PRODUCT CATALOG

british
ELECTRICALS

PRODUCT CATALOGUE

SERVICE TO INDUSTRIES

SINCE 1971

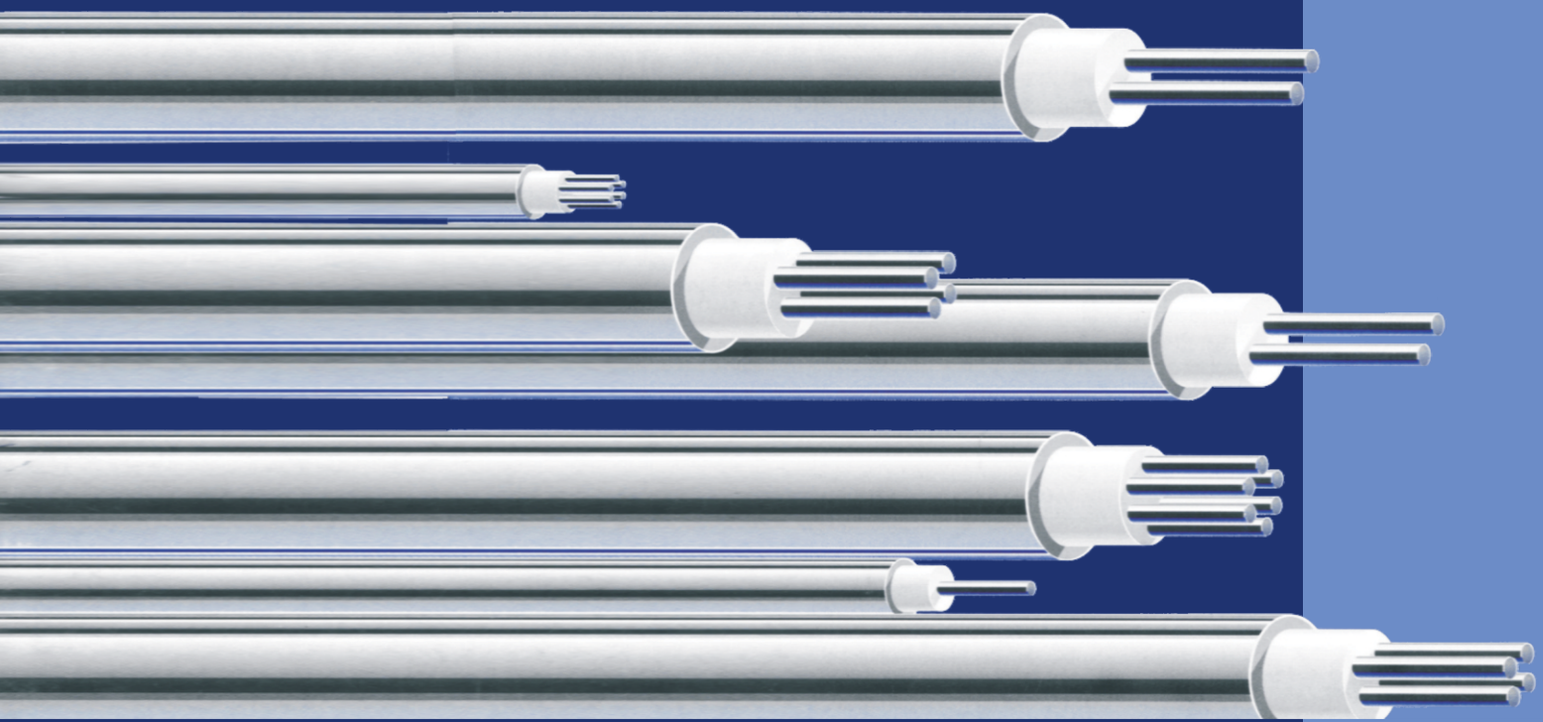
www.britishelectricals.com

british ELECTRICALS

Our Product Range

- M.I. THERMOCOUPLE CABLE.
- M.I. HEATING CABLE
- M.I. POWER & SIGNAL CABLE
- INSTRUMENTATION CABLE
- SIGNAL CABLES
- THERMOCOUPLE CABLE
- COMPENSATION CABLE
- HIGH TEMP. SHEATHED CABLE
- SELF LIMITING HEATING CABLE
- CONSTANT WATTAGE HEATING CABLE
- THERMOCOUPLE & RTD. ASSEMBLIES
- RTD ELEMENT - DIN/JIS/GOST. PT - 10, PT - 50, PT - 100, PT - 200, PT- 500 PT- 1000, CU - 53 IN SIMPLEX/DUPLEX DIFF SIZES FORM 0.7 MM TO 5 MM DIA. CLASS - B, CLASS - A & SPECIAL TOLERANCE
- FLEXIBLE HEATERS & PADS
- THERMOCOUPLE & RTD CONNECTORS
- TIMER
- THERMOCOUPLE CALIBRATOR
- TEMPERATURE TRANSMITTERS
- PC PROGRAMMABLE TEMP. TRANSMITTERS
- TEMP. & HUMIDITY DATA LOGGER
- TEMP. & HUMIDITY TRANSMITTER
- UNIVERSAL I/P - MODBUS O/P MODULES
- FIELD PROGRAMMABLE UNIVERSAL 8 CHANNELINPUT WITH MODBUS OUTPUT
- DUAL UNIVERSAL INPUT MODULE WITH MODBUS OUT PUT
- FIELD MOUNTING WEBSERVER
- PC LAB FOR R & D USES.
- SHORT WAVE INFRARED HEATER
- CERAMIC INFRARED HEATERS
- LED PANEL INDICATORS
- LED PUSH BUTTON SWITCHES
- WARNING LIGHTS
- PANEL BUZZERS & SIREN
- USB TO RS 485 ISOLATED CONVERTER
- THYRISTOR FUSES & BASE

Mineral Insulated Cables



Mineral Insulated Thermocouple Available in Standard Dia. From 1.0mm to 10 mm OD
(Optional 0.15 mm / 0.25 mm/ 0.5.mm as well above 10 mm sizes)
in Variety of Sheath Material : SS304L, SS310, SS316, SS316 Ti, SS321,
Inconel - 600 to Suits different process medium. As per DIN 43710 Class 1 or 2

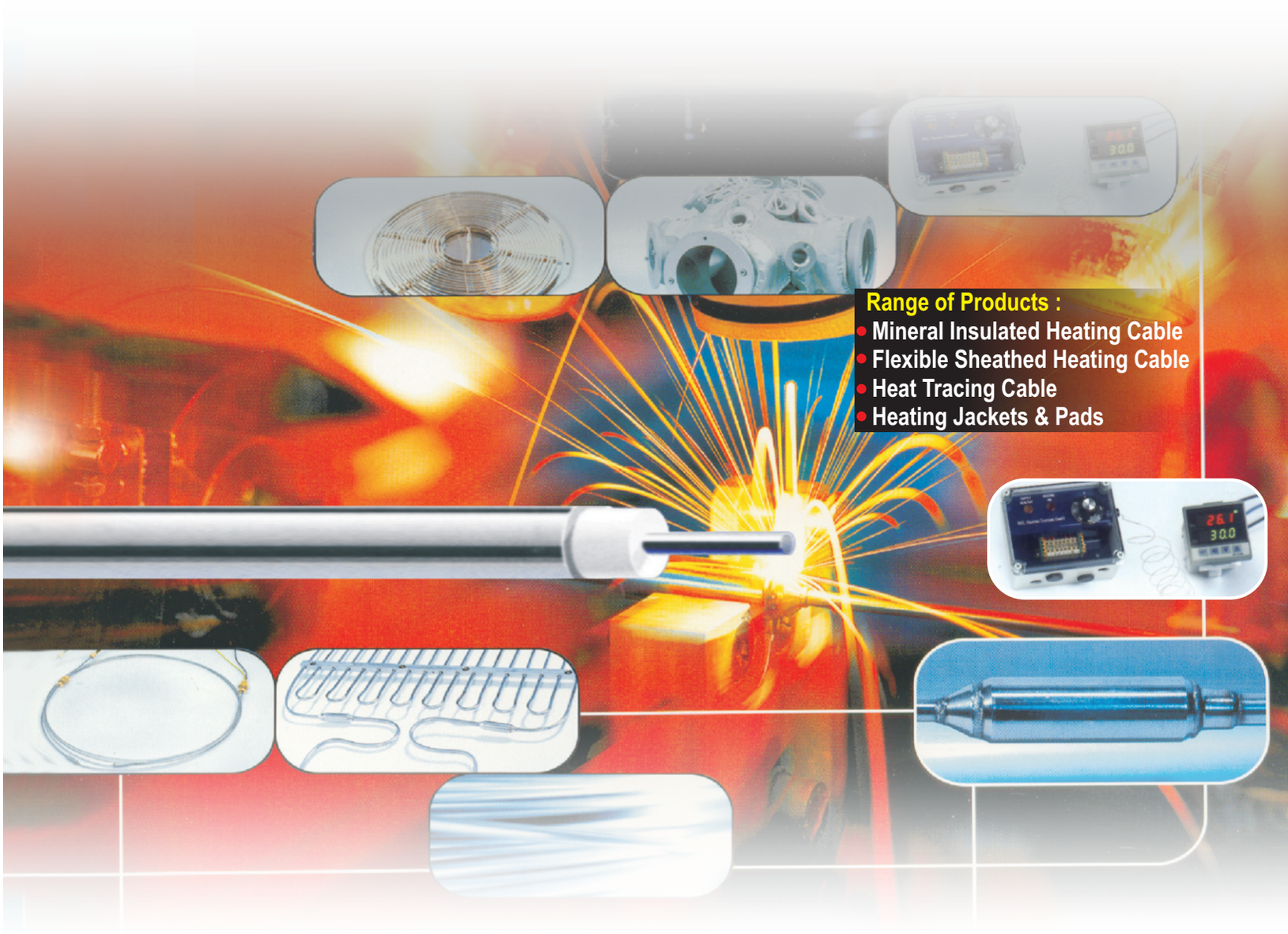
Standard Dimensions :	OD	Thermocouple		Wall thickness	Weight	max Length
		Inner Cond. Ø	Loop resistance			
	approx. mm	approx.mm	ohm/m	approx. mm	approx kg/m	mts.
SIMPLEX	1.0	0.18	37.5	0.14	0.004	400
	2.0	0.36	9.6	0.28	0.018	400
	3.0	0.54	4.3	0.42	0.041	400
	4.0	0.72	2.4	0.56	0.076	250
	6.0	1.08	1.1	0.84	0.164	100
	8.0	1.44	0.60	1.12	0.291	60
	10.0	1.80	0.38	1.40	0.455	40
DUPLEX	2.0	0.32	12.5	0.28	0.018	400
	3.0	0.48	5.5	0.48	0.043	400
	4.0	0.65	3.0	0.56	0.077	250
	6.0	0.95	1.4	0.84	0.172	100
	8.0	1.28	0.77	1.12	0.307	60

Also Available Triplex & customer specific sheath material
in type 'J' 'K' 'R' 'S' 'E' 'T' thermocouple & RTD cable.

ISOMIL ®

Mineral Insulated heating Cables

ISOHEAT



Available with:

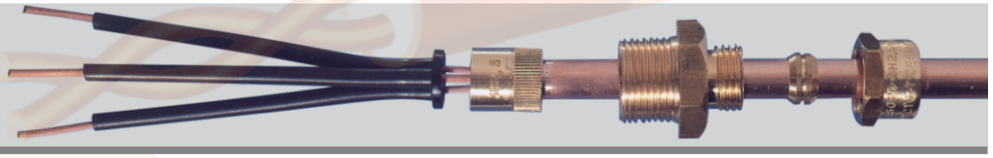
- Copper - nickel Outer sheathing for Temperature upto 450°C
- Stainless steel outer sheating for Temperature upto 800°C
- Inconel Outer sheathing for Temperature upto 1000°C

Also Available :

- PTFE Insulated heating cable for Temperature upto 260°C
- Glass weave insulated heting cable for Temperature upto 450°C
- Quartz Insulated heating cable for Temperature upto 950°C
- Heating Tapes. * Heating Mats * Heated Jackets
  (Custmised Application for Industries & Research)

Mineral Insulated Cable & Accessories

EUROPA METALLI



Mico® M.I cable manufatured acc to BS-6207 (or A 53013) an outer sheath consisting of continuous seamless copper tube with melting point of 1083°C, MGO insulant with melting point of 2800°C, 99.9% electrolytic copper conductor with melting point of 1083°C.

Mico® may also supplied with addition outer L.S.F. (Low Smoke & Fume) material, Self- Exteuguising sheath (Available in Orange, Red, White & Black Colour) following the requirement of IEC-332, Halogen Free, usefull for area where chemical agent may demage the copper sheath.

Cable is available light duty (upto 600V) Heavy duty (upto 1000V) in single core upto 400 Sq.mm, 2~4 cores upto 25 sq.mm & 7,12 & 19 cores upto 2.5 sq.mm size.

Mico® Structure offers best perfomance in many application

- Fire Resistance - Conform to IEC-331 Test
- Explosion Proof
- Waterproof
- Radiation Resistance
- Resistance to Corrosion

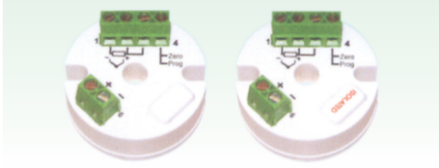
Standard & Certification

- BS 6207 - BASEC (UK) British Standard
- As 3187 - D.O. Energy Australia Certification
- HD 586 1s1 - IMQ (Italy) European Standard
- CEI 20 - 3911 - IMQ (Italy) Italian Standard
- VDE 0284 - 1 - VDE (Germany)
- IEC - 702 - IMQ (Italy) International Standard
- C 222 n°124 - Canadian Standard.

Also Available : Lancing cable for Thermocouple Type : R, S & B in simplex, Duplex.

TEMPERATURE TRANSMITTERS

TxBlock & TxIsoBlock



TxBlock and **TxIsoBlock**(isolated) are fully programmable head mount temperature transmitter dedicated to Pt100 and thermocouple sensors. In-the-fieled configuration of input type and working range can be achieved by means of a cable and an RS232 port from a PC.

- Programmable input Pt100 RTD and thermocouples type J, K, T, E, N, R, S, B.
- Two-wire loop powered 4-20mA output.
- Power supply: 10 to 35Vdc.
- Linearized output and cold junction. compensation for thermocouples
- 2 or 3-wire Pt100 with linearization.
- TxIsoBlock isolation: 1000 Vac
- Programmable working range.
- Windows configurator or Palm (optional).
- Manual frontal zero (offset) adjustment.
- Accuracy:-+0.2% full scale for Pt100 and 0.3% max. of FS for thermocouples.
- Temperature effect:0.003% SPAN/^{0}C.
- Working temperature:-40 to +85^{0}C
- Programmable burnout upscale or downscale sensor failure protection.
- Dimensions: 44mm (Diam) x 25mm (H).

TEMPERATURE TRANSMITTERS

TxRail & TxIsoRail

TxRail and TxIsoRail (isolated) are fully Programmable DIN rail mounting temperature transmitter for pt100 and thermocouple Sensors. Both units can be ordered for 0 to 10 Vdc output in a 3-wire configuration. The flexibility of in-the-field configuration translates in to a one model fits all signal conditioning and isolator module.

- Programmable input: Pt100 RTD and thermocouples type J, K, T, E, N, R, S, B.
- 2-wire loop powered 4-20mA output
- Power supply: 10 to 35Vdc.
- Linearized output and cold junction compensation for thermocouples.
- 2 or 3-wire Pt100 with linearization.
- TxIsoRail isolation: 100 Vac.
- Programmable range and offset correction.
- Windows configurator or Palm (optional).
- Accuracy: -+ 0.2% full scale for Pt100 and 0.3% max. of FS for thermocouples.
- Temperature effect: 0.003%SPAN/^{0}C.
- Working temperature: -40 to +85^{0}C
- Programmable burnout upscale or downscale sensor failure protection.
- Dimension : 71mm(H)x77mm (D)x19mm.

DATA ACQUISITION, RECORDING AND SUPERVISION

Penguin

The **Penguin** is a stand alone data logger for recording temperature and relative humidity The sensors are built in and the data is stored in local memory from where it can be conveniently transferred to a PC via the infrared **IR-Link3** interface or directly to a Palm PDA for visualization and analyses in the form of tables or graphics.

- Transparent polycarbonate IP65 case.
- Non-contact infrared interface (IR-Link 3).
- Memory capacity: 16k loggings for Penguin T and 32k loggings for Penguin RHT.
- Working temperature: -40^{0}C to +80^{0}C.
- Relative humidity: 0 to 100%.
- Accuracy: ±1.5% from 20 to 80% RU and ±1^{0}C for temperature (@ 25^{0}C).
- Resolution: 12 bits or 4.096 levels.
- Logging intervals: settable from 1s to 18h.
- Alarm setting: LO / HI.
- Software for Windows or Palm/OS.
- Lithium batterv: 3:6 V (good for ~5 years).
- Operation status LED indicator.
- International Start / Stop button.
- Internal real time clock.
- Dimensions: 45x60x20 mm.

RELATIVE HUMIDITY & TEMPERATURE TRANSMITTERS

RHT-WM

The **RHT-WM** series of humidity and temperature transmitters use a unique and study high performance sensor which delivers highly stable and accurate relative humidity and temperature measurements The state of art microprocessor based electronic circuit provides dual linear outputs which perform accurate measurement to provide control in the most demanding applications.

- Measures relative humidity from 0 to 100% without condensation.
- Dual 4-20 mA loop powered signals.
- Accuracy: +1.5%from 20 to 80% RH@ 25^{0}C and +1^{0}C for temperature.
- Hysteresis:+1% RH maximum.
- Linearity:<<1% RH
- Circuit working temperature:-10 to +65^{0}C
- Power supply: 12 to 30 Vdc.
- Nylon probe for sensor protection.
- IP65 protected ABS enclosure.
- Enclosure dimensions:90x60x36mm.
- Optional PC interface for configuration

I/O MODULES

DigiRail

The DigiRail I/O modules provide a simple and inexpensive way for integrating digital and analog signals into PLCs and SCADA systems via RS485 interface with Modbus RTU protocol.

- Two analog inputs (DigiRail-2A), 2 Relays (DigiRail-2R) or 4 counting digital inputs (DigiRail-4C).
- Accepts themocouples type J, K, T, E, N, R, S, B; Pt100 RTD; 0-20 mV, 0-50 mV, 0-5 V, 0-10 V; 0-20 mA, 4-20 mA.
- Sensor break detection for t/c, RTD & mV.
- Analog input resolution: 17 bits.
- User defined linearizion option for the analog inputs.
- Up to 4 digital counters inputs (DigiRail-4C) or 2 SPDT 3 A/250 Vac relays (DigiRail-2R).
- Power: 10-35 Vdc. Consumption:50 mA;
- RS485 (2-wire) Modbus RTU comm.
- Accuracy (at 25°C):±0.15% FS for Pt100, mV, V and mA.
- Isolation: 1000 Vac from digital or analog input to power or comm port.
- Windows software configurator.
- Dimensions: 71 x 77 x 19 mm.

DATA ACQUISITION, RECORDING AND SUPERVISION

*my*PCLab

***my*PCLab** is a very compact DAQ tool which connects to a PC via a USB port and monitors two universal input analog variables along with one digital input. From hobbyists to cientists, from simple technical tasks to complex engineering activities, ***my*PCLab** can be an invaluable tool for on-line monitoring and data logging in school, laboratory research, machine data recording and industrial understanding. It comes with an intuitive and easy-to-use Windows software which plots and records data, shows gauges, bargraphs abd digital readouts.

- Dual analog inputs for t/c, Pt100,mV,mA,V.
- A/D resolution: 12to 16 bits depending on sampling rate.
- Sampling: selectable from 8 to 128 second.
- Accuracy: 0.25% FS±1°C for thermocouples or 0.2% FS for other signals.
- Digital input:voltage level or dry contact.
- USB V1.1. Virtual Serial Port driver, Modbus RTU protocol.
- Windows software provides communication to multiple ***my*PCLab** devices.

DATA ACQUISITION, RECORDING AND SUPERVISION

FIELD LOGGER

This microprocessor based data acquisition and recorder can handle any analog input and will operate as an RTU linked to a PC for on line recording and supervision or as a stand alone data logger with real time clock and graph capabilities. DIN rail compatible it has 8 universal channels that will accept different input sensors at the same time and can be easily expanded.

- 8 universal analog channels per module.
- Accepts t/c J, K, T, E, N, R, S, B; 4-20mA, Pt100, 0-50 mV without hardware change.
- Internal memory (optional)for 128,000 recordings and real time clock.
- Input resolution: 13,000 levels.
- Accuracy: 0.25% FS±1°C for t/c or 0.2% FS for other signals.
- Acquisition rate: from 0.5s to 1 day.
- Power: 85-250 Vac, optional 24 Vdc.
- Alarms: 2 relays 3 A for the 8 channels.
- Digital input for remote START/STOP.
- RS-485, ModbusRTU, 19200 bps.
- 35 mm DIN rail mounting.
- ABS enclosure: 105x90x60 mm.

DATA ACQUISITION, RECORDING AND SUPERVISION

WEB SERVER

The **WS10** is targeted at the acquisition and transmission of data. It is capable of integrating instruments and sensors to the Internet and ethernet. The **WS10** comprises an ethernet interface, the TCP/IP protocol, 2 serial communication ports, 2 relay outputs and 4 analog or digital inputs.

As a Modbus RTU Master **WS10** can set and get information from external devices, and as a Modbus TCP Server or Gateway, can be easily integrated to SCADA systems.

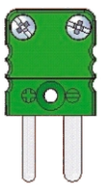
WS10 can serve dynamic HTML pages, send e-mail, monitor alarm conditions and communicate with SCADA software.

- Flash memory for HTML and Data Logging
- Comm ports: 1 RS232, 1 RS485, Ethernet 10BaseT.Optional: Internal V32 Modem
- Protocols: TCP/IP, PPP,HTTP,FTP, SMTP, DHCP, DNS, Modbus (TCP and RTU)
- Inputs:4 digital or analog (0-5V or 0-20 mA), 10 bits resolution.
- Outputs: 2 Relays SPST 3A/250 V.
- Power:85-250 Vca.
- Enclosure: 105x90x60mm, DIN rail mount

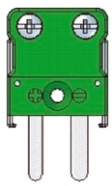
Miniature Connectors

HAMI-THERM

200° C
Standard
CMP-XX



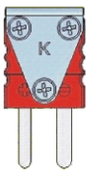
200° C
Locking
CMLP-XX



200° C
High Temp
CMPH-XX

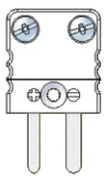
2-Pin
425° C
Ultra HT

CMPU-XX



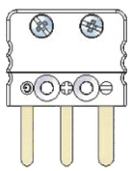
2-Pin
650° C
Ceramic

CMPC-XX



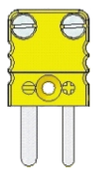
3-Pin
200° C
Standard

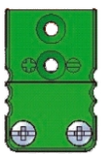
CMPT-XX



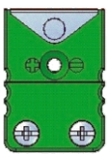
4-Pin
200° C
Duplex

CMPD-XX





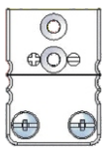
CMJ-XX



CMLJ-XX

CMJH-XX

CMJU-XX



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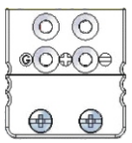
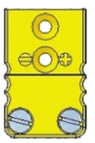


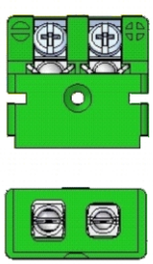
CMJT-XX



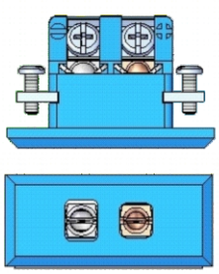
CMJD-XX

Standard Panel Inserts

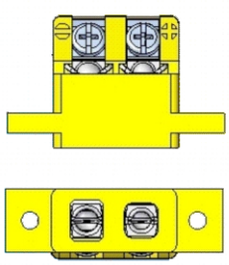
2-Pin
200° C
Standard
PSI-XX



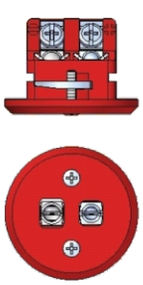
2-Pin
200° C
Flanged
PSIFB-XX



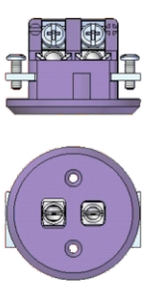
2-Pin
200° C
Lugged
PSIL-XX



2-Pin
200° C
Round
Front Mount
PSIR-XX

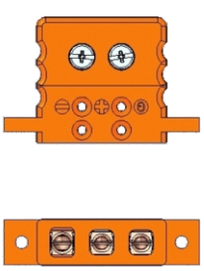


2-Pin
200° C
Round
Rear Mount
PSIRB-XX



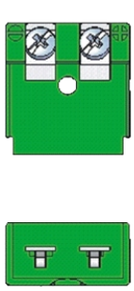
3-Pin
200° C
Lugged

PSITL-XX

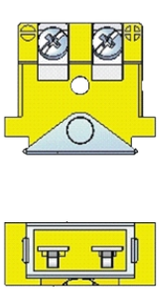


Miniature Panel Inserts

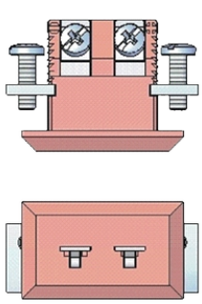
2-Pin
200° C
Standard
PMI-XX



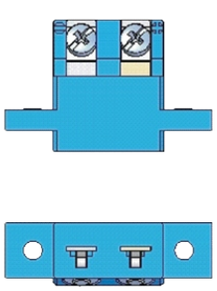
2-Pin
200° C
Locking
PMLI-XX



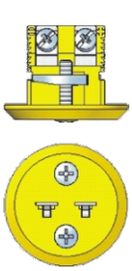
2-Pin
200° C
Flanged
PMIFB-XX



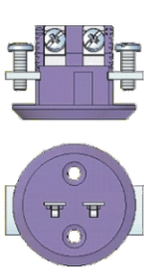
2-Pin
200° C
Lugged
PMIL-XX



2-Pin
200° C
Round
Front Mount
PMIR-XX

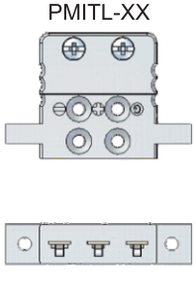


2-Pin
200° C
Round
Rear Mount
PMIRB-XX



3-Pin
200° C
Lugged

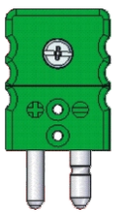
PMITL-XX



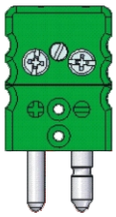
Standard Connectors

HAMI-THERM

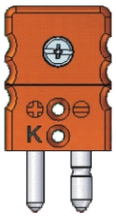
2-Pin
200° C
Standard
CSP(L)-XX



2-Pin
200° C
Jab in
CSPQ(L)-XX



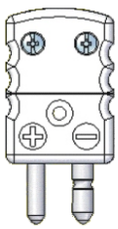
2-Pin
350° C
High Temp
CSPH(L)-XX



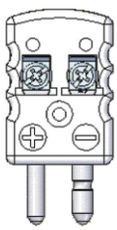
2-Pin
425°C
Ultra HT
CSPU(L)-XX

2-Pin
650° C
Ceramic

CSPC(L)-XX

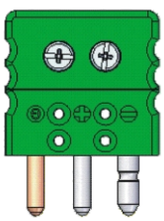


2-Pin
650° C
Ceramic
Jab-in
CSPCQ(L)-XX



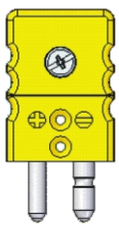
3-Pin
200° C
Standard

CSPT(L)-XX

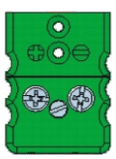


4-Pin
200° C
Standard

CSPD(L)-XX



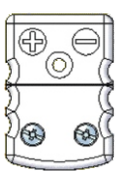
CSJ-XX



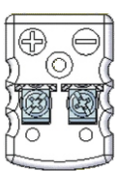
CSJQ-XX

CSJH-XX

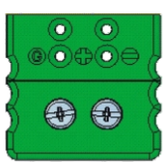
CSJU-XX



CSJC-XX



CSJCQ-XX



CSJT-XX

CSJD-XX

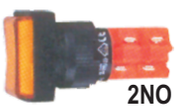
SUMO

LAS-SERIES PUSHBUTTON SWITCHES

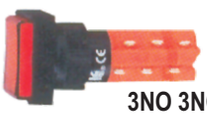
LAS 1 Φ18	18 x 18	18 x 24
LAS 2 Φ18	14 x 14	14 x 18
LAS 3 Φ18	12 x 12	12 x 16
LAS 4 Φ18	9 x 9	9 x 12

PILOT LAMP

1NO 1NC



2NO 2NC



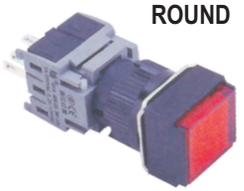
3NO 3NC

4NO 4NC

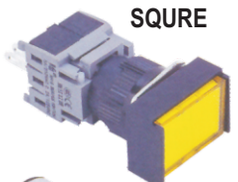
ROUND

SQUARE

ROUND



SQURE



RECTANGULAR

BUZZER

Characteristics

- The installation hole's diameter of the series 8, 10, 12, 16 mm
- Every pushbutton can be 1~4 NO + NC contact.
- Use the gold - plated silver contact or silver contact.
- The Front shape : Round, Rectangular, Square Many type are available: Indicator pilot lamps, pushbuttons, Illuminated
- push buttons, Selector switches, and Key lock switches.
  IP Protective Degree : IP40, IP 67.

ORDERING INFORMATION

LAS (X) □ – □□ □ / □ / □ / □						
Code of series	the front shape : Y round F square J rectangular M mushroom DF big square DJ big rectangular	Contact Structure : 11 1NO 1NC 22 2NO 2NC 33 3NO 3NC 44 4NO 4NC	Code name of derivative Products : D pilot lamp Z alternate type Y key lock type X selector type The momentary type is without letter	Colour : R red G Green Y Yellow O Orange B Blue W white B black C clarity	Selector and key lock Series : 2 two position 3 three Position	the specific rating of the lamp with illuminated button is included in the illuminated unit rating form

Specifications		
Operating Temperature		-25°C ~+ 55°C (on freezing)
Operating Humidity		45 ~ 85 % RH (on condensation)
Contact Material		- silver - silver CdO gold - plated silver
Contact Pressure		≈ 0.3N (30g)
Contact Resistance		⩽50mΩ
Insulation Resistance		⩾100MΩ
Rate insulation Voltage		250V, AC/DC
Dielectric Strength	Between contact and lamp terminals	2000V, AC 50Hz, 1min
	Between terminals of the same pole	1000V, AC 50Hz, 1 min
	Between terminals of different pole	2000V, AC50Hz, 1min
Vibration Resistance		50Hz, Amplitude 1.2mm p-p
Shock Resistance		⩾10g in all tree planes
Life	Mechanical	1, 000,000 times
	Electrical	⩾30, 000 times
Terminal		Diameter of welded wire : 2x0.8mm max Area of copper wire: 0.75mm²max
Operating Force		200gf~500gf (according to the quantity of switch units
Operating Travel		≈ 3mm (pushbutton)
IP Protective Degree		IP40 Ip67

SUMO

LED PUSH BUTTON
WITH CONTACT BLOCK
ADDED ON TYPE

Voltage : 240V AC
Diameter : 22.5 mm

Also available in 16 mm
without contact block

Working Envoirnment

Temp. Range : -25°C to +55°C
Humidity : ≤ 93% non-condensing
Works Normally from 3~60Hz
Vibration: ≤ 0.7g.
Pollution Class : 3
Install Sort : III
Model Marked “TH” for moiture resistance

Specification

Insulation resistance : ≥ 2 Meg (∩) Ohms
Residual Voltage : 2.5 KV AC for 1 min. (max)
Voltage variation : ± 20%
Working life : 30,000 Hrs. Continuous
Light Intensity : ≥ 60 cd/m2
Relative leakage index : CTI≥100
Protection Standard : IP65
Frequency AC : 50~60Hz

BUZZER WITH FLASHER
22.5 mm & 16 mm

Available in :
240 VAC / 24 VAC / DC.

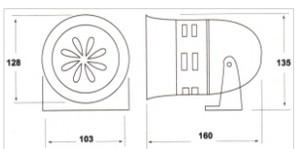
LED PANEL INDICATOR
22.5 mm & 16 mm

Voltage Available :

12 VAC / DC, 24 VAC / DC, 110 VAC & 240 VAC
other voltages available on request.

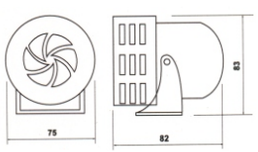
MOTOR SIREN

Type : MS-290
Volt. : DC 12V, 24V
AC 110V, 220-240V



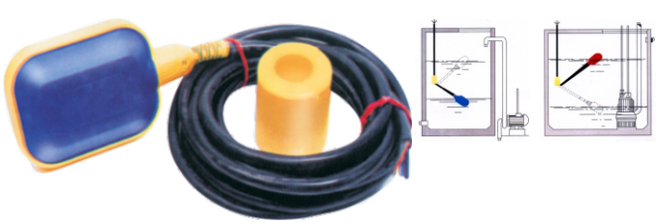
MINI MOTOR SIREN

Type : MS-190
Volt. : DC 12V, 24V
AC 110V, 220-240V



REOLVING WARNING LIGHT

Type : LTE-10
Volt. : DC 12V, 24V
AC 110V, 220-240V
Colour : Red, Yellow, Green, Blue

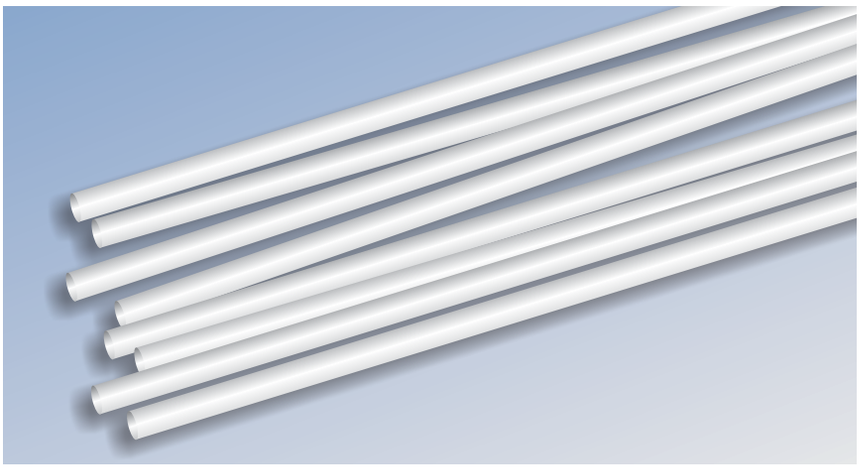


FLOAT SWITCH WITH 2 MTS & 5 MTS CABLE

WARNING LIGHT

Type : LTA-T-1, LTA-W-1, LTA-WJ-1
Volt. : DC 12V, 24V
AC 110V, 220-240V
Colour : Red, Yellow, Green, Blue, White
Available : On - Off / Flashing with or without Buzzer
From : 1~5 Stacks

CERAMIC TUBES FOR
THERMOCOUPLE ASSEMBLIES



Available Sizes

O.D 24 MM x I.D 18 MM x 700 MM
O.D 24 MM x I.D 18 MM x 1030 MM
O.D 20 MM x I.D 15 MM x 700 MM
O.D 20 MM x I.D 15 MM x 1030 MM

With Inner Tube & Insulator

PROPERTIES		UNITS	TEST	CUMITUFF 94	CUMITUFF 95W	CUMITUFF 98	CUMITUFF 995
CHEMICAL COMPOSITION				**94% Alumina**	**95% Alumina**	**98% Alumina**	**99.5% Alumina**
PHYSICAL	DENSTTY	gm/cc	ASTM C373-88 (2006)	3.70	3.70	3.80	3.85
	Colour	--	--	White	White	White	Ivory
	Water Absorption	%	ASTM C373-88 (2006)	0	0	0	0
MECHANICAL	Elastic Modulus	CPa	ASTM C1198-08	300	320	340	370
	Poisson's		ASTM 1198-08	0.21	0.22	0.22	0.22
	Flexural Strength	MPa	ASTM C1161-02c (2008)	350	340	330	370
	Compressive Strength	MPa	ASTM C1424-04	2100	2300	2500	2600
	Fracture Toughnes	$MPa\text{-}m^{1.5}$	ASTM C1421 01b (2007)	(4-5)	(4-5)	(4-5)	(4-5)
	Vickers (Rockwell) Hardness	CPa 1000g (R45N)	ASTM CI327-03	13.2 (78)	13.2 (78)	14.2 (81)	14.8 (82)
THERMAL	Thermal Conductivity	W/m-k	ASTM C1470-06	22.4	23	27.3	30
	Coefficient Of Thermal Expansion... 25-1000OC	10^4/C	ASTM C 1470-06	8.2	8.2	8.2	8.3
	Max Use Temperature	°C	No load condition	1700	1600	1700	1750
	Thermal Shock Resistance ΔTc	°C	ASTM CI525-04	250	250	250	200
ELECTRICAL	Dielectric Strength	ac-kV/ mm (3.18mm)	ASTM D149-97a (2004)	8.5	8.7	8.5	8.7
	Dielectric Loss	25°C 1MHZ	ASTM D2520-01	0.0004	-	0.0001	0.0001
	Volume Resistivity	25°C ohm-cm	-	$>10^{14}$	-	$>10^{14}$	$>10^{14}$
		500°C ohm-cm	-	$4x10^4$	-	$2x10^{10}$	$2x10^{10}$
		1000%. ohm-cm	ASTM D1829	$5x10^4$	-	$2x10^4$	$2x10^5$
Prime characteristics				Excellent electrical Insulation & Metallised Ceramics	Moderate wear & Corrosion resistance, good Electrical Insulation & Thermal Conductivity	Good Ballistic Properties	Excellent Wear. Corrosion Resistance & Excellent Ballistic Properties

The Lava

FEATURES

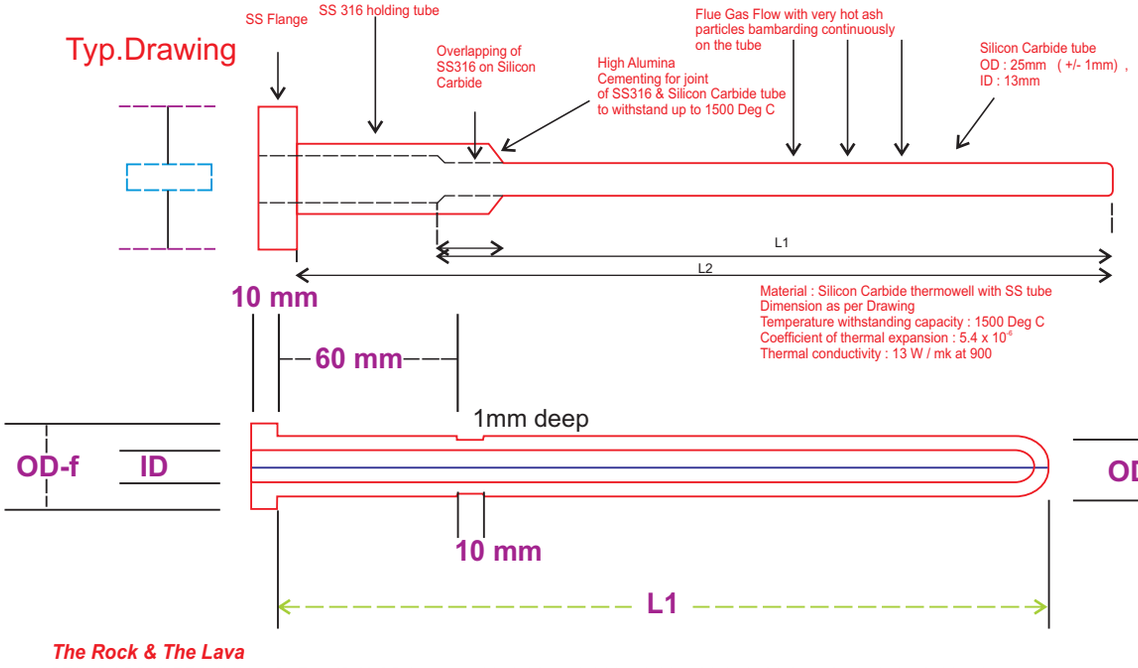
- QUICK RESPONSE
- MAINTENANCE FREE
- PROLONGED SERVICE LIFE
- HIGH OXIDATION RESISTANCE
- NO CONTAMINATION OF THE BATH
- EXCELLENT THERMAL SHOCK RESISTANCE
- LOW THERMAL EXPANSION COEFFICIENT
- NO CORROSION FROM MOLTEN ALUMINUM

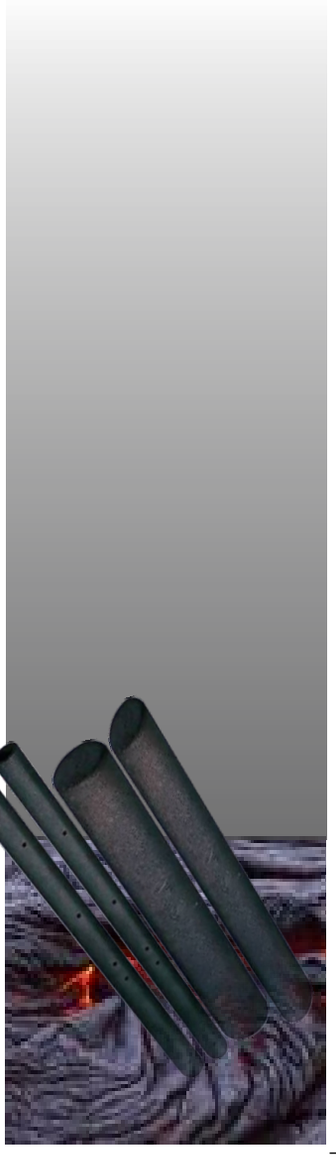
The Ultimate in thermocouple tube for molten metals, Lava Tube is ultimate in thermal protection for Aluminum industries, also Suitable for other molten metal like Zinc & Lead also. Any molten metal is highly alkaline corrosive liquid and it corrodes any metal protection tube of thermocouple. The Lava is highly suitable thermocouple protection tube having high corrosion resistance, Non wetting, and will withstand thermal shock at high temperature Without crack or break
After years of research & industries feedback, The Lava is developed to overcome industry's sensing problem in molten metal & frequent failure resulting break down and production loss. The Lava is available in standard sizes also can be made as pre customer's requirement with MOQ restriction

DESCRIPTION

Closely resembling to metal Lava is a new unique engineering ceramic. Due to its features like superior strength at high temperatures, excellent thermal shock resistance, and no chemical reaction to molten aluminum, it is good choice as thermocouple protection tubes and immersed heater protection tubes for use in molten aluminum baths even where there are rapid temperature fluctuations
Lava has solved the existing problem of brittleness of ceramic thermocouple tubes while still retaining their properties of heat, abrasion and corrosion resistance. Moreover, due to impermeable and non-wetting surface of Lava thermocouples assemblies need no daily washing or coating thereby providing maintenance free use in molten aluminum baths, much longer life than any other protection tube
Lava thermocouple protection tubes require no **pre - heating** due to thermal expansion coefficient and thermaP'/* shock resistance. Their low heat conductivity helps to prevent temperature drop in the molten aluminum bath and contributes to energy conservation, since the tubes are of ceramic material, there is no iron pick-up to create contamination in aluminum
The Rock Thermocouple protection tube is highly suitable for high temperature application ideal for Incinerator, flue gas, acid, and other chemicals. The Rock can Withstand high velocity flue gas particles coming out of Boilers while conventional Metal sheath get corroded very fast and cause frequent sensor failure, The Rock is developed after study of industries requirement & feedback.

The Rock protection tube is ideal solution for long life and available with standard size & also available as per customer requirement with MOQ restriction.





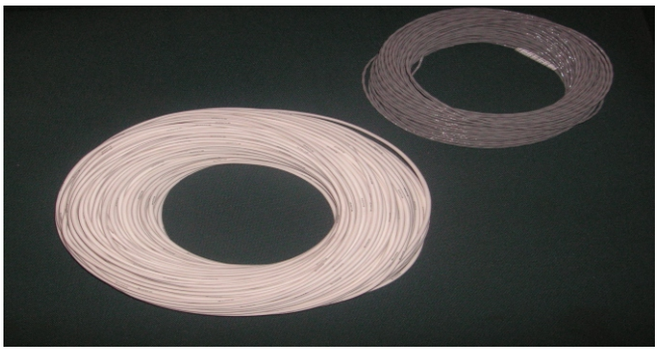
The Rock & The Lava

STANDARD SIZES AVAILABLE : **ID X OD in mm** : 20x8 / 25x13 / 30x18 / 35x23 / 40x26 / 45x25 / 50x35 & 60x40 mm in
LENGTH : 660 mm / 1000 mm / 1500 mm/

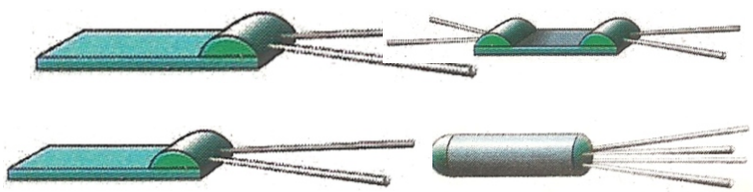
NOTE :- OTHER SIZES ON REQUIREMENT

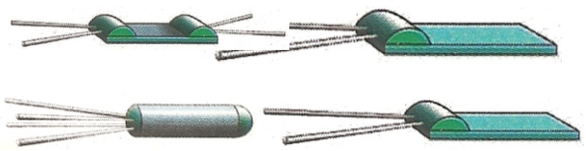
THERMOCOUPLE CABLE

PTEF / PTEF & PTEF / SILICON CABLE



Film Type and Wire Wound RTD





CONNECTORS

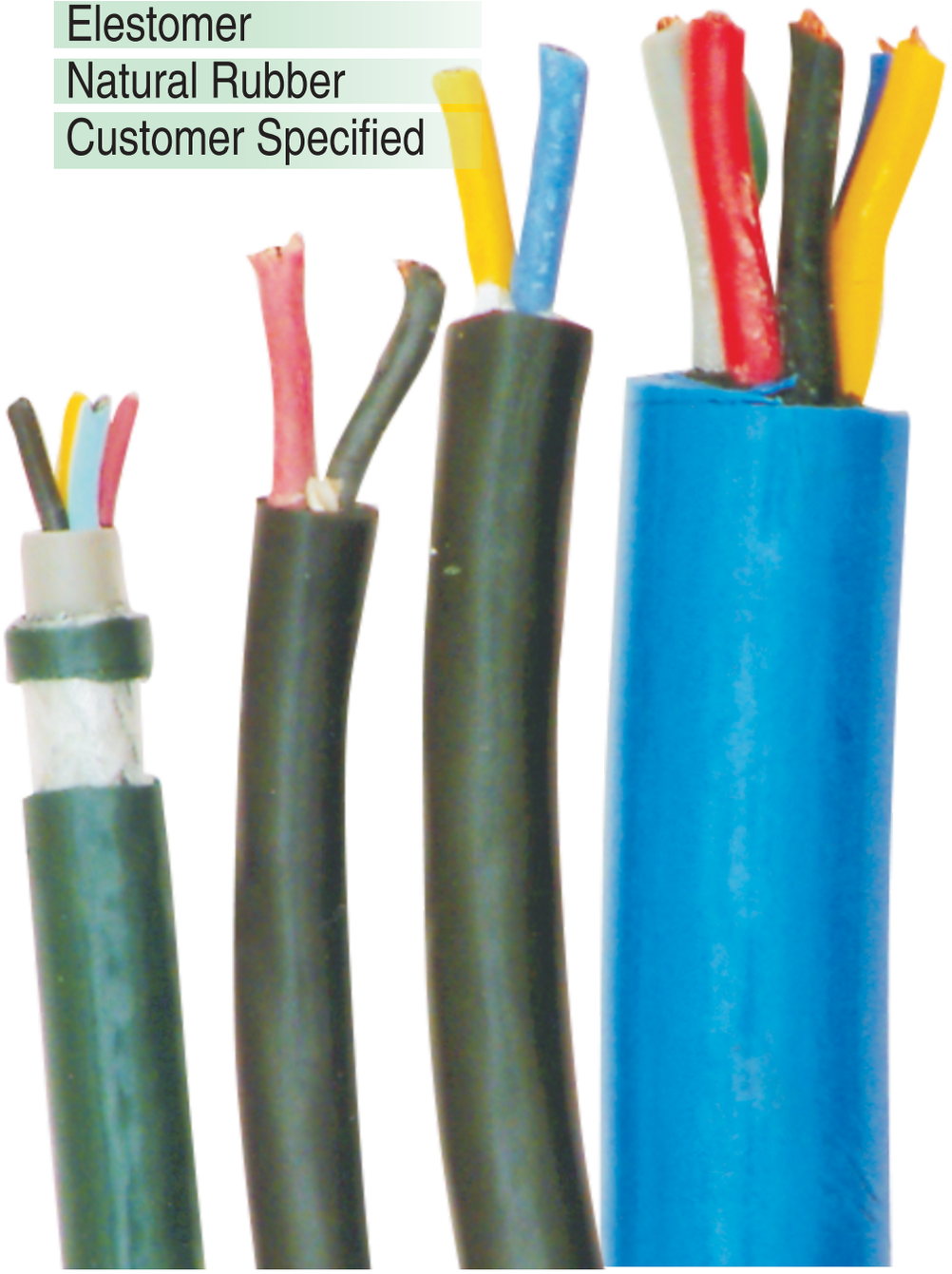
THERMOCOUPLE CABLE

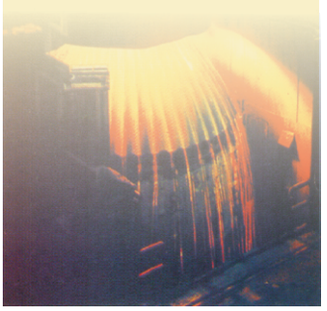
HEAT TRACER T/C CABLE

CABLES

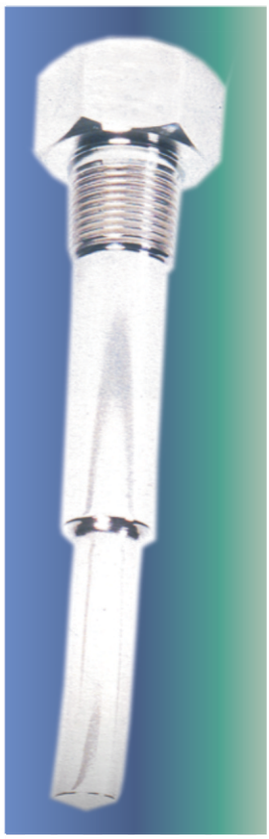
Customer specified cable can be produced from single core to 100 cores in different conductor sizes & Sheath materials & combination there of;
For signal cable, instrumentation cable,
RTD cable and thermocouple / compensating cable.

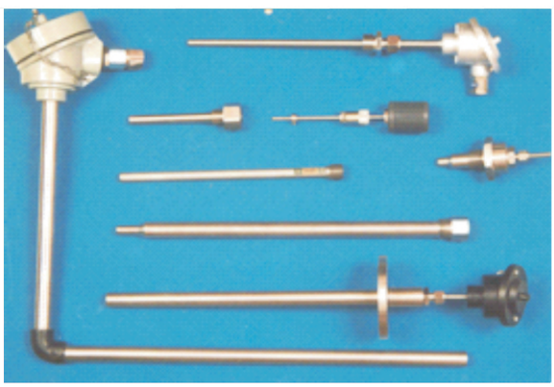
- PTFE
- Silicon Rubber
- Fibreglass
- PVC
- Elestomer
- Natural Rubber
- Customer Specified

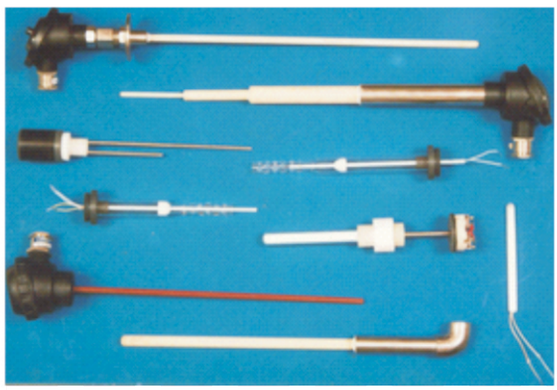




Thermocouple Assemblies & Thermowells



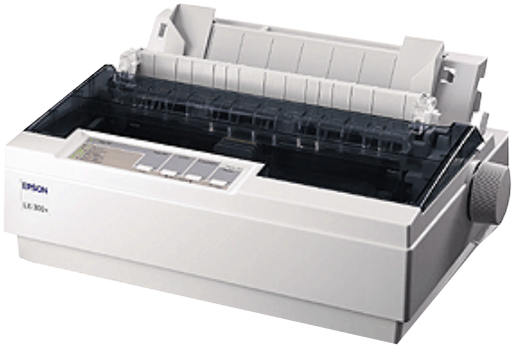


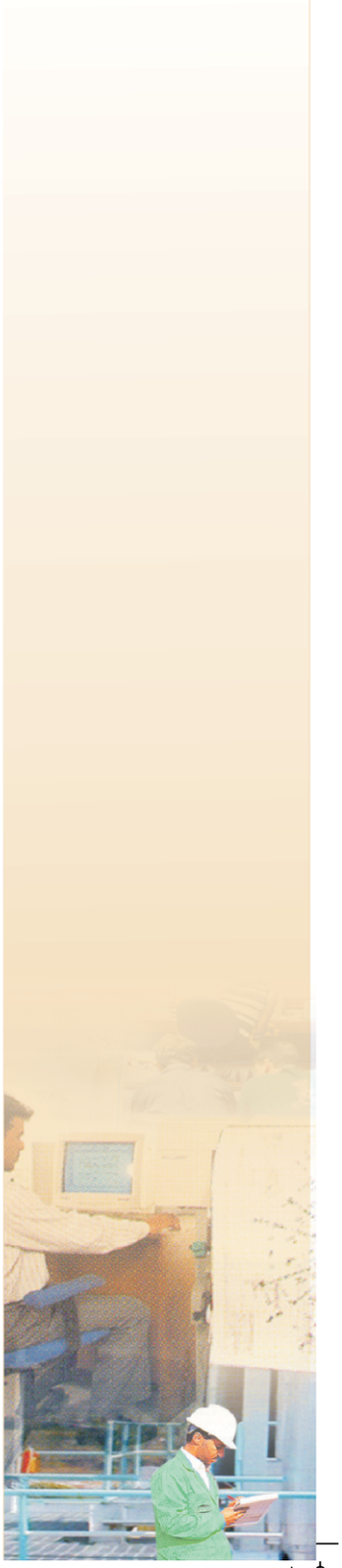


Manufactured as per customer requirement in different sizes & sheath material.
Mineral insulated from 0.5 mm to 8mm OD simplex / Duplex Isolated or grounded junction in SS316 / SS321 / Inconel-600 Sheath and Beaded Insulated Assembly.
Thermowell : Barstock / Fabricated - straight or tapered in SS316 / SS321 / Inconel-600 / Hastalloy - B/C / Titanium / Tentalum / Zirconium & Other Material

Thermocouple Sensor Calibration system

- Specially designed for temp. Sensor Calibration
  suitable for up to 1100^{0}C Temp. (Thermocal-8) 400^{0}C (Thermocal-3)
  All in one compact unit consist of following features
- Up to 7 thermocouple +1 Master can be calibrated at a time. (Thermocal-8)
  2 Thermocouple + 1 master (Thermocal-3)
- Master PID controller Interface for accurate heating & controlling
  Optional : Computer Interface for remote setting of parameters + Monitoring
  Profile control for multi - points calibration
- 8 Channel scanner with RS 232 Interface to log result with
  programable duration from 1 min. to 99min. (Thermocal-8)
- On Line logging options.
- External 80 column printer interface with dedication data
  interface to store up to 450 data of 16 channel with RTC with
  customised header and footer for direct printing or storing and
  printing later for (Thermocal-8)
- Computer Interface with Software to monitor and store data
  as well export to EXCEL, WORD, RTF etc.
- Isothermal Inconel - 600 block with 8 pockets of diff. sizes and diff. daimeters
  High temp. Thermal Insulation to minimize outer case
  temp. max 5^{0}C above embient.





LAB FURNACES

BLF-1200

Compact Bottom Loading Lab Furnace for 1200°C ideal for R & D application & ceramic industries like Dis integration, Test & Analysis of Advance Ceramic Sample, Glass melting, Refractory porosity, Long term temperature test, Firing & Sintering, Semi conductor Industries for Annealing silicon, Silicon carbide & Nitride samples. Furnace have electrically operated elevator for ease of loading / unloading operation furnace uses latest medium wave infrared technology controlled by Micro Processor Based, fuzzy logic PID control with programmable profile for 2 Pattern of 8 Step each for programming rate of Temp rise & hold time (Ramp / Soak), RS-232 Communication port is provided for on-line monitoring / controlling & Data logging with software provided, multiple using can be monitor using same software (upto 30 diff. Furncacesmodbus RS-485 interface in place of RS-232 fully insulated for Electrical & Heat.

Power	:	230 VAC ± 10% 50 Hz, 2000W.
Size	:	485mm (L) 325mm (D) 690mm (H)
		Weight : 26Kgs. Apx.
Option :		Inert Gas / Vaccum Atmosphere
		1400°C & 1800°C Range.

VQTF-1200

Compact Lab Furnace specially developed for R&D usage for Sampling & Testing using vaccume or insert atmosphere suitable for 1200° C, using latest medium wave infrared technlogy controlled by Micro Processor Based, fuzzy logic PID controller with programmable profile for 2 Pattern of 8 Step each for programming rate of Temp rise & hold time (Ramp / Soak), RS-232 Communication port is provided for on-line monitoring / controlling & Data logging with software
Provided, multiple units can be monitor using same software
(upto 30 diff. Furncaces using modbus RS-485 interface in place of RS-232) fully insulated for Electrical & Heat.

Power	: 230 VAC ± 10%, 50 Hz, 2000W.
Dimeasins	: 460mm (H) 302 (W) 405 (D)
Quartz Tube	: OD: 50mm ID: 45mm Length : 700mm
Weight	: 24Kg. Approx

TLF - 1200

Compact Top Loading Lab Furnace suitable for melting application using Graphite Crucible for 1200°C Ideal for R&D, Glass Industries, Jwellery industries. Furnace uses high temp. heating elements controlled by Micro Processor Based, fuzzy logic PID controller with programmable profile for 2 Pattern of 8 Step each for programming rate of Temp rise & hold time (Ramp / Soak), RS-232 Communication port is provided for on-line monitoring / controlling & Data logging with software provided, multiple units can be monitor using same software (upto 30 diff. Furncaces using modbus / RS-485 interface in place of RS-232) fully insulated for Electrical & Heat.

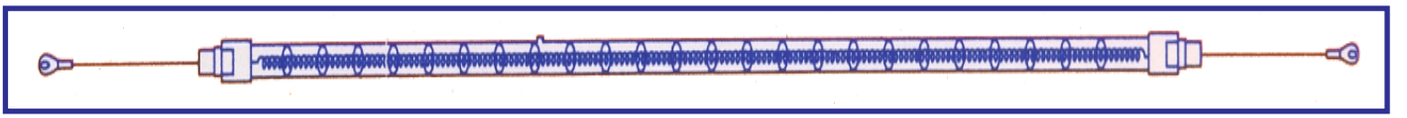
Power	:	230 VAC ± 10%, 50 Hz, 2000W.
Dimension	:	295mm(L) 250mm (D) 475mm (H)
Weight	:	15 Kgs. Apx

FLF - 1200

Compact front loading Lab Furnace suitable for 1200°C using latest medium wave infrared technology controlled by Micro Processor Based, fuzzy logic PID controller with programmable profile for 2 Pattern of 8 Step each for programming rate of Temp rise & hold time (Ramp / Soak), RS-232 Communication port is provided for on-line monitoring / controlling & Data logging with software provided, multiple units can be monitor using same software (upto 30 diff. Furncaces using modbus RS-485 interface in place of RS-232) fully insulated for Electrical & Heat. Electrically operated front door for opening / closing for ease of putting & removing jobs.

Power	:	230 VAC ± 10%, 50 Hz, 2000W.
Size	:	340mm(L) 430mm (D) 416mm (H)
Weight	:	26 Kgs. Apx

Infrared Heater - Short wave

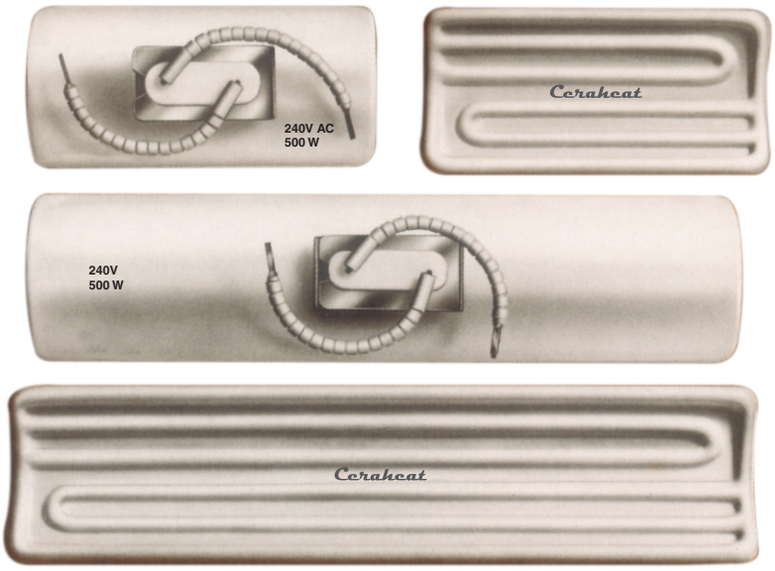


Standard range of short wave IR Heater

Code	Heated HL (mm)	Length OL (mm)	Overall Length (W)	Wattage Voltage (V)
SW500	127	212	500	240
SW1000	254	348	1000	240
SW1600S	406	500	1600	240
SW1600D	406	500	1600	415
SW2000S	508	626	2000	240
SW2000D	508	626	2000	415
SW2500D	635	728	2500	415
SW3000S	508	626	3000	240
SW3000D	765	1120	3000	415

All the above lamps are with round ceramic cap and 100mm long lead wire at both ends.
For horizontal mounting application only

Ceraheat



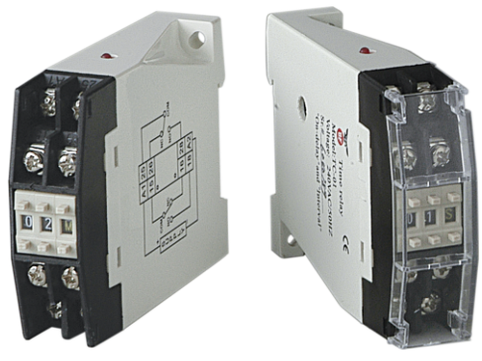
Ceraheat Ceramic I/R heaters for Industrial Heating / Baking are available in following wattage and sies

SIZE	WATTS
245 x 60HSC	650W 1000W
120 x 60HSC	350W 500W
120 X 120 HSF	500W 1000W

Also available with embedded T / couple “K”

TC-01 MULTI RANGE TIMER

CE



FEATURES:

- Selectable On / Off delay
- Selectable time range (Hr, Min & Sec)
- Din rail Mounting/ Screw Mounting
- Slim space saving construction

FUNCTION:

OFF DELAY:

When input power is applied timing begins & output relay gets energized. At the end of the preset time, the relay de-energizes. The timer is reset when the input power is removed.
Reset: removing input voltage resets the time delay and output relay.

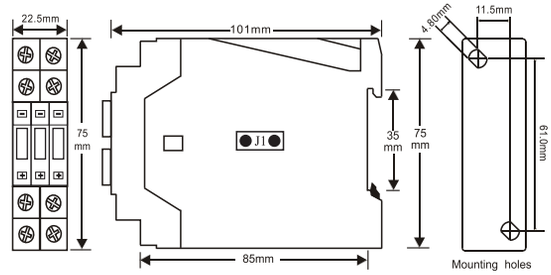
ON DELAY:

When input power is applied timing begins, during which the output relay remains de-energized.
At the end of the pre selected time, relay energizes.
The output relay is de-energized when power is
Reset: removing input voltage resets the time delay and output relay. removed, thus resetting the timer for the next cycle.

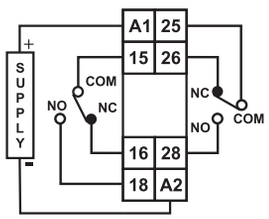
SPECIFICATIONS:

SUPPLY VOLTAGE	:	*24V AC/DC~240VAC/DC*
DELAY MODES	:	On delay/Off delay *Jumper Selection*
TIME RANGE	:	99 Sec; 99 Min; 99 Hour (Selectable by push wheel Switch)
OUT PUT	:	2 Relay, 1 C/O 1 Amp. Resistive Load
LED INDICATION	:	Flashing (while timer is running) Continuous on (while RELAY ON)
RESET	:	On interruption of power
MOUNTING	:	DIN rail mounting
SIZE (in mm)	:	22.5 (W) X 75 (H) X101 (D)
TEMPERATURE	:	0 to 50 □C
HUMIDITY	:	85% RH
WEIGHT	:	115 grams

DIMENSIONS :



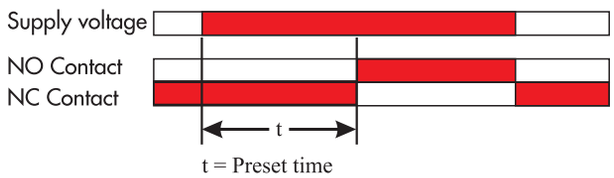
TERMINAL CONNECTIONS:



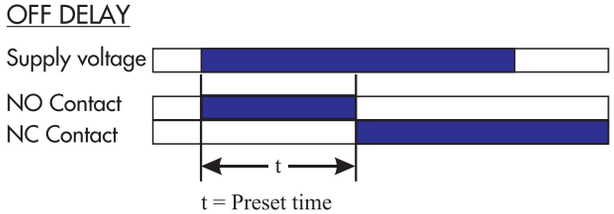
TERMINAL	DESCRIPTION
A1	L TIMER SUPPLY
A2	N TIMER SUPPLY
15	COM
16	NC — RELAY CONTACT 1
18	NO
25	COM
26	NC — RELAY CONTACT 2
28	NO

OPERATING MODES:

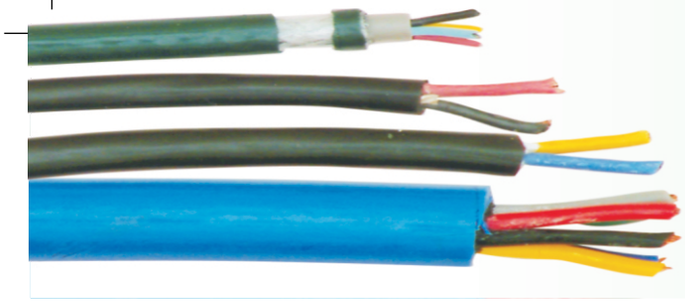
ON DELAY



OFF DELAY



NOTE: ON delay or OFF delay jumper selectable. (Remove jumper J1 for ON delay mode)



Colour Codes For Thermocouple Extension and Compensating Cable

THERMOCOUPLE CONDUCTOR COMBINATION TYPE	EXTENSION AND COMPENSATING CABLE TYPE		INTERNATIONAL COLOUR CODE **TO IEC 584.3:1989** **BS 4937 Part 30:1993**	INTERNATIONAL COLOUR CODE TO IEC 584.3:1989 **BS 4937 Part 30:1993** FOR INTRINSICALLY SAFE CIRCUITS	Redundant natinal colour coding for insulation of thermocouple extension and compensating cable.				
	EXTENSION CABLE	COMPENSATING CABLE			**BRITISH** TO **BS 1843**	**AMERICAN** TO **ANSI/MC96.1**	**GERMAN** TO **DIN 43714**	**FRENCH** TO **NFC 42324**	**JAPANESE** TO **JIS C 1610-1981**
K	KX								
		KCA							
		KCB							
T	TX								
J	JX								
E	EX								
N	NX								
		NC							
R		RCA							
		RCB							
S		SCA							
		SCB							
B		BC							


S-WEINA
BLF-1200

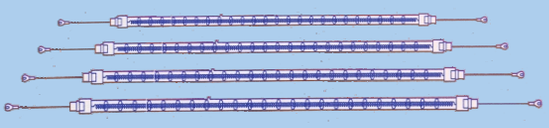

S-WEINA
VQTF-1200


Thermo Cal
novus
RHT
novus
USB

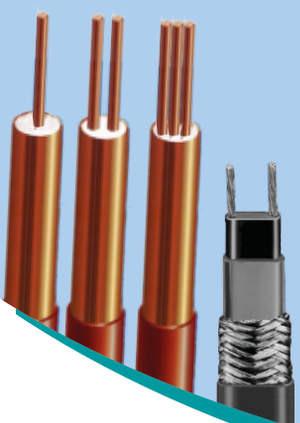

S-WEINA
FLF-1200

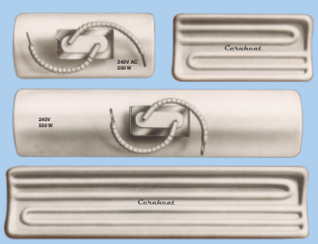

S-WEINA
TLF-1200

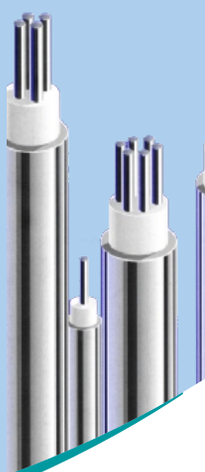
Think of Temperature sensing
Think british Electricals



E-mail:sales@britishelectricals.com
www.britishelectricals.com







british ELECTRICALS

237/8,New Sonal Link Indl. Estate, Bldg. No.2, Link Road,
Malad (West), Mumbai - 400 064
Tel.: 91-22-4062 0000 (Board) Fax : 91-22-4062 0099
E-mail: sales@britishelectricals.com
Website : www.britishelectricals.com

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