The Next Evolution of the YS Series Loop Controller
32 Years of Reliable Control!

The new YS1000 Series of single-loop controllers is the successor to the Yokogawa YS100 and YS80 single loop controllers. The YS1000 Series offers improved connectivity with supervisory systems and incorporates new, enhanced features that help operators work more efficiently. The YS1000 will work efficiently in petrochemical, chemical, power, pulp and paper, boiler and combustion control applications.

Incredibly easy to read display

TFT LCD makes it even easier to read.
- Even wider viewing angle (at least 1.5 times wider than our previous model)
- LED back light for brighter performance (at least 2.5 times brighter than our previous model)
- Greater contrast (at least 20 times greater than our previous model)

High reliability

Dual CPU and manual control ensure high reliability.
Improved maintainability

Easy to upgrade

With the YSS1000 setting software, you can convert your SLPC and YS170 programs with YS1700 programs.
YS100 and YS80 compatible models also available.

Adding value for the customer

We are continuing to offer the YS1000, embodying the quality and reliability we have cultivated over the decades.

Envision a plant...
Color LCD that’s easy to see and easier to use.

<table>
<thead>
<tr>
<th>Display Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meter display</td>
<td>Digital values displayed side-by-side with an intuitive analog meter makes the YS1000 the perfect replacement for YS80 or obsolete “moving coil” controllers.</td>
</tr>
<tr>
<td>Event Display</td>
<td>Displays when events are occurring. Messages can be displayed in English, Chinese, Japanese and other languages.</td>
</tr>
<tr>
<td>TREND Display</td>
<td>Your selection of up to 4 analog inputs or outputs can be displayed as trends.</td>
</tr>
<tr>
<td>ALARM Display</td>
<td>Color LCD alarm display makes it easy to identify and review alarm activity.</td>
</tr>
</tbody>
</table>

**LOOPS Display**

- Loops color-coded for easy identification.
- Ideal for 2-element control such as cascade or selector control.

**TREND Display**

- Uses a TFT LCD + LED back light display.
- Maintains good visibility, even on panels subject to direct morning and evening sunlight.

**ALARM Display**

- Color LCD alarm display makes it easy to identify and review alarm activity.

**Loop Display**

- Provides for greater freedom of instrumentation design.
- Compact, lightweight design allows the use of smaller and less expensive panel. Moreover, it allows attachment to doors which was previously difficult.

**Designed with a lightweight, compact case**

- YS1000: 250 mm, 1.6 kg
- YS100: 320 mm, 3.4 kg
- YS80: 480 mm, 6 kg
YS1000 Configuration and Programming Software

Your Choice of Programming Style: Graphical or Text Based

New Graphic Programming Tool

Programming is easier with our intuitive function block programming. The online module monitoring function allows you to confirm the performance while programming.

Original Text Based Programming

Backwards compatible with existing YS170 users programs. Increased programming capacity allows you to create more sophisticated control schemes.

Three connection modes

Connection modes: USB, Ethernet or RS485
When connecting via RS485 or Ethernet, a communication option is required on the main unit.

Password protection function

Passwords can be assigned to user programs to prevent unauthorized access to proprietary programs. A password on the main unit prevents unexpected changes in the engineering parameters.

Full set of computation functions

- Supports parameter setting for all YS1000 models
- Support for YS1700 custom programming.
- Calculations done using Engineering units and Floating point math.
- Includes over one-hundred computation modules for exponents, logarithms, temperature/pressure correction, and other operations.
- Function blocks (sub-programs) can be saved and reused.

Calibration tool

Following the YS1000’s online calibration instructions makes calibration easy. Calibration records and data can be saved on the YS1000, allowing you to load or print past calibration data as needed.

Backwards compatible with existing YS170 users programs.
Control output backup function

The control output backup function comes standard with YS1000 series controllers (YS1700 and YS1900) and the Manual Station for MV Setting (YS1360).

Dual CPU

With dual-CPU construction (main CPU and display CPU), manual control capability and display continues even if an abnormality occurs on one of the CPUs. If controller self-diagnostics detects a control circuit failure, the controller can suspend analog/digital output, switch to manual mode and allow manual control by operator.

Battery free memory backup

Nonvolatile memory is used for memory backup. Service life is improved because no batteries, backup capacitors, or other components are used.

Improved basic control performance

The YS1000 series achieves higher performance than previous models (YS100 series).

- I/O accuracy
  - Voltage input accuracy: ±0.2% → ±0.1%
  - Voltage output accuracy: ±0.3% → ±0.2%
  - Current output accuracy: ±1.0% → ±0.2%

- Internal data resolution of the I/O signal: 1/1000 → 1/10000
- Internal computation resolution of PID and other computations: 1/65536 → 1/65536

AC/DC power supply resists powerline fluctuations.

The AC/DC (100V/24V) power supply powers the instrument to provide consistent performance. Also accepts DC power regardless of polarity (specify 220 V power supply when ordering).

Controller online replacement function (portable manual station)

Use the YS110 portable manual station when exchanging or performing maintenance on a controller. You can switch to the spare controller without interrupting the control output.

Replace the display while retaining output.

The display unit is replaced by Yokogawa service personnel. Recommended LCD replacement period: 8 years

Manual operation —“Hard manual”

Independent manual override is built into the control circuits, ensuring that control output can continue even when a control circuit including the CPU experiences a problem.
**High reliability**

Including the CPU experiences a problem.

**Independent manual override** is built into the control circuits, ensuring that control output can continue even when a control circuit occurs on one of the CPUs. If controller self-diagnostics detect a MV Setting (YS1360).

**Series controllers (YS1700 and YS1500)** and the Manual Station for the control output backup function comes standard with YS1000 components are used. Nonvolatile memory is used for memory backup. Service life is improved process uptime.

*Test data of our company*

<table>
<thead>
<tr>
<th>Previous model</th>
<th>New YS1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow to deteriorate</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Communication with PLC**

Connections are enabled using the FA-M3’s UT link module and the RS485 communication function. No programming is necessary to exchange data between the instrument and the FA-M3.

The YS1000 can also be connected to PLCs of various manufacturers via the Modbus communication protocol.

**Peer-to-peer communication function**

With peer-to-peer communication, up to 32 YS1700 can be connected interchangeably. Four of the connected instruments can each output 4 points of analog data and 16 points of status data. This makes data exchange and I/O sharing possible since all instruments under peer-to-peer communications can read all data (16 analog and 64 status data).

Note: Does not support the YS100 series peer-to-peer communication network (YS-net).

Maximum no. of connections : 32  
No. of receiving units : 32  
No. of transmitting units : 4  
Transmitted data : 4 analog and 16 status data per transmitting YS1700  
Communication interval : 200 ms average  
(not synchronized to the control computation interval)

**Expandable I/O**

Additional I/O can be added by selecting the YS1700 basic model (with Expandable I/O). The total number of input/outputs points with the main unit and Expandable I/O are 8 analog inputs, 4 analog outputs, and 14 DI/DO.

Note: An interface for the additional Expandable I/O cannot be added after delivery. If there is a possibility that extra input/outputs will be needed, we recommend that you start with the basic model (with expansion I/O).

**Communication with CENTUM**

As with previous models, communication with Yokogawa’s DCS (CENTUM) is supported. This is ideal for DCS backup in chemical plants and other applications requiring extremely high reliability. Applicable Models: YS1700, YS1500, YS1350, and YS1360

**A sample of System Construction**

- Inter-lock system
  
  - Upper system
  
  - Field instruments
    - YS1700
    - YS1500
    - YS1350
    - YS1360
    - YS1310

Field wiring  
Signal in the panel  
Communication
Cases and housing for replacing old models

Indispensable for lasting, stable operations at the plant when replacing instrumentation. Case and housing are available for replacement of older-model SLCs by Yokogawa Electric Corp. (the EBS, I, EK, and HOMAC series) allowing you to exchange instruments without modifying existing instrumentation panels. Moreover, front panel design with analog-like meters lets you update to new instruments without losing the familiarity of the old interface.

Self-tuning (STC)

Simplifies tuning when starting up or changing the process unit under control.

<table>
<thead>
<tr>
<th>Before STC</th>
<th>After STC</th>
<th>Before STC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time (min.)</td>
<td>Time (min.)</td>
<td>SFA : SVF Parameter</td>
</tr>
<tr>
<td>PV = 80%</td>
<td>PV = 80%</td>
<td>PV = 80%</td>
</tr>
<tr>
<td>YS100*1</td>
<td>YS80*1</td>
<td>YS100*1</td>
</tr>
<tr>
<td>2 wire transmitter input (non-isolated)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Setpoint filter (SVF)

Can optimize tracking with changes in set-points. Also can maintain optimum responsiveness to disturbances.

Flexible DI/DO

The YS1700/YS1500’s six DI/DO terminals can be used for both input and output.

Programmable function key

With a user program, the program function key (PF key) on the instrument’s front panel can be used as an ON/OFF switch for self-tuning, or as a Start button for sequence operation.

Direct input function*

An optional signal conversion function can be added for 1 channel. Current, voltage pulse, thermocouples, RTDs, mV and potentiometers signals from differential pressure gauges, manometers, and flow meters can be connected directly to the controller. The direct input employs highly noise resistant, isolated inputs.

* Options available for suffix code “2”, “4”, “5” of “Type”.

*1: Compatibility is established by inserting the YS1000’s internal circuitry of the appropriate compatible type into the existing case.
*2: Compatibility is established by inserting the entire YS1000 unit of the appropriate compatible type into the existing controller housing. Order the housing separately as needed.
Applications

Automatic Boiler Control
An appropriate distribution of control functionality enables safe and stable automatic boiler control.

Residual Chlorine Control
With the 2-loop control function, you can control hypochloric flow control and residual chlorine.
Loop 1: Hypochloric flow control
Calculates hypochloric infusion from the flow, infusion rate, concentration, and specific gravity, and controls the flow.
Loop 2: Controls residual chlorine
Control is achieved by receiving signals from a residual chlorine analyzer.
The infusion rate from loop 1 is corrected by this control output.

Models and Suffix Codes (See General Specification Sheets for the ordering information in the detail.)

<table>
<thead>
<tr>
<th>Model</th>
<th>Suffix code</th>
<th>option code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>YS1700</td>
<td>—</td>
<td>—</td>
<td>Programmable Indicating controller</td>
</tr>
<tr>
<td>YS1500</td>
<td>—</td>
<td>—</td>
<td>Indicating controller</td>
</tr>
<tr>
<td>YS1310</td>
<td>—</td>
<td>—</td>
<td>Indicator with alarm</td>
</tr>
<tr>
<td>YS1350</td>
<td>—</td>
<td>—</td>
<td>Manual setter for SV setting</td>
</tr>
<tr>
<td>YS1360</td>
<td>—</td>
<td>—</td>
<td>Manual setter for MV setting</td>
</tr>
</tbody>
</table>

| Use     | — | — | In case of YS1700, YS1500 and YS1350. With hard manual unit |
|         | — | — | In case of YS1310 and YS1350. Always 1 |

| Type    | — | — | Basic type |
|         | — | — | Basic type with selectable IO |
|         | — | — | Compatible type for YS130 (with YS100 case) |
|         | — | — | Compatible type for YS80 internal unit, Compatible type for EBS, EK and HOMAC |

| Power supply | — | — | 220VAC, 24VDC |
|             | — | — | 24VDC |

| Direct input | — | — | mA input |
|             | — | — | Thermocouple input |
|             | — | — | 2-wire transmitter input (isolated) |
|             | — | — | 2-wire transmitter input (non-isolated) |

| Communication | — | — | RS-485 communication (PC-EC, Modbus, YS protocol, Peer-to-peer) |
|              | — | — | DCS-CES communication |
|              | — | — | Ethernet communication (Modbus/TCP) |

| Certification | — | — | FM nonincendive approved (FM Class I, div 2) |
|              | — | — | CSA safety and nonincendive approved (Class I, Div 1) |

| Accessories (sold separately) |

<table>
<thead>
<tr>
<th>Product name</th>
<th>Model</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHLP standard housing</td>
<td>SHLP-200</td>
<td>Available for YS100-6xxx (Replace for YS90 Series)</td>
</tr>
<tr>
<td>SHLP for housing</td>
<td>SHLP-100</td>
<td>Available for YS100-4xxx (Replace for YS100 Series)</td>
</tr>
<tr>
<td>SHLP-EK/HOMAC</td>
<td>SHLP-400</td>
<td>Available for YS100-4xxx (Replace for EK and HOMAC Series)</td>
</tr>
<tr>
<td>100 Line pneumatic instrument replacement housing</td>
<td>YS000</td>
<td>Available for YS100-4xxx (Replace for 100 Line pneumatic instrument)</td>
</tr>
<tr>
<td>120 Li terminating resistor</td>
<td>YS200</td>
<td>For RS-460 communication</td>
</tr>
<tr>
<td>250 Li shunt resistor</td>
<td>YS201</td>
<td>For a built-in 24 V transmitter power supply</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option</th>
<th>YS1700</th>
<th>YS1500</th>
<th>YS1310</th>
<th>YS1350</th>
<th>YS1360</th>
</tr>
</thead>
<tbody>
<tr>
<td>User programming</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Expandable IO</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ethernet communication</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>RS485 communication (PC-EC, Modbus, YS protocol)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DCS-CES communication</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Remarks</th>
</tr>
</thead>
</table>
* Can be added only for basic type (when selecting type "0" or "1") |
* Can be added only for basic type (when selecting type "0" or "1") |
* Can be added only for compatible type for YS100 (when selecting type "2", "4" and "5") |
* Can be added only for compatible type for YS130 (when selecting type "2", "4" and "5") |
* Can be added only for compatible type for YS80 (when selecting type "2", "4" and "5") |
* For basic type with selectable IO only (when selecting type "11). An expansion IO terminal (model YS1310) and expansion IO cable (model YS211) are included. |
* For basic type with selectable IO only (when selecting type "11). An expansion IO terminal (model YS1310) and expansion IO cable (model YS211) are included. |
YS1000 Series Line-up

**YS1700 Programmable Indicating Controller**

A programmable controller in which control and computational functions are combined by the user with the YS11000 programming tool. Each YS1700 can run two PID control calculations simultaneously and output the respective 4-20 mA output signals. The YS1700 can be also used as a multi-function controller without programming, in the same way as the Model YS1500.

**Controller mode**
- Programmable, Multi-function mode (single-loop, cascade and auto-selector)
- Basic PID control (built-in nonlinear control function), proportional control (built-in nonlinear control function), sampling PI control, built-in sampling PI control function, and batch PID control

**Control period**
- 0.05, 0.1 and 0.2 sec (programmable mode), 0.1 sec (multi-function mode)

**Additional control function**
- Adjustable setpoint filter (SVF), Self-tuning (STC), Non-linear PID control, PID control with reset bias function, output limiter, external cascade-control setpoint signal

**Extended control function**
- Feed-forward control, output tracking, preset MV output, PV/SV tracking, operation mode change, input filter, Square-root, 10-line-segment characterizer, ratio

**Auxiliary control function**
- High/low limits, Deviation limit, Alarm limits, Six channels (each being common to both input and output)

**Analog input**
- 1 to 5 V DC (5 channels or 8 channels with expandable I/O)

**Analog output**
- 4 mA to 20 mA (1 channel) and 1 to 5 V DC (2 channels) for simultaneous operation

**Alarms**
- High/low/high-high/low-low limits, Deviation limit, and velocity alarm

**Retransmission output**
- SV1, SV2, SV1, SV2, and other analog inputs

**Input computation**
- Square-root with low signal cut off, 10-line-segment characterizer, first-order lag calculation, scaling of external cascade-control setpoint signal, feed-forward signal calculation

**Output computation**
- Output high/low limiting

**Program method**
- Function block or text (use YS1000 configuration and programming software)

**Program capacity**
- 400 modules (function block), 1000 steps (text)

**Communication**
- Modbus/TCP, RS-485 (modbus), and DCS-LCS

**Hardmanual**
- Yes/No

**YS1500 Indicating Controller**

Incorporates fundamental control functions required for PID control. Necessary functions can be selected in accordance with the user’s purpose. The available functions include those necessary for input signal processing, such as square root extraction and linear segment conversion, and feed-forward calculation. Cascade and auto-selector control is also possible.

**Controller mode**
- Basic PID control (built-in nonlinear control function), proportional control (built-in nonlinear control function), sampling PI control, built-in sampling PI control function

**Control period**
- Adjustable setpoint filter (SVF), Self-tuning (STC), Non-linear PID control, PID control with reset bias function, output limiter, external cascade-control setpoint signal

**Auxiliary control function**
- Feed-forward control, output tracking, preset MV output, PV/SV tracking, operation mode change, input filter, Square-root, 10-line-segment characterizer, ratio

**Analog input**
- 1 to 5 V DC (4 channels)

**Analog output**
- 4 to 20 mA (1 channel)

**Alarms**
- High/low limits, Deviation limit, and velocity alarm

**Digital signal**
- Six channels (each being common to both input and output)

**Retransmission output**
- PV1, PV2, SV1, SV2, and other analog inputs

**Input computation**
- Square-root with low signal cut off, 10-line-segment characterizer, first-order lag calculation, scaling of external cascade-control setpoint signal, feed-forward signal calculation

**Output computation**
- Output high/low limiting

**Security**
- Protection by password

**Communication**
- Modbus/TCP, RS-485 (modbus), and DCS-LCS

**Hardmanual**
- Yes/No

**YS1310 Indicator with Alarm**

Indicating alarm monitor with two inputs for simultaneous monitoring of two loops. High-high, high, low, and low-low alarms can be detected for each of the two inputs, and logical ANDs or ORs of arbitrary alarms can be set. From among these, a total of six alarms can be assigned to alarm output contacts.

**Analog input**
- 1 to 5 V DC (2 channels)

**Digital signal**
- Six outputs/with one for digital input as background off and one FAIL contact

**Alarm functions**
- High/low/high-high/low-low limits

**Input computation**
- Square-root with low signal cut off, 10-line-segment characterizer

**Security**
- Protection by password

**Trend display**
- Protection by password

**Communication**
- Modbus/TCP, RS-485 (modbus), and DCS-LCS

**YS1350 Manual Setter for SV Setting**

This manual loader allows an operator to send a setpoint to a remote controller. Its operation mode is switched by the mode keys (C and M) or a status input. A status identification output is provided as standard.

**Analog input**
- 1 to 5 V DC (2 channels)

**Digital signal**
- Two inputs, three outputs and one FAIL contact

**Alarm functions**
- High/low limits

**Input computation**
- Square-root with low signal cut off

**Security**
- Protection by password

**Trend display**
- Protection by password

**Communication**
- Modbus/TCP, RS-485 (modbus), and DCS-LCS

**YS1360 Manual Setter for MV Setting**

This manual loader allows an operator to interrupt a control signal to a final control device and manually control its operation temporarily. Its operation mode is switched by the mode keys (C and M) or a status input. A status identification output is provided as standard.

**Analog input**
- 1 to 5 V DC (2 channels)

**Digital signal**
- Two inputs, three outputs and one FAIL contact

**Alarm functions**
- High/low limits

**Input computation**
- Square-root with low signal cut off

**Security**
- Protection by password

**Trend display**
- Protection by password

**Communication**
- Modbus/TCP, RS-485 (modbus), and DCS-LCS

**YS1100 Portable Manual Station**

When a YS1700, YS1500 or YS1360 requires maintenance, the YS1100 Portable Manual Station can be used to output a 4 - 20 mA signal to the final control element. Simply swing up the front panel of the controller, connect this unit to the controller, and replace the internal assembly while keeping the existing manipulated output active.

**Input signal**
- 1 to 5 V DC (1 channel)

**Manipulation signal**
- 4 to 20 mA DC (1 channel)

**Input/manipulation signal meters**
- Moving-cod method
- Range: 0 to 100%
- Scaling 20 equal divisions

**Output *I/O connection***
- Manual using the front-panel dials
- IOs are coupled with the connector on the case using a dedicated cable. YS1700, YS1500, YS1360

**Models to be backed up**
- Yes/No
### Terminal Block

#### YS1700/YS1500 Terminal Arrangements

<table>
<thead>
<tr>
<th>No.</th>
<th>Programmable mode</th>
<th>Single-loop mode</th>
<th>Cascade mode</th>
<th>Selector mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>PV1 (1-5V DC)</td>
<td>PV1 (1-5V DC)</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>Cascade set point input</td>
<td>Cascade set point input</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td>PV2 (1-5V DC)</td>
<td>PV2 (1-5V DC)</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td>Feedback input</td>
<td>Feedback input</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Direct input signal</td>
<td>Direct input signal</td>
<td>Direct input signal</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Fail output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Fail output</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### YS1310/YS1350/YS1360 Terminal Arrangements

<table>
<thead>
<tr>
<th>No.</th>
<th>Programmable mode</th>
<th>Single-loop mode</th>
<th>Cascade mode</th>
<th>Selector mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>PV1 (1-5V DC)</td>
<td>PV1 (1-5V DC)</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>PV2 (1-5V DC)</td>
<td>Cascade set point input</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>Cascade input</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### YS1000 Series (Basic Type) Terminal Block

#### YS010 Expandable I/O Terminal Arrangements

- Our product names or brand names mentioned in this manual are the trademarks or registered trademarks of YOKOGAWA Electric Corporation (hereinafter referred to as YOKOGAWA).
- Microsoft, MS-DOS, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Ethernet is a registered trademark of XEROX Corporation.
- We do not use the TM or ® mark to indicate these trademarks or registered trademarks in this user's manual.
- All other product names mentioned in this user's manual are trademarks or registered trademarks of their respective companies.
**Dimensions**

**Main Unit Dimensions**  
(YS1000 Basic Type)  
(YS1000 Basic Type with Expandable I/O)

**Expandable I/O Terminal Dimensions**

**Panel Cutout Width**

(For single mounting)  
(For side-by-side mounting)

**Expandable I/O Cable Dimensions**

---

**Notes:**

1. If a nameplate, etc. is installed within 60 mm above the instrument, the height of the nameplate, etc. must be 30 mm or less from the panel surface.

2. When installing the expandable I/O cable, ensure the seating space of at least 60 mm for a minimum curvature radius of the cable in addition to the mounting bracket space of 72 mm from the terminal cover face of the main unit.

---

**VigilantPlant** is Yokogawa's automation concept for safe, reliable, and profitable plant operations. VigilantPlant aims to enable an ongoing state of Operational Excellence where plant personnel are watchful and attentive, well-informed, and ready to take actions that optimize plant and business performance.

---

**Represented by:**

---

sted to change without notice.