

A Caution

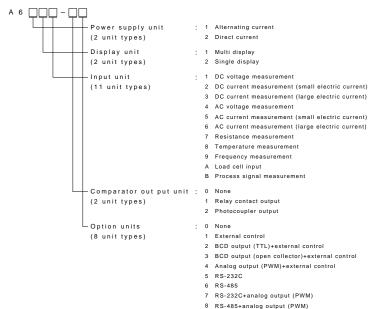
- Applying a voltage or current exceeding its maximum permissible value may cause the unit to be damaged. Always use the unit within the specified voltage range; otherwise, it may cause a fire, electric (1)
- (2)
- shock or personal/equipment damage. For the purpose of functional improvement, the information written herein may be changed (3) without prior notice.
- Information contained herein is considered accurate to the best of our knowledge. If you have (4) any question or comment on the information, please contact us or our distributo (5)
- Read this manual carefully and thoroughly before starting to operate the unit, and keep the manual available for future reference.

1 Before Using the Unit

Thank you for purchasing our quality designed and manufactured A6000 Series. Before unpacking the unit, check for damages during transportation. If you have noticed any damage, directly contact us or our distributor.

1.1 Type Identification

Each model number of the A6000 series has its general specifications, and the following describes each note and the meaning. Before using the unit, check that the model number and specifications of the delivered unit match those of the product you ordered. For optional units, see the separate instruction Manuals.



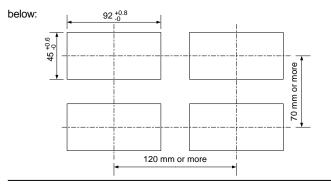
1.2 Accessories

Accessory	Quantity	Remarks
6-p terminal cover	2 or 3 each	2 without a comparator output 3 with a comparator output
Mounting band	2 pieces	
Unit indication label	1 each	

Mounting Method 2

Panel Cut Size 2.1

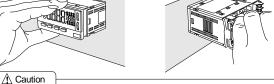
Cut the panel to mount the A6000 series in accordance with the illustration



2.2 How to Mount the Unit on the Panel

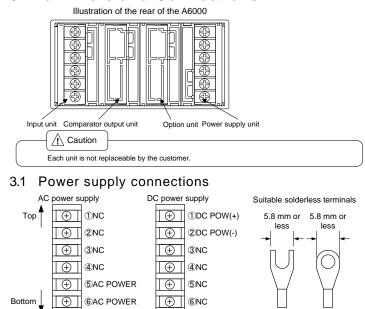
Mount the A6000 series to the panel in accordance with the illustration

below: (1) Remove the mounting band and insert the case (2) Fix the case using the mounting band from the from the front of the panel rear of the panel

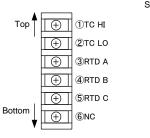


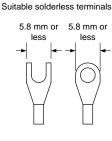
- (1) The recommended panel thickness is 0.8 to 5mm
- (i) The recommended parter thickness is 0.5 to 5000 minit.
 (2) Do not install the unit in locations where it is exposed to direct sunlight; where ambient emperature or humidity doesn't meet the requirements below; or where a drastic change in temperature may ause condensation. Ambient temperature: 0 to 50°C Ambient temperature: 0 to 50°C
 (3) Do not install the unit where it is exposed to dust, particles, chemicals harmful to electric components, corrosive gases, etc.
- (4) When this unit is installed inside other equipment, pay attention to the heat radiation and keep the heat inside the equipment 50°C or below.
- (5) Do not install the unit where it is exposed to excessive vibration or shock.
- (6) Install the unit horizontally; otherwise, ventilation will be adversely affected and may result in deterioration.

3 Terminals and Connections

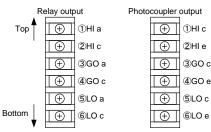


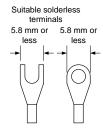
3.2 Input Signal Connections





3.3 **Comparator Output Connections**





3.4 Option connections

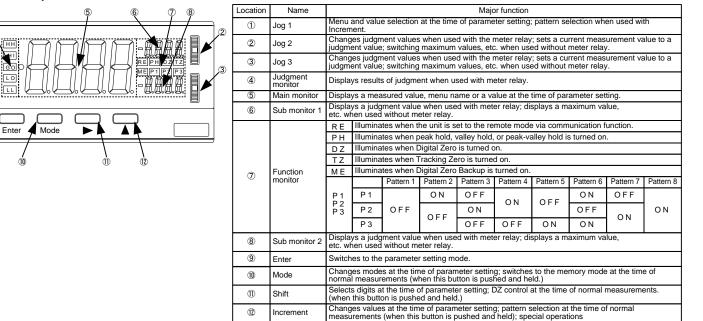
For connections of the options, see separate optional function instruction Manuals.

4 Parameter Settings

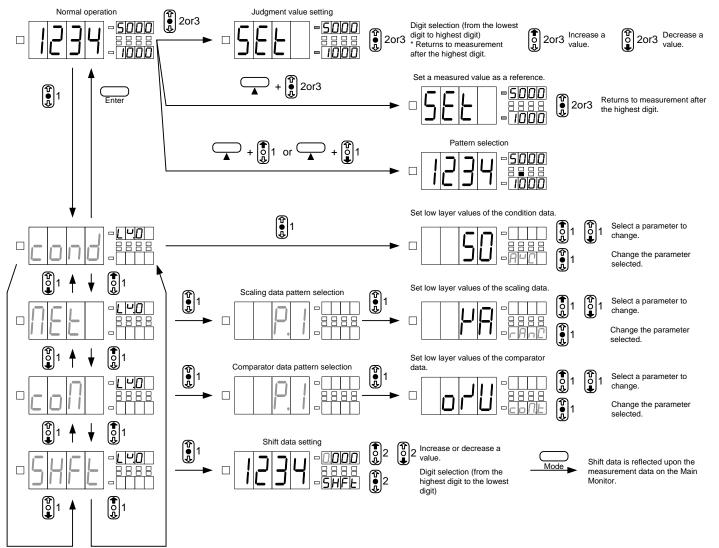
4.1 Multi Display Unit

1

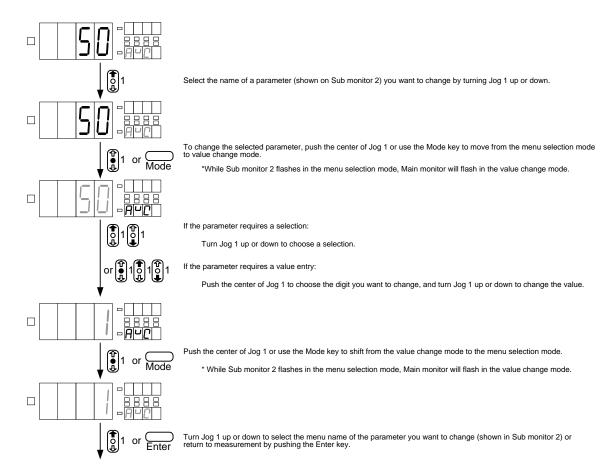
Names and major functions



Operation procedure diagram



How to set a low layer value (Condition data/scaling data/comparator data)

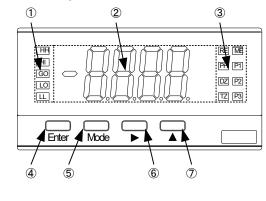


Remarks:

%The multi display unit can also follow the operation procedure of the single display unit operation system.
%Comparator judgment values can be set not only from Jog 2 and Jog 3 but also from the low layers of the comparator data.
%For operation procedures in the memory mode (maximum value/minimum value/(maximum value-minimum value)), see the operation procedure diagram of the single display unit.

4.2 Single Display Unit

Names and major functions



Location	Name		Major function								
1	Judgment monitor	Displa	Displays judgment results when used with meter relay.								
2	Main monitor	Displa	iys a	measured	value as w	ell as menu	i names ar	nd values a	t the time o	of paramete	er setting.
		RE	Illuminates when the unit is set to the remote mode via communication function.								
		PH	Illur	ninates wh	en peak ho	old, valley h	old, or pea	ak-valley ho	old is turne	d on.	
		DZ	Illur	ninates wh	en Digital 2	Zero is turn	ed on.				
		ΤZ	Illur	ninates wh	en Trackin	g Zero is tu	irned on.				
3	Function monitor	ME	Illur	ninates wh	en Digital 2	Zero Backu	p is turned	l on.			
				Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7	Pattern 8
		P1	P1	(ON	OFF	0.1	OFF	ON	OFF	ON
		P2 P3	Ρ2	OFF	OFF	ON	ON		OFF		
			Ρ3	1	UFF	OFF	OFF	ON	ON	ON	
4	Enter	Switch	nes to	the param	neter setting	g mode.					
5	Mode	Chang	ges m al mea	odes at the	e time of pa s (when this	arameter se s button is	etting; swite oushed an	ches to the d held.)	memory m	node at the	time of
6	Shift	Selec (when	Selects digits at the time of parameter setting; DZ control at the time of normal measurements. (when this button is pushed and held.)								
Ø	Increment					neter setting d) ; special o		ection at the	time of nor	mal measur	ements

&

Mode

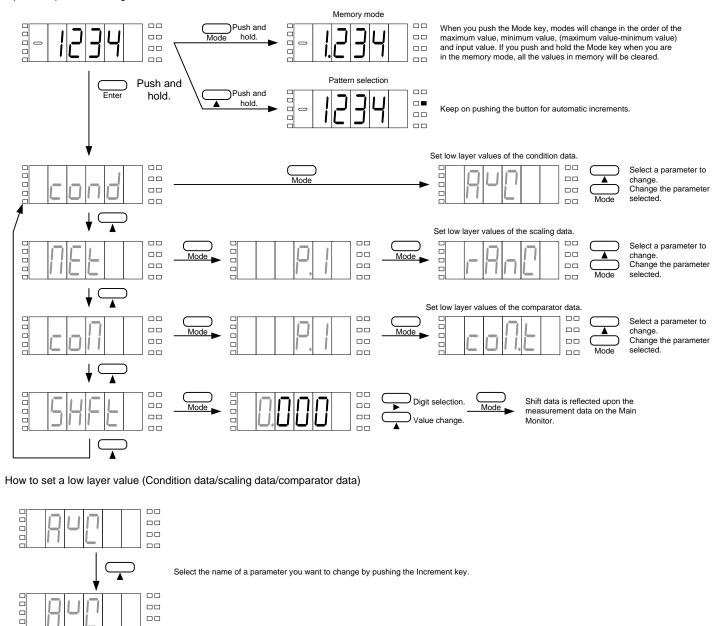
C

or

C Mode

C

Operation procedure diagram



4/8

Use the Shift key to choose the digit you want to change, and push the Increment key to set the value.

To change the selected parameter, use the Mode key to move from the menu selection mode to the value change mode.

Use the Mode key to shift from the value change mode to the menu selection mode.

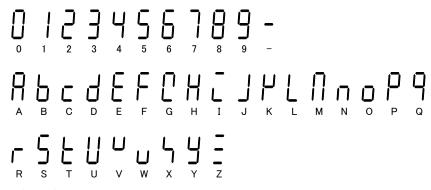
If the parameter requires a selection:

If the parameter requires a value entry:

Use the Increment key to choose a selection.

O or C Use the Increment key to select the menu name of the parameter you want to change or return to measurement by pushing the Enter key.

4.3 Numeric and Character Indications



4.4 Protection Levels

Each parameter of the A6000 has an individual protection level, and by setting the protection level of the condition data, you can set an access level. (For the protect level of each parameter, see the P.L. column of the tables in Section 4.5.)

The higher the protection level is, the less the number of settable parameters will be. If you set the protection level to the strictest LV3, you can change the protection level only, and all the other parameters may not be changed. (No comparator judgment value can be changed using the jog switches in this case.) *The protection level set at the time of shipment is LV1. (Settings of display colors, scaling and judgment-related values only are available.)

4.5 List of the Parameters

4.5.1 Condition Data

Menu indicatio	Parameter name	Initial value	P.L.	Setting range or alternatives	Major setting purpose and remarks
AVG	Average times	50	0	50/100/200/400/800/100 0/2000/5000	Selects Conversion rate (average times of internal sampling; sampling time: approx. 1 millisecond)
MAV	Average times of movements	1	0	1/2/4/8/16/32	Selects the average times of movements.Filtering effects: Small<1(OFF)-2-4-8-16-32>Big
S.WD	Step wide	1	0	1/2/5/10	Selects the range of display changes to maintain image display consistency. (If this parameter is set to 5, the lowest digit will display either 0 or 5 only).
CLR	Display color	RED	1	RED/GREEN	Selects display colors.*Only when without meter relay.
CLR.T	Display color type	AUTO	1	AUTO/MANU	Selects automatic (red in the HI or LO mode or green in the GO mode) or manual setting for display color type. *Only when with meter relay.
HI.CL	HI display color	RED	1	RED/GREEN	Selects red or green as display color at the time of HI judgment.*Only when CLR.T is MANU.
GO.CL	GO display color	GREN	1	RED/GREEN	Selects red or green as display color at the time of GO judgment.*Only when CLR.T is MANU.
LO.CL	LO display color	RED	1	RED/GREEN	Selects red or green as display color at the time of LO judgment.*Only when CLR.T is MANU.
BLNK	Display blank level	OFF	0	OFF/LV1/LV2/LV3/ON	Selects the display brightness. <bright off-lv1-lv2-lv3-on="">turned off</bright>
J.SW	Jog SW	ON	0	ON/OFF	Selects whether the jog SW is used or not.*With the multi display unit only.
PVH	PH Selection	PH	0	PH/VH/PVH	Selects a type that operates when the PH function is turned on (peak hold/valley hold/peak-valley hold).
DZ.BU	DZ backup	OFF	0	OFF/ON	Selects whether the digital zero value is backed up or not at the time when the unit is turned off.
ΡS	P.SEL	1	0	1/2/4/8	Selects the number of patterns available for the pattern selection function.
TR.T	TZ time	000	0	000 to 999	Selects whether the tracking zero function is enabled/disabled and sets the correction time (setup value/conversion rate).
TR.W	TZ correction range	01	0	01 to 99	Sets the correction range of the tracking zero function.*Only when TR.T is set to a value other than 000.
P.ON	Power on delay time	0	0	0 to 9	Sets the time between the startup and actual start of measurements (setup value x 1 second).
PRO	Protection level	LV.1	3	Lv.0/LV.1/LV.2/LV.3	Selects the protection level to prevent operation mistakes. High< LV3-LV2-LV1-LV0 >Low
U-NO.	Unit number indication	OFF	0	OFF/ON	Selects whether the code of a unit mounted at the time of startup is displayed or not.
PVH.T	PH type	А	0	A/B	Selects an operation type of peak hold (A: real-time display; B: results display).*Only with the external control.
DZ.C	DZ control	SW	0	SW/TERM	Selects a control method of Digital Zero (SW: front key; TERM: external control terminal).*Only with the external control.
PS.C	P.SEL control	SW	0	SW/TERM	Selects a control method of Pattern Selection (SW: front key; TERM: external control terminal).*Only with the external control.
BCD.L	BCD logic	N.LOG	0	N.LOG/P.LOG	Selects the BCD output logic (N: negative logic; P: positive logic).*Only when the BCD output is available.
BAUD	Baud rate	9600	1	2400/4800/9600/19200/3 8400	Sets a baud rate for communication.*Only when the communication function is available.
DATA	Data length	7	1	7/8	Selects the data length for communication.*Only when the communication function is available.
P.BIT	Parity bit	E	1	E/O/N	Selects the parity bit for communication.*Only when the communication function is available.
STP.B	Stop bit	2	1	1/2	Selects the stop bit for communication.*Only when the communication function is available.
T -	Delimiter	CR.LF	1	CR.LF/CR	Selects a delimiter for communication.*Only when the communication function is available.
ADR	Equipment ID	01	1	01 to 99	Selects the equipment ID for the RS-485 function.*Only when the RS-485 function is available.

%Start/hold is applocable to type "A" only in temperature input units.
%Start/hold delay time cannot be set in temperature input units.

4.5.2 Scaling Data

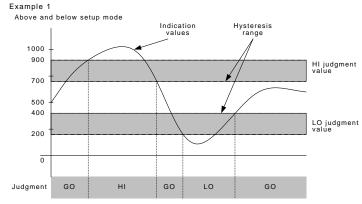
Menu indication	Parameter name	Initial value	P.L.	Setting range or alternatives	Major setting purpose and remarks
RANG	Input range	KA	1	KA/KB/J/T/S/R/B PA/JPA/PB/JPB	Selects an input range. *Note that input terminals vary depending on the actual input range.
DLHI	Digital limiter HI	9999	0	-9999 to +9999	Sets the upper limit of the displayable range. (Any value equal to or exceeding the digital limiter HI setting will not be updated and kept at the setup value.
DLLO	Digital limiter LO	-9999	0	-9999 to +9999	Sets the lower limit of the displayable range. (Any value equal to or below the digital limiter LO setting will not be updated and kept at the setup value.
A.OUT	Analog output type	0-1	1	0-1/0-10/1-5/4-20	Selects an analog output range.*Only when the analog output is available.
AOHI	Analog output HI	9999	1	-9999 to +9999	Sets the relationship between indications and analog outputs.*Only when the analog output is available.
AOLO	Analog output LO	0	1	-9999 to +9999	
UNIT	Unit of temperature indication	С	1	C/F	Unit of temperature indications is set.

4.5.3 Comparator Data (for meter relay only)

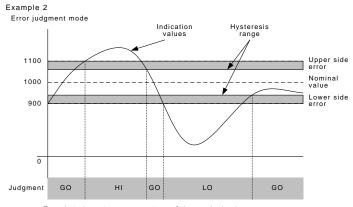
Menu indication	Parameter name	Initial value	P.L.	Setting range or alternatives	Major setting purpose and remarks
COM.T	Comparator output type	O/U	1	O/U/ERR	Select either [above or below] or error comparator types.
HI-S	Hl judgment value	1000	2	-9999 to +9999	Sets a HI judgment value.*Only when COM.T is O/U.
LO-S	LO judgment value	500	2	-9999 to +9999	Sets a LO judgment value.*Only when COM.T is O/U.
N.VAL	Nominal value	5000	2	-9999 to +9999	Sets a nominal value.*Only when COM.T is ERR.
ERR1	Error 1	5.00	2	0.00 to 99.99	Sets an error.*Only when COM.T is ERR.
HI-H	HI hysteresis	0	1	0 to +999	Sets a HI hysteresis value *Only when COM T is O/U.
LO-H	LO hysteresis	0	1	0 to +999	Sets a LO hysteresis value *Only when COM.T is O/U.
ER1.H	Error 1 hysteresis	1	1	0 to +999	Sets an error hysteresis *Only when COM.T is ERR.
HI-L	HI logic	N.O	0	N.O/N.C	Sets a HI output logic (N.O.=normally open or N.C.=normally closed)*Output when the power is OFF is always open (OFF).
GO-L	GO logic	N.O	0	N.O/N.C	Sets a GO output logic (N.O.=normally open or N.C.=normally closed)*Output when the power is OFF is always open (OFF).
LO-L	LO logic	N.O	0	N.O/N.C	Sets a LO output logic (N.O.=normally open or N.C.=normally closed)*Output when the power is OFF is always open (OFF).

5 Setting Examples

5.1 Comparator Data Setting Examples (for meter relay only)



The hysteresis is effective either in the range lower than the HI judgment value or that higher than the LO judgment value.



 $\hfill\square$ Error is to be set as a percentage of the nominal value.

 $\hfill\square$ The hysteresis is to be set as xx digits of the indication value.

□ The hysteresis is effective either in the range lower than the upper side error or that higher than the lower side error.

6 Specifications and External Dimensions

6.1 Input Specifications

 Tempera 	ture measurer	nents		
Range	Sensor	Measurement range	Error	Cold junction compensation error (10 to 40°C)
KA	к	-50.0 to + 199.9 °C	±(0.5% of FS)	
KB	ĸ	-50 to + 1200 °C	±(0.2% of FS)	
J	J	-50 to + 1000 °C	±(0.2% 01F3)	
т	т	-50 to + 400 °C	±(0.6% of FS)	±2°C
S	S	0 to + 1700 °C		
R	R	-10 to + 1700 °C	±(0.4% of FS)	
В	В	100 to 1800 °C		
PA	Pt100 Ω	-100.0 to + 199.9 °C	±(0.15% of FS)	
JPA	JPt100Ω	-100.0 t0 + 199.9 C	±(0.15%00F3)	
PB	Pt100 Ω	-100 to + 600 °C	±(0.3% of FS)	
JPB	JPt100Ω	-100 10 + 600 °C	±(0.3% 01F3)	
Sampli	ng rate :	RTD : Approx. 10 times/sec	max. (The sampling	speed is half of the configured.)

RTD : Approx. 10 times/sec max. (The sampling speed is half of the configured.) TC : Approx. 5 times/sec max. (The sampling speed is quarter of the configured.)

Caution

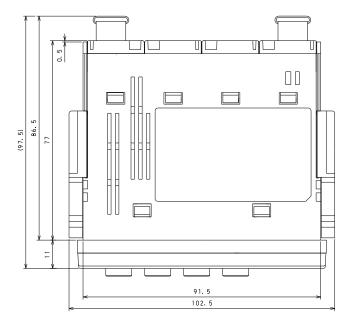
"ERR1" may be indicated immediately after the power is turned on or immediately after the range is switched. This is not an abnormal occurrence, because it is caused by the zero-contact compensation circuit becoming temporarily unstable. The product will automatically recover after several samplings.
 (2) If indications fluctuate heavily, decrease the sampling speed.

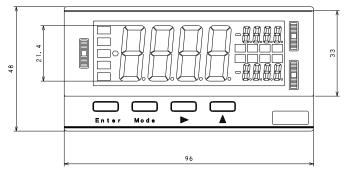
6.2 General Specifications

	•
Display	: Multi display Main display: Red/green 7-segment display (character height: approx. 20 mm) Sub display: Red 7-segment display (character height: approx. 6 mm) Single display Red/green 7-segment display (character height: approx. 20 mm)
Display range	: -9999 to 9999
Operational temperature	: 0 to 50°C 35 to 85%RH
Storage temperature	: -10 to 70 °C; 60%RH or less
Power supply	: AC PS
	AC 100 to 240V±10% DC PS
	DC PS DC 12 to 48V±10%
Power consumption	: AC PS
Tower consumption	Maximum load: Approx. 8 VA at 100 VAC
	DC PS
	Maximum load: Approx. 7 W at 24 VDC
External dimension	: 48 mm (H) x 96 mm (W) x 97.5 mm (with no DX option unit mounted)
Weight	: Approx. 450g
Withstand voltage	<pre>: AC PS PS-input, output: 1,500 VAC, 1 minute (AC PS) Input-output: 500 VDC, 1 minute Output-output: 500 VDC, 1 minute Case-PS, input, output: 1,500 VAC, 1 minute DC PS PS-input, output: 500 VDC, 1 minute (DC PS) Input-output: 500 VDC, 1 minute Output-output: 500 VDC, 1 minute Case-PS, input, output: 1,500 VAC, 1 minute</pre>
Insulation	AC PS
resistance	Among the above terminals: 500 VDC 100 M Ω or more
	DC PS Among the above terminals: 500 VDC 100 MΩ or more
A Caution	



6.3 External Dimensions





7 Warranty and Service

7.1 Warranty

The manufacturer warrants to the original retail customer its A6000 series universal digital panel meter to be free of defects in material and workmanship for use under normal care and will repair or replace any meter at no charge to the customer during the one (1) year warranty period of the meter.

7.2 After Sales Service

Under strict quality control measures, this product was manufactured,

tested, inspected and shipped. Should a defect in manufacture or workmanship be identified, please return the product to our distributor or

directly to us. It would be highly appreciated if you could give a detailed

account of the fault and enclose it with the product.

watanabe

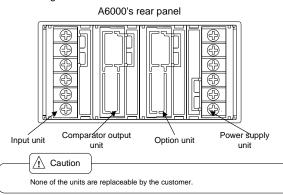
WATANABE ELECTRIC INDUSTRY CO., LTD.

Instruction Manual for A6000 Series Universal Digital Panel Meters

External Control Unit

1 Before Using the Unit

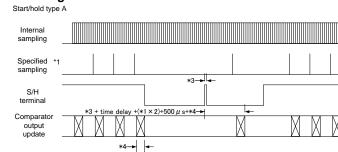
This instruction manual is for the external control unit of the A6000 series. Read this manual along with the main unit's instruction manual before using the unit.



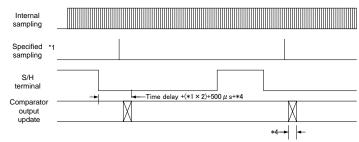
2 Terminals and Connections

	Top ① ① ① ② ② PH ③ ③ DZ ③ DZ ④ ④ ③ DZ ④ ④ RESET ⑤ ⑤ ⑤ P.SEL1 ⑦ P.SEL2 ⑤ ⑥ ⑧ NC ⑨ ⑨ ⑨ ⑧ NC ⑨ ⑨ Bottom ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Terminal	Function
S/H	"Start/hold" control terminal. The "hold" state is turned on when this terminal is at the same potential as the COM terminal or short-circuited.
PH	"Peak hold" control terminal. The peak hold function is turned on when this terminal is at the same potential as the COM terminal or short-circuited.
DZ	*Digital zero* control terminal. The digital zero function is turned on when this terminal is at the same potential as the COM terminal or short-circuited. This setting is valid only when the external control terminal is selected as the control method for digital zero using condition data.
R.RESET	"Relay reset control terminal. The relay reset function is turned on (only for the meter relay) when this terminal is at the same potential as the COM terminal or short-circuited.
P.SEL0 P.SEL1 P.SEL2	*Pattern selection* control terminals. Patterns can be selected by setting these terminals at the same potential as the COM terminal or short-circuiting them as shown in the table below. These settings are valid only when the external control terminal is selected as the control method for pattern selection using condition data.
COM	External control's common terminals, which are at the same potential as the LO or AG terminal for the input circuit.

3 Timing Charts



Start/hold type B



*1 Specified sampling

The sampling speed is determined by the AVG parameter setting of condition data as shown in the table below

AVG setting	Sampling speed	Sampling cycle	AVG setting	Sampling speed	Sampling cycle
1	1041.65 times/sec	Approx. 960 µs	100	10.4165 times/sec	Approx. 96 ms
2	520.825 times/sec	Approx. 1.92 ms	200	5.20825 times/sec	Approx. 192 ms
4	260.4125 times/sec	Approx. 3.84 ms	400	2.604125 times/sec	Approx. 384 ms
8	130.20625 times/sec	Approx. 7.68 ms	800	1.3020625 times/sec	Approx. 768 ms
10	104.165 times/sec	Approx. 9.6 ms	1000	1.04165 times/sec	Approx. 960 ms
20	52.0825 times/sec	Approx. 19.2 ms	2000	0.520825 times/sec	Approx. 1.92 sec
50	20.833 times/sec	Approx. 48 ms	5000	0.20833 times/sec	Approx. 4.8 sec
XI laing a to			a appendie he	olf of the velue in the t	

XUsing a temperature measuring unit, the sampling speed is half of the value in the table above when the RTD is selected and quarter of it when the TC is selected.

%It is different, and a frequency measurement unit is indication update time with a range. Please refer to input specifications (Clause 6.1) of an instruction manual for frequency measurement.

- Please refer to input specifications (Clause 6.1) of an instruction manual for frequency measurement. *3 External start signal The width of the external start signal must be from between 500 µs to a specified sampling cycle. A time
- delay can be set for the external start signal must be from between 500 µs to a specified sampling cycle. A tir delay can be set for the external start using the S/H delay time parameter of the condition data.
- *4 Time delay for comparator output

Relay output: 10 ms max., photocoupler output: 200 μs max.

4 Specifications and External Dimensions

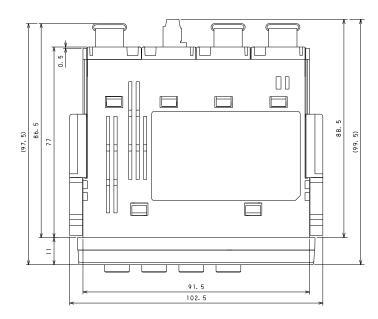
External control terminal

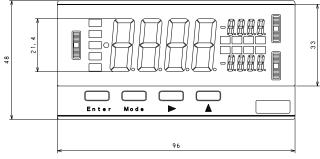
Internal circuit: Pulled up to approximately +5 V (through a 10 $k\Omega$ resistor).

Control signal's HI level: 4.2 to 5 V relative to the COM terminal

Control signal's LO level: 0 to 0.4 V relative to the COM terminal







5 Warranty and Service

5.1 Warranty

The manufacturer grants a warranty to the original retail customer stating that its A6000 series universal digital panel meter is free of defects in material and workmanship for use under normal care, and will repair or replace the meter at no charge to the customer during the one (1) year warranty period.

5.2 After Sales Service

This product was manufactured, tested, inspected and shipped under strict quality control measures. Should a defect in manufacture or workmanship be identified, please return the product to our distributor or directly to us. It would be highly appreciated if you could give a detailed account of the problem and enclose it with the product.

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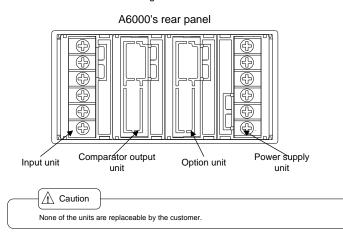
WATANABE ELECTRIC INDUSTRY CO., LTD.

Instruction Manual for A6000 Series Universal Digital Panel Meters

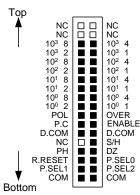
BCD Output and External Control Unit

1 Before Using the Unit

This instruction manual is for the BCD output and external control unit of the A6000 series. Read this manual along with the main unit's instruction manual before using the unit.

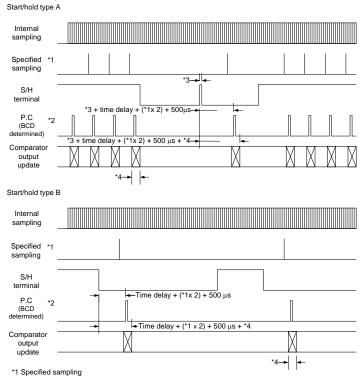


2 Terminals and Connections



Suitable connector (receptacle): KEL Corporation's 8822E-035-171-F

Terminal	Function						
10º1	Least significant bit output of least significant BCD digit. The output logic can be switched using condition data.						
10º2	Second least significant bit output of least significant BCD digit. The output logic can be switched using condition data.						
10º4	Second most significant bit output of least significant BCD digit. The output logic can be switched using condition data.						
10º8	Most significant bit output of least significant BCD digit. The output logic can be switched using condition data.						
:							
10 ³ 1	Least significant bit output of most significant BCD digit. The output logic can be switched using condition data.						
10 ³ 2	Second least significant bit output of most significant BCD digit. The output logic can be switched using condition data.						
10 ³ 4	Second most significant bit output of most significant BCD digit. The output logic can be switched using condition data.						
10 ³ 8	Most significant bit output of most significant BCD digit. The output logic can be switched using condition data.						
POL	BCD polarity output. The output logic can be switched using condition data.						
OVER	BCD overflow output. The output logic can be switched using condition data.						
P.C	BCD print instruction output.						
ENABLE	"Enable BCD' control terminal. The BCD output is set to the high-impedance state or the transistor is turned off when this terminal is short-circuited or at the same potential as the D.COM terminal.						
D.COM	BCD output• fs common terminals						
S/H	"Start/hold" control terminal. The "hold" state is turned on when this terminal is at the same potential as the COM terminal or short-circuited.						
PH	"Peak hold" control terminal. The peak hold function is turned on when this terminal is at the same potential as the COM terminal or short-circuited.						
DZ	*Digital zero* control terminal. The digital zero function is turned on when this terminal is at the same potential as the COM terminal or short-circuited. This setting is valid only when the external control terminal is selected as the control method for digital zero using condition data.						
R.RESET	*Relay reset control terminal. The relay reset function is turned on (only for the meter relay) when this terminal is at the same potential as the COM terminal or short-circuited.						
P.SEL0 P.SEL1 P.SEL2	Pattern selection* control terminals. Patterns can be selected by setting these terminals at the same potential as the COM terminals of short-circuiting them as shown in the table below. These settings are valid only when the external control terminal is selected as the control method for pattern selection using condition data. Pattern 2 Pattern 3 Pattern 4 Pattern 5 Pattern 7 Pattern 5 Pattern 4 Pattern 5 Pattern 7 Pattern 8 Pattern 5 Pattern 7 Pattern 8 Pattern 4 Pattern 5 Pattern 7 Pattern 5 Pattern						
COM	External control's common terminals, which are at the same potential as the LO or AG terminal for the input circuit.						



3 Timing Charts

The sampling	speed is determined	by the AVG parameter	eter setting of	condition data as show	n in the table below:
AVG setting	Sampling speed	Sampling cycle	AVG setting	Sampling speed	Sampling cycle
1	1041.65 times/sec	Approx. 960 µs	100	10.4165 times/sec	Approx. 96 ms
2	520.825 times/sec	Approx. 1.92 ms	200	5.20825 times/sec	Approx. 192 ms
4	260.4125 times/sec	Approx. 3.84 ms	400	2.604125 times/sec	Approx. 384 ms
8	130.20625 times/sec	Approx. 7.68 ms	800	1.3020625 times/sec	Approx. 768 ms
10	104.165 times/sec	Approx. 9.6 ms	1000	1.04165 times/sec	Approx. 960 ms
20	52.0825 times/sec	Approx. 19.2 ms	2000	0.520825 times/sec	Approx. 1.92 sec
50	20.833 times/sec	Approx. 48 ms	5000	0.20833 times/sec	Approx. 4.8 sec

*Using a temperature measuring unit, the sampling speed is half of the value in the table above when the RTD is selected and quarter of it when the TC is selected. %It is different, and a frequency measurement unit is indication update time with a range.

Please refer to input specifications (Clause 6.1) of an instruction manual for frequency measurement

*2 P.C output signal width

The output signal width is determined by the specified sampling setting as shown in the table below:

AVG	P.C	AVG	P.C
setting	output width	setting	output width
1	Approx. 220 µs	100	
2	Approx. 0.25 ms	200	
4	Approx. 1.15 ms	400	
8	Approx. 2.3 ms	800	Approx. 30 ms
10	Approx. 2.9 ms	1000	
20	Approx. 5.8 ms	2000	
50	Approx. 14.4 ms	5000	
The output	width is always 30 m	ns for the frequ	Jency measureme

*3 External start signal

The width of the external start signal must be from between 500 µs to a specified sampling cycle. A time delay can be set for the external start using the S/H delay time parameter of the condition data *4 Time delay for comparator output

Relay output: 10 ms max., photocoupler output: 200 µs max.

4 Specifications and External Dimensions

BCD output

Output type	:	open collector or TTL-compatible
Polarity	:	The applicable transistor (open collector) or polarity bit (TTL) turns on when
		negative values are indicated.
Overflow	:	The applicable transistor (open collector) or bit (TTL) turns on when the overflow
		state is indicated.
Output logic	:	Can be switched alternatively (the logic for the P.C bit cannot be changed).
Output rating	:	30 V DC and 10 mA (open collector), or fan-out 2 (TTL)
Cau		
data, whic	ch i	tput logic can be switched using the BCD logic parameter (BCD.L) of the condition s positive when BCD.L is set to P.LOG and negative when BCD.L is set to N.LOG type of Open collector. This logic is reversed if the output type is "TTL."
●External cor	ntro	ol terminal

Internal circuit: Pulled up to approximately +5 V (through a 10 kΩ resistor).

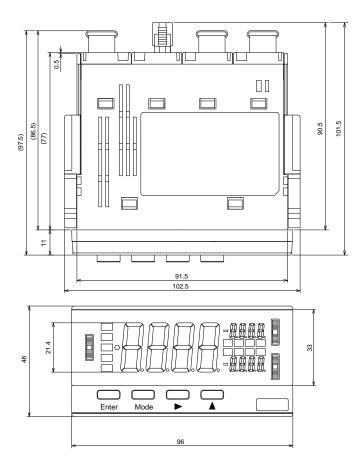
Control signal's HI level: 4.2 to 5 V relative to the COM terminal

Control signal's LO level: 0 to 0.4 V relative to the COM terminal

A Caution

The BCD output circuit and the external control circuit are electrically isolated from each other (withstand voltage: 500 V DC for one minute). The external control circuit's COM terminals and the input circuit's LO or AG terminal are

- set at the same DC potential.



5 Warranty and Service

5.1 Warranty

The manufacturer grants a warranty to the original retail customer stating that its A6000 series universal digital panel meter is free of defects in material and workmanship for use under normal care, and will repair or replace the meter at no charge to the customer during the one (1) year warranty period.

5.2 After Sales Service

This product was manufactured, tested, inspected and shipped under strict quality control measures. Should a defect in manufacture or workmanship be identified, please return the product to our distributor or directly to us. It would be highly appreciated if you could give a detailed account of the problem and enclose it with the product.



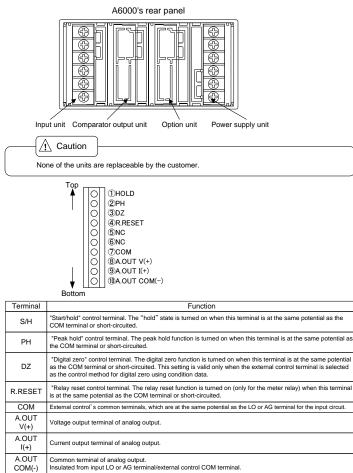
Instruction Manual for A6000 Series Universal Digital Panel Meters

Analog Output and External Control Unit

1 Before Using the Unit

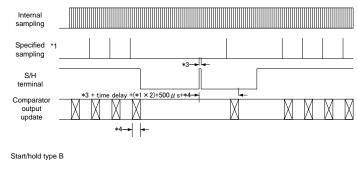
This instruction manual is for the analog output and external control unit of the A6000 series. Read this manual along with the main unit's instruction manual before using the unit.

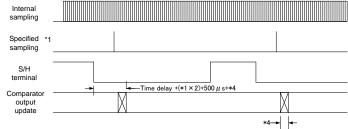
2 **Terminals and Connections**



3 Timing Charts

Start/hold type A





*1 Specified sampling

The sampling speed is determined by the AVG parameter setting of condition data as shown in the table below

AVG setting	Sampling speed	Sampling cycle	AVG setting	Sampling speed	Sampling cycle
1	1041.65 times/sec	Approx. 960 µs	100	10.4165 times/sec	Approx. 96 ms
2	520.825 times/sec	Approx. 1.92 ms	200	5.20825 times/sec	Approx. 192 ms
4	260.4125 times/sec	Approx. 3.84 ms	400	2.604125 times/sec	Approx. 384 ms
8	130.20625 times/sec	Approx. 7.68 ms	800	1.3020625 times/sec	Approx. 768 ms
10	104.165 times/sec	Approx. 9.6 ms	1000	1.04165 times/sec	Approx. 960 ms
20	52.0825 times/sec	Approx. 19.2 ms	2000	0.520825 times/sec	Approx. 1.92 sec
50	20.833 times/sec	Approx. 48 ms	5000	0.20833 times/sec	Approx. 4.8 sec
VI laina a ta	monoratura magauria	a unit the complin	a anaad ia hu	Slf of the velue in the t	

%Using a temperature measuring unit, the sampling speed is half of the value in the table above when the RTD is selected and quarter of it when the TC is selected.

%It is different, and a frequency measurement unit is indication update time with a range. Please refer to input specifications (Clause 6.1) of an instruction manual for frequency measurement. *3 External start signal

The width of the external start signal must be from between 500 µs to a specified sampling cycle. A time delay can be set for the external start using the S/H delay time parameter of the condition data

*4 Time delay for alarm output

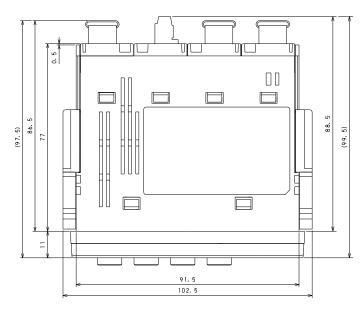
Relay output: 10 ms max., photocoupler output: 200 µs max.

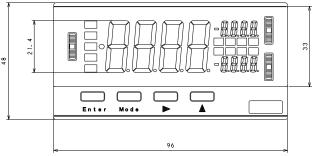
4 Specifications and External Dimensions

Analog output (PWM)

Output type	Load resistance	Accuracy	Response speed	Ripple
0 to 1V				
0 to 10V	10kΩ or more	1 (0 50(-1 50)	A	50mVp-p
1 to 5V		±(0.5% of FS)	Approx. 0.5 second	
4 to 20mA	550Ω or less			25mVp-p
Conversion system	n : PWM conve	sion		
Resolution	: Equivalent to	14 bits		
Scaling	: Digital scalin	g		
External control te Internal circuit Control signal's H level	: Pulled up 1	o approximately +5V (elative to the COM ter	through a 10kΩ resistor). minal	

(1) Ana one minute) (2) COM terminals of external control circuits and LO terminals of input circuits have the same electric potential at direct current.





5 Warranty and Service

5.1 Warranty

The manufacturer grants a warranty to the original retail customer stating that its A6000 series universal digital panel meter is free of defects in material and workmanship for use under normal care, and will repair or replace the meter at no charge to the customer during the one (1) year warranty period.

5.2 After Sales Service

This product was manufactured, tested, inspected and shipped under strict quality control measures. Should a defect in manufacture or workmanship be identified, please return the product to our distributor or directly to us. It would be highly appreciated if you could give a detailed account of the problem and enclose it with the product.

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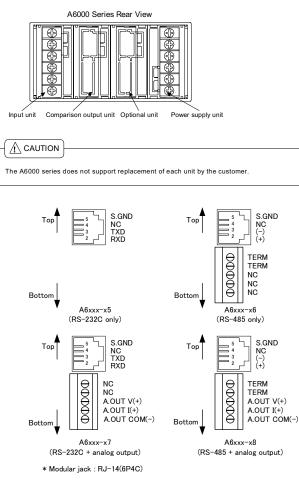
Instruction Manual for A6000 Series Universal Digital Panel Meter

~RS-232C/RS-485 and Analog Output Units~

1 Before Using the Unit

This Operation Manual corresponds to the communication function + analog output optional units of the A6000 Series Universal Digital Panel Meters. When using the instrument, please read through this manual in combination with the Operation Manual of the main unit.

2 Terminals and Connections

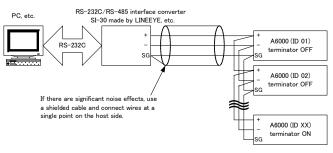


3 Examples of Connections and Use

3.1 Connecting the RS-232C Interface

A6000 series modular jack	D-sub 25-pin connector of PC, etc.	A6000 series modular jack	D-sub 9-pin connector of PC, etc.
RXD 🔫	► RXD (2)	RXD 🚽	► RXD (2)
TXD 🚽	► TXD (3)	TXD 🚽	► TXD (3)
SG 👞	► RTS (4)	SG 👞	► RTS (7)
	CTS (5)		CTS (8)
	SG (7)		SG (5)

3.2 Connecting the RS-485 Interface



*If cascade wiring is carried out with a RS-485 connection, use a commercially available Y-type split connector or the like. *To turn ON an RS-485 I/O unit's terminator (200 Q), short-circuit the two TERM terminals.

3.3 Control Codes Used in RS-485 Interface

		-
Code	Hexadecimal	Name
STX	02H	Start of Text
ETX	03H	End of Text
EOT	04H	End of Transmission
ENQ	05H	Enquiry
ACK	06H	Acknowledge

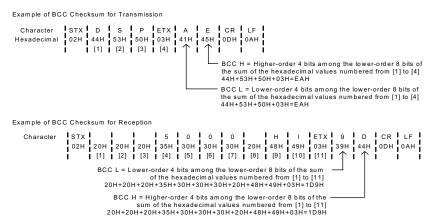
3.4 Establishing RS-485 Communication

Function	1 2	3	4	5	6	7	Char. Length	1	2	3	4	5	6	7	8	9	10	Char. Length
Establishing	ENQ 0		CR				3	ACK	0	1	Q	R LF						3
communication	*Device	D	is s	pecif	fied	l in		•				onse	<i>'</i>				}	
	2 digits	(00) is i	nvali	d).				re	 spo		me: is n						is
Canceling communication	EOT CR *If anot specific canceli commu commu possibl	her ed w ng inic	devi vitho atior	ut n,			1	, con	nm	unic	atio	e is n on.) me:						of

3.5 RS-485 Communication formats

As a means of error detection, a block check character (BCC) checksum is added to the RS-485 communication function of the A6000. See the following illustrations for details on the transmission and reception formats.

(RS-232C communication format is same as the command table which is mentioned in the next section.)



4 Communication Commands

Function	1 1	2	{ 3	} 4	5	6	7 8	3 9	10 11	12	13 14	15	Char. Le	Length 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 Char. Ler
Measured value and comparison result responses				CR				1					3	3 5 0 0 0 H I CR LF 10 ("+" indication without decimal point)
lesponses														- 5 0 0 0 H I CR LF 10
														("+" indication without decimal point) 5 0 0 . 0 H I CR LF 11
														("+" indication with a decimal point)
														< = 9 8 0 0 0 H I CR LF 10 ("+" side excess indication without decimal point)
														< =] - { 9 8 0 . 0 H I CR LF 11 ("-" side excess indication with a decimal point)
														P H 5 0 0 0 H I CR LF 10
														(Peak hold indication without decimal point) 5 0 0 0 A L 1 CR LF 11
														("+" indication without decim al point)
			1											("-" indication without decimal point)
														("+" indication with a decimal point)
		Ļ		1				1						
Measured value response A measurement condition such as peak	M	E	S	CR	LF								3	3 0 CR LF 12 ("0" indication without decimal point)
hold, etc. or compression decision is not responded.														("0.01" indication with a decimal point) CR LF 12
is notresponded.														- 1 CR LF 12
														("-1" indication without decimal point)
								1						("-0.005" indication with a decimal point)
			1					1						(Excess indication with a decimal point)
														<pre>< = - 9 8 0 . 5 CR LF 12 ("-" side excess indication with a decimal point)</pre>
														* All responses have a fixed length of 12 characters.
Judgment result response	J	G	M	CR	LF		+	+	++	+	+	-	3	
* A measurement condition is not responded.														(Response of a state in which the judgment result is HI) G O G O
			1					1						(Response of a state in which the judgment result is GO)
														L O CR LF 15 (Response of a state in which the judgment result is LO) In the state in which the judgment result is LO) In the state in which the judgment result is LO)
														O F F I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I
														N O ? CR LF 5
														(Response made if the relevant optional unit is not installed) * All responses have a fixed length of 15 characters with the
Unit num ber response	$\frac{1}{10}$	N	}	CR	1.5		_		\square		_	-	3	exception of an error. 4 6 CR LF 11 3 1 1 2 1 N O 4 6 CR LF 11
	ľ		1											(Response is made in the order of the display unit number, input
														unit number, comparison output unit number, and optional unit If the unit concerned is not installed, "NO" is returned.)
Response of the maximum value,	м			CR	1 5		_	<u> </u>			_	Ļ	3	3 M A X 5 0 0 . 0 CR LF 1 1 10
minimum value, or maximum and			Î										Ū	(Response of maximum value)
minimum values														M I N - 1 0 0 . 0 CR LF 10 (Response of minimum value) 0 CR LF 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10
				1				1						M - M 6 0 0 1 0 CR LF 10 (Response of maximum and minimum values)
														* These values are simultaneously responded by dividing them with a delimiter.
Clear of the maximum value,						A							6	
minimum value, or maximum and minimum values						ım va I∣C							6	6 Y E S CR LF 5
						m va M∣C							6	6 Y E S CR LF 5
									um valu	ies.)				
Key operation inhibition response	к	E	Y	CR	LF	1		1			+	+	3	
				1										O N CR LF 2
				1										(Response of a state in which the key operation inhibition function is ON)
Key operation inhibition setting		E				F				functio			7	7 Y E S CR LF 5
	ĸ	E	Y	1	0	NC	RLF	1	ibition				6	6 Y E S CR LF 5
	(Ac	tivat	test 	hek }	eyo	perat 	on ir	hibit	ion fun	ction.)				
Response of remote-controlled hold	S	Т	н	CR	LF								3	3 S T A R T CR LF 5 (Response of a state in which hold is deactivated by remote control)
				1										H O L D CR LF 4
				-										(Response of a state in which hold is activated by remote control)
								-						(Response of a state in which hold is not remote controlled)
Hold remote control		T				CR L Id fur							5	5 Y E S CR LF 5
	s	Т	н	1	н	CR	F	1					5	5 Y E S CR LF 5
	Ľ		1	}	old	functi	on.)							
Trigger input	Т	CR	LF										1	1 5 0 0 . 0 H I CR LF 11 ("+" indication with a decimal point)
														* The response format is the same as the DSP command.
Cancellation of hold remote control	E	s	м	CR	LF								3	3 Y E S CR LF 5
		1		}		Ĭ		1			1	1		

Function	1	2	<u> </u>	-		<i>.</i>	7	8	9	10	11	12	13	14	15	Char. Length	1 }	_	<u> </u>	-	_		_	_		_	<u> </u>	1	10	11	12	1	3	14	15	1	6	17	18	Ch	ar. Lengti
Response of remote-controlled peak hold	P	V	Н	CR	LF											3	P (Res												is (102	c tiv	ater	d by	/ ro	mol	te c	oni	rol			6
peak noid							[1							V																	, 16			1	101)			6
							[(Res P											holo	alis I	dea			ed b	by r	emo	ote	ر ن	ntro	I)		6
			1					1									(Res											 y ho	l i bla	e da	acti	vate	ed b	y re	mot	e co	ontr	ol)			0
																	P (Res	Н	-	0	N	1 0	CR	LF			}									1					5
			1					1									V															1	y I	emo			100	"			5
			1														(Res															ted	by	rem	note	co	ntr	ol)			5
							[P (Res											y ho				ted	by i	rem	ote ({ cont	trol)				5
																	L (Re									o h	1		h 0	d ir				ate				(bo			3
							[(Ne	spu		101			e II		1	511	fe {					1				{	1	euj			
Peak hold selection setting		V ets u				H	CR	LF								6	Υ	Е	s			0	CR	LF																	5
		V					CR	LF								6	Y	Е	s				CR	LF			}														5
	(Se	nts u	p va	illev	hol	d.)	}	{								6	Y	_					CR																		5
	(Se	V tsu	β Π p p	l eak	and	vall	ey h	old.)								0	'	-	3			ľ	-	LI																	5
Peak hold remote control		v				N										6	Y	-					CR				1														5
reak noid temole control								nctic	n.)							0						ľ	511																		5
								CR fun								7	Υ	Е	s			0	CR	LF																	5
		acu	{	is u	e pe	ar l	}	{		.,																															
Peak-held value response	P	V	D	CR	LF		[3	P (Re						5				{ ·		D	CR	LF										10
							[8							V	н		1		. [1	0	1	0	{.		5	CR	LF										10
																	(Re P				fval									CR											10
																	(Re				[fpe						}. /-h€														10
Clear of peak-held value		с	١.		Þ	н		I.E.								6	Y	F	ç				CR				{														5
	(C)	ears	s'a p	beak	-hel	ld va	lue.	.)		1						0						ſ	511	-			1														5
		C Cars														6	Y	Е	s			0	CR	LF			1														5
		C														6	Y	Е	s			0	CR	LF			1														5
	(CI	ears	pe	ak-	ind	vall	ey-h	ėld	alu	es.)																	}														
Cancellation of peak hold remote control	E	Р	м	CR	LF		[3	Y	Е	s	1		0	CR	LF			1														5
Response of remote-controlled		Z	R	CR	LE	<u> </u>	<u> </u>	<u> </u>			_	\rightarrow	_	+	_	3	0	F	F	CE	21	F		_	+		<u>{</u>	+			_	+	+		_	+	-	_		+	3
digital zero		-	[``		-			1								Ũ	(Res	pon	ise	òf a	sta	te i	n w	hio	h	digi	ital:	zer	o is				edi	by r	em	ote	coi	ntro	I)		
							[1 (Res	0 pons	0 e of	{ 0 a st	C tate	R [I in w	LF hich	dig	iita	ze	{ rois	act	tiv a		at 1	000	by i	rem	ote ((cont	trol)				5
							[- 1	1	0	0	0		CR	LF			1									1					5
			1					1									(Res * Th																								
																	L	0	С	CF	R L	F			1		1	1				1				1					3
							[(Re	spo	ns	9 01	ra s	tat	e ir	ı w	nı İ	cn	aig {		I ZE	ro	is r	101	ren	noi	te c	on	tro	lea)		
Digital zero remote control		Z				N		LF								6	Υ	Е	s			0	CR	LF																	5
		tivat Z						CR	LF							7	Y	Е	s				CR	LF																	5
		acti						0	CB							8	Y	E	e				CR				1														5
								0 00.)								0	1		3			ľ	-	LI			1														5
Cancellation of digital zero remote		z	1 M					1								3	Y	F	6				CR																		5
control	1]				[Ū	·	-	Ŭ			ſ		-			1														Ū
Response of remote-controlled	R	E	s	CR	LF	1	}	{			_	_	_	+	_	3	0	F	F	C	RIL	FI		_	+		1	+			-	+	_		_	1		_		╋	3
relay reset		[]		-	}	[-	(Res	pon	ise	of a	ista					rela			etis	de	acti	ivat			rem	ote	ç	ntro)		
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Setting of the number of moving averaging timesMAV4CRLFIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII<		™	' '	^[× [сĸ	LF			-							3	(Response of a state in which moving averaging is OFF)
Setting of the number of moving averaging times M A V 4 CR LF O N = 1 6 CR LF M A V 4 CR LF (Response of a state in which the number of moving averaging times is 16) Setting of the number of moving averaging times to "4".) M A V 1 1 6 CR LF M A V 1 1 6 CR LF Sets the number of moving averaging times to "16".) 6 Y E S CR LF M A V 0 CR LF 5 Y E S CR LF Sets the number of moving averaging times to "16".) K A V 0 CR LF 5 Y E S CR LF M A V 0 CR LF 5 Y E S CR LF Sets the number of moving averaging times to "16".) K K S CR LF M A V 0 CR LF Sets the number of moving averaging times to "16".) K K S CR LF M A V 0 CR LF Sets the number of moving averaging times is the moving averaging times in averaging time averaging times is s witched or moving averaging is deactivated im mediat	-				1							1						O N = 4 CR LF 4
Setting of the number of moving averaging times M A V 4 CR LF Image: CR Image: CR <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																		
averaging times (Sets the number of moving averaging times to "4") 6 Y E S CR LF (Sets the number of moving averaging times to "16") 6 Y E S CR LF (Sets the number of moving averaging times to "16") 6 Y E S CR LF (Sets the number of moving averaging times to "16") 6 Y E S CR LF (Gets the number of moving averaging times to "16") 5 Y E S CR LF (Cancels (deactivates) the moving averaging times in averaging time averaging times is switched or moving averaging is deactivated im mediately after setting. averaging is deactivated im mediately after setting. I					1							1						
averaging times (Sets the number of moving averaging times to "4") 6 Y E S CR LF (Sets the number of moving averaging times to "16") 6 Y E S CR LF (Sets the number of moving averaging times to "16") 6 Y E S CR LF (Sets the number of moving averaging times to "16") 6 Y E S CR LF (Gets the number of moving averaging times to "16") 5 Y E S CR LF (Cancels (deactivates) the moving averaging times in averaging time averaging times is switched or moving averaging is deactivated im mediately after setting. averaging is deactivated im mediately after setting. I	Setting of the number of moving	M	1	A	v		4	CR	LF								5	Y E S CR LF 5
(Sets the number of moving averaging times to "16".) M A V 0 CR LF 5 Y E S CR LF CR LF (Cancels (deactivates) the moving averaging function.) A CR LF CR		(S	ets	the	εnί	ım b	er	of m	ving			ng tin	ies I	to "4"	.)			
M A V 0 (CR LF) 5 Y E S CR LF (Cancels (deactivates) the moving averaging function.) * The number of moving averaging times is switched or moving averaging is deactivated im mediately after setting.		N (S	t / /	A the	V en i	ım h	1 er	6 of m	CR	LF	radi	na tim		 to "1	s".)		6	Y E S CR LF 5
averaging is deactivated immediately after setting.		N	1 /	A	V		0	CR	LF			1	1				5	
		(C	an	cels	s (d	ead	tiva	tes)	the	m ovi	ng a i	verag	ing :	funct	ion.)			
				_}	_ {													averaging is deactivated in mediately aller setting.

INSTRUCTION MANUAL MODEL A6xxx-x5/x6/x7/x8

Function	1 2 3 4 5 6 7 8 9 10 11 1	13 14 15 Char. Length 1 2 3 4 5 6 7 8 9 10 11	12 13 14 15 16 17 18 Char. Length
Step wide response	S W D CR LF	3 1 CR LF (Response of a state in which step wide is	
		1 0 CR LF	2
		(Response of a state in which step wide is	"10")
Step wide setting	S W D 1 CR LF	5 Y E S CR LF	5
	(Sets step wide to "1.") S W D 1 0 CR LF	6 Y E S CR LF	5
	(Sets step wide to "10.")	* Step wide is switched immediately after s	
Display color response		3 R E D CR LF	3
		(Response of a state in which the display c	ploris red)
		G R E E N CR LF (Response of a state in which the displayc	blorisgreen) 5
		N O ? CR LF	5
		(Response made if the comparison output	unitis not installed)
Display color setting	C L R R CR LF	5 Y E S CR LF	5
	(Sets display color to red.)) C L R G CR LF	5 Y E S CR LF	5
	(Sets display color to green.)		5
		NO ? CR LF (Response made if the comparison output	
Dianterration			
Display color type response	C L T CR LF	5 A U T O CR LF (Response of a state in which the displayc	olor type is Auto)
		M A N U A L CR LF	6
		N O ? CR LF	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
		(Response made if the comparison output	unit is not installed)
Display color type setting	C L T A CR LF	5 Y E S CR LF	5
	(Sets the display color type to Auto.)	5 Y E S CR LF	5
	C L R M CR LF (Sets the display color type to Manual.)	* The display color type is switched immedi	
		NO CLF	
HI display color response	C H I CR LF	3 R E D CR LF (Response of a state in which the HI displa	v color is red) 3
		GREENCRLF	5
		(Response of a state in which the HIdispla AUTOCRLF	ycolorisgreen) 4
		(Response of a state in which the display c	olor type is Auto)
		NO CLF	unitis not installed) 5
HI display color setting	C H I R CR LF (Sets HI display color to red.)	5 Y E S CR LF	5
	C H I G CR LF	5 Y E S CR LF	5
	(Sets HI display color to green.)	+ HÍdisplaý color is switched im mediately a A U T O CR LF	ftersetting.
		(Response of a state in which the display c	
		(Response made if the comparison output	unit is not installed) 5
		(Response of the state of independent judg	
GO display color response		3 R E D CR LF	3
		(Response of a state in which the GO dis	play color is red) 5
		G R E E N CR LF (Response of a state in which the GO dis	
		A U T O CR LF	4
		(Response of a state in which the display NO?CRLF	5
		(Response made if the comparison output	t unit is not installed)
GO display color setting	C G O R CR LF	5 Y E S CR LF	5
	(Sets GO display color to red.) C G O G CR LF	5 YES CRLF	5
	(Sets GO display color to green.)	* GO display color is switched immediate	ly after setting.
		A U T O CR LF (Response of a state in which the display	color type is Auto)
		NO ? CR LF	5
		(Response made if the comparison output (Response of the state of independent ju	
LO display color response	C L O CR LF	3 R E D CR LF (Response of a state in which the LO dis	3 (av color is red)
		GREENCRLF	5
		(Response of a state in which the LO dis A U T O CR LF	
		(Response of a state in which the display	color type is Auto)
		NO? CR LF (Response made if the comparison output	t unit is not installed)
LO display color setting	C L O R CR LF (Sets LO display color to red.)	5 Y E S CR LF	5
	C L O G CR LF	5 Y E S CR LF	5
	(Sets LO display color to green.)	* LO display color is switched immediatel A U T O CR LF	4
		(Response of a state in which the display N O ? CR LF	color type is Auto)
		N O ? CR LF (Response made if the comparison outpu	t unit is not installed)
		(Response of the state of independent ju	
			<u></u>

Function	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 c	har. Length 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 Char. Length
Display blank response	B L K CR LF	3 O F F CR LF 3
		(Response of a state in which blank setting is OFF)
		(Response of a state in which blank setting is at LV1)
		L V 2 CR LF 3 (Response of a state in which blank setting is at LV2)
		(Response of a state in which blank setting is at LV2) L V 3 CR LF 3
		(Response of a state in which blank setting is at LV3)
		O N CR LF 2 (Response of a state in which blank setting is ON)
		(Response of a state in which blank setting is ON)
Display blank setting	B L K O F F CR LF	7 YES CRLF 5
	(Deactivates blank setting.) B L K L V 1 CR	7 Y E S CR LF 5
	(Sets blank setting to LV1.)	
	B L K L V 2 CR LF (Sets blank setting to LV2.)	7 YES CRLF 5
	B L K L V 3 CR LF	7 YES CRLF 5
	(Sets blank setting to LV3.)	6 Y E S CR LF 5
	(Activates blank setting.)	
Jog switch response	J S W CR LF	3 O N CR LF 2 (Response of a state in which jog switch setting is ON)
		O F F CR\$ LF 3 (Response of a state in which jog switch setting is OFF) 3
		(Response of a state in which jog switch setting is OFF) N O ? CR LF 5
		(Response made if the relevant unit is not installed)
Jog switch setting	J S W O N CR LF	6 Y E S CR LF 5
	(Activates jog switch setting.)	
	J S W O F F CR: LF (Deactivates jog switch setting.)	7 Y E S CR LF 5
		N O ? CR LF 5
		(Response made if the relevant unit is not installed)
Digital zero backup response	B D Z CR LF	3 O N CR LF 2
		(Response of a state in which digital zero backup is ON)
		O F F CR LF 3 (Response of a state in which digital zero backup is OFF)
Digital zero backup control	B D Z O N CR LF (Activates digital zero backup:)	6 Y E S CR LF 5
	B D Z O F F CR LF	7 Y E S CR LF 5
	(Deactivates digital zero backup.)	
Digital zero data save command	S A V CR LF	3 Y E S CR LF 5
		N O ? CR LF 5
		(Response made if the relevant unit is not installed)
Response of the number of patterns	P S N CRLF	3 1 CR{LF
for pattern select		(Response of a state in which the number of patterns for pattern select is "1")
		8 CR{LF 1
		(Response of a state in which the number of patterns for pattern select is "8")
Control over the number of patterns	P S N 1 CR LF	5 Y E S CR LF 5
for pattern select	(Sets the number of patterns for pattern select to "1.") P S N 8 CR LF 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 Y E S CR LF 5
	(Sets the number of patterns for pattern select to "8.")	
Linearize function status response		3 O F F CR LF 3
		(Response of a state in which the linearize function is OFF)
		2 CR ³ LF 1 (Response of a state in which the linearize correction point is "2")
		1 6 CR LF 2
		(Response of a state in which the linearize correction point is "16")
Linearize function status setting	L I N O F F CR LF	7 Y E S CR LF 5
	(Deactivates the linearize function.)	
	L I N 2 CR LF (Sets linearize correction point to "2.")	5 Y E S CR LF 5
	L I N 1 6 CR LF	6 Y E S CR LF 5
	(Sets linearize correction point to "16.")	
Tracking zero response	T R K CR LF	3 0 N T = 1 W = 1 CR LF 10
		(Response of a state in which the tracking zero time is "1" and tracking zero width is "1") O N T = 9 9 9 W = 9 9 CR LF 12
		(Response of a state in which the tracking zero time is "99" and
		tracking zero width is "99") O F CR LF 3
		(Response of a state in which the tracking zero function is OFF)
Tracking zero setting		7 YES CRLF 5
	(Sets tracking zero time to "1.")	
	T R K T = 9 9 7 CR LF (Sets tracking zero time to "99.")	8 Y E S CR LF 5
	T R K W = 1 CR LF	7 YES CRLF 5
	(Sets tracking zero width to 1 digit.)	
	T R K W = 9 9 CR LF (Sets tracking zero width to 99 digits.)	8 Y E S CR LF 5
	T R K T = 0 CR LF	7 Y E S CR LF 5
	(Deactivates the tracking zero function.) * In order to validate a tracking zero setup, please perform a n	number of times setup of an average continuously after carrying out a tracking zero setup.
L		

Function	1 2 3 4 5 6 7 8 9 10 11 12 13	3 14 15 Char. Length 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 Char. Length
Power-on delay time response	P O N CR LF	3 0 CR LF 1
		(Response of a state in which the power-on delay function is OFF)
		1 CR LF 1 1 (Response of a state in which the power-on delay time is 1 second) 1
		9 CR LF
		(Response of a state in which the power-on delay time is 9 seconds)
D		
Power-on delay time setting	PON 1 CRLF (Sets power-on delay time to 1 second.)	5 Y E S CR LF 5
	PON 9 CRLF	5 YES CRLF 5
	(Sets power-on delay time to 9 seconds.)	
	PON 0 CR LF	5 Y E S CR LF 5
	(Deactivates the power-on delay function.)	
Protect level response	P R O CR LF	3 L V 0 CR LF 3
		(Response of a state in which the protect level is at LV0)
		L V 1 CR LF 3
		(Response of a state in which the protect level is at LV1)
		L V 2 CR LF 3 (Response of a state in which the protect level is at LV2)
		L V 3 CR LF
		(Response of a state in which the protect level is at LV3)
Desite et la calla a tita a		7 YES CRIF
Protect level setting	P R O L V 0 CR LF (Sets protect level to LV0.)	7 Y E S CR LF 5
		7 Y E S CR LF 5
	(Sets protect level to LV1.)	
	PROLV2CRLF	7 YES CRLF 5
	(Sets protect level to LV2.) P R O L V 3 CR LF	7 Y E S CR LF 5
	(Sets protect level to LV3.)	
Unit number indication response	U N O CR LF	3 0 N CR LF 2
		(Response of a state in which the unit number indication is ON) O F F CR LF 3
		(Response of a state in which the unit number indication is OFF)
Unit number indication setting	U N O O N CR LF	6 Y E S CR LF 5
	(Activates unit number indication.)	7 YES CRLF 5
	UNOF CREAT (Deactivates unit number indication.)	
Start hold type response	S T T CR LF	3 A CR LF 1
		(Response of a state in which the start hold type is A) B CR LF
		B CR LF 1 (Response of a state in which the start hold type is B)
Start hold type setting	S T T A CR LF	5 Y E S CR LF 5
	(Sets start hold type to A)	5 YES CRLF
	S T T T B CR LF (Sets start hold type to B.)	5 Y E S CR LF 5
Peak hold type response	P V T CR LF	3 A CR LF 1
		(Response of a state in which the peak hold type is A) B CR LF 1
		(Response of a state in which the peak hold type is B)
-		
Peak hold type setting	P V T A CR LF	5 Y E S CR LF 5
Peak hold type setting	P V § T A §CR {LF (Sets peak hold type to A.) P V § T P V § T B {CR {LF} (Sets peak hold type to B.) Image: Set	

Function	1 2 3 4 5 6 7 8 9 10 11 12 13	14 15 Char. Length		
Baud rate response	B A U CR LF	3	2 4 0 0 CR LF	4
			(Response of a state in which the baud rate is 2400 bps)	
			(Response of a state in which the baud rate is 4800 bps)	4
			9 6 0 0 CR LF	4
			(Response of a state in which the baud rate is 9600 bps)	
			1 9 2 0 0 CR LF	5
			(Response of a state in which the baud rate is 19200 bps)	
			3 8 4 0 0 CR LF	5
			(Response of a state in which the baud rate is 38400 bps)	
	B A U 2 4 0 0 CR LF	8	Y E S CR LF	5
	(Sets the baud rate to 2400 bps.)	Ŭ		, i i
	B A U 4 8 0 0 CR LF	8	Y E S CR LF	5
	(Sets the baud rate to 4800 bps.)			
	B A U 9 6 0 0 CR LF	8	Y E S CR LF	5
	(Sets the baud rate to 9600 bps.) B A U 1 9 2 0 0 CR LF	9	Y E S CR LF	5
	(Sets the baud rate to 19200 bps.)	9		
	B A U 3 8 4 0 0 CR LF	9	Y E S CR LF	5
	(Sets the baud rate to 38400 bps.)		* The baud rate is switched upon next power-up.	
Data length response	D A T CR LF	3	7 CR LF	1
			(Response of a state in which the data length is 7 bits) 8 CR LF	1
			(Response of a state in which the data length is 8 bits)	
	DAT 7 CR LF	5	Y E S CR LF	5
	(Sets data length to 7 bits.)			
	DAT 8 CR LF	5	Y E S CR LF	5
	(Sets data length to 8 bits.)		* The data length is switched upon next power-up.	
Parity bit response	P B T CR LF	3	E V E N CR LF	4
ranty bit lesponse		5	(Response of a state in which a parity bit is even parity)	4
			O D D CR LF	3
			(Response of a state in which a parity bit is odd parity)	
			N O CR LF	2
			(Response of a state in which a parity bit is none)	
	P B T E CR LF	5	Y E S CR LF	5
	(Sets a parity bit to even parity.)	5		
	P B T O CR LF	5	Y E S CR LF	5
	(Sets a parity bit to odd parity.)			
	P B T N CR LF	5	Y E S CR LF	5
	(Sets a parity bit to none.)		* A parity bit is switched upon next power-up.	
Otan hit manana a	S B T CR LF		1 CR LF	
Stop bit response		3	(Response of a state in which a stop bit is 1 bit)	1
			2 CR LF	1
			(Response of a state in which a stop bit is 2 bits)	
	S B T 1 CR LF	5	Y E S CR LF	5
	(Sets a stop bit to 1 bit.)	5		5
	S B T 2 CR LF (Sets a stop bit to 2 bits.)	5	Y E S CR LF * A stop bit is switched upon next power-up.	5
Delimiter response	D L M CR LF	3	C R + L F CR LF	5
			(Response of a state in which a delimiter is CR + LF)	
			C R CR LF	2
			(Response of a state in which a delimiter is CR)	
	D L M C L CR LF	6	Y E S CR LF	5
	(Sets a delimiter to CR + LF.)	0		
	D L M C CR LF	5	Y E S CR LF	5
	(Sets a delimiter to CR.)		* A delimiter is switched upon next power-up.	
Device ID response	A D R CR LF	3	1 CR LF	1
			(Response of a state in which the device ID is "01")	2
			9 9 CR LF	2 ²
Device ID setting	A D R 1 CR LF	5	Y E S CR LF	5
5	(Sets device ID to "01".)			
	A D R 9 9 CR LF	6	Y E S CR LF	5
	(Sets device ID to "99".)		* Device ID is switched upon next power-up.	
				1 1

Function	1	2 3 4	5 6 7 8	9 10 11	12 13 1	1 15 Char. Leng	th 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 Char.	. Length
Condition data parameter response	A					3	A V G 1 CR LF	5
							(Response of a state in which the number of averaging times is "1") M A V O F F CR LF	7
							(Response of a state in which the moving averaging function is OFF)	_
							S W D 1 CR LF 4 (Response of a state in which step wide is "1")	5
							C L R R E D CR LF	7
							(Response of a state in which the display color is red) 1 C L T M A N U A L CR LF 1	10
							(Response of a state in which the display color type is Manual)	10
								7
							(Response of a state in which the HH display color is red) C H I R E D CR LF I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I <td< td=""><td>7</td></td<>	7
							(Response of a state in which the HI display color is red)	_
							C G O R E D CR LF	7
								7
							(Response of a state in which the LO display color is red) C L R E D CR L I	7
							(Response of a state in which the LL display color is red)	
							B L K O F F CR LF	7
								6
							(Response of a state in which the jog switch is ON)	
							P V H P H - O F F CR LF 1 (Response of a state in which peak hold select is OFF at PH) 1	10
							B D Z O N CR LF	6
							(Response of a state in which digital zero backup is ON) P S N 1 CR LF	5
							(Response of a state in which pattern select is "1")	
							L I N O F F CR LF Image: CR Image: CR <t< td=""><td>7</td></t<>	7
								7
							(Response of a state in which tracking zero is OFF)	5
							PONOOCRLF (Response of a state in which the delay time is "0")	5
								7
							(Response of a state in which the protect level is at LV0) U N O F F CR LF F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F F <td< td=""><td>7</td></td<>	7
							(Response of a state in which unit number indication is OFF)	_
							S T T A CR LF Image: CR Image	5
							S T D	9
							P V T A CR LF Image: CR Image	5
							B A U 9 6 0 0 CR LF	8
							(Response of a state in which the baud rate is 9600 bps) D A T 7 CR LF	5
							(Response of a state in which the data length is 7 bits)	5
								8
							(Response of a state in which a parity bit is even parity) S B T 2 CR LF 4	5
							(Response of a state in which a stop bit is 2 bits)	
							D L M C R + L F CR LF (Response of a state in which a delimiter is CR + LF)	9
								5
							(Response of a state in which the device ID is 01)	
Scaling data parameter response	A	L 2 CR L	F			3		3
							(The pattern used previously is responded.)	7
							(Response of a state in which the measurement range is 2 A)	
							(Response of a state in which the input type is open collector)	8
							F S C 9 9 9 9 9 CR LF 1 (Response of a state in w hich the full-scale indicated value is "9999") 1	10
							F I N 9 9 9 CR LF 1	10
							(Response of a state in which the full-scale input value is "9999") O F S I O CR LF	10
							(Response of a state in which the offset indicated value is "0")	10
							(Response of a state in which the offset input value is "0")	
								7
							P P R 1 CR LF	5
							(Response of a state in which the frequency division value is "1") D L H I 9 9 9 9 0 CR LF	10
							(Response of a state in which the digital limiter HI value is "9999")	
							D L L O - 9 9 9 CR LF 1 (Response of a state in which the digital limiter LO value is "-9999")	10
							A O U T 0 - 1 CR LF	8
								9
							(Response of a state in which the analog output HI indicated value is "9999")	6
							(Response of a state in which the analog output LO indicated value is "0")	
							UNITIC CRLF (Response of a state in which the temperature indication unit is °C)	6
								7
							(Response of a state in which there is no decimal point)	
				• • • •	4 1 1	· ·		

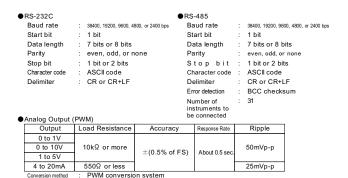
Function		2			5	6 7 8	9	10	11 } 12	2 13	14	15	Char. Length	
Comparator data parameter response *Case of the comparison output type is high-and low-limit setting	A	L	3	CR	LF								3	P - 1 CR LF 3 (The pattern used previously is responded.) C O M T O / U CR LF 8
														(Response of a state in which the comparison output type is of high-and low-limit setting) H - S 1 0 0 0 0 CR LF 10 10
														(Response of a state in which the HI judgment value is "1000") L O - S - S - S - S - S - S
														(Response of a state in which the LO judgment value is "500") 1 H I - H 0 CR LF 10 10
														(Response of a state in which the HI hysteresis is "0") 1 L O - H 1 0 CR L 0 10
														(Response of a state in which the LO hysteresis is "0") H I - L N O CR LF
														(Response of a state in which HI logic is normally open) Image: Comparison of a state in which GO logic is normally open) 7 (Response of a state in which GO logic is normally open) 7
														(Response of a state in which LO logic is normally open)
*Case of the comparison output type is the tolerance judgment	A	L	3	CR	LF		\uparrow		-	1			3	P - 1 CR LF 3 (The pattern used previously is responded.) 3 3 3 3
														C O M T E R R CRLF 8 (Response of a state in which the comparison output type is of
														$ \begin{array}{c c} Response \\ Ins \\ V \\ A \\ L \\ Ins \\ I$
														Response of a state in which the nominal value is "5000") 1 E R 1 5 0 0 CR LF 11
														(Response of a state in which tolerance 1 is "5.00") 1 E R 1 1 0 CR{LF 10
														$\begin{array}{c c c c c c c c c c c c c c c c c c c $
														(Response of a state in which HI logic is normally open) G O : - L N O CR LF
														(Response of a state in which GO logic is normally open)
														Response of a state in which LO logic is normally open) N O ? CR LF
Calibration data response			4	CR	LF		-		_	_			3	(Response made if the relevant input unit is not installed) P - 1 (CR LF
		-											-	The pattern used previously is responded.) S N S R 5 CR LF 6
														(Response of a state in which the sensor power is 5 V) 1 Z R I N 0 . 0 0 CR LF 10
														CResponse of a state in which the zero input value is "0.000") Z E R O 0 CR LF 6
														(Response of a state in which the zero indicated value is "0") S P I I N 2 0 0 CR LF 10
														(Response of a state in which the span input value is "2.000") \$\$ P A N \$\$ 9 9 9 9 CR LF\$\$ \$\$ 9
														(Response of a state in which the span indicated value is "9999") N O ? CR LF 5
														(Response made if the relevant input unit is not installed)
Linearize data response	A	L	5	CR	LF								3	0 1 6 (Response of a state in which the linearize data N-01 input value is "0") 0 1 1 0 = 0 ICR LF 3 6 6
														0 1 0 = 0 0R LF 6 (Response of a state in which the linearize data N-01 output value is "0") 0 2 1 = 1 0 0 CR LF 8
														(Response of a state in which the linearize data N-02 input value is "100") 0 2 0 = 1 1 1 0 CR LF 8
														(Response of a state in which the linearize data N-02 output value is "110")
														0 2 1 = 5 0 0 CR LF 8
														1 6 I I 9 0 0 0 CR LF 9 (Response of a state in which the linearize data N-16 9
														input value is "9000")
														output value is "9200")
														(Response of a state in which the linearize function is OFF)
Common response	┢	-	┝	1						+				Y E S CR LF 5
														(Normal response) N 0 7 CR LF 5
														(Response to an undefined command, etc.)
														E R R O R A CR LF I F F F F F F F F F F F F F F F F F
														(Response made if there is a communication parameter error) * There are ERROR B to ERROR F as an equivalent response command. * If there is a response of the ERROR X command, perform the
														same steps again. If this does not solve the problem, turn the meter supply OFF and then ON again.
Response made if internal memory data is abnormal														D A T A L O S T C O N D CR LF 14 (Response made if condition data is abnormal)
* Generally, a response is made only once.														D A T A L O S T C O M CR LF 13
														(Response made if comparator data is abnormal)
														(Response made if scaling data is abnormal)
														* Set scaling data again.
	-	-	•	2			-	· ·	0		, 1			

INSTRUCTION MANUAL MODEL A6xxx-x5/x6/x7/x8

Function Scaling data setting	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Char. Length 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Char. Length 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Char. Length 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Char. Length 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 M E T CR LF 3 P - 1 CR LF 14 15 16	17 18 Char. Length
	* Indication becomes "MET" at the instant the MET (The pattern used previously is responded.)	
	command has been received.	
	2 CR LF	3
	M CR LF 2 R A N G 2 A CR LF	7
		7
	(Sets the measurement range to 1 V.) 1 F S C 9 9 9 CR LF	8
		U U U
	8 0 0 0 CR LF 4 F S C 8 0 0 0 CR LF	8
	(Sets the full-scale indicated value to "8000.") 1 0 F S 0 CR LF Image: CR Image: CR <td>5</td>	5
		5
	2 0 0R LF 2 0 F S 2 0 0R LF	6
	(Sets the offset indicated value to "20.")	
	E CR LF	5
	command causes data acquired up to that point to be NO ? CR LF	5
	return to measurement operation. (Response made if a value out of the setting range is input)	
Comparator data setting	COMCRIF	3
*Case of the companson output type	* The main unit's indication becomes "COM" at the (1) (The pattern used previously is responded.)	
is high-and low-limit setting.	instant the COM command has been received.	
Sets data-setting pattern to "2" and HI logic to "8000",set LO logic to "-5000",		3
and sets HI &LO logic to normally	Sets data-setting pattern to "2.") 1 C O M U CR LF I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I	8
closed.		
	M CR LF 1 H I - S 1 0 0 0 CR LF	9
	8 0 0 0 CR LF	9
	(Sets HI logic to "8000.")	
	M CR LF 1 L O - S 5 0 0 CR LF	8
	- 5 0 0 0 0 0 CR LF 5 L O - S - 5 0 0 0 0 CR LF	
	- 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10
		6
	M CR LF 1 L O - H 0 CR LF	6
	M CR LF	7
	N C CR LF LF LF LF (Sets HI logic to normally closed.) 2 H I - L N C CR LF	7
	M CR LF 1 G O - L N O CR LF	7
	M CR LF 1 L O - L N O CR LF	7
		7
	(Sets LO logic to normally closed.)	
		5
	A return to measurement operation using the E E R R O R 0 CR LF	7
	command (If the N command is sent, a return to side judgment value is made.)	
	N 0 ? 08 LF	5
	(Response of a state in which the relevant input unit is not installed)	
*Case of the compason output type is sets the nominal value to "8000",	C O M CR LF 3 P - 1 CR LF 3 P - 1 CR LF 5 COM" at the CT A state of the pattern used previously is responded.)	3
sets the tolerance 1 to "20.00".		8
	E R R CR LF 6 C O M T E R R CR LF (Sets the comparator output type to tolerance judgment.)	8
	M CR LF 1 N V A L 5 0 0 0 CR LF	10
	8 0 0 0 CR LF 4 N V A L 8 0 0 0 CR LF	10
	(Sets the nominal value to "8000.") 1 E R 1 5 . 0 0 CR LF	11
	2 0 0 0 CR LF 5 E R R 1 2 0 . 0 0 CR LF	11
	Sets tolerance 1 to "20.00.") 1 E R 1 H 0 0 CR LF 0 CR	10
		5
	* Areturn to measurement operation using the E	
	command (If the N command is sent, a return to side judgment value is made.)	7
	side judgment value is made.) (Response made if a value not meeting the setting conditions is input NO OR	5
	(Response of a state in which the relevant input unit is not installed)	
* The serve estima methods as these a	above are also used for setting of other data (such as linearize data)	

* The same setting methods as those above are also used for setting of other data (such as linearize data).

5 Specifications and Dimensions



about 14 bits or equivalent

Resolution

6 Warranty and After-sales Services

6.1 Warranty

The warranty period of this product is one year from the date of delivery. If a problem occurs during this warranty period and its cause is determined to be attributable to us, and will repair the product without charge.

6.2 After-sales Services

This product has been manufactured, tested, and inspected under strict quality control before shipment from the factory. If the product breaks down, contact your sales representative or our local office (or send it). In this case, write down the problem in detail and report it to your service representative (or enclose it with the product).

