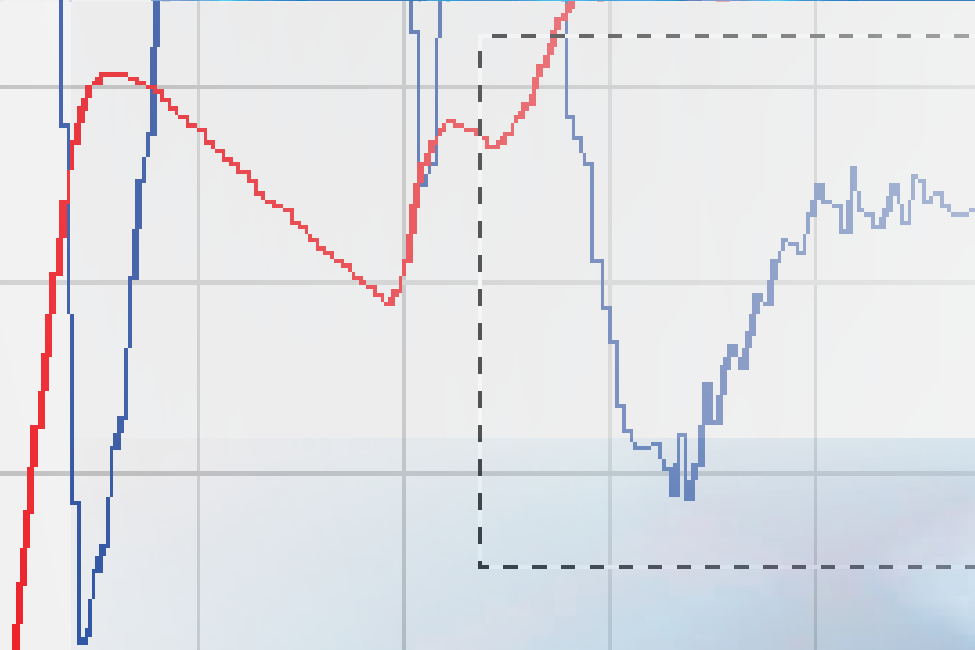




SHORTFORM CATALOG AUG2012



CONTENTS

PID CONTROLLERS	3
PROGRAMMABLE TEMPERATURE / PROCESS CONTROLLERS, INDICATORS	4
DIGITAL & BLIND TEMPERATURE CONTROLLERS, INDICATORS	5
RH+T INDICATORS / CONTROLLERS	6
RH+T 2-WIRE TRANSMITTERS	6
RH+T SENSORS	6
MULTI-CHANNEL SCANNERS	7
FLOW RATE INDICATOR/TOTALISERS	7
CALIBRATORS	8
HANDHELD THERMOMETERS, RH+T	9
2-WIRE TRANSMITTERS	10
LOOP POWERED ISOLATORS	10
SIGNAL ISOLATORS	11
LOOP POWERED INDICATORS	12
TIMERS, COUNTERS & RATE INDICATORS	12
NEW / SPECIAL PRODUCTS	14
FLAMEPROOF, WEATHERPROOF PRODUCTS	15
SCADA	16
END-TO-END AUTOMATION	17
THERMOCOUPLES	18
RTD SENSORS	21
PRESSURE GAUGES	24

PID CONTROLLERS

X SERIES : FULL-FEATURED • P SERIES : MIDRANGE • P3 SERIES : LOW-COST



Model	Size h x w x d mm	Input	Setpoints	Analog Output	Supply	Display Digits	RS485 / MODBUS RTU	Remarks
X96P	96x96x100	2 x Universal	5	2	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4+3	Yes	Full-featured
X48	48x48x100	Universal	3	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Full-featured
X96	96x96x100	Universal	5	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Full-featured
X72	72x72x100	Universal	5	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Full-featured
X49	48x96x100	Universal	4	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Full-featured
X94	96x48x100	Universal	4	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Full-featured
P48	48x48x100	Universal	2	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	No	Midrange
P96	96x96x100	Universal	2	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	No	Midrange

URL : www.radix.co.in/pid.htm

PROGRAMMABLE TEMPERATURE / PROCESS CONTROLLERS, INDICATORS

X-A SERIES : FULL-FEATURED • TC SERIES : MIDRANGE • EC SERIES : LOW-COST



Model	Size h x w x d mm	Input	Setpoints	Analog Output	Supply	Display Digits	RS485 / MODBUS RTU	Remarks
X96Δ	96x96x100	2 x Universal	4	2	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4+4	Yes	Difference, Average, etc
X48A	48x48x100	Universal	3	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Full-featured
X96A	96x96x100	2 x Universal	4	2	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Single/Dual Channel
X72A	72x72x100	Universal	4	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Full-featured
X49A	48x96x100	Universal	3	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Full-featured
X94A	96x48x100	Universal	3	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	Yes	Full-featured
TC48	48x48x100	Universal	2	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	No	Midrange
TC96	96x96x100	Universal	2	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	No	Midrange
TC72	72x72x100	Universal	2	1	85~265 V AC, 50/60 Hz	4+4	No	Midrange
TC49	48x96x100	Universal	2	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4+4	No	Midrange
TC49SU	48x96x100	Universal	2	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4	No	Midrange
NEW TEC201	48x96x100	Universal	2	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4	No	4 x 0.8" display
EC48	48x48x100	J, K, Pt100	2	0	85~265 V AC, 50/60 Hz	4+4	No	Low-cost
EC96	96x96x100	J, K, Pt100	2	0	85~265 V AC, 50/60 Hz	4+4	No	Low-cost
EC72	72x72x100	J, K, Pt100	2	0	85~265 V AC, 50/60 Hz	4+4	No	Low-cost
EC48S	48x48x100	J, K, Pt100	1	0	85~265 V AC, 50/60 Hz	4	No	Low-cost
EC96S	96x96x100	J, K, Pt100	1	0	85~265 V AC, 50/60 Hz	4	No	Low-cost
EC348	48x48x100	J, K, Pt100	1	0	85~265 V AC, 50/60 Hz	3	No	Low-cost
EC396	96x96x100	J, K, Pt100	1	0	85~265 V AC, 50/60 Hz	3	No	Low-cost
EC372	72x72x100	J, K, Pt100	1	0	85~265 V AC, 50/60 Hz	3	No	Low-cost
TCP961	96x96x100	Universal	1	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4	No	SP on pushwheel switches
TCP962	96x96x100	Universal	2	1	85~265 V AC, 50/60 Hz / 20~35 V DC	4	No	SP on pushwheel switches
FLOTO	96x96x100	0/4~20mA, 0~10V DC	4	1	85~265 V AC, 50/60 Hz	6+8	Yes	-19999 to 99999, 4 setpoints, relay modes, linear or square root input

DIFFERENCE TEMPERATURE CONTROLLER



X96Δ

TEMPERATURE CONTROLLER WITH PUSHWHEEL SWITCHES



TCP962

5-DIGIT PROCESS INDICATOR WITH ALARMS



FLOTO

SEE TABLE FOR BRIEF SPECS

URL : www.radix.co.in/ptc.htm

DIGITAL & BLIND TEMPERATURE CONTROLLERS, INDICATORS



Model	Size hwxwd mm	Input	Setpoints	Analog Output	Display Digits	Remarks
PRIMA 1SP	96x96x150	J, K, Pt100, mA, mV	1	1	3.5	Membrane + Potentiometer
PRIMA 2SP	96x96x150	J, K, Pt100, mA, mV	2	1	3.5	Membrane + Potentiometer
PRIMA 481	48x48x100	J, K, Pt100, mA, mV	1	1	3.5	Tact switch + trimpot
PRIMA 721	72x72x113	J, K, Pt100, mA, mV	1	1	3.5	Tact switch + trimpot
LCP 722	72x72x113	J, K, Pt100, mA, mV	2	0	3.5	Tact switch + trimpot
EK491	48x96x112	J, K, Pt100, mA, mV	1	1	3.5	Tact switch + trimpot
EK1SP	96x96x150	J, K, Pt100, mA, mV	1	1	3.5	Membrane + trimpot
EK2SP	96x96x150	J, K, Pt100, mA, mV	2	1	3.5	Membrane + trimpot
EK4SP	96x96x150	J, K, Pt100, mA, mV	4	1	3.5	Membrane + trimpot
EK451	96x96x150	J, K, Pt100, mA, mV	1	1	4.5	Membrane + trimpot
EK452	96x96x150	J, K, Pt100, mA, mV	2	1	4.5	Membrane + trimpot
C48S	48x48x100	J, K, Pt100	1	0	–	Blind Controller
ELEKTRA II	72x72x113	J, K, Pt100	1	0	–	Blind Controller
C961	96x96x150	J, K, Pt100	1	0	–	Blind Controller
PRIMA 480	48x48x100	J, K, Pt100	–	1	3.5	Indicator
PRIMA 720	72x72x113	J, K, Pt100	–	1	3.5	Indicator
PRIMA 0SP	96x96x150	J, K, Pt100	–	1	3.5	Indicator
EK0SP	96x96x150	J, K, Pt100	–	1	3.5	Indicator
EK490	48x96x112	J, K, Pt100	–	1	3.5	Indicator
EK450	96x96x150	J, K, Pt100	–	1	4.5	Indicator

 URL : www.radix.co.in/dbtc.htm

RH+T INDICATORS / CONTROLLERS



HT20



HTC96



HX96A

- Input : RH and T signals from sensor
- Accuracy : $\pm 2\%$ RH, ± 0.3 °C
- Upto 50 metres between sensor and instrument
- 85~265 V AC SMPS

Product	Model	Size h x w x d mm	RH+T Sensor	Display Digits	Setpoints	Retransmission Outputs	RS485	Mounting
Indicator	HT20	80x120x55	Integral/remote	4+4	0	1	No	Field / wall
Controller	HTC96	96x96x100	Remote	4+4	0/1/2	1	No	Panel
Controller	HX96A	96x96x100	Remote	4+4	0/1/2/3/4	2	Yes	Panel
Controller	HTC48	48x48x100	Remote	4+4	0/1/2	1	No	Panel
Controller	RHC301	SEE NEW/SPECIAL PRODUCTS						
Controller	RHC201	SEE NEW/SPECIAL PRODUCTS						

URL : www.radix.co.in/rh.htm

RH+T 2-WIRE TRANSMITTERS



SC807



SC804



SC805



SC806



TX7DR

Model	Size h x w x d mm	RH+T Sensor	Display Digits	Output	Supply	Mounting
SC807	See catalog	Integral/remote	–	2 x 4~20 mA	4.5~32 V DC loop supply	Surface / Wall / Duct
SC804	149x140	Integral/remote	4+4, LED	2 x 4~20 mA	11.5~32 V DC loop supply	Surface
SC805	See catalog	Integral/remote	4+4, LCD	2 x 4~20 mA	4.5~32 V DC loop supply	Surface / Wall / Duct
SC806	See catalog	Integral	–	2 x 4~20 mA	4.5~32 V DC loop supply	Duct mount
TX7DR	85x120x55	Integral/remote	4+4, LED	2 x 4~20 mA	11.5~32 V DC loop supply	Field / wall

URL : www.radix.co.in/rhtx.htm

MULTI-CHANNEL DATA LOGGER



- Upto 16 inputs, 16 outputs
- Universal Input : 8 Thermocouples, Pt100, mV or mA input front panel selection without DIP for each channel
- RS485 with MODBUS RTU

DATALOGGING

- Process Value, Alarm and Time Stamp Logging
- Memory for 13000+ records, over 9 days continuous logging
- Programmable logging interval
- Online and offline datalogging
- Sophisticated SCADA software for data retrieval, viewing, etc.
- Full datalogging control through SCADA
- 3-level security for SCADA

SCANNERS



ISOSCAN-H



ISOSCAN-V



ISOTHERM

MULTI-CHANNEL SCANNERS

- Upto 16 inputs/16 outputs
- For Temperature, Pressure, Flow, Level, RH, Conductivity, etc.
- Various Input(X)/Output(Y) combinations : X4Y0, X4Y8, X8Y4, X8Y16, X16Y16, etc
- Universal Input : 8 Thermocouples, Pt100, mV or mA input front panel selection without DIP for each channel
- Front panel user calibration
- Input burn protection
- Non-volatile memory for parameters - no batteries
- 3 key, 5 level programming
- Setpoint and level locks
- Tactile membrane keypad
- 5 software versions : Indicator, Multisetpoint, Grouping, etc
- RS485 with MODBUS RTU

- Powerful, flexible SCADA software available
- FDA21CFR Part11 compliant SCADA version
- Option : Printer interface (no computer needed)
- 85~265 V AC SMPS or 24 V DC supply

Additional features for Tmax version

- Password protection for program mode
- 4~20 mA output corresponding to maximum temperature or any selected channel, maximum temperature of all channels, or temperature of any selected channel
- 4~20 mA output corresponding to channel number, complimentary to maximum temperature facility to track the channel no.

8 - CHANNEL SCANNER

- Upto 8 inputs / 4 relays / 2 isolated 4~20 mA outputs
- Universal input : 8 thermocouples, Pt100, mV or mA input front panel selection without DIP reconfiguring for each channel
- Front panel user calibration
- Input burn protection
- Non-volatile memory - no batteries
- 3 key, 5 level programming
- Setpoint and level locks
- Tactile membrane keypad
- RS485 with MODBUS RTU
- Powerful, flexible SCADA software available
- FDA21CFR Part11 compliant SCADA version also
- 85~265 V AC SMPS or 24 V DC supply
- 96x96x220 mm

URL : www.radix.co.in/scanners.htm

FLOW RATE INDICATOR/TOTALISERS



FLOTO



FLOTO46

- FLOTO : 6 digit flow rate indicator, 8 digit flow totaliser
- FLOTO46 : 4 digit flow rate indicator, 6 digit flow totaliser
- Inputs : Analog inputs : 0~20mA / 4~20mA / 0~5 volts / 1~5 volts / 0~50 volts
Pulse input : 0~10 khz

- 4 relays assignable to flow rate or totaliser
- Programmable flow rate, setpoints and relay modes, etc.
- Application : Monitoring and controlling continuous as well as batch flow processes
- Isolated programmable 4~20 mA retransmission output

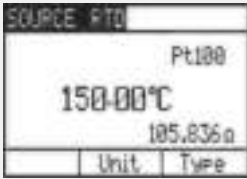
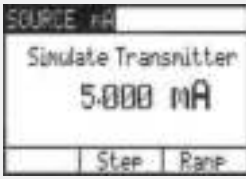
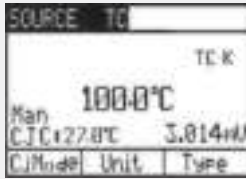
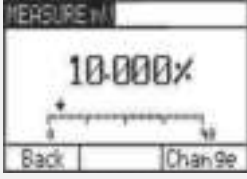
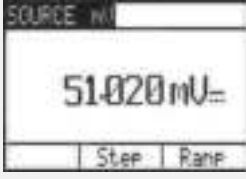
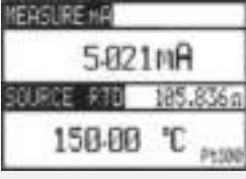
- RS 485 / MODBUS
- Password protected programming and reset
- Programmable start, stop, reset functions
- Supply : 85~265 V AC, 50/60 Hz / 20~35 V DC
- Size : 96x96x100 mm

URL : www.radix.co.in/floto.htm

CALIBRATORS



- 1 μ V / 1 μ A / 1/10m Ω resolution
- Measure / Source mV, mA, RTDs, thermocouples, ohms
- Simulate 4 to 20 mA transmitter
- 24V loop supply
- Simultaneous Measure and Source
- Step, ramp, % scale, min-max values
- 128 x 64 backlit LCD
- 8~14 hours of use with Li-ion rechargeable battery

		
SOURCE Pt100 RTD	SIMULATE 4 TO 20 TRANSMITTER IN SOURCE mA	SOURCE TC
		
MEASURE MODE WITH % SCALE FUNCTION	SOURCE MODE WITH STEP & RAMP FUNCTION	SIMULTANEOUS MEASURE AND SOURCE

URL : www.radix.co.in/cal.htm



- Modes : Measure and Source (Calibrate)
- B, E, J, K, R, S, T, W1, W3 & W5 thermocouples and Pt100 RTD measure in °C or °F, and simulate in °C or °F
- Millivolts (-199.99 to +199.99) and milliamps (0 to 19999 μ A)
- High accuracy : $\pm 0.02\%$ of FS ± 2 counts (except ohms)
- High resolution : 0.1 °C or °F, 10 μ V, 1 μ A, 0.02 Ω
- 2x16 character dot-matrix LCD display
- Li-ion batteries for 4 to 8 hours operation on single charge
- Compact : 220x80x220 mm
- Lightweight : 1.5 kg
- Available with NPL traceable internal or 3rd party certificate

URL : www.radix.co.in/cal.htm

HANDHELD THERMOMETERS, RH+T



TC K DIGIRAD71

- Resolution : 0.1 / 1°C
- Display : 3 ½ digit, 7 segment 0.5" (12.7mm) LCD display with maximum reading of 1999
- Accuracy : ± (0.3% of reading +1°C) -50°C to 1000°C ± (0.5% of reading +1°C) 1000°C to 1300°C



Pt100 ACCURAD71

- Resolution : 0.1 / 1°C
- Display : 3 ½ digit, 7 segment 0.5" (12.7mm) LCD display with maximum reading of 1999
- Accuracy : -150.0°C to 199.9°C : ± 0.3 °C -200°C to 600°C : ± 1°C



UNIVERSAL UNIRAD

- Universal input : 8 TC, 3 RTD
- Resolution : 1, 0.1
- Display : 4 digit, 7 segment 0.5" (12.7mm) LCD display with maximum reading of 9999
- 0.1% linearisation accuracy
- Software calibration - no trim pots



RH+T HUMIRAD71

- Resolution : 0.1
- Display : 3 digit, 7-segment, 0.5" (12.7mm) LCD display with maximum reading of 99.9
- Accuracy : ± 2% RH ± 0.3°C
- Software calibration - no trim pots

THERMOCOUPLE & RTD PROBES

Standard Immersion Probe



Pt100

Standard Immersion Probe (MI)



Pt100

Quick Response Immersion Probe (MI)



Pt100

Teflon Coated Immersion Probe



Pt100

Needle Probe



Pt100

Prick Probe



Pt100

Standard Immersion Probe



Pt100

Air Probe



TC K

Standard Immersion Probe



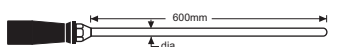
TC K

Quick Response Immersion Probe



TC K

High Temperature Immersion Probe



TC K

Teflon Coated Immersion Probe



TC K

Needle Probe



TC K

Prick Probe



TC K

Air Probe



TC K

Leaf Surface Probe - 400 °C



TC K

Leaf Surface Probe - 600 °C



TC K

Leaf Surface Probe - 800 °C



TC K

Bow Curved Surface Probe



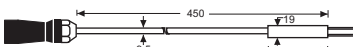
TC K

Spring Surface Probe

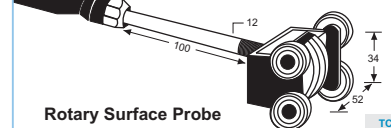


TC K

Smithy Probe



TC K



Rotary Surface Probe

TC K

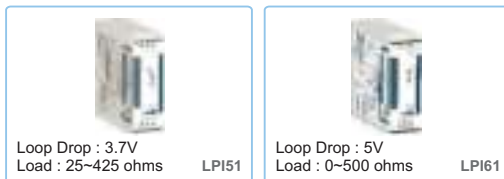
2-WIRE TRANSMITTERS



Model	Parameter	Size hwxwd mm	Input	Output	Supply	Input / Output Isolation	Local Display	Mounting	Remarks
SC601	Temperature	80x25x85	Universal	4~20mA	12~32 V DC loop supply	Yes	—	DIN rail	PC programmable, latest technology
TX1HM	Temperature	47x17	Pt100	4~20mA / 20~4mA	6.2~32 V DC loop supply	No	LED for Power On status	Sensor head	8 SPAN ranges, 4 ZERO ranges, accuracy 0.1%
TX1DR	Temperature	80x25x85	Pt100	4~20mA / 20~4mA	6.2~32 V DC loop supply	No	LED for Power On status	DIN rail	8 SPAN ranges, 4 ZERO ranges, accuracy 0.1%
TX1DR	Temperature	80x25x85	TC/mV	4~20mA / 20~4mA	6.2~32 V DC loop supply	No	LED for Power On status	DIN rail	9 ranges for TC / mV from 10mV to 50mV
TX2DR	Temperature	80x25x85	TC/mV	4~20mA	10~30 V DC loop supply	Yes	LED for Power On status	DIN rail	4 ranges for TC / mV from 5mV to 50mV
TX2DR	Temperature	80x25x85	Pt100	4~20mA	12~36 V DC loop supply	Yes	LED for Power On status	DIN rail	8 SPAN ranges, 4 ZERO ranges, accuracy 0.1%
TX3DR	Temperature	75x45x110	Universal	4~20mA	11~32 V DC loop supply	Yes	4 digit LED	DIN rail	Programmable, accuracy 0.1%
SC807	RH+T	See Catalog	RH+T sensor module	2 x 4~20mA	4.5~32 V DC loop supply	No	—	Surface / Wall / Duct	User programmable, integral or remote sensor
SC804	RH+T	149x140	RH+T sensor module	2 x 4~20mA	11.5~32 V DC loop supply	No	4+4, LED	Surface	FLP, dual display
SC805	RH+T	See Catalog	RH+T sensor module	2 x 4~20mA	4.5~32 V DC loop supply	No	4+4, LCD	Surface / Wall / Duct	LCD display
SC806	RH+T	See Catalog	RH+T sensor module	2 x 4~20mA	4.5~32 V DC loop supply	Yes	—	Duct	FLP
TX7DR	RH+T	80x120x55	RH+T sensor module	2 x 4~20mA	11~32 V DC loop supply	Yes	4+4, LED	Panel	User programmable, integral or remote sensor
TX4DR	Frequency	75x45x110	Unipolar voltage pulses	4~20mA	11~32 V DC loop supply	Yes	4 digit LED	DIN rail	10 khz max, user programmable, accuracy 0.1%
NEW SC504	Differential Pressure	See Catalog	Differential Pressure	4~20mA	12~32 V DC loop supply	No	4+4, LCD	Surface	Pressure unit & range selected by DIP or PC programming

URL : www.radix.co.in/tx.htm

LOOP POWERED ISOLATORS



- 4 ~ 20 mA in, 4 ~ 20 mA out
- Isolation between input and output : 1.5 KV AC RMS / 1 minute,
- 250 V AC RMS continuous
- 0.1% transfer accuracy
- DIN rail mounting
- No power supply required
- Size : 80x25x85 mm

URL : www.radix.co.in/lpi.htm

SIGNAL ISOLATORS



Model	Size HxWxD mm	Input	No. of Output	Output	Supply	Display	Mounting	Remarks
SI3P	75x55x110	Voltage, Current, TC/RTD, etc	1	0/4~20 mA, 0~10 V, etc	85~265 V AC, 50/60 Hz / 17~35 V DC	—	DIN rail	Most popular
SI3P	75x55x110	Load Cell	1	0/4~20 mA, 0~10 V, etc	85~265 V AC, 50/60 Hz / 17~35 V DC	—	DIN rail	New
SC301	80x25x85	0/4~20 mA	1	0/4~20 mA	20~35 V DC	—	DIN rail	HART compatible
SI4P	75x45x110	0/4~20 mA	2	0/4~20 mA	17~35 V DC	—	DIN rail	1 Kohm load, Line fault detection
SI4P	75x55x110	0/4~20 mA	2	0/4~20 mA	85~265 V AC, 50/60 Hz	—	DIN rail	1 Kohm load, Line fault detection
MSI4P (SCC311)	75x55x110	Universal	1, 2	0/4~20 mA, 0~10 V, etc	85~265 V AC, 50/60 Hz / 20~30 V DC	4 digit LED	DIN rail	Programmable, RS485/MODBUS
MSI4P	75x70x110	AC current/ voltage	1, 2	0/4~20 mA, 0~10 V, etc	85~265 V AC, 50/60 Hz / 20~30 V DC	4 digit LED	DIN rail	Programmable, RS485/MODBUS
MSI7P	75x100x110	Universal	3, 4, 5	0/4~20 mA, 0~10 V, etc	85~265 V AC, 50/60 Hz / 20~35 V DC	2x16 LCD	DIN rail	Programmable, RS485/MODBUS
VISO	75x55x110	0~±10 V, 0~250hz	1, 2	0~±10 V, 0~250 Hz	17~35 V DC	—	DIN rail	For AC & DC signals
SCC401	100x23x114	Voltage, Current, TC/RTD, Ohms, etc	1	0/4~20 mA, DC Volts	85~265 V AC, 50/60 Hz / 20~36 V DC	—	DIN rail	High Accuracy
SCC402	100x23x114	AC Voltage, DC Voltage, AC Current, DC Current	1	0/4~20 mA, DC Volts	85~265 V AC, 50/60 Hz / 20~36 V DC	—	DIN rail	High Accuracy
MSI7P	75x100x110	Oxygen Lambda Sensor	1, 2	0/4~20 mA, 0~10 V, etc	85~265 V AC, 50/60 Hz / 20~35 V DC	2x16 LCD	DIN rail	Programmable, RS485/MODBUS
MSI7P	75x100x110	Oxygen Probe (Carbon Potential)	1, 2	0/4~20 mA, 0~10 V, etc	85~265 V AC, 50/60 Hz / 20~35 V DC	2x16 LCD	DIN rail	Programmable, RS485/MODBUS

URL : www.radix.co.in/si.htm

LOOP POWERED INDICATORS



Model	Size hwxwd mm	Input	Mounting	Loop Drop	Display	Remarks
SD201	80x120x55	4~20 mA	Field / wall mount	<1V	LCD, 12.7 mm x 3.5 digit	0.025% accuracy, very low loop drop
SD202	80x120x55	4~20 mA	Field	<1V	LCD, 50.8 mm x 3.5 digit	0.025% accuracy, very low loop drop
PLC40	80x120x55	4~20 mA	Field / wall mount	4.8V	LCD, 12.7 mm x 3.5 digit LCD, 10.16 mm x 4.5 digit	Programmable, 0.1% accuracy, square root function
PLD40	80x120x55	4~20 mA	Field / wall mount	5V	LED, 14.2 mm x 4 digit	Programmable, 0.1% accuracy, square root function
PLD40	48x96x100	4~20 mA	Panel mount	5V	LED, 14.2 mm x 4 digit	Programmable, 0.1% accuracy, square root function

URL : www.radix.co.in/lpind.htm

TIMERS, COUNTERS & RATE INDICATORS



URL : www.radix.co.in/rct.htm

TIMERS, COUNTERS & RATE INDICATORS

Product	Model	Size h x w x d mm	Setpoints	Retransmission Output	Supply	Display Digits	Non-volatile Memory	Remarks
Programmable RPM/ Rate indicator	RCT202	48x96x100	0	0	85~265 V AC OR 24 V DC	4	No	–
RPM/Rate indicator with alarms	RCT206	48x96x100	2	1	85~265 V AC OR 24 V DC	6+6	No	–
RPM/Rate indicator with totaliser	RCT203	48x96x100	0	0	85~265 V AC OR 24 V DC	6	Yes	–
Preset counter with RPM/Rate indicator	RCT205	48x96x100	2	1	85~265 V AC OR 24 V DC	6+6	Yes	–
Preset counter with RPM/Rate indicator	RCT301	72x72x100	2	1	85~265 V AC OR 24 V DC	6+6	Yes	–
Preset counter/ Totaliser	RCT401	72x72x100	2	0	85~265 V AC OR 24 V DC	6	Yes	–
Preset counter	RCT403	72x72x100	1	0	85~265 V AC OR 24 V DC	6	Yes	Pushwheel switch, 6-digit
Preset counter	RCT404	72x72x100	1	0	85~265 V AC OR 24 V DC	4	Yes	Pushwheel switch, 4-digit
Multifunction memory timer	RCT601	48x48x100	2	0	85~265 V AC	4	Yes	9 ranges, 4 functions, configurable control inputs
Multifunction memory timer	RCT602	48x48x100	2	0	85~265 V AC	4+4	Yes	9 ranges, 12 functions, configurable control inputs
Multifunction memory timer	RCT604	72x72x100	2	0	85~265 V AC OR 24 V DC	4	Yes	9 ranges, 4 functions, configurable control inputs
Multifunction memory timer	RCT605	72x72x100	2	0	85~265 V AC OR 24 V DC	4+4	Yes	9 ranges, 12 functions, configurable control inputs
Multifunction memory timer	RCT606	72x72x100	1	0	85~265 V AC OR 24 V DC	4	Yes	Pushwheel switch, configurable control inputs
Cyclic timer with cycle counter	RCT608	72x72x100	2	0	85~265 V AC OR 24 V DC	4+4	Yes	ON & OFF SP with individual unit & resolution
Multifunction non-memory timer	RCT701	48x48x100	2	0	85~265 V AC	4	No	9 ranges, 4 functions, configurable control inputs
Multifunction non-memory timer	RCT702	48x48x100	2	0	85~265 V AC	4+4	No	9 ranges, 12 functions, configurable control inputs
Multifunction non-memory timer	RCT703	72x72x100	1	0	85~265 V AC OR 24 V DC	4	No	Pushwheel switch, configurable control inputs
Multifunction non-memory timer	RCT707	72x72x100	2	0	85~265 V AC OR 24 V DC	4	No	9 ranges, 4 functions, configurable control inputs
Multifunction non-memory timer	RCT708	72x72x100	2	0	85~265 V AC OR 24 V DC	4+4	No	9 ranges, 12 functions, configurable control inputs
Digital Din rail timer	T25	80x25x85	2	0	20~265 V AC/DC, 50/60 Hz	2	No	Standard, Star/ Delta, Forward / Reverse

 URL : www.radix.co.in/rct.htm

NEW / SPECIAL PRODUCTS



SCM201

ANALOG INPUT MODULE

- 3 key, 3 level programming
- 8 universal analog inputs
- 8 thermocouples, Pt100, 0~50 mV, 0/4~20 mA
- RS485 or 4~20 mA output
- 85~265 VAC or 24 V DC supply
- Powerful, flexible SCADA software available



RHC301

WET & DRY BULB % RH CONTROLLER

- %RH using wet & dry bulb temperature
- Max, Min functions for % RH
- Dew point temperature
- Two inputs for T_{DRY} & T_{WET}
- Input type : 4~20 mA/RTD
- 0 / 1 / 2 / 3 / 4 setpoints for %RH / T_{DRY} / T_{WET} / T_{DEW} / T_{DIFF}
- Water alarm / Sensor fail
- Isolated 2 x 0/4~20 mA or 0~10 V DC retransmission outputs corresponding to %RH / T_{DRY} / T_{WET} / T_{DEW} / T_{DIFF}
- Water alarm annunciator
- 24 V DC transmitter supply
- RS485 / MODBUS RTU
- 85~265 V AC or 20~35 V DC supply



SC808

RH+T INDICATOR WITH RS485

- Accuracy : $\pm 2\%$ RH, ± 0.5 °C
- Dual 7-segment LCD display to show RH & T
- Software calibration - no trim pots
- PC programmable
- 20~32 V DC loop supply
- RS485 / MODBUS RTU



SCC402

3-PORT SIGNAL ISOLATOR

- Input : DC volts, AC Amps, AC Volts, DC Amps, etc.
- Output : DC volts, 0/4~20 mA
- Supply : 20~36 V DC, 85~265 V AC / 50/60 hz
- Input/output/supply isolation : 1500 V AC / 1 min, 250 V AC continuous
- DINRAIL enclosure



SCC401

3-PORT SIGNAL ISOLATOR

- Input : DC volts, 0/4~20 mA, Ohms, RTD, Thermocouples, etc.
- Output : DC volts, 0/4~20 mA
- Supply : 20~36 V DC, 85~265 V AC / 50/60 hz
- Input/output/supply isolation : 1500 V AC / 1 min, 250 V AC continuous
- DINRAIL enclosure



TC96

MANUAL LOADER/AUTO-MANUAL STATION

- Manual Loader : type A, B or D
- Auto/Manual station : type C
- Input : 4~20 mA, 0~1 K ohms
- Isolated 4~20 mA output and / or 2 relays
- 85~265 V AC SMPS
- Accuracy : $\pm 1\%$ typical
- Input fail indication



SC701

POWERLINE TRANSDUCER

- 11 single phase powerline parameters
- Extended voltage range : 5 to 265VAC (2 to 100% of rated value)
- 4 x 4~20mA outputs for any parameter or combination of parameters
- 2 pulse outputs for energy
- RS485 / MODBUS RTU
- Input / supply / outputs / pulse outputs mutually isolated
- User programmable Primary & Secondary for CT and PT
- Powerful, flexible SCADA (Elipse) software available

FLAMEPROOF, WEATHERPROOF PRODUCTS



Product	Model	Setpoint(s)	Display Digits	RS485 / MODBUS RTU	Supply	Gas groups	Degree of Protection	Mounting
PID CONTROLLERS								
Autotune PID Controller	X96P	5	4+4+3	YES	85~265 VAC OR 20~35 VDC	I, IIA & IIB	IP 65	Wall
Autotune PID Controller	X96	5	4+4	YES	85~265 VAC OR 20~35 VDC	I, IIA & IIB	IP 65	Wall
Autotune PID Controller	X48V1	3	4+4	NO	85~265 VAC OR 20~35 VDC	I, IIA, IIB & IIC	IP 66	2" pipe mounting
ONOFF CONTROLLERS								
Programmable ONOFF Controller	X96A	4	4+4	YES	85~265 VAC OR 20~35 VDC	I, IIA & IIB	IP 65	Wall
Programmable ONOFF Controller	X96AV1	4	4+4	YES	85~265 VAC OR 20~35 VDC	I, IIA & IIB	IP 65	Wall
Programmable ONOFF Controller	X48AV1	3	4+4	YES	85~265 VAC OR 20~35 VDC	I, IIA, IIB & IIC	IP 66	2" pipe mounting
Programmable ONOFF Controller	TC96	2	4+4	NO	85~265 VAC OR 20~35 VDC	I, IIA & IIB	IP 65	Wall
Programmable Temperature Indicator	TEC301	0	4	NO	85~265 V AC	I, IIA & IIB	IP 65	Wall/Pipe
Programmable Temperature Controller	TEC302	1	4+4	NO	85~265 V AC	I, IIA & IIB	IP 65	Wall/Pipe
Programmable Temperature Controller	TC48V3	2	4+4	NO	85~265 VAC OR 20~35 VDC	I, IIA, IIB & IIC	IP 66	2" pipe mounting
Differential Temperature Controller	X96Delta	4	4+4+4	YES	85~265 VAC OR 20~35 VDC	I, IIA & IIB	IP 65	Wall
SCANNER								
Multi-channel Scanner	ISOSCAN	16	4.5+4.5+2	YES	85~265 VAC OR 20~35 VDC	I, IIA & IIB	IP 55	Wall
FLOW RATE INDICATOR / TOTALISER								
Flow Rate Indicator / Totaliser	FLOTO / FLOTO46	4	8+6 / 6+4	YES	85~265 V AC 20~35 V DC	I, IIA & IIB	IP 65	Wall
RPM/RATE INDICATORS, TIMERS, COUNTERS								
Programmable Rate Indicator	RCT202	0	4	NO	85~265 V AC OR 24 V DC	I, IIA & IIB	IP 65	Wall
RPM/Rate Indicator with Alarm	RCT206	2	6+6	NO	85~265 V AC OR 24 V DC	I, IIA & IIB	IP 65	Wall
Preset Counter with Rate Indicator	RCT301	2	6+6	NO	85~265 V AC OR 24 V DC	I, IIA & IIB	IP 65	Wall
Multifunction Memory timer	RCT605	2	4+4	NO	85~265 V AC OR 24 V DC	I, IIA & IIB	IP 65	Wall

Product	Model	Input	Output	Input / Output Isolation	Supply	Local Display	Gas groups	Degree of Protection	Mounting
ISOLATORS, TRANSMITTERS									
2-wire Programmable, Isolated Temperature Transmitter	TX3DR	Universal	4~20 mA	YES	11~32 V DC loop supply	4 digit LED	I, IIA, IIB & IIC	IP 66	2" pipe
2-wire Temperature Transmitter	TX1HM	Pt100	4~20 mA / 20~4 mA	NO	6.2~32 V DC loop supply	LED for Power On status	I, IIA & IIB	IP 65	2" pipe
2-wire Temperature Transmitter	SCC633	Universal	4~20 mA	YES	10.5~45 V DC	Backlit LCD display	I, IIA & IIB	IP 65	Field
ISOLATORS, TRANSMITTERS									
2-wire RH+T Transmitter	SC804	RH+T sensor	2 x 4~20 mA	NO	11.5~32 V DC loop supply	4 digit LED	I, IIA, IIB & IIC	IP 66	Surface
2-wire RH+T Transmitter	SC806	RH+T sensor	2 x 4~20 mA	YES	4.5~32 V DC loop supply	4 digit LED	I, IIA & IIB	IP 66	Duct
RH+T CONTROLLER									
RH+T Onoff Controller	HX96A	Remote sensor	4~20 mA	YES	85~265 V AC OR 20~30 V DC	4 digit LED	I, IIA & IIB	IP 65	Wall
LOOP POWERED INDICATORS									
Loop Powered Indicator	PLD40	4~20 mA	-	NA	NA	4 digit LED	I, IIA, IIB & IIC	IP 66	2" pipe
Loop Powered Indicator	PLC40	4~20 mA	-	NA	NA	4 digit LCD	I, IIA, IIB & IIC	IP 66	2" pipe

URL : www.radix.co.in/flp.html

ELIPSE SCADA

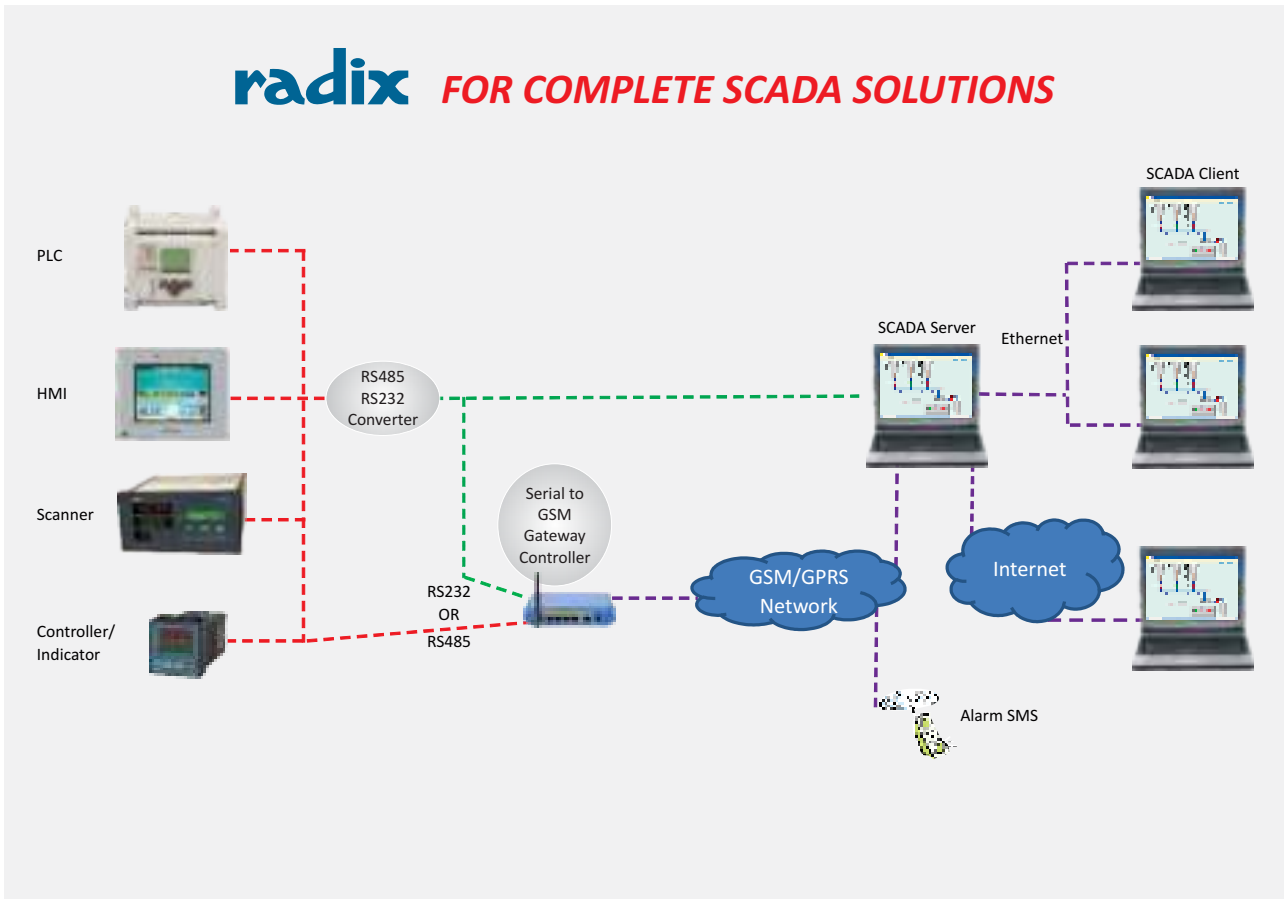
Elipse Software offers powerful, easy-to-configure products for the development of HMI/SCADA applications, with excellent cost/benefit ratio, be it for simple projects or for complex systems of process management. With Elipse SCADA and E3 you have the best tools to increase efficiency and quality of your processes, reducing costs and losses.

ELIPSE PRO32

Communication with any equipment – PLCs, HMI, Process Control Instruments, etc.
Supports MODBUS / RTU-ASCII-TCP/IP, PROFIBUS, CANOpen, DF1, DH485, Ethernet IP, etc.
Mimic displays
Real-time and Historical Trends
Alarm Annunciation, Summary and History
In-built Recipe functions
Historical Data-logging in a secure, tamper-proof database
Customised, Excel, Text & HTML reports
Event-logging through scripting
Remote View function over Ethernet

E3 - THIRD GENERATION SCADA

Higher version of Elipse Pro32
21CFR PART 11 compliant
Distributed architecture
Client/server concept
Highly flexible and scalable
Vector graphics
Database connectivity
OPC connectivity
Remote access over Ethernet/Internet



URL : www.radix.co.in/scada.htm

END-TO-END AUTOMATION

Radix now offers integrated automation solutions, from sensor to control panel to scada. We work with a large variety of automation products - PLC, HMI, VFD & SCADA - of reputed international brands. This gives us the flexibility to design, manufacture and supply optimized and cost effective automation systems that meet all your requirements.

AUTOMATION DEPARTMENT



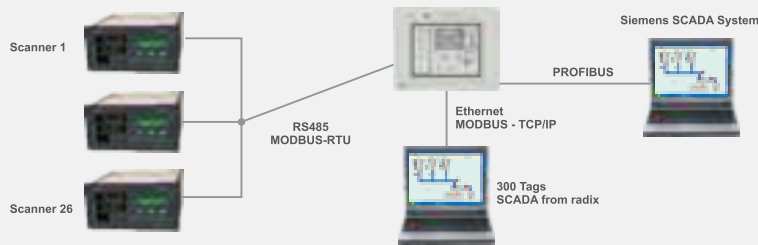
Our Automation Department combines the vast experience of our Automation professionals with the process expertise of Radix to give an unmatched problem-solving ability. PLC programming, SCADA, multilevel SCADA with OPC connectivity, interface with high level software such as Oracle, 21CFR compliance - Radix has been there, done that.

ALL INDIA SALES & SUPPORT



Our extensive sales network of over 30 field staff across the country assures a quick response. Our sales team is trained to handle first level automation inquiries, and is also being trained to provide support. Combined with the Automation expertise of our Head Office team, Radix can provide fast and reliable pre- and post-sales service to customers in every corner of India.

APPLICATIONS



DATA ACQUISITION SYSTEM - STEEL PLANT

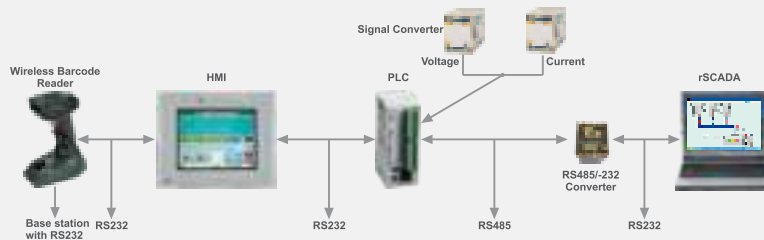
MODBUS, PROFIBUS, ETHERNET

Product Mix

- Universal Input 16 ch. Scanners - Radix
- 5.7" TFT color touch screen HMI - Exor
- SCADA - Radix
- RS485 cable

Features

- Protocol conversion from Modbus to Profibus
- Independent SCADA for data logging over Modbus TCP-IP
- Local alarm display on HMI



BARCODE SCANNING & DATA-LOGGING SYSTEM

Product Mix

- PLC with 8DI + 4DO - DVP14SC11R2 - Delta
- 4x20 Lines, Functin Key HMI - ePAD05-TCM15 - Exor
- Barcode Scanner - Datalogic
- Signal Converter - Radix
- 75 Tags SCADA - Elipse

Features

- Online barcode scanning
- Non-stop operation for 8 hours
- Total cycle time is only 10 sec.
- Automatic generation of daily report in MS Excel

SERVO BASED CUT-TO-LENGTH SYSTEM

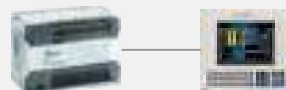


Product Mix

- PLC with 40 I/Os
- 7" wide TFT color touch screen HMI
- 1KW, 3000 Rpm Servo system
- 5 HP VFD
- 3 HP VFD

Features

- High speed operation - 80 cuts/min
- Cutting accuracy +/- 0.2 mm at full speed
- Recipe function diff. products
- Low cost



PHARMA

FLUID BED DRYER

- PLC with 48 I/Os - Delta
- 5.7" Touch screen HMI - EXOR

RAPID MIXER GRANULATOR

- PLC with 32 I/Os Delta
- 4x20 Character Function key HMI EXOR

TABET COATING MACHINE

- PLC with 56 I/Os Delta
- 10" Touch screen HMI EXOR

URL : www.radix.co.in/automation.htm

THERMOCOUPLES

CONVENTIONAL ASSEMBLIES

- Ceramic insulated wire-in-bead construction
- Available in K and N calibration
- SS316 and Inconel 600 are standard sheath materials
- Also available in SS310, SS446 & INCOLOY 800
- Terminal heads for flameproof applications also
- ½" BSP (F) cable entry as standard
- Single cable entry without cable gland as standard
- Double cable entry and cable glands optional
- Elements terminated into nickel plated brass terminals mounted on high purity ceramic terminal block
- All models also available with dual element configuration



**WITH ADJUSTABLE
COMPRESSION FITTING**



**WITH ADJUSTABLE
FLANGE**

BASE METAL ELEMENTS



The base metal thermocouple elements are replacement elements for use in Radix industrial thermocouple assemblies.

These thermocouples are available as bare wire or ceramic insulated elements in K, N and T calibration.

**BARE WIRE WITH CERAMIC
BEADS & TERMINAL BLOCK**

FOR ACIDS & ALKALIES



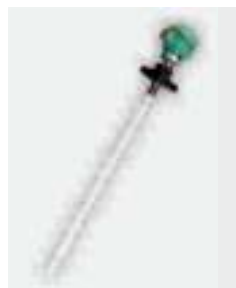
**WITH TEFLON COATED
& TITANIUM SHEATH**

- Teflon (PTFE) coated SS316 sheath protects against acids and alkalis
- Up to 200°C
- Available up to 1000mm length
- 6 & 8 mm diameters
- Titanium sheath in 8 & 10 mm dia for longer life
- Plastic terminal head
- Stainless steel head optional

PLATINUM THERMOCOUPLES

Platinum thermocouple assemblies are most commonly used in high temperature process heating applications. These assemblies are available with a variety of process mountings, fittings and assembly options. These are also available with double protection tubes. Sheath is cemented inside supporting stainless steel collar for mounting in the terminal head.

All models are available with dual element configuration.



**WITH ADJUSTABLE
FLANGE**



**WITH FIXED FITTING
AWAY FROM HEAD**

THERMOCOUPLE PROBES FOR HANDHELD THERMOMETERS



A variety of thermocouple probes are available for use with Handheld Thermometers

THERMOCOUPLES

SURFACE TEMPERATURE MEASUREMENT



WASHER THERMOCOUPLES

- Easy to use, low cost varieties made of Class 2 (IEC) grade 7/36 SWG thermocouple wire
- Grounded hot junction
- PTFE taped cables for 250°C and glass fibre braided & impregnated for 300°C applications
- J, K, and T calibration
- Supplied with 1 mtr long glass fibre insulated, stainless steel braided cable as standard
- Leads terminated into fork type lugs



STICK-ON THERMOCOUPLE

- Self adhesive tape for easy installation
- Better than 0.2 second response time
- Rated for 150 °C
- Calibration : K
- Colour-Coded PTFE insulated leads
- Multistranded leads for long life and flexibility



LEAF SURFACE PROBES

- Low mass ensures fast response
- For measuring temperature of flat surfaces
- Up to 400°C
- 3 sizes



MAGNET TYPE THERMOCOUPLES

- For surfaces which cannot be drilled
- Up to 200°C
- J, K & T calibration
- Grounded hot junction for fast response
- Spring loaded hot junction ensures proper contact
- 3mm dia MI makes it bendable & easy to install
- Miniature plug & socket for easy disconnection

PLASTICS

- Supplied with grounded hot junction
- Ungrounded (isolated) hot junction optional
- Bayonet caps & fittings made of plated brass
- SS304 caps & fittings available
- Standard sheath material : SS316
- Supplied with 1 mtr long glass fibre insulated, stainless steel braided cable. Other cable lengths available in multiples of 1 mtr



BAYONET THERMOCOUPLES



IN-MELT THERMOCOUPLE FOR EXTRUDER



NOT-IN-MELT THERMOCOUPLE FOR EXTRUDER

HEAT TREATMENT



FOR SALT BATH

- K & N calibration
- 21/25/28mm OD, 7mm ID, SS446 barstock hot arm
- SS316 cold arm
- SS elbow
- 6mm dia MI Inconel 600 sheathed element
- Standard lengths : 300, 450 & 600mm
- Also available with inner ceramic sheath
- Upto 1000 °C

MOLTEN ALUMINIUM THERMOCOUPLES



FOR MOLTEN ALUMINIUM

MeltAI is used for continuous measurement of molten aluminium temperature. Life expectancy is 1 to 5 years.

MeltAL is a new material designed to withstand molten aluminium corrosion much longer than any other material. Like ceramics, it has good heat and abrasion resistance. Unlike ceramics, it is not brittle.

THERMOCOUPLES

BANBURY THERMOCOUPLE



- Special purpose temperature sensor for rubber compound mixing

FOR TYRE INDUSTRY

EXHAUST GAS THERMOCOUPLES



- Used in exhaust pipe of carbureted engines

EXHAUST GAS THERMOCOUPLES

MINERAL INSULATED THERMOCOUPLES

GENERAL

In Mineral Insulated (MI) thermocouples, elements are surrounded by compact inorganic insulation (MgO) and housed in stainless steel or heat resistant alloy sheath for protection from the environment. Compared to conventional beaded thermocouples, MI thermocouples have the following advantages :

- Available in long lengths
- Can be bent, twisted and flattened at any point. Bends or distortions produce neither short circuits nor ruptures at the sheath or cores. Long units can be wound into coils for easy transportation
- Smallest bending radius : 2 x sheath diameter
- Small sheath diameter and flexibility save installation space and create minimum flow obstruction
- High vibration strength since they contain no movable / brittle parts such as ceramic beads
- High insulation resistance and fast response
- Robust in construction and good mechanical strength
- Available in 1, 1.5, 2.5, 3, 4.5, 6, 8 and 10mm dia
- Available in J, K, T & N calibration



STANDARD SHEATH MATERIALS

Circuit	Cross Section	Sheath dia in mm	Available sheath materials			
			J	K	N	T
Single		1.0	SS316	SS316, INCONEL 600	-	-
		1.5	SS316	SS316, INCONEL 600	-	SS316
		3.0	SS316	SS316, INCONEL 600	INCONEL 600	SS316
		4.5	SS316	SS316, INCONEL 600	-	-
		6.0	SS316	SS316, SS 310, SS 446, INCONEL 600	INCONEL 600	SS316
		8.0	SS316	SS316, SS 310, INCONEL 600	INCONEL 600	-
		10.0	-	SS 310, INCONEL 600	-	-
Dual		3.0	SS316	SS316, INCONEL 600	-	-
		4.5	SS316	SS316, INCONEL 600	-	-
		6.0	SS316	SS316, SS 310, INCONEL 600	-	-
		8.0	SS316	SS316, SS 310, INCONEL 600	-	-
		10.0	-	INCONEL 600	-	-

SHEATH MATERIAL, TEMPERATURE RANGE

CALIBRATION	SHEATH MATERIAL	TEMPERATURE RANGE
Iron / Constantan (J)		0 to 600°C
Chromel / Alumel (K)	SS316	0 to 850°C
Chromel / Alumel (K)	SS316*	0 to 1000°C
Chromel / Alumel (K)	SS310**	0 to 1100°C
Chromel / Alumel (K)	SS446**	0 to 1150°C
Copper / Constantan (T)	INCONEL 600	-200 to 350°C

* Available in 6 & 8mm diameters only

** Available in 6mm dia only. No nickel content. Best suitable for sulphur bearing atmosphere

Minimum wall thickness : 10% of OD

Minimum element dia : 15% of OD

MINERAL INSULATED ASSEMBLIES



MI THERMOCOUPLE



PLUG & JACK TYPE THERMOCOUPLES



MULTIPOINT THERMOCOUPLE ASSEMBLY

Multipoint Thermocouples

- Multiple elements are located at different heights to measure zone temperatures
- Used in a reactors, storage tanks & catalyst bed
- Custom built design to suit specific requirements

RTD SENSORS

RTD SENSORS



GENERAL

- Pt50, Pt100, Pt200, Pt500, Pt1000
- Rated upto 250°C, 400°C and 600°C
- MI and conventional types
- Film and wire-wound elements
- Accuracy classes: A, B and better

MINERAL INSULATED RTDs



WITH EXPLOSION PROOF HEAD

- MI RTDs can be bent as required
- More robust and vibration resistant
- Single and Dual element
- 3, 5, 6 and 8mm dia
- SS316 sheath
- Lengths upto 10 metres
- 0 to 400°C standard rating
- Other ranges optional

CONVENTIONAL RTDs

- Non-bendable sheath
- -20 to 250°C range
- Standard lengths: 150, 300, 450 & 600mm. Longer assemblies not recommended
- Termination : Aluminium head with threaded cap and chain
- Elements terminated into nickel plated brass terminals mounted on high purity ceramic terminal block
- Different types of terminal heads
- PG13.5 (F) single cable entry. Dual entries & glands optional



WELDED HEX MALE PLUG & LAG EXTENSION



WITH ADJUSTABLE COMPRESSION FITTING

PLASTICS

- Standard range 0 to 250°C; other ranges available
- SS316 sheath
- PTFE insulated and jacketed cables. Stainless steel overbraided cables available
- Supplied with 1 meter cable or in multiples thereof
- Bayonet caps and fitting made of plated brass. SS304 caps and fitting available



BAYONET ASSEMBLIES WITH FIXED LENGTH



ANGULAR CONSTRUCTION

TRANSITION JOINT ASSEMBLIES

- Integral cable makes the assembly light and easy to install
- Easy to use models
- Standard models for -20 to 250°C range; other ranges available
- SS316 sheath, SS316L optional
- PTFE insulated and jacketed cables, stainless steel overbraided cables available
- Supplied with 1 meter cable or in multiples thereof



WITHOUT PROCESS CONNECTION



WITH ADJUSTABLE COMPRESSION FITTING



ANGULAR CONSTRUCTION

RTD SENSORS

SANITARY RTDs

- Used in food, dairy, beverage, pharmaceutical and chemical processes where contamination & cleanliness are of concern
- Tri-Clovers made of SS316L
- SS316 for other process connections
- -20 to 250°C range, other ranges available
- Termination : Aluminium head with threaded cap and chain



WITH TRICLOVER FITTING



WITH FIXED FITTING



WITH SS HEAD & TRICLOVER FITTING

SURFACE & BODY TEMPERATURE

RTDs with Weld pad

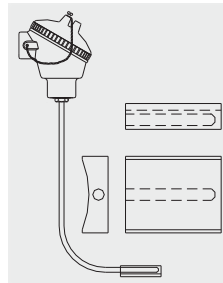
- Standard models for -20 to 250°C
- To measure surface temperature of process pipe
- Curved pad to match pipe diameter
- SS304 & SS316 pads
- Other terminations available

Clamp-on RTDs

- For pipe / cylinder surface temperature measurement where welding, drilling, etc. are not possible
- -20 to 250 °C range

Block type RTDs

- For temperature measurement of block surfaces, parts and bodies of machineries



WITH WELD PAD



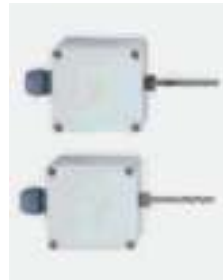
CLAMP-ON



BLOCK TYPE

HVAC RTDs

- RTD for air & gas temperature
- 8mm sheath diameter
- Temperature transmitter and cable optional
- For clean room temperature
- For outdoor temperature
- For duct temperature



- ABS housing
- -20 to 65 °C



- Cast aluminium housing
- -20 to 100°C



- For flowing non-corrosive air - indoor only
- Perforated tip and thin film element for fast response
- Upto 250°C

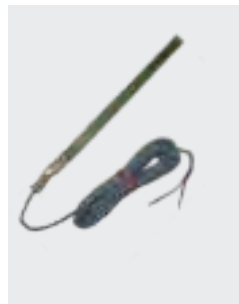
RTD FOR AUTOMOBILES



DIPSTICK RTD FOR OIL TEMPERATURE

- Flexible steel spring ensures easy insertion
- "O" rings prevent leakage of fluid
- -20 to 200 °C range
- PTFE insulated cable as standard

SLOT RTD



FOR WINDING TEMPERATURE

- For measurement of winding temperature of various electrical devices
- Made of fibre body
- Designed to withstand voltage upto 2KV
- Can be inserted between windings
- Upto 180 °C
- Supplied with PTFE insulated and jacketed cable
- Dual elements available
- Select suitable length to get mean temperature

RTD SENSORS

ACIDS & ALKALIES



WITH TEFLON COATED & TITANIUM SHEATH

- Teflon (PTFE) coated SS316 sheath protects against acids and alkalis
- Up to 200°C
- Available up to 1000mm length
- 6 & 8mm diameters
- Titanium sheath in 8 & 10mm dia for longer life
- Plastic terminal head
- Stainless steel head optional

AUTOCLAVE RTD



AUTOCLAVE RTD

- Designed for the pharmaceutical industry
- Eliminates the problem associated with ordinary probes where the pressure cycling of autoclave can force moisture inside the probe.

OTHER

MERCURY IN STEEL DIAL THERMOMETER



CAPILLARY TYPE

RIGID STEM TYPE

- Uses the principle of Mercury Expansion
- Temperature range -30°C to 600°C
- Available in Rigid Stem & Capillary Type for remote sensing
- Accuracy: $\pm 1\%$ FSD

BIMETAL DIAL THERMOMETER



- -50°C to 400°C
- With Rigid Stem
- Bottom & Back Entry
- Also in All-Angle construction
- Accuracy: $\pm 1\%$ FSD

THERMOWELLS & PROTECTION TUBES



- Wide range of BARSTOCK (monolithic drilled well of bar material) and FABRICATED (protection tube weld sealed at the end of drawn metal pipe) thermowells and protection tubes.
- Available in SS316, SS310, SS446, Hastalloy B & C, Tantalum and Monel

RTD & THERMOCOUPLE CONNECTORS



- Miniature and Standard
- J, K, T, N, R, S, B calibration
- RTD connectors
- Panel mount versions also

CABLES



- Compensating cables
- Extension cables
- Instrumentation cables
- Multi-core cables
- PVC, Teflon, Fibreglass, Asbestos, Silicone Rubber cables

PRESSURE GAUGES



GENERAL PURPOSE GAUGES

For Industrial & Process Application. Designed for Valve Positioners, Air Filters & Regulators, Small Boilers, Fire Extinguishers, Pharmaceutical & Food Processing Equipments, Pumps, Compressors, Hydraulic & Pneumatic Systems, Ammonia & Refrigeration Services.

Available in Bottom, Back Connection, Direct Surface, Panel Clamp mountings; available in all standard process connections. Accuracy $\pm 2\%$. Dial size 40, 50, 63, 100, 150, 200 & 250 mm.

INDUSTRIAL GAUGES

Commonly used in Chemical Processing, Petroleum Refinery, Petrochemical, Fertilizer, Thermal & Nuclear Power Generating industries. Bourdon tube made of Brass or SS 316. Weatherproof and Dustproof. Dial size 63, 100, 150 mm. Accuracy $\pm 1.6\%$ for 63 mm, $\pm 1\%$ for 100 and 150 mm. Ranges upto 1000 kg/cm^2 , -760 mm Hg to 0 (vacuum).



GLYCERINE FILLED GAUGES

Designed for rugged applications. Provides extra protection from vibration, pulsation and shock. Installed on Powerpacks, Hydraulic Machineries, Pumps, Compressors, Power Plants, Pipelines and Transmission Stations.

Glycerine filling makes the movement damped and constantly lubricated. Other details same as for Industrial gauges.

DIAPHRAGM TYPE GAUGES

Designed for Chemical applications, for use on corrosive gases and liquids. Diaphragm material is Stainless Steel with/without Teflon protection.

Diaphragm Sealed gauges recommended for protection from corrosive or viscous fluids, clogging, and in-line freezing of the process media. Special hygienic diaphragm seal on gauges available for pharmaceutical, food processing and dairy applications.

Accuracy $\pm 1.6\%$. Standard dial sizes available are 63 mm, 100 mm and 150 mm. Pressure range from 50 mbar to 600 mbar and $0-1 \text{ kg/cm}^2$ upto $0-400 \text{ kg/cm}^2$.



CAPSULE TYPE GAUGES

Designed for low pressure measurement of non-corrosive gases, commercial heating, gas distribution and filtration. Element made of Brass or SS 316 capsule.

Available in dial sizes 63, 100 and 150 mm with choice of mounting and connection.

Accuracy $\pm 2\%$ for 63 mm, $\pm 1.6\%$ for 100 mm and 150 mm. Standard pressure range is mmWC, mbar and inches of water column. Very low pressure ranges from 25 mbar upto 600 mbar.

CONTACT GAUGES

Designed for control of pressure and audible or visible alarms by switching on and off action.

Used in Pumps, Motors, Turbines, Blowers, for Audio/Visual alarms for signalling irregularities.

Gauges provided with single or double contacts, adjustable throughout the range with different modes of switching action. Choice of low action normal contact, snap action magnetic contact or inductive contact.

Available in dial sizes 100 mm & 150 mm and in all standard ranges.



CAT#302R4