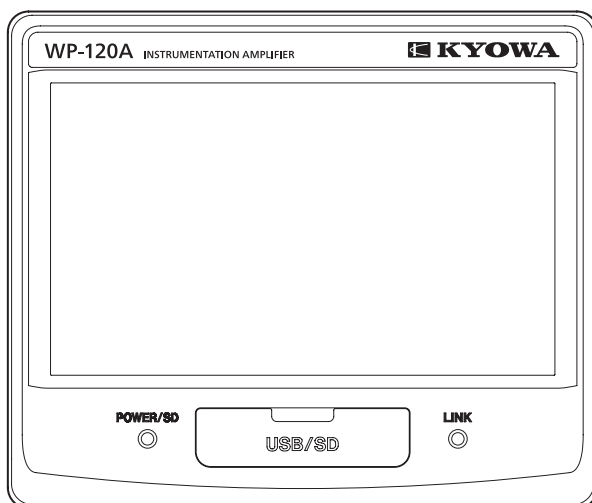




EtherNet/IP™ Instructions for Use

WP-120A-15

EtherNet/IP™



Introduction

Thank you for purchasing the WP-120A-15 Instrumentation Amplifier.

Please read this manual and the manual for the main unit completely before using them to get the best performance and ensure safe and proper operation.

Included accessories

No accessories are included with this product.

Disclaimers

Information is given about products in this manual only for the purpose of example and does not indicate any guarantees against infringements of third-party intellectual property rights and other rights related to them. We will bear no responsibility for infringements on third-party intellectual property rights or their occurrence because of the use of these products.

For information about EtherNet/IP™ communications, refer to dedicated documents about it, for example.

ATTENTION!

EtherNet/IP™ and USB/RS232C can be used for transmission with this unit. When using EtherNet/IP™ for control, however, discontinue control by USB/RS232C, and when using USB/RS232C for control, discontinue control by EtherNet/IP™. Operation cannot be guaranteed when controlled by both at the same time.

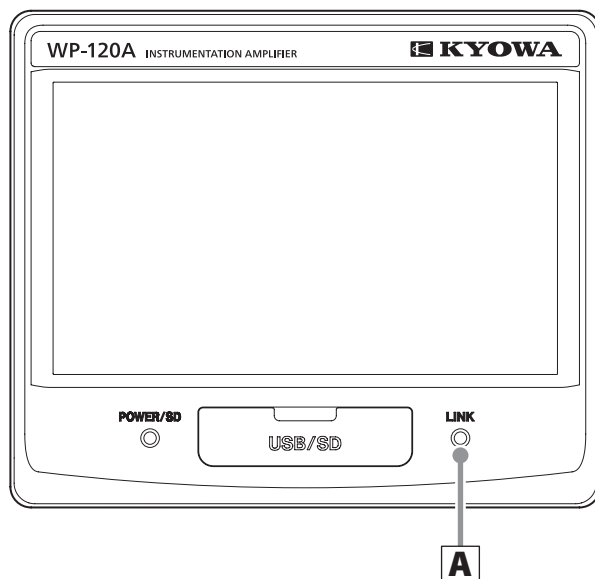
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1. Names and functions of parts

1-1. Front



A LINK indicator

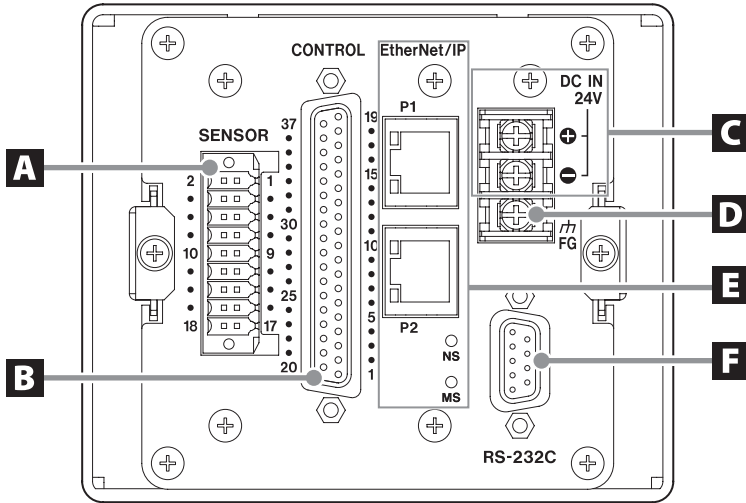
Unlit: No connection

Blinking: Waiting for connection

Lit: Connection established

Blinking rapidly: Connection error

1-2. Back



A SENSOR connector

Insert the included sensor connector plug here.

B CONTROL connector

C DC power supply input terminals

Connect a DC power supply.
The voltage range is DC 24 V $\pm$ 10%.

D FG (frame grounding) terminal

Frame grounding terminal for DC power supply.

⚠ Always be sure to connect the frame grounding terminal.

E EtherNet/IP

P1 connector

P2 connector

NS indicator

Unlit: Either no power supplied or IP address not set
Lit green: Online and connection established

Blinking green: Online but connection not established
Lit red: IP address is duplicated or fatal error
Blinking red: One or more connections have timed out (CIP Class 1 or 3)

MS indicator

Unlit: No power supplied
Lit green: Normal
Blinking green: Scanner is idle
Lit red: Malfunction or network trouble
Blinking red: Parameter error

NOTE

These are equipped on the EtherNet/IP™ model only.

F RS-232C connector

2. Communication functions

2-1. FIELD NETWORK

2-1-1.SETTINGS

To open the FIELD NETWORK screen, touch the buttons in the following order on the Home Screen.

⚙️ → CALIB. & SYSTEM → SYSTEM → FIELD NETWORK

SYSTEM

ESC HOME

DEVICE NUMBER 0000 DATE 2021-07-13 15:16

BEEP KEY TRIGGER OUTPUT SETTINGS

LCD BRIGHTNESS LEVEL 3

BACKLIGHT TIME 0 sec RESET TO FACTORY SETTINGS

EXT. START/STOP EDGE

SD CARD SERIAL COMM TEST & INFO FIELD NETWORK

FIELD NETWORK

ESC HOME

CONTROL INPUT CONT. TERMINAL

MEMORY CONTROL FORBID

CC-Link SETTINGS

EtherNet/IP SETTINGS

CONTROL INPUT

Select the device control method.
Only one method can be used for control.
Control terminal: Use external contact.
COMM. (Communication control): Use communication.

MEMORY CONTROL

Select the sensor number and work number switching method.
FORBID: Use control input signals.
ALLOW: Use communication.
(Work switching is only enabled when work number switching is set to external input in the work settings.)

EtherNet/IP

Ethernet settings

2-2. EtherNet/IP™

Refer to the following values for connection input/output settings.

Input settings

Instance ID: 100
Data size: 48-byte

Output settings

Instance ID: 150
Data size: 2-byte

2-2-1. Settings

To open the EtherNet/IP screen, touch the buttons in the following order on the Home Screen.

⚙️ → CALIB. & SYSTEM → SYSTEM → FIELD NETWORK
→ SETTINGS (next to "EtherNet/IP")

EtherNet/IP

ESC HOME

IP ADDRESS 192.168.0.10

SUBNET MASK 255.255.255.0

DHCP ENABLE

MAC ADDRESS 00-02-2E-E0-C0-07

The input items change according to the DHCP setting.

When DHCP is off

Set the following items.

IP ADDRESS
SUBNET MASK

When DHCP is on

Values for the following items will be set by DHCP. They cannot be input.

IP ADDRESS
SUBNET MASK

MAC

The MAC address of this unit will be shown.

ATTENTION!

Restart the unit after EtherNet/IP settings are changed.

2-3. Cyclic communication (implicit messages)

- Communication from a WP-120A-15 to a scanner will return indicator values and measurement results.
Data size is 24 words.
- Communication from a scanner to a WP-120A-15 will send control signals to start/stop measurement, for example.
Data size is 1 word.

Communication from a WP-120A-15 to a scanner

Input data (WP-120A-15 to scanner)

Word (16-bit)	Content	
0	Measurement status	
1	Current value	Current status
2		Load
3		Displacement
4		Load peak
5		Load bottom
6	Band judgment	Load
7		Time/displacement*
8		Result judgment
9	Zone 1	Load
10		Time/displacement*
11		Result judgment
12	Zone 2	Load
13		Time/displacement*
14		Result judgment
15	Zone 3	Load
16		Time/displacement*
17		Result judgment
18	Zone 4	Load
19		Time/displacement*
20		Result judgment
21	Zone 5	Load
22		Time/displacement*
23		Result judgment

*This depends on the X axis setting.

- The time unit is ms.

2. Communication functions

Measurement status

Bit	15	14	13	12	11	10	9	8
Setting	Measuring	Measurement complete	Trigger output		X axis displacement	Band judgment		
Status			2	1		HI	OK	LO

Bit	7	6	5	4	3	2	1	0
Setting	Overall displacement judgment				Overall load judgment			
Status	NG	HI	OK	LO	NG	HI	OK	LO

Current status

Bit	15	14	13	12	11	10	9	8
Setting	OVER/FULL	SD card error	Sensor number		Work number			
Status			bit1	bit0	bit3	bit2	bit1	bit0

Bit	7	6	5	4	3	2	1	0
Setting	Load decimal point position			Continuous load judgment				
Status	MSB		LSB	HH	HI	OK	LO	LL

Result judgment

Bit	15	14	13	12	11	10	9	8
Setting	Judgment method				Displacement judgment			
Status	MSB			LSB	NG	HI	OK	LO

Bit	7	6	5	4	3	2	1	0
Setting					Load judgment			
Status					NG	HI	OK	LO

Judgment method

0	Constant comparison
1	Sample
2	Peak
3	Bottom
4	Peak to peak
5	Average value
6	Maximum value
7	Minimum value
8	Inflection point

Load decimal point position

0	00000
1	0000.0
2	000.00
3	00.000
4	0.0000

Communication from a scanner to a WP-120A-15

Output data (scanner to WP-120A-15)

Bit	15	14	13	12	11	10	9	8
Setting	Clear peak/ bottom	Prevent touchscreen operation	Enable/ disable judg- ment output	Force back- light lighting	Switch zone	Reserved	Clear results (reset mea- surement results)	Start/stop measurement
Status								

Bit	7	6	5	4	3	2	1	0
Setting	Digital zero	Zero balance displacement	Switch sensor		Switch work			
Status			MSB	LSB	MSB			LSB

Clear peak/bottom

Clear peak and bottom load values.

Prevent touchscreen operation

Disable touchscreen operation while this is ON.

Enable/disable judgment output

Disable all judgment output while this is ON.

Force backlight lighting

Enable the backlight while this is ON.

Switch zone

This is enabled when ZONE SWITCHING is set to EXT. INPUT. While ON, it becomes zone. Switching is limited to zones that have zone judgment enabled.

Clear results (reset measurement results)

Judgment results are cleared at the moment this becomes ON.

All judgment output is turned OFF, and continuous judgment (CONTINUE) starts.

Start/stop measurement

When "MEASURE. START. COND." or "MEASURE. STOP.COND." is set to "EXT. SIGNAL" on the WORK settings screen, this controls starting and stopping measurement.

Select the control method with EXT. START/STOP.

When set to "EDGE", measurement will start or stop when it switches from OFF to ON.

When set to "LEVEL", measurement will start when it switches to ON and stop when it switches to OFF.

Digital Zero

Digital zero is executed at the moment this becomes ON.

Zero balance displacement

The displacement sensor is zero-balanced at the moment this becomes ON.

Switch sensor

Switch the sensor memory to the specified number.

ATTENTION!

To enable sensor switching, set MEMORY CONTROL to "ALLOW" (page 6).

Switch work

Use to switch to the specified work number.

WORK SWITCHING 1 is the LSB and WORK SWITCHING 8 is the MSB.

ATTENTION!

Make the following settings to enable work switching.

- CONTROL INPUT on the FIELD NETWORK settings screen: COMM.
- MEMORY CONTROL on the FIELD NETWORK settings screen: ALLOW
- WORK SWITCHING on the WORK settings screen: EXT. INPUT

2. Communication functions

2-4. Message communication (setting commands)

Parameters used by all commands

Read: Get Attribute Single (0Eh)

Write: Set Attribute Single (10h)

Class (Hex): 0A2h

Attribute: 05h

By designating each command number in an instance when communicating messages, the desired parameters can be read and written.

NOTE

If values other than parameters are set, they will be ignored.

System

Content	Command	Command No.	Byte	Parameter	Note
System	Device name	5010	16	"WP-120A "	ASCII
	Firmware version	5020	6	"x.xx "	ASCII
	Backlight setting (LCD BRIGHTNESS)	5301	1	0 to 3	
	Backlight time	5302	1	0 to 255	
	Language	5303	1	0: Japanese, 1: English, 2: Chinese, 3: Korean	
	Home Screen	5304	1	0: value display, 1: waveform display	
	OK counter	5410	4	100: Reset	64 in hexadecimal display
	NG counter	5411	4	100: Reset	64 in hexadecimal display
	Device number	5500	4		
	Beep	5501	1	0: OFF 1: KEY 2: KEY + JUDGE	
	External measurement signal mode (EXT. START/STOP)	5502	1	0: Edge, 1: Level	
Date & time setting	Format	5503	1	0: YYYY-MM-DD 1: DD-MM-YYYY 2: MM-DD-YYYY	
	Date & time setting	5506	6	YYMMDDHHMMSS(BCD)	For example, 14:20:30 on May 20, 2021 shown as 210520142030
Locking	Lock calibration values (CALIBRATION LOCK)	5201	1	0: Unlock, 1: Lock	
	Lock work (WORK LOCK)	5202	1	0: Unlock, 1: Lock	
	Lock all (ALL LOCK)	5203	1	0: Unlock, 1: Lock	
	Lock touchscreen	5204	1	0: Unlock, 1: Lock	
Internal memory	Save results (SAVING)	5400	1	0: NO 1: AUTO SAVE 2: SAVE ON ERROR	
	Overwrite (OVERWRITING)	5401	1	0: Forbid, 1: Allow	
	Delete all	5402	4	100: Execute	

2. Communication functions

Content	Command	Command No.	Byte	Parameter	Note
Trigger output 1	Output item	5510	1	0: None, 1: Load, 2: Displacement, 3: OK count, 4: NG count	
	Load output threshold (HI)	5511	4	±99999	
	Load output threshold (LO)	5512	4	±99999	
	Displacement output threshold (HI)	5513	4	±99999	
	Displacement output threshold (LO)	5514	4	±99999	
	OK count threshold	5515	4	0 to 99999	
	NG count threshold	5516	4	0 to 99999	
Trigger output 2	Output item	5520	1	0: None 1: Load 2: Displacement 3: OK count 4: NG count	
	Load output threshold (HI)	5521	4	±99999	
	Load output threshold (LO)	5522	4	±99999	
	Displacement output threshold (HI)	5523	4	±99999	
	Displacement output threshold (LO)	5524	4	±99999	
	OK count threshold	5525	4	0 to 99999	
	NG count threshold	5526	4	0 to 99999	
SD card	Automatic saving (AUTO SAVE)	5600	1	0: NO 1: AUTO SAVE 2: SAVE ON ERROR	
	Format	5601	1	1: Execute	
	Export settings	5602	1	1: Execute	
	Import settings	5603	1	1: Execute	
Serial communication (SERIAL COMM.)	Port selection	5700	1	0: Front USB (USB), 1: Back D-sub (D-SUB)	
	Communication mode	5702	1	0: TD format 1: TD format (BCC) 2: Continuous TX 3: Send results	
	Baud rate	5703	1	0: Reserved 1: 9600 2: 19200 3: 38400 4: 57600 5: 115200	
	Bit length	5704	1	0: 8-bit, 1: 7-bit	
	Parity bit	5705	1	0: No, 1: Odd, 2: Even	
	Stop bit	5706	1	0: 1-bit, 1: 2-bit	
	Delimiter	5707	1	0: CR+LF, 1: CR	

Field network

Content	Command No.	Byte	Parameter	Note
Control signal input (CONTROL INPUT)	5710	1	0: Control terminal (CONT. TERMINAL), 1: Communication control (COMM.)	
MEMORY CONTROL	5711	1	0: Forbid, 1: Allow	

2. Communication functions

Calibration

Content	Command	Command No.	Byte	Parameter	Note
Sensor	Sensor memory	1000	1	0: Sensor Memory 1, 1: Sensor Memory 2, 2: Sensor Memory 3, 3: Sensor Memory 4	
	Sampling	1006	1	0: 5 kHz, 1: 25 kHz	
	Y axis	1007	1	0: Load, 1: Load and displacement	
	X axis	1008	1	0: Time, 1: Displacement	
	X axis full scale	1009	1	0: 80 ms, 1: 170 ms, 2: 400 ms, 3: 800 ms, 4: 2.0 s, 5: 4.0 s, 6: 10.0 s, 7: 30.0 s, 8: 60.0 s, 9: 90.0 s	The definitions change according to the X axis setting (time/displacement).
	Unit shown setting	1401	1	0: None, 1: N, 2: kN, 3: kPa, 4: MPa, 5: g, 6: kg, 7: ton, 8: mNm, 9: Nm, 10: kNm, 11: dN, 12: Pa, 13: mBar, 14: Bar, 15: m/s ² , 16: Gal, 17: mm	
	Maximum display value (MAX. DISP. VALUE)	1404	4	1 to 99999	
	Sensor input logic	1405	1	0: Standard, 1: Reversed	
	Low-pass filter	2001	1	0: OFF, 1: 3 Hz, 2: 10 Hz, 3: 30 Hz, 4: 100 Hz, 5: 300 Hz, 6: 1000 Hz	
	Moving average number (MOVING AVG. NUM.)	2002	2	0: Disabled, 2 to 2048: Moving average number	
	Automatic digital filter (AUTO DIGITAL FILTER)	2003	1	0: OFF, 1: ON	
	Digital zero limit (D/Z LIMIT SETTING)	2302	4	00000 to 99999	
	Digital offset	2303	4	±19999	
Load cell	Bridge voltage	1001	1	0: 2.5 V, 1: 5 V, 2: 10 V	
	Load decimal point position	1002	1	0: None, 1: 0.0, 2: 0.00 3: 0.000, 4: 0.0000	
	Zero point input calibration	1003	4	−3100 to +3100, (−3.100 to 3.100 mV/V)	
	Zero balancing	1004	1	1: Execute	
	Remote sensing	1005	1	0: Unused, 1: Used	
	Reset zero balancing	1100	1	1: Execute	
	Rated output value (RATED OUTPUT)	1101	4	100 to 3200, (0.100 to 3.200 mV/V)	
	Rated capacity value (equivalent input)	1102	4	1 to 99999	
	Rated capacity value (actual load)	1103	4	1 to 99999	
	TEDS calibration (TEDS CALIB.)	1104	1	1: Execute	

2. Communication functions

Content	Command	Command No.	Byte	Parameter	Note
Linearization	Enable/disable linearization	1200	1	0: Disabled, 1: Enabled	
	Select linearization point	1201	1	1 to 5	The point designated by this can be changed with the following commands.
	Selection point enabled/disabled	1202	1	0: Disabled, 1: Enabled	
	Sensor output value for calibration point	1203	4	4-digit sensor output value (no decimal) (0 < setting value < rated output value)	Setting this value will calculate the load value from the current calibration value and make it the default output load value for the calibration point.
	Output load value for calibration point (equivalent input)	1204	4	±99999	An error will result if the difference with the default value is 5% or more.
	Output load value for calibration point (actual load input)	1205	4	±99999	
D/A	D/A output setting	1301	1	0: Voltage, 1: Current	
	D/A max. voltage	1302	1	1 to 10	
	D/A Zero	1303	4	±99999	
	D/A full scale	1304	4	±99999	
TEDS sensor	Serial number	6001	4		BCD
	Maximum rated capacity	6002	4		BCD (highest byte is decimal point position)
	Maximum rated output	6003	4		BCD (highest byte is decimal point position)
	Sensor impedance	6004	4		BCD (highest byte is decimal point position)
	Max. excitation level	6005	4		BCD (highest byte is decimal point position)
	Calibration date (CAL. DATE)	6006	4		BCD
	Model number	6007	2		BCD
Displacement sensor	Reset zero balancing (voltage)	1500	1	1: Execute	
	Unit shown	1501	1	1: µm, 2: mm, 3: cm, 4: m, 5: rad, 6: deg, 0: None	
	Input mode	1502	1	0: Pulse, 1: Voltage	
	Sensor input logic	1503	1	0: Standard, 1: Reversed	
	Zero balancing	1504	1	1: Execute	
	Displacement decimal point position	1505	1	0: None, 1: 0.0, 2: 0.00 3: 0.000, 4: 0.0000	

2. Communication functions

Content	Command	Command No.	Byte	Parameter	Note
Pulse displacement sensor	Count number (higher 2 digits)	1600	4	Higher 2 digits (0–15)	Always set from higher.
	Count number (lower 6 digits)	1601	4	Lower 6 digits (000000 to 999999)	1–15000000 range with higher
	Display value (equivalent input)	1602	4	00001 to 99999	
	Display value (actual load)	1603	4	00001 to 99999	
	Zero position	1604	4	±99999	
	Moving average number (MOVING AVG. NUM.)	1605	2	0: Disabled, 2 to 2048: Moving average number	
	Output phase (AB, A)	1606	1	0: AB phase, 1: A phase	
Voltage displacement sensor	Rated output	1610	4	0.100 to 5.200 V	
	Display value (equivalent input)	1612	4	00001 to 99999	
	Display value (actual load)	1613	4	00001 to 99999	
	Zero position	1614	4	±99999	
	Moving average number (MOVING AVG. NUM.)	1615	2	0: Disabled, 2 to 2048: Moving average number	
	Low-pass filter	1616	1	0: 10 Hz, 1: 30 Hz, 2: 100 Hz, 3: 300 Hz	

Work

Content	Command	Command No.	Byte	Parameter	Note
Work	Work number	7000	1	1 to 16 (enabled only during manual selection)	
	Switch work (WORK SWITCHING)	7001	1	0: Manually, 1: External input (EXT. INPUT)	
	Copy work	7002	1	0: All, 1–16: Work number	
Measurement trigger	Measurement starting condition	7003	1	0: EXT. SIGNAL, 1: EXT. & LOAD, 2: EXT. & DISP, 3: LOAD ↑, 4: LOAD ↓, 5: DISPLACE. ↑, 6: DISPLACE. ↓	
	Measurement starting level	7004	4	±99999	
	Measurement stopping condition	7005	1	0: EXT. SIGNAL, 1: EXT. or LOAD (EXT. LOAD), 2: EXT. or DISP (EXT. DISP), 3: EXT. or TIME (EXT. TIME)	
	Measurement stopping level	7006	4	±99999	
Continuous judgment	Enable HHLL (HH/LL ON)	7010	1	0: Disabled, 1: Enabled	
	HH	7011	4	±99999	
	HI	7012	4	±99999	
	LO	7013	4	±99999	
	LL	7014	4	±99999	
Band judgment	Enable/Disable waveform comparison (WAVEFORM COMP)	7100	1	0: Disabled, 1: Enabled	If no reference waveform has been set, it will not become enabled.
Zone judgment	Zone switching	7101	1	0: Preset, 1: External input	
	Indicator value display (INDICATOR VALUE)	7102	1	0: Input value, 1 to 5: Zone number	

2. Communication functions

Content	Command	Command No.	Byte	Parameter	Note
Zone settings	Set zone number	7200	1	1 to 5 (resets to 1 when power turned on/off)	The zone set by this can be changed with the following commands.
	Enable zone	7201	1	0: Disabled, 1: Enabled	
	Zone range starting point	7202	4	0 to 99999	
	Zone range ending point	7203	4	0 to 99999	
	Load high limit (HI)	7204	4	±99999	
	Load low limit (LO)	7205	4	±99999	
	Displacement high limit (HI)	7206	4	0 to 99999	This can be set when the X axis is set to displacement.
	Displacement low limit (LO)	7207	4	0 to 99999	
	Judgment method	7208	1	0: Constant comparison, 1: Sample, 2: Peak, 3: Bottom, 4: Peak-to-peak, 5: Average value, 6: Maximum, 7: Minimum, 8: Inflection point	
Maximum/ minimum	Load difference (LOAD DIF.)	7211	4	±99999	
	Scaling factor	7212	1	00 to 99 (input without decimal point) (0.0 to 9.9)	Values higher than 9.9 automatically rounded to 9.9.
	Number of detections (COUNT)	7213	1	1 to 10	Values higher than 10 automatically rounded to 10.
Inflection point (INFLECTION)	Detection starting load (STARTING LOAD)	7220	4	±99999	
	Detection extent A (WIDTH A)	7221	4	1 to 9999	
	Detection extent B (WIDTH B)	7222	4	1 to 9999	
	Load difference (LOAD DIF.)	7223	4	±99999	
	Offset extent (OFFSET)	7224	4	0 to 99	

Message communication (measurement data commands)

Content	Command	Command No.	Service	Transmitted data (in word* units)					
Zone display	Zone 1	300	R	Start pos	End pos	Load(Lo)	Load(Hi)	Disp(Lo)	Disp(Hi)
	Zone 2	301	R	Start pos	End pos	Load(Lo)	Load(Hi)	Disp(Lo)	Disp(Hi)
	Zone 3	302	R	Start pos	End pos	Load(Lo)	Load(Hi)	Disp(Lo)	Disp(Hi)
	Zone 4	303	R	Start pos	End pos	Load(Lo)	Load(Hi)	Disp(Lo)	Disp(Hi)
	Zone 5	304	R	Start pos	End pos	Load(Lo)	Load(Hi)	Disp(Lo)	Disp(Hi)
Measurement waveform	Measurement range	305	R	Start pos	End pos				
	Load measurement waveform (load)	310 to 319	R	1 block = 224 words* (10 blocks total)					
	Load measurement waveform (displacement)	320 to 329	R	1 block = 224 words* (10 blocks total)					
	Load measurement time	330 to 339	R	1 block = 224 words* (10 blocks total)					
Band waveform	Band waveform range	306	R/W	Start pos	End pos				
	Load band waveform (low limit)	350 to 359	R/W	1 block = 224 words* (10 blocks total)					
	Load band waveform (high limit)	360 to 369	R/W	1 block = 224 words* (10 blocks total)					

- Start pos and End pos units are not physical units. They are dot positions on the X axis. Values are in the image range (0–2239) on the X axis.

*1 word is 2 bytes (little-endian)

2. Communication functions

Transmission of measurement and band waveforms

The maximum amount of data is 2240 for measurement and band waveforms.
To send data, divide all data into 10 parts, and send 224 data with a single command number.
Use measurement range (305) and band waveform range (306) commands, and look up necessary data ranges.

Waveform data

Excluding decimal points, send indicator values as 2-byte binary data for each single data unit.
Look up the decimal point position with load decimal point position (1002) and displacement decimal point position (1505).

Command No.

Transmitted data blocks are designated by the lowest digit of each load waveform command.

- xx0 : Data from 0 to 223 (block 1)
- xx1 : Data from 224 to 447 (block 2)
- :
- xx9 : Data from 2016 to 2239 (block 10)

Data transmission example

Load measurement waveform (load) (310) response example

Byte	0	1	2	3	4	5	...	444	445	446	447
HEX											
ASCII	x	x	x	x	x	x		x	x	x	x
Load value (not including decimal point)							Load value (not including decimal point)				

Common error codes

Error code	Content
0x05	The path designation is unknown (Class, Instance).
0x08	The service is not supported.
0x0E	The attribute cannot be set.
0x10	The currently requested service cannot be executed.
0x13	The data quantity is insufficient.
0x15	The data quantity is excessive.
0x2C	The attribute cannot be acquired.

3-1. Setting value list

Item	Setting	Format	Default value	Setting range/options
FIELD NETWORK	CONTROL INPUT	Selection	CONT. TERMINAL	CONT. TERMINAL, COMM.
	MEMORY CONTROL	Selection	FORBID	FORBID, ALLOW
EtherNet/IP	IP ADDRESS	Input	192.168.0.10	0.0.0.0 to 255.255.255.255
	SUBNET MASK	Input	255.255.255.0	0.0.0.0 to 255.255.255.255
	DHCP	Selection	ENABLE	ENABLE, DISABLE

ATTENTION!

Conducting an operation with the screen, including starting/stopping measurement and switching sensors or work memories, at the same time that an operation is executed by communication could cause unpredictable malfunction. For this reason, we recommend prohibiting making changes on screen during communication.

3-2. Serial communication (SERIAL COMM.)

Read the unit operation manual for details about serial communication protocol.

3-2-1. Field network

Content	Command No.	Default value	Setting item	Note
Control signal input	5710	0: Control terminal (CONT. TERMINAL)	0: Control terminal (CONT. TERMINAL), 1: Communication control (COMM.)	
Memory control	5711	0: Forbid	0: Forbid, 1: Allow	

3-2-2. EtherNet/IP™

Content	Command No.	Default value	Setting item	Note
DHCP	5720	1: Enabled	0: Disable, 1: Enabled	We recommend turning the power off and on again after changing this setting.
IP address	5721	192.168.0.10	000:000:000:000 to 255:255:255:255	Transmit 12 ASCII characters
Subnet mask	5722	255.255.255.0	000:000:000:000 to 255:255:255:255	Transmit 12 ASCII characters

ATTENTION!

Restart the unit after EtherNet/IP settings are changed.

NOTE

“Field network” and “EtherNet/IP” setting commands will be disabled if the corresponding options are not installed.

4. Specifications

EtherNet/IP™ communication specifications

Transmission type	10BASE-T/100BASE-TX
Transmission speed	10/100 Mbps
Communication distance	100 m or less between nodes
Transmission cable	Category 5/5e STP cable
Topology	Star, line, tree
Maximum number of connected units	No limit

General

Weight About 1,040 g

- Specifications and appearance are subject to change without notice.
- Weight and dimensions are approximate.
- Illustrations in this manual might differ slightly from production models.

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