

List of instruments to be replaced Be sure to see the reference page concerned.

Model	Product Name	Discontinuation Date	Recommended Model	Reference Page
UT10	Digital indicating controller	March 1993	UT32A	3
UT14	Digital indicating controller	June 1997	UT32A	4
UT15	Digital indicating controller	June 1997	UT35A	4
UT20	Digital indicating controller	March 1993	UT55A	5
UT30	Digital indicating controller	March 1993	UT55A	6
UT35	Digital indicating controller	Sept. 1997	UT55A	7
UT37	Digital indicating controller	Sept. 1997	UT55A	8
UT38	Digital indicating controller	Sept. 1997	UT55A	8
UT40	Digital indicating controller	Sept. 1997	UT75A	9
UT101	Digital temperature indicator	March 1988	UM33A	10
UT102	Digital temperature indicating alarm unit	March 1988	UM33A	10
UT103	Digital indicating alarm unit	March 1993	UM33A	11
UT201	Digital indicating controller	June 1997	UT55A	12
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UT321	Digital indicating controller	Sept. 2010	UT32A	13
UT350	Digital indicating controller	Sept. 2010	UT35A	14
UT351	Digital indicating controller	Sept. 2010	UT35A	14
UT420	Digital indicating controller	Sept. 2010	UT52A	15
UT450	Digital indicating controller	Sept. 2010	UT55A	16
UT520	Digital indicating controller	Sept. 2010	UT52A	17
UT550	Digital indicating controller	Sept. 2010	UT55A	18
UT551	Digital indicating controller	Sept. 2010	UT55A	18
UT750	Digital indicating controller	Oct. 2013	UT75A	19
UP25	Program controller	Sept. 1997	UP55A	20
UP27	Program controller	Sept. 1997	UP55A	21
UP30	Program controller	Sept. 1997	UP55A	22
UP40	Program controller	March 1997	UP55A	23
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UP351	Program controller	March 2011	UP35A	24
UP550	Program controller	June 2015	UP55A	25
UP750	Program controller	June 2015	UP55A	26
UM04	Digital indicator with alarms	June 1997	UM33A	27
UM05	Digital indicator with alarms	June 1997	UM33A	27
UM330	Digital indicator with alarms	March 2011	UM33A	28
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UM350	Digital indicator with alarms	March 2011	UM33A	28
UM351	Digital indicator with alarms	March 2011	UM33A	28

For other instruments, see the next page.

For detailed informations for the replacement units, please see General specifications.

The model of an old product is displayed on the nameplate attached to the product.
The nameplate is attached to the inside or outside or both sides of the main body case, depending on the product.
To check the full model code, also look at the inside of the main body case.
Example: The option code of the UT35 is not displayed on the nameplate on the outside of the main body case, but is displayed on the nameplate inside.
Select the appropriate model and suffix code according to the usage condition of the existing hardware and product functions.

Model	Product Name	Discontinuation Date	Recommended Model
EI108	Indicating controller	Sept. 1991	UT55A
ER181/182	Recording controller (built-in type)	June 1994	GX20
M500	Temperature controller	Feb., 1993	UT32A/UT35A UM33A
M502	Temperature controller without indication	June 1997	UT35A
M1□4□	Temperature indicating controller	Sept. 1985	UT35A
M1□7□	Temperature controller	Sept. 1985	UT35A
M1□9□	Temperature controller	June 1997	UT35A
M2091	Digital indicating controller	June 1997	UT55A
M2092	Digital indicating controller	June 1997	UT55A
M2093	Digital indicator	June 1997	UM33A
M2094	Digital indicator	June 1997	UM33A
M2095	Digital cryogenic temperature indicator	June 1997	UT55A
OF120	Controller without indication	Sept. 1988	UT35A
OF121	Full-scale indicating controller	June 1997	UT35A
OF122	Deviation indicating controller	July 1986	UT35A
OF128	Digital indicating controller	Sept. 1988	UT55A
OF131	Indicating controller	Sept. 1988	UT35A
PC181	Program setting unit/controller	Sept. 1992	UP55A
PC182	Program setting unit/controller	Sept. 1992	UP55A and UT55A
PG181/182	Program setting unit	Sept. 1991	UP55A
PC200	Program setting unit/controller	Sept. 1988	UP55A
PS200	Program setting unit	Sept. 1988	UP55A
PC300	Program setting unit/controller	Sept. 1988	UP55A
UT04	Digital indicating controller	Jan. 2001	TC10
UT07J	Digital indicating controller	Jan. 2001	TC10
Y/40	Indicating/recording controller	Dec. 1993	UT55A
UT130	Temperature controller	Dec. 2017	TC10
UT150	Temperature controller	Dec. 2017	TC10
UT152	Temperature controller	Nov. 2015	UT32A
UT155	Temperature controller	Nov. 2015	UT35A
UD310	Manual Setter	Dec. 2017	TC10
UD320	Manual Setter	Nov. 2015	UT32A
UD350	Manual Setter	Nov. 2015	UT35A

Please refer to Replacement
Guide for TC10 Temperature
Controller (TI 05C01E81-01EN).

UT10 ⇒ UT32A

UT10 Digital Indicating Controller



External dimensions: 48×96×100 mm
 Measurement accuracy: ±0.3%
 Control period: 500 ms
 Burn-out: specifiable
 Anti-reset windup provided with auto tuning
 Two alarm points available (with standby)
 A/M switching function not provided

Model	Suffix Code		Description	Recommended Model
UT10			Digital indicating controller	UT32A-000-11-00
Control action	-1		PID action	With auto tuning
	-2		PID action with auto tuning	
Input	K		Thermocouple type K	Universal input
	J		Thermocouple type J	
	R		Thermocouple type R	
	S		Thermocouple type S	
	B		Thermocouple type B	
	E		Thermocouple type E	
	N		Thermocouple type N	
	T		Thermocouple type T	
	D		RTD Pt100	
	P		RTD JPt100	
	V		DC voltage	
	A		DC current: 4 – 20 mA DC	
Manipulated output	-1		Relay output	Universal output
	-2		Voltage pulse output: 0 – 12 V DC	
	-3		Current output: 4 – 20 mA DC	
Alarm output	N		No alarm	Standard
	1		High-limit deviation alarm	
	2		Low-limit deviation alarm	
	3		High- and low-limit deviation alarm	
Supply voltage	-1		100/110 and 200/220 V AC	Free power supply
	-2		110/120 and 220/240 V AC	
Style code		*A	Style A	

Note!

① Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key and A/M-switching dedicated key
3. Quick setting function for easy setting of basic functions
4. 4 sets of setpoints and PID are settable
5. 2 contact inputs and 3 contact outputs provided as standard
6. Input/output not required to be specified (universal input/output)
7. Hunting-suppressing function
8. Control period: 200 ms. Measurement accuracy: ±0.1 %
9. Depth: 65 mm
10. Retransmission output provided as standard
11. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
12. Heating/cooling type and Position proportional type can be specified.
13. 24 VDC sensor power can be supplied (optional specifications)
14. RS-485 communication (optional specifications)
15. Power supply 24 V AC/DC can be specified (optional specifications)

UT14 • UT15 ⇒ UT32A • UT35A

UT14 and UT15 Digital Indicating Controllers



External dimensions: 48×96×100 mm (UT14)
96×96×100 mm (UT15)

Measurement accuracy: ±0.1%

Control period: 500 ms

Universal input/output

Auto tuning built in

A/M software switching function

Model	Suffix Code	Description	Recommended Model
UT14		Digital indicating controller	UT32A-000-11-00
Style code	*A	Style A	
Option code		There are no optional specifications.	

Model	Suffix Code	Description	Recommended Model
UT15		Digital indicating controller	UT35A-000-11-00
Style code	*A	Style A	
Option code	/RET	Transmission output	Standard
	/RS422	RS-422A interface	UT35A-001-11-00 Note ①

Note!

- ① RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to other communication protocol, which requires software (program) change on the equipment to which this model is connected.
- ② Screw terminals are from M3.5 to M3.

Advantages of replacement

- 5-digit, 14-segment active color LCD
- Simple operations using the Navigation key and A/M-switching dedicated key
- Quick setting function for easy setting of basic functions
- 4 sets of setpoints and PID are settable
- 2 contact inputs and 3 contact outputs provided as standard
- Hunting-suppressing function
- Control period: 200 ms
- Depth: 65 mm
- Retransmission output provided as standard
- Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
- Heating/cooling type and Position proportional type can be specified.
- 24 VDC sensor power can be supplied (optional specifications)
- RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
- Power supply 24 V AC/DC can be specified (optional specifications)

UT20 ⇨ UT55A

UT20 Digital Indicating Controller



External dimensions: 96×96×100 mm
 Measurement accuracy: ±0.3%
 Control period: 500 ms
 Burn-out: specifiable
 Anti-reset windup provided with auto tuning
 Two alarm points available (with standby)
 A/M switching function not provided
 Remote setting input provided as standard

Model	Suffix Code	Description	Recommended Model
UT20		Digital indicating controller	
Control action	-1	PID action	UT55A-040-11-00
	-2	PID action with auto tuning	
	-3	Heating/cooling PID action	
	-4	Heating/cooling PID action with auto tuning	UT55A-240-11-00
	-5	Position proportional PID action (relay output)	
	-6	Position proportional PID action with auto tuning (relay output)	
Input	K	Thermocouple type K	Universal input
	J	Thermocouple type J	
	R	Thermocouple type R	
	S	Thermocouple type S	
	B	Thermocouple type B	
	E	Thermocouple type E	
	N	Thermocouple type N	
	T	Thermocouple type T	
	D	RTD Pt100	
	P	RTD JPt100	
Manipulated output (Heating side)	V	DC voltage	Universal output: standard Note ①
	A	DC current: 4 – 20 mA DC	
	-1	Relay output	
	-2	Voltage pulse output: 0 – 12 V DC	
	-3	Current output: 4 – 20 mA DC	
Manipulated output (Cooling side)	-4	Continuous voltage output: 1 – 5 V DC	Universal output: standard Note ①
	N	No function	
	1	Relay output	
	2	Voltage pulse output: 0 – 12 V DC	
	3	Current output: 4 – 20 mA DC	
Alarm output	4	Continuous voltage output: 1 – 5 V DC	Standard
	N	No alarm	
	1	High-limit deviation alarm	
	2	Low-limit deviation alarm	
Supply voltage	3	High- and low-limit deviation alarm	Free power supply
	-1	100/110 and 200/220 V AC	
	-2	110/120 and 220/240 V AC	
Style code	*A	Style A	
Option code	/RS422	RS-422A communication function (unavailable if position proportional type is specified)	UT55A-* 41-11-00, etc. Note ②
	/RET	Analog output (unavailable if heating/cooling type is specified)	Standard
	/RL	Remote/local switching (unavailable if position proportional type is specified or when in combination with /RS-422)	Standard

Note!

- ① For continuous voltage output, use an external 250-Ω shunt resistor (X010-250-3).
- ② RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to other communication protocol, which requires a program change.
- ③ Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key and A/M-switching dedicated key
3. Quick setting function for easy setting of basic functions
4. 8 sets of setpoints and PID are settable
5. 3 contact inputs and 3 contact outputs provided as standard
6. Input/output not required to be specified (universal input/output)
7. Hunting-suppressing function
8. Control period: max. 50 ms. Measurement accuracy: ±0.1 %
9. Depth: 65 mm
10. Retransmission output provided as standard
11. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
12. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
13. 24 VDC sensor power can be supplied (optional specifications)
14. Power supply 24 V AC/DC can be specified (optional specifications)

UT30 ⇒ UT55A

UT30 Digital Indicating Controller



External dimensions: 96×96×180 mm
 Measurement accuracy: ±0.3%
 Control period: 250 ms
 Multi-gain built in
 Remote input provided as standard (ratio bias available)
 Input square root extraction
 Output bar graph display
 Auto tuning built in
 A/M switching function
 RS-422 communication

Model	Suffix Code	Description	Recommended Model
UT30		Digital indicating controller	UT55A-040-11-00
Input	-1	Thermocouple, mV, and 4 – 20 mA DC input	Universal input
	-2	RTD input	
Control action	1	Time proportional PID, relay output	Universal output Note ①
	2	Time proportional PID, voltage pulse output	
	3	Continuous output PID, 4 – 20 mA DC output	
	4	Continuous output PID, 1 – 5 V DC output	
	5	Position proportional PID action (relay output)	UT55A-140-11-00
Supply voltage	-1	100 V system (90 – 132 V AC)	Free power supply
	-5	200 V system (180 – 250 V AC)	
Style code	*B	Style B	
Option code	/DCV	DC voltage input (0 to 1, -1 to 1, 0 to 5, 1 to 5, 0 to 10 V DC)	Universal input Note ②
	/F***	Specify the input type.	N/A
	/EX	Remote/Local external switching	Standard
	/RET	Transmission output	Standard
	/RS422	RS-422A communication interface	UT55A-010-11-00, etc. Note ③
	/RTSR	Ratio, bias, and square root extraction	Standard

Note!

- ① For 1 – 5 V DC output, use an external 250-Ω shunt resistor (X010-250-3).
- ② There is no range corresponding to -1 to 1 V DC. Use a signal converter.
- ③ RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to other communication protocol, which requires a program change. When the /LP option (24 V DC loop power supply) is specified, the RS-485 communication is 2-wire system.
- ④ Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. 8 sets of setpoints and PID are settable
5. 3 contact inputs and 3 contact outputs provided as standard
6. Input/output not required to be specified (universal input/output)
7. Hunting-suppressing function
8. Control period: max. 50 ms. Measurement accuracy: ±0.1 %
9. Depth: 65 mm
10. Retransmission output provided as standard
11. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
12. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
13. 24 VDC sensor power can be supplied (optional specifications)
14. Power supply 24 V AC/DC can be specified (optional specifications)

UT35 ⇨ UT55A

UT35 Digital Indicating Controller



External dimensions: 96×96×180 mm

Measurement accuracy: ±0.2%

Control period: 200 ms

Multi-range

Auto tuning built in

General type ⇨ UT55A-000-11-00
Position proportional ⇨ UT55A-100-11-00

Heating/cooling type ⇨ UT55A-200-11-00

Cryogenic type ⇨ UT55A-000-11-00

Model	Suffix Code	Description
UT35		Digital indicating controller
	-A	General type
Target setpoints that can be switched	1 4 8	1 setting 4 settings 8 settings
Measurement input	1 2 3	Thermocouple, DC voltage (mV) RTD DC current, DC voltage (V)
Control action	10 20 30 40 50 60	Time proportional PID (relay output) Time proportional PID (voltage pulse output) Continuous output PID (4 – 20 mA DC) Continuous output PID (1 – 5 V DC) Position proportional PID (relay output) Three positions (relay output)
Alarm output	N 1	No alarm With alarms
Style code	*A	Style A
Option code / <input type="checkbox"/> / <input type="checkbox"/>		Specify each option code.

Notes ①, ③
Three positions → Note ②

Model	Suffix Code	Description
UT35		Digital indicating controller
	-B	Heating/cooling type
Target setpoints that can be switched	1 4 8	1 setting 4 settings 8 settings
Measurement input	1 2 3	Thermocouple, DC voltage (mV) RTD DC current, DC voltage (V)
Control action (Heating side)	1 2 3 4	Time proportional PID (relay output) Time proportional PID (voltage pulse) Continuous output PID (4 – 20 mA DC) Continuous output PID (1 – 5 V DC)
Control action (Cooling side)	1 2 3 4	Time proportional PID (relay output) Time proportional PID (voltage pulse) Continuous output PID (4 – 20 mA DC) Continuous output PID (1 – 5 V DC)
Alarm output	N 1	No alarm With alarms
Style code	*A	Style A
Option code / <input type="checkbox"/> / <input type="checkbox"/>		Specify each option code.

Notes ①, ③

Use a cryogenic temperature converter. Note ⑨		
Model	Suffix Code	Description
UT35		Digital indicating controller
	-C	Cryogenic type
Target setpoints that can be switched	1 4 8	1 setting 4 settings 8 settings
Measurement input	4	RTD (Pt-CO), (J263°B)
Control action	10 20 30 40	Time proportional PID (relay output) Time proportional PID (voltage pulse output) Continuous output PID (4 – 20 mA DC) Continuous output PID (1 – 5 V DC)
Alarm output	N 1	No alarm With alarms
Style code	*A	Style A
Option code / <input type="checkbox"/> / <input type="checkbox"/>		Specify each option code.

Notes ①, ③

Options

Option Code	Description	Recommended Model (1 setting, 4/8 setting type)
/EX1	Auto/Manual with external contact switching terminal	Standard Note ⑤
/EX2	Run/Stop with external contact switching terminal	Standard Note ⑤
/RET1	Transmission output signal: 4 – 20 mA DC	Standard
/RET2	Transmission output signal: 1 – 5 VDC	Note ④
/RSP	Remote setting input	UT55A-* 40-11-00, etc. Note ⑥
/RMSR	Remote input ratio, bias, and square root extraction	UT55A-* 40-11-00, etc. Note ⑥
/RLEX	Remote/Local with external switching terminal	UT55A-* 40-11-00, etc. Note ⑤, ⑥
/PVSR	PV input square root extraction	Standard
/SPEX	Target setpoint automatic switching	UP55A-*00-11-00
/RS232C	Communication interface	UT55A-* 10-11-00, etc. Note ⑦
/RS422	Communication interface	UT55A-* 10-11-00, etc. Note ⑧
/STC	Special thermocouple input	Standard

Note!

- ① There is no range corresponding to DC voltage range code 021 (-1 to 1 V). Use a signal converter.
- ② For three-position output, control action is handled by ON/OFF control on both heating and cooling sides using the heating/cooling UT55A-200-11-00.
- ③ For DC voltage output, use an external 250-Ω shunt resistor (X010-250-3).
- ④ Because a 4 – 20 mA transmission output signal is provided as standard, each option code can be handled by purchasing a 250-Ω shunt resistor (X010-250-3) separately.
- ⑤ For the combination of options /EX1, /EX2 and /RLEX, specify UT55A-*50-11-00.
- ⑥ For DC current input, specify UT55A-*0-11-00/DR.
- ⑦ Use RS-232C/RS-485 converter ML2.
- ⑧ RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to other communication protocol, which requires a program change. When the /LP option (24 V DC loop power supply) is specified, the RS-485 communication is 2-wire system.
- ⑨ Use the cryogenic temperature converter WRU*.
- ⑩ Screw terminals are from M3.5 to M3.
- ⑪ Be careful in selecting the appropriate model depending on the usage condition of the hardware.
Example: If the number of target setpoint switches is 8 and DI switching is used, we recommend UT55A-*3*-11-00.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. 8 sets of setpoints and PID are settable
5. 3 contact inputs and 3 contact outputs provided as standard
6. Input/output not required to be specified (universal input/output)
7. Hunting-suppressing function
8. Control period: max. 50 ms. Measurement accuracy: ±0.1 %
9. Depth: 65 mm
10. Retransmission output provided as standard
11. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
12. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
13. 24 VDC sensor power can be supplied (optional specifications)
14. Power supply 24 V AC/DC can be specified (optional specifications)

UT37 • UT38 ⇒ UT55A

UT37 and UT38 Digital Indicating Controllers



External dimensions: 96×96×100 mm
 Measurement accuracy: ±0.1%
 Control period: 200 ms
 Universal input/output
 (For UT38, only input is universal)
 Auto tuning "SUPER" built in

Model	Suffix Code	Description	Recommended Model
UT37		Digital indicating controller	UT55A-0*0-11-00
UT38		Digital indicating controller Universal input position proportional type	UT55A-1*0-11-00
Option codes	/RET	Transmission output Selectable from among PV, SP, and MV	Standard
	/LPS	Sensor supply power 21.6 to 28.0 V DC, 30 mA max Not possible to be used in combination with /RSP or /RET	UT55A-*00-11-00/LP
	/RS422	RS-422A interface	UT55A-*10-11-00, etc. Note ①
	/RSP	Remote setting input (1 – 5 V DC)	UT55A-*10-11-00, etc.
	/ALM4	Four alarm outputs (Two open collector outputs can be added)	UT55A-*30-11-00, etc.

Note!

- ① RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to other communication protocol, which requires a program change. When the /LP option (24 V DC loop power supply) is specified, the RS-485 communication is 2-wire system.
- ② Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. 8 sets of setpoints and PID are settable
5. 3 contact inputs provided as standard and max. 18 contact outputs
6. Hunting-suppressing function
7. Control period: max. 50 ms
8. Depth: 65 mm
9. Retransmission output provided as standard
10. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
11. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
12. Power supply 24 V AC/DC can be specified (optional specifications)

UT40 ⇒ UT75A

UT40 Digital Indicating Controller



External dimensions: 96×96×180 mm
 Measurement accuracy: ±0.1%
 Control period: 100 ms
 Multi-range in the same sensor
 Auto tuning built in

Model	Suffix Code		Description	Recommended Model
UT40			Digital indicating controller	UT75A-010-11-00 Notes ① and ②
Measurement input group	-1		Thermocouple, mV, and 4 – 20 mA DC input	
	-2		RTD input	
Control action	1		Time proportional PID (relay output)	
	2		Time proportional PID (voltage pulse output)	
	3		Continuous output PID (4 – 20 mA DC output)	
	4		Continuous output PID (1 – 5 V DC output)	
	5		Position proportional PID (relay output)	UT75A-110-11-00
Power supply	1		100 V system (90 – 132 V AC)	Free power supply 100 – 240 V AC
	5		200 V system (180 – 250 V AC)	
Style code	*B		Style B	—————
Option code	/DCV		DC voltage (V) input	Note ③
	/F***		Specify the input type.	N/A
	/EX		Remote/Local external switching	Standard
	/RET		Transmission output	
	/RTSR		Ratio, bias, and square root extraction	
	/RS422		RS-422 communication interface	UT75A-***1-11-00 Note ④

Note!

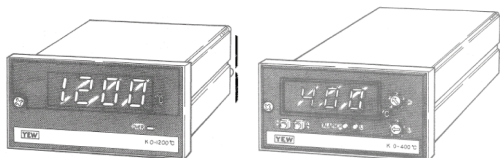
- ① For continuous output PID 1 – 5 V DC, use a 250-Ω shunt resistor (X010-250-2).
 ② If no remote setting input is used, optional specifications are not required (UT75A-*00-11-00).
 ③ There is no range corresponding to DC voltage range code 021 (-1 to 1 V). Use a signal converter.
 ④ RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to PC link communication, which requires a software program change.

Advantages of replacement

1. Transmission output provided as standard
2. Four alarm points/loop provided as standard
3. Eight sets of setpoints and PID are settable
4. Five-digit large LED display
5. One-touch control mode switching (maximum of 13 types of UT mode)
6. Hunting-suppressing function provided

UT101 • UT102 ⇒ **UM33A**

UT101 Digital Temperature Indicator UT102 Digital Temperature Indicating Alarm Unit



External dimensions: 96×48×145 mm
 Measurement accuracy: ±0.25% (UT101)
 ±0.3% (UT102)
 Sampling period: 2 sec.
 Alarm: Two points (UT102)

Model	Suffix Code	Description	Recommended Model
UT101		Digital temperature indicator	UM33A-000-11
Input	-K	Thermocouple type K	Standard (Universal input)
	-J	Thermocouple type J	
	-R	Thermocouple type R	
	-P	RTD JPt100	
Style code	*A	Style A	

Model	Suffix Code	Description	Recommended Model
UT102		Digital temperature indicating alarm unit	UM33A-000-11
Alarm action	-11	High-limit setting	Standard (three points)
	-12	Low-limit setting	
	-14	High- and low-limit setting	
Input	K	Thermocouple type K	Standard (Universal input)
	J	Thermocouple type J	
	R	Thermocouple type R	
	P	RTD JPt100	
Style code	*A	Style A	

Note!

① Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. Sampling period (50, 100 and 200 ms) are selectable. Measurement accuracy: ±0.1 %
5. Input/output not required to be specified (universal input/output)
6. Input correction (bias and 10-segment linearizer)
7. Up to 9 alarm outputs (including one Fail)
8. Retransmission output provided as standard
9. 24 VDC sensor power can be supplied (optional specifications)
10. Power supply 24 V AC/DC can be specified (optional specifications)
11. Depth: 65 mm
12. Parameter Setting Tool can be used. (Note that the LL50A Parameter Setting Software, separately sold, is required.)

UT103 ⇒ UM33A

UT103 Digital Indicating Controller



External dimensions: 96×48×100 mm
 Measurement accuracy: ±0.3%
 Sampling period: 500 ms
 Burn-out: Up for TC or RTD
 Down for voltage or current
 Two alarm points
 Transmission output

Model	Suffix Code		Description	Recommended Model
UT103			Digital temperature indicating alarm unit	UM33A-000-11
Alarm action	-N		Indication only	3 points provided as standard
	-1		High-limit setting	
	-2		Low-limit setting	
	-3		High- and low-limit setting	
Input	K		Thermocouple type K	Universal input
	J		Thermocouple type J	
	R		Thermocouple type R	
	S		Thermocouple type S	
	B		Thermocouple type B	
	E		Thermocouple type E	
	N		Thermocouple type N	
	T		Thermocouple type T	
	D		RTD Pt100	
	P		RTD JPt100	
	V		DC voltage	
	A		DC current: 4 – 20 mA DC	
Supply voltage		1	100/110 and 200/220 V AC	Free power supply
		2	110/120 and 220/240 V AC	
Style code		*A	Style A	
Option code		/RET	Transmission output: 4 – 20 mA DC	Standard

Note!

① Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. Sampling period (50, 100 and 200 ms) are selectable. Measurement accuracy: ±0.1 %
5. Input/output not required to be specified (universal input/output)
6. Input correction (bias and 10-segment linearizer)
7. Up to 9 alarm outputs (including one Fail)
8. 24 VDC sensor power can be supplied (optional specifications)
9. Power supply 24 V AC/DC can be specified (optional specifications)
10. Depth: 65 mm
11. Parameter Setting Tool can be used. (Note that the LL50A Parameter Setting Software, separately sold, is required.)

UT201 ⇒ UT55A

UT201 Digital Indicating Controller



External dimensions: 96×144×240 mm Note ①

Measurement accuracy: ±0.3%

Two alarm points

Remote input and Remote/Local selectable

Output bar graph display

A/M switching

Anti-reset windup provided

Model	Suffix Code	Description	Recommended Model
UT201		Digital temperature indicating controller	UT55A-000-11-00
Input	A	DC current: 4 – 20 mA DC	Universal input
	V	DC voltage: 1 – 5 V DC	
	M	DC voltage: 0 – 10 mV DC	
	K	Thermocouple type K	
	J	Thermocouple type J	
	E	Thermocouple type E	
	T	Thermocouple type T	
	R	Thermocouple type R	
	B	Thermocouple type B	
	P	RTD JPt100	
	Q	RTD Pt50	N/A
	D	RTD Pt100	Universal input
Setting	1	Local setting	Standard
	2	Local/remote setting (4 – 20 mA DC)	UT55A-040-11-00/DR
	3	Local/remote setting (1 – 5 V DC)	UT55A-040-11-00
Control action	4	PID action: time proportional ON-OFF	Universal output
	5	PID action: voltage output 24 V DC (isolated type)	N/A
	6	PID action: position proportional ON-OFF	UT55A-1*0-11-00
	7	PID action: current output 4 – 20 mA DC	Universal output
Proportional band	1	Proportional band: 1 – 50%	Standard
	2	Proportional band: 6 – 300%	(Proportional band: 0.1 to 999.9%)
Construction	0	General type	_____

Note!

① Pay attention to the external dimensions.

② Screw terminals are from M3.5 to M3.

Advantages of replacement

- 5-digit, 14-segment active color LCD
- Simple operations using the Navigation key
- Quick setting function for easy setting of basic functions
- 8 sets of setpoints and PID are settable
- 3 contact inputs and 3 contact outputs provided as standard
- Input/output not required to be specified (universal input/output)
- Hunting-suppressing function
- Control period: max. 50 ms. Measurement accuracy: ±0.1 %
- Depth: 65 mm
- Retransmission output provided as standard
- Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
- RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
- 24 VDC sensor power can be supplied (optional specifications)
- Power supply 24 V AC/DC can be specified (optional specifications)

UT320 • UT321 ⇒ UT32A

UT320 • UT321 Digital Indicating Controller



External dimensions: 48×96×100 mm
 Measurement accuracy: ±0.1%
 Control period: 250 ms
 Universal input/output
 Auto tuning "SUPER" built in
 A/M switching function

Model	Suffix Code	Description	Recommended Model
UT320		Digital indicating controller (provided with retransmission output and 15V DC loop power supply as standard)	UT32A-000-11-00
UT321			
Type	-0	Standard type	UT32A-000-11-00
	-2	Heating/cooling type	UT32A-200-11-00
	-3	Standard type with 24V DC loop power supply	UT32A-000-11-00/LP
Optional function	0	None	UT32A-*00-11-00
	1	Communication functions, heater burnout alarm (2 points)	UT32A-*10-11-00/HA
	2	Heater burnout alarm (2 points)	UT32A-*00-11-00/HA

Note!

- ① Screw terminals are from M3.5 to M3.
- ② When the /LP option (24 V DC loop power supply) is specified, the RS-485 communication is 2-wire system.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. Control period: 200 ms
5. Depth: 65 mm
6. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
7. Position proportional type can be specified.
8. Power supply 24 V AC/DC can be specified (optional specifications)

UT350 • UT351 ⇒ UT35A

UT350 • UT351 Digital Indicating Controller



External dimensions: 96×96×100 mm
 Measurement accuracy: ±0.1%
 Control period: 250 ms
 Universal input/output
 Auto tuning "SUPER" built in
 A/M switching function

Model	Suffix Code	Description	Recommended Model
UT350		Digital indicating controller (provided with retransmission output and 15V DC loop power supply as standard)	UT35A-000-11-00
UT351			
Type	-0	Standard type	UT35A-000-11-00
	-2	Heating/cooling type	UT35A-200-11-00
	-3	Standard type with 24V DC loop power supply	UT35A-000-11-00/LP
Optional function	0	None	UT35A-*00-11-00
	1	Communication functions, heater burnout alarm (2 points)	UT35A-*01-11-00/HA
	2	Heater burnout alarm (2 points)	UT32A-*00-11-00/HA
	A	Ethernet communication Note ①	UT35A-*02-11-00

Note!

- ① Ethernet option is not applicable with "-3" standard type with 24V DC loop power supply.
 ② Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. Control period: 200 ms
5. Depth: 65 mm
6. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
7. Position proportional type can be specified.
8. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
9. Power supply 24 V AC/DC can be specified (optional specifications)

UT420 ⇒ UT52A

UT420 Digital Indicating Controller



External dimensions: 48×96×100 mm
 Measurement accuracy: ±0.1%
 Control period: 200 ms
 Universal input/output
 Auto tuning built in
 5-digit display
 Three alarm points provided as standard

Model	Suffix Code	Description	Recommended Model
UT420		Digital indicating controller	UT52A-000-11-00
Type	-0	General type	UT52A-000-11-00
Optional function	0	None	UT52A-000-11-00
	7	Communication, remote input, and two DI points to be added	UT52A-010-11-00
	8	Remote input and two DI points to be added	UT52A-020-11-00

Note!

- ① Screw terminals are from M3.5 to M3.
- ② When the RS-485 communication is specified, the RS-485 communication is 2-wire system.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. 8 sets of setpoints and PID are settable
5. Control period: max. 50 ms
6. Depth: 65 mm
7. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
8. 24 VDC sensor power can be supplied (optional specifications)
9. Power supply 24 V AC/DC can be specified (optional specifications)

UT450 ⇒ UT55A

UT450 Digital Indicating Controller



External dimensions: 96×96×100 mm
 Measurement accuracy: ±0.1%
 Control period: 200 ms
 Universal input/output
 Auto tuning built in
 5-digit display
 Three alarm points provided as standard

Model	Suffix Code	Description	Recommended Model
UT450		Digital indicating controller	
Type	-0	General type	UT55A-0*0-11-00
	-1	Position proportional type	UT55A-1*0-11-00
	-2	Heating/cooling type	UT55A-2*0-11-00
	-3	General type (provided with 24 V DC sensor supply power)	UT55A-0*0-11-00/LP
	-4	Position proportional type (provided with 24 V DC sensor supply power)	UT55A-1*0-11-00/LP
Optional function	0	None	UT55A-*00-11-00
	1	Communication, remote input, five DI points, and one alarm point to be added	UT55A-*10-11-00
	2	Communication, remote input, and one DI point to be added	UT55A-*20-11-00
	3	Four DI points and one alarm point to be added	UT55A-*30-11-00
	4	Remote input and one DI point to be added	UT55A-*40-11-00

Note!

- ① Screw terminals are from M3.5 to M3.
- ② When the /LP option (24 V DC loop power supply) is specified, the RS-485 communication is 2-wire system.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. 8 sets of setpoints and PID are settable
5. Control period: max. 50 ms
6. Depth: 65 mm
7. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
8. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
9. 24 VDC sensor power can be supplied (optional specifications)
10. Power supply 24 V AC/DC can be specified (optional specifications)

UT520 ⇒ UT52A

UT520 Digital Indicating Controller



External dimensions: 48×96×100 mm
 Measurement accuracy: ±0.1%
 Control period: 50 ms or greater
 Universal input/output
 Auto tuning built in
 5-digit display
 Three alarm points provided as standard

Model	Suffix Code	Description	Recommended Model
UT520		Digital indicating controller	UT52A-000-11-00
Type	-0	General type	UT52A-000-11-00
Optional function	0	None	UT52A-000-11-00
	7	Communication, auxiliary analog (remote) input, and two DI points to be added	UT52A-010-11-00
	8	Auxiliary analog (remote) input and two DI points to be added	UT52A-020-11-00

Note!

- ① Screw terminals are from M3.5 to M3.
 ② When the RS-485 communication is specified, the RS-485 communication is 2-wire system.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. Depth: 65 mm
5. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
6. 24 VDC sensor power can be supplied (optional specifications)
7. Power supply 24 V AC/DC can be specified (optional specifications)

UT550/UT551 ⇒ UT55A

UT550/UT551 Digital Indicating Controller



External dimensions: 96×96×100 mm
 Measurement accuracy: ±0.1%
 Control period: 50 ms or greater
 Universal input/output
 Auto tuning built in
 5-digit display
 Active display (UT551 only)
 Ethernet communication (UT551-□A to D only)

Model	Suffix Code	Description	Recommended Model
UT550 /UT551		Digital indicating controller	_____
Type	-0	General type	UT55A-0*0-11-00
	-1	Position proportional type	UT55A-1*0-11-00
	-2	Heating/cooling type	UT55A-2*0-11-00
	-3	General type (provided with 24 V DC sensor supply power)	UT55A-0*0-11-00/LP
	-4	Position proportional type (provided with 24 V DC sensor supply power)	UT55A-1*0-11-00/LP
Optional function	0	None	UT55A-*00-11-00
	1	Communication, auxiliary (remote) input, six DI points, and four DO points to be added	UT55A-*10-11-00
	2	Communication, auxiliary analog (remote) input, and one DI point to be added	UT55A-*20-11-00
	3	Five DI points and four DO points to be added	UT55A-*30-11-00
	4	Auxiliary analog (remote) input and one DI point to be added	UT55A-*40-11-00

Model	Suffix Code	Description	Recommended Model
UT551		Digital indicating controller	_____
Type	-0	General type	UT55A-0*2-11-00
	-1	Position proportional type	UT55A-1*2-11-00
Optional function	A	Provided with Ethernet communication	UT55A-*02-11-00
	B	Provided with Ethernet communication, and auxiliary (remote) input and one DI point to be added	UT55A-*42-11-00
	C	Provided with Ethernet communication, and five DI points and four DO points to be added	UT55A-*32-11-00
	D	Provided with Ethernet communication, and auxiliary analog (remote) input, six DI points, and four DO points to be added	UT55A-*52-11-00

Note!

- ① Screw terminals are from M3.5 to M3.
- ② When the /LP option (24 V DC loop power supply) is specified, the RS-485 communication is 2-wire system.
- ③ The RS-485 communication for serial gateway of Ethernet communication is 2-wire system.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. Depth: 65 mm
5. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
6. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
7. 24 VDC sensor power can be supplied (optional specifications)
8. Power supply 24 V AC/DC can be specified (optional specifications)

UT750 ⇒ UT75A

UT750 Digital Indicating Controller



External dimensions: 96×96×100 mm
 Measurement accuracy: ±0.1%
 Control period: 50 ms or greater
 Universal input/output
 Auto tuning built in
 5-digit display

Model	Suffix Code	Description	Recommended Model
UT750		Digital indicating controller (provided with Custom Computing Function)	_____
Type	-0	Single-loop type	UT75A-0*0-11-00
	-1	Position proportional type	UT75A-1*0-11-00
	-5	Dual-loop type	UT75A-5*0-11-00
Optional function	0	None	UT75A-*00-11-00
	1	Communication functions, auxiliary analog (remote) input	UT75A-*11-11-00

Note!

- ① Screw terminals are from M3.5 to M3.
- ② The RS-485 communication for serial gateway of Ethernet communication is 2-wire system.
- ③ The contact I/O expansion module for UT750 cannot be connected to UT75A.
- ④ Please check the program if you use a custom computing function (parameter symbol UTM = 21).

Advantages of replacement

1. Ladder sequence function provided as standard, and the custom ladder instruction can be created. (Note that the LL50A Parameter Setting Software, separately sold, is required.)
2. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
3. Carbon potential calculation function provided as optional specifications.
4. Simple operations using the Navigation key
5. Quick setting function for easy setting of basic functions
6. Depth: 65 mm
7. Power supply 24 V AC/DC can be specified (optional specifications)

UP25 ⇒ **UP55A****UP25 Program Controller**

External dimensions: 96×96×180 mm
 Measurement accuracy: ±0.2%
 Control period: 200 ms
 Multi-range in the same sensor
 Auto tuning "SUPER" built in
 Maximum of eight patterns/118 segments
 Two PV events and four time events
 Eight sets of zone PID

General type ⇒ UP55A-0*0-11-00
 Position proportional ⇒ UP55A-1*0-11-00

Heating/cooling type ⇒ UP55A-2*0-11-00

Cryogenic type ⇒ UP55A-0*0-11-00

Model	Suffix Code	Description
UP25		Program controller
	-A	General type
Number of patterns	4 8	4 patterns 8 patterns
Measurement input group	1 2 3	Thermocouple, DC voltage (mV) RTD DC current, DC voltage (V)
Control action	10 20 30 40 50 60	Time proportional PID (relay output) Time proportional PID (voltage pulse output) Continuous output PID (4 – 20 mA DC) Continuous output PID (1 – 5 V DC) Position proportional PID (relay output) Three positions (relay output)
Alarm output	N 1	No alarm With alarms (PV event)
Style code	*A	Style A
Option code / <input type="checkbox"/> / <input type="checkbox"/>		Specify each option code.

Note ①
 Continuous PID 1 – 5 V → Note ②
 Three-position output → Note ④

Model	Suffix Code	Description
UP25		Program controller
	-B	Heating/cooling type
Number of patterns	4 8	4 patterns 8 patterns
Measurement input group	1 2 3	Thermocouple, DC voltage (mV) RTD DC current, DC voltage (V)
Control action (Heating side)	1 2 3 4	Time proportional PID (relay output) Time proportional PID (voltage pulse output) Continuous output PID (4 – 20 mA DC) Continuous output PID (1 – 5 V DC)
Control action (Cooling side)	1 2 3 4	Time proportional PID (relay output) Time proportional PID (voltage pulse output) Continuous output PID (4 – 20 mA DC) Continuous output PID (1 – 5 V DC)
Alarm output	N 1	No alarm With alarms (PV event)
Style code	*A	Style A
Option code / <input type="checkbox"/> / <input type="checkbox"/>		Specify each option code.

Note ①
 Continuous PID 1 – 5 V → Note ②

Use a cryogenic temperature converter.

Note ⑦

Model	Suffix Code	Description
UP25		Program controller
	-C	Cryogenic type
Number of patterns	4 8	4 patterns 8 patterns
Measurement input	4	RTD (Pt-CO), (J263°B)
Control action	10 20 30 40	Time proportional PID (relay output) Time proportional PID (voltage pulse output) Continuous output PID (4 – 20 mA DC) Continuous output PID (1 – 5 V DC)
Alarm output	N 1	No alarm With alarms (PV event)
Style code	*A	Style A
Option code / <input type="checkbox"/> / <input type="checkbox"/>		Specify each option code.

Continuous PID 1 – 5 V → Note ②

Options

Option Code	Description	Recommended Model
/EX	Operation mode with external contact switching terminal	Standard
/RET1	Transmission output signal: 4 – 20 mA DC	Standard
/RET2	Transmission output signal: 1 – 5 VDC	Note ③
/PTNEX	Program patterns with external contact switching terminal	Standard
/RS232C	Communication interface	UP55A-*20-11-00, Note ⑤
/RS422	Communication interface	UP55A-*20-11-00, Note ⑥
/STC	Special thermocouple input	Standard

Note!

- ① There is no range corresponding to DC voltage range code 021 (-1 to 1 V). Use a signal converter.
- ② For DC voltage output, use an external 250-Ω shunt resistor (X010-250-2).
- ③ Because a 4 – 20 mA transmission output signal is provided as standard, this option code can be handled by purchasing a 250-Ω shunt resistor (X010-250-2) separately.
- ④ For three-position output, control action is handled by ON/OFF control on both the heating and cooling sides using the heating/cooling UP55A-2*0-11-00.
- ⑤ Use RS-232C/RS-485 converter ML2.
- ⑥ RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to other communication protocol, which requires a software program change.
- ⑦ Use the cryogenic temperature converter WRU*.
- ⑧ Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 30 patterns/300 segments (When the /AP option is specified, 99 program patterns/600 program segments.)
2. 8 contact inputs provided as standard, and max. 18 contact outputs
3. 8 PV events, 16 time events and 8 alarms are settable
4. Control period: max. 100 ms
5. 5-digit, 14-segment active color LCD
6. Simple operations using the Navigation key
7. Quick setting function for easy setting of basic functions
8. Retransmission output provided as standard
9. Depth: 65 mm
10. Power supply 24 V AC/DC can be specified (optional specifications)
11. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
12. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)

UP27 ⇒ UP55A

UP27 Program Controller



External dimensions: 96×96×100 mm
 Measurement accuracy: ±0.1%
 Control period: 200 ms
 Universal input/output
 Auto tuning "SUPER" built in
 15 patterns/192 segments
 Two PV events and four time events
 Pattern end signal (1 point)
 Zone PID/300 segments
 Eight sets of PIDs settable

Model	Suffix Code	Description	Recommended Model
UP27		Program controller	UP55A-000-11-00
Option code	/RET	Transmission output Selectable from among PV, SP, and MV	Standard Notes ① and ②
	/LPS	Sensor supply power 21.6 – 28.0 V DC, 30 mA DC max Not available in mixed use with /RSP or /RET	
	/RS422	RS-422A interface Provided with a coordinated operation function	UP55A-020-11-00 Note ③

Note!

- ① Either transmission output or sensor supply power is available as standard.
- ② Sensor supply power is 14.5 to 18.0 V DC at 21 mA DC maximum.
For 21.6 – 28.0 V power supply, The detailed code model can be available. Contact our representatives for inquiries.
- ③ RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to other communication protocol, which requires a software program change.
- ④ Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 30 patterns/300 segments (When the /AP option is specified, 99 program patterns/600 program segments.)
2. 8 contact inputs provided as standard, and max. 18 contact outputs
3. 8 PV events, 16 time events and 8 alarms are settable
4. Control period: max. 100 ms
5. 5-digit, 14-segment active color LCD
6. Simple operations using the Navigation key
7. Quick setting function for easy setting of basic functions
8. Retransmission output provided as standard
9. Depth: 65 mm
10. Power supply 24 V AC/DC can be specified (optional specifications)
11. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
12. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)

UP30 ⇒ UP55A

UP30 Program Controller



External dimensions: 96×96×180 mm
 Measurement accuracy: ±0.1%
 Control period: 100 ms
 Universal input/output
 Auto tuning "SUPER" built in
 19 patterns/200 segments
 Two PV events and four time events
 Pattern end signal (1 point)
 Zone PID switching and eight sets of PIDs are settable

Model	Suffix Code	Description	Recommended Model
UP30		Program controller	UP55A-000-11-00 Notes ① and ④
Measurement input group	-1	Thermocouple, mV, and 4 – 20 mA DC input	
	-2	RTD input	
Control action	1	Time proportional PID (relay output)	
	2	Time proportional PID (voltage pulse output)	
	3	Continuous output PID (4 – 20 mA DC)	
	4	Continuous output PID (1 – 5 V DC)	
Power supply	1	100 V system (90 – 132 V AC)	Free power supply 100 – 240 V AC
	5	200 V system (180 – 250 V AC)	
Style code	*B	Style B	—
Option code	/DCV	DC voltage (V) input	Standard Note ②
	/F***	Specify the input type.	N/A
	/RET	Transmission output	Standard
	/RS422	RS-422 communication interface	UP55A-020-11-00 Note ③

Note!

- ① For continuous output PID (1 – 5 V DC), use a 250-Ω shunt resistor (X010-250-2).
- ② There is no range corresponding to DC voltage range code 021 (-1 to 1 V). Use a signal converter.
- ③ RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to other communication protocol, which requires a software program change.
- ④ There is no range corresponding to DC voltage range code 021 (-1 to 1 V). Use a signal converter.
- ⑤ Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 30 patterns/300 segments (When the /AP option is specified, 99 program patterns/600 program segments.)
2. 8 contact inputs provided as standard, and max. 18 contact outputs
3. 8 PV events, 16 time events and 8 alarms are settable
4. Control period: max. 100 ms
5. 5-digit, 14-segment active color LCD
6. Simple operations using the Navigation key
7. Quick setting function for easy setting of basic functions
8. Retransmission output provided as standard
9. Depth: 65 mm
10. Power supply 24 V AC/DC can be specified (optional specifications)
11. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)
12. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)

UP40 ⇒ UP55A

UP40 Program Controller



External dimensions: 96×144×180 mm Note ①
 Measurement accuracy: ±0.1%
 Control period: 100 ms
 Multi-range in the same sensor
 Auto tuning built in
 99 patterns/400 segments
 Four PV events and eight time events
 Zone PID switching, and eight sets of PIDs are settable

Model	Suffix Code	Description	Recommended Model
UP40		Program controller	UP55A-000-11-00 Notes ② and ③
Measurement input group	-1	Thermocouple, mV, and 4 – 20 mA DC input	
	-2	RTD input	
Control action	1	Time proportional PID (relay output)	
	2	Time proportional PID (voltage pulse output)	
	3	Continuous output PID (4 – 20 mA DC)	
	4	Continuous output PID (1 – 5 V DC)	
Power supply	1	100 V system (90 – 132 V AC)	Free power supply 100 – 240 V AC
	5	200 V system (180 – 250 V AC)	
Style code	*B	Style B	—————
Option code	/DCV	DC voltage (V) input	Standard Note ③
	/F***	Specify the input type.	N/A
	/RET	Transmission output	Standard
	/RS422	RS-422 communication interface	UP55A-001-11-00 Note ⑤

Note!

- ① Pay attention to the external dimensions.
- ② For continuous output PID (1 – 5 V DC), use a 250-Ω shunt resistor (X010-250-2).
- ③ There is no range corresponding to DC voltage range code 021 (-1 to 1 V). Use a signal converter.
- ④ RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to PC link communication, which requires a software program change.
- ⑤ If a sequence is organized using an ANS signal for contact output, this option is handled as ladder program of UP55A.
- ⑥ An expansion module is required depending on the number of contact inputs/outputs. See the connection diagram in the general outline.

Advantages of replacement

1. 99 program patterns/600 program segments. (When the /AP option is specified.)
2. Contact inputs and outputs: Up to 23 points each (7 points each are provided as standard).
3. Eight PV events/16 time events are settable
4. Transmission output provided as standard
5. Hunting-suppressing function
6. Five-digit large LED display

UP350/UP351 ⇒ UP35A

UP350/UP351 Program Controller



External dimensions	: 96x96x100 mm
Measurement accuracy	: $\pm 0.1\%$
Control period	: 250 ms
Number of program pattern	: 2
Number of segments	: 20 (10/1 pattern)
PV event output	: 2
Time event output	: 1
Program pattern switch	

Model	Suffix Code		Description	Recommended Model
UP350			Program controller (provided with retransmission output and 15 V DC loop power supply as standard)	_____
UP351				
Type	-0		Standard type	UP35A-00*-11-00
Optional functions	0		None	UP35A-000-11-00
	1		With communication, auxiliary analog input, and 1 additional DI	UP35A-001-11-00

Note!

① Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Max. 4 patterns/max. 40 segments (when option /AP is specified)
3. Up to 8 contact inputs and 8 contact outputs
4. 2 PV events, 4 time events and 2 alarms are settable
5. Depth: 65 mm
6. Power supply 24 V AC/DC can be specified (optional specifications)
7. Simple operations using the Navigation key
8. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
9. Quick setting function for easy setting of basic functions
10. Heating/cooling type and Position proportional type can be specified.
11. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)

UP550 ⇒ UP55A

UP550 Program Controller



External dimensions	: 96×96×100 mm
Measurement accuracy	: ±0.1 %
Control period	: max. 100 ms
Number of program pattern	: 30
Number of segments	: 300 (99/1 pattern)
PV event output	: 2
Time event output	: 4
Alarm output	: 1
Program pattern switch	

Model	Suffix Code	Description	Recommended Model
UP550		Program controller (provided with retransmission output and 15 V DC loop power supply as standard)	_____
Type	-0	Standard type	UP55A-0*0-11-00
	-1	Position proportional type	UP55A-1*0-11-00
	-2	Heating/cooling type	UP55A-2*0-11-00
Optional functions	0	None	UP55A-*00-11-00
	1	With communication, auxiliary analog input, and 1 additional DI	UP55A-*11-11-00

Note!

① Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Up to 18 contact outputs
3. Depth: 65 mm
4. Power supply 24 V AC/DC can be specified (optional specifications)
5. Simple operations using the Navigation key
6. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
7. Quick setting function for easy setting of basic functions
8. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)

UP750 ⇒ UP55A

UP750 Program Controller



External dimensions	: 96×96×100 mm
Measurement accuracy	: ±0.1 %
Control period	: 100 ms (shortest)
Number of program pattern	: max. 300
Number of segments	: max. 3000 (99/1 pattern)
PV event output	: 2 (factory default setting)
Time event output	: 4 (factory default setting)
Alarm output	: 1 (factory default setting)
Program pattern switch	

Model	Suffix Code	Description	Recommended Model
UP750		Program controller (provided with Custom Computing Function)	UP55A (99 program patterns/600 program segments when the /AP option is specified.)
Type	-0	Single-loop type	UP55A-0**-11-00/AP
	-5	Dual-loop type	Please combine two UP55As.
Optional functions	0	None	UP55A-000-11-00/AP
	1	With communication, auxiliary analog input	UP55A-011-11-00/AP

Note!

- ① Screw terminals are from M3.5 to M3.
- ② The contact I/O expansion module for UP750 cannot be connected to UP55A.
- ③ Maximum number of program pattern is 99, maximum number of program segment is 300.
- ④ 2-loop program pattern control is not available with single unit.
- ⑤ Please check the program if you use a custom computing function (parameter symbol UPM = 21).

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Up to 18 contact outputs
3. Depth: 65 mm
4. Power supply 24 V AC/DC can be specified (optional specifications)
5. Simple operations using the Navigation key
6. Ladder sequence function provided as standard (Note that the LL50A Parameter Setting Software, separately sold, is required.)
7. Quick setting function for easy setting of basic functions
8. RS-485, Ethernet, CC-Link, DeviceNet and PROFIBUS-DP communication (optional specifications)

UM04 • UM05 ⇒ **UM33A**

UM04 and UM05 Digital Indicating Alarm Units



External dimensions: 96×48×100 mm (UM04)
96×96×100 mm (UM05)

Measurement accuracy: ±0.1%

Sampling period: 500 ms

Universal inputs

Two alarm points provided as standard

Transmission output

Model	Suffix Code	Description	Recommended Model
UM04		Digital indicator with alarms	UM33A-000-11
Style code	*A	Style A	
Option code	/RET	Measured-value transmission output: 4 – 20 mA DC	

Model	Suffix Code	Description	Recommended Model
UM05		Digital indicator with alarms	UM33A-000-11 Note ①
Style code	*A	Style A	
Option code	/RET	Measured-value transmission output: 4 – 20 mA DC	
	/RS422	RS-422 communication interface	UM33A-010-11 Note ① and ②
	/ALM4	Four alarm outputs (two outputs to be added)	UM33A-020-11 Note ①

Note!

- ① Pay attention to the external dimensions. UT35A Digital Indicating Controller can be used as an alternative to UM350/UM351.
- ② RS-485 is electrically upward compatible to RS-422. However, the communication protocol is changed to other communication protocol, which requires a software program change.
- ③ Screw terminals are from M3.5 to M3.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Simple operations using the Navigation key
3. Quick setting function for easy setting of basic functions
4. Sampling period (50, 100 and 200 ms) are selectable
5. Input correction (bias and 10-segment linearizer)
6. Up to 9 alarm outputs (including one Fail)
7. 24 VDC sensor power can be supplied (optional specifications)
8. Power supply 24 V AC/DC can be specified (optional specifications)
9. Depth: 65 mm
10. Parameter Setting Tool can be used. (Note that the LL50A Parameter Setting Software, separately sold, is required.)

UM330/UM331/UM350/UM351 ⇒ UM33A

UM330•UM331•UM350•UM351 Digital Indicator with Alarms



External dimensions : 96x48x100 mm (UM330/UM331)
 : 96x96x100 mm (UM350/UM351)
 Measurement accuracy : $\pm 0.1\%$
 Sampling period : 250 ms
 Universal input
 3 alarm outputs as standard (max. 4 points)
 Retransmission output as standard

Model	Suffix Code	Description	Recommended Model
UM330		Digital indicator with alarms (provided with retransmission output and 15 V DC loop power supply as standard)	_____
UM331			_____
Type	-0	Standard type with three alarms	UM33A-0*0-11
	-3	Standard type with three alarms (with 24 V DC loop power supply)	UM33A-0*0-11/LP
Optional functions	0	None	UM33A-000-11
	1	With communication and additional alarm-4	UM33A-010-11
	2	With additional alarm-4	UM33A-020-11

Note!

- ① Screw terminals are from M3.5 to M3.
- ② Pay attention to the external dimensions. UT35A Digital Indicating Controller can be used as an alternative to UM350/UM351.
- ③ When the /LP option (24 V DC loop power supply) is specified, the RS-485 communication is 2-wire system.

Advantages of replacement

1. 5-digit, 14-segment active color LCD
2. Sampling period (50, 100 and 200 ms) are selectable.
3. Input correction (bias and 10-segment linearizer)
4. Up to 9 alarm outputs (including one Fail)
5. Power supply 24 V AC/DC can be specified (optional specifications)
6. Quick setting function for easy setting of basic functions
7. Parameter Setting Tool can be used. (Note that the LL50A Parameter Setting Software, separately sold, is required.)