P Parameter (for Ladder Program)

**Parameter symbol:** P

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1 to P5</td>
<td>Reference point 1 to 5</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
<td>STD</td>
</tr>
</tbody>
</table>

### Control Function Setting Parameter

**Parameter symbol:** F

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 to F5</td>
<td>Control function 1 to 5</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
<td>STD</td>
</tr>
</tbody>
</table>

### PV Input Setting Parameter

**Parameter symbol:** PV

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>PV input limit</td>
<td>Maximum value of PV input range</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
<td>STD</td>
</tr>
</tbody>
</table>

### Input, SP Limiter Setting Parameter

**Parameter symbol:** P

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1 to P5</td>
<td>Control PV input limit 1 to 5</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
<td>STD</td>
</tr>
</tbody>
</table>

---

**Notes:**
- If you are using two or more groups of PID parameters, use the following table to record their setting values.
- **Setup Parameters**
  - Hold down the PARAMETER key or PARA key and Left arrow key simultaneously for 3 seconds to move to the Operation Display or Operation Parameter Setting Display to the Setup Parameter Setting Display. Press the DISPLAY key or DSP key once to return to the Operation Display.

**Operation for Setting**
- To select the parameter setting displayed as the initial value, press the Down arrow key to move to the next parameter.
- To change and set the parameter setting, press the SET/ENTER key to start the set-point editing. (The blinking state allows you to make changes (setting mode). Use the Up/Down/Left/Right arrow keys to change the setting). Press the SET/ENTER key to register the selection.

**Note:**
- There are some parameters which are not displayed depending on the Model and suffix codes, control type (CMT), etc. The parameters for professional setting mode (LE/EX, PRC) are not described in this manual. See User's Manual (IM 05P010331-01EN).
### Output Setting Parameter

**Menu symbol:** [O0] (OUT)

**Parameter symbol** | **Name of Parameter** | **Setting Range** | **Unit** | **Value Setting** | **Display Level**
---|---|---|---|---|---
- | - | - | - | - | -

### Heater Break Alarm Setting Parameter

**Menu symbol:** [O1] (OUT)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Unit</th>
<th>Value Setting</th>
<th>Display Level</th>
</tr>
</thead>
</table>
- | Heater break alarm 1 (function selection) | 1. Heater current measurement  
2. Heater in OFF/ON (sleeping mode)  
3. Cooling side heater break alarm  
4. Cooling side heater break alarm  | 1 | YES | EASY |

### Ethernet Communication Setting Parameter (E3-terminal Area)

**Menu symbol:** [E3] (OUT)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Unit</th>
<th>Value Setting</th>
<th>Display Level</th>
</tr>
</thead>
</table>
- | Auto-tuning | 1: RUN  
2: AUTO-TUNE  
3: STOP | 1 | YES | EASY |

### RS-485 Communication Setting Parameter (UT35A: E3-terminal Area, UT32A: E1-terminal Area)

**Menu symbol:** [E3] (OUT)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Unit</th>
<th>Value Setting</th>
<th>Display Level</th>
</tr>
</thead>
</table>
- | RS-485 Communication Setting Parameter | 1. Full-duplex communication  
2. Half-duplex communication  
3. RS-485 Communication Setting Parameter  
4. RS-485 Communication Setting Parameter | 1 | YES | EASY |

### CC-Link Communication Setting Parameter (UT35A: E3-terminal Area, UT32A: E1-terminal Area)

**Menu symbol:** [E3] (OUT)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Unit</th>
<th>Value Setting</th>
<th>Display Level</th>
</tr>
</thead>
</table>
- | Auto-tuning | 1: RUN  
2: AUTO-TUNE  
3: STOP | 1 | YES | EASY |

### Display Function Setting Parameter

**Menu symbol:** [G1] (OUT)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Unit</th>
<th>Value Setting</th>
<th>Display Level</th>
</tr>
</thead>
</table>
- | Polling | 1: OFF  
2: ON  
3: Auto-tuning | 1 | YES | EASY |

### PROFIBUS-DP Communication Setting Parameter (E3-terminal Area)

**Menu symbol:** [P0] (PN0)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Unit</th>
<th>Value Setting</th>
<th>Display Level</th>
</tr>
</thead>
</table>
- | Polling | 1: OFF  
2: ON  
3: Auto-tuning | 1 | YES | EASY |

---

**In cases where the current transformers manufactured by U R D. Co., Ltd. are used, set the following value for the coil winding number ratio.**

**CT1: 5-1000: 800**

**CT2: 12L-30: 3000**

---

**RS-485 Communication Setting Parameter**

- **Menu symbol:** [E3] (OUT)

**Parameter symbol** | **Name of Parameter** | **Setting Range** | **Unit** | **Value Setting** | **Display Level**
---|---|---|---|---|---
- | Protocol selection | RS-485 (RS): RS-485 communication  
RS-485 (ADR): RS-485 communication (with maximum baud rate)  
RS-485 (DLN): RS-485 communication (with maximum baud rate)  
RS-485 (ADR): RS-485 communication (with maximum baud rate)  | 1 | YES | EASY |

---

**Heater Break Alarm Setting Parameter**

- **Menu symbol:** [O1] (OUT)

**Parameter symbol** | **Name of Parameter** | **Setting Range** | **Unit** | **Value Setting** | **Display Level**
---|---|---|---|---|---
- | Heater break alarm 1 (function selection) | 1. Heater current measurement  
2. Heater in OFF/ON (sleeping mode)  
3. Cooling side heater break alarm  
4. Cooling side heater break alarm  | 1 | YES | EASY |

---

**Ethernet Communication Setting Parameter**

- **Menu symbol:** [E3] (OUT)

**Parameter symbol** | **Name of Parameter** | **Setting Range** | **Unit** | **Value Setting** | **Display Level**
---|---|---|---|---|---
- | Auto-tuning | 1: RUN  
2: AUTO-TUNE  
3: STOP | 1 | YES | EASY |

---

**RS-485 Communication Setting Parameter**

- **Menu symbol:** [E3] (OUT)

**Parameter symbol** | **Name of Parameter** | **Setting Range** | **Unit** | **Value Setting** | **Display Level**
---|---|---|---|---|---
- | Protocol selection | RS-485 (RS): RS-485 communication  
RS-485 (ADR): RS-485 communication (with maximum baud rate)  
RS-485 (DLN): RS-485 communication (with maximum baud rate)  
RS-485 (ADR): RS-485 communication (with maximum baud rate)  | 1 | YES | EASY |

---

**Heater Break Alarm Setting Parameter**

- **Menu symbol:** [O1] (OUT)

**Parameter symbol** | **Name of Parameter** | **Setting Range** | **Unit** | **Value Setting** | **Display Level**
---|---|---|---|---|---
- | Heater break alarm 1 (function selection) | 1. Heater current measurement  
2. Heater in OFF/ON (sleeping mode)  
3. Cooling side heater break alarm  
4. Cooling side heater break alarm  | 1 | YES | EASY |
### SELECT Display Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS1 to CS5</td>
<td></td>
<td></td>
<td>OFF</td>
<td></td>
<td>STD</td>
</tr>
</tbody>
</table>

- **CS1 to CS5**
  - SELECT Display 1 to 5 (CS1 to CS5): Use the following table to record SELECT Display setting value.

### Key Lock Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELAY1 to RELAY2</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
</tbody>
</table>

### DO Setting Parameter (E1/E4/terminal Area)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>D0H/D0V function selection</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
<tr>
<td>D0H/D0V function selection</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
<tr>
<td>D0H/D0V function selection</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
<tr>
<td>D0H/D0V function selection</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
</tbody>
</table>

### System Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPR1 to LPR4</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
</tbody>
</table>

### Error and Version Confirmation Parameter (for display only)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Status record</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P1 to P13</strong></td>
<td></td>
<td></td>
<td>EASY</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Status record</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P14 to P25</strong></td>
<td></td>
<td></td>
<td>EASY</td>
</tr>
</tbody>
</table>

### DI Function Registration Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC to DC switch</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
</tbody>
</table>

### DI Function Numbering Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>50P to 59P</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>EASY</td>
</tr>
</tbody>
</table>

### System Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPR1 to LPR4</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
</tbody>
</table>

### Key Lock Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELAY1 to RELAY2</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
</tbody>
</table>

### DO Setting Parameter (E1/E4/terminal Area)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>D0H/D0V function selection</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
<tr>
<td>D0H/D0V function selection</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
<tr>
<td>D0H/D0V function selection</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
<tr>
<td>D0H/D0V function selection</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
</tbody>
</table>

### System Setting Parameter

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Setting Range</th>
<th>Initial value</th>
<th>User Setting</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPR1 to LPR4</td>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
<td>STD</td>
</tr>
</tbody>
</table>

### Error and Version Confirmation Parameter (for display only)

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Status record</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P1 to P13</strong></td>
<td></td>
<td></td>
<td>EASY</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter symbol</th>
<th>Name of Parameter</th>
<th>Status record</th>
<th>Display level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P14 to P25</strong></td>
<td></td>
<td></td>
<td>EASY</td>
</tr>
</tbody>
</table>