

# Yokogawa Advanced Controllers

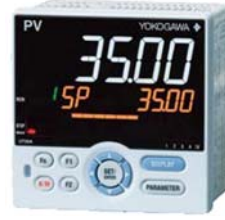
**NEW**

**Digital Indicating Controllers:** UT55A, UT52A, UT35A, UT32A  
**Program Controllers:** UP55A, UP35A  
**Digital Indicator with Alarms:** UM33A

- 8 built-in PID control modes
- 8 built-in PID control types
- Ladder sequence control
- Fuzzy logic control
- Active color LCD display
- Scrolling text
- Programmable function keys
- RS-485 (Modbus) & Ethernet communications
- 3 year warranty



**UT32A** ▲



▲ **UT35A**



▲ **UP55A** ▲

With built-in **Ladder Sequence Control**, the UT Advanced controllers can replace a small PLC to:

- Monitor and control external machinery
- Implement digital input/output logic functions.

Sequence control and PID control can be performed simultaneously.

The **Fuzzy Logic Control** functions deliver fine control and reduce overshoot or hunting.

**8 Built-in Control Types**

- PID control
- ON/OFF control (1 point hysteresis)
- ON/OFF control (2 point hysteresis)
- Two-position, two-level control
- Heating/cooling control
- Sample PI control
- Batch PID control
- Feedforward control

**8 Built-in Control Modes**

- Single-loop control
- Cascade primary-loop control
- Cascade secondary-loop control
- Cascade control
- Loop control for backup
- Loop control with PV switching
- Loop control with PV auto-selector
- Control with PV-hold



To Order—Insert Code for Each Letter to Select Catalog Number.

**Universal Input:**

Thermocouple: Type K, J, T, B, S, R, N, E, L, U, W, PL-2, PR20-40, W97Re3, W75Re25  
 RTD: Pt100, JPt100 (3-wire except 3/4-wire on 55A)  
 DC Voltage: 0.4 to 2V, 1 to 5V, 0 to 2V, 0 to 10V, -10 to 20mV, 0 to 100mV  
 DC Current: 4 to 20mA, 0 to 20mA  
**Standard Power Supply:** 100-240 V AC  
**PV Display:** 5 digits, 0.1% of FS accuracy

UP55A— [A] [B] [C] — [D] — 00 / [E]	
<b>A Control</b>	
0	Standard type
1	Position proportional type
2	Heating/cooling type
<b>B Functions</b>	
0	None
1	Remote (1 additional aux. analog) input, 1 additional DI
2	RS-485 (Max.19.2 kbps, 2/4-wire)
3	10 additional DOs
4	3 additional aux. analog inputs, 2 DIs & 5 DOs to be deleted
<b>C Network Communications</b>	
0	None
1	RS-485(Max.38.4 kbps, 2/4-wire)
2	Ethernet (with serial gateway function)
<b>D Case Color</b>	
10	Light Gray
11	Dark Gray
<b>E Options</b>	
/DR	Additional direct input (TC & 3/4-wire RTD), current input to Remote (1 additional aux. analog) input, 1 DI to be deleted
/HA	Heater break alarm
/DC	Power supply 24 V AC/DC
/CT	Coating

Model	UT55A	UT52A	UT35A	UT32A	UP55A	UP35A	UM33A
Size	1/4 DIN	1/8 DIN	1/4 DIN	1/8 DIN	1/4 DIN	1/4 DIN	1/8 DIN
# of Analog Inputs Std (Max)	1 (4)	1 (2)	1	1	1 (4)	1	1
# of SPs (PIDs) Max	8	8	4	4	8	4	—
# of Control Modes Max	8	8	1	1	5	1	—
# of Control Types Max	8	8	5	5	4	4	—
Relay, Pulse, Current Output	✓	✓	✓	✓	✓	✓	—
# of Analog Outputs Std (Max)	2 (3)	2 (3)	2	2	2 (3)	2	1
# of Digital Inputs Std (Max)	3 (9)	3 (5)	2 (7)	2 (4)	3 (9)	3 (8)	2
# of Alarms Max	8	8	4	4	8	2	8
# of Digital Outputs Std (Max)	3 (18)	3 (5)	3 (8)	3 (5)	8 (18)	3 (8)	3 (9)
RS-485 communication (Max)	✓ (2)	✓ (1)	✓ (1)	✓ (1)	✓ (2)	✓ (1)	✓ (1)
Ethernet communication	✓	—	✓	—	✓	✓	—
Split Computation Output	✓	✓	—	—	✓	—	✓
Ratio & Square Root Extraction	✓	✓	—	—	✓	—	✓
Remote SP Function	✓	✓	—	—	✓	—	✓
Heater Break Alarm Function	Std type	Std type	Std or Heat/cool	Std type	Std type	Std type	—
Ladder Sequence (max. steps)	✓ (500)	✓ (500)	✓ (300)	✓ (300)	✓ (500)	✓ (300)	—
Control Scan Period (msec)	50/100/200	200	200	200	100/200	200	50/100/200
Bar graph display (Number)	✓ (2)	✓ (2)	✓ (1)	✓ (1)	✓ (2)	✓ (1)	—

See complete [data sheet](#) for additional options and ordering information for UT55A, UT52A, UP35A models.



**UM33A** ▶

**ORDERING INFORMATION**

UM33A— [A] [B] — [C] / [D]	
<b>A Control</b>	
0	Standard type
<b>B Functions</b>	
00	None
10	1 additional DO (form C relay) + RS-485 comm (Max. 38.4kbps, 2/4-wire)
20	1 additional DO (form C relay)
30	6 additional DOs (form C relay; 1 point & open collector; 5 points)
<b>C Case Color</b>	
10	Light Gray
11	Dark Gray
<b>D Options</b>	
/LP	24 V DC loop power supply
/DC	Power supply 24 V AC/DC
/CT	Coating

UT32A— [A] [B] — [C] — 00 / [D]	
<b>A Control</b>	
0	Standard type
1	Position proportional type
2	Heating / cooling type
<b>B Functions</b>	
00	None
10	RS-485 comm (Max.38 kbps, 2/4-wire)
20	2 additional DIs & 2 additional DOs
<b>C Case Color</b>	
10	Light Gray
11	Dark Gray
<b>D Options</b>	
/LP	24 V DC loop power supply
/HA	Heater break alarm
/DC	Power supply 24 V AC / DC
/CT	Coating

UT35A— [A] [B] [C] — [D] — 00 / [E]	
<b>A Control</b>	
0	Standard type
1	Position proportional type
2	Heating / cooling type
<b>B Functions</b>	
0	None
1	2 additional DIs and 2 additional DOs
2	5 additional DIs and 5 additional DOs
<b>C Network Communications</b>	
0	None
1	RS-485 (Max.38.4 kbps, 2/4-wire)
2	Ethernet (with serial gateway function)
<b>D Case Color</b>	
10	Light Gray
11	Dark Gray
<b>E Options</b>	
/LP	24 V DC loop power supply
/HA	Heater break alarm
/DC	Power supply 24 V AC / DC
/CT	Coating

CONTROLLERS