



Intelligent Industrial Recorders

The μ R series are the compact industrial recorders with the recording widths of 100 mm and 180 mm.

The 100 mm family consists of 1,2,3,4-pen and 6-dot models.

The 180 mm family consists of 1,2,3,4-pen and 6,12,18,24-dot models.

Bulletin 04P02B01-01E

www.yokogawa.com/ns/







Delivers Confidence

The critical factor in continuous recording using industrial recorders is reliability. Leveraging the latest technology, Yokogawa brings you that reliability in a compact, lightweight unit that embodies all the breakthroughs and know-how that Yokogawa has cultivated over the years.

Bringing You the Highest Reliability

Servo Unit

The pen servo unit takes advantage of an ultra-small, rack-and-pinion stepping motor. The servo unit is smaller and consumes less power than previous models.

Splash-proof Front Door

(conforms to DIN 40050-IP54)

The front door meets DIN 40050-IP54 standards in panel-mount installations.

Safety/EMC Standards

Yokogawa's highly reliable industrial recorders support safety and EMC (electromagnetic compatibility) standards. And of course, the R conforms to the European CE marking standard.



6 dot model



High-Voltage Solid State Scanners High withstand voltage semiconductor relays have been adopted for scanners that

relays have been adopted for scanners that switch the input signal. They enable high speed scanning of six dots per second, increase the life of the scanner, and reduce noise.

Use of ASICs

INTELLIGENT INDUSTRIAL RECORDERS

The recorders feature a high degree of functional integration through Yokogawa's renowned ASICs (application specific integrated circuits, or custom ICs). They allow for reduced power consumption, increased lifespan of components, and suppressing of heat emmisions.

Matching the Displayed Operation Screen to the Application

The user can switch between up to fifteen previously configured operation screens using the DISP key.



Lightweight

Innovative molding technology reduces the number of parts and lowers the weight of the unit. Higher efficiency and low heat emissions have also been achieved through a high degree of integration and a new type of servo unit.

Large VFD: 101 x 16 full dot matrix using a variety of screens.

for Site Monitoring

100.0 200.0 300.0 400.0 500.0 600.0

Multi-Display (Displays a Variety of Screens)

Displays that support our customers' site monitoring needs with high visibility.

2 channel digital display

1 1000.0°C 2 1000.0°C

• "I want to monitor the recorder position on an analog indicator." Flag display



• "I want to monitor alarms collectively."

Channel alarm status display



Navigational Display Makes Setup a Snap

The instrument features a simple configuration, with Operation mode for normal use, and Setting mode for use during setup. In Operation mode, measured values, time, and alarms are updated, and lists are printed. In

Setting mode, you can enter measuring ranges, alarm values, and other parameters. Also, Setting mode offers a navigational display that eases entry of settings.



Easier to Acquire, Easier to Read

Uses a large, easy-to-view VFD 101 x 16 full dot matrix display. All settings are interactive, and supported by the navigational display, offering easier to read selections and superior ease of operation.

SD Memory Card *

With saving of measured data, printout of measured data (dot model only), and saving and loading of settings, µR recorders are ideal for ensuring redundancy.
* Option

Optional Terminals*

* Individual terminals are removable, making wiring and maintenance easy.

Input Terminals*

Ethernet (10Base-T)

Data management possible via network.



(EMI testing LAB in Yokogawa)

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Splash-proof Front Door

(conforms to DIN 40050-IP54)
The front door meets DIN 40050-IP54 standards in panel-mount installations.

High-Voltage Solid State Scanners

High withstand voltage semiconductor relays have been adopted for scanners that switch the input signal. They enable high speed scanning of six dots per second or twelve to twenty-four dots in 2.5 seconds, increase the life of the scanner, and reduce noise.

Use of ASICs

The recorders feature a high degree of functional integration through Yokogawa's renowned ASICs (application specific integrated circuits, or custom ICs). They allow for reduced power consumption, increased lifespan of components, and suppressing of heat emmisions.

Safety/EMC Standards Yokogawa's highly reliable

Yokogawa's highly reliable industrial recorders support safety and EMC (electromagnetic compatibility) standards. And of course, the R conforms to the European CE marking standard.

24 dot model



Lightweight

Innovative molding technology reduces the number of parts and lowers the weight of the unit. Higher efficiency and low heat emissions have also been achieved through a high degree of integration and a new type of servo unit.

SD Memory Card *

With saving of measured data, printout of measured data (dot model only), and saving and loading of settings, µR recorders are ideal for ensuring redundancy * Option

Matching the Displayed Operation Screen to the Application

The user can switch between up to fifteen previously configured operation screens using the DISP key.



Optional Terminals*

* Individual terminals are removable, making wiring and maintenance easy.

Input Terminals*

Ethernet (10Base-T)

Data management possible via network.

Multi-Display (Displays a Variety of Screens) for Site Monitoring

Displays that support our customers' site monitoring needs with high visibility. Large VFD: 181 x 16 full dot matrix using a variety of screens.

"I want to use my recorder as a monitor."
 12 channel digital display (12, 18, and 24 dot models)

2 1300.0 1400.0 1500.0 1600.0 1700.0 1800.0 1900.0 2000.0 2000.0 2100.0 2200.0 2300.0 2400.0

Two groups are alternately displayed: 18 dot model 1Gr (1 to 12ch), 2Gr (13 to 18ch) 24 dot model 1Gr (1 to 12ch), 2Gr (13 to 24ch)

4 channel digital display

INTELLIGENT INDUSTRIAL RECORDERS

01 100.0°C 02 200.0m³ 03 300.0cm³ 04 400.0kPa

"I want to monitor the recorder position on an analog indicator."
 Flag display



"I want to monitor alarms collectively."
 Channel alarm status display



Navigational Display Makes Setup a Snap

The instrument features a simple configuration, with Operation mode for normal use, and Setting mode for use during setup. In Operation mode, measured values, time, and alarms are updated, and lists are printed. In Setting mode, you can enter

measuring ranges, alarm values, and other parameters. Also, Setting mode offers a navigational display that eases entry of settings.

Navigational display to support setting selections (Example: Range Setting)



Easier to Acquire, Easier to Use

Uses a large, easy-to-view VFD 181 x 16 full dot matrix display. All settings are interactive, and supported by the navigational display, offering easier to read selections and superior ease of operation.

6

7

Broad Functionality for Wide Range of

Applications The instrument comes with a full set of functions to cover the many needs of our customers and support their applications.

Variety of Networking Functions

Ethernet Support With your GX/GP/GM or other supporting instrument on an existing network, the GA10 data logging software delivers centralized control of measured data. The software can also send e-mail alerts when certain events (alarms, specified times, E-mail Notification creation of files, etc.) occur. ·Alarm information ·Fixed time instantaneous values Report data ISDN/ dedicated line/ packet network Panerless Recorde μR10000 / μR20000 Communications GX10/GX20

GM

Application Software That Expands the Possibilities of the µR

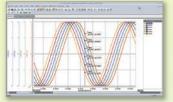
Universal Viewer (free download)



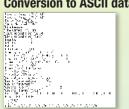
Data files saved on the SD memory card can be loaded and displayed. For specified data, you can also perform statistical computation over an area and export to ASCII, Excel, or other

http://www.yokogawa.com/ns/

Displaying waveforms with the Viewer



Conversion to ASCII data



Data Logging Software GA10 (sold separately)

Data Acquisition System



With Ethernet or RS-422/485 (optional), the software can gather measured data from a variety of instruments including the µR series onto the PC. This gives you power over your data including the ability to monitor remotely from the office, record electronically on the PC, and centrally manage data from multiple µR units.

Easy-to-read monitor screen



Variety of functions

- Alarm sound - E-mail transmission - Add client monitoring PCs ...and more
- * For details, see the GA10 catalog, bulletin 04L65B01-01EN

RXA10 Configuration Software (sold separately)

Multi Drop Connection

Entry and management of settings for measurement and calculation channels is easier than ever. Also, settings can be entered via communication interface.

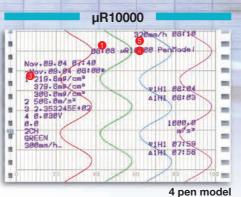
Comes with RS-422A/485.

The Modbus protocol

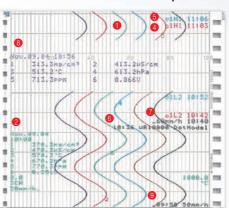
(RTU, SLAVE) is also

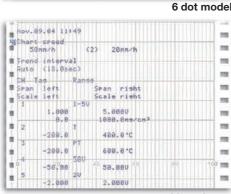


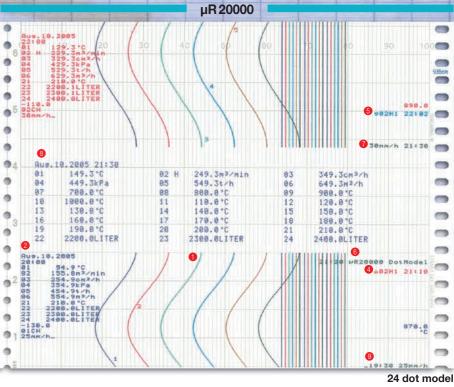
A Wealth of Recording and Printing Functions

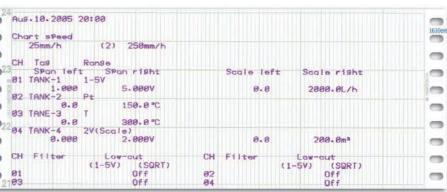


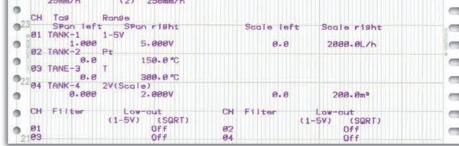
INTELLIGENT INDUSTRIAL RECORDERS



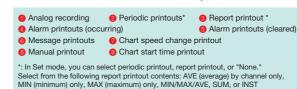








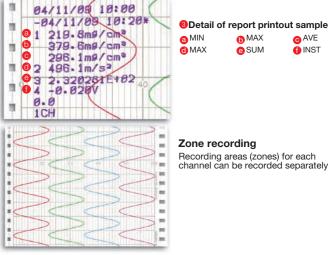




A1HT 88188114 WINI 88158132

Partial expanded recording

Any important portion within the full scale can be expanded for recording



MAX

SUM

List printout

INST

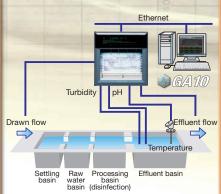
Zone recording

Recording areas (zones) for each channel can be recorded separately

INTELLIGENT INDUSTRIAL RECORDERS A Surprising Variety of Applications and Uses to Meet Every Customer's Needs.





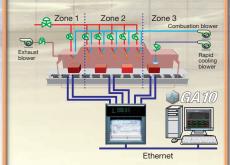


- Display and record temperature, flow, turbidity, pH,
- dissolved oxygen, and other factors, and monitor on-site. Automatic calculation of flow with the computation function (/M1 option).

 Connect with Data Logging Software GA10 for remote
- monitoring in real time

Temperature Monitoring and Recording in a Tunnel Kiln (Acquisition of Temperature Data for Ceramic Processing)

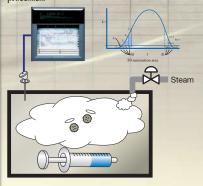
Select screens and display intervals according to on-site processes (zones) to create the optimum temperature monitoring and recording setup.



- Select from a variety of inputs (universal input)
 Monitor and record alarms on site upon occurr temperature data and abnormalities.
- Optimized monitoring through simultaneous display of multiple channels and AUTO screen switching
 Connect Data Logging Software GA10 to control the
- operational conditions (temperature and alarms) in a furnace from your office

Managing Sterilization of Pharmaceuticals and Foodstuffs (Acquisition of Sterilization/Pasteurization Data)

MATH function (/M1 option) enables recording (and F value calculation) of sterilization and pasteurization



- Automatically computes F0 value according to temperature Computed results are recorded together with temperature and other parameters (pharmaceutical/foodstuff temperature, pressure, etc.)

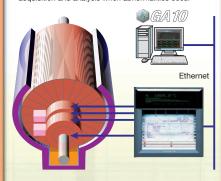
 Measurement ON/OFF through external contact input
- (/R1 option)

- Select from a variety of inputs (universal input)
- Automatically computes relative humidity from dry bulb temperature and web bulb temperature (/M1 option)
 Computed results are recorded together with
- temperature and humidity (pressure and current)



Display and Recording of Data from Environmental Testing Equipment (Acquisition of Test data from a Thermostatic Chamber

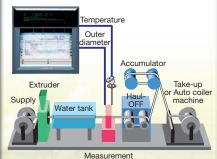
- Select from a variety of inputs such as Cu input sensors (/N1 option)
- Monitor and record alarms upon occurrence of
- temperature, vibration, and abnormalities.
 Connect with Data Logging Software GA10 for data acquisition and analysis when abnormalities occur



Measures temperature and vibration of the turbine for rapid identification of abnormalities

Equipment Maintenance in a Power Plant (Acquisition of Data on Turbine Temperature and Vibration

- Select from a variety of inputs (universal input)
- Displays temperature and wire diameter simultaneously for monitoring of correlations
- Monitor and record diameter, temperature, and alarms upon occurrence of abnormalities on site



Displays outer diameter and temperature in a electrical wire coating process for monitoring insulation quality

Management of Electrical Wire Coating Process (Acquisition of Data on Wire Temperature and Outer Diameter)

Superior ease-of-operation

Easy-to-see display

Accurate measurement

Reliable recording

Supports our customers' site monitoring needs. Offers optimal solutions and a user-friendly operating environment.

Specifications

See the general specification (GS04P01B01-01E, GS04P02B01-01E) for the detailed specifications.

Input

Measurement Inputs

μR10000: 1, 2, 3, 4 (pen) and 6 (dot) points μR20000: 1, 2, 3, 4 (pen) and 6, 12, 18, 24 (dot) points

Inputs

Available on TC and 1-5 VDC range, ON/OFF selectable (per channel) 1-5V Burnout: less than 0.2V

Filter

Pen model:

Signal damping ON/OFF selectable (per channel), Time constant (2, 5, 10sec)

Dot model:

Moving average ON/OFF selectable (per channel), Moving average cycle (2 to 16)

Standard Computation
Differential computation, Linear scaling, Square root, Bias addition

Recording and Printing

Recoring Method
 Pen model: Disposable felt pens, Plotter pen, Dot model: 6 color wire dot

■ Pen Offset Compensation: ON / OFF selectable (Pen model only)

■ Effective Recording Width µR10000: 100 mm, µR20000: 180 mm

■ Chart µR10000: Plain-paper Z-fold chart (16 m) µR20000: Plain-paper Z-fold chart (20 m)

Recording Period

Pen model: Dot model:

Continuous for each channel µR10000; Max. 6 ch/10sec µR20000; Max. 6 ch/10 s, 7 to 12 ch/15 s. 13 to 18 ch/20 s, 19 to 24/30 s

Pen model: 5 to 12000 mm/h (82 increments)
Dot model: 1 to 1500 mm/h (1 mm step)

Chart Speed Change
 speed 1, speed 2 change by remote control signals (option).

■ Recording Colors

pen1=red, pen2=green, pen3=blue, pen4=violet, plotter pen=purple µR10000

Dot model:

ch1=purple, ch2=red, ch3=green, ch4=blue, ch5=brown, ch6=black (color can be assigned to any channel)

μR20000 ch1, 7, 13, 19=purple ch2, 8, 14, 20=red ch3, 9, 15, 21=green ch4, 10, 16, 22=blue ch5, 11, 17, 23=brown ch6, 12, 18, 24=black (color can be assigned to any channel)

■ Recording Format

Analog recording: Zone recording, Partial expanded recording
Digital printout: Channel number or TAG (Dot model only), Alarm, Periodic
printout or Report printout, Message printout, Record start time,
Chart speed printout, List printout, Manual printout, SET UP List
printout

Display

Display Method
μR10000: VFD (101×16 dot matrix), μR20000: VFD (181×16 dot matrix)

■ Display Types
Multiple displays
Digital, bar, flag, Dl/DO display etc. can be displayed.
15 display types can be selected from approx. 80 display types.

Status Display

Recording in progress (RECORD), Shared alarm (ALARM), Channel No. display of occuring alarm (pen model: 12 3 4 or Dot model: μR10000; 1 to 6, μR20000; 1 to 24), Chart end display (CHART END) For the model with option (FAIL/chart end detection and output), Math (MATH), Key lock display (KEY LOCK)

Setting Settings display by interactive mode. In setting, navigator method is used. Display updated interval can be selected from AUTO/MAN.

Bar Gragh Display Measurment value: left/right (%) reference or center zero reference display (each channel selectable). Alarm: Alarm setting level display and flashing display of occuring alarm.

■ Display Brightness Setting Display brightness level: 1 to 8

Alarm

■ Number of Levels: Up to 4 level for each channel.

Alarm Type High and low limits, differential high and low limits, high and low rate-of-change limits and delay high and low Interval time of rate-of-change alarms: The measurement interval times 1 to 15

Power supply

■ Rated Power Voltage: 100-240 VAC (automatically selected)

■ Power Voltage Range: 90-132 VAC, 180-264 VAC

■ Rated Power Flequency: 50 Hz/60 Hz (sutomatically selected)

Power Consumption

			(Approx.)
μR10000	100 VAC power source	240 VAC power source	Maximum
1 to 4 pen model	12 VA*	17 VA*	40 VA
6 dot model	13 VA*	18 VA*	40 VA

*In balance

(Approx.)

			(, thbiox.)
μR20000	100 VAC power source	240 VAC power source	Maximum
1 to 4 pen model	17 VA*	25 VA*	55 VA
6 to 24 dot model	17 VA*	23 VA*	55 VA

^{*}In balance

General Specification

Ambient Temperature and Humidity 0 to 50°C, 20 -80%RH (at 5 to 40°C)

Memory Backup

Litium battery to save settings parameters Approx. 10 years (at room temperature, for standard model)

Settings Protection Function Password method

Internal Light White LED

Operation Position
0° Frontwards: Within 30° from horizontal

Optional Specification

Alarm Output Relay (/A1, /A2, /A3, /A4*, /A5*)

Number of output: 2, 4, 6, 12*, 14*

Relay contact rating: 250 VDC/0.1 A (resistance load), 250 VAC (50/60 Hz) /3 A only for µR20000

■ RS-422A/485 Communication Interface (/C3)
Measurment value output and setting parameter input/output
Conforms to EIA-422A (RS-422A) and EIA-485 (RS-485) standard

Ethernet Communication Interface (/C7)
Measurment value output and setting parameter input/output
Transmission media:10 Base-T
Protocol: TCP, IP, UDP, ICMP, ARP

Total Carlot (CT)

Protocol: TCP, IP, UDP, ICMP, ARP

■ FAIL/Chart End Detection and Output (/F1)
In CPU error occurrence or the chart end, output relay is activated.
Relay contact rating: 250 VDC/0.1 A (resistance load), 250 VAC (50/60 Hz) /3 A

■ Clamped Input Terminal (/H2): Clamped input

Non-glare Door Glass (/H3)
Non-glare door glass for front door

Non-glare door glass for front door
 Portable Type (/H5[]) Provides carrying handle and power code
 Mathematical Function (/M1) Number of computation channel: 8 channels (pen model), 12 channels (μR10000 dot model), 24 channels (μR20000 dot model) Arithmetic operation (+, -, x, ÷), Square, Absolute, Common logarithm (y=log10x), Exponential (eX), Power (Xn), Relational operator (<, ≤, >, ≥, =, ÷), Logic (AND, OR, NOT, XOR)
 Christian Learney testing: Statistical type: MAY, MIN, AVF, S(IM, MAY, MIN)

Statistical computation: Statistical type: MAX, MIN, AVE, SUM, MAX-MIN Comutation channel can be recorded

Cu10, Cu25 RTD Input (/N1)

Cu10, Cu25 RTD input
Pt100 and JPt100 inputs can be used together.

3 Legs Isolated RTD Input (/N2)
A, B, b legs of RTD are isolated for dot model

Expansion Inputs (/N3)
Following input types can be supported besides standard inputs. TC: PR40-20, PLATINEL, NiNiMo, W/WRe26, Type N (AWG14),

Kp vs Au7Fe RTD: Pt25, Pt50, Ni100 (SAMA), Ni100 (DIN), Ni120, J263*B, Cu53, Cu100 *Cu100 : α=0.00425 at 0°C

*Cu100 : a=0.00425 at 0*C ■ 24V DC/AC Power Supply (/P1) Rated power supply: 24 V DC/AC Allowable power supply voltage range: 21.6 to 26.4 V DC/AC Rated power supply frequency: 50/60 Hz

■ Remote Control(/R1)

Reinote Control (AT)

Below actions can be assigned to up to 5 points

Recording start/stop, Chart speed change, Message printout start, Manual printout start, Alarm ACK, Time set, Math start/stop, Math reset etc.

Calibration Correction (/CC1)

Corrects the measurement value of each channel using segment linearizer approximation.

Number of segment points: 2 to 16

Header Printout (/BT1) Batch name, comment, time, chart speed are printed in record Start/Stop. /R1 option allows you to execute functions of /BT1 easily by a contact input.

SD Memory Card (/EM1)
SD memory cards can be used as external storage media. Measured data can be saved and replayed (dot model only), and setting parameters can be saved and



μR10000

Model Code	Suffix Code	Option Code	Description	
436101			μR10000 1 pen recorder	
436102			μR10000 2 pen recorder	
436103			μR10000 3 pen recorder	
436104			μR10000 4 pen recorder	
436106			μR10000 6 dot recorder	
Language	-2		English / German 10 / French 10, degF & DST	
		/A1	Alarm output relay (2 contacts) 1	
		/A2	Alarm output relay (4 contacts) 1	
		/A3	Alarm output relay (6 contacts) 1, 2	
		/BT1	Header printout	
		/C3	RS-422A/485 communication interface 4	
		/C7	Ethernet communication interface 3, 4	
		/CC1	Calibration Correction	
		/EM1	SD memory card ⁴	
Ontion		/F1	FAIL/chart end detection and output 2	
Option		/H2	Clamped input terminal 5	
		/H3	Non-glare door glass	
		/H5[] ⁹	Portable Type 8	
		/M1	Mathematical function	
		/N1	Cu10, Cu25 inputs	
		/N2	3 legs Isolated RTD 5,6	
		/N3	Expansion inputs ⁷	
		/P1	24V DC/AC Power Supply 8	
		/R1	Remote control (5 contacts)	

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Model Code	Suffix Code	Option Code	Description	
437101			μR20000 1 pen recorder	
437102			μR20000 2 pen recorder	
437103			μR20000 3 pen recorder	
437104			μR20000 4 pen recorder	
437106			μR20000 6 dot recorder	
437112			μR20000 12 dot recorder	
437118			μR20000 18 dot recorder	
437124			μR20000 24 dot recorder	
Language	-2		English/German 12 / French 12, degF & DST	
		/A1	Alarm output relay (2 contacts) 1	
		/A2	Alarm output relay (4 contacts) 1	
		/A3	Alarm output relay (6 contacts) 1	
		/A4	Alarm output relay (12 contacts) 1,2	
		/A5	Alarm output relay (24 contacts) 1, 3, 4	
		/BT1	Header printout	
		/C3	RS-422A/485 communication interface 5	
		/C7	Ethernet communication interface 5	
		/CC1	Calibration Correction	
		/EM1	SD memory card ⁶	
Option		/F1	FAIL/chart end detection and output 2,3	
		/H2	Clamped input terminal 7	
		/H3	Non-glare door glass	
/M		/H5[] ¹¹	Portable Type 10	
		/M1	Mathematical function	
		/N1	Cu10, Cu25 inputs	
		/N2	3 legs Isolated RTD 7,8	
		/N3	Expansion inputs 9	
		/P1	24V DC/AC Power Supply 10	
		/R1	Remote control (5 contacts)	

In the note Control's Contacts;

1: only one of /A1, /A2, /A3, /A4, /A5 can be selected, 2: /A4 and /F1 can not be specified together for pen model,

3: /A5 and /F1 can not be specified together, 4: /A5 can be specified only for dot model, 5: /C3 and /C7 can not be specified together, 6: /C3 and /EM1 can not be specified together, 7: /H2 and /N2 can not be specified together,

8: /N2 can be specified only for dot model, 9: 14 types inputs: Pt50 RTD, PR40-20, PLTINEL TC etc., 10: /H5[] and /P1 can not be specified together, 11: /H5[] (D-Power cord UL, CSA std, F-Power cord VB std, R-Power cord SAA std, J-Power cord BS std, H-Power cord GB std), 12: Available from firmware version R1.21

Model Code	Description	os
RXA10-01	RXA10 configuration software	Windows Vista/7/8/8.1
RXA10-02	RXA10 configuration software (With interface unit)	Windows Vista/7/8/8.1

<Notes on using the RXA10 Configuration Software>
When the /EM1 recorder option is specified, the interface unit supplied with the RXA10 Configuration Software cannot be used. If you need to use the RXA10 Configuration Software, specify the /C7 recorder option (Ethernet communication interface) and also purchase the RXA10-01.

Standard Accessories

Name		1 pen	2 pen	3 pen	4 pen	dot
Z-fold chart		1	1	1	1	1
6 color ribbon cassette		-	-	-	-	1
	Red	1	1	1	1	-
Disposable felt-pen	Green	_	1	1	1	-
cartridge	Blue	-	-	1	1	-
	Violet	-	-	-	1	-
Plotter pen Purple		1	1	1	1	-
SD memory card (1 GB, with the /EM1 option)		1	1	1	1	1
Mounting brackets		2	2	2	2	2
Operation manual		1	1	1	1	1

Spares/Optional Accessories

Name		Model Code (Parts No.)	Specification	
Z-fold chart for R10000		10000	B9565AW	10 (agles unit)
Z-IOIU CHAIL	for F	20000	B9573AN	10 (sales unit)
6 color ribbon	for F	10000	B9901AX	1 (agles unit)
cassette	for F	20000	B9906JA	1 (sales unit)
		Red	B9902AM	1 (sales unit, 3 piece/unit)
Disposable felt	-pen	Green	B9902AN	1 (sales unit, 3 piece/unit)
cartridge		Blue	B9902AP	1 (sales unit, 3 piece/unit)
		Violet	B9902AQ	1 (sales unit, 3 piece/unit)
Plotter pen	Plotter pen Purple		B9902AR	1 (sales unit, 3 piece/unit)
SD memory card (1GB)		773001	1 (sales unit)	
Mounting brackets		B9900BX	2 (sales unit)	
	(for screw input terminal)		415920	250 Ω ±0.1%
Shunt resistor			415921	100 Ω ±0.1%
			415922	10 Ω ±0.1%
	(for clamped input terminal)		438920	250 Ω ±0.1%
Shunt resistor			438921	100 Ω ±0.1%
			438922	10 Ω ±0.1%

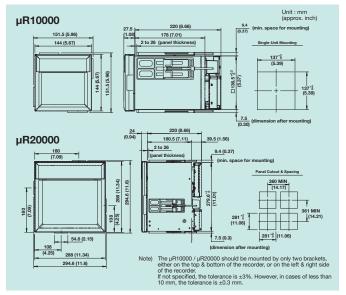


Disposable felt-pen, Plotter pen



6 color ribbon

Dimensions



NOTICE

- Before operating the product, read the instruction manual thoroughly for proper and safe operation.
- · If this product is for use with a system requiring safeguards that directly involve personnel safety, please contact the Yokogawa sales offices



KNOW

ACT

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.

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