

# ***COMPANY GUIDE***



**SIEMENS**



# **HORIZON ELECTROTECHNICS (PVT) LTD.**

## INTRODUCTION :

**H**orizon Electrotechnics (Pvt) Ltd is a multidisciplinary specialist engineering company, built to cater the rising requirements in the field of Automation and Control systems engineering in both modern industry and the marine sector.

Since its establishment in the year of 2015, Horizon Electrotechnics has been among the pioneers in the front line, Delivering state of the art engineering solutions and services to a various caliber of clients in both domestic and international arena.

Moulded by the Passion, Practise and Professional knowledge, The Team-Horizon Electrotechnics is committed to deliver reliable solutions and services in the fields of Automation, Motion technology, Machinery control systems, Sales & Support and Industrial Training at an economical cost.

Horizon Marine Electrotechnics is a subsidiary of Horizon Electrotechnics (Pvt) Ltd, and is solely built to cater the Marine Electrical and Automation systems Engineering sector. Armed with a team of expert Marine Engineers and latest Field troubleshooting equipments, The company can attend to Troubleshoot, Modify or Install any kind of Marine electrical engineering product on ships sailing in international waters.

**Field repairs & troubleshooting.**

**Industrial Automation & control systems Engineering.**

**Drive repair centre.**

**Motion Technology.**

**Industrial training.**

**Sales & Marketing**

**Machinery control panels assembly**

**Marine Electrical & Automation**



# Services Offered by Horizon Electrotechnics :

## 1. Design and manufacture of Machinery control panels.

Our experts can handle the entire process, from designing to assemble and commissioning of control panels, to suit any kind of your complex machines on the factory floor.

**All our Control panels and Switchgear Panels strictly complies with IEC 61439-1/2:2011 and EN 60204-1 International safety standards.**

We also undertake Following Job scopes:

- Upgrading, Retro-fitting or even re-designing of entire control systems of used / obsolete machinery.
- Commissioning of Automated plants and machinery. This includes calibration or Fine tuning as well.
- Upgrading or Replacement of existing PLC's and Servo drives in machinery control systems in to latest Siemens PLC's.
- Manufacture of Low voltage switchgear and Automatic Change-Over (ATS) switches.



## 2. Programming and Upgrading the Programmable Logic Controllers (PLC) & Human Machine Interface (HMI) devices.

We proudly stand alongside the handful of Automation Engineers that are qualified and certified by Siemens, The world's leading Automation solutions provider from Germany. In order to deliver up-to-the-date products with quality, the technical staff at Horizon Electrotechnics undergo periodical career development programs at **Siemens-Strain**.

- Programming & Installation of new PLC's for industrial and Commercial applications.

*Siemens SIMATIC S7-1200 Series  
Siemens SIMATIC S7-1500 Series*

- Migrating from obsolete Siemens PLC's into Newly arrived Siemens PLC's. (Added benefits & Cos efficiency can be discussed by contacting our customer support line)

*From Siemens S7-200 - To Siemens S7-1200  
From Siemens S7-300 / S7- 400 - To Siemens S7-1500*

- Upgrading Or replacement of of 3rd Party PLC's in Control panels in to Siemens PLC's

- Programming & Installation of Siemens HMI Devices.

- PLC's and HMI's of any other brand can be supplied, Programmed and Installed at request (Subject to Availability and Compatibility of the products).



## 3. Motion technology solutions.

Horizon Electrotechnics offer a wide range of Products and Service solutions to address the growing demand in the field of Motion Technology.

With the aid of OEM softwares, Computer guided simulations, and measuring / calibration instruments from Fluke-USA), our experts deliver following services to Motion-controlled machinery in Packaging, Printing, F&B, Medical, and Textile industries.

- Designing, Configuring and installation of Siemens Motion controllers to newly built machines and Plants.

*Siemens SINAMICS Series.  
Siemens SIMOTION Series.*

- Upgrading or Replacement of obsolete 3rd party Motion controllers, Servo motors to Siemens Motion controllers. This also includes Any modifications done to Speed / Position feedback encoders, Planetary gear box, External drive controllers as well.

- Design, Installation and repair of motion controllers which uses Stepper motors and Indexers.

- Configuring and installation of Variable Frequency drives (VFD) and feedback systems.

- Designing, Configuring and installation of any 3rd party Motion controllers and Servo Motors is also available on request (Subject to Availability & Compatibility of Products).





## 4. Electro - Pneumatic and Electro - Hydraulic Applications.

- Designing and Installation of Electro-Pneumatic Automation systems for new built machines and plants.  
- (Trusted brands - Festo, Germany)
- Designing and Installation of Electro-Hydraulic Applications for new built machines and plants.  
- (Trusted brands - Parker, Germany)
- Modifications and Troubleshooting of complex Electro - Pneumatic or Electro - Hydraulic Circuits.
- Commissioning of Existing circuits using modern calibrators and simulation softwares.



## 5. Horizon Electrotechnics - Drive Repairs and Servicing centre

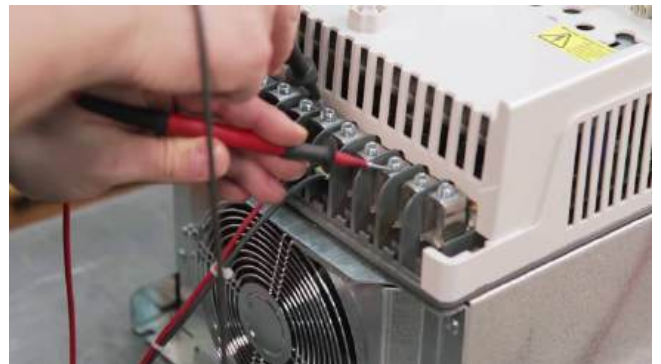


" Is your plant or valuable machinery at standstill due to a defective Motor drive ...? "

" Were you already approached or suggested to replace the entire drive at great expense ...? "

Now you have Horizon Electrotechnics by your side to help keeping your business up and running at all time. For the first time in Sri Lanka we proudly own and operate a full-fledged Drives repair centre to offer below services to all major brands in the present market.

- Repairing Variable Frequency Drives (VFD) of all major brands.
- Field Testing and Troubleshooting of VFD's.
- Commissioning and Configuring of new VFD's in machinery and plants.



## 6. Industrial Training programs.

Horizon Electrotechnics Conducts Product Oriented training programs (POTP) related to various Siemens products at various locations.

The target group includes, but not limited to Plant Engineers, Engineering Project Managers, Technicians, and enthusiasts whose job scope involves installation and / or maintenance of Siemens products.

Training programs are subject to availability of maximum number of participants. Participants can gain a detailed theoretical knowledge and also hands-on practice regarding the relevant Siemens products, which suits the modern Automation Engineering sector.

- Training course for programming of Siemens S7-1200 series PLC with TIA Portal.
- Training course for programming of Siemens S7-1500 Series PLC with TIA Portal.
- Training course for programming of SIMATIC Touch HMI devices using Siemens WinCC.
- In-situ training programs for various Siemens products and Electro-Pneumatic applications also can be arranged on prior request.

*Please contact our customer helpline to Know the Commencing dates, Venue and the Registration process.*



## 7. Horizon Marine Electrotechnics.

Established as a subsidiary of Horizon Electrotechnics (Pvt) Ltd, Horizon Marine Electrotechnics is purposely built to cater the Marine Electrical & Automation Engineering requirements on Commercial ships in International voyages.

A team of Professional Marine Engineers provide following Engineering Services for ships calling various domestic or international ports.

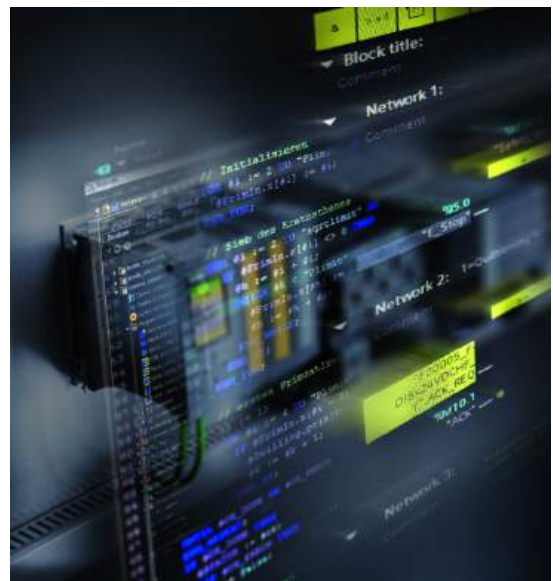
Ship owners, Technical managers and Vessel superintendents can directly approach us for further information.

Horizon marine Electrotechnics is also listed in the Ship Serv as a professional marine Electrical & Automation Engineering service provider.

- Designing and upgrading or retrofitting of existing Ship's automation systems using modern Siemens PLC's.
- Design and installation of automated Variable Speed Drives (VFD) systems for pumps and fans on ships for energy conservation.
- Repairs and upgrading Control and Alarms monitoring Systems (CAMS) in Engine rooms.
- Repairs, Retrofitting for following marine electrical equipments is also available ;
  - Marine boiler and Incinerator control panels.
  - Main Switch boards (MSB) and Emergency Switch boards (ESB) repairs.
  - Pump / Fan stater panels, Sequential starter circuits.
  - Marine compressor starters and automation systems.

## 8. Industrial IT, Communication and Software solutions.

- Set-up and installation of Industrial communication for Distributed Control systems (DCS) in plants. This service includes PROFINET, PROFIBUS, MODBUS TCP / RTU or serial communication protocols.
- Real time remote viewing and logging of precious process variables (Ex: Temperature, Pressure, Level) for reliable process control, Including Automatic SQL Data base entry.
- Tailor made software, IOT solutions and for Industrial and commercial purposes.



# SALES & MARKETING

## 1. DIN rail terminal accessories (Manufacturer : RS Pro, Weidmuller)

- End brackets and intermediate plates
- Jumper bars (Terminal jumper bars 10 way)
- Terminal Marker strips (1-50 numbers or blank)
- Shield connectors (for grounding the signal cable shields)



## 2. DIN rail terminal blocks (Manufacturer : RS Pro, Weidmuller)

- Feed-through terminals - Screw termination or spring cage termination
- Double level terminals
- Earthing terminals
- Miniature series terminals



## 3. DIN Rail mount interface modules (Manufacturer : RS pro Interface modules connect electronic devices to electrical systems at the control level. These modules perform signal transmission and distribution functions within the device and the system.

Types : D-SUB or IDC (09, 25, 37, AND 50 poles)

## 4. Wire terminals and splices (maker - RS Pro - 0.75 sqmm - 16 sqmm)

- Insulated crimp bootlace ferrules (German colour code)
- Non-Insulated crimp bootlace ferrules
- Twin entry bootlace ferrules.
- Self adjusting crimping plier / knipex, Germany / 0.5 sqmm to 16 sqmm



## 5. Power line passive filters (Manufacturer - RS Pro, Schaffner)

Chassis mount or DIN Rail mount 400HZ 250V AC/DC, 520/300V AC/DC, 3 X 520/300 VAC Single phase or three phase.

## 6. Isolated DC-DC Power converters. (Manufacturer - RS Pro, Traco Power, TDK-Lambda)

Chassis mount or DIN Rail mount  
Output - 5VDC / 12VDC / 24VDC / 48VDC

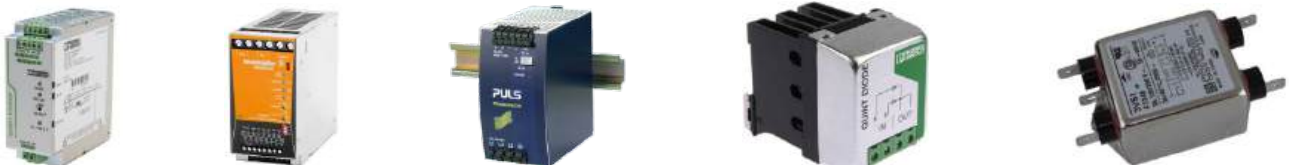
## 7. DIN rail mount Power supply units - Maker - RS pro, PULS, Mean Well

## 8. DC UPS Module (DIN rail mount) for control panels (Maker. -Weidmuller)

1.3 - 17AH / 10 or 20A

DIN Rail mount battery module for DC UPS - 2 X 12V Lead acid battery / 24VDC Output

## 9. Power supply unit redundancy module - Maker - Phoenix Contact





#### 10. Miniature Circuit Breakers (Maker - Schneider)

500mA / 1A / 2A / 3A / 4A / 5A  
Single pole or two pole / Type - C

#### 11. Opto-couplers or Opto-Isolators (Maker - RS Pro, ABB)

Forward Voltage - 5V, 12V, 24V or 230 - 240VAC  
Input Current - 6mA, 1A, 3A, 5A

#### 12. Monitoring Relays (Maker - RS Pro, Carlo Gavazzi, Phoenix Contact)

For monitoring parameters - Frequency, Liquid Level, Speed, Voltage and Thermistor protection relay for motor control circuits.

#### 13. Signal conditioning relays (Maker - RS Pro, Weidmuller, Phoenix Contact)

A signal conditioner is a device that converts one type of electronic signal into another type of signal. Its primary use is to convert a signal that may be difficult to read by conventional instrumentation into a more easily read format.

Input - Voltage(0-10V, +/-10V), Current(0-20mA, 4-20mA), frequency, Resistance, Temperature,  
Output - Voltage(0-10V, +/-10V), Current(0-20mA, 4-20mA), frequency

#### 14. Linear Actuators (Maker - RS Pro, festo, SKF)

Linear actuators create a straight line motion and have been designed to withstand a range of operating conditions.

Actuation type - Stepper drive, Lead screw, Electric, Belt driven  
DC motor driven Input Voltage - 12 to 24VDC  
Stroke - 10mm, 50mm, 100mm, 200mm, 300mm, 500mm, etc.

#### 15. Servo motors, Servo drives and accessories (Maker - Siemens, Schneider, Delta Electronics)

Siemens SINAMIC and SIMOTION series.  
Voltage - 200-240VAC Single phase or 380-480VAC three phase  
Gear boxes, Optical rotary encoders, cable harnesses, etc

#### 16. Fluid Control systems (Maker - Burkert, SMC)

- Mass flow controllers
- Flow transducers.
- Inline flow meters.
- Flow switches.
- Level sensors - Capacitance, Ultrasonic, Optical, Guided wave radar and Fork level switch.

#### 17. Industrial push. Buttons, Pilot lights, and Control stations. (Maker - Schneider, EATON)

We offer a wide selection of industrial push buttons, pilot lights and control stations. You will also find a variety of accessories including enclosures and contact blocks. Our comprehensive range includes top brands such as Schneider Electric, Siemens, ABB and Eaton.

- Contact blocks and light blocks
- Selector switch and key switch control units
- Key switch and control switch heads
- Pilot light complete units and pilot light heads
- Push button complete unit and push button heads
- Push button pendant stations
- Illuminated push buttons



## 18. Industrial switches

- Magnetic proximity reed switch
- non-Fused switched disconnectors With or without enclosure / 3 pole or 4 pole 4A to 63A
- Rotary cam switches - Various pole and throw configuration.

## 19. PLC, HMI and data acquisition solutions (Maker - Siemens)

- PLC CPU : SIMATIC S7-1200 and SIMATIC S7-1500 series
- PLC expansion modules and I/O modules.
- PLC Backplanes.
- SITOP power supply modules
- Communication modules.
- LOGIC modules - Siemens LOGO! 8
- Touch screen HMI.
- Siemens SIMATIC accessories, simulator modules and cable assemblies



## 20. Sensors and Transducers (Maker -Pepper + Fuchs)

- Capacitive Proximity sensors.
- Inductive Proximity sensors.
- Optical Rotary Encoders and encoder measuring wheels
- Linear transducers
- Load cells.
- Pressure sensors and Platinum resistance temperature sensors.
- Sensor reflectors
- Ultrasonic proximity sensors.
- Sensor accessories including cable assemblies.



## 21. Temperature and Process heating / cooling controllers (Makers - RS Pro, Jumo, Euro Therm)

- On / Off temperature controllers.
- PID temperature controllers.
- Temperature controller accessories, Sensors and Transmitters.

## 22. Cable Accessories Including Cable clips & retainers, Cable markers, and heat / cold shrink sleeves in assortment boxes (Can be ordered according to the sleeve colour, Shrink ratio and Diameter).

Cable Printers and spare cassette - Brother, Dymo

## 23. Enclosure accessories

- Axial cooling fans, Extractor fans, Filter modules, and protective grills.
- Electronic Enclosure heating / cooling controllers (Thermostats).
- Space heaters for enclosures.



## 24. Relays

We stock a large choice of relay products for a wide variety of applications. Within our range, you will find products such as latching and non-latching relays, solid state relays, interface relays and reed relays. All from trusted brands such as RS PRO, Omron, Finder

- General purpose relay and accessories (Non-latching relays)
- Interface relay and accessories including bus bar.
- Solid state relays.



## 25. Switches

We stock a variety of special purpose switches to suit machine controllers and safety functions.

- Detector switch
- Foot switch
- Joystick switch
- Rotary switch

## 26. Hand tools

Industrial tool kits essential for Engineers and Technicians, whose job scope involves Repair or Maintenance of control gear and switchgear panels.

Tested to 10,000V As per IEC 60900 and VDE safety standards. (Working voltage is 1000V Max).

Knipex, Wera - Made in Germany.

Portable flashlights and Head lamps from Maglite - USA and Petzl - France

Personal Protective Equipment (PPE) and Workwear

Ear defenders, Safety glasses, Hyflex Work gloves,



## 27. Electrical Testing and Measuring Instruments. - Brand - Fluke, Chauvin Arnoux - France

Horizon Electrotechnics offer an expansive range of test and measuring instruments used in electrical and electronic work. We also stock a variety of test lead and accessories as well.

- Digital handheld multimeters.
- Digital clip-on current meters.
- Portable calibrators and signal simulators (0-10VDC, 0-20mA, 4-20mA, Frequency, PT-100, Thermocouple)
- Digital storage oscilloscopes - bench or Handheld models are available.
- Optical tachometers.
- Insulation resistance meters (Megger testers)



**For further information and to learn about our complete range of  
Products and Services please visit ;**

[www.Horizonelectrotechnics.com](http://www.Horizonelectrotechnics.com)

Or

Contact the customer helpline;

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**Automation for Marine & Industry**