Temperature Instruments & Sensors
Timer, Counter

JAS-ANZ
ICS
ISO 9001 : 2008
Reg. No.: RQ91/541

ION ELECTRICALS PVT. LTD.
Business in Piezo Buzzers and
Digital Time / Temperature Instruments

ION ELECTRICALS PVT. LTD.

आयन् इलेक्ट्रिकल्स प्रा. लि.

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PROFILE

Way back in 1984, ION started business in electronic piezo buzzers when the technology was at it's infancy in India. Ever since, ION has maintained the **Number 1 Position** in the Indian Buzzer market.

ION is also a name to reckon with the business of precise and accurate temperature sensors, indicators, Controllers, Timers, Lift Controller, Weekly settable Timer with 32/50 programes and custom designed instruments.

To effectively support the objectives of thrust on R & D and top quality products, ION has engaged a team of qualified engineers, skilled assemblers and also has a separate full time R & D department. ION has strict quality checks right from material procurement to the finished product.

ION's business over the years has grown across the country due to excellent support by a dealer network which has stood the test of time. The integrity of promoters and the reliability of products have contributed to the strong bonds of understanding between the customers and the company.

ION ELECTRICALS PVT. LTD. have the prestigious International Quality Standards ISO 9001:2008 Certification. This certificate has been awarded to ION for design, Manufacture and supply of electrical and electronic products. The joint accreditation system of Australia and New Zealand has conferred upon this accreditation in recognition of our fulfilling its stringent quality norms.

In Conclusion :-

ION is well known for its Quality, Guarantee and Strong Bond with its Customers.

MULTI -1
(Single Set Point)

Selectable On / Off control or proportional action
Logic : Heating / Cooling (same models)
Hysterisis / Diff. : 1 to 99°C (selectable)
Time Delay : 1 to 255 sec. (adjustable)
Cycle time : 1 to 50 sec. (for time prop. mode)
Band width : 0 to 50 % (for time prop. mode)
Display : 4 digit, 7segment RED LED
Range : -100°C to 400°C for Pt 100 &
-99.9 to 199.9 for 0.1 °C (RTD)
0 to 750°C for J type thermocouple
0 to 1200°C for K type thermocouple
Cycle time & offset adjustment for proportional action can be done by front keys
Size (mm) : 96 (H) x 96 (W) x 125 (D)
(Also available in 72 x 72 & 48 x 48)

MULTI -PRO 96/72
(Dual Display with Single Set Point)

Selectable On / Off control or proportional action with set point indication
Logic : Heating / Cooling (same models)
Hysterisis / Diff. : 1 to 99°C (adjustable)
Time Delay : 1 to 255 sec. (adjustable)
Cycle time : 1 to 50 sec. (for time prop. mode)
Band width : 0 to 50 % (for time prop. mode)
Display : 4 digit, 7segment RED LED
Range : -100°C to 400°C for Pt 100 (RTD)
0 to 750°C for J type thermocouple
0 to 1200°C for K type thermocouple
Cycle time & offset adjustment for proportional action can be done by front keys
Size (mm) : 96 (H) x 96 (W) x 125 (D)
(Also available in 72 x 72)

OMNI EXTRA DTC72V

Logic : Heating / Cooling (selectable)
Hysterisis / Diff. : 0 to 9°C (adjustable)
Alarm : Above / Below 0 to 9°C (adjustable)
Time Delay : 0-9 min., adj. - Cooling / 1-9 sec., adj. - Heating
Size (mm) : 72 (H) x 72 (W) x 125 (D)

Model	Input Sensor	Control Range	Resolution
DTC72V	Pt 100	-25 to 400°C	1.0°C
DTC72VP1	Pt 100	-9.9 to 99.9°C	0.1°C
DTC72VP2	Pt 100	-99 to 250°C	1.0°C

MULTI -42
(Dual Set Point)

Selectable On / Off control or proportional action
Logic : Heating / Cooling (same models)
Hysterisis / Diff. : 1 to 99°C (adjustable)
Time Delay : 1 to 255 sec. (adjustable)
Cycle time : 1 to 50 sec. (for time prop. mode)
Band width : 0 to 50 % (for time prop. mode)
Display : 4 digit, 7segment RED LED
Range : -100°C to 400°C for Pt 100 (RTD)
0 to 750°C for J type thermocouple
0 to 1200°C for K type thermocouple
Cycle time & offset adjustment for proportional action can be done by front keys
Size (mm) : 96 (H) x 96 (W) x 125 (D)
(Also available in 72 x 72 & 48 x 48)

MULTI -PRO 96/72
(Dual Display with Two Set Point)

Selectable On / Off control or proportional action with set point indication
Logic : Heating / Cooling (same models)
Hysterisis / Diff. : 1 to 99°C (adjustable)
Time Delay : 1 to 255 sec. (adjustable)
Cycle time : 1 to 50 sec. (for time prop. mode)
Band width : 0 to 50 % (for time prop. mode)
Display : 4½ digit, 7segment RED LED
Range : -100°C to 400°C for Pt 100 (RTD)
0 to 750°C for J type thermocouple
0 to 1200°C for K type thermocouple
Cycle time & offset adjustment for proportional action can be done by front keys
Size (mm) : 96 (H) x 96 (W) x 125 (D)
(Also available in 72 x 72)

MULTI PID/AUTO TUNE

Specifications

1) Input sensor : PT-100 (RTD 1 degree resolution, RTD1 0.1 Degree resolution) J-type, K-type Thermocouple, Current
2) Output : PID 4 To 20 mA .
3) Differential : 1 to 100 deg
4) Proportional band: 0 to 100%.
5) Time Delay : 1 to 255 seconds
6) Cycle time : 1 to 50 seconds.
7) Range: - 99 to 400°C for RTD, 0 to 750°C for J, 0 to 1200°C / 0 to 999°C for K
8) Cut-out : 70 x 70 mm / 91 x 91 mm.
9) Power consumption : 10 VA max.
10) Display : 4 digit 7-seg, red led display.
11) Supply : 220 V AC +/- 15% 50 Hz

Applications : In Oven, Incubator, Boiler, Cooling Chambers, Water Bath, Deep Freezer, Cooling Plant, Scientific Laboratory Equipment, Packing Industries, Chemical Industries

TEMPERATURE CONTROLLERS

ION ELECTRICALS PVT. LTD.

DTI48
(Size Available in 72 & 96)

Temperature Indicator

Display : 3 digit, 0.5" 7 segment RED LED
Accuracy : 1% of the span
Op. Voltage : 230 V AC ± 15%, 50 Hz
Size (mm) : 48 (H) x 48 (W) x 105 (D)
Cutout (mm) : 45 (H) x 45 (W)

Model	Input Sensor	Control Range	Resolution
DTI 48 P2	RTD (Pt 100)	-99.9 to 199.9°C	0.1°C
DTI 48 P4	RTD (Pt 100)	-100 to 400°C	1°C
DTI 48 J	J type Thermocouple	0 to 700°C	1°C
DTI 48 K	K type Thermocouple	0 to 1200°C	1°C

MULTI 49
Also available in 72 x 72 and 96 x 96

Temperature Indicator

Display : 3½ digit, 0.8" 7 segment RED LED
Input Sensor : RTD (Pt 100)
Accuracy : 1% of the span
Op. Voltage : 230 V AC ± 15%, 50 Hz
Cutout (mm) : 48 (H) x 92 (W)
Size (mm) : 48 (H) x 96 (W) x 130 (D)

IS 10 / IS 16

Temperature Scanner with Channel hold facility

Display : 3½ digit, 0.8" 7 segment RED LED
Accuracy : 1% of the span
Op. Voltage : 230 V AC ± 15%, 50 Hz
Size (mm) : 96 (H) x 192 (W) x 150 (D)

Model	Input Sensor	Control Range	Resolution
IS 10 P2	RTD (Pt 100)	-99.9 to 199.9°C	0.1°C
IS 10 P4	RTD (Pt 100)	-100 to 400°C	1°C
IS 10 J	J type Thermocouple	0 to 700°C	1°C
IS 10 K	K type Thermocouple	0 to 1200°C	1°C

964S4

Temperature Scanner with CH hold facility

Display : 3½ digit, 0.5" 7 segment RED LED
Accuracy : 1% of the span
Op. Voltage : 230 V AC ± 15%, 50 Hz
Size (mm) : 96 (H) x 96 (W) x 200 (D)

Model	Input Sensor	Control Range	Resolution
964S4 P2	RTD (Pt 100)	-99.9 to 199.9°C	0.1°C
964S4 P4	RTD (Pt 100)	-100 to 400°C	1°C
964S4 J	J type Thermocouple	0 to 700°C	1°C
964S4 K	K type Thermocouple	0 to 1200°C	1°C

Applications : In Chemical Plant, Process Industries & Cold Storage

LOOP POWERED INDICATOR

Specifications

HARDWARE

1. Display : 4-Digit, seven segment red LED display.
2. Input : 4 to 20 mA current.
3. Operating voltage : 4 to 20 mA current source.
4. 4 keys for setting.
5. 8 amp terminals for connection.

SOFTWARE

1. Input sensor : 4 to 20 mA current.
2. Range : 999 to 9999, user scallable according to the input.
3. Decimal point adjustable from no DP to 000.0, 00.00, 0.000.
4. Callibration by front keys.
5. Range low & range high is locable through front keys.
6. Calibration mode lock is given through hardware.

IFP (Indicator)

Input Sensor : RTD (Pt 100)

Accuracy : 1% of the span

Display : 3½ digit 0.5" seven segment RED LED

Op. Voltage : 230 V AC ± 15% 50 Hz

Size (mm) : 350 (H) x 190 (W) x 135 (D)

Mode	Range	Resolution
IFP2	-99.9 to 199.9°C	0.1°C
IFP4	-100 to 400°C	1.0°C

IFDT
(Two point temp. Indicator)

Temperature indicator in flame proof housing

Accuracy : 1% of the span

Display : 3½ digit 0.5" 7 segment RED & GREEN LED

Op. Voltage : 230 V AC ± 15% 50 Hz

Size (mm) : 350 (H) x 190 (W) x 135 (D)

Mode	Range	Resolution
IFDTP2	-99.9 to 199.9°C	0.1°C
IFDTP4	-100 to 400°C	1.0°C

IFS4
(Four channel scanner with channel hold facility)

Accuracy : 1% of the span RED LED

Display : 3½ digit 0.5" seven segment

Op. Voltage : 230 V AC ± 15% 50 Hz

Size (mm) : 365 (H) x 170 (W) x 135 (D)

Mode	Range	Resolution
IFS4P2	-99.9 to 199.9°C	0.1°C
IFS4P4	-100 to 400°C	1.0°C

Also available : 10, 16 ch. scanner in flame proof housing

CFP (Controller)

Mounting : Wall Mounting Type

Logic : Heating

Size (mm) : 390 (H) x 170 (W) x 135 (D)

Mode	Range	Resolution	Accuracy (Control)
CFP2	-99.9 to 199.9°C	0.1°C	± 0.1°C
CFP4	-0 to 400°C	1.0°C	± 1.0°C

Applications : Flame Proof Area in Chemical / Pharma / Solvent Industries

FLAME PROOF INSTRUMENT

ION ELECTRICALS PVT. LTD.

CT72

Inputs	: Proximity switch (N-P-N, P-N-P), encoder, potential free contacts, voltage pulse (5-30 VDC / 50 mA), photoelectric contact
Range	: 0 to 999999 counts
Display	: 0.3" 7 segment RED LED
Counting	: Up counting
Frequency	: 4 kHz
Auto Reset time	: 0.1 sec. to 99999.9 sec.
Relay	: Two changeover potential free contacts of 5 Amp. (resistive)
Size (mm)	: 72 (H) x 72 (W) x 125 (D)

T72U

Op. Voltage	: 230 V AC ± 15%, 50 Hz
Range	: 1 to 9999 Hrs. / Min. / Sec. 0.1 to 999.9 Hrs. / Min. / Sec.
Display	: 0.3" 7 segment RED LED for Process Time & GREEN LED for Set Time
Counting	: Up / Down
Accuracy	: 0.01 sec. / hour using quartz crystal
Mode	: Cyclic / Non - Cyclic
Relay	: Two changeover potential free contacts of 5 Amp. (resistive)
Cyclic Mode	: "ON" time first / "OFF" time first
Non-Cyclic Mode	: Delayed "ON" / Delayed "OFF"
Start	: Power "ON" start / key start
Size (mm)	: 72 (H) x 72 (W) x 125 (D)

T48U

Op. Voltage	: 230 V AC ± 15%, 50 Hz
Range	: 1 to 99 Hrs. / Min. / Sec.
Display	: 0.3" 7 segment RED LED
Counting	: Count Down
Accuracy	: 0.01 sec. / hour using quartz crystal
Mode	: Cyclic / Non - Cyclic
Relay	: One change over potential free contacts of 5 Amp. for resistive load
Cyclic Mode	: "ON" time first / "OFF" time first
Non-Cyclic Mode	: Delayed "ON" / Delayed "OFF"
Start	: Power "ON" start / key start
Lock	: Internal code for data stored
Size (mm)	: 48 (H) x 48 (W) x 105 (D)

T96TW

Op. Voltage	: 230 V AC ± 15%, 50 Hz
Range	: 0 to 99 Hrs. / Min. / Sec. 0.0 to 9.9 Hrs. / Min. / Sec. 0 to 999 Hrs. / Min. / Sec. 00.0 to 99.9 Hrs. / Min. / Sec. 0 to 9999 Hrs. / Min. / Sec. 000.0 to 999.9 Hrs. / Min. / Sec.
Display	: 2 digit / 3 digit / 4 digit, 7 segment two RED LED
Counting	: Count Down
Accuracy	: 0.01 sec. / hour using quartz crystal
Start	: Start key is provided on front panel External start is provided
Size (mm)	: 72 (H) x 72 (W) x 125 (D) Also available in 96 x 96 size

FT-96

Supply Voltage	: 230 V AC ± 15%, 50 Hz
Power Consumption	: 10 VA max.
No. of Programs	: 192 (user selectable)
Display	: 5 digit, 7 seg, red led display for time & date indication & 5 digit, 7 seg. green led display for program indication.
Cut out	: 92 (H) x 92 (W) mm
Nonvolatile Memory	: (Battery back up) Both relays can be individually programmed to any program no.

Applications : In Casting Industries, Textile Industries, Process Plant, Packing Industries

TIMERS & COUNTERS

ION ELECTRICALS PVT. LTD.

BTC
(Blood Storage Temp. Controller)
Model : CLC5BR

Input sensor : Pt 100 (RTD)
Logic : Cooling
Control range : 4 to 6C fixed
Resolution : 1°C
Display : 3½ digit 7 segment RED LED
Alarm : Below 2°C and above 8°C
Cutout (mm) : 92 x 92
Op. Voltage : 230 V AC ± 15%, 50 Hz
Size (mm) : 96 (H) x 96 (W) x 200 (D)

Applications : Blood Bank Controller

964B6
(for BOD Incubators)

Automatically selects heating or cooling with respect to ambient temperature

Input sensor : Pt 100 (RTD) for cabinet & S D for ambient temp.
Logic : Heating & Cooling
Control range : 0 to 65°C
Resolution : 1°C
Delay : 40 sec., to 220 sec. (adj.)
Display : 3½ digit 7 segment RED LED
Op. Voltage : 230 V AC ± 15%, 50 Hz
Cutout : 92 x 92

Applications : Incubator, BOD Incubator

C3S2R

Rate profile controller Ramp / Soak controller
This controller can be used for gradual rise in temperature.
It has 1 to 5 programs & each program has nine steps.
Further each step has one Ramp & one Soak. The Ramp & Soak is settable upto 99.9 hrs. or 99.9 min. The differential can be set from 1 to 9.9C

Input sensor : Pt 100 (RTD)
Control range : 0 to 199.9 / 400°C
Size (mm) : 96 (H) x 96 (W) x 165 (D)

Applications : Profile Controller with 9 Step program, X Ray, Paper Glass Industries, Chemical Process Industry

CLC5R
(Cascade Ref. Controller)

Also available with computer interface through RS-232 serial port or RS-485 parallel ports.

SPECIFICATION :
1) Input sensor : PT-100 for Cabinet & PT-100 for Cascade
2) Control Range: - 40 to -85C adjustable
3) Differential : 5°C adjustable
4) Cascade & cabinet delay adjustable from 1 to 255 secs.
5) Alarm low & high, for cabinet is adjustable.
6) Resolution : 1°C
7) Size : 96(H)x 192(W)x 165(D)
8) Cutout : 92 x 188 mm.
9) Relay Output : 5 Amp. Resistive load
10) Power consumption : 10 VA max.

Applications : Deep Freezer Controller with cascade / Cabinet System, Refrigeration System with cascade compressor

FLA

SPECIFICATION :
1) Input : FLA works on potential free 'NO' contacts of magnetic float switch
2) Size : 96(H)x 96(W)x 200(D)
3) Relay : 5 Amp. max.

Annunciator window indication for high or low level
• High level alarm indication
• Low level indication
•Optional Pump control through main starter

Applications : Liquid storage, Process Tank with magnetic float switch

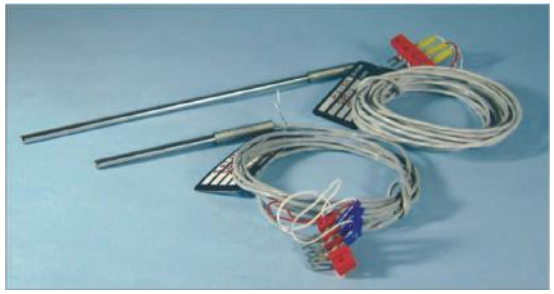
Annunciation System

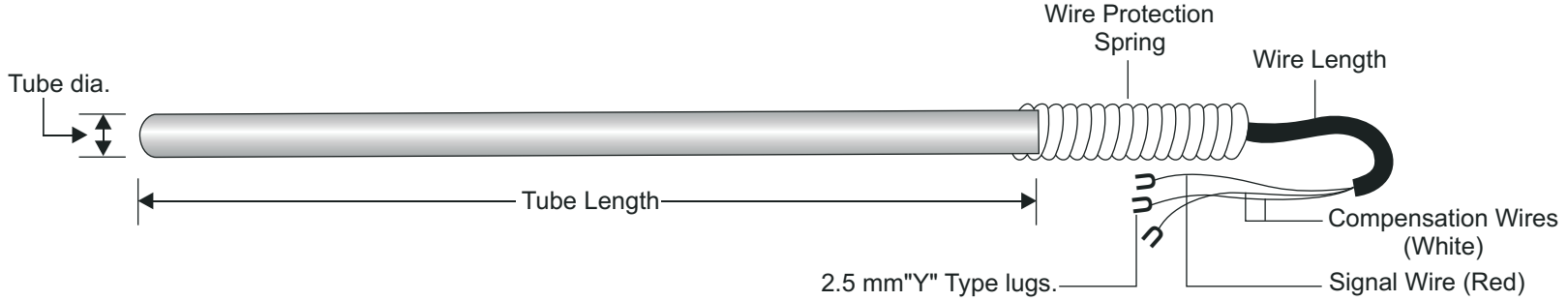
Supply Voltage : 230 V AC ± 15%, 50 Hz
Windows : 2, 4, 8 & 16 available.
Input : Potential free contacts for logic.
Windows : Flashing annunciation windows with 12V/12W bulbs for logic indication.
External NO type push switch : is provided to hold flashing of windows & to keep that condition ON & also to mute HOOTER.
External NO type switch : is provided to reset the window.

ION ELECTRICALS PVT. LTD.

RTD (Pt.100) is available in 2 wire or 3 wire connection. Generally 3 wire is used for length compensation. Compensation is achieved for lead resistance and change of temperature in load resistance. This is the most commonly used configuration. RTD operates on the principle of change in electrical resistance in Pt wire as a function of temperature. RTD is used for temperature range -200°C to 600°C. Thermocouple probe is a temperature measurement sensor that consists of two dissimilar metals joined together at one end (junction) that produces a small thermometric voltage when the junction is heated. The change in thermoelectric voltage is interpreted by the thermocouple as a change in temp. The most common types are "J" (Iron-Constantant) up to 700°C & "K" (Chrome) - Alumel) up to 1200°C. These sensors are suitable for ovens, deep freezers, boilers, incubators etc. General Purpose Sensors are not suitable for liquid immersion application. For liquid immersion use Industrial Assembly Sensors.

Model	Temp. Range	Type of Sensor	Tube Dia.	Tube Length	Type Of Wire	Wire Length in Meters
GPSL	-100°C to 100°C	Pt 100 Simplex	4 mm	100 mm	Teflon Coated	1.5 M
GPS1	-100°C to 200°C	Pt 100 Simplex	4 mm	60 mm	Teflon Coated	1.5 M
GPS2	-100°C to 200°C	Pt 100 Simplex	4 mm	150 mm	Teflon Coated	1.5 M
GPS3	-100°C to 200°C	Pt 100 Simplex	4 mm	150 mm	Teflon Coated	3.0 M
GPS5	-100°C to 400°C	Pt 100 Simplex	6 mm	150 mm	S.S. Braided Teflon	1.5 M
GPS6	-100°C to 400°C	Pt 100 Simplex	8 mm	150 mm	S.S. Braided Teflon	1.5 M
GPS7	-100°C to 400°C	Pt 100 Simplex	6 mm	300 mm	S.S. Braided Teflon	1.5 M
GPSD	-100°C to 250°C	Pt 100 Duplex	6 mm	100 mm	Teflon Coated	2 x 2.5 M
GJS1	0 to 600°C	J Type Thermocouple	6 mm	150 mm	S.S. Braided	1.5 M
GJS2	0 to 600°C	J Type Thermocouple	6 mm	300 mm	S.S. Braided	1.5 M
GKS1	0 to 600°G	K Type Thermocouple	6 mm	150 mm	S.S. Braided	1.5 M
GKS2	0 to 600°C	K Type Thermocouple	6 mm	300 mm	S.S. Braided	1.5 M
GKS3	0 to 1150°C	K Type Thermocouple	8 mm	300 mm	S.S. Braided	1.5 M





SIGMA GENERAL PURPOSE SENSORS

ION ELECTRICALS PVT. LTD.

Industrial head sensor is designed to Connection head provides the greatest protection for the electrical termination of the transducer and associated instrumentation. The threaded cover is chained and fully gasketed for completely weatherproof installation. Sensors are made on the basis of operational requirements accessibility or avoiding direct contact with hot surface.

For Customised Sensor, please specify

- Temperature Range.
- Tube Material 304 / 316 SS, length and dia.
- Type of Head - Weatherproof / Flameproof.
- Type of Flange.
- Type of Wire & Length : a) PVC b) Teflon coated c) SS braided teflon (in case of general purpose sensor)

Type of Process Connection

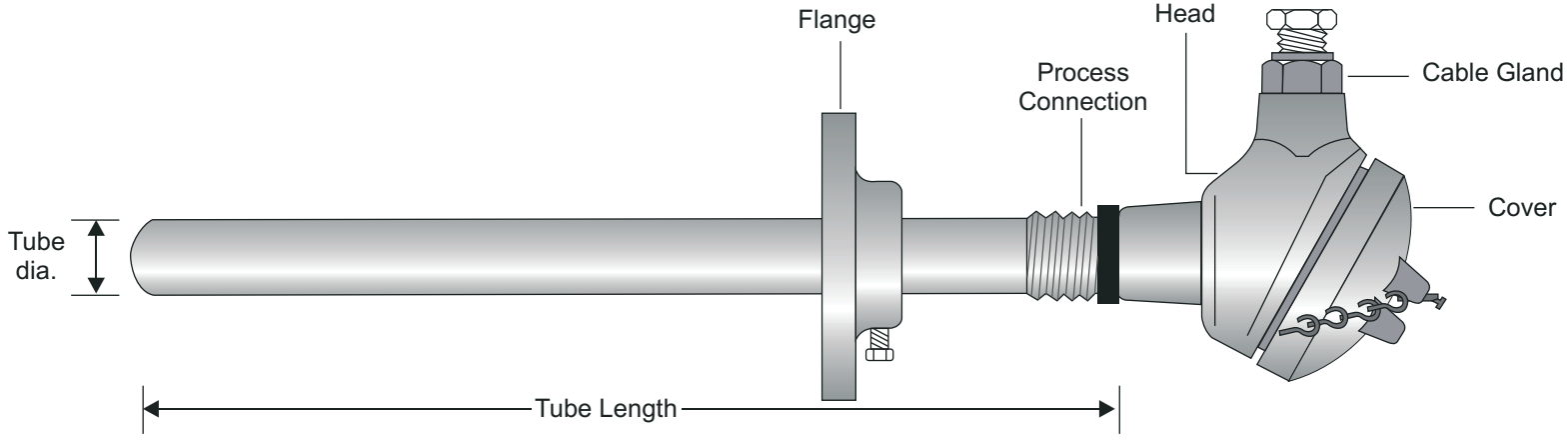
a) Fixed male fitting b) Adjustable Compression.
c) Nipple threaded d) Nipple - Union - Nipple.

Size of Process Connection

a) 1/4" BSP b) 1/2"BSP c) 3/4" BSP d) NPT

Due to continuous improvement specifications may vary, kindly confirm before order

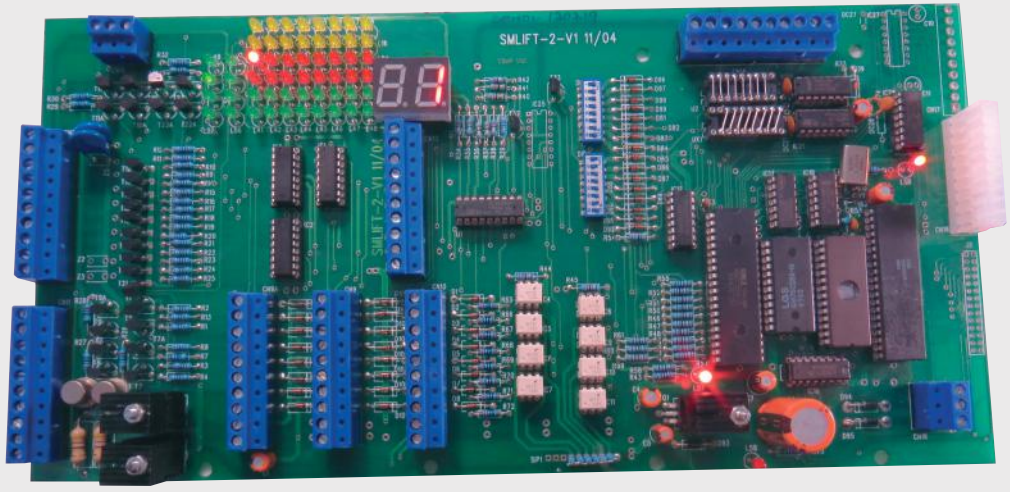
Model	Temp. Range	Type of Sensor	Tubs Dia.	Tube Length
IPSI	0 to 400°C	Pt 100 Simplex	6 mm	300 mm
IPS2	0 to 400°C	Pt 100 Simplex	8 mm	300 mm
IPSF (Flameproof)	0 to 400oC	Pt 100 Simplex	6 mm	300 mm
IPSD	0 to 400 C	Pt 100 Duplex	8 mm	300 mm
IJSI	0 to 600°C	J Type Thermocouple	6 mm	300 mm
IJS2	0 to 600°C	J Type Thermocouple	8 mm	300 mm
IKS1	0 to 600°C	K Type Thermocouple	6 mm	300 mm
IKS2	0 to 600°C	K Type Thermocouple	8 mm	300 mm
IKS3	0 to 1200°C	K Type Thermocouple	8 mm	300 mm



INDUSTRIAL HEAD TYPE SENSORS

ION ELECTRICALS PVT. LTD.

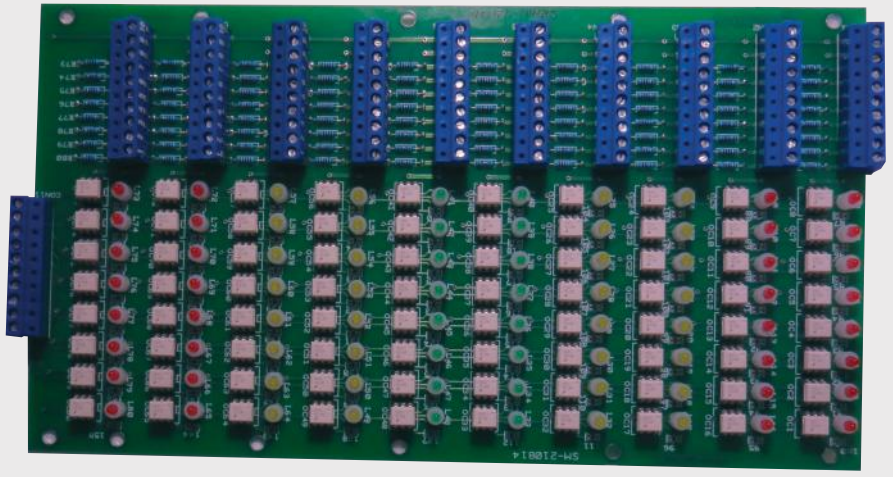
LIFT Controller



ION introduces elevator lift controller with extravagant features like up collective, down collective, collective selective,Just by changing a DIP switch. It is a up based single PCB design, Microprocessor based, car position indicator, & call registration Indication. Cards available for Traction & Oil lift

1) Upto 32 Floors.
2) Down collect shock collective - selective.
3) Fire mode.
4) Attendance mode.
5) Provision for Dot matrix display.
6) Provision for voice card.
7) Max floor hock with dip switch users selectable.

Opto Card



1) Provision for 10 inputs connector, each connector has eight individual isolated inputs.
2) Can work on 12 VDC supply.
3) 8 outputs for each wire.

LIFT CONTROLLER

ION ELECTRICALS PVT. LTD.

Multi Card (Display)

Selectable On / Off or Proportional action
Logic : Heating / Cooling
Hysterisis / Diff : 0 to 99°C (adj.)
Cycle time : 1 to 50 sec (for time prop. mode)
Band width : 0 to 100% (for time prop. mode)
Time delay : 0 to 255 sec. (adj.)
Display : 4 digit 7 seq. Red LED
Range :100°C to 400°C for pt. 100
0 to 750°C for J type TC
0 to 1200 for K type TC
Size : 125 x 92
Cycle time & offset adj. for proportional action can be done by front keys.

Applications : In Oven, Incubator, Boiler, Cooling Chambers, Water Bath, Deep Freezer, Cooling Plant, Scientific Laboratory Equipment, Packing Industries, Chemical Industries

RPM CARD

1) Display : 5 Digit 0.3", screen segment Red LED display for RPM indication 2 Digit 0.3", screen segment Red LED display for Timer indication
2) Input : 0-30VAC from taco winding of motor
3) Timer : 0-99 mins user selectable with single key.
4) Relay output : 5 AMP, 1c/o, for sensitive load with relay on indication
5) Resolution : 100 RPM
6) Range : 0-19900 RPM
7) Size : 187x86 mm

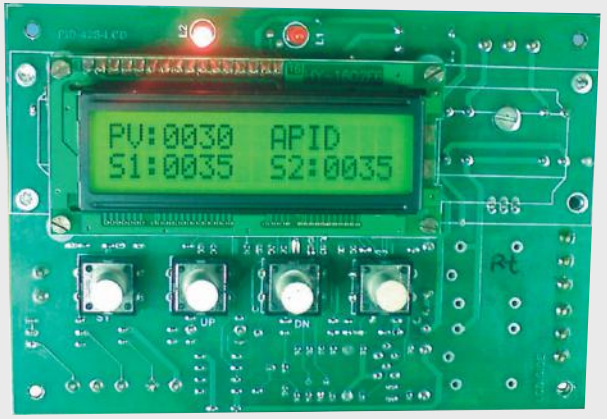
Applications : Centrifuge

Time Temp. Card

1) 4 seven seg. display for time &
3 seven seg. display for temp.
2) 4 keys for time setting
3) Size 134 x 70

Applications : Elevators

MULTI PID LCD CARD



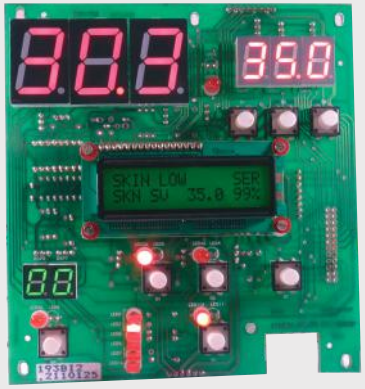
1) Input Sensor : Pt-100 (Rtd 1 degree resolution)
J-type, K-type thermocouple,
current 4 to 20 MA output
2) Differential : 1 to 100 Deg
3) Proportional band : 0 to 100%
4) Time Delay : 1 to 255 seconds
5) Cycle time : 1 to 50 sec
6) Range : 99 to 400 deg cel for Rtd,0 to 750 deg cel for J & 0 to 1200 deg cel for K
7) Cut Out : 70 x 70 mm / 91 x 91 mm
8) Power Consumption : 10 VA max
9) Display : 4 digit 7 seg , Red LED display
10) Supply : 220 VAC +/- 15% 50 hz

Applications : In Oven, Incubator, Boiler, Cooling Chambers, Water Bath, Deep Freezer, Cooling Plant, Scientific Laboratory Equipment, Packing Industries, Chemical Industries

CARD TYPE INSTRUMENTS

ION ELECTRICALS PVT. LTD.

MODEL: 193BI2
Baby Incubator Controller



Features

1) Set point adjustment on front with soft keys.
2) SSR output is given.
3) Master relay is provided for safety with necessary logic.
4) Manual / servo mode indication on separate leds.
5) Audio alarm mute indication on led.
6) Skin & air probe open indication on led.
7) Power fail indication on led with audio alarm.
8) Programmable mute timer.
9) 5 amp relay contact for resistive load.
10) APGAR timer is given.

Specifications

1) Input sensor : pt-100 (rtd) for skin probe & air probe.
2) Servo/Manual mode of operation (user selectable).
3) Set point : 30.0 to 40.0 °C
4) Mounting : Panel Mounting.
5) Power consumption : 10 va max.
7) Display : 1 inch, 3 Digit, red led display for skin & 0.5 inch 3 digit, 7-Seg., green led display for set Temperature indication.
8) Supply : 200 V AC +/- 15% 50 Hz
9) Alarm : 0.0°C to 9.9°C above & below skin set.
10) Mute Time : 0 to 15 mins (selectable)
11) APGAR LED will flash on every seconds as the mute timestarts.
12) Mute LED will flash on every seconds as the mute timestarts.
13) Power setting : 10 to 99% for manual mode.
14) Servo / Manual mode indication with led.
15) c°/f° selection on front with soft key, also the indication for f° mode is given on led.
16) Set point adjustment with two keys so no one can disturb it easily.
17) Master relay with 5 amp 1 c/o contact for resistive load & SSR output with 6 amp contact.
18) Master relay will cut-off as skin temp goes above 38°C or if air temperature goes above 39°C & SSR will be as the skin temp goes above 37°C.
19) Set high, Set low, Probe fail, Power fail, High temp & Low temp alarm indication on flat leds & on LCD display.
20) "PV" display will flash on every error condition.

Applications : Baby warmer controller

MODEL: 193BIV
Baby Incubator Controller

Features

1) Set point adjustment on front with soft keys.
2) SSR output is given.
3) Master relay is provided for safety with necessary logic.
4) Manual / servo mode indication on separate leds.
5) Audio alarm mute indication on led.
6) Skin & air probe open indication on led.
7) Power fail indication on led with audio alarm.
8) Programmable mute timer.
9) 5 amp relay contact for resistive load.
10) APGAR timer is given.

Specifications

1) Input sensor : pt-100 (rtd) for skin probe & air probe.
2) Servo / manual mode of operation (user selectable).
3) Set point : 30.0 to 40.0°C
4) Mounting : panel mounting.
5) Duty cycle : 30 secs fixed.
6) Power consumption : 10 va max.
7) Display : 1 inch,3 digit, 7-seg, red led display for skin & 0.5 inch 3 digit, 7-seg, green led display for set temperature indication. 2 line16-character lcd display for set, process value & fault indication.
8) Supply : 220 v ac +/- 15% 50 Hz.
9) Alarm : 0.0°C to 9.9°C above & below skin set.
10) Mute time: 0 to 15 mins (selectable).
11) APGAR led will flash on every seconds as the time starts.
12) Mute led will flash on every seconds as the mute time starts.
13) Power setting : 10 to 99% for manual mode.
14) Servo / manual mode indication with led.
15) c°/f° selection on front with soft key, also the indication for f mode is given on led.
16) Set point adjustment with two keys so no one can disturb it easily.
17) Master relay with 5 amp 1c/o contact for resistive load & SSR output with 6 amp contact.
18) Master relay will cut-off as the skin temp goes above 38°C or if air temperature goes above 39°C & SSR will be off as the skin temp goes above 37°C.
19) Set high, set low, probe fail, power fail, high temp & low temp alarm indication on flat leds & on LCD display.
20) “PV” display will flash on every error condition.

BABY INCUBATOR CONTROLLER

ION ELECTRICALS PVT. LTD.

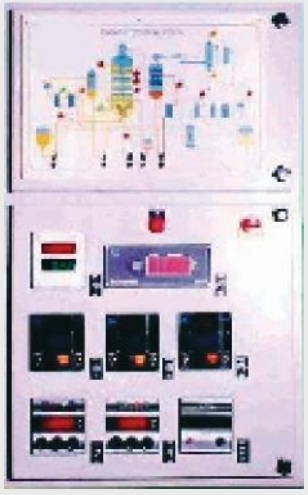
INSTRUMENTION & ELECTRICAL PANEL

Electrical Specifications :
Panel suitable for DOL starter for 3 phase electrical motors with ratings as per requirement (3 Hp to 15 Hp)
1. Suitable Contractor (Siemens / L&T or as per your Specification)
2. MCB (ABB or equivalent Make)
3. Suitable overload relay for motor protection.
4. Star / Delta timer for motors above 10 Hp rating.
5. Start / Stop push buttons.
6. Start / Stop & trip indication.

Wire-660 / 1100V grade PVC insulated copper wire of 1.5 Sq. mm for control & 2.5 Sq. mm for power circuit.
System 415V TPN 50Hz AC Supply.

Mechanical Specifications :
Free standing, Floor mounting, Desk type, Dust & vermin proof.
Approx. size 1050 mm (W) x 1750 mm (H) x 300 mm (D)
14/16SWG CRCA sheet steel.
Powder coated Siemens Grey (Shade 631)
Cable entry from down.
Mimic Plate (1000x550 mm) accommodated in the same panel as per requirement.

INSTRUMENTION PANEL



Specifications :

1. System : 230V AC ± 10%
2. Wall mounting dust & vermin proof.
3. 14/15 SWG CRCA sheet steel.
4. Powder coated Siemens Grey (Shade 631)
5. Cable entry from down.
6. Mimic Plate (1000x550 mm) accommodated

in the same panel as per requirement.

660 / 1100V grade PVC insulated,

flexible copper wire of 0.75 Sq. mm

for control circuit and 2.5 Sq. mm for power circuit.

INSTRUMENTATION & ELECTRICAL PANEL

ION ELECTRICALS PVT. LTD.

9610C

OVEN CONTROLLER
(Selectable On/Off control Action with set point indication)
Logic : Heating
Hysteresis / Diff : 1 to 100 degree (adjustable)
Cycle time : 1 to 5 sec. (for time prop. mode)
Bandwidth : 0 to 50% (for time prop. mode)
Size (mm) : 130x96x96
Voltage Input : 220V AC
Relay : SSR
Alarm : Available
Display : 10 digit 7 segment
Range : 0 to 400°C for PT 100 (RTD)

Applications : Rack Oven

RH CONTROLLER

Specification of Relative Humidity & Temp. Controller
Input :- Temperature sensor (PT-100 ,J,K & 4-20mA) & RH sensor for Humidity.
Range :- For PT-100 0 to 200°C in point 0.1°C & 0 to 400°C in 1°C.
For J:- 0 to 750°C.
For K:- 0 to 1200°C.
RH:- 0 to 100 %
Resolution :- 0.1°C or 1°C (selectable)
RH :- 0.1%
Accuracy :- Better than ±0.1% for temperature & ± 2% to ±5% for RH (give better accurancy).
Display :- 4 digit (0.3”/0.5”) 7-segment display, (0.5”) Red for temp. & (0.3”)green for RH.
Tuning :- Auto tuning/PID/(ON/OFF).
Control Action :- PID for heating/cooling, Humidity or De-Humidity, On/OFF with
Time delay for cooling.
Alarm Outputs :- High/Low alarm for Temp. & Humidity. (total-4 o/p).
Compressor mode :- Adjustable time delay 10 to 300 sec.
Open Sensor Indication :- Display shows Err1 or Err2.
Settings :- Using front panel keyboard to set the various values.
Memory backup :- Retention of PID and set values in the non-volatile memory in
the event of power failure.
Interface :- serial RS232 for PC interface.

Applications : Humidity Test Chember

RH CONTROLLER & OVEN CONTROLLER

ION ELECTRICALS PVT. LTD.

16-Channel Scanner with Data Logger

Supply Voltage : 230V AC / 110V AC ± 10 %, 50/60 Hz.

Inputs : J, K, R, S, N, B, T, RTD (PT-100)
3 wire, (0-100) mV etc. (Each channel can be of different input type)

Range : -200 to 2000°C subject to the specified input.

Scan Time : User selectable 1 to 240 sec.

Out put : 2 Retransmission output (4 to 20 mA)

Date Counts : Maximum no. of Logos can be stored (2046)

Applications : All Chemical Equipments & Lab Equipments

DIN RAIL TIMER

Applications : Control Panels

SPECIFICATIONS	MODEL NAMES			
	DRAT-SD-230	DRAT-0-230	DRAT-C-230	DRAT-FRP-230
Mode	Star - Delta	ON/OFF (Delay)	Cyclic	Forward-Paused-Reversed
Accuracy	0.5% of Full Scale	0.5% of Full Scale	0.5% of Full Scale	0.5% of Full Scale
Reset	On Interruption of Power	On Interruption of Power	On Interruption of Power	On Interruption of Power
O/P Specification	1C/O Relay, 7A, Resistive	1C/O Relay, 7A, Resistive	1C/O Relay, 7A, Resistive	1C/O Relay, 7A, Resistive
Supply Voltage	230V AC, 24V DC	230V AC, 24V DC	230V AC, 24V DC	230V AC, 24V DC
Range	Runup time : 0-30 sec. 0-60 sec. Changeover Time : 50 msec. 100 msec.	0-3 sec. 0-30 sec. 0-3 min 0-30 min 0-1 Hrs. 0-3 Hrs. 0-30 Hrs. 0-60 Hrs.	0-1 sec. 0-10 sec. 0-1 min 0-10 min 0-1 Hrs. 0-3 Hrs. 0-30 Hrs. 0-60 Hrs.	ON Time Range 0-1 min. 0-2 min. 0-4 min. 0-8 min Pause Time Range 0-10 sec. 0-20 sec. 0-40 sec. 0-80 sec.
Size	22.5 mm (H)* 75mm (W)* 101 mm (D)	22.5 mm (H)* 75mm (W)* 101 mm (D)	22.5 mm (H)* 75mm (W)* 101 mm (D)	22.5 mm (H)* 75mm (W)* 101 mm (D)

6-CHANNEL SCANNER WITH DATA LOGGER & DIN RAIL TIMER

ION ELECTRICALS PVT. LTD.

ION ELECTRICALS PVT. LTD.
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ISO 9001 : 2008
Reg. No.: RQ91/541

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