

PQ 8800X

Class A Power Quality Analyzer

The Future of Excellence in Power Quality Management

MAKE IN INDIA

ELMEASURE®
Possibilities...Infinite



CERTIFIED IEC 61000-4-30 CERTIFIED

Unmatched Precision.
Unparalleled Performance.

Elevate Power Quality Management.

Introducing PQ 8800X - a groundbreaking Class A Power Quality Analyser designed for accuracy and efficiency in diagnosing complex power quality issues. Crafted for professionals who seek precision, the PQ 8800X combines advanced technology with ease of use, setting a new benchmark in the field.



Innovative Features for a detailed Power Quality Analysis

Power Quality Measurement

Compliance with IEC standards, offering detailed insights and storage capabilities.

Class A Metering

Ensuring consistency, reliability and accuracy in each and every reading as per the Class A IEC 61000-4-30 Edition 3 standard.

Harmonics Measurement

Advanced recording of Individual harmonics and Interharmonics up to the 127th level, delivering unprecedented clarity.

Very High Sampling Rate

An impressive 1024 samples/cycle for precise data capture and analysis.

Voltage Analysis

Flicker, Transients, RVC, Voltage Sag, Voltage Swells and Interruptions, ensuring thorough monitoring.

Energy Trends & Efficiency

Monitor and manage energy usage with trend analysis and energy-efficiency metrics.

Global Standard Compliance

Adheres to global standards, including EN 50160, IEEE 519-2014, CEA Regulations 2019, ITIC Curve/ CBEMA and COMTRADE, for complete PQ analysis.

Demand Analysis

kW, kVA, kVAR Demand recording with timestamp. Includes forecast demand, maximum demand, and a detailed demand profile.

Dynamic Communication

Features simultaneous RS485 and Ethernet communications, ensuring seamless data transmission as per the site's requirements.

Communication

- Time synchronization via Network Time Protocol (SNTP)
- Alarm notification and Push historical data via mail.

Beyond Basic Analysis: Advanced Features in Action

Detailed Voltage & Current Analysis

The PQ 8800X helps you delve deep into power quality with its ability to assess voltage and current harmonics up to the 127th level. This level of detail is crucial for identifying and resolving even the most subtle power quality issues, far exceeding basic analysis which typically stops at lower harmonic levels.

For example, in a manufacturing plant, this level of detail is crucial in environments with sensitive machinery, where even minor harmonic distortions can lead to operational inefficiencies and increased maintenance costs.

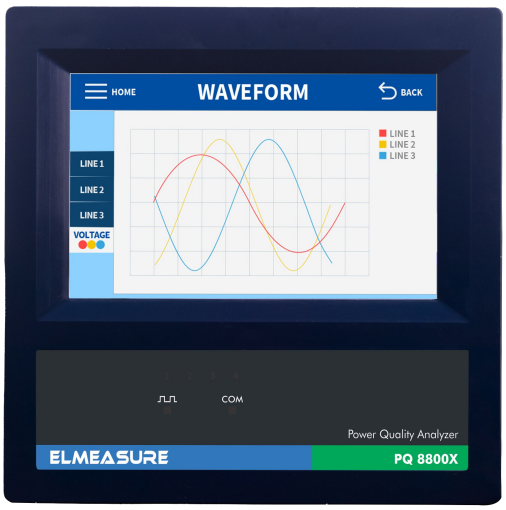
Integrated Parameters for Holistic Monitoring

It's not just about measuring power; it is also about understanding it. The PQ 8800X includes integrated parameters such as Wh, VAh, VARh, and CO2 emissions monitoring. For example, in a commercial building, the PQ 8800X can monitor not just power usage but also CO2 emissions, helping facility managers implement energy-saving measures while also considering environmental impact.

This holistic approach to power consumption data provides a more comprehensive understanding of power quality impacts, environmental considerations, and efficiency opportunities.

Optimize Energy consumption with Demand & TOU Analysis

Maximize efficiency with the PQ 8800X's Demand and Time of Use (TOU) Analysis. This feature transcends basic data collection by providing insights into energy usage patterns, crucial for strategic energy management in commercial settings. For instance, a shopping mall can utilize TOU analysis to identify peak energy consumption periods, enabling them to implement cost-saving measures during high-demand hours. Such insights assist in reducing energy bills and enhancing overall operational efficiency, exemplifying the PQ 8800's capability in transforming energy management for businesses.



Precision and Clarity Meets Elegance in a 5-inch TFT Display.

Experience Excellence in Every Pixel.

At the heart of the PQ 8800X's user experience is its 5-inch TFT high-contrast graphical display, a marvel of engineering designed to redefine clarity in device monitoring. This isn't just a display; it's your window to precision and performance.



Superior Clarity

Whether you're in a brightly lit commercial space or a dimly lit industrial setting, every aspect of the PQ 8800X is visible in stunning detail, thanks to the high-contrast display. Monitoring Harmonics, tracking voltage fluctuations, or analyzing power quality reports, the display brings every detail to life with unmatched clarity. PQ 8800X ensures your power quality monitoring is unhindered by environmental factors.

Enhanced Accessibility

Navigation through the PQ 8800X's myriad features is a breeze. The display is designed for accessibility, allowing users to effortlessly interact with the device's advanced capabilities. The intuitive interface ensures that all functions are just a touch away, making complex analyses simpler and more efficient.

PQ 8800X is a perfect blend of functionality and design, where advanced technology and user-centric design converge. Beyond just a tool, it is a comprehensive solution for power quality analysis, highlighted by its exceptional 5-inch TFT display, ensuring clarity and ease of use.



Easily monitor your assets locally or globally.

PQ 8800X offers advanced features like built-in web server with powerful web dashboard and MQTT support for seamless and secure IoT cloud connectivity.

- Easily publish to **IoT Cloud** platform for **remote asset monitoring**
- **Secured** data transfer over **MQTT protocol**
- Supports up to **2 TCP client connections** simultaneously

Conduct Comprehensive Power Quality Monitoring on-the-go.



IoT Remote Monitoring

aws | Microsoft Azure | THEIOX

Secured IoT Cloud Platform



PQ 8800X
Power Quality Meter



Industrial/Manufacturing Plants



Data Centers



Office Spaces/Commercial Malls

From Factories to Malls: Drive Universal Power Proficiency

Power Quality and Efficiency across Diverse Applications

The PQ 8800 is engineered to enhance power quality and efficiency in a variety of sectors. Its advanced features and precise analysis capabilities are tailored to meet the unique needs of industries, infrastructures, and retail environments, ensuring optimal performance and cost-effectiveness.







Industrial/Manufacturing Plants

In the industrial sector, the PQ 8800X's detailed analysis of power quality issues such as harmonics and voltage imbalances is critical in safeguarding sensitive machinery. This protection directly contributes to reducing operational disruptions and extending equipment life. Additionally, by facilitating energy-efficient practices, it aids industries in reducing their overall energy expenditure and contributing to a greener operation.

Commercial Buildings

The PQ 8800X's role in infrastructure projects extends beyond reliable power management. It serves as a crucial tool for monitoring and reducing CO2 emissions, a key factor in meeting sustainability targets. This function is particularly significant for projects emphasizing green credentials and regulatory compliance. Moreover, its ability to manage load and energy distribution efficiently leads to prolonged asset life and operational savings.

Retail stores / Shopping Malls

Retail environments, particularly shopping malls, face the challenge of balancing energy consumption with customer comfort. The PQ 8800X excels in this arena by providing insights into peak energy usage times and enabling tailored energy and cost saving strategies. The capability of CO2 emissions monitoring is an added advantage for retail spaces looking to promote sustainability and attract environmentally-conscious consumers.

Parameters Monitored

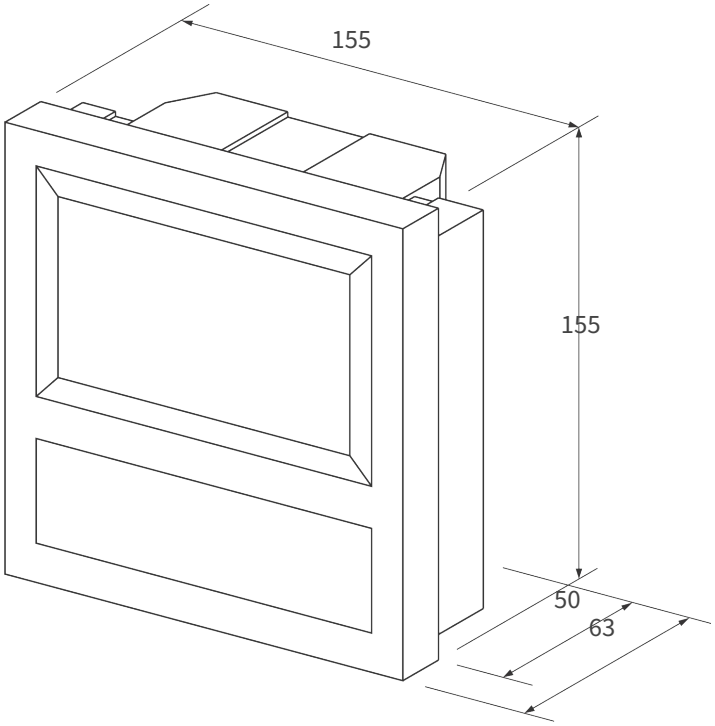
Parameters	PQ 8800X
ACCURACY CLASS	
Class 0.2S	✓
BASIC PARAMETERS	
V12, V23, V31	✓
V1, V2, V3, V(Average)	✓
A1, A2, A3, A(Average)	✓
Hz	✓
Angle V & A, RPM, Unbalance V & A	✓
Neutral Current Measurement *(Optional)*	✓
POWER PARAMETERS	
W, W1, W2, W3	✓
VA, VA1, VA2, VA3	✓
PF, PF1, PF2, PF3	✓
VAR, VAR1, VAR2, VAR3	✓
POWER QUALITY PARAMETERS	
V & A Individual Harmonics *(upto 50th in device, upto 127th via web browser)*	✓
VA, VA1, VA2, VA3	✓
PF, PF1, PF2, PF3	✓
K-Factor, Crest Factor	✓
High Low - Instantaneous	✓*
Voltage Dips/Swell (4 cycles), Flicker, RVC, Transients (49µs) & Interruptions	✓
High/Low - Last Minute	✓*
Power Cycles	✓
Total Even Harmonic Distortion (TEHD)	✓
Total Odd Harmonic Distortion (TOHD)	✓
Power THD	✓
Total Demand Distortion (TDD)	✓
INTEGRATED PARAMETERS	
Wh	✓
VAh	✓
VARh - Inductive	✓
VARh - Capacitive	✓
Load Hours	✓
Phase Energy & Load Hours	✓*
Received/Delivered (Import/Export)	✓
Wh - Total and Net	✓*
VAh - Total and Net	✓*
ON Hours	✓*
CO2 Emission	✓*
Volt Squared Hours	✓
Amp Squared Hours	✓
TOD PARAMETERS	
TOD Demand - Import (8 slots with programmable time)	✓*
TOD Energy - Import & Export (8 slots with programmable time)	✓*
DEMAND PARAMETERS	
Rising Demand (Sliding /Block - Programmable)	✓
Forecast Demand	✓
Maximum Demand	✓
Demand Profile - 4 High & 4 Low	✓*
ADDITIONAL FEATURES	
Load Efficiency, Energy Trends, Dynamic communication	✓*
Time synchronisation protocol: SNTP	✓*
Communication service: SMTP e-mail notification	✓*
In-built Data Storage (4GB)	✓
USB Port	✓
COMMUNICATION	
RS485 (MODBUS)	✓
Ethernet (Default 1 port, 2 ports available as optional)	✓
OPTIONAL FEATURES	
Up to 2 Analog Inputs + 4 Digital Inputs + 4 Digital Outputs	✓

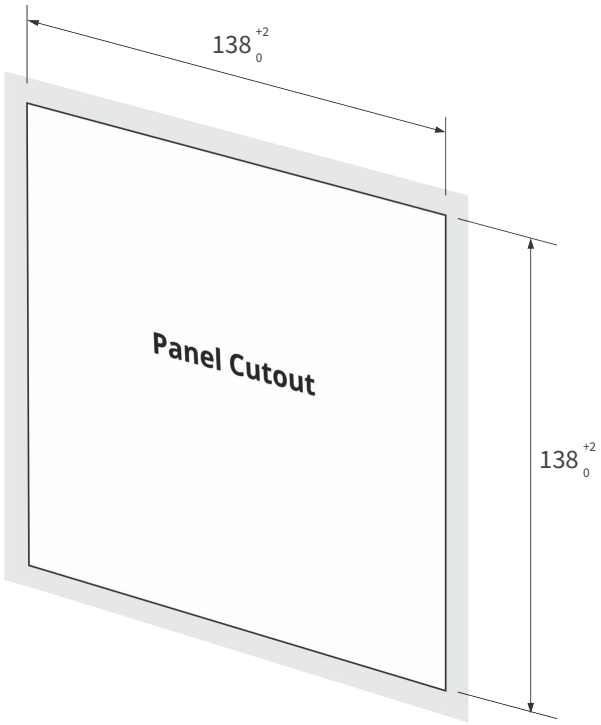
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Technical Specifications

Technical Parameters	Specifications
GENERAL CHARACTERISTICS	
Display type	5-inch Capacitive Touch TFT Display *(Res: 800x480)*
Sensing / Measurement	True RMS AC Measurement, 4 Quadrant power & energy
Rated Voltage Input (4 differential voltage channels)	50–600 VLL AC, 415V LL Nominal & Primary Programmable upto 999 kV
Rated Current	10 mA–6A
Operational Frequency	45-65 Hz
Poles description	3P, 3P + N
Measured Accuracy Class	Class 0.2S as per IEC 62053-22
Permissible overload	120%, Burden: 0.2VA per phase
External fuse rating	2 A *(voltage input)*, 200 mA *(current input)*
CT/PT Ratio max.	2000 MVA *(Programmable)*
Auxiliary supply	80–300V AC/DC
Power Consumption	10VA nominal
Data update rate	200ms *(Basic and Power)*, 1 sec *(Other parameters)*
Wiring configuration	4-Wire, 3-Phase Wye, 3-Phase (Floating or Grounded) Delta
Power Quality Reporting	As per IEC 61000-4-30 (Edition 3), EN 50160, IEEE 519-2014, ITIC Curve
ENVIRONMENTAL CHARACTERISTICS	
Operating temperature	-10°C to +55°C (14°F - 130°F)
Storage temperature	-25°C to +70°C (-13°F - 158°F)
Humidity	5% to 95% non-condensing
Altitude	Below 2000 meters
Measurement category	CAT III (As per IEC 61010)
Pollution degree	2 (As per IEC 61010)
PROTECTION CLASS	
Ingress protection	IP 51 *(Front facia)*
COMMUNICATION	
RS485 Modbus	Device ID: 1-247, Parity: Odd/Even/None *(preferred Even)*
	Baud rate: 9600 bps to 115200 bps
	Isolation: 2000 volts AC isolation for 1 minute between communication & other circuits.
Ethernet	LAN port: 10/100 Base-T, Wi-Fi
	Protocol: TCP/IP, IPV4, MQTT, DHCP, DNS, Modbus TCP(Multi-client polling), Modbus RTU over TCP
	Configuration: Web server
	Protection Ethernet: Magnetic protection (Ethernet port 1.5 kV), Surge protection
	Data storage: 4GB

Mechanical Specifications

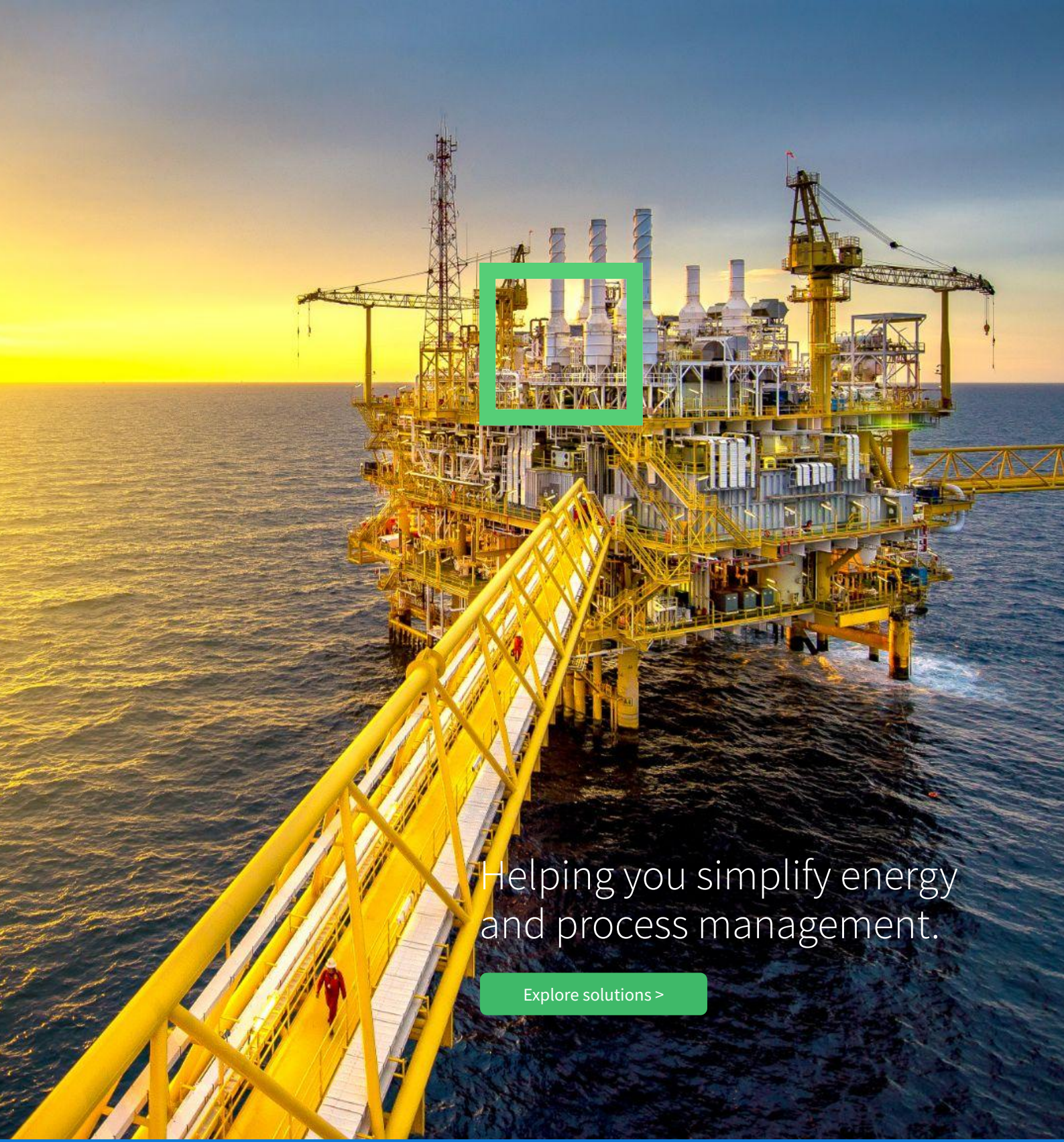




All dimensions in mm.

Parameters	Specifications
MECHANICAL CHARACTERISTICS	
Weight	Unpacked: 600g, Packed: 900g
Dimensions	155mm x 155mm x 63mm
Panel Cut-out	138mm x 138mm
Torque at terminals	0.5 N-m
Wire-gauge at terminals	16–12 AWG (2.5mm^2)
STANDARDS	
Construction	IEC/EN 61010-1 EDITION 3, CAT III, 300V LN/600V LL, Protection Class II
Standards	UL 61010-1, IEC/EN 62052-11
Power Quality Monitoring	IEC 61000-4-30, IEEE 519-2014, IEEE 519-2022, EN 50160, ITIC Curve
Harmonics/Interharmonics Monitoring	IEC 61000-4-7, IEEE 519-2014, IEE 519-2022
Harmonics Emissions	IEC 61000-3-6
Flicker	IEC 61000-4-15 & IEEE 1453

ELECTROMAGNETIC COMPATIBILITY	
Electrostatic discharge	IEC 61000-4-2
Immunity to electromagnetic RF fields	IEC 61000-4-3
Conducted immunity	IEC 61000-4-6
Immunity to magnetic fields	IEC 61000-4-8
Immunity to voltage dips and interruptions	IEC 61000-4-11
Immunity to surge waves	IEC 61000-4-5
Fast transient	IEC 61000-4-4
Conducted and radiated emission	CISPR-22



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Possibilities...Infinite

MAKE IN INDIA

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