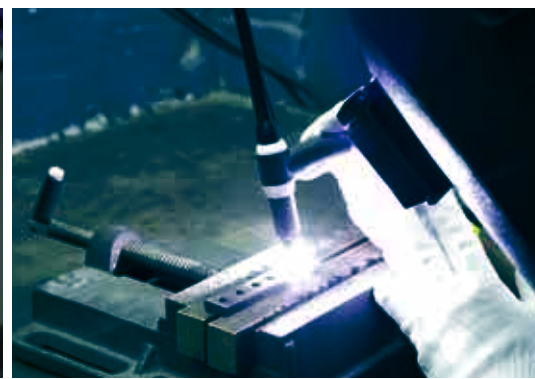
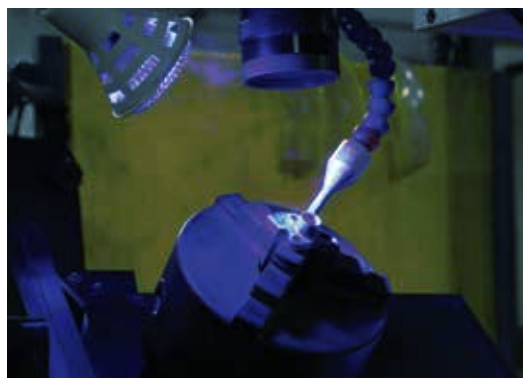


30 YEARS OF
EXCELLENCE



MALTEC

**THERMAL & TEMPERATURE CONTROLS
DESIGN & ENGINEERED SOLUTIONS**




Dpstar Group



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Identity

WHO WE ARE

With 30 years of experience and under our trademark brand Maltec-H, we are proud to be the only manufacturer to have been accredited with the prestigious UL certificate in Malaysia, along with other certifications such as ISO 9001, CE, UKAS, and Standards. Our trademark brand Maltec-T is the only thermocouple that is CE certified in Malaysia. We are an industry leader in temperature sensor manufacturing for thermocouples, pt 100 sensors, and all other types of customized temperature sensors. Lastly, through our brand Maltec-F we manufacture and fabricate float switches for level sensing.

Customers prefer us because we are able to customise, design, and manufacture. Further, our calibration lab allows us to develop the most accurate and reliable temperature sensors in the market for temperature related applications. Machine makers, equipment fabricators, and HVAC companies engage us for OEM manufacturing because of our cost competitiveness, our cutting edge technology, and our fast production capabilities.

We are able to make drawings through AutoCAD and so on to demonstrate to machine makers and end users alike the specifications, information, and designs of our products before it gets delivered. This is because we believe in providing only the best solutions that customers actually desire, because at Dpstar we believe that product quality is critical and we must deliver customer satisfaction that is unparalleled.

About Dpstar

>30

Years
Experience

>15

Sales & Associate
Companies in
Southeast Asia

>170

Dedicated
Employees

>30

Years Continuous
Sales Growth



WHY DPSTAR

30+ Years Experience

ISO 9001 Certified, UKAS, CE, UL

Custom Solutions

Satisfaction Guaranteed

Prompt Delivery

Competitive Prices



Exceptional Quality

Dpstar guarantees our products quality to be one of the best in the industry. We strive to offer the highest quality products in the market and to work with customers to ensure complete satisfaction. Our mission is to consistently satisfy our customers' needs through high quality products and coupled with an excellent service. Our Research and Development department has expanded our range of possibilities by developing innovative solutions and our heater & thermocouple products.

Services & Test Facilities

- Welding robot
- Manufacturing record book
- Quality inspection plan
- Visual inspection
- Dimensional check
- WPS and PQR for welded Thermowells
- Batch certificate
- Certificate of origin
- Certificate of conformance
- Functional performance test
- Loop resistant test
- Insulation resistance test
- Dye penetration test
- Pressure test
- Calibration test
- From $-200\text{ }^{\circ}\text{C}$ up to $1.500\text{ }^{\circ}\text{C}$ (RvA/ILAC)
- Calibration test for each instrument, mV, mA, Ohms and V (RvA/ILAC)
- Vacuum test
- Helium leak test
- PMI test

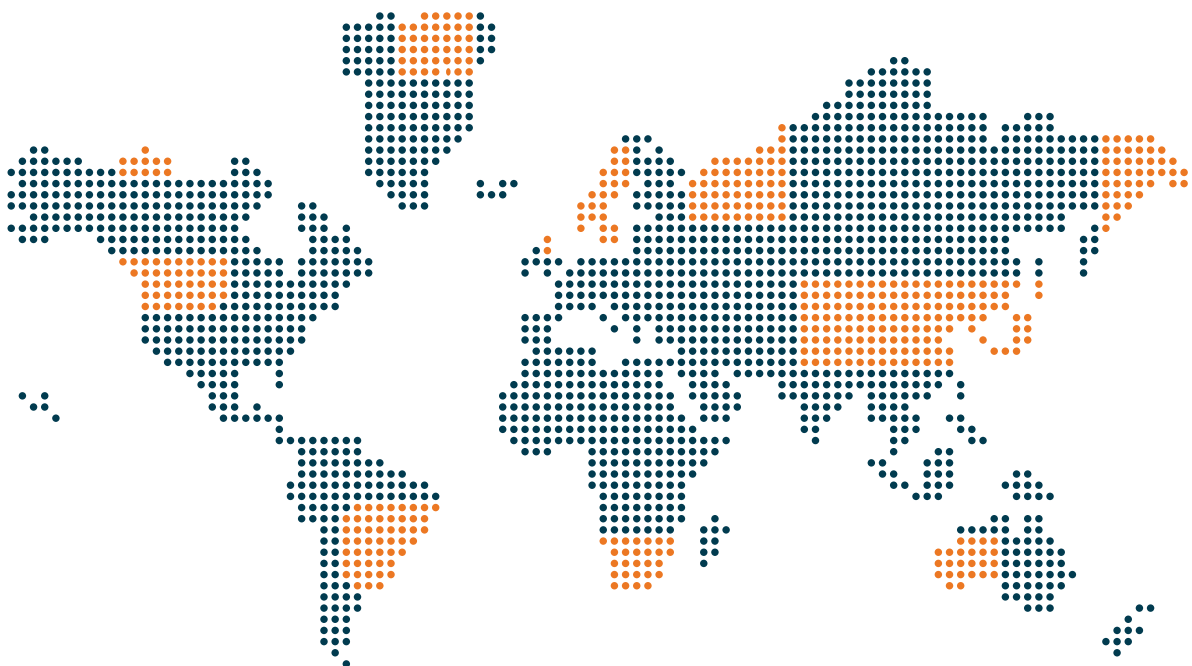
Satisfaction Guaranteed

Customer satisfaction is our first priority. Dpstar understands the value of service and the needs of customers. Dpstar has a dedicated team to provide quotes within an hour, manufacture custom made designs in a day and delivery uncompromised quality goods to industries such as distributors of heating products, food processing industries, plastic injection molding, and any other small or large organization requiring exceptional service.

Proud to say that, our heaters and thermocouples have traveled quite a distance from our humble beginning – Malaysia. Whether you are from Middle East, Europe, Singapore, Thailand, Indonesia, Philippines or further, we are able to deliver your order to your doorstep.

Don't wait for your goods to arrive in weeks! We can accommodate your schedule. If your machine is down, do call us. Our production facility allows us to make custom made heaters in a day! This is the most effective way to reduce manufacturing machine downtime to help organizations minimize the risk of lost production time. Our dedicated team not just helps you in resolving the problem but also guides you through the best of the solutions.

**“Customer satisfaction
has always been our first priority ”**





Capabilities

Dpstar Capabilities

At Dpstar, we are able to assist you in achieving your business target. We simplify your operations by developing state-of-the-art automation solutions, custom-made according to your specific requirements. Setup in early 90's, Dpstar has played a major role as a renowned provider of Factory, Building and Process Automation Solutions for a wide range of applications and industries. We have proven and enviable track record of timely high-technological precision in supplying electronics and electrical engineering equipment for numerous projects around Malaysia. Dpstar is a responsive organization with an emphasis on dynamic innovation. From its catalogue of standard products to products that we custom made according to customer's specification, Dpstar pledged quality and excellent in all our products and services, and provide designs that are able to negate any process complications.

Through continuous investment in research and development, our engineering team is able to develop a pattern of constant innovation, in-line with our commitment towards achieving the finest. More than 150 employees currently work in Dpstar, in one production centre and ten sales offices through out Peninsular Malaysia. Our strength lies in our abilities and dare to innovate ahead of our time. From presale to implementation and beyond, Dpstar is committed in providing excellent services and solutions. Our automation solutions are constantly being improved, simplified and getting more powerful by the day. As a result, efficiency constantly increases and this spells benefits for organizations, system and factories everywhere.

Design Expertise

Dpstar design teams support our partners from conceptual design and feasibility study throughout the life cycle of the equipment. Our design capabilities include:

- Process Heater Design
- Thermal Design
- Electrical Design
- Electronic Design (Hardware And Software)
- Mechanical Design
- Temperature Control Design
- Hazardous Area Certification



Engineering & Manufacturing

In being a leader in providing total solutions for industrial, building and process automation, Dpstar Group also have its own production centre, Dpstar Manufacturing Sdn. Bhd. Maltec-H and Maltec-T are our house brands for heaters and thermocouples that our factory manufacture to suit exacting automation needs. In preparation for a forecasted increase in the automation market, we have increased our intensive product development investment to ensure constant ground breaking initiatives. Our future activities will be fueled by our commitment to “Cutting Edge Technology” as we move into the future, we proceed in line with the advances in resources and technologies.

In House Capabilities

- Testing
- X-Ray
- Insulation resistance
- High voltage dielectric
- Harmonic test
- Waveform test
- Load test (power controls)
- Functional

Complete Supply

- In house manufacturing
- Technical design support
- Dedicated project teams
- After sales support services
- On site commissioning and start up assistance

Industries Served

- Agriculture
- Automotive
- Chemicals/Petrochemicals
- Electronic & Semiconductor
- Food & Beverage
- Furnaces and Incinerators
- Glass Manufacturing
- HVAC
- Ovens and Kilns
- Packaging & Printing
- Petrochemical, Oil and Gas
- Pharmaceuticals
- Plastics & Rubber Industry
- Power Generation
- Pulp/Paper/Wood
- Textiles
- Waste & Wastewater



“ Dpstar is The Proven Partner To Meet Your Expectations. ”



Production



Electric Heating Elements

Customized design for general, industry and OEM

**With Over 100,000,000 Custom Heater Element Designs
There Is A Good Chance That We've Made Something
Similar To The Heating Solution You Seek.**

Dpstar offers the very best in the design and engineering of custom heating elements. Our capabilities are ideally suited to meet your requirements and we are committed to keeping up with the constant changes occurring in manufacturing and product design.

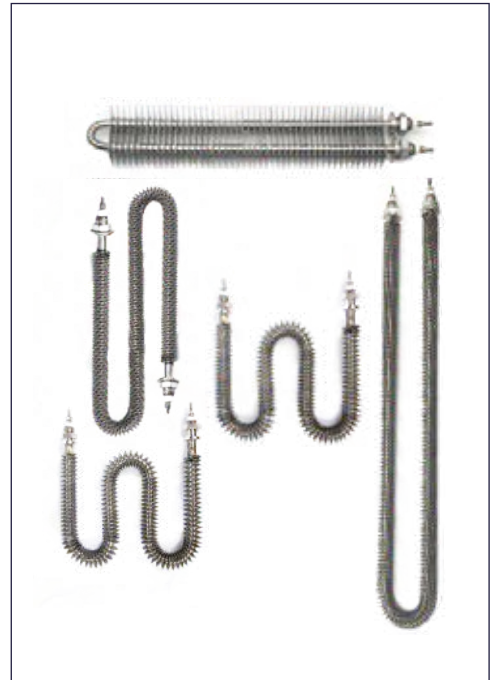
Tubular heater is highly adaptable to most applications where electrical heating is required. They can be used in their straight form or bent into various shapes. Tubular heaters are typically made using stainless steel, Incoloy, Inconel or titanium alloys. These heating elements have a strong outer sheath to help protect the process heater from physical stress and uses high quality alloys to allow efficient heat transfer from resistance coil to your heating medium.



Electric Heating Elements

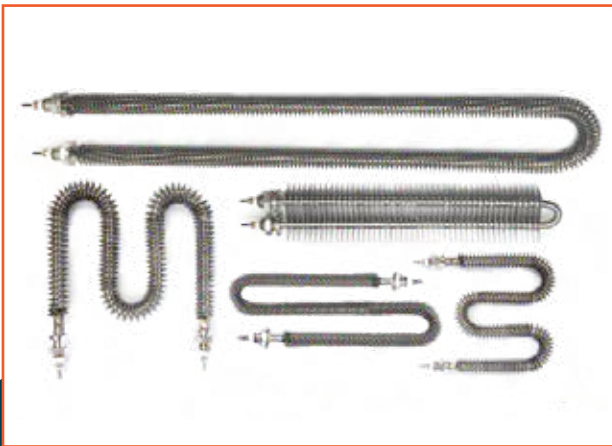
Finned Heater

Finned heaters are constructed using Dpstar's robust tubular element as the basis of construction. Finned heaters are an electric heating element that maximizes heat intensity and transfer effectively in an area that can be easily controlled by using a heating control panel, mechanical thermostat or cost effective bi-metal thermostats that can be installed on the surface of the heater. Finned heaters are used for process air heating applications. The fins improve heat transfer in free or forced air heating applications.



Ducting Finned Heater

Ducting Finned Heater are designed for outdoor use or in harsher environments. Ducting Finned Heater construction and sheet metal terminal housing with predrilled flange mount. These can help to reduce watt density and ensure a consistent flow of air within the duct. These Heater are primarily used in air flowing ventilation systems and comfort heating applications. The stainless-steel fins can withstand outside elements making them suitable for commercial and industrial applications.



Air Finned Heaters

Air Finned Heater is the most versatile and the best suited solutions to a large number of applications. In applications where tubular heaters are exposed to forced convection, placing fins around tubular heaters increases their surface area and thus improves their heat transferring capacity.

Heater Element for Air, compared to regular tubular heaters, run at lower surface temperatures for the same watt densities when placed in identical air streams. These heating elements have a strong outer sheath to help protect the heater from physical stress and uses high quality alloys to allow efficient heat transfer from resistance coil to your heating medium.

Applications

- Drying
- Heat Treating
- HVAC Systems
- Load Bank

Our Clients



Electric Heating Elements

Cartridge Heater

A cartridge heater is a tube-shaped, industrial heating element that can be inserted into drilled holes. Cartridge heaters provide localized and precise heating and are commonly used in the heating process industry. Cartridge heaters have low/moderate watt density elements consisting of helical wire coils on ceramic former or high watt density elements with the heating element located close to the sheath, which is swaged to improve heat conduction.



Inline Circulation Heater

Inline Circulation Heater are used for heating flowing liquids, air, and gases. Non-pressurized or highly pressurized fluids can be heated very effectively using direct circulation heating. A wide variety of standard designs and custom engineered power ratings, sizes, flow capacities, and options are available to fulfill most any application needs. Heaters may be installed horizontal, vertical or even sloped for vaporizing liquids.

Customised Design And Engineering For Process Heaters



Inline-Circulation Heater

Dpstar is manufacturing company developing electric heating products. With uncompromised dedication to our customers, we offer solutions and just not products. Our development in oil and gas industries, renewable energy, HVAC system and government projects help customer like you to get alternative solutions for your projects to get off the ground in the most cost efficient way.



Our Clients



Electric Heating Elements

Bobbin Heater

Bobbin heater is constructed using several refractory ceramic blocks assembled together to the required length. Bobbin Heater consists of 80/20 nickel chrome resistance wire supported on refractory insulators and connected to a terminal block at one end. The element flex to allow easy installation and handling. They are normally manufactured for horizontal mounting, but may be specially designed constructed for vertical installation.



Immersion Heater

Electric immersion heaters are typically inserted directly into a pipe, tank, or vessel to heat process gases or liquids. Heating up liquids using direct heat transfer allows for the liquid medium to quickly reach the desired temperature using electric heating elements such as flanged heaters, screw plug heaters, over the side heaters or immersion water heaters. Electric immersion heaters have been known to use the cleanest form of energy, leaving no residual discharge and provide immediate heat transfer to any medium.

Customised Design And Engineering For Flange Immersion Heater



Compact

Easy to install & Maintain

Design and built for safety

Applications

- Boiler Equipment
- Open storage Tank

Our Clients



Electric Heating Elements

Teflon Heater

Teflon heater is a type of corrosion-resistant electric heater made of PTFE sleeve for heating various corrosive liquids. It has excellent anti-aging properties and good flexural properties, and is designed with low surface load. The Teflon heater can be divided into two types, one is to directly spray the surface of the heating tube with the fluoroplastic material, and the other is to form the fluoroplastic sleeve on the outer layer of the iron heating tube and the copper heating tube. They can be shaped into any pattern, can be clamped or wrapped around the bodies that shall be heated.



Quartz Heater

Use PP junction box and PVC protection cover, the heating rod is made of pottery with great insulation function. Can be applied to heat in the chemical polishing sticky liquid, which is corrosion and acid-resistant. It's not suitable for long time heating under the circumstance of hydrofluoric acid and strong base. All the heater can add thermostat controller to protect the equipment. It is made of high-quality quartz tube, which is resistant to rapid cooling and heat, strong corrosion resistance, suitable for high concentration acid and alkaline liquid heating; good stability and insulation performance.

Electric Heating Elements

Silicon Carbide (SiC) Heater

Silicon carbide heating elements are refractory, non-metallic electrical resistant products in solid rods or tubular form with a temperature range of 600-1600°C. It is made of selected super quality green silicon carbide as main material, which is made into blank, silicate under high temperature and re-crystallized. Widely used in various high temperature electric furnaces and other electric heating devices, such as in the industries of magnet, ceramics, powder metallurgy, glass, metallurgy and machinery, etc.



Infrared Heater

Infrared Heaters are designed to emit infrared heat. Infrared radiant heat energy can be delivered to concentrated areas at a very fast rate with individual heaters or heater arrays. Infrared heaters are made up of a heating element and a reflective surface area. The heating element converts energy (measured in microns) from electricity or gas into heat, while the reflective surface is used to direct the heat rays onto objects for heating. Infrared energy is heat that can be applied to many different things for manufacturing, finishing, drying and heat processing.

Electric Heating Elements

Ceramic Infrared Heater

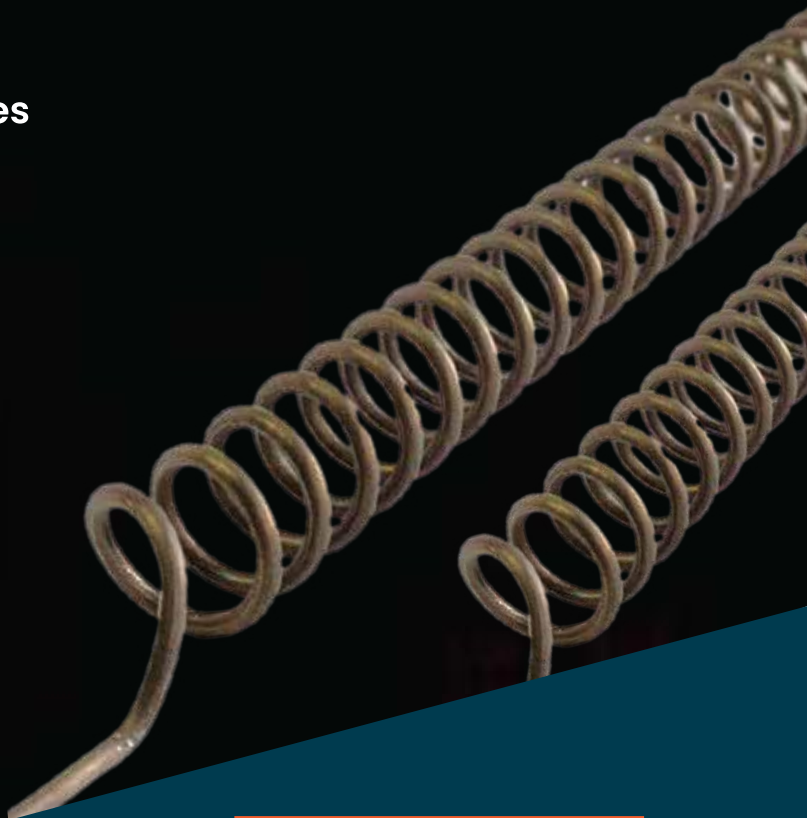
Ceramic infrared heat elements are efficient and robust heating elements, which provide long wave infrared radiation. They are used among others for curing and drying processes. They are available in various standard sizes and power ratings. This modular approach allows arrangement of elements in a heating array providing an even heat profile over the whole target area. Elements in the array can be mounted at different heights to cater for uneven surfaces. Ceramic infrared emitters can be supplied with integrated thermocouple, allowing precise measurement and control of heating power.



Open Coil Ceramic Heater

Open coil heater elements are an indirect industrial heating solution to decrease watt density requirements or the heat fluxes on the surface area of the pipe connected to the heated section and prevent heat sensitive materials from coking or breaking. Open coil elements have open circuits that heat air directly from the suspended resistive coils. These heating elements have fast heat up times that improve efficiency and have been designed for low maintenance and easily, inexpensive replacement parts.

Industrial Furnace Repair & Services



Dpstar Manufacturing is a leading manufacturer of Industrial Heaters and Heating Elements. With years of experience designing and manufacturing of industrial Heating Elements, we can help our customers to keep their equipment operating at its best. No matter your needs.

Dpstar have you covered. Dpstar Coil Heating Elements are ideal for use in:

- Industrial ovens and furnaces for heat treating, melting, holding, burn-off or powder coating
- Kilns
- Duct heaters



Project References



Refurbishment Round Furnace

Size: 40" high x 60" diameter

Job Description : Repair surrounded fire bricks



Hardening Furnace

Design & Built Hardening Furnace

Power Rating : 415V – 58kw

Size : 1150mm Lg x 965 mm H x 1605mm Dept

Operating Temp : 1000°C

Heater Spec : 2.6mmØ x 33mmOD x 1105mm U-Lg x 9pcs AF Elements.

Application : Hardening



Tempering Furnace

Design & Built Tempering Furnace

Power Rating : 415v – 40kw

Size : 1300mm Lg x 500mm H x 1550mm Dept

Operating Temp : 550°C – 750°C

Heater Size : 2.5mm Ø x 32mm OD x 1220mm U Lg AF Element x 6 pcs.

Application : Tempering Process

Electric Heating Elements

Hot Runner Heater

Hot Runner Heater is made of nickel chrome resistance wire placed inside chrome nickel steel tube filled with MgO powder and compacted for faster and efficient heat transfer. The heaters are annealed to acquire malleability for bending into any shape. Hot runner heaters with built-in thermocouple are also available. Hot runner bushes are produced with hot runner heaters of the different cross-section with inner brass and an outer stainless-steel cover.



Hot Air Blower

Hot air blowers are suitable for usage in a variety of circumstances requiring direct application of heated air onto a target surface, which makes them essential equipment in the process heating operations of a number of industries. Hot air blowers are designed to be integrated into open-looped and closer-looped industrial process control systems, as well as used as a stand-alone piece of equipment. Some of the applications that a hot air blower can be used for includes heating, baking, warming and drying.



Daiichi Denko Anti- Condensation Heater

Switchboard Panel | Control & Monitoring Systems | Industrial Enclosure

Anti-condensation heater are suitable for installation in all enclosures and have been designed to protect equipment from water damage due to condensation. They are particularly important in cooler areas, or where the humidity is high. Relative air humidity of 65% and upwards, is considered to be problematic, if unaddressed, it can cause corrosion and failures of components such as relays, switch gear, PCBs and electromechanical assemblies. Mounting in the bottom part of the cabinet will increase efficiency. As for the position in relation to other components in the cabinet, a distance of at least 5cm to the sides and 3cm to the bottom is recommended.

Features

- No thermostat is required.
- Self regulated heating.
- No moving parts to wear out.
- Compact size and high watt density.
- Uniform heat output.
- Corrosion resistance aluminium.
- Easy mounting – All heater are simple to install on 35mm DIN rail.

Specifications

- **Rated Power** : Thermal Output 80W
- **Voltage** : 240VAC (Others voltage and power rating available upon request)
- **Termination** : Silicone rubber insulated cable
- **Profile Material** : Aluminum, natural anodized
- **Size** : 71mmW x 55mmH x 125mmL
71mmW x 55mmH x 200mmL

Explosion Proof Heaters

Dpstar has the knowledge and expertise to design and manufacture electric process heating equipment suitable for installation within the extreme environments commonly found in the oil, gas and petrochemical industries. Explosion proof heaters are ideal for use when specific explosive gases and dusts may be present and are designed to withstand difficult operating conditions in hazardous locations and heavy industries. Dpstar manufactures a wide range of Explosion-Proof Heaters including:

Process Heaters

Dpstar explosion proof Ex d process heater comprises a large range of process flow heaters, certified for use in a Zone 1 or Class I, Div 1 or Div 2 hazardous area, custom built to meet client specifications. Process heaters are designed for heating many process fluids and are used in a wide variety of process applications, from heating fuel or natural gas, to molecular sieve regeneration and heat transfer processes.



Features

- Up to 1400kW.
- Ex d, Zone 1, Gas Group II A, B, C.
- Class I, Div 1, Gas Group A, B, C, D.
- Terminal box certified weatherproof to IP66.
- Temperature class T1 to T6 (T450 to T85°C)
- Elements specially sealed to prevent
- moisture ingress.
- Elements individually replaceable on site without the need for special tools.
- Suitable and certified for use in ambient temperatures -60 to +60°C.
- Anti-condensation heaters fitted if required.

Applications

- Fuel gas
- Natural gas
- Industrial gases
- Molecular sieve regeneration
- Heat transfer oils
- Fuel oils
- Water
- Crude oil / hydrocarbons / liquids
- Heating mediums



Line Heaters

Dpstar line heaters provide a clean, safe and efficient heating method for bulk liquid flow applications, and suitable for heating a variety of mediums such as water, oil, air, as well as both corrosive and non-corrosive materials. Our comprehensive range of line heaters provide a compact and efficient heating solution for constant flow liquids or gases.



Features

- Certified to meet the ATEX Directive 94/9/EC.
- Weatherproof lightweight cast aluminium terminal enclosure-IP67.
- Choice of built in process temperature sensors adjustable option.
- Mild steel or stainless-steel vessel.
- Standard range of high quality Incoloy rod-type elements designed for oil.
- Wall or floor, vertical or horizontal mounting.

Applications

- Industrial washing and rinsing processes.
- Indirect heating of liquids.
- Engine jacket pre-heating.
- Temperature maintenance of storage tanks.
- Under floor heating schemes.
- Lube oil pre-heating.
- Fuel oil.
- Heat transfer oils.
- Tempering of low-grade residual oils for burners and engines.
- Natural gas
- Paint heating
- CO2
- Instrument air
- Air
- Steam generation
- Nitrogen
- Solvent
- Annealing



Immersion Heaters

Dpstar Immersion Heater is designed for direct immersion into process fluids. Our immersion heaters is a highly adaptable solution that can be customized to suit the process requirements of our clients. They are suitable for heating all types of process liquids and gases which are non-corrosive to the materials of construction.



Features

- Certified to meet the requirements of the ATEX Directive 94/9/EC, IECEx, CSA and CCOE.
- Mild steel or 316 stainless steel terminal enclosure with weatherproof protection to IP66.
- Choice of built in process temperature sensors.
- Suitable for ambient temperatures to -50°C to +60°C.
- Mounting of the heater can be by a threaded boss or an industry standard flange.
- Designed for horizontal installation (vertical mounting version available on request).
- Can be supplied with the terminal box mounted away from the fixing boss/flange for high process temperatures.

Applications

- Pre-heating oil/water
- Processing equipment
- Cleaning and rinsing tanks
- Heating medium
- Boiler equipment
- Frost protection
- Heat transfer systems
- Tank heating
- Safety showers



Duct Heaters

Dpstar Explosion-Proof Duct Heater is designed for heating air or gases in hazardous environments where potentially explosive substances are present, such as oil refineries, coal mines, petrochemical plants and sewage treatment plants.



Features

- Rugged
- Custom engineered
- Designed for harsh, hazardous location environments.
- The elements terminate and are bussed within a single IP66 enclosure to allow for easy wiring.
- ATEX, IECEx, and EAC certifications.
- Terminal box is certified weatherproof to IP66 and IP67.
- Temperature class T2 to T6.
- Elements are specially sealed to prevent moisture ingress.
- Elements are individually replaceable on site without the need for special tools.
- Various types of over-temperature cut-outs available (eg) certified thermostats, RTDs or thermocouples.
- Anti-condensation heaters fitted if required

Applications

- Oil and Gas Refineries
- Offshore Platforms and Processing Facilities
- Coal Mines
- Pulp and Paper Mills
- Chemical and Petrochemical Plants
- Water and Wastewater Treatment Plants



Air Heaters

Dpstar Explosion Proof Air Heater provide intrinsically safe, hazardous area certified heating and air warming for Zone 1, Zone 2, Zone 21 and Zone 22 hazardous areas. Our air heater range has an easy to adjust external thermostat and is designed to provide an air warming solution for small work or storage areas and can be provided with temperature ratings of T2, T3 and T4, suitable for ambient temperatures from -60°C to +60°C. Our air heater is certified to meet ATEX equipment directive and IECEx standards and are suitable for wall or floor mounting.



Features

- Certified to meet the ATEX Directive 94/9/EC and IECEx.
- Weatherproof to IP66/67.
- Temperature classes T2, T3 and T4 available.
- Corrosion resistant powder coated finish.
- Suitable for floor or wall mounting.
- 2 x 25mm (plugged) cable entries provided as standard.
- Rotatable terminal box.
- Externally adjustable 0-40°C room temperature-controlled thermostat.
- Suitable for ambient temperatures from -60°C to Containers +60°C.
- Individually replaceable heating elements.

Applications

- Aircraft hangars
- Fuel servicing areas
- Chemical plants
- Offshore installations
- Battery stores
- Gas installations
- Paint/solvent stores
- Safety showers
- Frost protection
- Electrical enclosures/cabinets
- Containers
- Explosive stores
- Dusty environments
- Sugar refineries
- Firework factories
- Ammunition depots



Electric Heat Tracing

All In One

Electric Heat Tracing Packages!

What Makes Us Different?

Design, Supply, Installation, Testing and Commissioning

Electric Heat Tracing heat tape or surface heating, is a system used to maintain or raise the temperature of pipes and vessels. Electric Heat Tracing takes the form of an electrical heating element run in physical contact along the length of a pipe or vessel. It is also possible to control the amount of heat generation through these cables by varying the wattage of the cable to suit particular processing fluid requirements.

Why You Should Use This Method?

Electric heat tracing systems are typically used to provide protection against freezing or to maintain the temperature of water, chemicals, or fluids in pipes and tanks. When the heat loss from pipes or tanks cannot be efficiently controlled with thermal insulation alone, heat tracing reduces the losses and provides targeted heat to maintain the desired process temperature. Electric heat tracing systems are comprised of the heat tracing cable, termination boxes, temperature sensing equipment, and control systems (temperature control, monitoring, and power distribution).

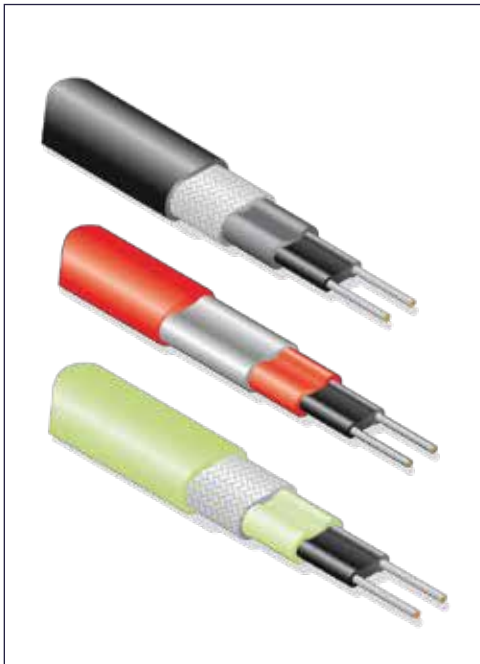


Benefits

- Easy and economical to install.
- 24/7 monitoring
- Energy saving
- Provides long-term performance.
- Improved safety
- Multi-use
- Time saving
- More uniform temperature
- Predicted maximum generated temperature

Heat Trace and Control

HEAT TRACE Manufacture and Supply a complete range of Electric Trace heating products including:



Self-Regulating Heating Cables

Semi conductive parallel resistance heating cables mainly for use in freeze protection or temperature maintenance applications. For use up to 300°C (572°F).

We can produce self-regulating heating cables within the following ranges:

- 12 – 1000 Volts
- Up to 300°C (572°F) withstand temperature
- Up to 120 W/m of output



Constant Wattage Heating Cables

Constant Wattage heating cables (zonal heating cables) can be conveniently cut-to-length, but are less popular than self-regulating heating cables, because they often require thermostatic control to ensure temperature safety.

We can produce constant wattage heating cables within the following ranges:

- 12 – 1000 Volts
- Up to 425°C (797°F) withstand temperature
- Up to 200 W/m of output



Series Resistance (Longline) Heating Cables

Series Resistance heating cables have to be individually designed into particular length and load configurations and so are not as versatile as parallel cables.

We can produce series resistance heating cables within the following ranges:

- Up to 1000 Volts 3 phase
- Up to 230°C (446°F) withstand temperature
- Up to 60 W/m of output



Power Connection and Terminations

We provide a choice of termination systems specifically designed and approved for use with our heating cables.

We can produce constant wattage heating cables within the following ranges:

- Standard Gland and Junction Box
- StripFree
- DESTU
- UniClip Micro



Temperature Control and Monitoring

We manufacture an extensive range of temperature control and monitoring equipment:

- Capillary Thermostats
- Electronic Thermostats
- PowerMatch Micro +
- Guardian - Integrated computer-based energy management system

Applications

- Temperature maintenance duties.
- Ensuring steam tracing systems operate at optimum efficiency.
- Freeze protection of pipes/tanks.
- Temperature maintenance of hot water distribution pipes.
- Under floor heating.
- Roof and gutter heating for snow/ice prevention.
- Snow/ice prevention on roads/ramps/walkways/steps & access areas, etc.
- Heating of residential fuel oil storage tanks.
- Heating systems for all modes of transport.
- Short or long pipelines
- Complex in-plant piping systems
- Above ground, buried, or sub-sea pipelines
- Externally or internally traced pipelines
- Safe or hazardous area installations
- Heated helidecks
- Tanks and vessels
- Hoppers
- Instrumentation and sample lines
- Instrument enclosures
- Temperature maintenance, or heat raising, to temperatures up to 600°C

Certification

All design work is carried out in accordance with ISO 9001:2008 certification. Using the latest CAD software, system design complies with the latest national and international standards and approvals including: IEC, IEEE and CENELEC.

Dpstar Offers Complete Solutions

Dpstar can help you with all aspects of heat tracing for pipes, vessels, instrumentation and other process equipment. Together we can ensure that materials selection circuit layout, installation and operating costs will all be considered for your particular application. From initial planning stages through installation and final commissioning, Dpstar provides a total systems approach precisely tailored to meet your heat tracing needs.



Installing New Heat Tracing Wire And Thermostat Enclosure, Testing & Commissioning



Design, Commissioning and Installation of Heat Tracing Cable for Palm Oil Industry

Our Clients



Control Panel Expertise

Industrial control panel systems are one of the core components modern plant automation. Dpstar is one of the most experienced control panel manufacturing companies in Malaysia. Dpstar offers various control panel solutions ranging from design, engineering, installation as well as testing & commissioning for all our panels. We provide industrial control systems that are able to complement machines or processes according to industry leading standards.



Features

- Power control panels designed for industrial applications
- Quick and safe installation and start-up
- High-quality components
- Safety power contactor separated from the temperature control loop
- Optimized frame size for space saving
- Faster engineering time

Applications

- Food processing
- Oil & gas
- Batching plants
- Water plants
- Edible oil processing
- Power generation
- Railway

Electrical & Control Components

- Transformers
- Contactor & TOR
- Terminals
- Inverter
- Circuit Breakers
- Surge Protective Relay
- Programmable Logic Controller (PLC)

Fabrication

- NEMA Constructed Control Enclosures
- Stainless Steel Enclosures 304 / 316
- Carbon Steel Enclosures
- Aluminum Enclosures
- Purged Enclosures
- Intrinsically Safe Enclosures
- Outdoor Shielded / Insulated Enclosures
- Heated and Cooled Enclosures
- Humidity Controlled Enclosures
- Sunshields / Control Stands
- Corrosion Resistant Enclosures
- Environmental Area Classification-Class I, II or III, Divisions 1 & 2
- Custom fabrication
- Wet painting
- Powder Coating

Wiring Method

- Accelerate the engineering, assembly, testing, and commissioning processes
- Eliminate most hardwiring
- Connect to industry-standard networks and fieldbuses.
- Connect standard motor-control components
- Reduce control-cabinet space requirements



Expert Control Panel Solutions



Padiberas Nasional Berhad
(BERNAS)



PETRONAS



Malaysia Holdings Berhad
(MSM)



CEMEX



FGV



OSRAM



AJINOMOTO



SIME DARBY



SYNCOATES

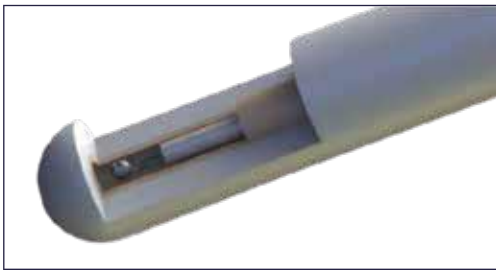
Our Clients



Basic of Thermocouples & RTD

Thermocouple

A thermocouple is a sensor used to measure temperature. Thermocouples consist of two wires, each made of a different metal, welded together at one end to form an electrical junction. This junction is where the temperature is measured. When the junction experiences a change in temperature, a voltage is created. The voltage can then be interpreted using thermocouple reference tables to calculate the temperature.



Features

- Low cost
- Highly reliable
- High accuracy
- Fast thermal response
- Robust; can be used under high vibration and in other harsh environments
- Wide operating temperature range

Tolerance Table for Type of Thermocouple

Material Symbol	Main Materials		Operating Temperature Range (°C)	
	+ leg	- leg	In Normal Application	In Overheated Application
B	PT 70, RH 30	PT 94, Rh 6	1500	1700
R	PT 87, RH 13	PT 100	1400	1600
S	PT 90, RH 10	PT 100	1400	1600
K	Ni, Cr	Ni, A	650~1000	850~1200
E	Ni, Cr	Ni, Cu	450~700	500~800
J	Fe	Ni, Cu	400~600	500~750
T	Cu	Ni, Cu	200~300	250~350

Applications

- Monitoring temperatures of metal in steel, iron and aluminum industries
- Acting as a heat pump to perform thermoelectric cooling
- Testing temperatures associated with process plants such as petroleum refineries and chemical plants
- Low temperature and cryogenic applications in food industry
- Temperature profiling in ovens, furnaces and kilns
- Sensing pilot flame in gas appliances
- Temperature measurement of gas turbine and engine exhausts
- Monitoring in a vacuum and for inert metals
- Hot processes including plastics and resin manufacture

Basic of Thermocouples & RTD

RTD

RTDs or Resistance Temperature Detectors are temperature sensors that contain a resistor that changes resistance value as its temperature changes. The most popular RTD is the PT100. RTDs are designed to ensure precise and repeatable temperature versus resistance characteristics. The type of material used in RTD construction will determine the limits on the temperature the RTD can be exposed to. They have been used for many years to measure temperature in laboratory and industrial processes, and have developed a reputation for accuracy, repeatability, and stability.



Features

- Highly accurate
- Consistent
- Offer long term stability
- High repeatability
- Suitable for extreme environments
- Have a high temperature range (depending on resistance element material)

Tolerance Table for Type of Thermocouple

Temperature Value (°C)	Class A (±)	Class B (±)
-200	0.55	1.3
-100	0.35	0.8
0	0.15	0.3
100	0.35	0.8
200	0.55	1.3
300	0.75	1.8
350	0.85	2.05
400	0.95	2.3
500	1.15	2.8
600	1.35	3.3
650	1.45	3.6

Applications

- Due to electrical output it is used wherever feedback system is required and corrective action is thus taken in an automated system.
- Used in medical and chemical laboratories to detect very low temperature (like dry ice and liquid nitrogen).
- Widely used in furnaces for automatic temperature measurement.
- Due to its compactness, it replaces conventional thermometers as well as thermocouples thus eliminating the use of lots of wires.



Base Metal Thermocouples with Thermowells / Protection Tubes

Base metal thermowell assemblies are manufactured from drilled bar stock and have threaded NPT process connections or flanges for direct immersion into high pressure or corrosive applications. Base Metal Thermocouple types are composed of common, inexpensive metals such as nickel, iron and copper. The thermocouple element can be constructed of ceramic insulated thermocouple wires or mineral insulated cable for increased durability.

Type	J, K, T, E, N
Element size (MI)	3.0, 3.2, 4.8, 6.0, 6.4, 8.0 mm, Other sizes on request
Element size (Non-MI)	1.6, 2.0, 3.0, 3.2, 4.8, 6.0, 8.0, 9.5, 10 mm, Other sizes on request
Sheath Material	SS304, SS316, SS310, Inconel
Thermowell Material	HRS 446, INCONEL-600/601/ 800, Nickel, Hastalloy Titanium, Tantalum Sleeve, Ceramic 610 & C -799, Silicon Carbide, Monel etc
Configuration	Simplex/ Duplex/ Multipoint



MI Thermocouple

Mineral insulated thermocouples consist of an outer metal sheath which protects the thermocouple elements from damage and contamination, this sheath is malleable so mineral insulated thermocouples can be easily bent and formed into a variety of shapes to suit your application. The inner thermocouple elements are insulated with magnesium oxide powder, tightly packed so no air is trapped inside, this provides great thermal conductivity. This construction provides an incredibly durable temperature sensor that can be adapted to a wide variety of applications.

Type	J, K, T, E, N, R, S
Element size (MI)	0.25, 0.5, 1.0, 1.5, 3.0, 4.5, 6.0, 8.0 m Other sizes on request
Sheath Material	SS321, SS316, SS310, HRS 446, Inconel 600, Nimonic, Pyrosil, Platinum etc.
Configuration	Simplex/ Duplex/ Multipoint
Configuration	<ul style="list-style-type: none"> • Miniature Thermocouples with minimum 0.25 m Dia • Swaged Tip Thermocouples • Tube Temperature Skin Type Thermocouples • Special Sensors as per ASTM-E235 for critical application • High Wall Thickness



Noble Metal Thermocouple

Noble Metal Thermocouples are manufactured with precious or noble metals like Platinum and Rhodium. Noble metal thermocouples can be used in oxidizing or inert applications and must be used with a ceramic protection tube surrounding the thermocouple element. Noble Metal thermocouples are designed for high temperature applications, where it is essential that the thermocouple withstands the damaging effects of oxidation and corrosion.

Type	R, S, B
Element Diameter	0.30, 0.35, 0.4, 0.45, 0.5 mm other sizes on request
Sheath Material	Recrystallized Alumina Ceramic(C-799), 610, Inconel, Silicon Carbide, Platinum etc
Configuration	Simplex/ Duplex/ Multipoint
Configuration	<ul style="list-style-type: none"> • Hot Blast & Stove Dome Thermocouples • Tri Level Thermocouples • Crown Thermocouples



Refractory Thermocouples

Refractory Thermocouples are designed for use in oxidizing, neutral and reducing environments. Refractory Metal Thermocouples are manufactured with wire that is made from the exotic metals tungsten and Rhenium. These metals are expensive, difficult to manufacture and wires made with these metals are very brittle. Applications in all type of furnaces can be measured with these types of sensors. All standard refractory metal and noble metal thermocouple alloys are available in High-Temperature Thermocouples are defined as sensors used at temperatures of 2300°C and beyond.

Type	G, C, D
Element Diameter	1.6, 3.2, 6.4, 8.0 mm
Sheath Material	Tantalum, Molybdenum, Inconel 600, Ceramic etc
Configuration	SS316 or INCONEL
Configuration	Magnesium Oxide, Aluminium Oxide, Beryllium Oxide, Hafnium Oxide



RTDs With Thermowells/ Protection Tubes

Resistance temperature detectors are designed for corrosive, high pressure, fast flowing medium with Thermowell. Resistance temperature detectors are temperature sensors that have elements which change their electrical resistance with change in temperature. RTDs with thermowell are suitable for high pressure and flow medium where there is a need for frequent change of sensor.

Type	Pt 100, 200, 500, 1000 etc
Element Diameter	Wire wound ceramic encapsulated, wire wound glass encapsulated, Thin film ceramic encapsulated
Sheath Material	2, 3, 4 Wire
Configuration	SS304, SS321, SS316, SS310, Inconel 600/800, HRS 446, Hastalloy, Monel
Configuration	Simplex/ Duplex/ Others



Mineral Insulated RTDs

Mineral-insulated RTDs provide excellent performance, even when exposed to high levels of shock and vibration in tough industrial environments. Mineral Insulated Resistance Thermometers are made with Platinum-measuring resistors Pt100Ω to DIN IEC 751. The measuring resistor will be connected to the inner conductors, is also embedded and is surrounded by the metal sheath to form a hermetically sealed assembly.

Type	Pt 100, 200, 500, 1000 cu-50, 53 etc
Connection	2, 3, 4 wire
Element Diameter	1.5, 3.0, 4.5, 6.0, 8.0 mm
Configuration	Simplex/ Duplex/ Others

Explosion Proof Thermocouple



Dpstar Explosion Proof Thermocouple is designed to measure temperatures in explosive gaseous or liquid environments. Dpstar offers a wide range of standard or customised ATEX or IECEx certified temperature-sensors, single and multipoint for Gas zone 0, 1 and 2 with Exi, Exe and Exd, and Dust for zone 20, 21 and 22 approval. These sensors can be fitted with an integral certified head-mounted temperature transmitter or display unit with 4-20mA, HART or Profibus communication.

Features

- Temperature sensor range from -200°C to 1600°C depending on the sheath material.
- Thermowell connection by a nipple union nipple with 1/2"NPT connection.
- Aluminium connection head with swing cover.
- Cable entry M20x1.5mm.
- Replaceable 6mm insert with 20mm spring action.
- Calibration K, T, J, E, N, R, S or B, single or duplex.
- Can be delivered with head-mounted transmitter.
- Insertion length as required.

Applications

- Heavy duty applications
- Oil & Gas processing industry
- Gas tanker ships
- Chemical plants
- Offshore oil platforms
- Harsh environments

Float Switches

MALTEC-F Float Switch

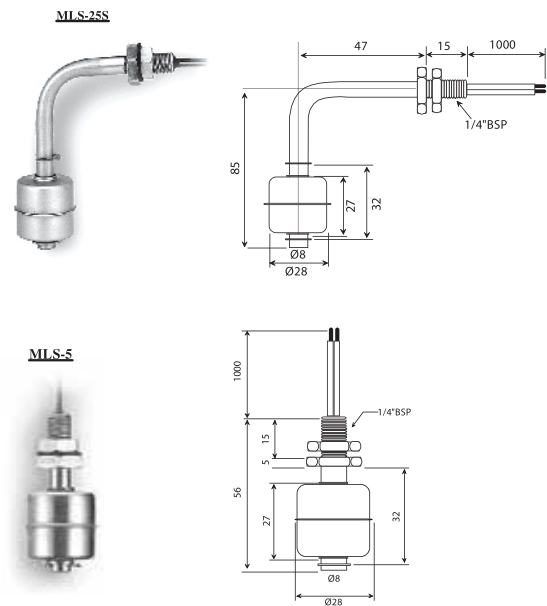
The stem of this liquid float switches contains a hermitically sealed reed switch. The float contains a permanent magnet. As the float rises or falls with the level of the liquid, the reed switch is activated by the magnet. The operation of the switch, normally open or normally closed, is easily changed by removing a retainer and inverting the float.

Features

- Compact design
- Low Cost
- High Reliability and Long switch life.

Application

- Marine Industry
- Power station equipment
- Automatic vending machine
- Food Industry
- Waste-water/pure water processing
- Small collection tanks



Float Switch Specification

Part Number	MLS-5 / MLS-25S
Material: Steam Float Retainer	316SS
Operating Temperature	-20 ~ 120°C
Pressure Rating	10 bar
Switch Rating	50VA / 240VAC
Maximum Carry Current	2.5A
Liquid Specific Gravity Min.	0.7
Lead Wire	PVC Wire, 1 Meter
Pull-in Value (PI)	20~60 AT
Drop-out Value (PI)	6min AT
Contact resistance (CR)	100 mΩ
Breakdown voltage	600 min (PI≥35)VDC
	500 min (PI 20 to 35)VDC
Insulation resistance	10 ¹⁰ minΩ
Electrostatic capacitance	0.5max pF
Contact rating	50W
	70VA
Maximum switching voltage	300VAC
	350VDC
Maximum switching current	DC0.7/AC0.5A

MALTEC-F Series Multi-level Float Switches

MT-F – Standard Type | MT-FH – Heavy Duty Type

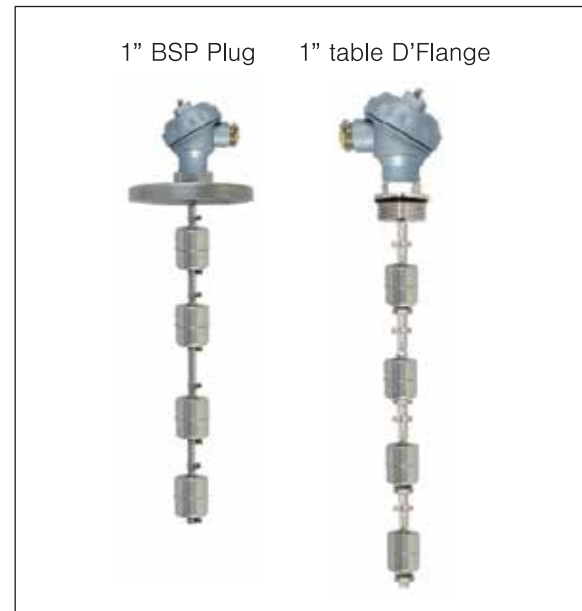
MT-F – Standard Type

- 1" table 'D' flange or 1" BSP plug
- Switching voltage: 250 VAC/200 VDC
- Switching current: 1 AMP AC/DC
- Switching power: 30W AC/DC
- Minimum voltage breakdown: 430 VDC

Common Specifications

- Aluminium terminal heads
- All wetted parts 316SS
- Multiple Floats
- Operating Temperature -55°C --+150°C
- High current ratings

MT-F Series



MT-FH Series



MT-FH – (Heavy Guty)

- 2" table 'D' flange or 2" BSP plug
- Switching voltage: 250 VAC/200 VDC
- Switching current: 2 AMPS AC/DC
- Switching power: 50W AC/DC
- Minimum voltage breakdown: 500 VDC

Common Options

- 316SS or plastic terminal head

Our Certifications



30 YEARS OF EXCELLENCE



Standard Malaysia



UKAS



UL Certificate



UL Certificate



UL Certificate



CE Certificate



CE Certificate



CE Certificate



CE Certificate



CE Certificate



CE Certificate



CE Certificate

Our Clients



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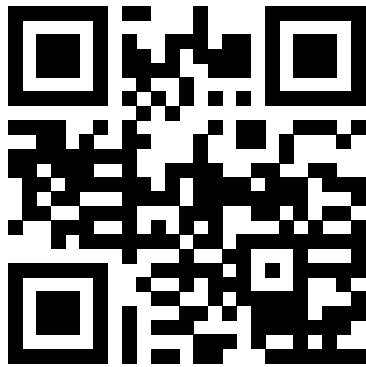
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