

# Product Preview & Price List 2021

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Neptune – The name the nation Trusts and the World Acclaims; A distinctive identity, that, has been committed to offer, total satisfaction, in work credibility, over the last 30 years and continues to progressively march ahead, to achieve and introduce world class technology, in the field of, "Innovative Energy Management, Solutions for Power Quality Improvement", and "Intuitive Access Automation & Parking Management Solutions". The Organization gained Remarkable Progressive Growth and Development, under the Visionary Aura and Inspiration of Neptune Group Founder & Chairman Deepak Kapoor. An ode to these remarkable achievements included the honoring of the Neptune Group, with the Prestigious PWC Brand and Leader Award. Today, Neptune stands out as

a Pioneering Leader and owes its excellence to a dedicated and committed team of expert professionals and passionate work force that is focused on our motto - "Always Together to Achieve the Best". The committed dedication has credited the Neptune Group as on ISO certified company that has more than 300 Business Channel Partners across India and 21 Branch Offices for a Pan India Sales & Support Network. The Organization has collaboration with Global Conglomerates that includes – Bals Elektrotechnik GmbH and Ducati Energia SpA, Italy and more. Besides having installations more than 45000 Plus Energy Management and Power Solutions and successfully accomplished 6000 Plus Projects, in last 3 year.

# Neptune-Domain of Excellence



POWER DISTRIBUTION MANAGEMENT



SECURITY & ACCESS MANAGEMENT



# Power & Distribution Management

# INDUSTRIAL PLUGS & SOCKETS HSN-8536

# **SURFACE MOUNTING**



Surface Mounting Socket



Surface Mounting Socket

	2P+ <u></u> 230V		3P+≟ 415V		3P+N+≟ 230/415V	
Ampere	Part No.	L.P. ₹	Part No.	L.P. ₹	Part No.	L.P. ₹
SPLASH PROOF IP-44	1					
16/20	111	960	11645	1,060	100	1,060
32	11651	1,190	11646	1,290	101	1,290
63	1104	4,720	1127	4,740	1124	4,740
WATER TIGHT IP-67						
16/20	1133	1,620	1137	2,070	1143	2,070
32	1145	2,030	1149	2,500	1155	2,500
63	1157	6,150	1161	6,000	1112	6,000
125	11427	19.490	11441	21,400	11447	21,400

# **PANEL MOUNTING**



Panel Mounting Socket



Panel Mounting Socket



Panel Mounting Socket



Panel Mounting Socket

	2P+ <del> </del> 230V		3P+≟ 415V		3P+N+≟ 230/415V		
Ampere	Part No.	L.P. ₹	Part No.	L.P. ₹	Part No.	L.P. ₹	
SOCKET-OUTLET ANGLED SPLASH PROOF IP-44							
16/20	1217	590	1221	970	12078	970	
32	12310	1,020	1233	1,180	1215	1,180	
63	12135	4,130	_	4,220	12380	4,220	
SOCKET-OUTLET	SOCKET-OUTLET STRAIGHT						
16/20	131	590	1324	970	132001	970	
32	13007	1,020	13011	1,180	1333	1,180	
63	1307	4,130	134	4,220	136	4,220	
SOCKET-OUTLET	ANGLED WATER	TIGHT IP-6	7				
16/20	1266	1,260	1270	1,360	1276	1,360	
32	1278	1,570	1282	1,760	1288	1,760	
63	12001	4,950	1200	4,650	129	4,650	
125	12100	15,840	12104	15,850	12108	15,850	
SOCKET-OUTLET	STRAIGHT						
16/20	1372	1,260	1376	1,360	1382	1,360	
32	13024	1,570	13028	1,760	1370	1,760	
63	1396	4,950	13100	4,640	13104	4,640	
125	13452	15,840	13447	15,850	13451	15,850	

# INDUSTRIAL PLUGS & SOCKETS HSN-8536

# PANEL MOUNTING

socket-outlet schuko



Plug-schuko



Angled-Plug, with short cable



	2P+ <del>≟</del> 230V		3P+ <del> </del> 415V		3P+N+ <u>↓</u> 230/415V	
Ampere	Part No.	L.P. ₹	Part No.	L.P. ₹	Part No.	L.P. ₹
SPLASH PROOF IP-	44					
16/20	71094	560	-	-	-	-
16/20	7370	500	-	-	_	-
16/20	231	760	_	_	_	_

# **PLUG**



Plug



Plug water tight



GT Connector



**GT** Connector

	2P+ <u></u> 230V		3P+ <u>↓</u> 415V		3P+N+ ≟ 230/415V	
Ampere	Part No.	L.P. ₹	Part No.	L.P. ₹	Part No.	L.P. ₹
SPLASH PROOF IP-44	_					
16/20	21001	500	21005	680	203	680
32	21013	830	21017	970	204	970
63	2104	4,260	2151	3,890	21590	3,890
WATER TIGHT IP-67						
16/20	210576	1090	21349	1,480	21239	1,480
32	210594	1,690	21351	1,790	210607	1,790
63	2181	4,930	2185	4,550	2189	4,550
125	2191	14,500	2195	14,250	2199	14,250
SPLASH PROOF IP-44						
16/20	31001	740	31005	880	303	880
32	31013	960	31017	1,200	304	1,200
63	3104	5,100	3151	5,090	3112	5,090
WATER TIGHT IP-67						
16/20	310333	1,580	31241	1,890	31243	1,890
32	31244	2,180	31245	2,400	310364	2,400
63	3181	5,420	3185	5,200	3124	5,200
125	3191	16,600	3195	16,970	3199	16,970

# INDUSTRIAL PLUGS & SOCKETS HSN-8536

# **SURFACE MOUNTING**



Socket-outlet with MCB Provision



Socket-outlet interlocked

	2P+≟ 230V		3P+ <b>≟</b> 415V		3P+N+ <u>↓</u> 230/415V	
Ampere	Part No.	L.P. ₹	Part No.	L.P. ₹	Part No.	L.P. ₹
SPLASH PROOF IP-	-44					
16/20	15019	6,400	_	7,100	15059	7,100
32	15030	7,100	_	8,350	1585	8,350
63	_	_	_	17,000	15036	17,000
WATER TIGHT IP-6	67					
16/20	15024	6,500	15098	7,300	15028	7,300
32	15352	7,200	15111	8,550	15112	8,550
63	-	_	15000	17,190	15001	17,190
125	-	_	15158	52,150	15160	52,150
SPLASH PROOF IP	-44					
16/20	1619	8,500	1610	11,900	1611	11,900
32	16097	11,100	16596	13,500	16043	13,500
63	-	_	16605	25,290	16603	25,290
WATER TIGHT IP-	67					
16/20	1600	8,500	1602	12,000	1604	12,000
32	16104	11,550	160178	14,420	160177	14,420
63	-	_	16604	26,700	16602	26,700
125	-	_	16621	87,800	16622	87,800

# DOMESTIC AC/ INDUSTRIAL OUTLET

Plug/Socket combined in metal enclosure



Plug/Socket combined in Polycarbonate enclosure



Appliance Inlet



	2P+≟ 230V		3P+ <del>≟</del> 415V		3P+N+ <u>↓</u> 230/415V	
Ampere	Part No.	L.P. ₹	Part No.	L.P. ₹	Part No.	L.P. ₹
SPLASH PROOF	IP-44					
16/20	1201 SP/DP	1,750/1,76	60 -	2,500	3201	2,500
32	1202 SP/DP	2,450	-	3,150	3202	3,150
63	1203	10,150	-	9,950	3203	9,950
PLUG SOCKET	COMBINED IN POLY	CARBONATE				
16/20	901	2,060	-	2,940	903	2,940
32	911	2,830	_	3,470	913	3,470
SPLASH PROOF	IP-44					
16/20	261	1,480	-	1,520	2612	1,520
32	2662	2,160	_	2,960	2600	2,960

# VARIABOX The new generation of distributors HSN-8537

The new VARIABOX from Bals meets all requirements for a modern distributor housing and can be individually configured in 5 different sizes with versions S, M, L, & XXL as surface mounting or mobile combination. We have the right distributor for every user. Configuration according to individual specifications on the basis of pre-defined, encoded flanges, which offer a maximum level of safety during the initial installation & /or maintenance. With their robust design in a high grade & durable, quality plastic, their good seal, the modular expansion option & many Innovative extra features, the new VARIABOX proves itself even under the most adverse conditions.



# **Features**

- > Ready wired for installation
- > Housing made of high-grade, impact-resistant plastic
- > Top and bottom can be sealed together
- > Permanently attached cover screws
- > All CEE socket outlets with screw less, maintenance-free QUICK-CONNECT connection technology
- Colors, bottom-black. top-electro grey (Housing top optionally available in the colors yellow, red, blue or silver)
- > With high quality handle
- > Coded flange system for maximum safety during initial installation and maintenance
- Fuse elements arranged below transparent, lockable operating window with user friendly OTC mechanics (one touch close)

Item Code	Dimensions	L.P.₹
Variabox-Small	130 x 230 mm	8,550/-
Variabox-Medium	260 x 230 mm	10,350/-
Variabox-Large	390 x 230 mm	13,950/-
Variabox-Extra Large	520 x 230 mm	17,550/-
10 Way Window	-	1,620/-
4 Way Window	-	1,575/-

# **ECO BOX ENCLOSURE & JUNCTION BOXES HSN-8538**

# Modular Distribution Board - IP 65



Modular Distribution Board



Modular Enclosure



Junction Boxes

Dimensions Lx\	WxH (mm) Part No.	L.P.₹
MODULAR DISTRIBUTION BOARDS		
150 x 300 x 21	0 9150	2,550/-
300 x 300 x 21	0 9300	3,250/-
450 x 300 x 21	0 9450	4,890/-
600 x 300 x 21	0 9600	6,230/-
MODULAR ENCLOSURE		
180 x 180 x 13	5 6180	1,380/-
180 x 240 x 13	5 6260	1,620/-
240 x 320 x 13	5 6320	2,940/-
320 x 420 x 13	5 6420	4,050/-
420 x 640 x 16	0 6520	8,910/-
JUNCTION BOXES		
90 x 90 x 5	0 1001	300/-
100 x 100 x 6	0 1002	350/-
110 x 140 x 7	0 1003	600/-
130 x 130 x 10	0 1004	720/-
130 x 170 x 8	0 1005	790/-
170 x 210 x 10	0 1006	1,550/-

### **DESCRIPTION**

### **Modular Enclosure**

- > Impact resistant modular polycarbonate distribution boards
- > Chemical resistant
- Solid and Stable
- > Self-extinguishing
- > Weather Resistant
- > Corrosion free screws

# **Eco Box Modular Distribution Boards**

- > Impact resistant modular polycarbonate enclosures
- > Chemical resistant
- > Solid and stable
- > Self-extinguishing
- > Weather resistant
- > Corrosion free screws
- > Self internal fixing center / fixing center outside
- > Cable entry to client's specifications

# Mobile Distribution Rubber Boards HSN-8537







# Customized IP 65 L.V. Distribution Panels & Feeder Pillar HSN-8537







# Enclosures HSN-8538 IP-65





Part No.	Rating	LxWxH (mm)	L.P. ₹
3004	4 Way	160 x 225 x 100	1,490/-
3008	8 Way	225 x 225 x 100	2,350/-
3304	12 Way	300 x 225 x 100	3,290/-
3308	24 Way	300 x 400 x 100	5,900/-
3312	36 Way	300 x 600x 100	8,700/-

Rubber distribution & IP 65 L.V. Distribution Panel-  $\mbox{Price}$  as per specification on request

# Windows HSN-8538



No. of ways	Part No.	L.P. ₹
2 Way	5882	570/-
4 Way	5891	590/-
8 Way	58010	760/-
12 Way	58019	910/-



# LV SWITCHBOARDS HSN-8537

# **Modular Switchboards**

- 1. Fully bolted Structure, CPRI Type Tested confirming to IS 8623/IEC 61439
- 2. Available up to 5000A current rating
- 3. Easily extensible on either side, makes the enclosure future proof
- 4. Single Front and space saving double front can be constructed
- 5. Type of construction up to form 4b
- 6. Standard sizes available off the shelf, thus cutting down lead time & inventory carrying cost
- 7. Appropriate level for degree of protection (special design available for higher level of protection)
- 8. Door can be hinged on either side offering greater flexibility to configure as per the site conditions
- 9. Spacious arrangement for cable termination & appropriate support for cable routing
- 10. Provision for BMS compatibility



NEPTUNE POWER D SWITCHBOARDS ARE INTELLIGENT - EVERY INCOMING / OUTGOING FEEDER CAN BE MONITORED & CONTROLLED REMOTELY WITH EMS. SINGLE POINT ACCESS OF COMPLETE DATA ON MODUS FOR FURTHER MONITORING ON EMS / BMS.

# NEPTUNE Elsteel Techno Modular Switchboards (TTA)

#### **Constructional Features**

- 1. Enclosures are modular in construction and expandable in all three dimension in easily measurable multiples of 200 MM
- 2. Enclosures provide upto form 4b type separation to ensure absolute operational sefety
- 3. Ingres protection level of the enclosures provided upto IP 54/55
- **4.** Enclosures to provide drill less system for all connections of busbors to maintain high efficiency and minimal losses (Low heat dissipation)
- **5.** All load bearing structures of the moduler enclosures made of electro galvanized steel and powder coated ensuring durability and resistance to corrosion.
- 6. Moduler structure, Draw out / Semi draw out construction.

#### **Test certifications**

- Enclosures are constructed as fully type tested assemblies
   (TTA), confirming to IEC 61439-1/2 standards.
- 2. Type tested for special tests like Seismic Test as per IEC 68-3-3, Vibration test as per IEC 68-2-6 & IEC 68-2-36, Arc containment as per IEC 61641 standards etc.
- 3. ASB Type approval certificate for shipboard and associated marine and offshore installations.





# Neptune-ABB ArTu Licensed Partner & Integrator

#### ABB ArTu Technical Highlights

- Construction: ABB ArTu Panel is made of 275GSM (Galvanized Iron) sheet, which offers Non corrosive and long life to Panel structure.
- Double door protection, having front door of 6mm Thick special Toughend Glass. Having Better Protection from moisture and dust to the Switchgears Parts.
- 3. Compliance with Standards IEC-61439 Part 1 & 2
- Test of Vibration for Structure: According to IEC-60068-2-57 Standard
- 5. Test of Anti Seismic: According to IEE Std. 693 Standard
- 6. Tested for Internal Arc as per IEC 60641 for 65KA for 0.3 Seconds
- 7. Rated Impulse Withstand Voltage (Uimp) 12kV
- 8. Rated Current In Up to 6300A

## Additional Features Provided by NEPTUNE

ABB ArTu Panels manufactured & integrated by Neptune are completely intelligent with every incoming & Out going Feeders can be monitored & controlled remotely with Neptune EMS

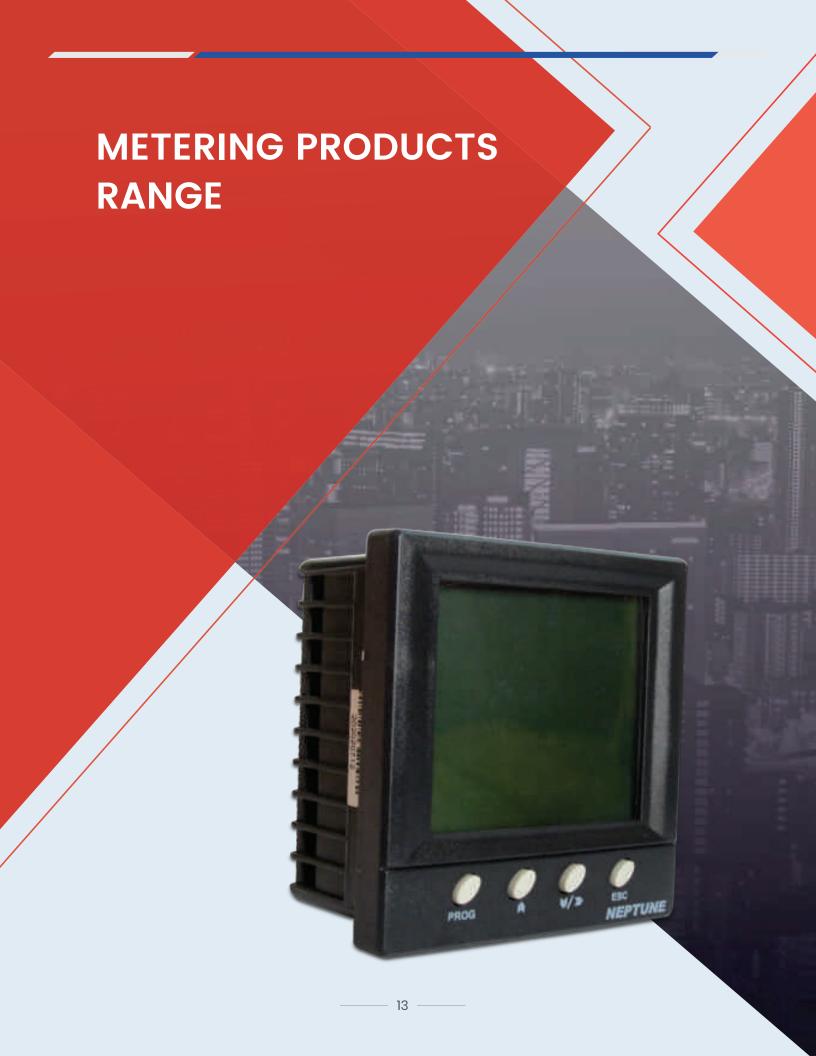
# Specifications & Features of Energy Management System:

Neptune HMI installed in LV Panels for monitoring and control of the following:-

- a) Single Line Diagram, with Live Status of Each Feeder.
- b) Event history of the breakers.
- c) Feeder description of Each Feeder. (Address, Rating, Make-Model, Live Status)
- d) Real time Date of Power Analyzers/
   Meters installed in incomers & out goings.
- e) Single Point access of complete Data on Modbus for further monitoring on Energy Management System / BMS. the data can also be available on Neptune Energia App.







# **POWER ANALYSERS** HSN-9028

# M8 Power Analyzer

L.P.₹ 6,350/-



- + 7 segment bright LED display, Three rows
- + Site Programmable CT and PT ratio
- + True RMS measurement
- + Password protection
- + Harmonic measurement (THD)
- + Parameters- Phase wise-VL-L, VL-N, Amp, Hz, PF, KW, KVA, KVAR, Total energy, THDV, THDI & run hours
- + M8 plus with above features, available with RS 485 (price on request)

# **M9 Power Analyzer**

L.P.₹ 10,400/-



- + 7 segment bright LED display, Four rows
- + Site Programmable CT and PT ratio
- + True RMS measurement
- + Password protection
- + Maximum demand with relay contact with RS 485
- + Harmonic measurement (Total & Individual)
- + Parameters- Phase wise-VL-L, VL-N, Amp, Hz, PF, KW, KVA, KVAR, KVAH KVARH, KWH energy, dual energy, THDV, THDI & run hours, MD & upto 31st Harmonic through RS 485

# M20 Power Analyzer

L.P.₹ 12,500/-



- + LCD display with backlight
- + Site Programmable CT and PT ratio
- + True RMS measurement
- + Password protection
- + Bargraph for percentage current
- + 8 digit energy display
- + Maximum demand with relay contact RS485 computer interface
- + Harmonic measurement (Total & Individual)
- + Universal Auxiliary supply
- + Parameters- Phase wise-VL-L, VL-N, Amp, Hz, PF, KW, KVA, KVAR, KVAH KVARH, KWH energy, dual energy, THDV, THDI & run hours, MD & upto 31st Harmonic through RS 485

# M30 Power Analyzer

L.P.₹ 38,000/-



- + Measurement up to 31 Harmonic for current & voltage separately
- + Total Harmonic Distortion for Voltage & Current (THD-V/ 1%)
- + RS-485 Communication and 2 nos of Relay contact output
- + Energy Pulse output or Digital input (optional)
- + 4-20mA angle O/P for PLC's/ other auxiliary tracking methods (optional)
- + Display demand value, max/min values & Neutral Current
- + Parameters and demand values are stores even if supply voltage is cut off
- + Data logging (1 Mb internal memory) with real time clock
- + Password protection for setup

# **DIGITAL METERING HSN-9028**

# 1 Phase Meter (Ammeter/Voltmeter)

LP.₹ 1,040/-



- + LED type, 7-segment, 4 Digit display
- + CT / PT ratio site selectable
- + True RMS measurement & Password protection
- + Auto ranging
- + Auxiliary supply 90-270 VAC/DC
- + Auto/manual page scrolling
- + Parameters A / V, THDI/THDV & Hz

# 3 Phase Meter (Ammeter/Voltmeter)

L.P.₹ 1,740/-



- + LED type, 7-segment, 4 Digit display
- + CT / PT ratio site selectable
- + True RMS measurement & password protection
- + Auxiliary supply, self powered
- + Auto/Manual page scrolling
- + Auto ranging
- + Parameters- A / V, Amps Phase wise and Avg / VL-L, VL-N, THDI/THDV & Hz

# **Advance VIF Meter**

LP.₹ 2,350/-



- + LED type, 7-segment, 3 Digit display
- + CT / PT ratio site selectable
- + True RMS measurement & password protection
- + Auto ranging
- + Auxiliary supply, 40-270 V
- + Auto/Manual page scrolling
- + Parameter measured are V, I, Hz, P.F. KW, KVa, RPM

### Earth Leakage Relay HSN-8536 with CBCT HSN-8504





- + Latest micro controller based technology with true RMS sensing
- + Single model covers from 30 mA to 30 A-completely programmable in 10 steps
- + Monitors cable connection between ELR/CBCT
- + Bar graph to indicate % of leakage current in the system
- + Alarm available at 50% set of value & triping at 80-90% of set value
- + Core balance CT (CBCT) available in 4 sizes: 35/70/120/210mm (dia)
- + Delay adjustable from 0-10 sect in 10 steps

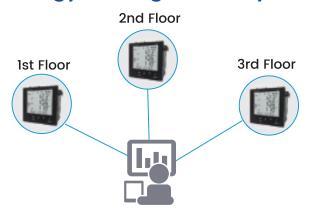
Panel Mounting Din Mounting

Item Code	L.P.₹
Earth leakage Relay with 35 mm CBCT	4,150/-
Earth leakage Relay with 70 mm CBCT	4,540/-
Earth leakage Relay with 120 mm CBCT	5,000/-
Earth leakage Relay with 210 mm CBCT	6,900/-

Special sizes of CBCT also available on request. Display available in Panel Mounting



# **Energy Management System**



#### Salient features of Neptune EMS are:

- ▶ Historic trend charts
- ▶ On-line trend charts
- ▶ Performance reports
- ▶ Energy reports
- Cost reports
- ▶ Budget Reports
- ▶ Alarm Reports
- ▶ Specific energy consumption reports
- ▶ Run hour reports

#### **MEASURE to Manage Energy**

Neptune EMS uses advance range of fault, energy and power monitoring devices which can be used in network for Power Quality and Energy Management.

#### **ANALYSE to Understand**

Neptune EMS is your gateway to understanding by Analyzing specific energy consumption for different energy sources organized according to cost centers, products, services or equipments. Set targets to compare them with the results. Analyze the effect of external factors on how energy is used.

#### SAVE to Get more ... and REPORT it

Neptune EMS empowers you to act with targets on improvements derived from analysis. Continuous monitoring helps to keep control and to follow success immediately at any time, whether it is the result of investment in new equipment, repair, adjustment or maintenance.

The access to archived and real time data on energy purchased lost or sold gives management analysis at the same time, it offers complete connectivity with production and quality management systems in any factory & building.

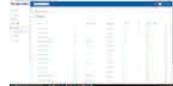
Unlike most of your overheads, energy is a controllable cost. Energy Management thus becomes an integral part of decision making in your quest for cost control. Energy Management is a process requiring long term management commitment, dedication and right tools. It involves all stake holders from users, technical staff and management.

Neptune EMS brings a wide range of experience in Energy Management to projects for your benefit. Our specialists in software and advance internet applications make sure that Neptune EMS works for you. Our hardware supports a smooth and accurate data transfer. We prefer to work in partnership to create win-win situations. Neptune EMS helps to improve energy and thereby overall company performance with less effort and greater precision. The energy savings will help reduce not only costs, but they add significantly to reducing your carbon footprint.

#### **Benefits**

- Maximising overall energy productivity
- Increased revenues
- Accurate picture of energy usage
- Transparency and track record on all conditions that affect power quality and energy consumption
- ▶ The ability to pay only for what you consume
- ▶ The ability to forecast energy consumption
- ▶ Basis to optimize resource usage
- Comprehensive insights into energy related performance & cost
- Relevant information for successful energy efficiency project design
- ▶ Calculation for an excellent rate of return
- ▶ Monitoring & Targeting





# Dual Energy Metering Pre-paid & Post-paid with EMS Software & Networking Solution HSN-9028

# M302, M306 & M308





- + Micro controller based design
- + CT/PT site selectable
- + Password protection
- + True RMS measurement
- + Auxiliary supply 90-270 VAC/DC
- + Auto ranging, Auto / Manual page scrolling
- + Parameters measured are V, I, Hz, P.F., Kw, Kwh, Kva, KVAR
- + THD-V, THD-I, load hrs.
- + Accuracy Class 1 / 0.5
- + Available with or without RS485
- + Also availablein LCD display

## Networking with Power Analyzer and Dual Metering for Pre-Paid and Post-paid Solutions







Dual Energy Metering with Automatic meter reading (Pre-paid, Post paid and Hybrid) has become the need of the day. Neptune AMR provide energy usage trends, which helps to control energy consumption and pre-paid and Post-paid billing system, ensuring better recovery on energy usage by calculating the purchased / produced energy, common energy, losses in the energy and total consumption concessionaire wise. It has option for load management, energy management and option to auto disconnect the system due to non payment of dues or over usage of the sectioned load. Comprehensive set of information and reporting system makes it an inevitable tool for sub single / dual source metering.

Power Net = Energy Management System

Power Scan = Energy billing and automated meter reading software

Item Code	L.P.₹
Kwh Meter M-302	3,850/-
Kwh Meter M-304 with RS-485 Port	On request
Dual Source Kwh Meter M-306 / 5 CTR with RS-485 Port	7,120/-
Dual Source Kwh Meter Direct, up to 60 Amp. M-306D with RS-485 Port	8,580/-
Dual Source Kwh Meter LCD M-308	12,500/-
Power Net Software- Power monitoring and control application	On request

# **AUTOMATIC METER READING SYSTEM**

### **Automatic Meter HSN-9028**



Dual Source Energy Meter (Single Phase and Three Phase)

Neptune provide host of solution in Dual/Multi source, Pre/Post paid automatic metering systems. Our solutions are designed to automatically collect consumption, Status, Diagnose and transfer the data from the meter to the central for billing, analysis, trouble shouting and historical purpose.

#### **Solution Features**

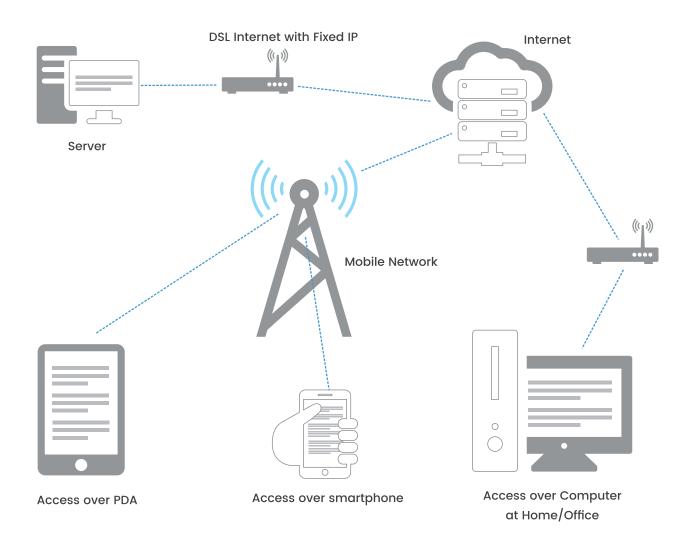
- Automatic collection of data on specific intervals
- Integration with web based self-services as users can view consumption, billing etc.
- ▶ Load control, tamper and outage detection.
- Monitoring of voltage, harmonics and other power quality characteristics.
- On demand electric meter reading and time of use based meter reading.
- Remote services for connection & disconnection on non-payment or over demand.
- Messaging to customers on real time any changes in prices.
- Automatic detection and reporting of power outages and restoration of services.
- Automatic messaging alert.
- Third party integration with SAP and other CRM, PMS software.
- Integration with window, iOS & Android mobiles.

#### **Software Features**

- Multi layer system which makes it scalable, robust and responsive enough to cater large customer base.
- Suitably armed software, which has options for Pre-Paid, and both with option of customer information tools like E-mail, SMS, IVR and access to customer on mobile/PDA/Computer.
- Software supported by well experienced team for support and customization to customer specific requirements.
- Centrally controlled system with independent local permission & engineering data make the system ideal for multi-site/multi location scenario. Its ready to plug ERP integration module works seamlessly with existing ERP systems.
- User programmable option to add new heads if any missed at the time of implementation like DG Rates, EB Rates, common Area consumption Rates, facility rates like gym, pool health club, energy tax etc. You think of and head definition is possible.
- Easy to use system any one can master with minimum training as it has no hassle of printing coupon and then feeding them in the meters, the movement customer pays amount (Cash, Cheque, Card, Net banking) meter is recharged immediately.
- Transaction based system, where every process is recorded in a very systematic way to enable auditing system.
- System has in-built basic accounting system to a level that is required at site.
- System gives option customer to directly view his consumption, load behavior & balance using his unique credential.
- Solid reporting system built to keep in mind different user like: End Customer, Site Engineers, Site Accounting person, Central Administration Team.

# How does Energy Management System work?

# System Architecture



# **Communication Option:**

Neptune meters can communicate over various option Like:

- 1. Wired (Rs485), Ethernet
- 2. Wirelessly with Power2-Air system, GPRS / GSM bridge
- 3. Hybrid model of combination of above.

# NSL 10 HD / Ultima / LL-M HSN-8532

# NSL - 10 Heavy Duty Capacitors



- + The dielectric consist of heavy film of polypropylene
- + The capacitors are designed with a very low loss dielectric & high quality film is used
- + Operational Life > 1,00,000 hours.
- + The safety and reliability of the traditional technology of impregnated used for medium voltage capacitors.
- + Double Protection Safety Device

# Ultima - The Ultimate Capacitors



- + Withstands high harmonics overload
- + Life expectancy of more than 2,00,000 hours
- + Low losses ≤ 0.2 W/Kvar
- + Each element is made by Metallized Polyproylene.
- + The Metallization has been made in a special "Profile" to allow: an higher voltage stress on the film.
- + Temp. Range -25 °C + 70 °C
- + Rating available in 525 v i.e 7.5, 15, 18.75, 22.5, 30, 37.5, 75 kvar

# LL-M Capacitors - Long Life Mixed Dielectric Capacitors



- + Dielectric impregnated with biodegradable synthetic oil
- + R.M.S Current level in excess of 4 In
- + Withstand Harmonic Overloads
- + Long operational Life > 2,00,000 hours
- + Available in 450V 550V
- + Temperature range -25°C to 70°C

Price Per KVAR

Item Code	Rating	L.P.₹   440v	525v
NSL-10 HD Capacitor	25 Kvar	440/-	_
NSL-10 HD Capacitor	5 - 20 Kvar	455/-	-
Ultima Capacitor	25 & 50 Kvar	675/-	765/-
Ultima Capacitor	5-20 Kvar	685/-	775/-
LL-M Capacitor	25 & 50 Kvar	720/-	On request
LL-M Capacitor	5-20 Kvar	760/-	On request

# Power 9 / Duca Power XD Capacitors HSN-8532

# **Power 9 Heavy Duty Small Capacitors**



- + New compact Heavy Duty Series
- + Cylindrical 3 phase Capacitors
- + Life expectancy > 1,00,000 hrs.
- + Low losses ≤ 0.2 w/Kvar
- + Rating available in 1, 2, 3, & 4 Kvar

# **Power 9 Heavy Duty Capacitors**



- + New compact Heavy Duty Series
- + Cylindrical 3 phase Capacitors
- + Life expectancy > 1,00,000 hrs.
- + Low losses ≤ 0.2 w/Kvar
- + Rating available in 5, 10, 12.5, 15 & 25 Kvar

# **Duca Power XD Capacitors**



- + Withstand Harmonic Overloads
- + Up to 4 In Max Current
- + Life expectancy > 1,70,000 hrs.
- + Low losses ≤ 0.2 w/Kvar
- + Temperature Range 25°C to 70°C
- + Rating available in 525 v i.e 7.1, 14.2, 17.8, 21.3, 35.6 kvar

Price Per KVAR

ltem Code	Rating	L.P.₹   440v	525v
Power 9 Capacitor	1, 2, 3, & 4 Kvar	365/-	_
Power 9 Capacitor	25 Kvar	340/-	_
Power 9 Capacitor	5-20 Kvar	360/-	_
Ducapower Capacitor XD (Super HD)	25 Kvar	450/-	505/-
Ducapower Capacitor XD (Super HD)	5-20 Kvar	490/-	545/-
APP Capacitor	5-50 Kvar	On request	On request

# **Automatic Power Factor Controller Single CT HSN-9032**

# Intelligent P. F. Controller - RM Series



- + LED Type 7 segment 4 Digit Display
- + 8 &12 capacitors steps available in ON/Off modes
- + Measurement of A, V, PF, Cos phi, W, VAr, VA
- + Automatic calculation of C/k values
- + Program entry for targeted Cos phi value
- + Number of capacitors steps are user definable
- + Automatic / Manual mode selection with indicator light
- + Over voltage, insufficient compensation, overcompensation state alarm indicator lights with output contact

# **Automatic Power Factor Controller 3 CT HSN-9032**

# Intelligent P. F. Controller - NAAC 3P series



- + LED Type 7 segment 4 Digit Display
- + 8 & 12 capacitors steps available in ON/Off modes
- + Measurement of A, V, PF, Cos phi, W, VAr, VA
- + Automatic calculation of C/k values
- + Program entry for targeted Cos phi value
- + Number of capacitors steps are user definable
- + Automatic / Manual mode selection with indicator light
- + Overvoltage, insufficient compensation, overcompensation state alarm indicator lights with output contact
- + Compensation for all 3 phases

# Advance P. F. Controller - G8/ G8 Plus



- + 7 segment LCD Display
- + Suitable for Power Factor Correction using Thyristor Modules for Real Time Compensation & Contractor Switching for normal compensation
- + Master slave function
- + GSM / GPRS Model (optional)
- + Current & Voltage Harmonic analysis
- + Independent compensation for all 3 phases
- + Capacitor over-current protection on all 3 phases

Item Code	Item Code	L.P.₹
RM Series		
	RM 6	13,400/-
	RM 8	15,500/-
	RM 12	19,200/-
Neptune 3P Series		
	NAAC 3P-8	20,800/-
	NAAC 3P-12	25,600/-
Intelligent P.F. Series		
	G8 & G8 Plus	On request

# Harmonic Block Reactors for Detuned Systems / Thyristor Switching Module

# Harmonic Block Reactor HSN-85045090



- + India first single layer design with inbuilt TOP device.
- + 3 Phase aluminium wound reactors with an iron core and air gap
- + Highest quality material and very stringent quality control
- + It has been designed with properties like low temperature rise and lower flux density so that it can operate in worst conditions of ambient and harmonic overloads.
- + Filtering factor of 5.6%, 7% and 14% (any other filtering factor on request)
- + High Linearity (L>0.95 x Ln): 200%
- + H-Class Insulation
- + Vacuum Impregnated

Rating 440v, 50Hz	Harmonic Block Reactor (AL/Cu) P = 7% LP. ₹	Harmonic Block Reactor 7% with DUCA Power Capacitor (Separate Units)	with Ultima Capacitor
5 KVAR	8,650/-	11,375/-	12,525/-
10 KVAR	10,600/-	16,050/-	18,350/-
25 KVAR	15,600/-	28,225/-	34,725/-
50 KVAR	26,900/-	52,150/-	65,150/-
100 KVAR	49,990/-	1,00,490/-	1,26,490/-

<sup>\*</sup>Copper wound reactor also available on request \* Any other Detuned Frequency & rating can be provided on request **NOTE:** Prices for 14% & 5.6% Harmonic Block Reactor with and without Capacitor Bank are available on request.

# Thyristor switching Module HSN-8541



#### **Electronic switches:**

- + Rated Voltage: 415V ±10%
- + Temperature controlled, in built forced air cooling in all models

#### Enclosure: IP 40 Maximum ambient temp:40 °C Alarms

+ Built-in Alarms for protection of switching module & capacitor Banks

Item Code	Rating (KVAR)	L.P.₹
	PS 15 KVAR	28,090/-
Thyristor Switching Module	PS 25 KVAR	31,200/-
for 415V / 450V application	PS 50 KVAR	37,200/-
	PS 100 KVAR	66,000/-
Thyristor Switching Module	PS 50 H KVAR	50,540/-
for 690V / 750V application	PS 100 H KVAR	88,400/-
Fast discharge Reactor for 415V / 440V	-	1,470/-
Fast discharge Reactor for 690V / 750V	-	2,360/-

# POWERNAC Series P.F. Compensator HSN-8537

# Intelligent P.F. Compensator Series-I & II



- + Available from 25 KVAR to 600 KVAR in series-I and series-II
- + Havy Duty 3 Phase Cylindrical Capacitor
- + Expandable Intelligent PF control for small to medium load network
- + Ultimate solution for compensation of unbalanced loads
- + Measure the reactive power of the system through 3CT's from all 3 Phase
- + Highly intelligent Micro processor based 3 phase P. F. Controller with optional
- + Dual P. F. Setting
- + LCD Controller with inbuilt Load Manager with front optical port
- + Optional Plugable Data logger, Ethernet, USB RS485,GSM modem and capacitor protection modules
- + Power Coated- Structure finish with attractive Deep Orange and Dark Blue finish
- + Incomer TP-MCCB
- + HRC/MCB's are used for backup protection.

P.F. Compensators are manufactured with standard banking and make P.F. components. Any change in specification will attract different quote.

P.F. Compens	ator Rat	ing 3Ph	ase, 44	0v, 50H:	z							Unit Price
Rating KVAR				— Bank	ing con	figurati	on (kva	r) —			Wall Mounted	L.P.₹
25	2	3	5	5	10							1,07,580
30	2	3	5	10	10							1,08,900
40	2	3	5	10	20							1,12,20
50	2	3	5	10	10	20						1,21,55
60	2	3	5	10	20	20						1,35,85
											Type-I Floor Mounted	
75	5	5	15	25	25							1,52,90
100	5	5	15	25	25	25						1,67,20
125	5	5	15	25	25	25	25					1,84,80
											Type-II Floor Mounted	
150	5	5	15	25	25	25	50					3,06,90
200	5	5	15	25	25	25	50	50				3,49,80
250	12.5	12.5	25	50	50	50	50					3,90,50
300	12.5	12.5	25	50	50	50	50	50				4,31,20
325	12.5	12.5	25	50	50	50	50	75				4,68,60
350	12.5	12.5	25	50	50	50	75	75				4,97,20
400	12.5	12.5	25	50	75	75	75	75				5,51,10
450	25	50	75	75	75	75	75					6,27,00
500	25	50	50	75	75	75	75	75				6,82,00
600	25	25	50	50	75	75	75	75	75	75		8,06,30

# **ACTIVCOMP Thyristor Switched / Contactor Switched / Detuned-Tuned Harmonic Filtration Systems HSN-8537**

#### Activcomp System (Real Time thyristor Switched Dynamic Power Factor Correction & Harmonic Filtration System)



- + Fast Real Time Transient-Free switching of Capacitor Bank
- + Prevents damage to sensitive electronic equipment in network
- + Highly intellgent micro processor based 3 phase P.F. Controller with Dual P.F. Setting and Master Slave modes
- + LCD Controller has inbuilt with Load Manager with front optical port
- + Optional plugable Data Logger, Ethernet, USB, RS485, GSM modem and capacitor protection modules
- + Saves Energy with P.F. Control and Harmonic Filtration
- + Extremely long life expectancy
- + Integral 3 phase Power Quality Analyze showing upto 31st Harmonics
- + Voltage & Current Waveforms
- + Unique Self Testing and Comprehensive reporting and event logging
- + The compensation is based on averaging the FFT analysis of each cycle, resulting in more accurate compensation, even in the presence of harmonics.
- + Available with Tuned, 7%, 5.6%, 14% or any other Tuning frequency as per customer request

Contactor Switching System (Contactor Switched P.F. & Detuned / Tuned Harmonic Filtration System)



+ System is available with Contactor switching for non-dynamic, normal loads-Rating and Dimensions are same as Activcomp System

manufactured with standard make of component. Any Change in specification will attract different quate

<b>Output</b> KVAR	Banking Configuration KVAR	Switching Sequence	Dimensions W x D x H (mm)	Thyristor Switched Unit Price	Contactor Switched Unit Price
100	2x12.5, 3x25	1:2:2	800 x 850 x 2125	On request	On request
200	2x12.5, 1x25, 3x50	1:2:4	800 x 850 x 2125	On request	On request
300	2x12.5, 1x25, 1x50, 2x100	1:2:4	800 x 1150 x 2125	On request	On request
400	2x25, 1x50, 3x100	1:2:4	1600 x 1150 x 2125	On request	On request
500	2x25, 1x50, 4x100	1:2:4	2400 x 1150 x 2125	On request	On request
600	2x25, 1x50, 5x100	1:2:4	2400 x 1150 x 2125	On request	On request
700	2x25, 1x50, 6x100	1:2:4	2400 x 1150 x 2125	On request	On request
800	2x25, 1x50, 7x100	1:2:4	3200 x 1150 x 2125	On request	On request
900	2x25, 1x50, 8x100	1:2:4	3200 x 1150 x 2125	On request	On request
1000	2x25, 1x50, 9x100	1:2:4	3200 x 1150 x 2125	On request	On request

# Active Harmonic Filter HSN-8504

# **Active Harmonic Filter**



- + To reduce harmonics of networks with Non-liner loads like UPS, Rectifiers AC & DC drives / VFDs etc. in industrial and commercial installations.
- + Performance meets IEEE and compliance to other international standards.
- + Can be used as Hybrid filter combination of Activcomp with Active filter resulting in reduction of best cost and rating of active filter.
- + Applications- Industries with Harmonic generation loads, Hospitals, Data Centers and IT Facilities, Office Buildings, Airports, Shopping Plazas etc.
- + Improvement in reliability of electrical system leading to lower THD-I & V, reduction in operational problems/cable and transformer losses.
- + Better utilization of distribution Transformer & Generator
- + Increases efficiency, capacitor life, PF, uptime.
- + Easy to commission and use with advance control interface

# **Hybrid Power Conditioning System**



Hybrid Power Conditioning System is a combination of Dynamic Activeomp
Thyristor based Power factor Correction System and IGBT fired Active
harmonic filtration. It offers most viable and economical solution for both
Power Factor Compensation and Harmonic Mitigation.

Rating (Amp)	3P 3W Unit Price	3P 4W Unit Price		3P 3W Unit Price	3P 4W Unit Price
Active Harmonic Filter			Hybrid Power C	onditioning S	ystem
30 A	On request	On request	300 KVAR + 60 A	On request	On request
60 A	On request	On request	400 KVAR + 100 A	On request	On request
100 A	On request	On request	500 KVAR + 150 A	On request	On request
150 A	On request	On request	600 KVAR + 200 A	On request	On request
200 A	On request	On request	800 KVAR + 300 A	On request	On request
300 A	On request	On request	1000 KVAR + 400 A	On request	On request
400 A	On request	On request			
500 A	On request	On request			
600 A	On request	On request			

# Terms & Conditions

#### **Price Basis:**

The prices mentioned are Unit Price and Ex-Works basis.

Prices shall be applicable as per our Price List ruling at the time of despatch.

#### Place of despatch:

The materials shall be despatched from Noida / Delhi works.

#### GST:

Goods & Service Tax shall be charged extra as applicable at the time of despatch.

#### Insurance:

Insurance shall be organized, paid, dealt by the customer directly. Damages or any shortages, if found shall be dealt by the customer directly.

### Forwarding & Freight Charges:

For all standard items, freight shall be charged extra @3%.

For all other items, e.g. Block Reactors & Panels, freight shall be charged extra at actual.

#### **Terms of Payments:**

For all authorized Business Partners, payment terms shall be applicable as per the Trade Policy except APFC Panels & other Panels.

In case of Panels, advance payment & balance along with 100% taxes & duties levies etc. shall be released against PI before despatch.

NOTE: This Price List supersedes all previous Price Lists.

# **Regional Contacts**

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