JHAVERI POWERLABS

POWEREasy

STOP ELECTRICAL FIRES BEFORE THEY OCCUR

Short Circuits Kill

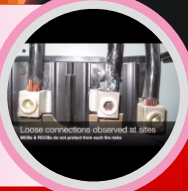
Medical Equipments
BHUBANESWAR
Oct 18 2016
Hospital
22 Deaths

Air Conditioner
DELHI
Feb 12 2018
Hotel
17 Deaths

Christmas Tree
MUMBAI
Dec 30 2018
Home
5 Deaths

Rodents
BANGALORE
Dec 28 2018
Train
26 Deaths

Loose Wiring
MUMBAI
Jan 4 2018
Shop
12 Deaths



DID YOU KNOW ?

33
Deaths/day
Due to electrical faults

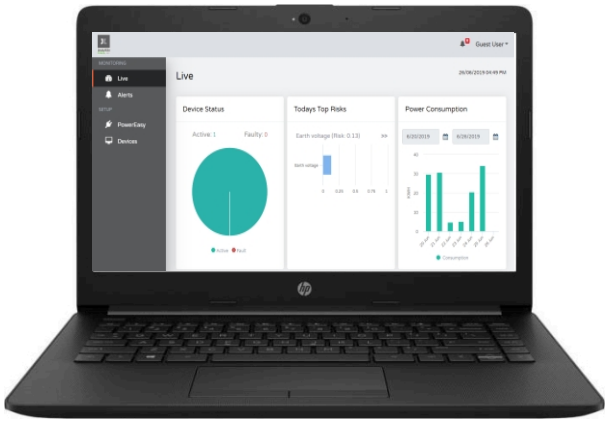
32:1
Ratio of death to injuries due to fire

86%
Fire can be prevented by proper maintenance

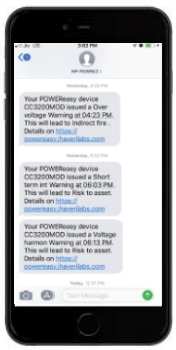
You need protection for 12 electrical faults to prevent fires

POWEReasy is India's 1st intelligent device that reports high risk electrical faults that the user must fix to avoid fires. It even isolates supply for critical faults. POWEReasy protects for 12 fire risks whereas an MCB and RCCB protect for only 3.

Live Dashboard with identification of risks



SMS Alerts



Prevent Fire — Save lives and assets

Early Warnings — Prevent unplanned shutdown

Actionable insights — Improves efficiency of electrician

Reports to app — Monitoring on the go

COMPANY VISION
TO ENSURE EVERY LAST INDIAN GETS RELIABLE ELECTRICITY

India sees 33 deaths a day from electrical issues. Accidents, near misses and operational losses are accepted on a daily basis, as there are limited options for electrical safety solutions. Maintenance teams perform audits once a year that can identify 12 of 20 electrical risks. Realtime protection devices (MCB + RCCBs) protect for only 3 out of the 20 possible risks. The fact is the changing ecosystem of energy with (a) Move to renewable energy, (b) reliance on complex and electronics loads such as EVs, inverter based systems etc, (c) growing demand of electricity the risk to the consumer is increasing. Electrical safety needs a complete overhaul.

POWEReasy automates electrical safety. The patent pending POWEReasy is an IOT enabled device that not only monitors electrical conditions but also identifies all 20 electrical faults. It has the ability to isolate the electrical supply and even diagnose and report issues via the cloud.

- **Automatic, realtime electrical audits.** POWEReasy reports all electrical conditions to a dashboard that is constantly evaluating electrical risks. Electrical audits are no longer an annual event.
- **Fire prevention.** POWEReasy is the only device that can provide comprehensive protection and isolation in case of these 12 critical electrical events.
- **Fault Diagnosis with root cause analysis.** POWEReasy monitors electrical signatures in realtime to identify 20 unique electrical problems. It also reports the root cause, enabling effective and in-time correction to complex electrical faults.

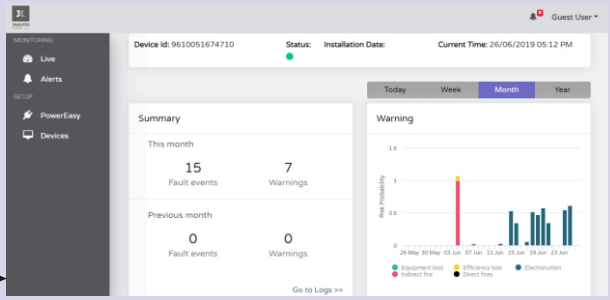
KNOWS RISK FOR ELECTRICAL FAULTS

Type of Fault / Functions	Potential Risk from fault				Solution Available	
	Fire	Electro -cution	Damage to equipment	Efficiency loss	MCB + RCCB	POWEReasy
Short circuit	X				Trip	Trip
Over current	X				Trip	Warn & Trip
Earth leakage	X	X	X		Trip	Warn & Trip
Critical Over voltage	X		X		No	Warn & Trip
Critical Under voltage	X		X		No	Warn & Trip
Earth voltage	X	X	X		No	Warn & Trip
Neutral loss	X		X		No	Trip
Phase/Line loss	X		X		No	Trip
Arc faults	X		X		No	Trip
Surge	X		X		No	Protect & Trip
Current unbalance	X			X	No	Warn
Current harmonics	X		X	X	No	Warn
Phase Reversal			X		No	Trip
Power factor				X	No	Warn
Voltage harmonics			X		No	Warn & Trip
Short term interruptions			X		No	Warn
Voltage variation			X	X	No	Warn
Voltage unbalance			X	X	No	Warn
Inrush current			X		No	Warn
Reverse current		X			No	Warn
Metering					No	Yes

POWEReasy SOLUTIONS SUMMARY

Maximize your performance. Unlock the potential for a new level of electrical safety. “0 downtime”, “0 incidence”, “lowering near misses”, “reducing energy consumption” are just some of the KPIs you can maximize with POWEReasy.

Track & Optimize risks, metrics and KPIs →



	Smart Protection Unit	Smart Optimizer	Smart DB	Smart DB With Optimizer
				
Innovation	Coverage of all 20 electrical faults	5X smaller size Energy saving	Integrated DB with Coverage of all 20 Electrical Faults	Wall Concealed Stabilizer Integrated DB with Energy Saving
Electrical Fire Prevetion	All 12 risks	All 12 risks	All 12 risks	All 12 risks
Root Cause Analysis	All 20 risks	All 20 risks	All 20 risks	All 20 risks
Surge Protection	Type II	Type II	Type II	Type II
SMS & Dashboard	Available	Available	Available	Available
Voltage Stabilization	-	Inbuilt	-	Inbuilt
Energy Savings	-	18% with AVO	-	18% with AVO
Distribution board	-	-	6Way, 8way, 12way	6Way, 8way, 12way
Mounting	Wall Mounting	Wall Mounting	Wall Concealed	Wall Concealed

OUR CLIENTS.

KBS · YES BANK · ADITYA BIRLA GROUP · FOUR SEASONS Hotels and Resorts · NATURE'S BASKET · ROOPAM · CapMetrics Investment Advisers · THE TIMES OF INDIA · Hiranandani · Kirloskar Enriching Lives · allcargo Ingenuity In Motion · IMPRESARIO handmade restaurants · Dialhealth

POWEReasy PROTECTION UNIT (PU)

PARAMETER	FEATURES		
		3P32PU	3P63PU
Electrical	System Technology	Microcontroller sensed electrical fault signatures and realtime monitoring, reporting and automatic isolation	
	Capacity in Amp	32A	63A
	Standards	EN61000-6-4, IEC 61000-4-3, IEC 61000-4-2,IEC 61000-4-4, IEC 61000-4-5,IEC 61000-4-6, IEC 61000-4-11	
Electronics	Primary Microcontroller type	32 bit	
	Firmware version	JL-PE006	
Input	Min voltage	280 V AC	
	Max voltage	500 V AC	
	Nominal Frequency	47-53 HZ	
Output	System status indicator	20 x 4 LCD Display	
	Data Monitoring	In app / dashboard	
	Data logging	On cloud for all events	
Environmental	Operating Temperature	0 to 45 Degrees	
	Operating Humidity	95% non condensing	
Protective Features	Alerts for preventive maintenance	1) Over Current	
		2) Earth Leakage	
		3) Over Voltage	
		4) Under Voltage	
		5) Earth Voltage	
		6) Loose Connection	
		7) Current unbalance	
		8) Current Harmonics	
		9) Power Factor	
		10) Voltage Harmonics	
		11) Short term Interruptions	
		12) Voltage variation	
		13) Voltage unbalance	
		14) Inrush current	
		15) Reverse current	
	Power cut off (with reports & logs)	1) Short circuit	
		2) Over current	
		3) Critical Earth leakage	
		4) Critical Over voltage	
		5) Critical Under voltage	
		6) Critical Earth voltage	
		7) Neutral loss	
		8) Phase loss / Line loss	
		9) Arcing	
		10) Surge	
		11) Phase / Line reversal	
		12) Critical Voltage harmonics	
	Audible alarm	Audible alarm for faulty operation for 15 sec	
	Isolation device	MCB with shunt trip Provision	
Physical	Dimensions in mm (L X B X H)	220 x 80 X 250mm	
	Weight	3.2 Kg	
	Input Output wire connections	Input R, Y, B to MCB Input Neutral, Output, R, Y, B, Neutral & Earth to terminal blocks	
	Mounting	Wall Mounting	
Obligations	Warranty	12 Months Standard	

POWEReasy THREE PHASE ENHANCED MODEL WITH STABILIZATION & ENERGY SAVINGS (EX)

PARAMETER	FEATURES			
		3P12WEX - 10KVA	3P20WEX-15KVA	3P40WEX-30KVA
Electrical	System Technology	1. Microcontroller sensed electrical fault signatures and solid state device operated transformers with zero Current cross switching silent and hunting free operation. 2. Upgraded design to operate at wider temperature ranges 3. Upgraded to high inrush current handling 4. Improved measurement accuracy using 32 bit microcontrollers and data logging features		
	Efficiency	99% Peak		
	Capacity in Amp	12A/Phase	20A/Phase	40A/Phase
	Standards	EN61000-6-4, IEC 61000-4-3, IEC 61000-4-2,IEC 61000-4-4, IEC 61000-4-5,IEC 61000-4-6, IEC 61000-4-11		
Electronics	Primary Microcontroller type	32 bit		
	Firmware version	JL-PE009A		
	Data logging	Scalable with up to 100 events		
Input	Min voltage	330 V AC		
	Max voltage	470 V AC		
	Nominal Frequency	47-53 HZ		
	Nominal POWEReasy Voltage	Auto-selected (between 360-415)		
Output	Regulation	1.50%		
	System status indicator	Red Led-Indicates system needs attention		
	Waveform Distortion	None added		
	Load Power Factor range	0 to 1		
	Response Time	Less than 1 sec		
Environmental	Operating Temperature	0 to 55 Degrees		
	Cabinet cooling methods	Fan cooled		
	Operating Humidity	95% non condensing		
Protective Features	Automatic Bypass	1) Temperature Rise/Over current 2) Under voltage & Over voltage Detection 3) In the event of Solid state Device failure		
	Alerts for preventive maintenance	1) Over Current 6) Loose Connection 11) Short term Interruptions 2) Earth Leakage 7) Current unbalance 12) Voltage variation 3) Over Voltage 8) Current Harmonics 13) Voltage unbalance 4) Under Voltage 9) Power Factor 14) Inrush current 5) Earth Voltage 10) Voltage Harmonics 15) Reverse current		
	Power cut off (with reports & logs)	1) Short circuit 7) Neutral loss 2) Over current 8) Phase loss / Line loss 3) Critical Earth leakage 9) Arcing 4) Critical Over voltage 10) Surge 5) Critical Under voltage 11) Phase / Line reversal 6) Critical Earth voltage 12) Critical Voltage harmonics		
	Audible alarm	Audible alarm for faulty operation due to triac failure for 15 sec		
	Overload Ability	110% for 30 minutes	125% for 30 minutes	
	Short circuit	MCCB Provision		
	Manual bypass	Toggle switch for bypass the POWEReasy		
Physical	Dimensions in mm (L X B X H)	520 X 165 X 580	520 X 165 X 580	620 x 165 X 680
	Weight	40 Kg	40 Kg	62 Kg
	Input Output wire connections	Terminal Blocks for R,Y,B,Neutral & Earth.	Terminal Blocks for R,Y,B,Neutral & Earth.	Bus Bar for R,Y,B, Neutral & Earth.
	Designed Life	10 Years		
Obligations	Warranty	24 Months Standard		

POWEReasy INTEGRATED DB WITH PROTECTION UNIT

PARAMETER	FEATURES		
		PEIDB-3P32-12	PEIDB-3P62-12
Electrical	System Technology	Microcontroller sensed electrical fault signatures and realtime monitoring, reporting and automatic isolation with DB	
	Capacity in Amp	32A	63A
	Standards	EN61000-6-4, IEC 61000-4-3, IEC 61000-4-2,IEC 61000-4-4, IEC 61000-4-5,IEC 61000-4-6, IEC 61000-4-11	
Electronics	Primary Microcontroller type	32 bit	
	Firmware version	JL-PE006	
Input	Min voltage	280 V AC	
	Max voltage	500 V AC	
	Nominal Frequency	47-53 HZ	
Output	System status indicator	20 x 4 LCD Display	
	Data Monitoring	In app / dashboard	
	Data logging	On cloud for all events	
Environmental	Operating Temperature	0 to 45 Degrees	
	Operating Humidity	95% non condensing	
Protective Features	Alerts for preventive maintenance	1) Over Current	
		2) Earth Leakage	
		3) Over Voltage	
		4) Under Voltage	
		5) Earth Voltage	
		6) Loose Connection	
		7) Current unbalance	
		8) Current Harmonics	
		9) Power Factor	
		10) Voltage Harmonics	
		11) Short term Interruptions	
		12) Voltage variation	
		13) Voltage unbalance	
		14) Inrush current	
		15) Reverse current	
	Power cut off (with reports & logs)	1) Short circuit	
		2) Over current	
		3) Critical Earth leakage	
		4) Critical Over voltage	
		5) Critical Under voltage	
		6) Critical Earth voltage	
		7) Neutral loss	
		8) Phase loss / Line loss	
		9) Arcing	
		10) Surge	
		11) Phase / Line reversal	
		12) Critical Voltage harmonics	
	Audible alarm	Audible alarm for faulty operation for 15 sec	
	Isolation device	MCB with shunt trip Provision	
Physical	Dimensions in mm (L X B X H)	600 x 80 X 500mm	
	Weight	28 Kg	
	Input Output wire connections	Input & Output Line to MCB, Input Neutral & Earth to terminal blocks Input Neutral & Earth to Neutral links	
	No of Output	Per Phase 10 Output	
	Mounting	Wall Mounting	
Obligations	Warranty	12 Months Standard	

SPECIFICATIONS FOR POWEReasy INTEGRATED DB WITH STABILIZATION & ENERGY SAVINGS

PARAMETER	FEATURES		
		PEIDB-3P12-4X	PEIDB-3P20-12
Electrical	System Technology	1. Microcontroller sensed electrical fault signatures and solid state device operated transformers with zero Current cross switching silent and hunting free operation with DB 2. Upgraded design to operate at wider temperature ranges 3. Upgraded to high inrush current handling 4. Improved measurement accuracy using 32 bit microcontrollers and data logging features	
	Efficiency	99% Peak	
	Capacity in Amp	12A/Phase	20A/Phase
	Standards	EN61000-6-4, IEC 61000-4-3, IEC 61000-4-2,IEC 61000-4-4, IEC 61000-4-5,IEC 61000-4-6, IEC 61000-4-11	
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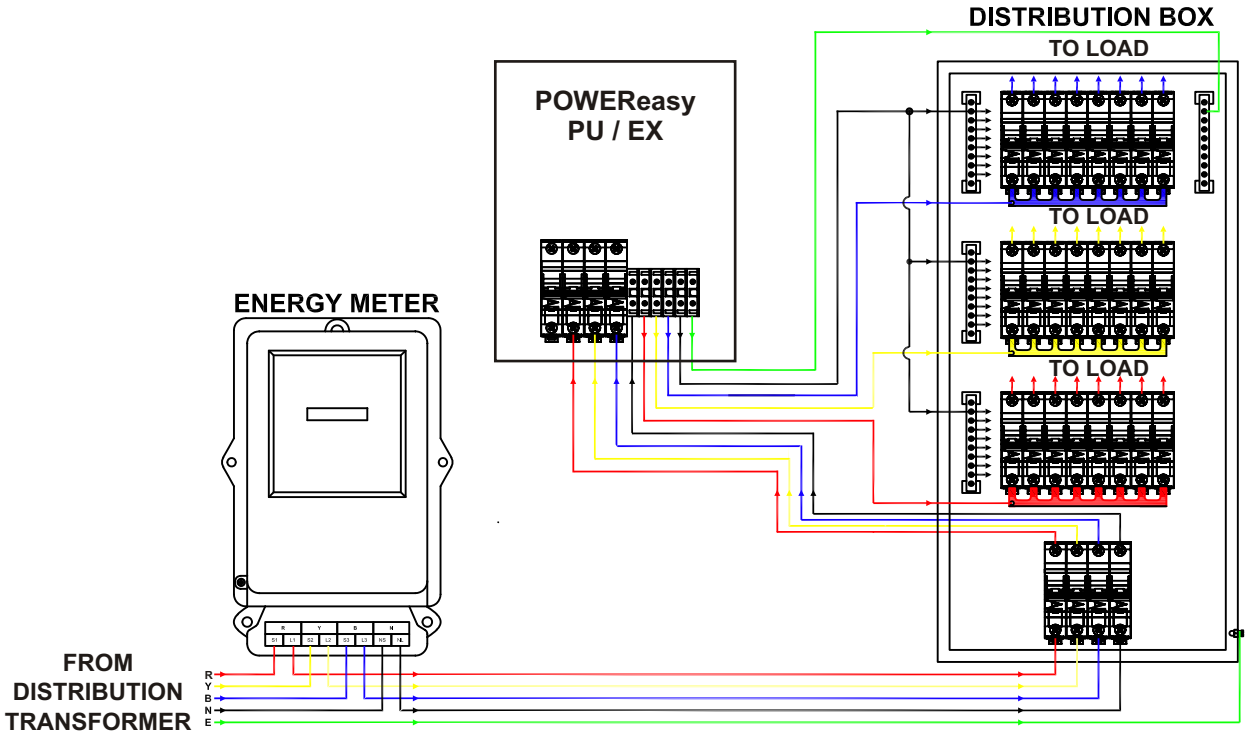
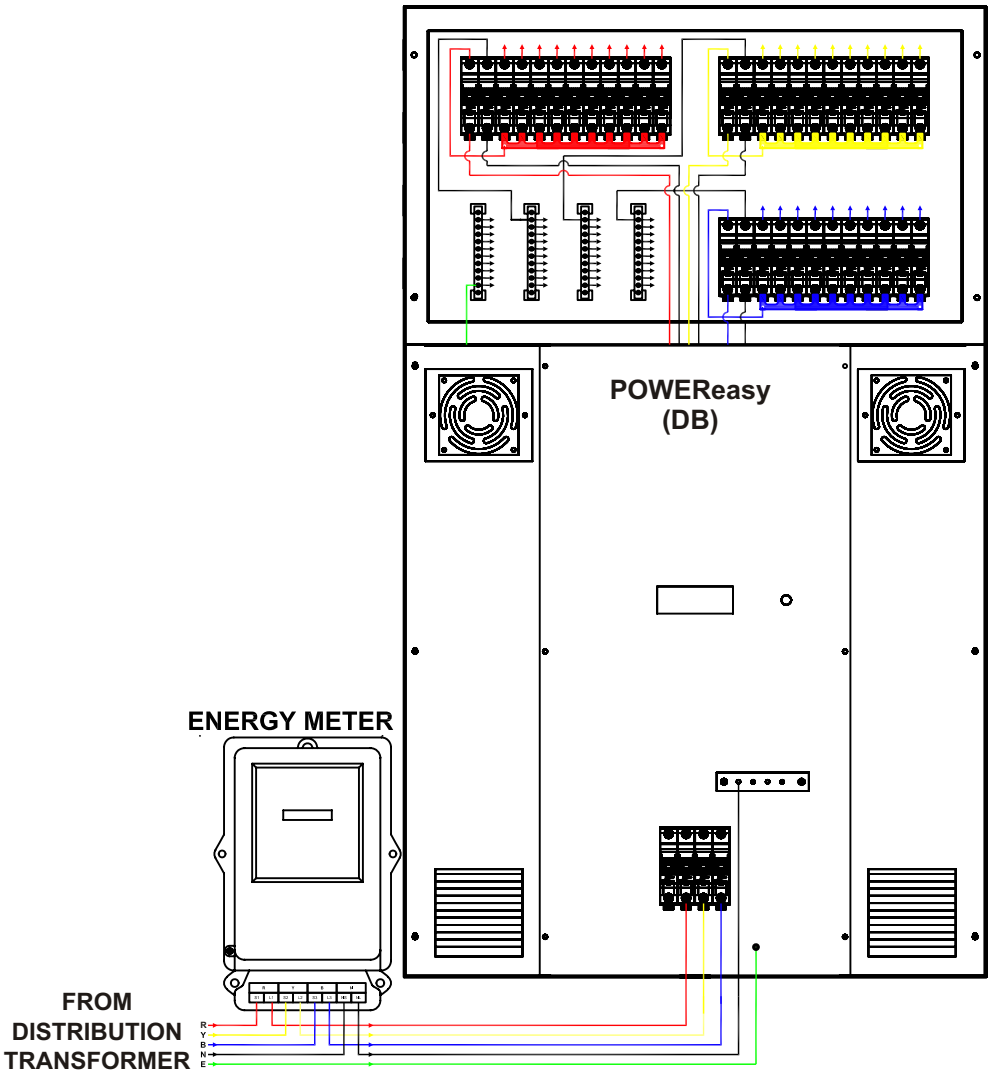
	Data logging	Scalable with up to 100 events	
Input	Min voltage	330 V AC	
	Max voltage	470 V AC	
	Nominal Frequency	47-53 HZ	
	Nominal POWEReasy Voltage	Auto-selected (between 360-415)	
Output	Regulation	1.50%	
	System status indicator	Red Led-Indicates system needs attention	
	Waveform Distortion	None added	
	Load Power Factor range	0 to 1	
	Response Time	Less than 1 sec	
Environmental	Operating Temperature	0 to 55 Degrees	
	Cabinet cooling methods	Fan cooled	
	Operating Humidity	95% non condensing	
Protective Features	Automatic Bypass	1) Temperature Rise/Over current 2) Under voltage & Over voltage Detection 3) In the event of Solid state Device failure	
	Alerts for preventive maintenance	1) Over Current 2) Earth Leakage 3) Over Voltage 4) Under Voltage 5) Earth Voltage 6) Loose Connection 7) Current unbalance 8) Current Harmonics	9) Power Factor 10) Voltage Harmonics 11) Short term Interruptions 12) Voltage variation 13) Voltage unbalance 14) Inrush current 15) Reverse current
	Power cut off (with reports & logs)	1) Short circuit 2) Over current 3) Critical Earth leakage 4) Critical Over voltage 5) Critical Under voltage 6) Critical Earth voltage	7) Neutral loss 8) Phase loss / Line loss 9) Arcing 10) Surge 11) Phase / Line reversal 12) Critical Voltage harmonics
	Audible alarm	Audible alarm for faulty operation due to triac failure for 15 sec	
	Overload Ability	110% for 30 minutes	
	Short circuit	MCCB Provision	
	Manual bypass	Toggle switch for bypass the POWEReasy	
Physical	Dimensions in mm (L X B X H)	600 X 80 X 850	600 x 80 X 1000
	Weight	48 Kg	52 Kg
	Input Output wire connections	Terminal Blocks for R,Y,B,Neutral & Earth.	Bus Bar for R,Y,B, Neutral & Earth.
	Designed Life	10 Years	
Obligations	Warranty	24 Months Standard	

INSTALLATION DIAGRAM





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