

TURNKEY



Mission Statement

TURNKEY Technologies Limited (hereinafter called “**TURNKEY**”) works as a multi-sector professional services provider with assets of knowledge, experience and solutions. We are committed to integrating green and sustainability principles into all aspects of our projects.

TURNKEY aims to achieve the satisfaction of client requirements in the execution of each service provided and aims to instill a culture of continual improvement and turnkey solutions to benefit our clients.



Who We Are

TURNKEY is a professional Data Centre Infrastructure Services Provider based in Hong Kong, and is able to offer the optimum turnkey solutions on all challenging projects.

Our diverse skills and services have been applied to both standard and tailored products. We can ensure the quality, value, innovation, management and excellence of service to all our clients from institutes, SMEs, multi-national corporations and public listed corporations in Hong Kong and Macau. We can provide a range of services from System Integrators all the way to major IT infrastructure service projects.

Professional
On-site support
1x24
On-site support
commitment
services
Data centre
Cabling
Helpful
Customer-oriented
Server Room
System Integrator
Cost-effective

Who We Are

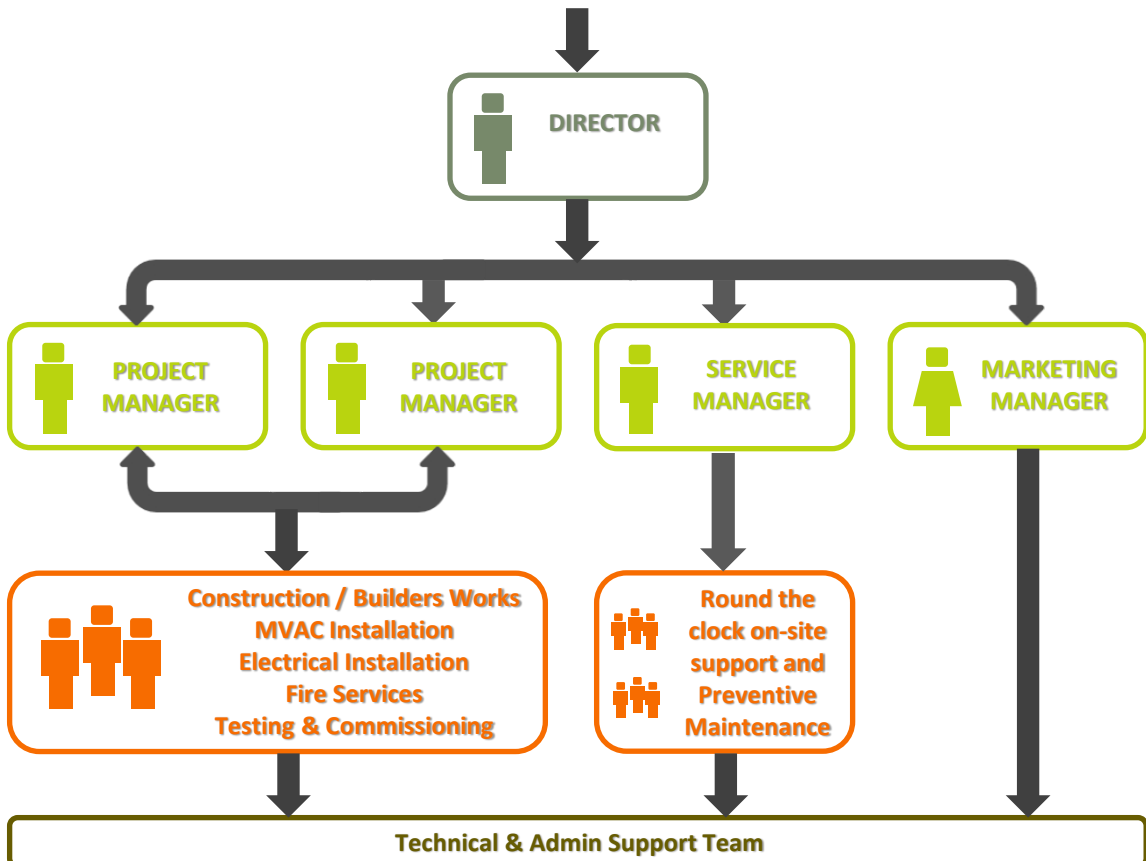
Our Team

TURNKEY's Specialist Team is experienced and accustomed to servicing our client's high standards. The team members have many assets, including:

- Proven integrated Infrastructure design and management expertise and experience, having successfully completed numerous projects of similar scale and complexity.
- Strength in providing creative and unique designs specializing in Data Centre projects.
- The ability to provide fully personalized service.
- Full authority and capability to make decisions to direct and drive the project.



OUR VALUED CLIENTS



What We Do

TURNKEY strives to provide comprehensive consultancy services and turnkey solutions for Mission Critical Facilities:



Our Differentiation

TURNKEY is able to provide best quality & extensive services to our clients. Below are selected areas of our differentiation:

TURNKEY's strength not only to have strong track record in the design and build projects, but also including

- 🔑 Availability of extensive specialist expertise and knowledge in-house.
- 🔑 Work collaboration with Architects, Authorized Person, Registered Structural Engineers and Designers.

TURNKEY offers an alternative, fresh and unique design approach including

- 🔑 Creative and specialized planning solutions that work.
- 🔑 Unique design options that excite and entertain your guests.
- 🔑 Individual design solutions that are specific to your project.

TURNKEY will reduce the project expenditure

- 🔑 Will cost evaluate all specified materials.
- 🔑 Will incorporate cost effective solutions wherever feasible.
- 🔑 Introduce flexible planning concepts to reduce costs.

TURNKEY provides a personal service

- 🔑 A dedicated "Project Manager" actively involved from commencement to completion
- 🔑 Will design and work for the client – not ourselves.
- 🔑 Team members "on call" during project.
- 🔑 A compact expert team with extensive resources.
- 🔑 Have gained extensive repeat clients.



Our Strength

TURNKEY acquires specialized equipment and strikes to provide comprehensive professional services to satisfy our Client's needs:

Dummy Load Test Services

🔧 To provide TPN 18kw rack mount type dummy loader for T&C services.

Thermal Scanning Services

🔧 To provide professional engineers, tools and FLUKE® thermal imaging services on all server room E&M facilities including a thermal imaging report and thermal images.

Professional Power Quality Measurement & Logging Services

🔧 To provide an advanced power analyzing service by using a Power Analyzer: FLUKE® 435-II Series, which is the ideal portable power quality instrument providing advanced power quality functionality and energy analysis capabilities.

Battery Bank Health Checking Services

🔧 To provide a Professional Battery Bank Analyzer: FLUKE® BT521 Series, which is an ideal test tool for maintenance, troubleshooting and performance testing of individual stationary batteries and battery banks used in critical battery back-up applications.

Cable Testing and Certification Services

🔧 To provide an accurate and error-free certification by using The FLUKE® - DSX 5000 Cable Analyzer to enables testing and certification of twisted pair cabling and fiber. Making jobs easier to manage, and getting to system acceptance faster.

EV Charger Testing Services

🔧 To perform different tests for EV charging facility, incorporate with multi-meter like Fluke 1664 FC Multifunction Tester.



Our Collaboration

TURNKEY – through collaboration with architect, interior design specialists, authorized person, RSE and manufacturers we aim to offer the optimum turnkey solutions on all challenging projects. Shown below are our collaborations:



How We Work With Our Client

With our blend of experience and expertise, **TURNKEY** adopts a holistic approach to project development, using our complete spectrum of skills that cover all stages of the development cycle – all the way from preparing the business case and advising on related issues to devising and implementing the solution as well as providing ongoing support.

Most importantly, we are strongly supported by our honorable and strong **Business Partners:**



A brand of  **legrand**



Our Signature Clients (Hong Kong):



Our Signature Clients (Hong Kong):



Our Signature Clients (Hong Kong):

CENTRE FOR
NOVOSTICS



控緯集團



Northern Trust



ROPES & GRAY



TRIMCO GROUP
CLOTEX A-TEX LABELON



Our Signature Clients (Macau Government Departments):



教育暨青年局
Direcção dos Serviços de
Educação e Juventude



澳門特別行政區政府
社會工作局
GOVERNO DA RAEM
INSTITUTO DE ACÇÃO SOCIAL



文化局
Instituto Cultural

何東圖書館
Biblioteca Sir Robert Ho Tung



澳門特別行政區政府衛生局

Serviços de Saúde do Governo da Região Administrativa Especial de Macau



旅遊危機處理辦公室
Gabinete de Gestão de Crises do Turismo
Tourism Crisis Management Office



澳門特別行政區政府
Governo da Região Administrativa Especial de Macau
文化產業基金
Fundo das Indústrias Culturais



澳門貿易投資促進局
Instituto de Promoção do Comércio e do Investimento de Macau
Macao Trade and Investment Promotion Institute



個人資料保護辦公室
Gabinete para a Protecção de Dados Pessoais
Office for Personal Data Protection



澳門特別行政區政府勞工事務局
Governo da Região Administrativa Especial de Macau
Direcção dos Serviços para os Assuntos Laborais



澳門特別行政區政府體育局
Instituto do Desporto do Governo da RAEM



澳門特別行政區政府
Governo da Região Administrativa Especial de Macau
建設發展辦公室
Gabinete para o Desenvolvimento de Infra-estruturas



民政總署
Instituto para os
Assuntos Cívicos
e Municipais



廉政公署
C C A C



警察總局
SERVIÇOS DE POLÍCIA UNITÁRIOS



澳門特別行政區政府
Governo da RAEM
身份證明局
Direcção dos Serviços de Identificação

Our Signature Clients (Macau):



澳門理工學院
Instituto Politécnico de Macau
Macao Polytechnic Institute



澳門大學
UNIVERSIDADE DE MACAU
UNIVERSITY OF MACAU



聖若瑟大學
UNIVERSIDADE
DE SÃO JOSÉ



科學技術發展基金
F I D I C I T



GALAXY™
MACAU
澳門銀河



广发银行 | CGB



澳門博彩控股有限公司
SJM HOLDINGS LIMITED



澳門彩票有限公司
macau-slot.com



CITY OF 新濠
DREAMS 天地
MACAU



THE
LONDONER™
— 澳門倫敦人 —




THE
PARISIAN™
MACAO



THE
VENETIAN™
MACAO








Our Products

 **VERTIV™** is a leading data centre infrastructure players in the industry to provide global manufacturing and mission critical facilities.

Vertiv's Liebert® ITA2™ UPS Systems:

The Liebert® ITA2™ is a fully-digital, highly reliable, double-conversion UPS solution that delivers clean and consistent power. This highly efficient solution is ideal for various deployments, whether it's IT racks, network closets, automation control systems, and precision instruments to small-sized control rooms among other edge applications.

Key Features

-  Robust structure with cutting-edge channelized airflow design
-  Wide input voltage range, making it immune to grid interference
-  Programmable output outlets/terminals with cascade protection to protect key devices during heavy load
-  Integrated Ethernet port with HTTP protocol compatibility & streamlined remote monitoring
-  Easy to install, repair, and maintain
-  Compliance with seismic conduction & vehicle carrying test
-  Gravity sense LCD Display

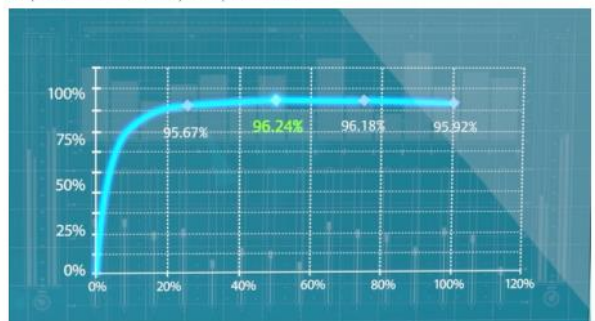


5-10 kVA

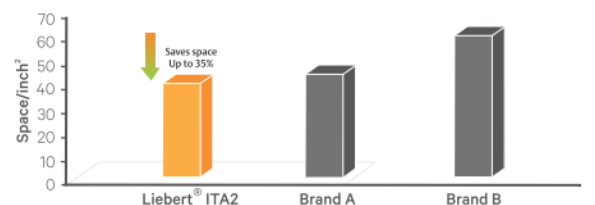
16-20 kVA

The Most Efficient UPS


Liebert® ITA2™ offers best-in-class efficiency of up to 96.3% over a wide range of load conditions, resulting in significant OPEX cost savings. ITA2™'s integrated Smart Sleep technology in ECO mode provides a superlative efficiency of up to 99%.



The Most Compact UPS



Our Products

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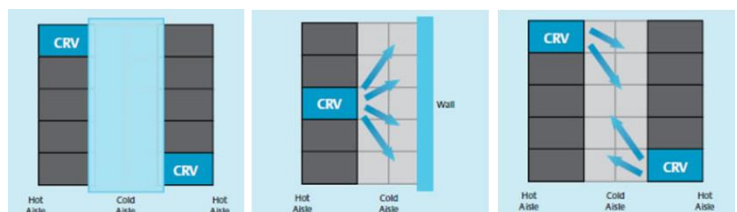
Vertiv's Liebert® CRV Row-Based Cooling Unit:

Key Features


- 🔧 Rack-sized Liebert® CRV provides high capacity cooling in a small footprint
- 🔧 Available in 20 and 40kW air cooled and water cooled systems, and 30, 33, 60 and 65kW chilled water cooled systems
- 🔧 50Hz models
- 🔧 Horizontal airflow, suitable for raised or non-raised floors
- 🔧 Features with the Global HMI Intelligent Controller to Monitor up to 10 racks with 20 sensors (precisely controls air temperature, humidity and filtration in the surrounding racks)
- 🔧 Adjustable airflow baffles on 24 in. (600mm) wide model maximize cooling to rack equipment, allowing the system to be positioned within the row or at the end of the row



Global HMI Intelligent Controller



Our Products

 **VERTIV™** is a leading data centre infrastructure players in the industry to provide global manufacturing and mission critical facilities.


Vertiv™ PEX CRAC Systems:

Key Features

-  Global HMI Intelligent Controller
-  Scroll Technology
-  Electronic Expansion Valve
-  Liebert® EC Fan
-  Energy Efficiency
-  Ease of Maintenance



Our Products

 **VERTIV™** is a leading data centre infrastructure players in the industry to provide global manufacturing and mission critical facilities.

Vertiv™ Liebert® APM2 Modular UPS Solution:

Key Performance Characteristics

- 🔧 Scalable, Flexible
- 🔧 Hot-plug modular design improves availability
- 🔧 Integral Intelligent power distribution and monitoring (Including Branch Circuit Monitoring)
- 🔧 96% high efficiency
- 🔧 The highest power density UPS
- 🔧 Easy Configurable, Dual-bus system
- 🔧 Unity Input and output Power factor UPS
- 🔧 Outstanding Input characteristics
- 🔧 Excellent Overload capacity
- 🔧 Advanced network management

**APM2 600kVA
No Switch 60-
600 kVA
(Top cable entry)**

**APM2 600kVA
Full switch
60-600 kVA**



Our Products

APC® a flagship brand of Schneider Electric, provides clean, uninterruptible backup power and IT physical infrastructure.

APC® NetShelter Rack Automatic Transfer Switch:

Key Features

- 🔧 Minimized downtime disruption with Field-replaceable NMC
- 🔧 Monitor temperature and humidity efficiently
- 🔧 Dual power cords to enhance uptime for critical loads
- 🔧 Connect and manage up to 32 Rack ATs from one IP address
- 🔧 Seamless switching with transfer time 10ms



AP4423A



AP4424A

Our Products

COWIN is one of the earliest manufacturers in China to engage in this DCIM service. It provides computer room monitoring solutions in various modes, such as embedded, local and remote monitoring, and networked monitoring management.

COWIN (DCIM Solutions) provides industry companies with critical facility monitoring software that is affordable and easy to use. This solution delivers superior monitoring, alerting, trending and data organization capabilities for companies in such verticals as healthcare, financial services, government and more, helping them protect and grow their business. Customers get monitoring, alerting and trending at a price that's right for their business.

Key Benefits:

- 🔧 Increase your business flexibility – Vendor neutral SNMP device management at no additional cost to run your business the way you need.
- 🔧 Gain an affordable solution – COWIN DCIM is a budget-friendly solution, making it easy for SMBs and enterprises to deploy systems.
- 🔧 Benefit from fast and easy configuration – Manage your own system configuration and changes, eliminating the need for support touchpoints (optional service packages are available).
- 🔧 Customize your data – Set your own views with our modern user interface to focus on the data you need most for your job.
- 🔧 Connect all operations – Use our API to connect to remote DCIM and building management systems (BMS) for a more complete picture of your operations.



COWIN DCIM Boards

Our Products



is the leading provider of airflow management solutions in America with over 40 years experience in the industry.

TURNKEY is proud to introduce the ***Airflow Management Systems.***

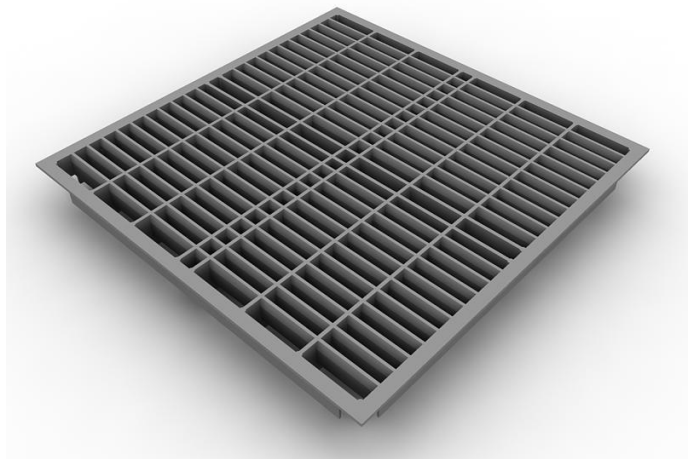
Data Clean® - Directional High Output Airflow Panel:

The DC-68-D is a 70 degree directional tile that will put the cold air directly into your server cabinet. A directional tile reduce air loss and the DC-68-D directional tile and it is a full 68% open area tile to maximize the amount of air to cool those high density servers.

The DC-68-D is also available with a sliding damper to adjust the volume of air required for your particular application and equipment load.

Tile Specifications:

Dimensions: 600 x 600 x 55mm
Weight: 8.8 kg
Materials: Cast Aluminum
Open Area: 68%
Available with sliding damper



DC 68 Directional High Airflow Panel

Our Products



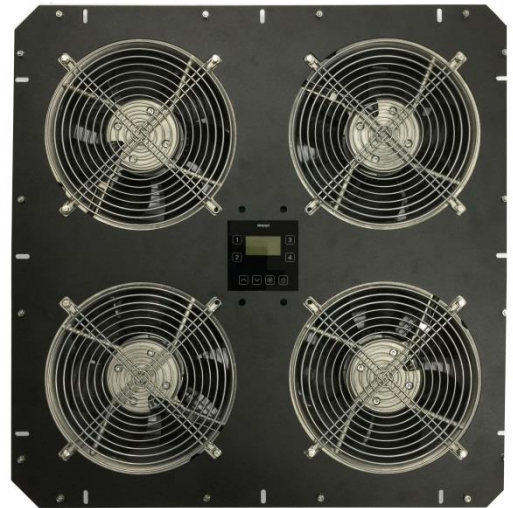
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TURNKEY is proud to introduce the ***Airflow Management Systems.***

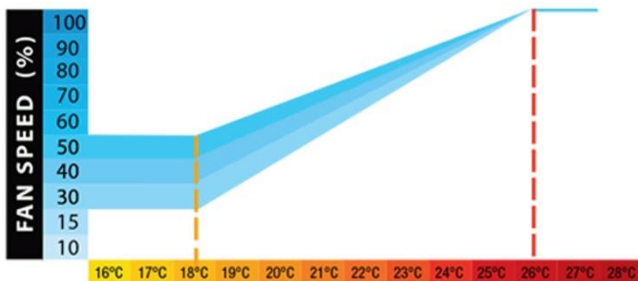
Data Clean® - Air Boost:

The New Airboost EC controller manufactured by EBM was designed specifically to control and monitor up to 4 EC-Fans and is equipped with 1.8" Mono LCD and Touch Sense Technology. Set minimum or idle fan speed from 15% to 100%, depending on desired airflow. They come with both manual control and remote temperature controlled features and can regulate the fan speed according to temperature signals received from up to 3 remote temperature sensors. The Airboost EC allows BMS connection to provide low and high temperature alarm information and have been used to cool upwards of 15kW server loads.



Air Boost Panel

Airboost EC Temperature Controlled:



The remote temperature control will automatically adjust the fan speed, based on temperature changes. The Airboost EC controller by EBM was designed specifically to control and monitor up to 4 EC-Fans and is equipped with 1.8" Mono LCD and Touch Sense Technology. Set minimum or idle fan speed from 15% to 100%, depending on desired airflow.

Temperature sensor behavior (shown below)
*Complete: 100% at 26C, 60% at 22C,
ON at 18C, OFF at 16C

**The graph shows the relationship of fan speed to temperature*

Our Products



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TURNKEY is proud to introduce the ***Airflow Management Systems.***

Data Clean® - Sliding Door:

The ideal solution for both cold and hot aisle containment designs. Combining cost effectiveness with ease of installation, the no threshold design eliminates tripping hazards. Frame components arrive pre-assembled and easily connect to the header rail which secures the assembly together. Integrated slide-locks simplify door installation onto the frame.

The Sliding Doors reduces data center operating costs by improving thermal efficiency and reducing IT equipment intake temperatures, which enhances both equipment life and reliability.



DC Modular Aluminium Sliding Door

Our Products



is the leading provider of airflow management solutions in America with over 40 years experience in the industry.

TURNKEY is proud to introduce the ***Airflow Management Systems.***

HotLok™ Blanking Panel

Key Characteristics

- 🔧 Snap-spring design offers durable, 99.97+% effective seal
- 🔧 Tool-free, snap-in installation and easy-pull removal for any EIA-310-E standard openings using ergonomically designed finger grips
- 🔧 Cantilevered sealing vanes eliminate the gap between adjoining Blanking Panels or with installed equipment
- 🔧 1U Panels stack 10 high and 2U Panels stack 20 high for easy storage and ready availability
- 🔧 Upsite Temperature Strip colored-coded temperature ranges indicates potential hotspots by color based on ASHRAE Standard



Full Rack Modular Blanking Panels

- 🔧 Flexibility - Multiple U sizes (1U and 2U blanking panels; 3U, 9U and 12U blanking sheets)
- 🔧 Engineered mechanical clip design allows for a quick and simple installation
- 🔧 Can be re-used and re-configured as necessary
- 🔧 Utilizes ABS sheets that do not sag or require attachment to the rails (used for larger blanking areas)

Our Products



serverLIFT® established in 2002, is the premier IT equipment handling solutions provider, with a strong focus on a safe and efficient way to handle servers and other IT equipment in the data center.

ServerLIFT® Heavy-Duty Electric SL-500Xi Server Lifter (500 lb. Capacity) & SL-1000Xi Server Lifter (1000 lb. Capacity):

Unique Features

- 🔧 Built-in Easy Glide Shelf
 - Adds 6"(150mm) of lateral movement into rack
 - Fits into standard 19" racks
 - Heavy-duty platform resists sagging and twisting with a 500lb. Load
- 🔧 Compact Design
 - Slim 24"(600mm) wide base easily navigates narrow aisles
 - Fit through standard size doorways (under 6'(1.83m) tall)
 - Ideal for cold aisle containment
- 🔧 Smart Controls
 - Precise height adjustment with proprietary micro-processor controlled lifting system
 - Dual side controls allow a single operation to align equipment while facing the rack



SL500Xi



SL1000Xi

Our Products




Early Leak System Apparatus is to protect key installations and assets from intrinsic or extrinsic damages caused by a liquid (oil included) leak.

ELSA is a manufacturer specialized in early warning leak detection system for both Conductive Liquids and Non-Conductive Hydrocarbon Liquids, focusing on research and innovation with advanced features including: **Fail-Safe Loop Back, Anti-False Alarm and Monitor Leakage Level Remotely**

Features:

The Flagship Digi-Flex :

 The Digi-Flex series upgrades from the [standard series](#), offering fully **customisable** capabilities that build efficient, real-time-monitoring liquid leak detection systems. This series also includes [oil-specific](#) products like **reusable** hydrocarbon sensing cables; zero-false-alarm, ultra-sensitive mini sensor modules; and thin-film (~0.1mm) oil-on-water detection modules etc. All systems boast a **Fail-Safe Loop-Back** feature, allowing continued detection even in the event of any cable break. But that's hardly all.



ELSA Digi-Flex
3L-DF/TP 12' Touch Screen Panel



ELSA Digi-Flex Control Panel
3L-DF/SP



ELSA Digi-Flex Control Panel
3L-DF/SDP



ELSA Digi-Flex Sensor Module
3L-DF/SM50

Our Products



Early Leak System Apparatus is to protect key installations and assets from intrinsic or extrinsic damages caused by a liquid (oil included) leak.

ELSA 3L-LS Sensing Cable

- 🔧 The 3L-LS is a distance-type sensing cable used to detect water, slightly corrosive and conductive liquids.



ELSA Sensing Cable: 3L-LS

Characteristics & Performance:

- 🔧 Application: Water and slightly corrosive conductive liquids
- 🔧 Diameter size: 6.3mm average
- 🔧 Continuity wires: Spirally-winded White & Red insulated with flame-retardant polymer
- 🔧 Central core: Insulated AWG18 stranded copper wire for greater pulling resistance
- 🔧 Sensing wires: Spirally-winded 2 x Black wires, semi-conductive polymer
- 🔧 Carrier: Flame-retardant polymer material with greenish color in high visibility
- 🔧 Fire resistance: Non-flame propagating and self-extinguishing

3L-LS Sensing Cable Length:

- 🔧 Available in standard length of 1m, 3m, 7m and 15m (cut-to length is available upon request) 3L-LS SENSING CABLE CONNECTIONS/JOINTS:

3L-LS Sensing Cable Length:

- 🔧 M12 (14.5mm diameter) Male/female connector (i.e. all connections/joints is modular)
- 🔧 Hot-Shrink-Tube approach is available upon request or as per requirement (i.e. all connections/joints is fix)

Our Products

SENSAPHONE® has designed and built its full line of innovative remote environmental monitoring systems and early detection products since 1985 in Aston, Pennsylvania that quickly and effectively provide alerts to problems at your facilities.

Sensaphone Stratus EMS Monitoring System:

Sensaphone's cloud-based Stratus EMS allows you to monitor data center facilities and environments with the same degree of certainty you've come to expect from Sensaphone. Users can check critical conditions of their climate and equipment-sensitive commodities at any time.

The Stratus EMS monitors, delivers alarms, and data logs 64 input/output points from Modbus inputs in addition to 12 universal digital or analog inputs. It supports Modbus RTU/485 and Modbus TCP which make it capable of reading data from many IDF, PDU, UPS and Building Automation Systems. It takes the burden out of managing your system by giving you access to your readings from anywhere using a simple, powerful web-based interface. If there's a disruption, you'll be the first to know. Alerts can be sent straight to your mobile device—keeping you updated and giving you peace-of-mind wherever you are so you can remain focused on business as usual.

The Stratus EMS is available with an optional rack-mounted LCD that displays data onsite.



Our Products

SENSAPHONE® has designed and built its full line of innovative remote environmental monitoring systems and early detection products since 1985 in Aston, Pennsylvania that quickly and effectively provide alerts to problems at your facilities.

Features:

- 🔧 A supervised internet connection assures the Stratus EMS is online and monitoring at all times
- 🔧 Store your sensor readings in “the cloud” to automatically protect against data loss and provide limitless information storage
- 🔧 Notifies an unlimited number of people by e-mail, text message or voice phone calls in the event of an alarm
- 🔧 Poll Modbus registers from other equipment via RS485 and TCP/IP
- 🔧 12 powered universal digital or analog inputs monitor temperature, humidity, water and more
- 🔧 Temperature sensing range of -109° to 168 °F | -85° to 76 °C
- 🔧 Manage multiple units, make programming changes and access status conditions using a simple, powerful web-based interface
- 🔧 Fits in a 1U rack space
- 🔧 Up to 30 hours of extended battery backup life
- 🔧 2 relay outputs for manual or automatic switching
- 🔧 API Data Interchange Formats: JSON, HTTPS, POST, REST web services, cURL
- 🔧 Ability to use Sensaphone WEB600 and WSG30 as expansion modules



Contact Us

We welcome your participation to help us grow. For any queries or suggestions on our Services and Products of **TURNKEY**, please contact us:

HONG KONG OFFICE

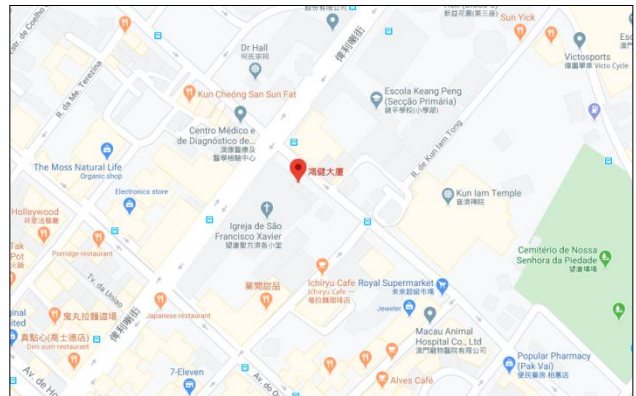
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