

DIGITAL PANEL METER - DP1000B SERIES



DPM 15mm mosaic

Weight: Approx. 200g

APPLICATION

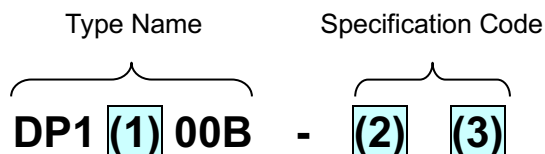
This digital panel meter is corresponding from minigrapane and 15mm mosaic panel. Any numeric value 2-4 digital scaling, polarity indication, decimal point position, OR and UR indication can be manufacture when the general direct current signal is specified or can use communicator (CM-1 option, selling separately) to instrumentation of various plants any time at field site. Satisfy with the wide use of various plant measurements.

FEATURES

- ▶ High accuracy and high reliability design CPU is adopted.
- ▶ Any scaling is possible by communicator (CM-1)
- ▶ Installation 15mm mosaic panel is possible.
(One touch type also possible to install by attachment lug option)
- ▶ Setting function of polarity display, decimal point position, over range, under range and zero suppression is possible.

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TYPE AND SPECIFICATION CODE DESIGNATION



Type and Sepcification Code			Classification by specification	
T Y P E	(1)	Max. display digit	0 : 3 1/2-digit (Max. display range: ±1999, Polar character is display in 7-segment LED) *1	
			1 : 4-digit (Max. display range: ±9999, Polar character is display in circle LED + carving filter)	
S P E C I F I C A T I O N C O D E	(2)	Colour of indicator	R : Red LED	
			G : Green LED *2	
			S : Orange LED	
	(3)	Kind of Input	0 : DC4~20mA	D : DC±10V
			1 : DC1~5V	E : DC0~100μA
			2 : DC0~50mV	F : DC0~1mA
			3 : DC0~60mV	G : DC~5mA
			4 : DC0~100mV	H : DC0~10mA
			5 : DC0~1V	I : DC0~16mA
			6 : DC0~5V	J : DC±100μA
			7 : DC0~10V	K : DC±1mA
			8 : DC±50mV	L : DC±5mA
			9 : DC±60mV	M : DC±10mA
			A : DC±100mV	N : DC±16mA
			B : DC±1V	
			C : DC±5V	Z : Except above

*1, Polarity display: – polarity only for Orange LED.

*2, 4-digit display only.

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STANDARD SPECIFICATIONS

ITEM	SPECIFICATION		
Operation system	Integral calculus system		
Display	3 1/2-digit	Specify (Max. display range: -1999~+1999)	
	4-digit	Specify (Max. display range: -9999~+9999)	
	Possible to change the range of display by communicator (option)		
Input circuit system	Floating type		
Display update time	0.4 sec. (2.5 cycle/ sec.)		
	Possible to change (within 0.1~9.9sec., 0.1sec. step) by communicator (option)		
Measurement accuracy	3 1/2-digit	±0.1% of rdg, ±1digit (23 ±5℃)	
	4-digit	±0.05% of rdg, ±5digit (23 ±5℃)	
Auxiliary supply	DC24V, ±10%, 3W or less		
Indicator	Specify color of display: Red LED / Green LED (4-digit only) / Orange LED 7-segment LED, Character heigh: 10.16mm		
Sculpture of unit display	Sculpture in front cover (filter) White color		
Polarity display	Specify (Nothing / - only / ±)		
	Possible to change by communicator (option).		
Decimal point display	Specify (decimal point position: 2~4 digit)		
	Possible to change by communicator (option).		
Measurement range	Specify display range for upper limit is +10% and lower limit is -10%. (Display hold for 3 1/2-digit is ±1999, 4-digit is ±9999 and display hold is 0 for polarity nothing specification)		
Function of OR/ UR	Standand: OR / None UR function.		
	Possible to change by communicator (option).		
	-Detection setting: 4 type (Nothing , OR only, UR only, OR or UR) -Detection range: over range, max. range display + 10% of display SPAN under range, min. range display - 10% of display SPAN		
	-Detection display: (OR (UR)⇔OR (UR) setting value or OR (UR)⇔alternate display measurement value)		
Function of zero suppression	Standand: Zero suppression		
	Possible to change by communicator (option) (Nothing/ Zero suppression, It will turn off the light automatically for unnecessary 0)		
BIAS, SPAN adjust	Possible to adjust (±3%) by communicator (option)		
Overload	Input	voltage	2-time (10 sec.), 1.2-time (continuance)
		current	10-time (5 sec.), 1.2-time (continuance)
	Aux. power		1.5-time (10 sec.), 1.2-ime (continuance)
Insulation resistance	Between electric circuit and outer case		DC500V, 50MΩ or more
	Between input and aux. power terminal		
Withstand voltage	Between electric circuit and outer case		AC2000V, 50/60Hz, 1 min.
	Between input and aux. power terminal		AC1500V, 50/60Hz, 1 min.
Impulse withstand voltage	Between electric circuit and outer case		5kV, 1.2/50μs, positive/ negative polarity, each 3-time
Vibration	Oscillation frequency:16.7Hz, Double amplitude: 1mm (5.88m/s ²) For each 2-hour by vibration in X, Y, Z direction.		
Impact shock	Impact shock: 294m/ s ² for each 3-time forward reverse in a direction X, Y, Z.		
Operated temperature & humidity range	0~55℃ : 30~85% RH		
Storage temperature range	-20~+70℃		

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SPECIFICATIONS OF PRODUCTS BEFORE SHIPMENT

Product shipment out with below Standard Setting (Specify is possible inside the setting and designate range)

NO	ITEM	STANDARD	SETTING AND SPECIFY POSSIBLE RANGE *3
1	Max. display	3 1/2-digit: 1000 4-digit: 5000	3 1/2-digit: ± 1999 4-digit: ± 9999
2	Min. display	0	3 1/2-digit: ± 1999 4-digit: ± 9999
3	Polarity display	0~□display: Nothing ±□display: $\pm$ display	Nothing, - display, $\pm$ display, LAG or LEAD display, other (In case 3 1/2-display is orange, only - polarity display)
4	Decimal point position	No decimal point	2-digit ~ 4-digit
5	Display update time	0.4 sec. (2.5cycle/ sec.)	0.1~9.9 sec., 0.1 sec. step (approx. 0.1~10cycle/ sec.)
6	Fix 0 at last digit	Nothing	Nothing / Fix 0 at last digit (In case fix 0 at last digit, measurement accuracy of 3 1/2-digit is $\pm 0.1\%$ of rdg ± 10 digit, Or measurement accuracy of 4-digit is 0.05% of rdg ± 10 digit)
7	Setting OR or UR	Nothing	Nothing/ OR or UR/ only OR/ only UR
8	Setting value of OR	Max. input value + 10.0%	Max. input value + 0.0~10.0% of span.
9	OR display	OR $\leftrightarrow$ OR setting value	OR $\leftrightarrow$ OR setting value/ OR $\leftrightarrow$ measurement value/ 1.0 flash display (power factor)
10	Setting value of UR	Min. input value - 10.0%	Min. input value - 0.0~10.0% of span.
11	UR display	UR $\leftrightarrow$ UR setting value	UR $\leftrightarrow$ UR setting value/ UR $\leftrightarrow$ measurement value/ 1.0 flash display (power factor)
12	Zero suppression	Zero suppression	Nothing / Zero suppression
13	Style of '6' and '9'	Standard (6 , 9)	Standard (6 , 9) / Specify (6 , 9)
14	Sculpture (unit, use, scale)	Nothing	For any unit, use, scale
15	Test report	With test report	Without / with test report

*3. Caving Indications (DP110B includes polarity, LAG and LEAD display)

Other than above can be changed by communicator (option)

Sell Separately (make separately order from DP1000B series)

1. Auxiliary Lug for LPDSA-4:

Use it when tile half stagger installation of mosaic panel and raise the installation strength. (1pcs/ 1-unit)

2. Installation Spring for LPDSA:

Use it when installation of 15mm mosaic panel one touch. (2pcs/ 1-unit)

3. Installation space for LPDSA: KCC&Co.:

Use it when installation of KCC&Co. 15mm mosaic panel one touch. (2pcs/ 1-unit)

4. CM-1 (communicator):

Use this to charge any setting value.

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RESISTANCE INPUT

Input	Resistance Input
$\pm 1\text{mA}$	200Ω
$\pm 10\text{mA}$	20Ω
$4\sim 20\text{mA}$	10Ω
$\pm 1\text{V}$	$1\text{M}\Omega$
$\pm 5\text{V}$	$1\text{M}\Omega$
$\pm 10\text{V}$	$1\text{M}\Omega$
$1\sim 5\text{V}$	$1\text{M}\Omega$

MANUFACTURE RANGE OF INPUT

* $\pm 100\mu\text{A}\sim\pm 100\text{mA}$

* $\pm 50\text{mV}\sim\pm 60\text{V}$

* External multiplier if input is exceeding 60V, manufacture for 1mA input is possible.

OVER RANGE & UNDER RANGE

Over Range (OR): 7-segment LED will be display when measurement range is exceeds the upper limit value.

Under Range (UR): 7-segment LED will be display when measurement range is exceeds the lower limit value.

*Rapidly exceeds measurement range may indicate the different value depending on the time lag of measurement sampling.

SPECIFY BELOW ITEM WHEN MAKING ORDER

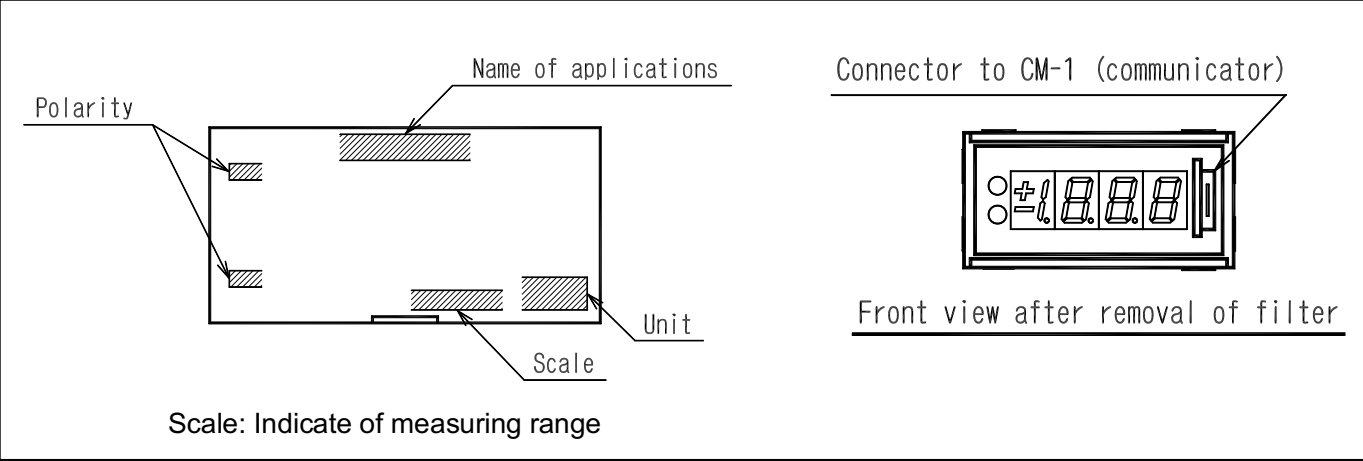
- 1). Type Name/ Specification code
- 2). Input (except standard)
- 3). Quantity

Option:

- 4). Display range
- 5). Sculpture
 - Scale (ranging) value:
 - Unit:
 - Name of application:
 - Sculpture of + polarity:
 - Sculpture of – polarity:
- 6). Sell separately
 - Name of product and quantity

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NAME AND THE FUNCTION OF EACH PART



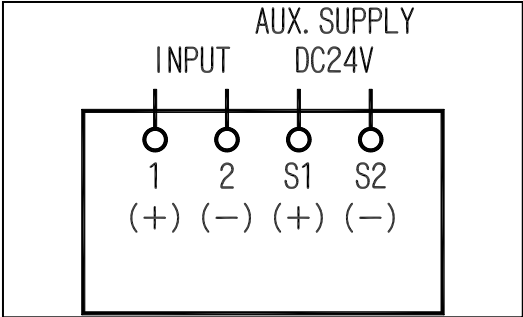
- * Please specify polarity (+, -LAG, LEAD etc.)
- * Please show us your diagram sculpture, if they are not in our catalogue.

DISPLAY

Classification series		LED display
DP1000B	Red	
	Orange	
DP1100B	Red / Green / Orange	

*4. Polarity display of DP1100B is in sculpture and circle LED.

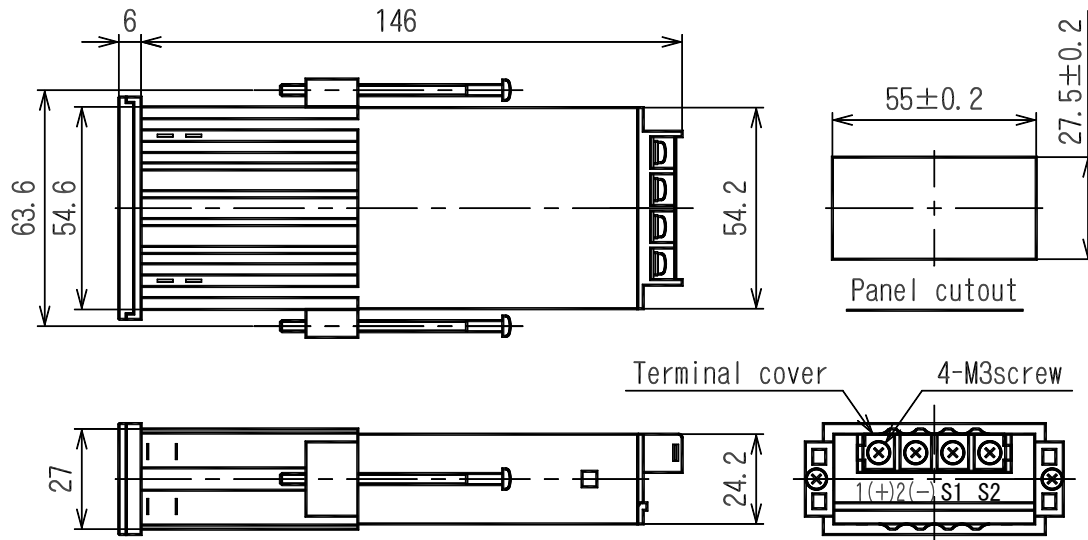
CONNECTION DIAGRAM



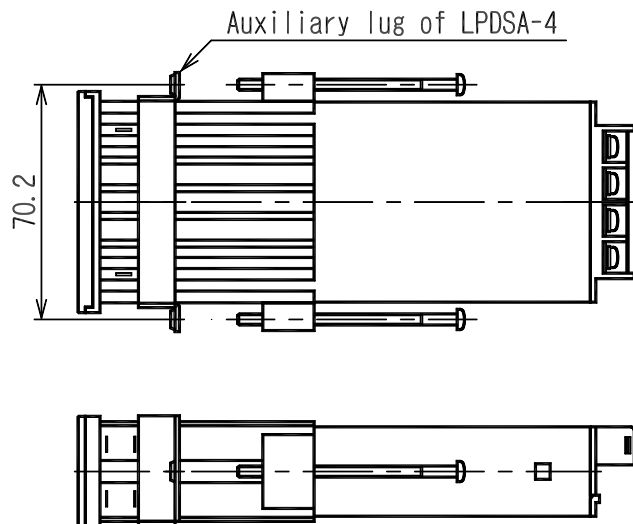
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DIMENSION DRAWING

1. Tighten screw type (standard)



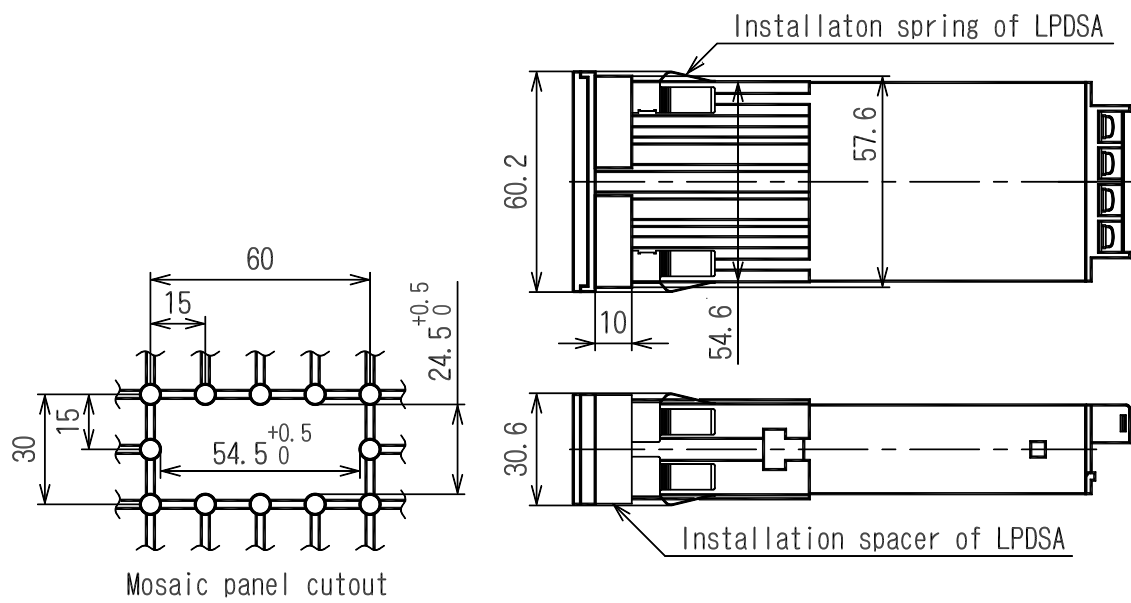
2. Tighten screw type (with install metal)



Sell separately: Auxiliary lug of LPDSA-4 (1pcs/ 1-unit)

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3. KCC & Co.: 15mm Mosaic One Touch Mounting



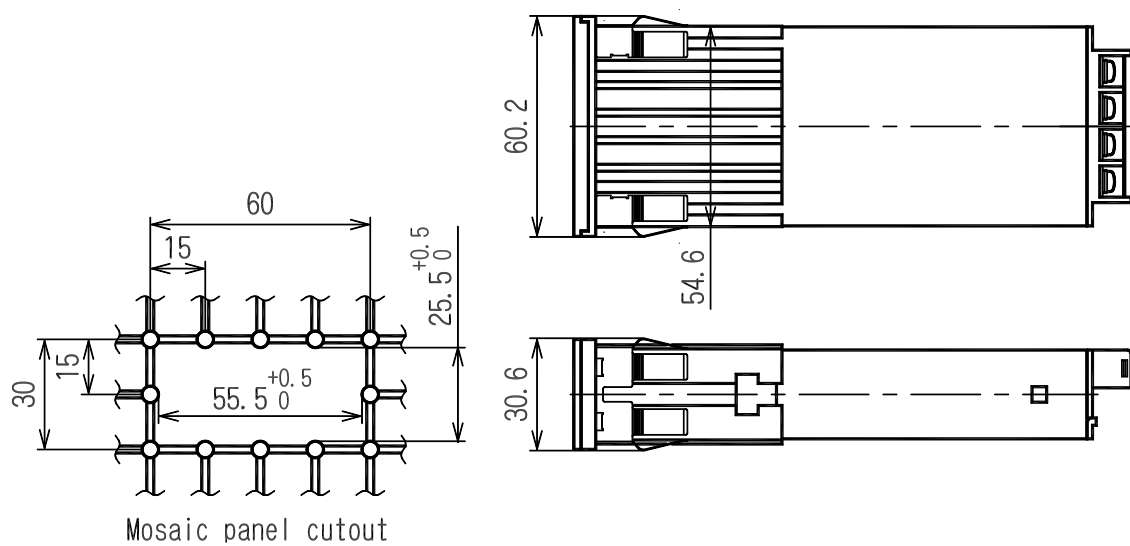
Sell separately: LPDSA Spacer

2pcs/ 1-unit

Sell separately: LPDSA Install Spring

2pcs/ 1-unit

4. SEIWA Electric: 15mm Mosaic One touch Mounting



Sell separately: LPDSA install spring

2pcs/ 1-unit

DIGITAL PANEL METER - COMMUNICATOR (CM-1)

APPLICATION

*CM-1 (communicator) is a data setter of DP1000B series for change the setting value.

*Possible to change the setting or adjust the scaling and update display of DPM.

SPECIFICATION

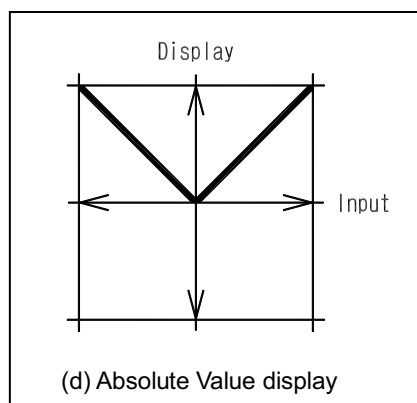
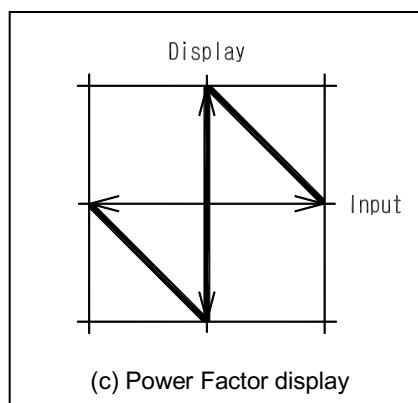
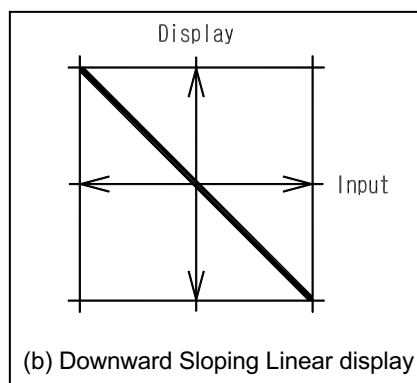
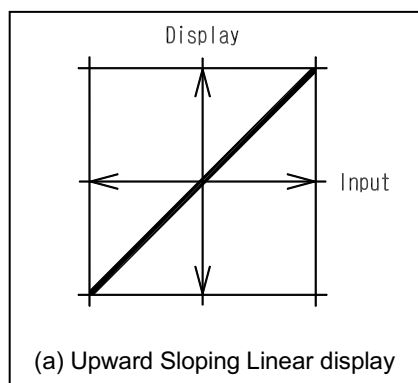
Cable length: approx. 2m

Weight: 200g

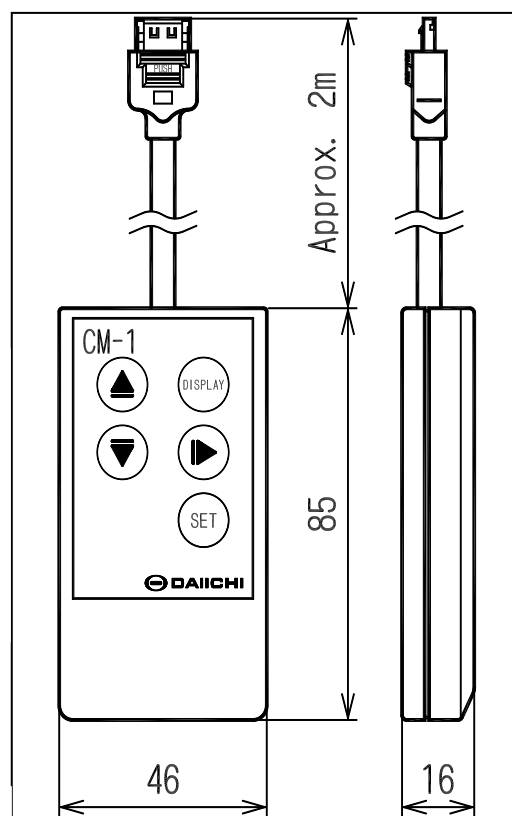


COMMUNICATOR

Scaling (display) pattern	Example display	Figure
Upward Sloping Linear	0~100, -100~100	(a)
	10~100, -100~10	(a)
Downward Sloping Linear	100~0, 100~-100	(b)
	-10~-100, 100~10	(b)
Display of power factor	-0.50~1.00~+0.50	(c)
Display of absolute value	100~0~100	(d)



DIMENSION DRAWING



Item to specify when purchase

* Item to specify

TYPE NAME

CM-1