



CUBIK

The Enclosure Company

SWITCHBOARD ACCESSORIES



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Panel Indicators are used for status indication in electrical switchboards & control panels.

Available in different colours, shapes and different types of bulbs.

MIKRA - Taiwan **MIKRA**

Ordering Information

Order No	Model No	Product	Colour	Size	Voltage	Bulb	Supply
225100	NLD22 -R	Panel Indicators	Red	22	24V AC/DC	LED	Direct
225101	NLD22 -Y	Panel Indicators	Yellow	22	24V AC/DC	LED	Direct
225102	NLD22-G	Panel Indicators	Green	22	24V AC/DC	LED	Direct
225103	NLD22-B	Panel Indicators	Blue	22	24V AC/DC	LED	Direct
225105	NLD22-R	Panel Indicators	Red	22	220/240V	LED	Direct
225106	NLD22-Y	Panel Indicators	Yellow	22	220/240V	LED	Direct
225107	NLD22-G	Panel Indicators	Green	22	220/240V	LED	Direct
225108	NLD22-B	Panel Indicators	Blue	22	220/240V	LED	Direct

Technical Details

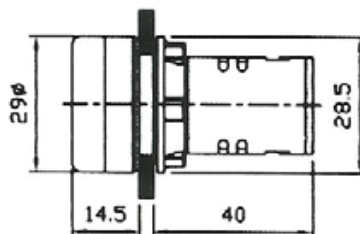
NLD22



NLD22



NLD22



Ordering Information

Order No	Model No	Product	Colour	Size	Voltage	Bulb	Supply	Marking
226 100	AD22-VM	Panel Indicators	Red	22	220/240V	LED	Direct	Voltage Display
226 101	AD22-VM	Panel Indicators	Yellow	22	220/240V	LED	Direct	Voltage Display
226 102	AD22-VM	Panel Indicators	Blue	22	220/240V	LED	Direct	Voltage Display
226 103	AD22-VM	Panel Indicators	Green	22	220/240V	LED	Direct	Voltage Display
226 105	AD22-VM	Panel Indicators	Red	22	24V AC/DC	LED	Direct	Voltage Display
226 106	AD22-VM	Panel Indicators	Yellow	22	24V AC/DC	LED	Direct	Voltage Display
226 107	AD22-VM	Panel Indicators	Blue	22	24V AC/DC	LED	Direct	Voltage Display
226 108	AD22-VM	Panel Indicators	Green	22	24V AC/DC	LED	Direct	Voltage Display
224220	AD22B-16C	Panel Indicators	Clear	16	220/240V	LED	Direct	
224 221	AD22B-16C	Panel Indicators	Green	16	220/240V	LED	Direct	
224222	AD22B-16C	Panel Indicators	Red	16	220/240V	LED	Direct	
224 223	AD22B-16C	Panel Indicators	Yellow	16	220/240V	LED	Direct	
224224	AD22B-16C	Panel Indicators	Blue	16	220/240V	LED	Direct	
224 232	LAY5-BV44	Panel Indicators	Red	22	220/240V	LED	Transformer	
224 233	LAY5-BV45	Panel Indicators	Yellow	22	220/240V	LED	Transformer	
224 234	LAY5-BV46	Panel Indicators	Blue	22	220/240V	LED	Transformer	
224 380	AD 22B -22W	Panel Indicators	Clear	22	220/240V	LED	Direct	X
224 381	AD 22B -22W	Panel Indicators	Clear	22	220/240V	LED	Direct	ISOLATED
224 382	AD 22B -22W	Panel Indicators	Clear	22	220/240V	LED	Direct	EARTHING
224 383	AD 22B -22W	Panel Indicators	Clear	22	220/240V	LED	Direct	OFF
224 384	AD 22B -22W	Panel Indicators	Clear	22	220/240V	LED	Direct	ON
224 385	AD 22B -22W	Panel Indicators	Clear	22	220/240V	LED	Direct	---
224 386	AD 22B -22W	Panel Indicators	Clear	22	220/240V	LED	Direct	O
224 387	AD 22B -22W	Panel Indicators	Clear	22	220/240V	LED	Direct	ARROW

Technical Details

Insulation resistance	$\geq 50M\Omega$
Contact resistance	$\leq 25\text{Min}\Omega$
Pf withstand Voltage	AC 2.5KV/min
Voltage Wave	$\pm 20\%$
Brightness	$60\text{cd}/\text{m}^2$
Continuous working life	$10 \times 10000\text{h}$

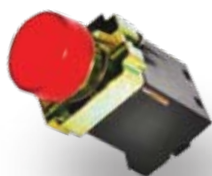
AD22-VM



AD22B-16C



LAY5-BV44



AD 22B -22W





Push buttons are used for process control in electrical switchboards & control panels. Available in different types, sizes & colours.

MIKRA - Taiwan **MIKRA**

Ordering Information

Order No	Model No	Product	Colour	Size	Voltage	Bulb	Type
225200	NPB22 - G	Push Buttons	Green	22	220/240V	-	Flush
225201	NPB22 - R	Push Buttons	Red	22	220/240V	-	Flush

Technical Details

NPB22



NPB22



Ordering Information

Order No	Model No	Product	Colour	Size	Voltage	Bulb	Supply
224 320	LA22-16F-11D	Push Buttons	Clear	16	220/240V	-	Flsuh
224 321	LA22-16F-11D	Push Buttons	Green	16	220/240V	-	Flsuh
224 322	LA22-16F-11D	Push Buttons	Red	16	220/240V	-	Flsuh
224 323	LA22-16F-11D	Push Buttons	Yellow	16	220/240V	-	Flsuh
224 324	LA22-16F-11D	Push Buttons	Blue	16	220/240V	-	Flsuh
224 700	BA31	Push Buttons	Green	22	220/240V	-	Flsuh
224 701	BA42	Push Buttons	Red	22	220/240V	-	Flsuh
224 720	BW3361	Push Buttons	Green	22	220/240V	LED	Illuminate
224 721	BW3361	Push Buttons	Red	22	220/240V	LED	Illuminate
224 722	BW3361	Push Buttons	Amber	22	220/240V	LED	Illuminate
224 723	BW3361	Push Buttons	Blue	22	220/240V	LED	Illuminate
224 751	BL9434	Push Buttons	Red+Green	22	220/240V	-	Double Head
224 760	LA22C-11RG	Push Buttons with O&I	Red+Green +Amber	22	220/240V		Double Head
224 770	BS542	Push Buttons	Red	22	220/240V	-	Mushroom
224 780	BS742	Push Buttons	Red	22	220/240V	-	Mushroom

224 771	11 M	Push Buttons	Red	22	220/240V	-	Mushroom
224 775	11 Z	Push Buttons with Circular	Red	22	220/240V	-	Mushroom
224 785	2022 EB	Push Buttons	Green	22	220/240V	-	Mushroom
224 790	LA22C-11M	Push Buttons with START	Green	22	220/240V	-	Mushroom
224 792	PB30-11MZ	Push Buttons with RESET	Red	22	220/240V	-	Mushroom

Technical Details

Rated insulation	AC 600V (50Hz/60Hz)
Conventional heating current	10A
Insulation resistance	$\geq 50\text{M}\Omega$
Contact resistance	$\leq 25\text{Min}\Omega$
Mechanical life	100×10000 push button
Electrical Life	500×10000 push button

Technical Details

LA22-16F-11D



BA31



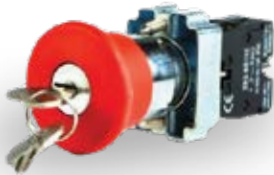
BA42



BW3361



BS742



BL9434



LA22C-11RG



BS542



2022 EB



11 M



LA22C-11M



PB30-11MZ



SELECTOR SWITCHES



Selector switches are used for ON/OFF functions in control circuits.

Selector switches are available in various types, colors, illuminated and non-illuminated depending on the applications.

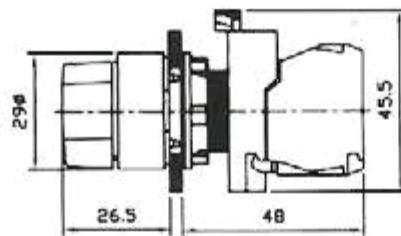
MIKRA-Taiwan **MIKRA**

Ordering Information

Order No	Model No	Product	Positions	Size	Voltage	Trun Angel	Colour
225 300	NSS22-S2	Selector Switch	2	22	220/240V	90°	Black

Technical Details

NSS22-S2



Ordering Information

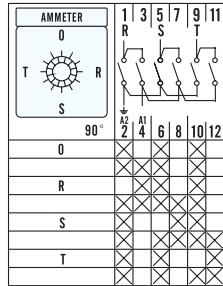
Order No	Model No	Product	Positions	Size	Voltage	Trun Type/ Bulb	Color
228 500	ASS	Ammeter Selector Switches			220/240V	45°	Black
228 510	VSS	Voltmeter Selector Switches			220/240V	45°	Black
224 500	BD21	Selector Switch	2	22	220/240V	45°	Black
224 502	BD41	Selector Switch	2	22	220/240V	45°	Black
224 503	BD45	Selector Switch	2	22	220/240V	45°	Black
224 504	BD33	Selector Switch	3	22	220/240V	45°	Black
224 505	BD53	Selector Switch	3	22	220/240V	45°	Black
224 510	BJ21	Selector Switch	2	22	220/240V	45°	Black
224 512	BJ41	Selector Switch	2	22	220/240V	45°	Black
224 513	BJ45	Selector Switch	2	22	220/240V	45°	Black
224 514	BJ33	Selector Switch	3	22	220/240V	45°	Black
224 515	BJ53	Selector Switch	3	22	220/240V	45°	Black
224 520	BG21	Key Selector Switch	2	22	220/240V	45°	Silver
224 521	BG25	Key Selector Switch	2	22	220/240V	45°	Silver
224 522	BG41	Key Selector Switch	2	22	220/240V	45°	Silver
224 523	BG45	Key Selector Switch	2	22	220/240V	45°	Silver
224 524	BG33	Key Selector Switch	3	22	220/240V	45°	Silver

Order No	Model No	Product	Positions	Size	Voltage	Trun Type/ Bulb	Color
224 550	BK2365	Illuminature Selector Switch	2	22	220/240V	45°/LED	Green
224 551	BK2465	Illuminature Selector Switch	2	22	220/240V	45°/LED	Red
224 552	BK3365	Illuminature Selector Switch	3	22	220/240V	45°/LED	Green
224 553	BK3465	Illuminature Selector Switch	3	22	220/240V	45°/LED	Red
224 570	11 XD	Illuminature Selector Switch	2	22	220/240V	45°/LED	Green
224 571	BD 25	Selector Switch	2	22	220/240V	45°	Black
224 572	BB-11X	Selector Switch	2	22	220/240V	45°	Black
224 580	ASW 211L	Selector Switch	2	22	220/240V	45°	Green
224 581	ASW 211L	Selector Switch	2	22	220/240V	45°	Red

Technical Details

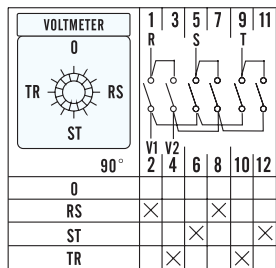
Rated insulation	AC 600V (50Hz/60Hz)
Conventional heating current	10A
Insulation resistance	≥50MΩ
Contact resistance	≤25MinΩ
Mechanical life	100×10000 selector switch
Electrical Life	500×10000 selector switch

ASS



Rated Thermal	20
No. of cells	3
Escutcheon Mark	0-1-2-3 OFF-R-Y-B OFF-1-2-3 O-R-S-T
Programme Code	+AK001
Case Qty. (pcs)	100

VSS

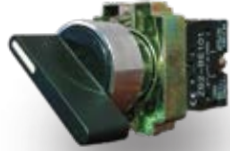


Rated Thermal	20
No. of cells	3
Escutcheon Mark	0-RS-ST-TR
Programme Code	+VN001
Case Qty. (pcs)	100

BD21



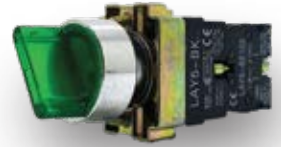
BJ41



BG21



BK2365



11XD



BD25



BB-11X



ASW211L



CONTACT BLOCKS



Contact blocks are used as add on module for Selector switches & push buttons.

Available in as NO (Normally-Open) & NC (Normally-Closed) modules.

AMIKO - Hong Kong  AMIKO

Ordering Information

Order No	Model No	Product
224 795	BE-101	Contact Block - NO
224 796	BE-102	Contact Block - NC

Technical Details

BE-101



BE-102





Panel Meters are used to measure different electrical parameters in electrical switchboards & control panels.

Available in different types, sizes & different parameters required for different applications.

MIKRA - Taiwan 

Ordering Information

Order No	Model No	Product	Range	Size	Voltage
225 606	BE-96-30	Ammeter - Analogue	30/5A	96x96	230V
225 608	BE-96-50	Ammeter - Analogue	50/5A	96x96	230V
225 609	BE-96-60	Ammeter - Analogue	60/5A	96x96	230V
225 611	BE-96-100	Ammeter - Analogue	100/5A	96x96	230V
225 613	BE-96-150	Ammeter - Analogue	150/5A	96x96	230V
225 614	BE-96-200	Ammeter - Analogue	200/5A	96x96	230V
225 615	BE-96-250	Ammeter - Analogue	250/5A	96x96	230V
225 617	BE-96-400	Ammeter - Analogue	400/5A	96x96	230V
225 620	BE-96-800	Ammeter - Analogue	800/5A	96x96	230V
225 506	BE-72-30	Ammeter - Analogue	30/5A	72x72	230V
225 509	BE-72-60	Ammeter - Analogue	60/5A	72x72	230V
225 511	BE-72-100	Ammeter - Analogue	100/5A	72x72	230V
225 513	BE-72-150	Ammeter - Analogue	150/5A	72x72	230V
225 519	BE-72-600	Ammeter - Analogue	600/5A	72x72	230V
225 673	BE-96-15	Ammeter - Analogue	15A	96x96	230V
225 676	BE-96-30	Ammeter - Analogue	30A	96x96	230V
225 571	BE-72-5	Ammeter - Analogue	5A	72x72	230V
225 573	BE-72-15	Ammeter - Analogue	15A	72x72	230V

Order No	Model No	Product	Range	Size	Voltage
225 576	BE-72-30	Ammeter - Analogue	30A	72x72	230V
225 650	BE-96-500V	Voltmeter - Analogue	0-500V	96x96	230V
225 649	BE-72-500V	Voltmeter - Analogue	0-500V	72x72	230V

Technical Details

BE-96-800



BE-72-150



BE-96-30



BE-72-15



BE-96-500V



BE-72-500V



Ordering Information

Order No	Model No	Product	Range	Size	Voltage	Phase
230 900	SFN-9K1-I	Ammeter- Digital	CT/5A	96x96	230V	Single
230 905	SFN-9K1-U	Voltmeter - Digital	600V	96x96	230V	Single
230 910	SFN-9K3-3I	Ammeter - Digital	CT/5A	96x96	230V	Three
230 915	SFN-9K3-3U	Voltmeter- Digital	600V	96x96	230V	Three
230 760	DF	Frequency Meter - Digital		96x96	230V	Single
230 765	DPF	Power Factor Meter - Digital		72x72	230V	Single
230 770	D-VHA	Meter - Volt, Frequency, Ampere		72x72	230V	Single
230 608	A-96- 50	Ammeter- Analogue	50/5A	96x96	230V	Single
230 609	A-96-60	Ammeter - Analogue	60/5A	96x96	230V	
230 611	A-96-100	Ammeter - Analogue	100/5A	96x96	230V	
230 613	A-96-150	Ammeter - Analogue	150/5A	96x96	230V	
230 614	A-96-200	Ammeter - Analogue	200/5A	96x96	230V	
230 615	A-96-250	Ammeter - Analogue	250/5A	96x96	230V	
230 617	A-96-400	Ammeter - Analogue	400/5A	96x96	230V	
230 618	A-96-500	Ammeter - Analogue	500/5A	96x96	230V	
230 619	A-96-600	Ammeter - Analogue	600/5A	96x96	230V	
230 620	A-96-800	Ammeter - Analogue	800/5A	96x96	230V	
230 621	A-96-1000	Ammeter - Analogue	1000/5A	96x96	230V	
230 622	A-96-1200	Ammeter - Analogue	1200/5A	96x96	230V	
230 625	A-96-1600	Ammeter - Analogue	1600/5A	96x96	230V	

230 508	A-72-50	Ammeter - Analogue	50/5A	72x72	230V	
230 514	A-72-200	Ammeter - Analogue	200/5A	72x72	230V	
230 515	A-72-250	Ammeter - Analogue	250/5A	72x72	230V	
230 517	A-72-400	Ammeter - Analogue	400/5A	72x72	230V	
230 518	A-72-500	Ammeter - Analogue	500/5A	72x72	230V	
230 520	A-72-800	Ammeter - Analogue	800/5A	72x72	230V	
230 521	A-72-1000	Ammeter - Analogue	1000/5A	72x72	230V	
230 522	A-72-1200	Ammeter - Analogue	1200/5A	72x72	230V	
230 525	A-72-1600	Ammeter - Analogue	1600/5A	72x72	230V	
230 671	AD-96-5	Ammeter - Analogue	5A	96x96	230V	
230 681	AD-96-100	Ammeter - Analogue	100A	96x96	230V	
230 573	AD-72-15	Ammeter - Analogue	15A	72x72	230V	
230 576	AD-72-30	Ammeter - Analogue	30A	72x72	230V	
230 581	AD-72-100	Ammeter - Analogue	100A	72x72	230V	
230 699	A-72-500V	Voltmeter - Analogue	0-500V	72x72	230V	
230 709	PFM	Power Factor Meter - Analogue		72x72	230V	
230 720	FM	Frequency Meter - Analogue	45-55Hz	96x96	230V	
230 719	FM	Frequency Meter - Analogue	45-55Hz	72x72	230V	Single
230 740	SFT-80	RPM Meter - Analogue	0-1800	80x80	230V	Single
230 455	WM-1P-96	Watt Meter - Analogue	6000W	96x96	230V	Single
230 459	WM-1P-96	Watt Meter- Analogue	16kW	96x96	230V	Single
230 462	WM-1P-96	Watt Meter- Analogue	40kW	96x96	230V	Single

230 466	WM-1P-96	Watt Meter- Analogue	100kW	96x96	230V	Single
230 480	WM-3P-96	Watt Meter- Analogue	24kW	96x96	380V	Three
230 484	WM-3P-96	Watt Meter- Analogue	64kW	96x96	380V	Three
230 487	WM-3P-96	Watt Meter- Analogue	160kW	96x96	380V	Three
230 491	WM-3P-96	Watt Meter - Analogue	400kW	96x96	380V	Three

Technical Details

SFN-9K1-I



SFN-9K1-U



Ammeter Digital SFN-9K3-3I



Voltmeter Digital SFN-9K3-3U



Ammeter - Analogue A-96-600



Ammeter - Analogue A-72-800



Voltmeter - Analogue A-72-500V



Power factor - Analogue PFM



Frequency - Analogue FM



RPM



Wattmeter WM-3P-96





Multi-function power meters are designed for single and three phase power monitoring and measure of voltage, current, energy, power, power factor and frequency, etc. Multi-function power meters are built with RS485 and can easily be integrated with SCADA system.

Multi-function meters are used to measure different electrical parameters in electrical switchboards & control panels.



ARCHMETER - Taiwan

archmeter

Ordering Information

Order No	Model No	Product	Voltage	Size	Display	Functions
250 700	PA 330	Multi Function Meter	220-240V	96x96	LCD	V, I, KW, Kvar, KVA, Kwh, Kvah, kvarh, PF, frequency, Demand, Running hour.

Technical Details

Aux Power	AC80-264V/DC100-300, Max.2.3W
Input Voltage	CATIII 10V-600V L-L
Input Current	2mA-5A
Accuracy	V, I 0.2%, W 0.5 (PF=1.0)
Frequency	V, I 0.2%, W 0.5 (PF=1.0)
Display	Mono 68 × 59 LCD
Wiring Ports	Aux Power, Voltage, Current, DO*2, RS485, LON
I/O	DO OUTPUT*2 ; DO1 Alarm output, DO2 Pulse/ Alarm Output
Operation Temperature	-20°C -70°C
Storage Temperature	-25°C -80°C
Humidity	20-90% RH
Dust/Water Proof Rating	Panel : IP52, Case : IP20
Size	96(W) × 96(H) × 97(L)mm
Power Consumption	0.45~0.7W (Backlight off) 1.3~1.7W (Max. , Backlight) 2.3W (Max. Backlight & Lon module)

PA 330



Ordering Information

Order No	Model No	Product	Voltage	Size	Display	Functions
250 750	SPM 33	Multi Function Meter	220-240V	96x96	LCD	Voltage, Voltage unbalance rate, current, current unbalance rate, Active power, reactive power, apparent power, power factor, frequency, active energy, reactive energy, Total apparent energy, Dual source kwh/kvarh, kVA

Technical Details

SPM 33



SPM 33

Connection Mode	3 Phase 3 Wires, 3 Phase 4 Wires
Metering	True RMS, 1 sec refresh time
Input	Rated current : 5A or 1A Rated voltage : 220/380V, 35Hz~65Hz
Overload	Current: 120% of rated, continuously Instantaneous current : 10time/
	Low voltage system : Up to 400V (L-N) / 650V (L-L) High voltage system : Up to 650kV
Status input Voltage	2 Channel active status input, less than 60V is open, more than 140V is closed, the maximum input is 300V
Relay output (Output)	2 Channels, Node capacity : 250Vac/5A
Power frequency withstand Voltage	AC 2KV/minute
Insulation Resistance	≥ 100MΩ
Impulse withstand voltage	5kV (peak) 1 2/50uS

Power Supply	85~265VAC or 100~300VDC
Power Loss	<5VA
Communication	RS485 serial, support modbus-RTU Baudrate : 4800, 9600, 19200bps Address : 1~247
Dimension (L × W × H)	Panel : 96×96×18 mm Cut-out : 89.5×89.5×69.5 mm (+0.5mm)
IP Index	IP54 (Front panel) and IP20 (Case)
Weight	Approx. 500gr.
Environment	Normal operating temperature : -10 °C~+55°C Operating temperature : -25°C ~+55°C Storage temperature: -40°C~+70°C Humidity: 5%~95% non-condensing
Standard (EMC)	Electrostatic discharge immunity test IEC 61000-4-2, Level 4 Radiated immunity test IEC 61000-4-3, Level 4 Electrical fast transient/burst immunity test IEC 61000-4-4, Level 4 Surge immunity test (1,2/50us~8/20us) IEC 61000-4-5, Level 4



Current transformers are used to measure the current in electrical switchboards & control Panels.

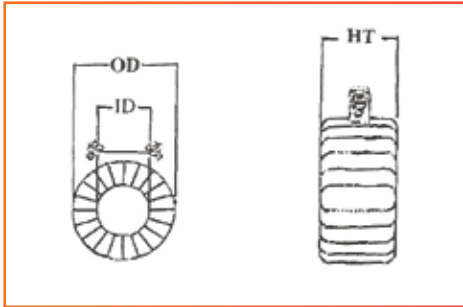
Available in different types, sizes & current ratings.

MIKRA - Taiwan **MIKRA**

Ordering Information

Order No	Model No	Product	Range	Burden	Class	OD (mm)	ID (mm)
225 700	MR-28-30	Current Transformer-Round	30/5A	1.0	1	70	28
225 701	MR-28-50	Current Transformer-Round	50/5A	2.5	1	70	28
225 702	MR-28-60	Current Transformer-Round	60/5A	2.5	1	70	28
225 703	MR-28-100	Current Transformer-Round	100/5A	2.5	1	70	28
225 704	MR-42-150	Current Transformer-Round	150/5A	5	1	80	42
225 705	MR-42-200	Current Transformer-Round	200/5A	5	1	80	42
225 706	MR-42-250	Current Transformer-Round	250/5A	5	1	80	42
225 708	MR-60-400	Current Transformer-Round	400/5A	5	1	80	42
225 749	MFO-30-30	Current Transformer-Sqaure	30/5A	2VA	1		
225 750	MFO-30-50	Current Transformer-Sqaure	50/5A	2VA	1		
225 751	MFO-30-60	Current Transformer-Sqaure	60/5A	2VA	1		
225 753	MFO-30-100	Current Transformer -Sqaure	100/5A	2.5A	1		
225 755	MFO-30-150	Current Transformer-Square	150/5A	3VA	1		
225 756	MFO-30-200	Current Transformer-Square	200/5A	5	1		
225 757	MFO-40-250	Current Transformer-Square	250/5A	3	1		
225 759	MFO-40-400	Current Transformer-Square	400/5A	5	1		
225 761	MFO-40-600	Current Transformer-Square	600/5A	5	1		
225 762	MFO-40-800	Current Transformer-Square	800 /5A	5	1		

Technical Details



MR-28-100

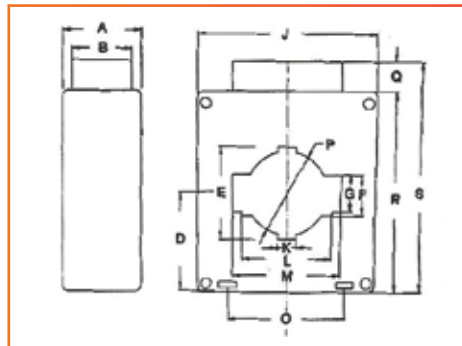
MR-42-150

MR-60-400



MFO-30-100

MFO-40-400



MOTD	MFO-30	MFO-40
Ratio	Power Class	Power Class
50/5A	2VA* 1A	
60/5A	2VA* 1A	
75/5A	2.5VA* 1A	
100/5A	2.5VA* 1A	
125/5A	2.5VA* 1A	
150/5A	3VA* 1A	
200/5A	5VA* 1A	3VA* 1A
250/5A	5VA* 1A	3VA* 1A
300/5A	5VA* 1A	5VA* 1A
400/5A	5VA* 1A	5VA* 1A
500/5A	5VA* 1A	5VA* 1A

	MFO-30	MFO-40
Primary / Secondary (A)	30/5A-500/5A	30/5A-500/5A
Window dimension	30×10mm	40×10mm
PCOAD (VA)	2.5	5
Accuracy Class	1.0	1.0
Rated Voltage	600V	600V

Ordering Information

Order No	Model No	Product	Range	Burden	Class
228 160	MR-60 400/5A	Current Transformer-Round	400/5A	5	1
228 164	MR-60 500/5A	Current Transformer-Round	500/5A	5	1
228 180	MR-125 1200/5A	Current Transformer-Round	1200/5A	15	1
228 199	MR-125 2500/5A	Current Transformer-Round	2500/5A	20	1
230 802	CTB - 60/5A	Current Transformer-Sqaure	60/5A		
230 803	CTB - 100/5A	Current Transformer-Sqaure	100/5A		
230 806	CTB - 250/5A	Current Transformer-Sqaure	250/5A		
230 811	CTB - 800/5A	Current Transformer-Sqaure	800/5A		
230 814	CTB - 1600/5A	Current Transformer-Sqaure	1600/5A		

Technical Details

MR-60 400/5A



CTB - 1600/5A



	MR-28	MR-42	MR-60	MR-85	MR-125
Specification	30/5A-60/5A	100/5A-2500/5A	400/5A-600/5A	800/5A-1600/5A	2000/5A-5000/5A
ID (mm)	28	42	60	85	125
OD (mm)	70	80	100	120	165
HT (mm)	40	30	30	20	20



Control Transformers are used to step down the voltage in control circuits.

Available in different VA Ratings, Primary & Secondary Voltages.

BOARDMAN-UK



BOARDMAN
TRANSFORMERS

Ordering Information

Order No	Model No	Product	VA Rating	Voltage Primary	Voltage Secondary	Ampere
251 300	CL25U1B	Control Transformers	25	230	24	1A
251 303	CL100U1B	Control Transformers	100	230	24	4.16A
251 304	CL150U1B	Control Transformers	150	230	24	6.25A
251 305	CL200U1B	Control Transformers	200	230	24	8.3A
251 306	CL250U1B	Control Transformers	250	230	24	10.4A
251 307	CL300U1B	Control Transformers	300	230	24	12.5A
251 308	CL500U1B	Control Transformers	500	230	24	20.8A
CBO 001	CL100UU	Control Transformers	100	230	230	

Technical Details

Designed and manufactured to comply with IEC61558. High quality product manufactured using automated winding and welding machines. Good access to the four-hole fixing, finger-proof terminals and full varnish impregnation to protect against humidity.

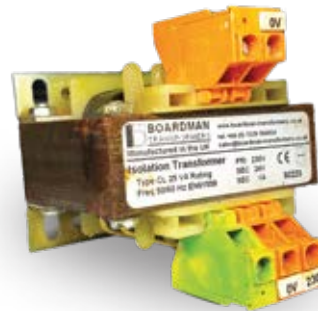
Class 1 Isolation Transformer with earth screen between primary and secondary.

- Standard - IEC / BS-EN 61558
- Primary Voltages 0 - 220 - 230 - 240V or 0 - 380 - 400 - 415V
- Secondary Voltages 12V, 24V, 48V, 110V, 230V
- Frequency 50/60Hz
- Insulation Class B
- Insulation Resistance > 5 Meg Ω
- Dielectric Strength Primary to secondary > 2.5kV
- Primary to Earth > 2.5kV
- Secondary to earth > 2.5kV
- Ambient Temperature - 49 °C

CL250U1B



CL250U1B



CL250U1B



ROTARY SWITCHES



Rotary Switches are used for ON/OFF functions in power control circuits.

Available in different types, sizes & current ratings for different applications.

AMIKO - Hong Kong  AMIKO

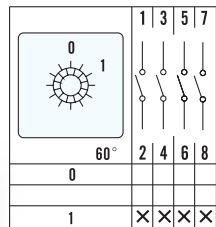
Ordering Information

Order No	Model No	Product	No. of Pole	Size	Voltage	Color	Ampere
224 531	LW126-20	Rotary Switch	3	48x48	220/240V	Black	20
224 532	LW126-25	Rotary Switch	3	48x48	220/240V	Black	25
224 533	LW126-32	Rotary Switch	3	48x48	220/240V	Black	32
224 534	LW126-40	Rotary Switch	3	48x48	220/240V	Black	40
224 535	LW126-63	Rotary Switch	3	48x48	220/240V	Black	63
224 541	LW126-20	Rotary Switch	4	48x48	220/240V	Black	20
224 542	LW126-25	Rotary Switch	4	48x48	220/240V	Black	25
224 543	LW126-32	Rotary Switch	4	48x48	220/240V	Black	32
224 544	LW126-40	Rotary Switch	4	48x48	220/240V	Black	40
224 545	LW126-63	Rotary Switch	4	48x48	220/240V	Black	63

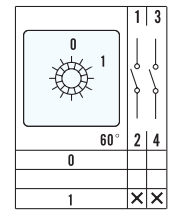
Technical Details

- Ambient Temperature - -5°C to $+35^{\circ}\text{C}$
- Install level - below 2000m from sea level
- Shall install in clean environment
- ISO9001 ROSH CE UL TUV

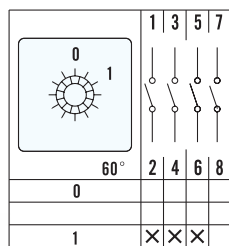
LW126-63 - 4 Pole



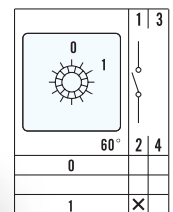
LW126-25 - 3 Pole



LW126-32 - 4 Pole



LW126-20 - 3 Pole





Phase Failure relays are used for the safety of the equipments in the motor control panels and switchboards.

Important to fix reliable phase failure relays in electrical installations to avoid the damages occur due to phase loss.



Ordering Information

Order No	Model No	Product
251 340	BPA03	Phase Failure relay

Technical Details

- Electronic monitoring of L1,L2, L3 for phase failure and sequence .
- The supply range is from 208 to 480VAC.
- 35mm casing for 2 C/O and 25mm casing for 1 C/O..

BPA03

Standard	EN60255-25:2000 EN61000-4-2:2000 EN61000-4-4:2000	
Supply	Self Power	
Input	208 - 480VAC L-L	
Start time	<1Sec	
Delay time	<1Sec	
Reset time	<1Sec	
Output	1 C/O Relay, 2C/O relay	
Operation Temperature	-20°C to +50°C	
Humidity	<95%	

Ordering Information

Order No	Model No	Product
251 210	MVTGBD1N	Phase Failure relay

Technical Details

- Measures Phase to phase voltage.
- Under and Over voltage trip level setting.
- Under and Over voltage time delay setting.
- Phase sequence and loss control (Only S or N version)
- Neutral Loss (Only N version)
- Output Relay 1 Pole changeover contact.
- Compact Size - 1 Module - 17.5mm
- Din rail mounting EN50.022
- Self-Extinguished material UL94 V0

MVTGBD1N

<p>DIMENSIONS (mm)</p>	
<p>DESCRIPTION</p>	<p>WIRING DIAGRAM</p>

MVTGBD1N

INPUT	UNIT	
Supply voltage AC $\pm 10\%$	V \sim	16 400 3~
Nominal Frequency	Hz	50 - 60 (range : 47 - 63)
Trip Levels	Under Over	75 - 96 % of U 105 - 125 % of U
Power consumption (max. AC)	VA	16
Supply indication (U)	-	Green LED
OUTPUT RELAY		400
Rating	-	8A - 250V~/24V $\overline{=}$
Max switching power	VA	2000
Max switching voltage	V \sim	400
Min switching load	-	10mA 12V $\overline{=}$
Contact life	Mech. Electr.	30 x 10 ³ ops 100 x 10 ³ ops
Changeover contacts	-	AgNiO.15
Output Indication (R)	-	Red LED
GENERAL		
Hysteresis (factory set)	%	+ / -2 of trip level
Response Time	ms	100
Time Range (T)	s	0.2 - 10
Delay from Failure (Tr)	ms	100
Power on delay (Td)	ms	100
Working temperature	°C	-20 / +50
Storage temperature	°C	-30 / +70
Electrical Insulation	kV	4
Overvoltage Category	-	I
Protection degree	IP	20
Pollution degree	-	2
Climate category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)
Altitude up to	m	2000
Weight	g	65
Dimensions	mm	98 x 17.5 x 64

Ordering Information

Order No	Model No	Product
225 411	JVM-2	Phase Failure relay
225 4113	JVM-4	Phase Failure relay

Technical Details

JVM-2



JVM-4



JVM - 2

Surface mounting	Socket base 8PFA
Output Capacity	SPDT
Response time of delay	Delay on : 0.5 Sec Delay off : 3 Sec
Frequency	50 or 60Hz
Rated Voltage	3Φ: 220, 380, 415, 440V 1Φ : 110, 220, 380, 415, 440V
Electrical Life	5 × 10 ⁵ Times

JVM - 4

Surface mounting	Socket base P2CF11
Output Capacity	SPDT
Response time of delay	Delay on : 0.5 Sec Delay off : 3 Sec
Frequency	50 or 60Hz
Rated Voltage	3Φ: 220, 380, 415, 440V 1Φ : 110, 220, 380, 415, 440V
Electrical Life	5 × 10 ⁵ Times



Timers are used to adjust operation time in different applications.

MIKRA-Taiwan **MIKRA**

Ordering Information

Order No	Model No	Product	Voltage
225 451	JSY-3D	Digital Timer	

Technical Details

JSY - 3D

Mounting	Flush mounting : Socket base P3G08 or US08
Output Capacity	Alternative by DIP switch : Mode A : DPDT (2 Time-limit contacts) Mode B : Instantaneous contact + Time-limit contact
Features	<ul style="list-style-type: none"> • Error-free digital setting and LED display. • Wide rated time range : 2-digit Timer ---- from 0.99 sec to 99 hour 3-digit Timer ---- from 99.9 sec to 999 hour
Output Capacity	JSY-3D : 99 Sec, 9.9 Sec, 99 Sec, 9.9 Min, 99 Min, 9.9 Hr, 99 Hr.
Rated Voltage	50/60Hz 12VDC, 24VAC/DC, 110VAC, 220VAC
Mechanical Life	10×10^6 Times
Electrical Life	5×10^5 Times
Reset Time	0.1 Sec Max
Reset Accuracy	$\pm 0.2\%$ Max
Setting Accuracy	$\pm 5\%$ Max
Voltage Accuracy	$\pm 0.5\%$ Max
Temperature Accuracy	$\pm 2\%$ Max
Ambient Temp & Humidity	-10°C~55°C, 85% Max

JSY-3D



Ordering Information

Order No	Model No	Product	Voltage
232 300	TS18	24 hrs Timer	

Technical Details

TS18





Different types of Relays are used in control circuits to control different processes.



Ordering Information

Order No	Model No	Product	Voltage
251 330	BCA03	Current Monitoring	220V AC
251 323	BXA04	Voltage Monitoring	
251 360	BWL05	Liquid Leakage Detector	220V AC
251 370	BRB08	Relay Base	

Technical Details

BCA03



BXA04



BWL 05



	BXA04	BCA03
Supply	Self Power	220V AC/24V DC \pm 15%
Input	0 - 500VAC L-L	0.5 - 5.5 A AC
Frequency	50/60Hz \pm 10%	50/60Hz \pm 10%
Repeat Accuracy	Better than \pm 1%	-
Hysteresis	3V	3% \times I-set
Delay Time	0.1 - 25 Sec	0.1 - 25 Sec
Instant Tripping Time	< 1 Sec	< 1 Sec
Output	1 C/O Relay	1 C/O Relay
Operation Temperature	-20°C to =50°C	-20°C to =50°C
Humidity	<95%	<95%

BWL05	
Supply	85 - 265V AC/ 24V DC \pm 15%
AC Aux. Frequency	50V60Hz \pm 10%
Sensor Output	max 24V 0.2mA
Sensor Input	Electrode
Adjustable Sensitivity	5 - 250K Ω
According standard	EN61000-4-4, EN61000-4-5
Immunity from micro	<1sec
Response time high level	<1sec
Output	1 C/O
Operation temperature	-20°C to +50°C

Ordering Information

Order No	Model No	Product	Voltage
225 422	LB2H	Power Relay	
225 424	LB4H	Power Relay	
225 415	JLC-1	Level Control Relay	
225 453	JSK-3D	3 Digital Counter	

Technical Details

LB2H



LB4H



JLC-1



JSK-3D



JSK - 3D

Features	<ul style="list-style-type: none"> • Error-free digital setting and LED display. • Power off reset or Auto reset 0.5S (upon customer's request) • External Connector : Could be proximity sensor or photoelectric sensor.
Reset Time	0.1 Sec Max
Mounting	Flush mounting : Socket base P3G08 or US08
Output Capacity	SPDT
Input	Counting speed : 30 cps max Counting input : By short-circuiting Counting input is effective 0.2S after power on.
Rated Voltage	50/60Hz 12VDC, 24VAC/DC, 110VAC, 220VAC
Mechanical Life	10×10^6 Times
Electrical Life	5×10^5 Times
Ambient Temp & Humidity	-10°C ~55°C, 85% Max

JLC - 1

Features	Water Supply or Water Drainage for controlling conductive liquids under 40 kΩ
Output Capacity	SPDT
Response time of relay	Standard : 0.5 SEC
Surface mounting	Socket base 8PFA
Output Capacity	SPDT
Response time of relay	Standard : 0.5 SEC
Rated Voltage	50/60Hz 110VAC, 220VAC, 380VAC, 415VAC
Mechanical Life	10×10^6 Times
Electrical Life	5×10^5 Times
Reset Time	0.2 Sec Max
Ambient Temp. & Humidity	-10°C~ 55°C, 85% Max



Fuses are reliable device to provide a overcurrent protection to an electrical circuits.

Fuses are conforms to GB13539.

1-2008/IEC60269-1 : 2006,
GB13539.2-2008/IEC60269-2:2006 International electrical commitee standards.

The Variable cross-section fuse body made by pure copper/silverpiece (or silver wire) is sealed in the fusion tube which is made by the high strength porcelain.

Fuses are used to limit over current in fault situations. Available in different types, current ratings for different applications.



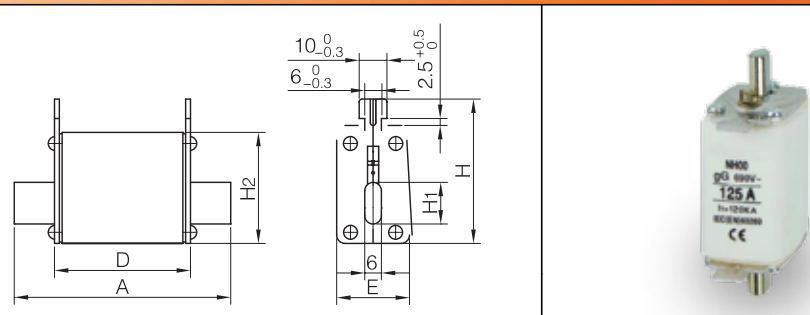
Ordering Information

Order No	Model No	Product	Voltage	Ampere
280 504	NH 00	HRC Fuse	500/690V	32A
280 505	NH 00	HRC Fuse	500/690V	40A
280 506	NH 00	HRC Fuse	500/690V	63A
280 507	NH 00	HRC Fuse	500/690V	80A
280 508	NH 00	HRC Fuse	500/690V	100A
280 509	NH 00	HRC Fuse	500/690V	125A
280 550	RT16-00	HRC Fuse Holder	660V	160A
280 600	RO 15	Cylindaricle Fuse	500/690V	1
280 610	RO 15	Cylindaricle Fuse	500/690V	2

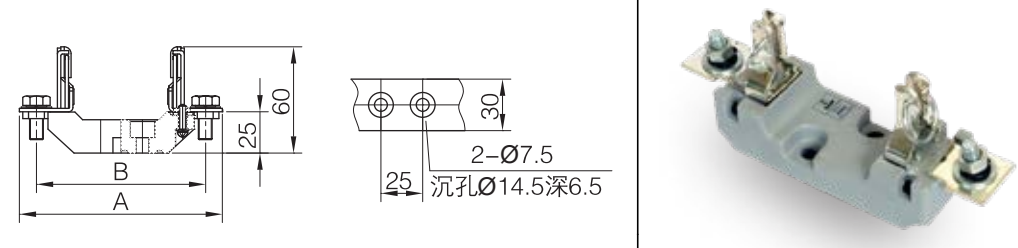
280 650	RT 18-32	Cylindaricle Fuse Holder	500/690V	
280 705	YRPV-30	Cylindaricle Fuse	DC 1000V	15A
280 710	YRPV-30	Cylindaricle Fuse	DC 1000V	25A
280 750	YRPV-30/ 10x38A	Cylindaricle Fuse	DC 1000V	30A

Technical Details

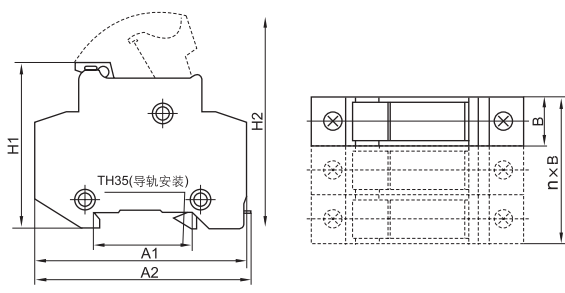

NH00

													
Rated Voltage	500/690												
Rated current Specifications	(4~100), 125, 160												
Overall dimension	<table border="1"> <thead> <tr> <th>A</th> <th>D</th> <th>E</th> <th>H</th> <th>H1</th> <th>H2</th> </tr> </thead> <tbody> <tr> <td>78</td> <td>53</td> <td>30</td> <td>60</td> <td>15</td> <td>48</td> </tr> </tbody> </table>	A	D	E	H	H1	H2	78	53	30	60	15	48
A	D	E	H	H1	H2								
78	53	30	60	15	48								

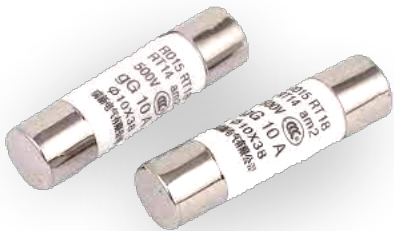
RT16-00

					
Rated Voltage	690V				
Rated current	160				
Matched with fuse body measurement	RT16-00,NT00,NT00C				
Overall dimension	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>120</td> <td>100</td> </tr> </tbody> </table>	A	B	120	100
A	B				
120	100				

RT 18-32

					
Rated Voltage	500				
Rated current	32				
Matched with fuse body measurement	10×38				
Overall dimension	A1	A2	B	H1	H2
	79	81	18	61	80
Weight	65g				

RO 15



YRPV-30



YRPV-30/10x38A





Surge Arrestors are to protect the switchgears, machines & other valuable appliances from high voltage surges. Very important to use reliable, tested, quality surge arrestors in electrical installations.

ONESTO - Hong Kong



Ordering Information

Order No	Model No	Product	Phase	Voltage	Type	Capacity
232 210	BY7-40/2-275	Surge Voltage Arrestors	Single	230/400	AC	20/40kA
232 220	BY7-40/3+1-275	Surge Voltage Arrestors	Three	230/400	AC	20/40kA
232 250	BY7-40/2-1000	Surge Voltage Arrestors		600/1000	DC	20/40kA
232 205	BY7-20/2-100	Surge Voltage Arrestors			DC	

Technical Details

BY7-40/2-275



BY7-40/2-1000



BY7-40/2-275**BY7-40/3+1-275**

	BY7-40/2-275	BY7-40/3+1-275
Number of Ports:	One port	One port
Type of network systems	TN-S,TN-C-S,IT	TN-S,TN-C-S,IT
SPD design topology	Voltage limiting (L-PE,N-PE)	Voltage limiting (L-PE,N-PE)
SPD design topology	II	II
SPD classified for test class	1P(1+0),2p(1+1&2+0) 3P(2+1&3+0),4P(3+1&4+0)	
(According to the need of protection mode in the system)		
Nominal discharge current in	20kA	20kA
Maximum discharge current max	40kA	40kA
Location	Indoor	Indoor
Mounting method	Fixed	Fixed
SPD Disconnecter: internal Protection function	Thermal	Thermal
Maximum continuous operating	275V	275V
Voltage : (One value for each mode of protection)		
Voltage protection level UP	1.2kV	1.2kV
(One value for each mode of protection)		
Short circuit current rating ISCCR	800A	800A
Ambient Temperature	-40°C-+80°C	-40°C-+80°C
Relative Humidity	5%RH~95%RH	5%RH~95%RH
Connection:Screw terminal	4 to 25mm ² , by busbar	4 to 25mm ² , by busbar
Remote signalling of disconnection	Optional	Optional
Protection Index IP	IP20	IP20

BY7-40/2-1000

Number of Ports:	2 Ports
Rated Voltage	1000Vdc
Maximum discharge surge current	I _{max} =40kA
Norminal discharge current(8/20is)	I _n =20KA
Voltage protection level	U _p =3.23KV
Type of network systems	PV
Protection Rating	IP20
Temperature Rating	-40°C-+80°C
Disconnection Indicator	Red
Remote Signal of disconnection	Option
Mounting	DIN rail 35mm installation
Connection	4-25mm ² , by busbar
Material	PA6UL94-VO
More	Plug-in replacement module with indicator
Standard	IEC61643-11, EN50539



Energy meters are used to measure energy used. Energy meters are available in different types depend on mounting, display & input supply.

The energy meters are designed & manufactured in advanced technologies of research and development, like microelectronic-techniques, specialized large- technical performances of energy meters are completely conform to international standards IEC 62053/21.

The energy meters has excellent long-term reliability, small volume, light weight, perfect appearance and easy to install.

LOGOSMETER - Hong Kong 

Ordering Information

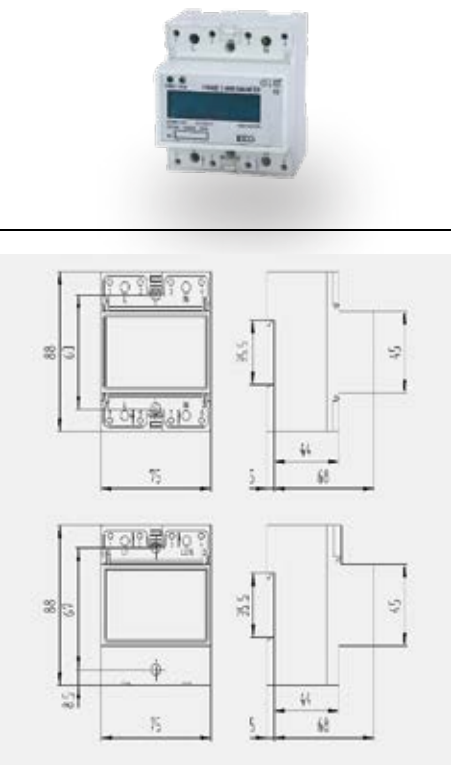
Order No	Model No	Product	Phase	Mount	Display	Ampere	Accuracy Class
250 600	LEM011JC	Energy Meters	1 Phase	DIN	LCD	10(60)A	1
250 605	LEM011AG	Energy Meters	1 Phase	DIN	Step Motor	10(60)A	1
250 630	LEM052JC	Energy Meters	1 Phase	Front Board	LCD	10(60)A	1
250 635	LEM052AG	Energy Meters	1 Phase	Front Board	Step Motor	10(60)A	1
250 650	LEM061JC	Energy Meters	3 Phase	Front Board	LCD	20(120)A	1
250 655	LEM061AG	Energy Meters	3 Phase	Front Board	Step Motor	20(120)A	1
250 660	LEM061AI	Energy Meters	3 Phase	Front Board	LCD	5/A	1
250 670	LEM021MC	Energy Meters	3 Phase	DIN	LCD	10(60)A	1

Technical Details

Accuracy Class - 1
 Voltage - 230V/440V
 AC voltage 4kV for 1 minute,

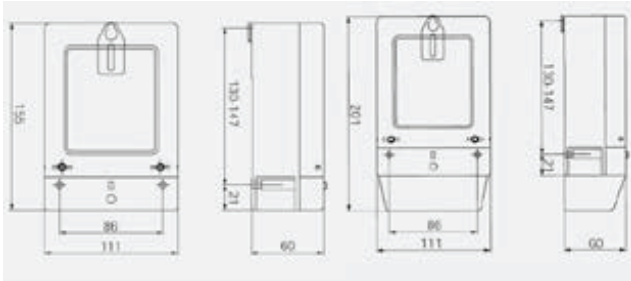
LEM011 JC/AG

Configuration Options	Configuration Code	
	AG	JC
5 + 1 digits step motor impulse register	●	
6 + 1 digits LCD		●
Two 6 digits LCD to display total power and real-time power		
Can be mounted on the front PANEL and the distance of two mounting holes center is 63mm (picture 1)	●	●
Can be mounted on the front PANEL and the distance of two mounting holes center is 67mm (Picture 2)		
Far infrared data communication port and RS485 data communication port		
Inside load switch for the remote control credit		
Type S (Wiring diagram - 1)	●	●
Type T (Wiring diagram - 2)		
Type S (Wiring diagram - 3)		



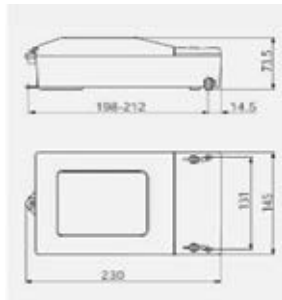
The image shows a photograph of the LEM011 meter, a white rectangular device with a digital display and several ports. Below the photograph are four technical drawings: two front views and two side views. The front views show the meter's dimensions: a total width of 75mm, a height of 88mm, and a mounting hole spacing of 63mm (top view) and 67mm (bottom view). The side views show a depth of 45mm and a mounting hole offset of 35.5mm from the top edge.

LEM052 AG



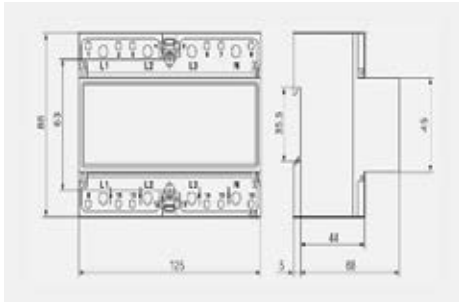
Reference Voltage(V)	230
Current specifications(A)	10(60)
Starting Current(A)	0.02 0.04 0.08
Insulation performance	AC voltage 4kV for 1 minute, 1.2/50us waveform impulse voltage 6kV
Weight	65g

LEM061 AG



Reference Voltage(V)	3x230
Current specifications(A)	CT/5 20(120)
Starting Current(A)	0.02 0.04 0.08
Insulation performance	AC voltage 4kV for 1 minute, 1.2/50us waveform impulse voltage 6kV

LEM021MC



Reference Voltage(V)	3x230
Current specifications(A)	10(60)
Starting Current(A)	0.02 0.04 0.08
Insulation performance	AC voltage 4kV for 1 minute, 1.2/50us waveform impulse voltage 6kV



Power supplies are used to supply different voltages to different applications.

Available in different voltages & multiple outputs.

MEANWELL - Taiwan



Ordering Information

Order No	Model No	Product	Watt	Class	Type	Ampere
275 111	LRS-50-12	Power Supply	50W			4.2
275 113	LRS-50-24	Power Supply	50W			2.2
275 104	LRS-50-48	Power Supply	50W			
275 131	LRS-100-12	Power Supply	100			8.5
275 151	LRS-150F-12	Power Supply	150			12.5
275 173	LRS-350-24	Power Supply	350			14.6
275 201	MDR-60-12	Power Supply	150		DIN	5
275 203	MDR-60-24	Power Supply	125		DIN	2.5
275 303	RS-150-24	Power Supply	150			6.5
275 350	RD-125-1224	Power Supply	125			
275 403	LPV-35-24	Power Supply	35			

LRS-50

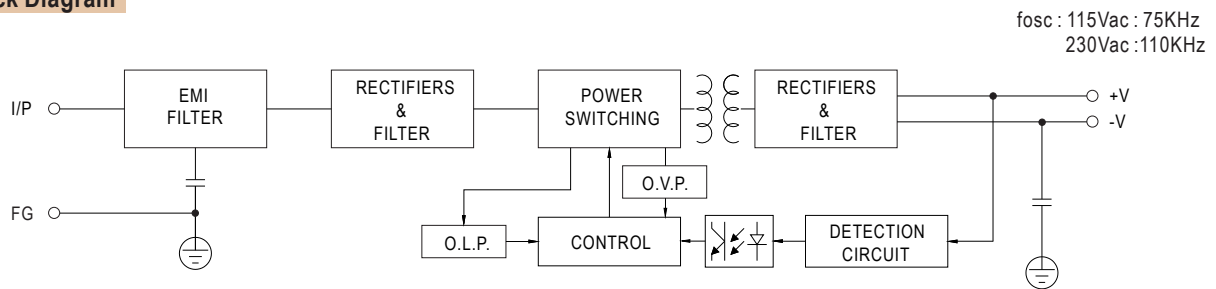
- Universal AC input/ Full range
- Withstand 300VAC surge input for 5 sec.
- No load power consumption <0.3W
- Miniature size and 1U low profile.
- High operating temperature up to 70°C.
- Protections: short circuit/ Overload/ Over voltage.
- Cooling by free air convection.
- Compliance to IEC/ BS EN/EN 60335-1 (PD3) and IEC/BS EN/EN 61558-1, -2-16 for household appliances.
- Operating altitude up to 5000 meters.
- Withstand 5G Vibration test.
- High efficiency, long life and high reliability.
- LED indicator for power on.
- Over vpltage category III.
- 100% full load burn-in test.



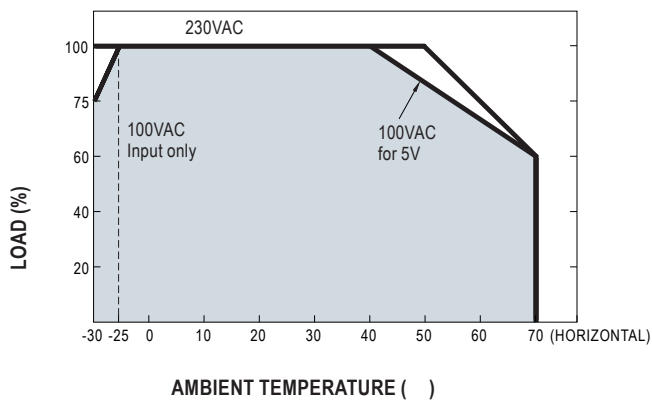
MODEL		LRS-50-12	LRS-50-24	LRS-50-48
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	4.2A	2.2A	1.1A
	CURRENT RANGE	0 ~ 4.2A	0 ~ 2.2A	0 ~ 1.1A
	RATED POWER	50.4W	52.8W	52.8W
	RIPPLE & NOISE (max.) Note.2	120mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	10.2 ~ 13.8V	21.6 ~ 28.8V	43.2 ~ 52.8V
	VOLTAGE TOLERANCE Note.3	± 1.0%	± 1.0%	± 1.0%
	LINE REGULATION Note.4	± 0.5%	± 0.5%	± 0.5%
	LOAD REGULATION Note.5	± 0.5%	± 0.5%	± 0.5%
	SETUP, RISE TIME	1000ms, 30ms/230VAC 2000ms,30ms/115VAC at full load		
HOLD UP TIME (Typ.)	30ms/230VAC	12ms/115VAC at full load		
INPUT	VOLTAGE RANGE	85 ~ 264VAC	120 ~ 373VDC	
	FREQUENCY RANGE	47 ~ 63Hz		
	EFFICIENCY (Typ.)	86%	88%	90%
	AC CURRENT (Typ.)	0.95A/115VAC	0.56A/230VAC	
	INRUSH CURRENT (Typ.)	COLD START 45A/230VAC		
	LEAKAGE CURRENT	<0.75mA / 240VAC		
PROTECTION	OVER LOAD	110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed		
	OVER VOLTAGE	13.8 ~ 17.2V	28.8 ~ 36.6V	55.2 ~ 67.8V Protection type : Shut down o/p voltage, re-power on to recover

ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing
	TEMP. COEFFICIENT	± 0.03%/°C (0 ~ 50°C)
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes
	OVER VOLTAGE CATEGORY	; Compliance to BS EN/EN61558, BS EN/EN50178, BS EN/EN60664-1, BS EN/EN62477-1; altitude up to 2000 meters
SAFETY & EMC (Note 9)	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2-16, CCC GB4943.1, BSMI CNS14336-1, EAC TP TC 004, AS/NZS 60950.1(by CB), KC K60950-1(for LRS-50-12/24 only), BIS IS13252(Part1): 2010/IEC 60950-1: 2005 approved
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:1.25KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN55014, BS EN/EN61000-3-2, -3, GB/T 9254, BSMI CNS13438, EAC TP TC 020, KC KN32, KN35(for LRS-50-12/24 only)
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61000-6-2 (BS EN/EN50082-2), BS EN/EN55035, heavy industry level, EAC TP TC 020, KC KN32, KN35(for LRS-50-12/24 only)
OTHERS	MTBF	3149.8K hrs min. Telcordia SR-332 (Bellcore) ; 561.6Khrs min. MIL-HDBK-217F (25)
	DIMENSION	99*82*30mm (L*W*H)
	PACKING	0.23Kg; 60pcs/14.8Kg/0.88CUFT

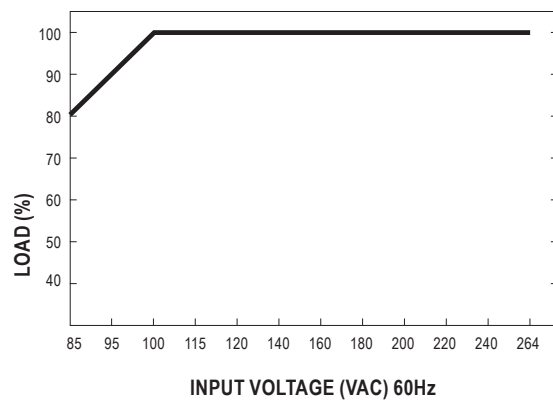
■ Block Diagram



■ Derating Curve

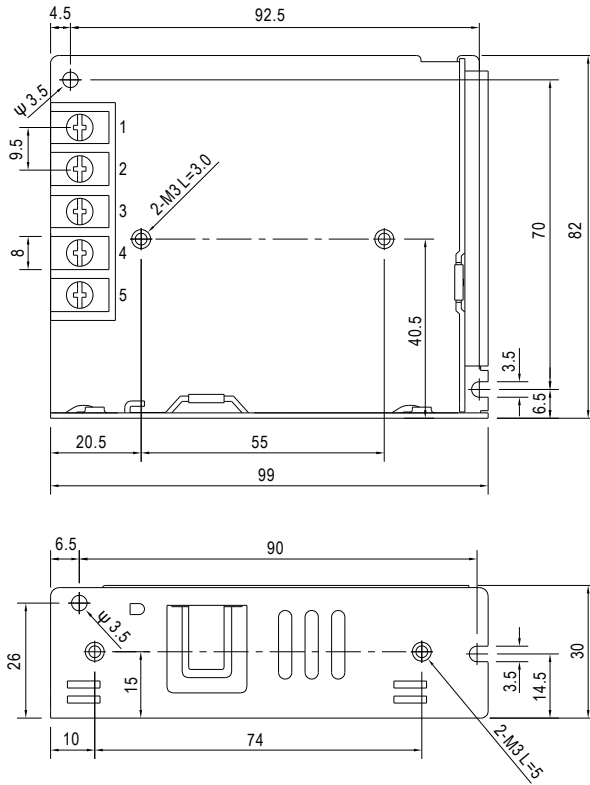


■ Static Characteristics



Mechanical Specification

Unit:mm



Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V
2	AC/N	5	DC OUTPUT +V
3	FG \perp		

LRS-100

- Constant voltage design
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 sec.
- Protections : Short circuit / Overload / Over Voltage.
- Cooling by free air convection.
- Miniature size and 1U low profile.
- Compliance to IEC/BS EN/EN 60335-1 (PD3) and IEC/BS EN/EN61558-1, 2-16 for household appliances.
- Operating altitude up to 5000 meters.
- Withstand 5G vibration test.
- LED indicator for power on.
- No load power consumption <0.3W.
- Over voltage category III.
- 100% full burn-in test.
- High operating temperature up to 70°C.
- High efficiency, long life and high reliability.



MODEL		LRS-100-3.3	LRS-100-5	LRS-100-12	LRS-100-15	LRS-100-24	LRS-100-36	LRS-100-48	
OUTPUT	DC VOLTAGE	3.3V	5V	12V	15V	24V	36V	48V	
	RATED CURRENT	20A	18A	8.5A	7A	4.5A	2.8A	2.3A	
	CURRENT RANGE	0 ~ 20A	0 ~ 18A	0 ~ 8.5A	0 ~ 7A	0 ~ 4.5A	0 ~ 2.8A	0 ~ 2.3A	
	RATED POWER	66W	90W	102W	105W	108W	100.8W	110.4W	
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	120mVp-p	120mVp-p	150mVp-p	200mVp-p	200mVp-p	
	VOLTAGE ADJ. RANGE	2.97 ~ 3.6V	4.5 ~ 5.5V	10.2 ~ 13.8V	13.5 ~ 18V	21.6 ~ 28.8V	32.4 ~ 39.6V	43.2 ~ 52.8V	
	VOLTAGE TOLERANCE Note.3	± 3.0%	± 2.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	
	LINE REGULATION Note.4	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	
	LOAD REGULATION Note.5	± 2.0%	± 1.0%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	
	SETUP, RISE TIME	500ms, 30ms/230VAC 500ms,30ms/115VAC at full load							
HOLD UP TIME (Typ.)	55ms/230VAC 10ms/115VAC at full load								
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)							
	FREQUENCY RANGE	47 ~ 63Hz							
	EFFICIENCY (Typ.)	84.5%	86%	88%	88.5%	90%	90.5%	91%	
	AC CURRENT (Typ.)	1.9A/115VAC 1.2A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 50A/230VAC							
	LEAKAGE CURRENT	<0.75mA / 240VAC							
PROTECTION	OVER LOAD	110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE	3.8 ~ 4.45V	5.75 ~ 6.75V	13.8 ~ 16.2V	18.75 ~ 21.75V	28.8 ~ 33.6V	41.4 ~ 48.6V	55.2 ~ 64.8V	Protection type : Shut down o/p voltage, re-power on to recover
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing							
	TEMP. COEFFICIENT	± 0.03%/°C (0 ~ 50°C)							
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes							
	OVER VOLTAGE CATEGORY	; Compliance to BS EN/EN61558, BS EN/EN50178, BS EN/EN60664-1, BS EN/EN62477-1; altitude up to 2000 meters							

SAFETY & EMC (Note 8)	SAFETY STANDARDS	UL 62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2-16, CCC GB4943.1, BSMI CNS14336-1, EAC TP TC 004, S/NZS62368.1 (by CB), KC K60950-1 (for LRS-100-12/24 only), BIS IS13252 (Part1): 2010/IEC 60950-1: 2005 approved
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:1.25KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN55014, BS EN/EN61000-3-2,-3, GB/T 9254, BSMI CNS13438, EAC TP TC 020, KC KN32, KN35 (for LRS-100-12/24 only)
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61000-6-2 (BS EN/EN50082-2), BS EN/EN55035, heavy industry level, EAC TP TC 020, KC KN32, KN35 (for LRS-100-12/24 only)
OTHERS	MTBF	3348.9K hrs min. Telcordia SR-332 (Bellcore) ; 677.4Khrs min. MIL-HDBK-217F (25)
	DIMENSION	129*97*30mm (L*W*H)
	PACKING	0.34Kg ; 40pcs/14.6Kg/0.92CUFT

Block Diagram fosc : 65KHz

Derating Curve

Ambient Temperature (°C)	Load (%)
-30	100
0	100
10	100
20	100
30	100
40	100
45	100
50	90
60	70
70	60

Static Characteristics

Input Voltage (VAC) 60Hz	Load (%)
85	80
95	90
100	95
115	100
120	100
140	100
160	100
180	100
200	100
220	100
240	100
264	100

Mechanical Specification Unit:mm

Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG		

LRS-150F-12

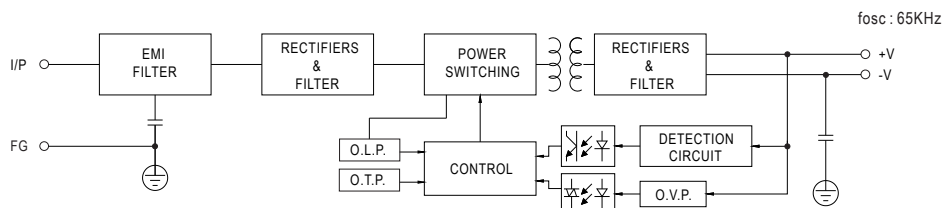
- Universal AC input/ Full range
- Withstand 300VAC surge input for 5 sec.
- No load power consumption <0.5W
- Protections : Short circuit / Overload / Over Voltage.
- Miniature size and 1U low profile.
- Miniature size and 1U low profile.
- Compliance to IEC/BS EN/EN 60335-1 (PD3) and IEC/BS EN/EN61558-1, 2-16 for household appliances.
- Operating altitude up to 5000 meters.
- Withstand 5G vibration test.
- LED indicator for power on.
- No load power consumption <0.3W.
- Over voltage category III.
- 100% full burn-in test.
- High operating temperature up to 70°C.
- High efficiency, long life and high reliability.



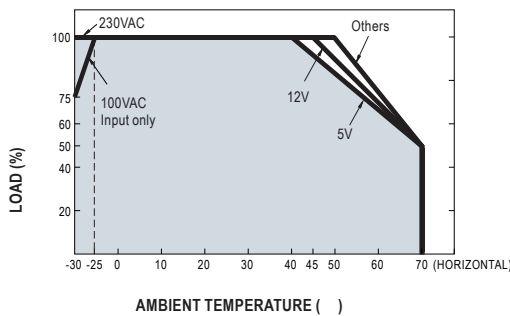
MODEL	LRS-150F-12	
OUTPUT	DC VOLTAGE	12V
	RATED CURRENT	12.5A
	CURRENT RANGE	0 ~ 12.5A
	RATED POWER	150W
	RIPPLE & NOISE (max.) Note.2	150mVp-p
	VOLTAGE ADJ. RANGE	10.2 ~ 13.8V
	VOLTAGE TOLERANCE Note.3	± 1.0%
	LINE REGULATION Note.4	± 0.5%
	LOAD REGULATION Note.5	± 0.5%
	SETUP, RISE TIME	500ms, 30ms/230VAC 500ms,30ms/115VAC at full load
HOLD UP TIME (Typ.)	16ms/230VAC 12ms/115VAC at full load	
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY (Typ.)	87.5%
	AC CURRENT (Typ.)	3A/115VAC 1.7A/230VAC
	INRUSH CURRENT (Typ.)	COLD STAR 60A/230VAC
LEAKAGE CURRENT	<0.75mA / 240VAC	
PROTECTION	OVER LOAD	110 ~ 140% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed
	OVER VOLTAGE	13.8 ~ 16.2V Protection type : Shut down o/p voltage, re-power on to recover
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing
	TEMP. COEFFICIENT	± 0.03%/°C (0 ~ 50°C)
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes
OVER VOLTAGE CATEGORY	; Compliance to BS EN/EN61558, BS EN/EN50178, BS EN/EN60664-1, BS EN/EN62477-1; altitude up to 2000 meters	

SAFETY & EMC (Note 7)	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2-16, CCC GB4943.1, BSMI CNS14336-1, EAC TP TC004, AS/NZS 62368.1 (by CB) approved
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:1.25KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN55014, BS EN/EN61000-3-2 Class A(≤80% Load), GB/T 9254, BSMI CNS13438, EAC TP TC 020
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, EAC TP TC 020
OTHERS	MTBF	2761.8K hrs min. Telcordia SR-332 (Bellcore); 592.4Khrs min. MIL-HDBK-217F (25)
	DIMENSION	159*97*30mm (L*W*H)
	PACKING	0.48Kg; 30pcs/15.4Kg/0.75CUFT

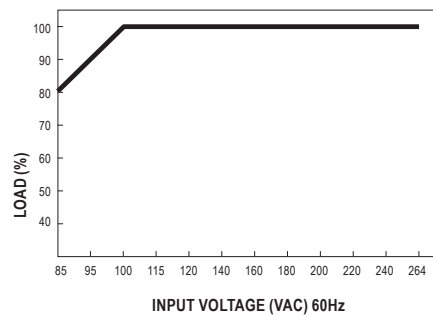
■ Block Diagram



■ Derating Curve

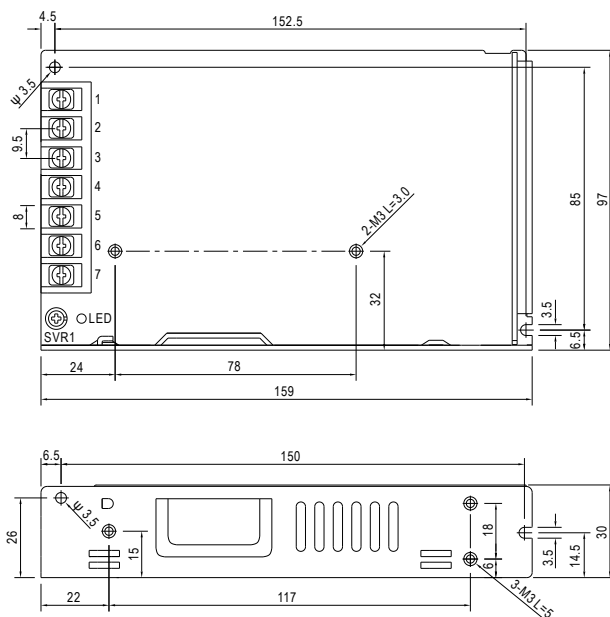


■ Static Characteristics



■ Mechanical Specification

nit:mm



Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG		

LRS-350-24

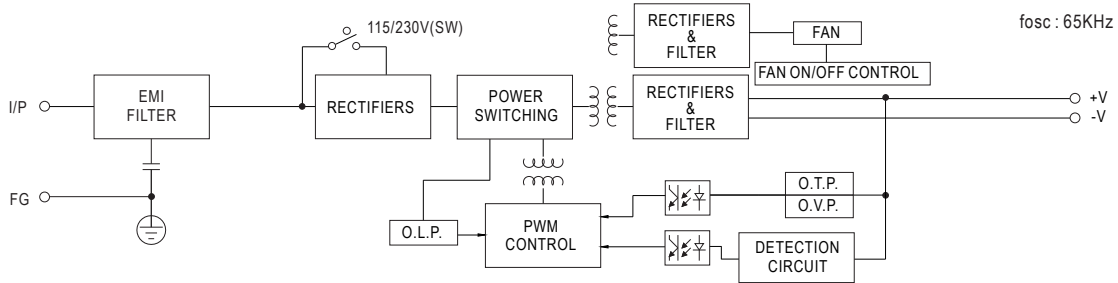
- AC input range selectable by switch.
- Withstand 300VAC surge input for 5 sec.
- Protections : Short circuit/ Overload/ Over Voltage.
- Protections : Short circuit / Overload / Over Voltage/ Over temperature.
- Forced air cooling by built-in DC fan.
- Built-in cooling Fan ON-OFF
- 1U low profile.
- Withstand 5G vibration test.
- LED indicator for power on.
- No load power consumption<0.75W.
- 100% full load burn-in test.
- High operating temperature up to 70°C.
- Operating altitude up to 5000 meters.
- High efficiency, long life and high reliability



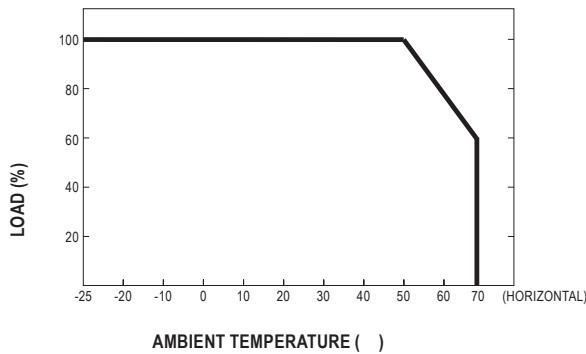
MODEL		LRS-350-24
	DC VOLTAGE	24V
	RATED CURRENT	14.6A
	CURRENT RANGE	0 ~ 14.6A
OUTPUT	RATED POWER	350.4W
	RIPPLE & NOISE (max.) Note.2	150mVp-p
	VOLTAGE ADJ. RANGE	21.6 ~ 28.8V
	VOLTAGE TOLERANCE Note.3	± 1.0%
	LINE REGULATION Note.4	± 0.5%
	LOAD REGULATION Note.5	± 0.5%
		SETUP, RISE TIME
	HOLD UP TIME (Typ.)	16ms/230VAC 12ms/115VAC at full load
INPUT	VOLTAGE RANGE	90 ~ 132VAC / 180 ~ 264VAC by switch 240 ~ 370VDC (switch on 230VAC)
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY (Typ.)	88%
	AC CURRENT (Typ.)	6.8A/115VAC 3.4A/230VAC
	INRUSH CURRENT (Typ.)	60A/115VAC 60A/230VAC
	LEAKAGE CURRENT	<2mA / 240VAC
PROTECTION	OVER LOAD	110 ~ 140% rated output power 3.3~36V Hiccup mode, recovers automatically after fault condition is removed. 48V Shut down and latch off o/p voltage, re-power on to recover.
	OVER VOLTAGE	28.8 ~ 33.6V 3.3~36V Hiccup mode, recovers automatically after fault condition is removed. 48V Shut down and latch off o/p voltage, re-power on to recover.
	OVER TEMPERATURE	3.3~36V Hiccup mode, recovers automatically after fault condition is removed. 48V Shut down and latch off o/p voltage, re-power on to recover.
FUNCTION	FAN ON/OFF CONTROL (Typ.)	RTH3 50 FAN ON, 40 FAN OFF
ENVIRONMENT	WORKING TEMP.	-25 ~ +70°C (Refer to "Derating Curve")
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	± 0.03%/°C (0 ~ 50°C)
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes

SAFETY	SAFETY STANDARDS	IEC/UL 62368-1, BSMI CNS14336-1, EAC TP TC 004, KC K60950-1 (for LRS-350-12/24 only), BIS IS13252(Part1): 2010/IEC 60950-1: 2005, AS/NZS62368.1 approved; Design refer to BS EN/EN62368-1
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC / 25 / 70% RH
	EMC EMISSION	Compliance to BSMI CNS13438, EAC TP TC 020, KC KN32, KN35 (for LRS-350-12/24 only)
	EMC IMMUNITY	Compliance to BS EN/EN55035, EAC TP TC 020, KC KN32, KN35 (for LRS-350-12/24 only)
OTHERS	MTBF	2099.9K hrs min. Telcordia SR-332 (Bellcore); 328.6Khrs min. MIL-HDBK-217F (25)
	DIMENSION	215*115*30mm (L*W*H)
	PACKING	0.76Kg; 15pcs/12.4Kg/0.78CUFT

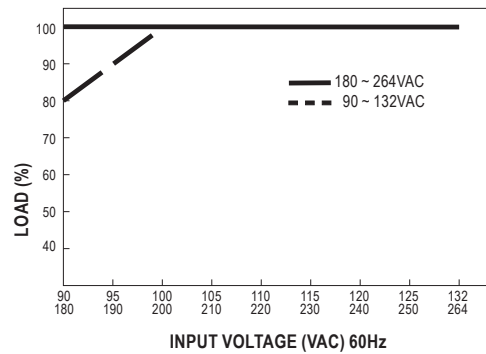
Block Diagram



Derating Curve

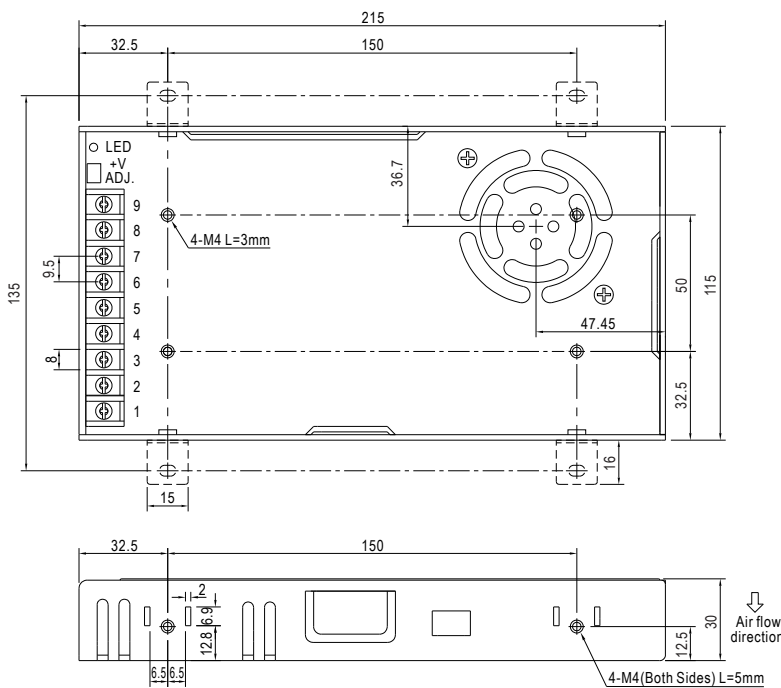


Static Characteristics



Mechanical Specification

Unit:mm



Terminal Pin No. Assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4-6	DC OUTPUT -V
2	AC/N	7-9	DC OUTPUT +V
3	FG		

MDR-60

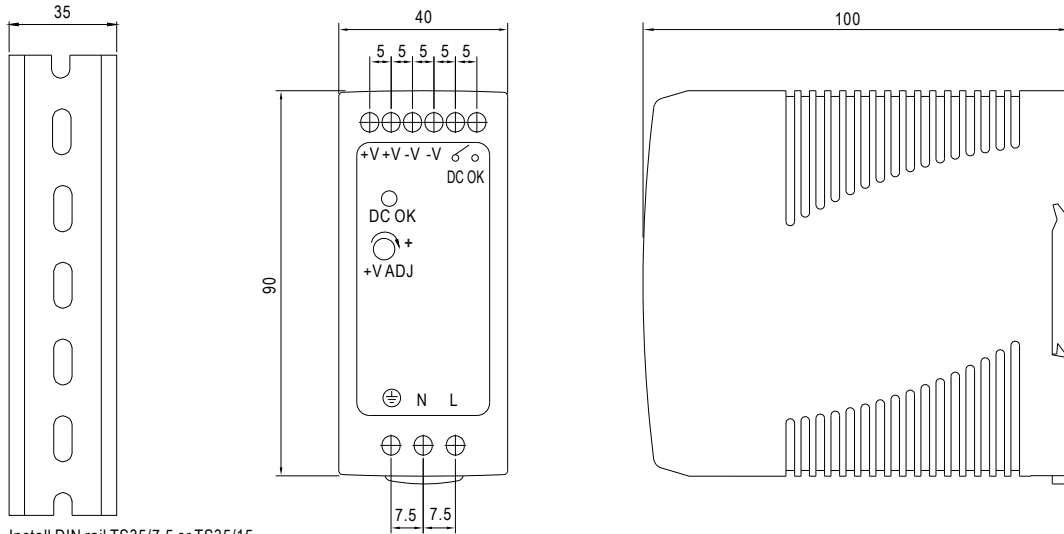
- Universal AC input/Full range.
- Protections : short circuit/ Overload/ Over voltage.
- Cooling by free air convection.
- Can be installed on DIN rail TS-35/7.5 or 15.
- Class I, Div 2 Hazardous locations t4.
- LED indicator for power on.
- DC OK relay contact.
- No load power consumption<0.75W.
- 100% full load burn-in test.



MODEL		MDR-60-12	MDR-60-24
OUTPUT	DC VOLTAGE	12V	24V
	RATED CURRENT	5A	2.5A
	CURRENT RANGE	0 ~ 5A	0 ~ 2.5A
	RATED POWER	60W	60W
	RIPPLE & NOISE (max.) Note.2	120mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 15V	24 ~ 30V
	VOLTAGE TOLERANCE Note.3	± 1.0%	± 1.0%
	LINE REGULATION	± 1.0%	± 1.0%
	LOAD REGULATION	± 1.0%	± 1.0%
	SETUP, RISE TIME Note.5	500ms, 30ms/230VAC	500ms, 30ms/115VAC at full load
HOLD UP TIME (Typ.)	50ms/230VAC	20ms/115VAC at full load	
INPUT	VOLTAGE RANGE	85 ~ 264VAC	120 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz	
	EFFICIENCY (Typ.)	86%	88%
	AC CURRENT (Typ.)	1.8A/115VAC	1A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC	60A/230VAC
	LEAKAGE CURRENT	<1mA / 240VAC	
PROTECTION	OVERLOAD	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed	
	OVER VOLTAGE	15.6 ~ 18V	31.2 ~ 36V
		Protection type : Shut down o/p voltage, re-power on to recover	
FUNCTION	DC OK SIGNAL	Relay contact rating(max.): 30V/1A resistive	
ENVIRONMENT	WORKING TEMP.	-20 ~ +70°C (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH	
	TEMP. COEFFICIENT	± 0.03%/°C (0 ~ 50°C)	
	VIBRATION	Component : 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes ; Mounting : Compliance to IEC60068-2-6	
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, UL62368-1, TUV BS EN/EN62368-1, Class I, Div. 2 Group A, B, C, D Hazardous Locations T4, EAC TP TC 004, BSMI CNS14336-1, AS/NZS 60950.1, IS13252(Part1)/IEC60950-1 approved	
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC	
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25 / 70% RH	
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32), BS EN/EN61204-3 Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020, CNS13438 Class B	
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2, 3, 4, 5, 6, 8, 11, BS EN/EN55035, BS EN/EN61000-6-2, BS EN/EN61204-3, heavy industry level, EAC TP TC 020	
OTHERS	MTBF	2355.2K hrs min. Telcordia SR-332 (Bellcore) ; 489.9K hrs min. MIL-HDBK-217F (25)	
	DIMENSION	40*90*100mm (W*H*D)	
	PACKING	0.33Kg; 42pcs/14.8Kg/0.82CUFT	

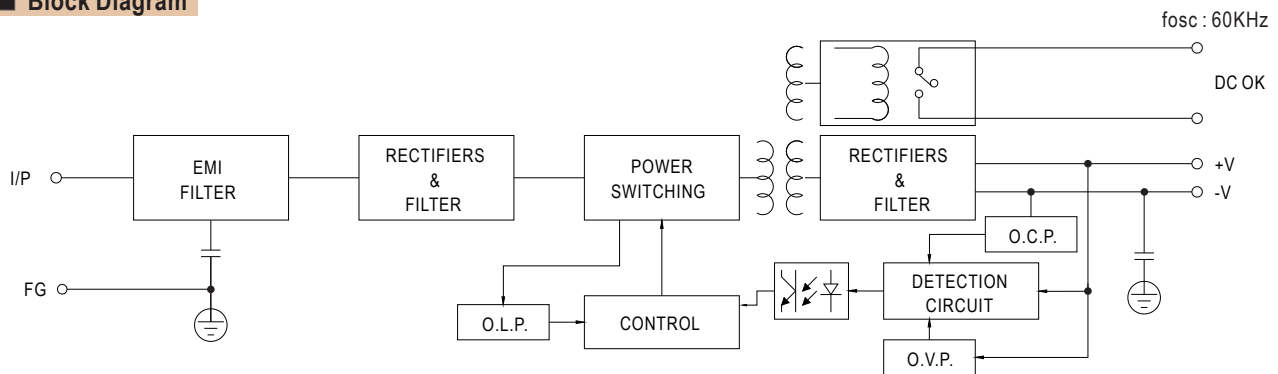
Mechanical Specification

Unit:mm



Install DIN rail TS35/7.5 or TS35/15

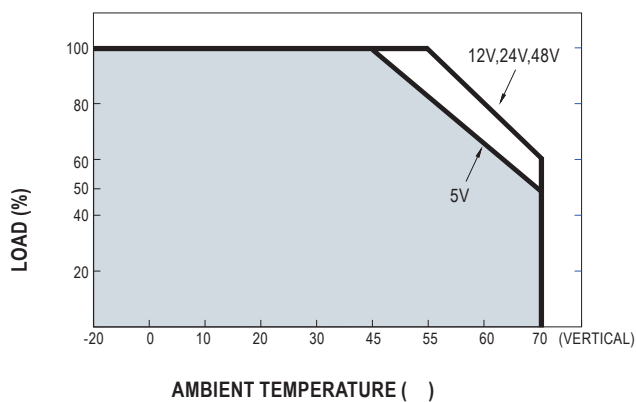
Block Diagram



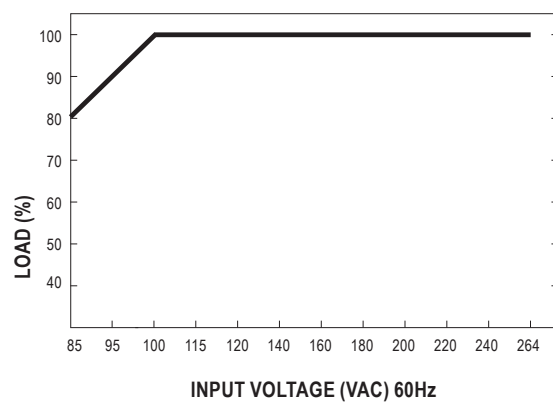
DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

Derating Curve



Output Derating VS Input Voltage



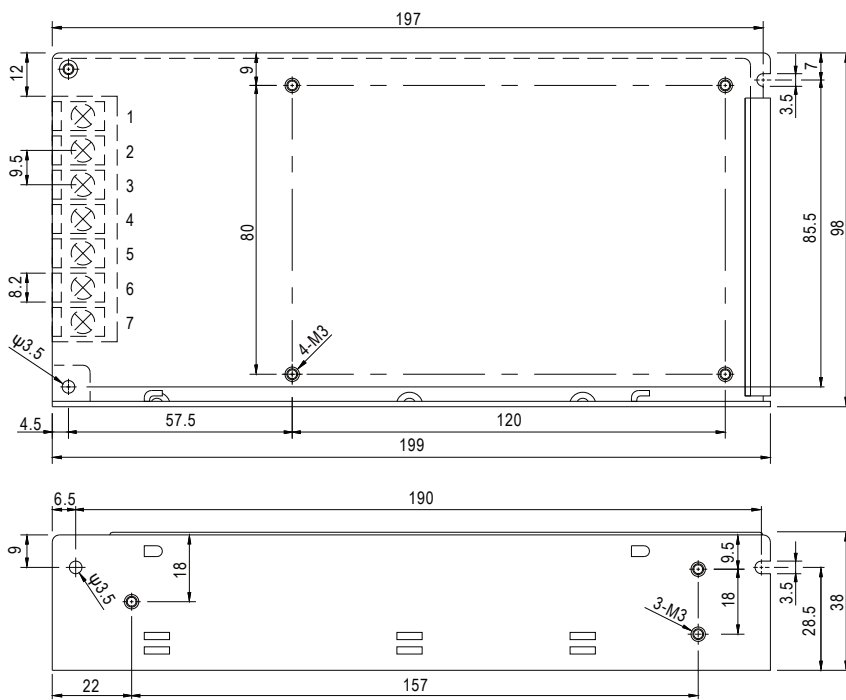
RS-150-24

- Protections : Short circuit/ Overload/ Over voltage.
- Cooling by free air convection.
- LED indicator for power on.
- 100% full load burn-in test.
- All using 105 long life electrolytic capacitors.
- Withstand 300VAC surge input for 5 sec.
- High Operating temperature up to 70°C
- Withstand 5G vibration test.
- High efficiency, long life and high reliability.



MODEL		RS-150-24
OUTPUT	DC VOLTAGE	24V
	RATED CURRENT	6.5A
	CURRENT RANGE	0 ~ 6.5A
	RATED POWER	156W
	RIPPLE & NOISE (max.) Note.2	120mVp-p
	VOLTAGE ADJ. RANGE	22.8 ~ 26.4V
	VOLTAGE TOLERANCE Note.3	±1.0%
	LINE REGULATION Note.4	±0.5%
	LOAD REGULATION Note.5	±0.5%
	SETUP, RISE TIME	800ms, 20ms/230VAC 1200ms, 30ms/115VAC at full load
HOLD UP TIME (Typ.)	28ms/230VAC 20ms/115VAC at full load	
INPUT	VOLTAGE RANGE	88 ~ 132VAC / 176 ~ 264VAC selected by switch 248 ~ 373VDC(Withstand 300VAC surge for 5sec. Without damage)
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY(Typ.)	86%
	AC CURRENT (Typ.)	3A/115VAC 2A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 40A/230VAC
LEAKAGE CURRENT	<2mA / 240VAC	
PROTECTION	OVERLOAD Note.8	110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed
	OVER VOLTAGE	27.6 ~ 32.4V Protection type : Hiccup mode, recovers automatically after fault condition is removed
ENVIRONMENT	WORKING TEMP.	-25 ~ +70°C (Refer to "Derating Curve")
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes	
SAFETY & EMC (Note 6)	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, AS/NZS 62368.1, EAC TP TC 004 approved
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020
EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, EAC TP TC 020	
OTHERS	MTBF	3044.1K hrs min. Telcordia SR-332 (Bellcore) ; 437.3K hrs min. MIL-HDBK-217F (25)
	DIMENSION	199*98*38mm (L*W*H)
	PACKING	0.7Kg; 20pcs/14Kg/0.85CUFT

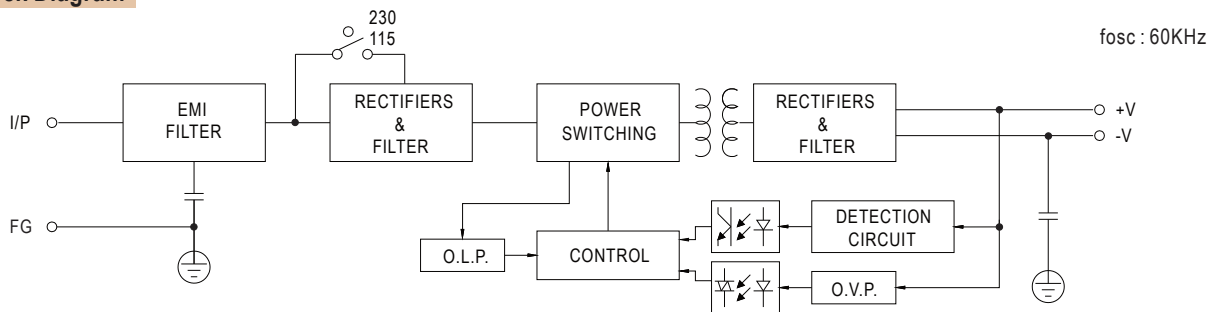
Mechanical Specification



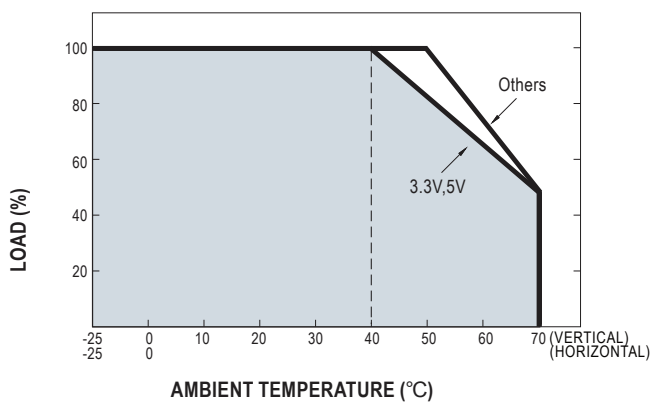
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG \perp		

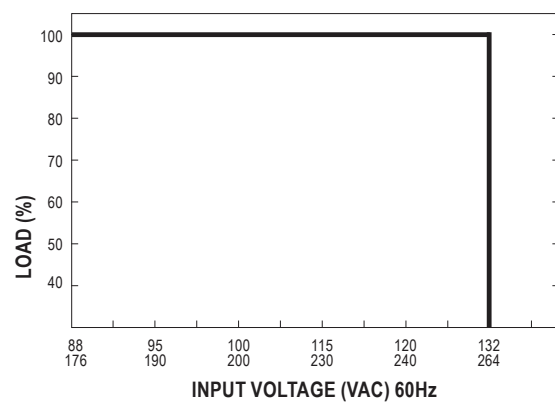
Block Diagram



Derating Curve



Static Characteristics



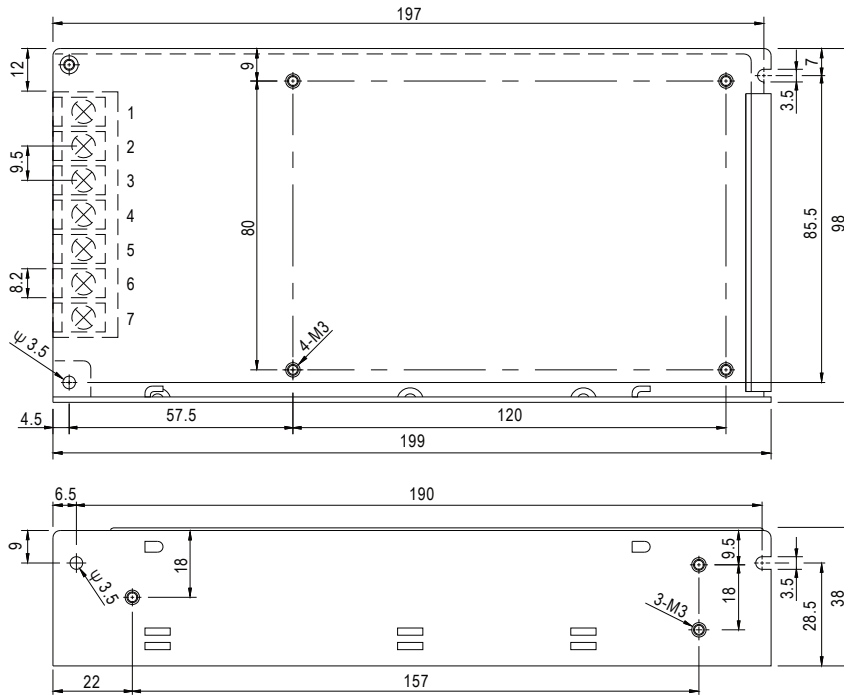
RD-125-1224

- Protections : Short circuit / Overload / Over voltage.
- Cooling by free air convection.
- LED indicator for power on.
- 100% full load turn-in test.
- All using 105 long life electrolytic capacitors.
- Withstand 300VAC surge input for 5 second.
- High operating temperature up to 70°C.
- Withstand 5G
- High efficiency, long life and high reliability.



MODEL		RD-125-1224	
OUTPUT	OUTPUT NUMBER	CH1	CH2
	DC VOLTAGE	12V	24V
	RATED CURRENT	3.7A	3.7A
	CURRENT RANGE <small>Note.3</small>	0 ~ 7A	0 ~ 5A
	RATED POWER <small>Note.6</small>	133.2W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	120mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	CH1: 11.4 ~ 13.2V	
	VOLTAGE TOLERANCE <small>Note.3</small>	±2.0%	±8.0%
	LINE REGULATION <small>Note.4</small>	±0.5%	±1.0%
	LOAD REGULATION <small>Note.5</small>	±1.0%	±5.0%
	SETUP, RISE TIME	500ms, 20ms/230VAC	1200ms, 30ms/115VAC at full load
	HOLD UP TIME (Typ.)	25ms/230VAC	30ms/115VAC at full load
INPUT	VOLTAGE RANGE	88 ~ 132VAC / 176 ~ 264VAC selected by switch 248 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)	
	FREQUENCY RANGE	47 ~ 63Hz	
	EFFICIENCY (Typ.)	85%	
	AC CURRENT (Typ.)	3A/115VAC	2A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 50A/230VAC	
	LEAKAGE CURRENT	<2mA / 240VAC	
PROTECTION	OVERLOAD	110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed	
	OVER VOLTAGE	CH1: 13.8 ~ 16.2V Protection type : Hiccup mode, recovers automatically after fault condition is removed	
ENVIRONMENT	WORKING TEMP.	-25 ~ +70 (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85 , 10 ~ 95% RH	
	TEMP. COEFFICIENT	± 0.03%/ (0 ~ 50) on CH1 output	
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes	
SAFETY & EMC <small>(Note 7)</small>	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, IS 13252(Part 1)(only for RD-125-1224), EAC TP TC 004 approved	
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC	
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 / 70% RH	
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020	
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, EAC TP TC 020	
	MTBF	2755.4K hrs min. Telcordia SR-332 (Bellcore) ; 425.8K hrs min. MIL-HDBK-217F (25)	
	DIMENSION	199*98*38mm (L*W*H)	
	PACKING	0.7Kg; 20pcs/15Kg/0.85CUFT	

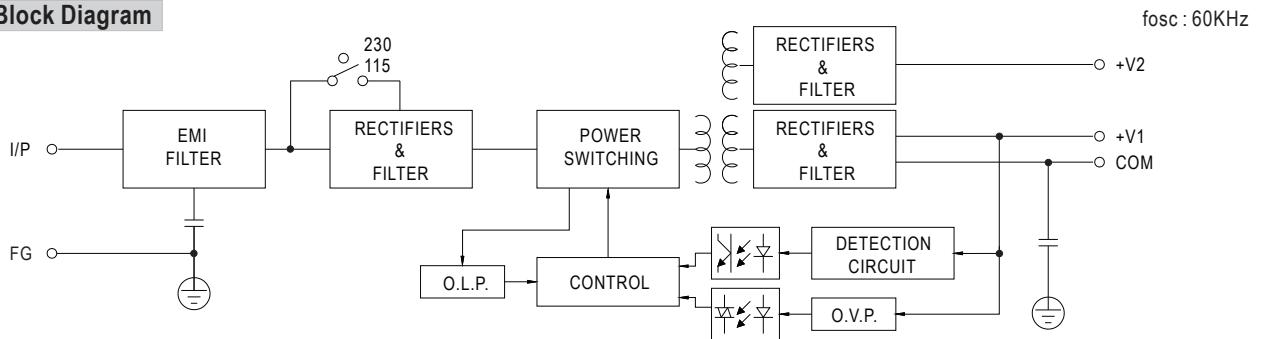
Mechanical Specification



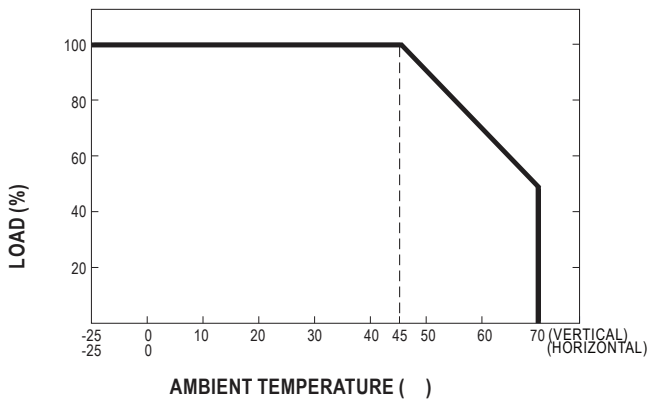
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,6	DC OUTPUT COM
2	AC/N	5	DC OUTPUT +V2
3	FG \perp	7	DC OUTPUT +V1

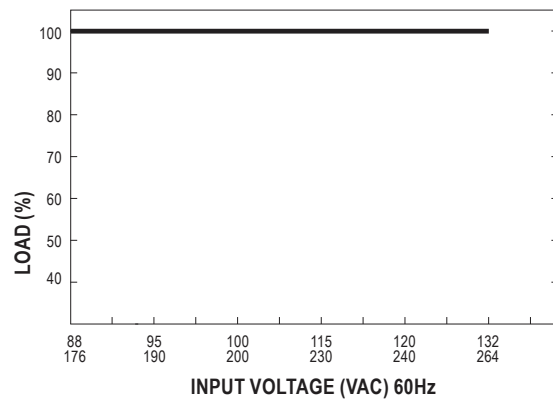
Block Diagram



Derating Curve



Static Characteristics



LPV-35-24

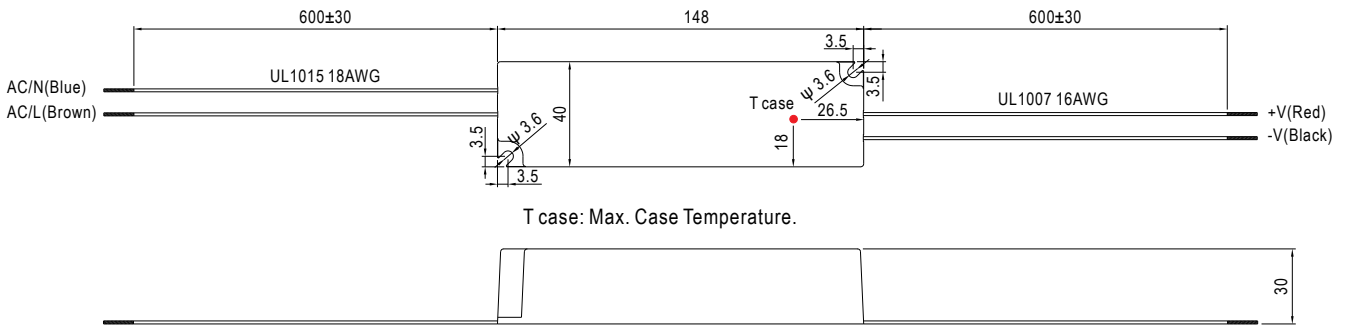
- Constant voltage design
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 sec.
- Protections : Short circuit / Overload / Over Voltage.
- Cooling by free air convection.
- Full encapsulated with IP67 level.
- Fully isolated plastic case.
- Class II power unit, no FG.
- Class 2 power unit.
- Pass LPS



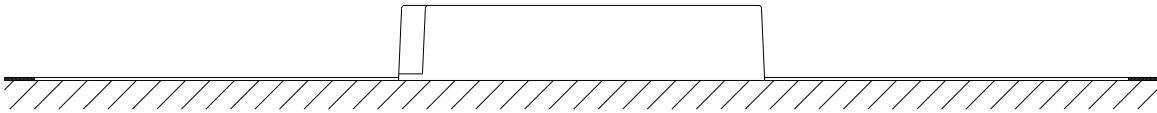
MODEL		LPV-35-24
OUTPUT	DC VOLTAGE	24V
	RATED CURRENT	1.5A
	CURRENT RANGE	0 ~ 1.5A
	RATED POWER	36W
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p
	SETUP, RISE TIME <small>Note.6</small>	500ms, 20ms / 230VAC 500ms, 20ms / 115VAC at full load
	HOLD UP TIME (Typ.)	50ms/230VAC 16ms/115VAC at full load
INPUT	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY (Typ.)	85%
	AC CURRENT (Typ.)	1.1A/115VAC 0.7A/230VAC
	INRUSH CURRENT(Typ.)	COLD START 55A(twidth=510µs measured at 50% Ipeak) at 230VAC
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	4 units (circuit breaker of type B) / 7 units (circuit breaker of type C) at 230VAC
	LEAKAGE CURRENT	0.25mA / 240VAC
PROTECTION	OVERLOAD	110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed
	OVER VOLTAGE	27.6 ~ 32.4V Protection type : Shut down o/p voltage, re-power on to recover
ENVIRONMENT	WORKING TEMP.	-30 ~ +65°C (Refer to "Derating Curve")
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
SAFETY & EMC	SAFETY STANDARDS	UL1310 class 2, CAN/CSA No. 223-M91, BIS IS15885(for LPV-35-12, LPV-35-24 only), IEC62368-1, EAC TP TC 004, IP67, BS EN/EN62368-1 approved
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2 Class A, BS EN/EN61000-3-3, EAC TP TC 020
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, light industry level, EAC TP TC 020
OTHERS	MTBF	5170.3K hrs min. Telcordia SR-332 (Bellcore) ; 743.5Khrs min. MIL-HDBK-217F (25)
	DIMENSION	148*40*30mm (L*W*H)
	PACKING	0.34Kg; 40pcs/14.6Kg/0.70CUFT

Mechanical Specification

Unit:mm

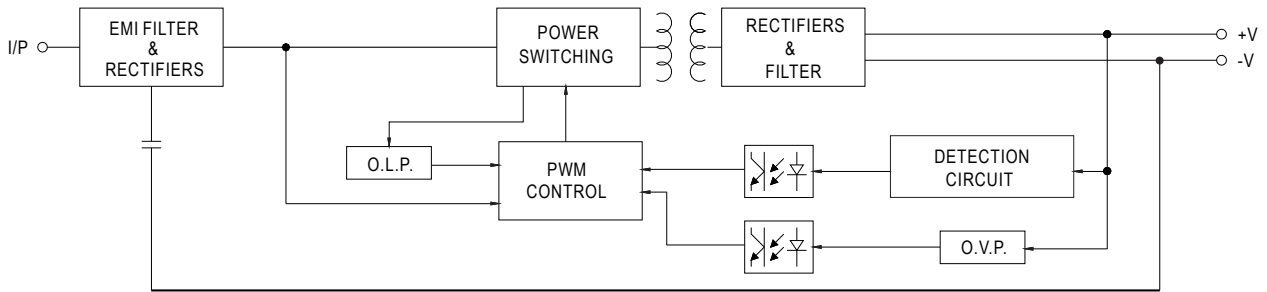


Recommend Mounting Direction

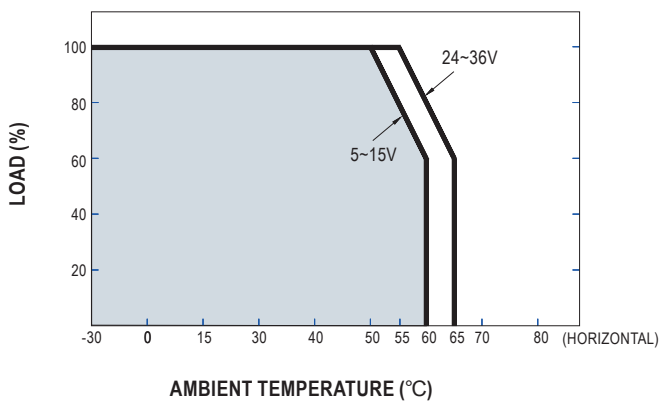


Block Diagram

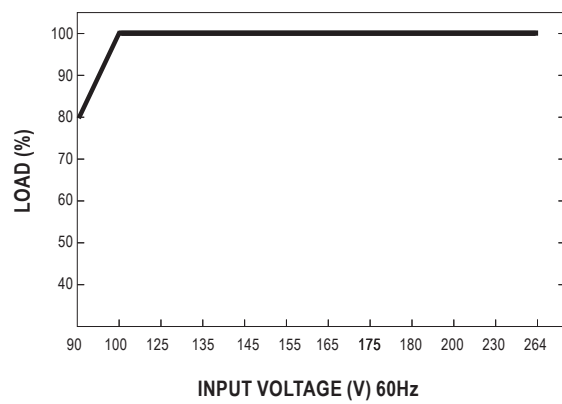
fosc : 65KHz



Derating Curve



Static Characteristics





Process Control pilot devices are used in manufacturing and process control environments to provide visual and audible indication of machines status to operators, technicians & controllers.

Many other process control devices are available.

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Ordering Information

Order No	Model No	Product	Bulb	Voltage	Colors	Warning Power
228 880	LTE-LED - S	Tower Lamp - Standard	LED	230V	Red/Yellow/Green	5W
228 882	LTE-LED - F	Tower Lamp - Flash	LED	230V	Red/Yellow/Green	5W
228 884	LTD-BULB -S	Tower Lamp - Standard	Neon	230V	Red/Yellow/Green	5W
228 886	LTD-BULB -F	Tower Lamp - Flash	Neon	230V	Red/Yellow/Green	5W

Technical Details

LTD-BULB - S

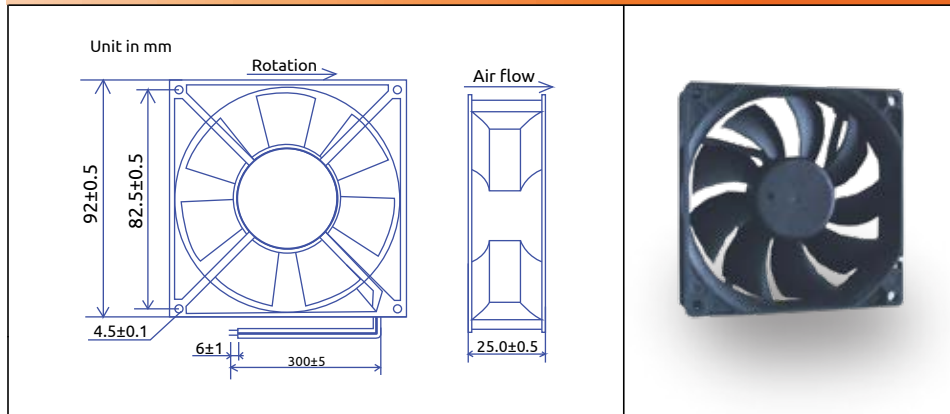


Ordering Information

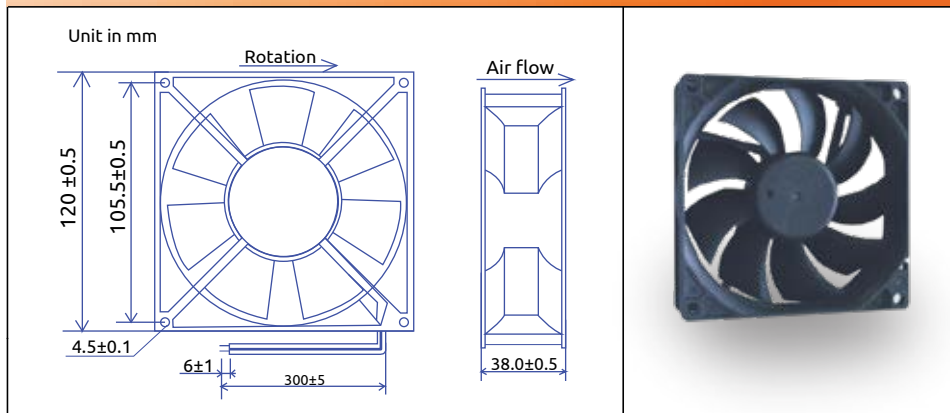
Order No	Model No	Product	Voltage	Size	Frequency
228 989		Exhaust Fans	230V AC	92x92x38	50Hz
228 990		Exhaust Fans	230V AC	120x120x38	50Hz
228 995		Exhaust Fans	24V DC	120x120x38	50Hz
228 998		Finger Guard		120x120	
224 910	XFK 3321.200	Louver Filters		115x115	
224 911	XFK 3322.200	Louver Filters		148x148	

Technical Details

Exhaust Fans (JD9225)



Exhaust Fans (JD12038-A)



XFK 3321.200



XFK 3322.200



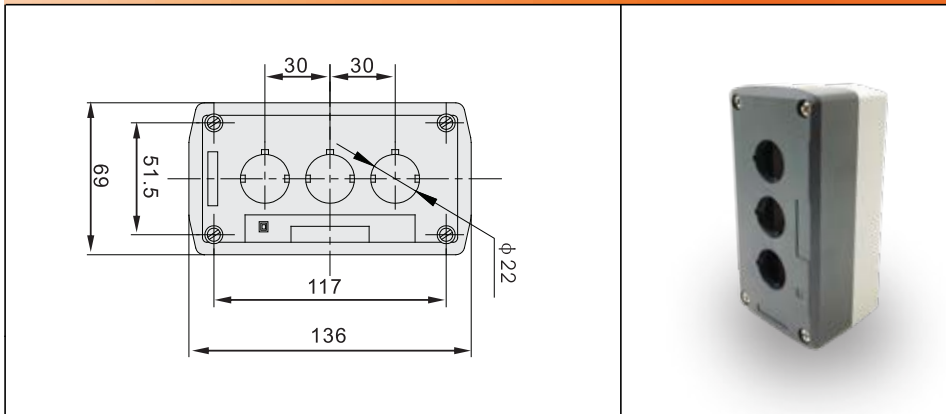
AMIKO-Hong Kong  AMIKO

Ordering Information

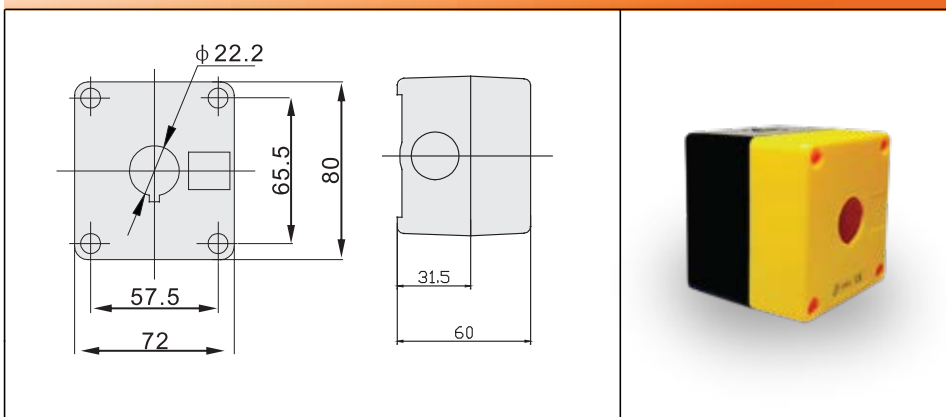
Order No	Model No	Product	Colour	Holes	Size	IP Rating	Hole Size
224 900	LAY5-BX 1	Control Station Boxes	Black & Yellow	1	70x80x65	IP 54	22mm
224 901	LAY5-BX 2	Control Station Boxes	Black & Yellow	2	70x110x65	IP 54	22mm
224 902	LAY5-BX 3	Control Station Boxes	Black & Yellow	3	70x140x65	IP 54	22mm
224 903	LAY5-BX 4	Control Station Boxes	Black & Yellow	4	70x190x65	IP 54	22mm
224 905	LAY4-BEN1	Control Station Boxes	Black & Grey	1	58x57x50	IP 65	22mm
224 906	LAY4-BEN2	Control Station Boxes	Black & Grey	2	58x95x50	IP 65	22mm
224 907	LAY4-BEN3	Control Station Boxes	Black & Grey	3	58x120x50	IP 65	22mm

Technical Details

LAY4 - BEN1



LAY5 - BX1



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Ordering Information

Order No	Model No	Product	Colour	Bulb	Voltage	Light Power
224 950	AD22-22MFD	Buzzer	Black		230V	
224 951	AD22-22MSD	Flash Buzzer	Red	LED	230V	
224 952	KRB-N80	Buzzer	Grey		230V	
224 960	LTD 1081	Warning Light	Red	LED	220V AC	5W
224 961	LTE 1081	Warning Light	Red	LED	24V DC	5W

Technical Details

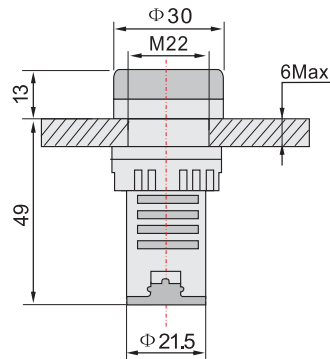
LTE 1081



KRB-N80

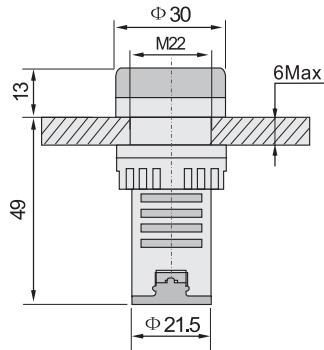


AD22-22MFD



Voltage of working frequency	2.5kV (AC Valid value) , 1min
Insulated resistance	1 mΩ
Voltage wave allowed by AC indicator ±20%	
Continual working life	≥30000h
Brightness	60cd/m ²
Index of leakage CT1	≥100

AD22-22MSD



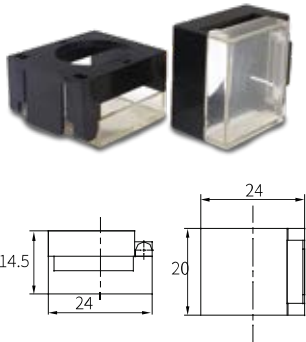
Voltage of working frequency	2.5kV (AC Valid value) , 1min
Insulated resistance	1 mΩ
Voltage wave allowed by AC indicator ±20%	
Continual working life	≥30000h
Brightness	60cd/m ²
Index of leakage CT1	≥100

Ordering Information

Order No	Model No	Product	Colour	Size	Shape
224 980	LAY5-ZB 16F	Dust Cover	Black	16	Square
224 981	LAY5-EB 22F	Dust Cover	Black	22	Round
224 982	LAY5-EB 22P	Dust Cover	Transparent	22	Round
224 983	LAY5-PE 22A	Dust Cover	Transparent	22	Round
224 984	LAY5-PB 30	Dust Cover	Grey	30	Round

Technical Details

LAY5-ZB 16F



LAY5-EB 22F



LAY5-EB 22P



LAY5-PE 22A



LAY5-PB 30



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Ordering Information

Order No	Model No	Product	Colour	Size	Ways
224 940	XPED-2	MCB Cover	White		2
224 941	XPED-4	MCB Cover	White		3
224 942	XPED-6	MCB Cover	White		4

Technical Details

MCB Cover








CUBIK

The Enclosure Company

CUBIK ENGINEERING CO. PVT LTD

 370/1, Nawala Road, Rajagiriya, Sri Lanka.

 011 2 86 10 10 (Auto lines)

 011 2 86 40 40

 sales@cubik.lk

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