

for a safe tomorrow...



**NATIONAL ELECTRICAL INDUSTRIES CO. LLC**



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## THE ALI MIRZA GROUP OF COMPANIES

Ali Mirza Group, established in 1974, is a leading business group, incorporated in the Sultanate of Oman with branches in Dubai. It functions in core infrastructure activity covering Contracting, Manufacturing & Trading. Its leading arms in the above activities are as follows.:



An ISO 9001 : 2008 certified company with a complete range of products certified by European Labs. Medium voltage and Low voltage switchgear products certified by ASTA, UK. NEI boasts of a full-fledged manufacturing unit that comprises of latest technology with computer controlled machineries and one of the largest CNC machines in the Sultanate of Oman. It has highly experienced staff who man and control the operations.

### CHAIN LINK FENCING



### CIVILCO

Specialized Contractors in the field of Civil, Mechanical, Electrical, Engineering, Procurement, Construction (EPC/ Turnkey) Power, Transmission and Distribution, Pipelines, Water and Waste water, Painting, Coating, Telecommunications, Landscaping & Irrigation. An ISO 9002 company engaged in the execution of the above type of projects by virtue of modern management techniques and established supervisory methods. It has completed many diverse projects both for governmental and private sectors in the last three decades.

### NATIONAL ELECTRICAL INDUSTRIES CO. LLC



Manufacturers of Fencing Systems

### OTHER GROUP COMPANIES

1. TRADE LINKS & SERVICES
2. OMAN PLASTICS CO. LLC
3. GARGASH & TRADE LINK INSURANCE SERVICES

# The Company

## THE COMPANY

**National Electrical Industries Co. LLC. (NEI)**, a member of 'Ali Mirza group of companies' was established in the year 1997. NEI is in the field of manufacturing Electrical switchgear and Switchboards The NEI switchgear range starts from Miniature Circuit Breakers, RCCB, MCCB, RCBO up to ACBs.

The switch boards cover complete spectrum from Low Voltage to Medium Voltage Products

NEI has a dedicated design and development team to develop MCB/MCCB/RCCB etc. and also has the expertise in every type of switchgears and panels comprising of LOW VOLTAGE and MEDIUM VOLTAGE switchboards. To ensure the highest quality the raw material for these switchgears and its assemblies are sourced from Europe. These materials are Flame retardant and meets International standards. NEI is the only company in the Sultanate of Oman to have a Short circuit testing type test facility in house.

**NEI is an ISO 9001:2008 Organization**



## PRODUCT RANGE

RANGE OF SWITCHGEAR PANELS :

### Medium Voltage Range

- 3.3 kV switchgear panels
- 6.6 kV switchgear panels
- 11 kV switchgear panels

The above range comes with the bus bar rating from 630A to 3150A with fault levels from 18.4 kA/ to 50kA/. These products are manufactured using the latest state of the art technology in Product and Design Process. The panels are type tested as per latest international (IEC) standard IEC 62271-200 at independent international labs.

### Low Voltage Product Range



reputed European labs such as ASTA, UK and CESI, Italy. These type tested products conform to IEC standards.

The manufacturing facility is located at a multi level built up area of 15000 sq. ft. at Mabellah, Oman with specialized areas of manufacturing under one roof, Design, fabrication, assembling, testing and dispatching this minimizes logistics & improves co-ordination which leads to quicker delivery.

NEI has been accredited ISO 9001: 2008 Quality Management System for its Design, Engineering, Sales & Servicing of Low and Medium Voltage Electrical Switchgears and Panel Boards.

The products of NEI are type tested as per IEC 61439 / & IEC 62271-200 standards by world renowned independent European laboratories.

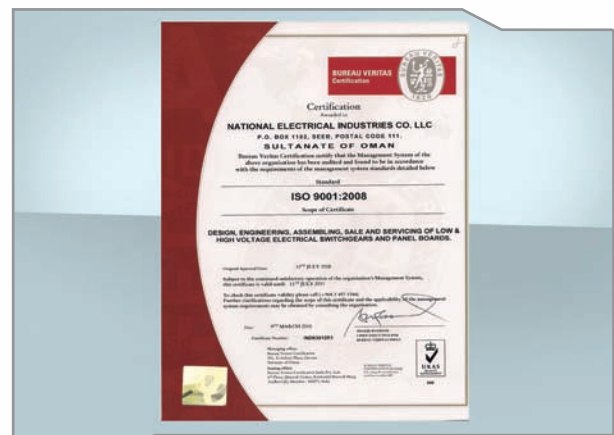


Distribution Boards, Main Distribution Boards, Feeder Pillars, Lighting control Cabinets, Metering Panels, Power Control Centers (PCC) up to 5000A, Intelligent Motor Control Centers (iMCC), Motor Control Centers (MCC Draw out, Fixed / Plug In.), Auto Changeover Panels, Power Factor improvement Panels, Synchronizing Panels, Generator Control Panels.

NEI commands a lion's share for locally produced component business in the Sultanate of Oman with a staggering 80% market share; It is also one of the Leaders in the Low Voltage switchbond industry with a substantial market share and exporting to the GCC countries.

It has partnered with Schneider Electric France to manufacture Prisma TT and Blockset panels. Panels up to 6300A , 220 kA have been manufactured in this prestigious facility & have been installed in various mega projects of OMAN.

NEI's switch boards are fully type tested in internationally



# Competence

## COMPETENCE

### DESIGN & ENGINEERING

To tailor make the customer's specific requirement NEI has its highly skilled team of engineers who work on custom built software.

The designs that suit and comply with international standards are made under strict supervision. The complete NEI operations are integrated on world renowned ERP System(Microsoft Based).



## ABILITIES

SHEET METAL FABRICATION, PRETREATMENT & POWDER COATING

### SHEET METAL FABRICATION

NEI has a full-fledged sheet metal fabrication unit to make its manufacturing more comprehensive. It uses one of the most sophisticated and the largest CNC machine as on date in Oman.

These machines are loaded with superior tools from USA. Further, to ensure a well balanced fabrication line-up it has hydraulic bending machines and uses TIG & MIG welding machines effectively to complete the fabrication. The steel sheets used are of high quality electro galvanized from most reputed mills that are certified by independent international agencies.



## PRE-TREATMENT

NEI has a seven tank pre-treatment process. The above ensures NEI has complete control over its entire products and processes. Establishing of these lines ensures quick throughput.



## POWDER COATING

NEI has an in house automated powder coating plant. The Powder Coating that is carried out in-house has facility to paint any color. The painted parts are polymerized in two electric furnaces. This can cater to the exact tailor made requirements of our customers in the shortest possible time.



## CAPABILITY

### ASSEMBLY LINE

Large shop floor area that facilitates to run multiple assembly lines at the same time. These are equipped with necessary tools, torque wrenches, jigs, fixtures, pneumatic tools, In-shop drawing boards and work tables. The assembly lines are ergonomically designed to take care of material flow.

## AMENITY

### COPPER FABRICATION SHOP

Copper fabrication shop is fully equipped with Hydraulic machines for shearing, punching and bending. Copper Bus Bars are manufactured from high conductivity hard drawn electrolytic tinned copper. Copper Bus Bar systems are rated up to 5000A. The Bus Bars are insulated precisely with colour coded fire retardant insulating sleeves of 20kv/ mm class. The bus bars are manufactured exactly as per engineering drawings provided.



## PRODUCTS

### MEDIUM VOLTAGE SWITCHGEAR

Type tested at International Labs along with Internal Arc Test (for protection of the operator), The functional units of the switchgear are guaranteed arc proof AFLR 315kA Is in accordance with the IEC 62271-200 standard. Explosion resistant design. Single Bus bar Air-Insulated Metal-Clad Switchgear. Designed for primary/secondary distribution networks with the rated voltages 3.3kV, 6.6kV of 12kV and 17, 5 kV/50Hz Rating up to 3150 Amps.

Vacuum Circuit Breakers (VCB) are mounted on Truck-(Draw-out unit)

All switching operations performed with front door closed Short Circuit withstand capability up to 50kA / 3 seconds.



### INTELLIGENT MOTOR CONTROL CENTRES (iMCC)

Incorporates intelligent protection controls in each feeders/ starter's integrated System suitable for connection to SCADA, PLC or DCS system using IEC Protocol on TCP/IP to communicate with other devices. This ensures faster communication compared to conventional MODBUS device.

Online data for Building Management System trend monitoring parameters of PF peak demand etc. can be measured. Measurement & Control Relays, Protection Relays & Contactors that confirm to IEC and Electromagnetic standards are integrated in the modules IEC based version of Draw-out design that ensures minimum downtime. Plug-in as well as traditional fixed units are also available. Totally Type tested by ASTA / KEMA.



### LOW VOLTAGE SWITCHGEAR PANELS

NEI Partners with Schneider Electric, France and manufactures both PRISMA TT and BLOKSET Panels. Our range covers various applications in Power Distribution, Instrumentation and Control Panels confirming to IP 55 protection class manufactured from electro galvanized sheet steel of European origin. Colour to normal standard of DIN 43656-RAL 7032 but not limited.

Power Control Centres (PCC) up to 7500A /415V / 50Hz. Robust Type tested designs for higher Short Circuit loads. Form of Segregation 2, 3 and 4 Type-7 designs. Bus Bar entries can be top/middle or bottom.



### MOTOR CONTROL CENTRES (MCC)

Type tested, suitable for switching and control of motors. Operation in diverse applications with immaculate designing. Sliding modules on rails for easy withdrawing. Automatic isolation of Power and Control contacts. Unique Draw-out module. Padlocking facility in service and test positions and Safety shutters for blocking access to power contact when module is withdrawn from service position. Cable entry from Top or Bottom may be provided as per the requirement. Can be offered in C & L formation also.

## AMF PANEL

- Rating : of up 5000 A
- Incomer : MCCB/ ACB
- Outgoing : MCCB/ ACB
- Metering : Direct reading KWH meter with cutout both SPN and TPN, CT operated KWH meter in accordance with customers requirement. Voltmeter, Ammeter etc; may be provided as an option.
- Enclosure : Electro galvanized sheet steel with powder coated enclosure confirming to different IP ratings.
- Busbar : High conductivity hard drawn electrolytic tinned and sleeved with colour coded fire retardant insulation sleeves of 20KV/mm class Copper Busbar.



## AUTOMATIC POWER FACTOR CORRECTION CAPACITOR

- BANKS Rating : Up to 1000A KVAR Incorporates a Touchproof design with IP20 Protection even with door open condition. The unprotected zone in the cap panel is eliminated due to above design.
- Incomer : MCCB/ Isolator
- Outgoing : Multi units of 6 way or 12 way capacitor banks switched by TP contactors and backed up by HRC fuses. All capacitors are provided with discharge resistors.
- PF Controller: Microprocessor based 6 step/12 step PF regulator relay with digital PF indicator.
- Enclosure : Electro galvanized sheet steel with powder coated enclosure confirming to different IP ratings.
- Busbar : Highconductivity hard drawn electrolytic tinned and sleeved with colour coded fire retardant insulation sleeves of 20KV/ mm class Copper Busbar.

## FEEDER PILLARS

- Rating : Upto 3200A, 65/50KA Fault level
- Incomer : ACB, MCCB, Isolators, Vertical Fuse Switch
- Outgoing : Vertical Strip Fuseways upto size II with DIN type fuse/ MCCB
- Metering : Voltmeter, Ammeter, KWH meter, Max-Demand meters etc; as per required by customer.
- Busbar : Copper Busbar. High conductivity hard drawn electrolytic tinned and sleeved with colour coded fire retardant insulation sleeves of 20KV/mm class





# Distribution Boards

## MCB DISTRIBUTION BOARDS

Both in SPN and TPN Specification

	:	BS 5486 Part 12 / IEC 61439
Basbar Rating	:	100A, 10KA
Incoming Options	:	Isolator 100A + RCCB RCCB (ELCB) 40/63/100A with 30/100/ 300mA Sensitivity
Outgoing Type	:	6A TO 60A SP/ TP MCBs Plug-in
Maximum Rated Voltage	:	240VAC IP/ 415VAC 3P at 50/60Hz
Number of Ways	:	a) Single Phase DB: 4,6,8,9,10,12,15 & 18
b) Three Phase DB:	:	4,6,8,10,12,14 & 16
Split TPN DB	:	2+2/ 4+2/ 4+4/ 6+4/ 8+4 & 8+6
Colour	:	RAL 7032 Powder Coated
Protection Category:	:	IP 41



Any special requirement of number of outgoing ways may be manufactured as per customer's requirements.

MCCB DBs conform to IEC 61439 and are designed with a fully enclosed and insulated busbar system. High conductivity busbars are used in the DBs. The enclosures are powder coated with light grey shade(RAL 7032).

NEI MCCBs conform to IEC61947-2 and are tested in CESI, Italy and ASTA, U.K. The MCCB range is from 20 Aup to 800A, in 1,2, 3, & 4 pole versions.



## HIGH PERFORMANCE MOLDED CASE CIRCUIT BREAKERS:

Technical Specifications of MCCB N1		
Characteristic	N1	
Frame size [A]	125	
Rated uninterrupted current at 50° C, I <sub>u</sub> [A]	20,32,40,50,63,80,100,125	
Number of poles	2, 3, 4	
Performance level	A	B
Breaking Capacity	16	25



Technical Specifications of MCCB N2			
Characteristic	N2		
Frame size [A]	250		
Rated uninterrupted current at 50° C, I <sub>u</sub> [A]	100, 160, 200, 225, 250		
Number of poles	3, 4		
Performance level	A	B	C
Breaking Capacity	25	40	50

Technical Specifications of MCCB N3			
Characteristic	N3		
Frame size [A]	400		
Rated uninterrupted current at 50° C, I <sub>u</sub> [A]	300, 320, 400		
Number of poles	3, 4		
Performance level	A	B	C
Breaking Capacity	25	40	50



Technical Specifications of MCCB N4			
Characteristic	N4		
Frame size [A]	800		
Rated uninterrupted current at 50° C, I <sub>u</sub> [A]	630, 800		
Number of poles	3, 4		
Performance level	B	C	D
Breaking Capacity	40	50	65

# Circuit Breaker

## BOLT-ON MINITATURE CIRCUIT BREAKER

Protects and controls circuit against overload and short circuit in domestic installations, Commercial and electrical distribution systems

### TECHNICAL DATA

- Current ratings: 6, 10, 15, 25, 32, 40, 50, 60A
- Voltage ratings 240/415V AC
- No. of Poles: 1, 2, 3, 4
- 3KA, 6KA or 10KA breaking capacities



## RESIDUAL CURRENT OPERATED CIRCUIT BREAKER

### FEATURES

- Positive contact indication of the contacts is given by the legend "ON" or "OFF" on the handle.
- All NEI RCCBs incorporate a filtering device preventing the risks of unwanted tripping due to transient voltages and transient currents.

### TECHNICAL DATA

- Current ratings: 40A, 63A, 100A
- Voltage ratings: 240/415V AC., No. of poles 2,4
- Sensitivities 30, 100, 300mA
- Connection capacity: Tunnel terminals for cable up to 35mm<sup>2</sup>.



## PLUG-IN MINITATURE CIRCUIT BREAKER (230/415 AC)

Protects and controls circuit against overload and short circuit in domestic installations, Commercial and electrical distribution systems

### TECHNICAL DATA

- Current ratings: 6, 10, 15, 25, 32, 40,50, 60A
- Voltage ratings 240/415V AC
- No. of Poles: 1, 2, 3, 4
- Frequency:50Hz/60Hz
- Breaking Capacity: 3/6/10 KA
- Characteristic: as per BS 60898



## QUALITY ASSURANCE

- NEI Assurance and Quality Management System are in place.
- It has all facilities and testing equipments to routinely test various products in house.
- The only organisation in Oman to have short circuit testing facility.
- Current Injection facilities are available upto 6400 A.
- Impulse testing kits are available upto 30,000 volts.



## RECOGNITION AND ENDORSEMENT

NEI Switchgear products have been recognized and endorsed by host of organizations across the GCC and MNC contractors. The NEI Produce have been installed in several prestigious projects. To name a few top notch marquee organizations are as mentioned in here.

- Petroleum Development Oman LLC (PDO)
- Ministry of Housing, Electricity and Water
- Ministry of Regional Municipalities
- Ministry of Defence
- Royal Oman Police
- DGPM Diwan of Royal Court
- Ministry of Health
- Ministry of Education
- Ministry of Communication
- Ministry of Commerce and Industry
- Murya Tourism Development
- Federal Electricity and Water Authority
- Dubai Electricity and Water Authority
- Sharjah Water and Electricity Authority
- Abu Dhabi Water and Electricity Authority
- Qatar General Electricity and Water Corporation

