

PHOTOELECTRIC NON-CONTACT METER RELAY

EL SERIES

EL SERIES LIST

Item		Operating Principle	Type	Class	Max. scale value/ rated value	Internal resistance / Voltage fall / Current consumption / Consumption VA		Accessory Transducer	Diagram	Note
DC Current		Permanent Magnet Moving Coil Type	MEL-110C	1.5	200μA	2500Ω		—	C-1	—
					1mA	400Ω				
					5mA	730Ω				
					10mA	7.3Ω				
					20mA	3Ω				
					20~750mA	60mV				
					1A~10kA	60mV		Shunt		
DC Voltage		Permanent Magnet Moving Coil Type	MEL-110C	1.5	60~900mV	5mA		—	C-2	—
					1~600V	1mA				
					750~25kV	1mA		Series resistor		
DC Receiving meter		Permanent Magnet Moving Coil Type	XEL-110C	1.5	1mA	400Ω		—	C-1 C-2	—
					4~20mA	5.4 Ω				
					1~300V	1mA				
AC Current		Rectifier Type	CEL-110C	1.5	10~300mA	1VA or less		—	C-3	—
					0.35~100A	1VA				
AC Voltage		Rectifier Type	CEL-110C	1.5	3~600V	1mA		—	C-4	—
					750V~25kV	1mA				
AC Receiving meter		Rectifier Type	YEL-110C	1.5	1mA	1300Ω		—	C-3 C-4	—
					3~300V	1mA				
Watt Meter	single phase	Transducer Type	WEL-110C-12	1.5	110V, 5A 220V, 5A	voltage 2VA voltage 3.5VA	current 1VA current 1VA	WT-62M-12	C-8	* Refer to accessory transducer outline drawing page. * Refer to meter manufacturing limit and max. scale value page.
	single phase 3 wire		WEL-110C-13	1.5	110V, 5A	voltage each phase 2VA	current each phase 1VA	WT-83M-13	C-5	
	3 phase		WEL-110C-33	1.5	110V, 5A 220V, 5A	voltage each phase 2VA voltage each phase 3.5VA	current each phase 1VA current each phase 1VA	WT-83M-33	C-5	
	3 phase 4 wire		WEL-110C-34	1.5	110/√3V, 5A 220/√3V, 5A	voltage each phase 1.5VA voltage each phase 3VA	“	WT-83M-34	C-6	
Var Meter	single phase	Transducer Type	WVEL-110C-12	1.5	110V, 5A 220V, 5A	voltage each phase 3.5VA voltage each phase 3.5VA	current each phase 1.5VA current each phase 1.5VA	* WVT-62M-12	C-8	* Specify frequency (50/60Hz). * Scale: Lead□var~0~Lag□var * Refer to accessory transducer outline drawing page. * Refer to meter manufacturing limit & max. scale value.
	3 phase (balanced)		WVBEL-110C-33	1.5	110V, 5A 220V, 5A	voltage each phase 3.5VA voltage each phase 3.5VA	current each phase 1.5VA current each phase 1.5VA	WVBT-83M-33	C-5	
	3 phase (unbalanced)		WVEL-110C-33	1.5	110V, 5A 220V, 5A	“	“	* WVT-83M-33	C-5	
	3 phase 4-wire		WVEL-110C-34	1.5	110V, 5A 220V, 5A	“	“	WVT-83M-34	C-7	
Power Factor Meter	single phase	Rectifier Type	PEL-110C-12	5.0	110V, 5A 220V, 5A	voltage 1VA voltage 2VA	current 1VA current 1VA	* PT-62M-12	C-8	* Specify frequency (50/60Hz). * Scale: Lead 0.5~1~Lag 0.5. * Refer to accessory transducer outline drawing page.
	3 phase (balanced)		PBEL-110C-33		110V, 5A 220V, 5A	voltage each phase 1VA voltage each phase 2VA	current each phase 1VA current each phase 1VA	PBT-62M-33	C-9	
	3 phase (unbalanced)	Transducer Type	PEL-110C-33		110V, 5A 220V, 5A	“	“	* PT-63M-33	C-10	
	3 phase 4-wire (balanced)	Rectifier Type	PBEL-110C-34		110V, 5A 220V, 5A	“	“	PBT-62M-34	C-11	
	3 phase 4-wire (unbalanced)	Transducer Type	PEL-110C-34		110V, 5A 220V, 5A	“	“	* PT-64M-34	C-12	
Frequency		Transducer Type	AEL-110C	1.0	110V 220V	45~55Hz 55~65Hz 45~65Hz 350~450Hz	For 110V, 1.7VA For 220V, 2.5VA	FT-62M	C-13	—

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COMMON STANDARD SPECIFICATION

Item		Specification
Class		Refer to [EL series list]
Support System		Pivot system
Meter deflection angle		230°
Dimensions meter from front		110 × 110mm
Scale length		172mm
Scale plate		White paint
Pointer		Lance (black)
Meter mounting position		Vertical (⊥)
Material panel		Iron plate or non-iron plate
Mounting panel thickness		10mm or less
Type according to output signal		Continuance output type
Pointer moving range		Passing full scale type
Setting range		Full scale
Tolerance of pick up value		±1.0% of scale length
Dead band		1.0% of scale length
Min. setting width		3% of scale length
Relay operation control system		H (upper limit) , L (lower limit), HL (upper and lower limit)
Setting index		Triangle type, H : red, L : yellow
Relay control power		AC110V, 220V (4.5VA) +10% -15% (50/60Hz) DC24V (2.5W), 48V (5W), 110V (12W) ±15%
Contact configuration		2C contact for HL
Contact capacity		AC200V, 5A (resistance load) DC30V, 5A (resistance load)
Color of cover		Dark blue: (Munsell 7.5BG4/1.5) Black: (Munsell N 1.5)
Material of case		Cover: Methacrylic acid resin molding (Antistatic prevention treatment) Base: Flame-retarded ABS resin
Insulation resistance		Between electric circuit and outer case DC500V, 50MΩ or more
Voltage test		Between electric circuit and outer case AC3320V, between 5sec.
Safety requiments	Standard	JISC 1010-1
	Insulation	Between electric circuit and outer case: Base of insulation
	Use	For indoor use (Cubicle etc.)
	High altitude	2000m or less
	Pollution	Pollution level 2
	Measure category	CATⅢ
	Max. circuit voltage	600V (Am meter)
Opertaion temperature/ humidity range		-10~55℃, Average day temperature is 40℃ or less, 25~85% RH
Storage temperature range		-20~70℃

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COMMON SPECIAL SPECIFICATIONS

Item		Specification	
Scale	Extend scale	CEL: 2~5-time extend (Please specify)	
	Color line	Red, Green, Yellow (Please specify)	
	Color area (bar)	Red, Green, Yellow (Please specify)	
	Double scale	Please specify	
	Double seal	Please specify	
	Max. scale section	110 angle : 100 sections	
	Special scale	Please specify	
Indicator manufacturing limit		DC200μA, DC60mV	
DC relay control power		DC50V up to 350V (specify for variation range).	
Relay operation control system		HH (upper limit 2 steps) ; LL (lower limit 2 steps)	
Start current protection circuit		Variable or Fixed within 0~60 sec.	
Mounting panel thickness		Above 12mm auxiliary fixture is required.	
Tropical specification		Rust preventative, 「FOR TROPICS」 will display at the name plate.	
Pointer		Stick-type (multiple scale)	
Meter mounting position		Horizontal, inclination installation (angle specified)	
Flame-retarded material		Cover	Polycarbonate resin
Protection circuit of meter		Overcurrent	Specify for necessary tolerated dose.
		Overvoltage	Specify for necessary tolerated dose.
Extended part of scale		Voltmeter	±10%, ±20%, ±30% of central scale value 75% or more of scale length
			Ammeter
		up to 50% of upper limit value of effective measuring range. 75% or more of scale length.	
For RMS value rectifier type		AC Current, AC Voltage	
For SCR control waves use		AC Current, AC Voltage, Frequency	
Test report		Specify the useful frequency and copies of test report require.	
Color of cover		Please specify	
Terminal cover		Please specify	
Others		Please consultation with us when special frequency is necessary.	

STANDARD SCALE SECTION

Max. Scale Value (10 times)	1	1.5	2	2.5	3	4	5	6	7.5	8	9
EL	50	30	40	50	30	40	50	30	37.5	40	45

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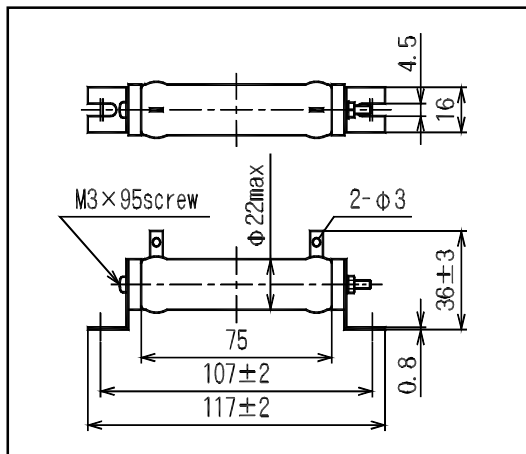
EL

EXTERNAL SERIES RESISTOR (DC Control Power)

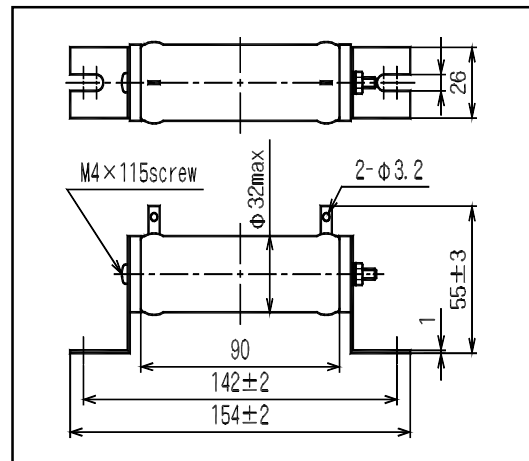
Rated Value	Series Resistor	Note
DC 48V	CRH 30G	
DC110V	CRH 60G	

Outline Drawing

* CRH 30G (For DC48V)



* CRH 60G (For DC110V)



Outline Drawing

