



- Din Rail Mount
- Wall Mount

Applicable EMI / EMC standards		
Product standard : IEC 61326-1		
Category	Standards Compliance	
ESD Immunity	IEC 61000-4-2	Level II for Contact discharge Level III for Air discharge
Surge Immunity	IEC 61000-4-5	+/- 2 kV common mode,
Radiated Susceptibility	IEC 61000-4-3	Level III, 80 to 1000MHz Level II, 1.4GHz to 2GHz Level I, 2GHz to 2.7GHz
Conducted Susceptibility	IEC 61000-4-6	Level II
Conducted Emission	CISPR-11	
Radiated Emission	CISPR-11	
Electrical Fast Transient	IEC 61000-4-4	Level II



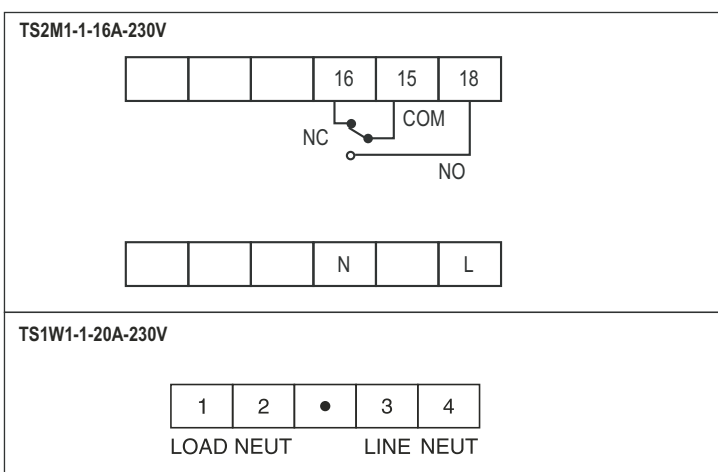
**TS2M1-1-16A-230V**  
Size : 35mm (Width)



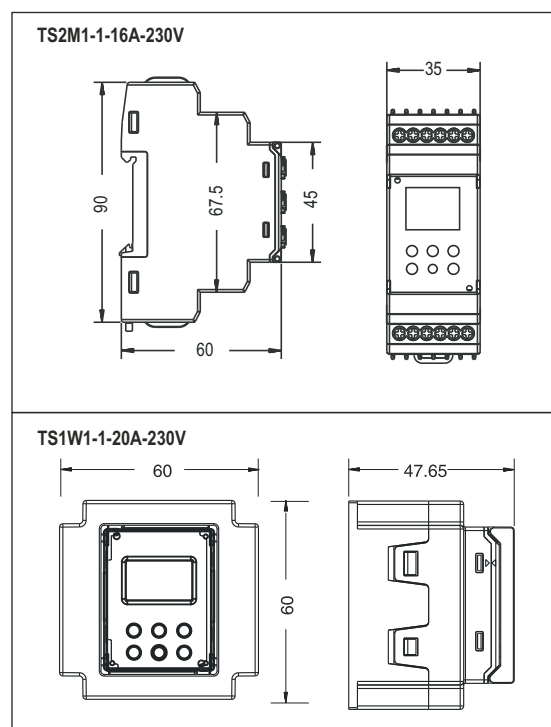
**TS1W1-1-20A-230V**  
Size : 60 x 60 mm

<b>FEATURES</b>	<ul style="list-style-type: none"> <li>• Din Rail Mount</li> <li>• 50 ON - OFF Steps per day</li> <li>• 1C/O SPDT</li> <li>• Indications -Auto manual, Holiday, Relay status, Day of Week, Programming Mode</li> </ul>	<ul style="list-style-type: none"> <li>• Wall Mount</li> <li>• 50 ON - OFF Steps per day</li> <li>• 1C/O SPST</li> <li>• Indications -Auto manual, Holiday, Relay status, Day of Week, Programming Mode</li> </ul>
<b>DISPLAY</b>	Text LCD (Without Backlight)	
<b>RTC ACCURACY</b>	15 Minutes a year@25°C	
<b>OUTPUT CONTACT</b>	1 C/O SPDT	1 C/O SPST
<b>CONTACT RATING</b>	16A@250V AC	20A@250V AC
<b>OPERATION PERIOD</b>	1 Week	
<b>WEEKLY PROGRAM</b>	Total 50 ON Steps and 50 OFF Steps 2 Programs x 25 Steps 3 Programs x 16 Steps 4 Programs x 12 Steps 5 Programs x 10 Steps 6 Programs x 08 Steps 7 Programs x 07 Steps 8 Programs x 06 Steps	
<b>MINIMUM SETTING UNIT</b>	1 Second	
<b>HOLIDAY SETTINGS</b>	16 Dates	
<b>CLOCK</b>	12-hr. (AM / PM) and 24-hr. selection	
<b>RELAY OPERATING MODE</b>	Auto / Temporary Override / Permanent Override ON / Permanent Override OFF	
<b>SUPPLY VOLTAGE (AC : 50 / 60 Hz)</b>	230V AC ±10%	

**Terminal Connections**



**Dimensions (All are in mm)**



**Ordering Information**

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
TS2M1-1-16A-230V	230V AC	CE in process
TS1W1-1-20A-230V	230V AC	CE in process



- 17.5mm DIN Rail Timers
- 22.5mm DIN Rail Timers
- 8 Pin Socket / Panel Mount Timers
- Digital Timers
- Time Totalisers

Applicable EMI / EMC standards		
Product standard : IEC 61326-1		
Category	Standards Compliance	
ESD Immunity	IEC 61000-4-2	Level II for Contact discharge Level III for Air discharge
Surge Immunity	IEC 61000-4-5	+/- 2 kV common mode,
Radiated Susceptibility	IEC 61000-4-3	Level III, 80 to 1000MHz Level II, 1.4GHz to 2GHz Level I, 2GHz to 2.7GHz
Conducted Susceptibility	IEC 61000-4-6	Level II
Radiated Emission	CISPR-11	
Electrical Fast Transient	IEC 61000-4-4	Level II

Note : Above standards are applicable only for CE certified Timers

**17.5mm Din Rail Timers**



**600DT**

Size : 17.5 x 90 x 60mm



**600ST**

Size : 17.5 x 90 x 60mm



**600XU**

Size : 17.5 x 90 x 60mm



**600SD**

Size : 17.5 x 90 x 60mm



**642SQ-A**

Size : 17.5 x 90 x 60mm



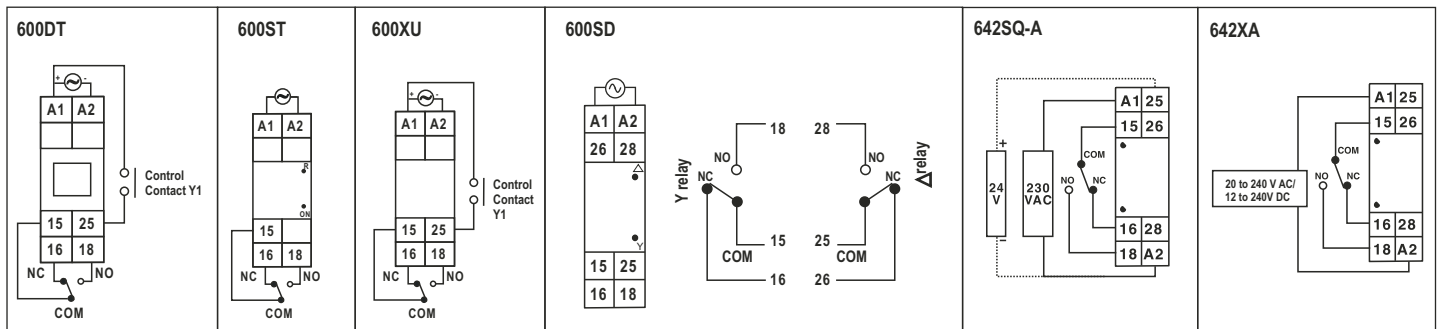
**642XA**

Size : 17.5 x 90 x 60mm

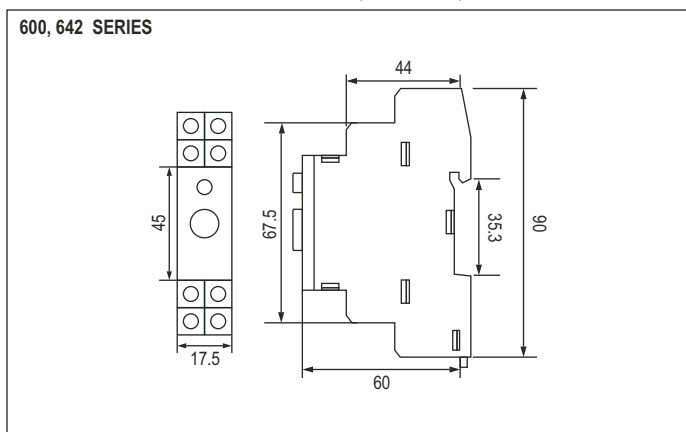
FEATURES	<ul style="list-style-type: none"> <li>• Digital Timer</li> <li>• 15 Functions</li> <li>• 8 Time Ranges</li> <li>• 1 C/O SPDT</li> </ul>	<ul style="list-style-type: none"> <li>• Single Function</li> <li>• 10 Time Ranges</li> <li>• 1 C/O SPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 13 Functions</li> <li>• 10 Time Ranges</li> <li>• 1 C/O SPDT</li> </ul>	<ul style="list-style-type: none"> <li>• Star Delta</li> <li>• 1 C/O Relay each for Star &amp; Delta</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 8 Time Ranges</li> <li>• 1 C/O SPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 8 Time Ranges</li> <li>• 1 C/O SPDT</li> </ul>
ACCURACY	Setting : ± 0.1% of set time or ±50ms (whichever is greater) For Y contact operation : +100ms, Repeat : ± 0.1 %		Setting : ±5% of F.S Repeat : ±0.5% (F.S. = Full Scale) Pause time accuracy : ±5% ±5ms			
OUTPUT CONTACT	1 C/O SPDT	1 C/O SPDT	1 C/O SPDT	1 C/O relay each for star & delta	1 C/O SPDT	
CONTACT RATING	8 A @ 250V AC		5A @ 250V AC or 24V DC			
MODES	A, B, C, D, E, F, H, J, K, L, P, Q, R, T, U	A	A, B, C, Ci, D, E, F, H, I, J, K, Ai, Bi	Star - Delta	ON delay / Interval	ON delay / Interval
TIME RANGES	99.9 sec/min/hr, 999 sec/min/hr 9:59 min:sec, 9:59 hr:min	0.1-1 sec, 0.3-3 sec, 1-10 sec, 3-30 sec, 0.1-1 min, 0.3-3 min, 1-10 min, 3-30 min, 0.1-1 hr, 0.3-3 hr		Runup time: 3 sec - 30 sec, 6 sec - 60 sec Change over : 50/100 ms	0 - 3 sec / min, 0 - 10 sec / min, 0 - 30 sec / min, 0 - 60 sec / min	0 - 3 sec / min, 0 - 10 sec / min, 0 - 30 sec / min, 0 - 60 sec / min
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	20 to 240V AC / DC		240V AC, 110V AC	20 to 240V AC 12 to 240V DC	110V AC, 230V AC, 415V AC	230V AC, 24V AC/DC

Modes	<p><b>600DT</b> A - On delay, B - Interval, C - Asymmetrical cyclic OFF first, D - Asymmetrical cyclic ON first, E - Repeat cycle equal OFF first, F - Repeat cycle equal ON first, H - Pulse output, J - Delay on break, K - Delay on make/Delay on break, L - Interval after break, P - Single shot, Q - Retriggerable Single shot, R - Latching relay, T - Delay on make with Totalise, U - Interval with Totalise</p> <p><b>600ST &amp; 600XU</b> A - On delay, B - Interval, C - Repeat cycle equal OFF first, Ci - Repeat cycle equal ON first, D - Pulse output 500ms fixed, E - Delay on break, F - Delay on make/Delay on break, H - Interval after break, I - Single shot, J - Retriggerable Single shot, K - Latching relay, Ai - Delay on make with Totalise, Bi - Interval with Totalise</p>
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**Terminal Connections**



**Dimensions** (All are in mm)



**Ordering Information**

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
600DT	20-240V AC/DC	CE
600DT-CU		CE RoHS
600XU	20-240V AC, 12-240V DC	CE
600XU-A-1-CU		CE RoHS
600SD-2-230	230V AC	CE
600SD-2-230-CU-RoHS		CE RoHS
600SD-2-110V	110V AC	CE
600SD-110-CU		CE
600ST	240V AC	CE
600ST-CU		CE RoHS
642SQ-A	230VAC, 24 AC/DC	---
642XA	20 to 240V AC, 12 to 240VDC	---

**22.5mm Din Rail Timers**



**800XU**  
Size : 22.5 x 75 x 101mm



**800XA**  
Size : 22.5 x 75 x 101mm



**800M**  
Size : 22.5 x 75 x 101mm



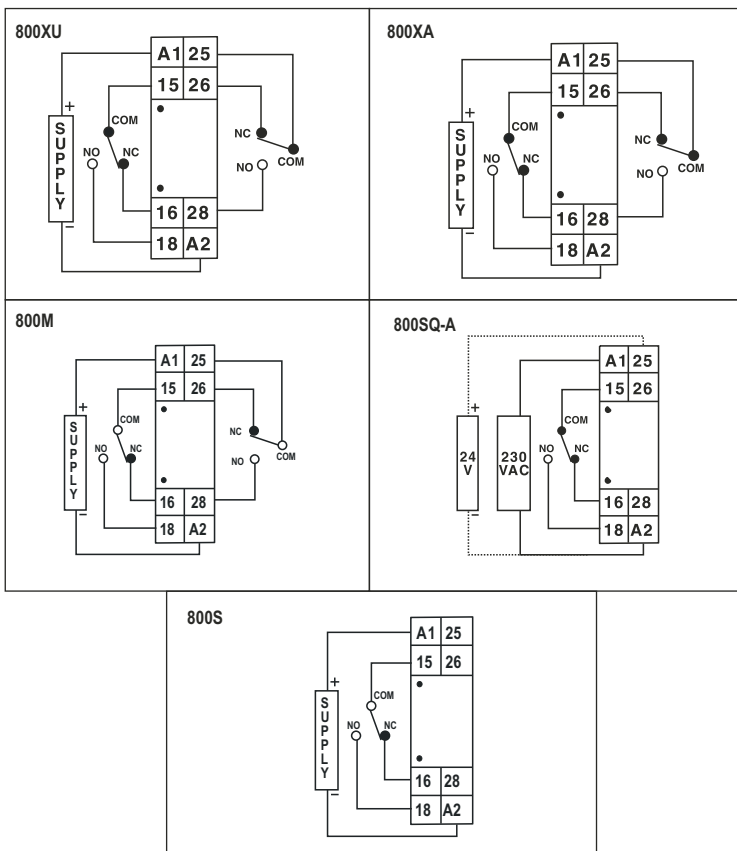
**800SQ-A**  
Size : 22.5 x 75 x 101mm



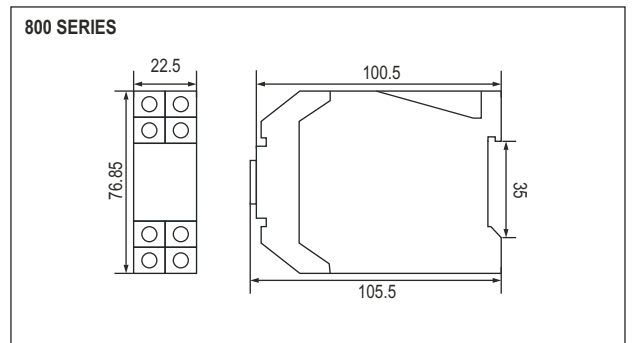
**800S**  
Size : 22.5 x 75 x 101mm

FEATURES	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 12 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 8 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 12 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 8 Time Ranges</li> <li>• 1 C/O SPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Functions</li> <li>• 2 Time Ranges</li> <li>• 1 C/O SPDT</li> </ul>
OUTPUT CONTACT	2 C/O DPDT	2 C/O DPDT	2 C/O DPDT	1 C/O SPDT	1 C/O SPDT
CONTACT RATING	5A @ 250V AC or 24V DC				
MODES	ON delay / Interval				ON: ON-delay
TIME RANGES	1 / 3 / 10 / 30 sec / min / hr	3 / 10 / 30 / 60 sec / min	1 / 3 / 10 / 30 sec / min / hr	3 / 10 / 30 / 60 sec / min	30: 30 sec 60S: 60 sec (factory set)
SETTING ACCURACY	±5% of full scale				
REPEAT ACCURACY	±0.5% or 50ms (Whichever is greater)				
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	20 to 240V AC, 12 to 240V DC	20 to 240V AC, 12 to 240V DC	230V AC, 12V DC	230V AC & 24V AC/DC 110V AC & 24V AC/DC	12V DC, 110V AC 230V AC, 415V AC

**Terminal Connections**



**Dimensions (All are in mm)**



**Ordering Information**

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
800XU	20-240VAC, 12-240V DC	---
800XU-CU	20-240VAC, 12-240V DC	CE, RoHS
800XA	20-240V AC, 12-240V DC	---
800XA-CE	20-240V AC, 12-240V DC	CE
800M(V1.1)-230	230V AC	---
800SQ-A	230V AC	---
800SQ-A-230-CU	230V AC	CE, RoHS
800S-1-ON-30S-230	230V AC	---
800S-1-ON-60S-230	230V AC	---
800S-1-ON-30S-415	415V AC	---
800S-1-ON-60S-415	415V AC	---

**22.5mm Din Rail Timers**



**800SD-2**  
Size : 22.5 x 75 x 101mm



**800XC**  
Size : 22.5 x 75 x 101mm



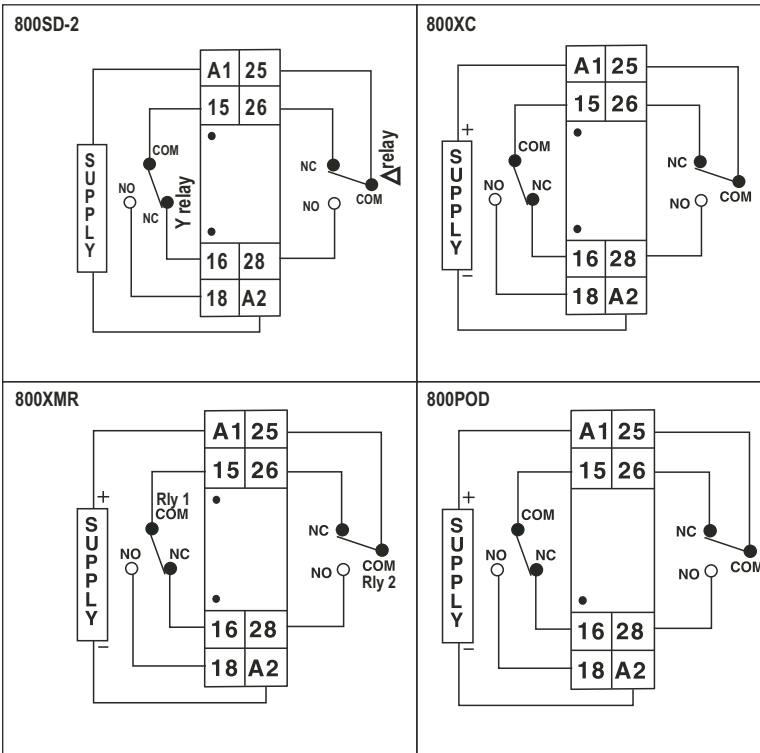
**800XMR**  
Size : 22.5 x 75 x 101mm



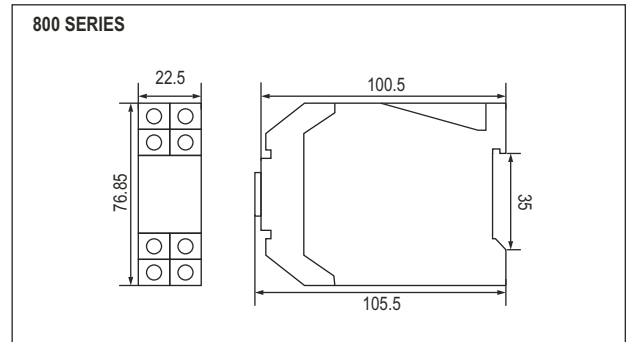
**800POD**  
Size : 22.5 x 75 x 101mm

FEATURES	<ul style="list-style-type: none"> <li>• Star delta</li> <li>• 2 Time Ranges</li> <li>• 1 C/O relay each for star &amp; delta</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 6 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• Forward Pause Reverse</li> <li>• 1 C/O Relay each for Forward &amp; Reverse</li> </ul>	<ul style="list-style-type: none"> <li>• True power OFF delay</li> <li>• 2 C/O DPDT</li> </ul>
OUTPUT CONTACT	1 C/O relay each for star & delta	2 C/O (DPDT)	1 C/O each for Forward & Reverse	2 C/O (DPDT)
CONTACT RATING	5A @ 250V AC or 24V DC			
MODES	Star - delta	Asymmetrical Cyclic ON first or OFF first	Forward - Pause - Reverse	True power OFF delay
TIME RANGES	Run up time range: 30 / 60 sec Change over: 50 / 100 msec	1 / 10 / sec / min / hr for both ON & OFF time	ON time : 1/2/4/8min Pause time : 10/20/40/80s	60s - 60sec, 180s - 180sec
SETTING ACCURACY	±0.5% or 50ms (Whichever is greater)			±10% of full scale,
REPEAT ACCURACY	±5% of full scale			±2% or 100ms
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	110 - 110V AC, 230 - 230V AC 415 - 415V AC	20 to 240V AC, 12 to 240VDC	20 to 240V AC, 12 to 240VDC	110 to 240 V AC / DC

**Terminal Connections**



**Dimensions (All are in mm)**



**Ordering Information**

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
800SD-2-230	230V AC	---
800SD-2-230-CU		CE, RoHS
800SD-2-110	110V AC	---
800SD-2-110-CU		CE, RoHS
800SD-2-415	415V AC	---
800XC	20-240V AC, 12-240V DC	---
800XC-CU		CE, RoHS
800XMR	20-240VAC, 12-240V DC	---
800POD-180S	110 -240V AC/DC	CE, RoHS
800POD-60S		CE, RoHS

Plug / Panel Mounting Timers



55XU  
Size : 48 x 48mm



55XC  
Size : 48 x 48mm



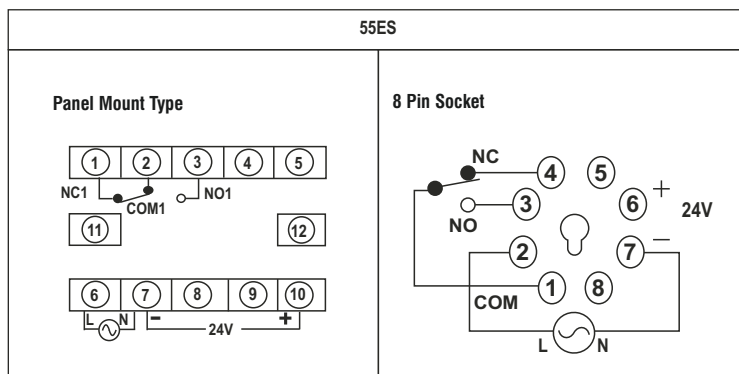
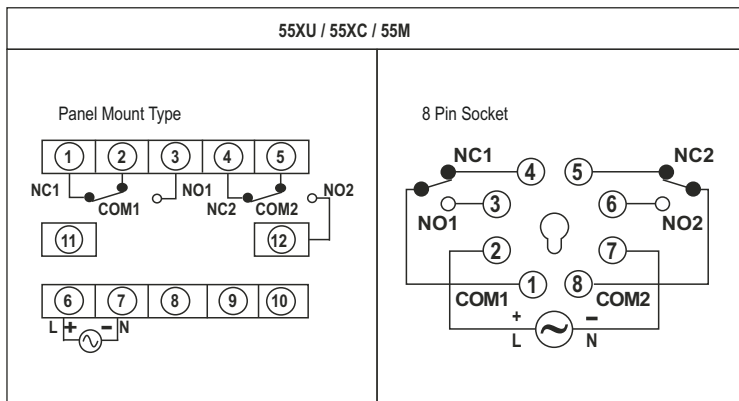
55ES  
Size : 48 x 48mm



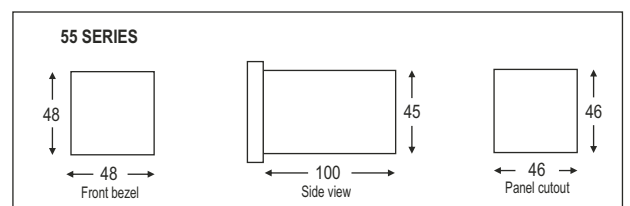
55M  
Size : 48 x 48mm

FEATURES	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 12 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 6 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 8 Time Ranges</li> <li>• 1 C/O SPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Functions</li> <li>• 12 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>
BASE TYPE	P8 - 8 pin plug, T8 - Screw terminal			
OUTPUT CONTACT	2 C/O DPDT	2 C/O DPDT	1 C/O SPDT	2 C/O DPDT
CONTACT RATING	5A @ 250V AC/ 24V DC			
MODES	ON Delay / Interval	Asymmetrical Cyclic ON first or OFF first	ON Delay / Interval	
TIME RANGE	1 / 3 / 10 / 30 sec min / hr	1 / 10 sec / min / hr for both ON & OFF time	3 / 10 / 30 / 60 sec / min	1 / 3 / 10 / 30 sec min / hr
ACCURACY	Setting : ± 5% of full scale, Repeat : ± 0.5% or 50 ms (whichever is greater)			
RELAY RATING	5 A @ 230V AC / 24VDC, resistive load			
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	20 to 240V AC, 12 to 240V DC	20 to 240V AC, 12 to 240V DC	230V AC & 24V AC / DC, 110V AC & 24V AC / DC	230V AC

Terminal Connections



Dimensions (All are in mm)



Ordering Information

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
55XC-P8	20-240V AC, 12-240V DC	---
55XC-P8-CU		CE RoHS:
55XC-T8		---
55XC-T8-CU	20-240V AC, 12-240V DC	CE RoHS:
55XU-P8		---
55XU-P8-CU		CE RoHS:
55XU-T8	230V AC	---
55XU-T8-CU		CE RoHS:
55M-P8-230		---
55M-T8-230	230V AC & 24V AC/DC	---
55ES-P8-230		---
55ES-P8-230-CU		CE
55ES-T-230	110V AC & 24V AC/DC	---
55ES-T-230-CU		CE
55ES-P8-110		---
55ES-P8-110-CU	110V AC & 24V AC/DC	CE
55ES-T-110		---
55ES-T-110-CU		CE



**XT532**  
Size : 48 x 48mm



**XT520**  
Size : 48 x 48mm



**XT543**  
Size : 48 x 48mm



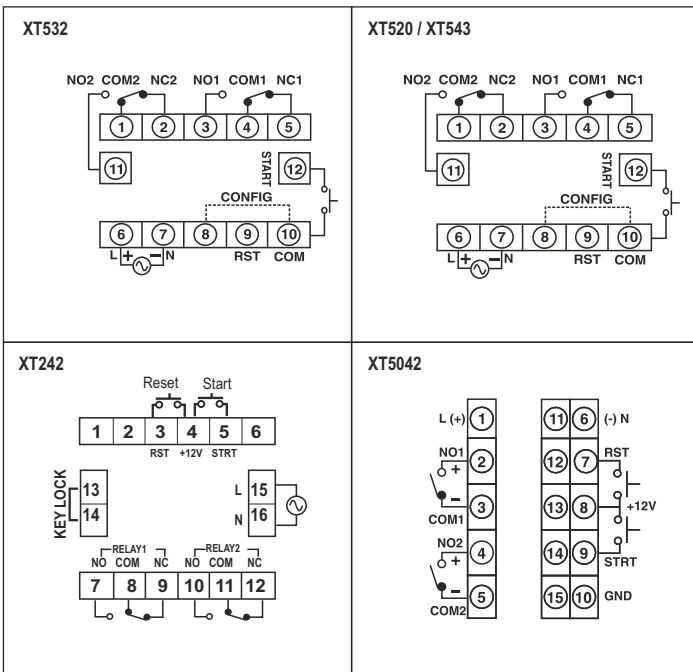
**XT242**  
Size : 72 x 72mm



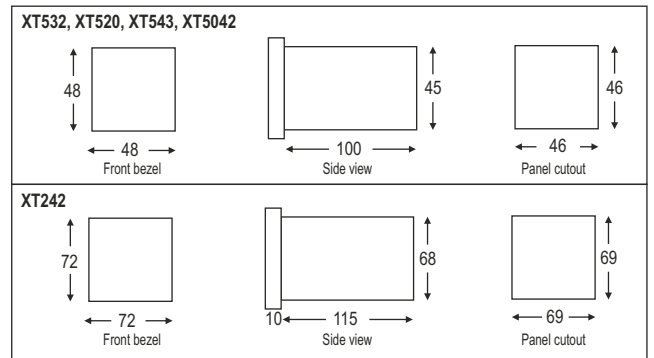
**XT5042**  
Size : 48 x 48mm

FEATURES	<ul style="list-style-type: none"> <li>• 4 Functions</li> <li>• 6 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 4 Functions</li> <li>• 9 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 4 Functions</li> <li>• 9 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 4 Functions</li> <li>• 9 Time Ranges</li> <li>• 2 C/O SPDT</li> </ul>	<ul style="list-style-type: none"> <li>• 7 Functions</li> <li>• 9 Time Ranges</li> <li>• 2 C/O SPST</li> </ul>
DISPLAY	2 digits		3 digits		4 + 4 digits
SETPOINT	Single set point				Dual set point
DELAY MODES	ON delay / Interval / Cyclic ON first / Cyclic OFF first				ON delay/Interval/Cyclic (on first)/Cyclic (off first)/Forward-Pause-Reverse/ Instantaneous + Delayed/Timer/Batch
TIME RANGE	9.9/99sec, 9.9/99min, 9.9/99hr	9.99/99.9/999sec, 9:59min:sec, 99.9/999min, 9:59hr:min, 99.9/999hr		99.99/999.9/9999sec, 99.59min:sec, 999.9min, 9999min, 999.9hr, 9999hr	99.99/999.9/9999sec, 99.59min:sec, 999.9/9999min, 99.59hr:min 999.9/9999hr
MEMORY RETENTION	10 Year	No memory retention		10 Year	
RESET / START INPUT	Start: Pulse start		Start: Gate / Pulse start (Programmable)		
ACCURACY	±0.05% of F.S. or 50 ms		±0.5% of F.S. or 50 ms		±0.05% of F.S. or 50 ms
OUTPUT CONTACT	2 C/O DPDT			2 C/O SPDT	2 C/O SPST
CONTACT RATING	5A @ 250V AC or 24V DC				
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC		85 to 270V AC / DC		90 to 270V AC / DC

**Terminal Connections**



**Dimensions (All are in mm)**



**Ordering Information**

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
XT532	90-270V AC/DC	---
XT520	85-270V AC/DC	---
XT543	90-270V AC/DC	---
XT242	90-270V AC/DC	---
XT5042	90-270V AC/DC	CE
XT5042-24V	24V AC/DC	CE
XT5042-CU	90-270V AC/DC	CE, RoHS





**XT56** Size : 48 x 48mm  
**XT264** Size : 72 x 72mm  
**XT364** Size : 96 x 96mm



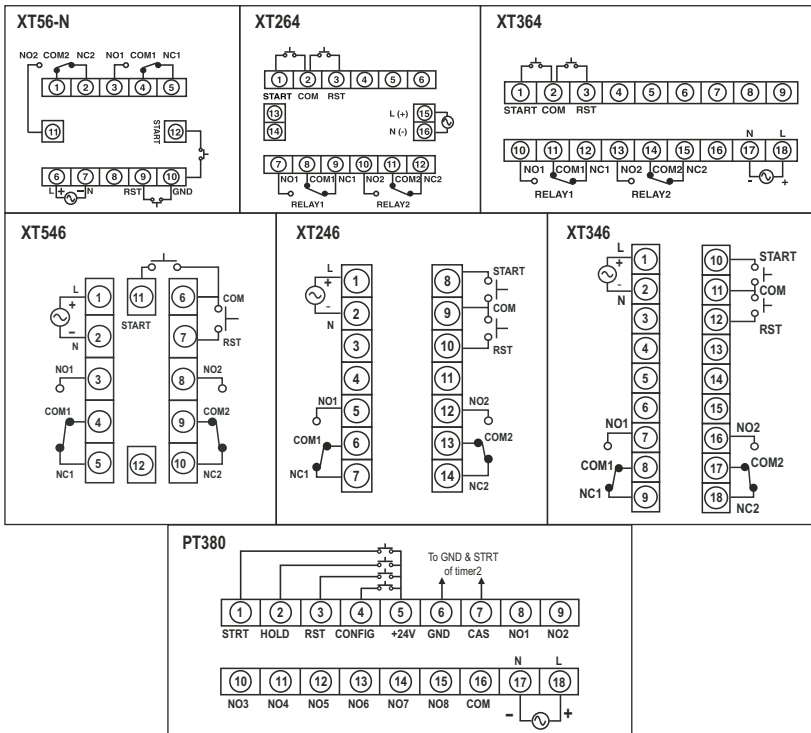
**XT546** Size : 48 x 48mm  
**XT246** Size : 72 x 72mm  
**XT346** Size : 96 x 96mm



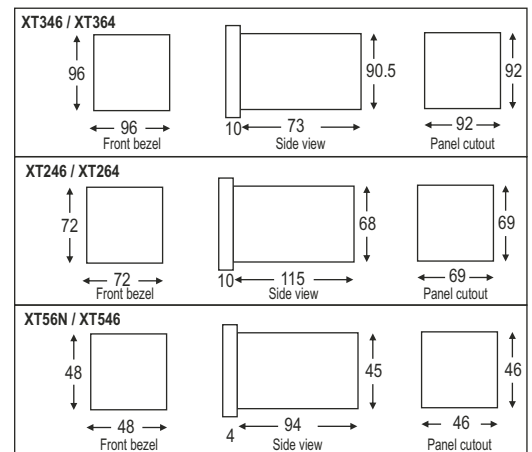
**PT380** Size : 96 x 96mm

FEATURES	<ul style="list-style-type: none"> <li>• Single set point</li> <li>• 2 Functions</li> <li>• 6 Time Ranges</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• Single set point</li> <li>• 4 Functions</li> <li>• 9 Time Range</li> <li>• 2 C/O DPDT</li> </ul>	<ul style="list-style-type: none"> <li>• Sequential timer</li> <li>• 8 Channels,</li> <li>• 4 Functions</li> <li>• 6 Time Ranges</li> </ul>
DISPLAY	3 digits	3 digit 7 Segment LED, Dual display	2 + 4 digits
SETPOINT	Single setpoint		
MODES	ON delay / Interval	ON delay / Interval / Cyclic (on first) / Cyclic (off first)	ON delay / Interval / Cyclic on first / Cyclic off first (Start up delay & no. of cycles programmable for cyclic mode)
TIME RANGE	9.99 / 99.9 / 999sec, 99.9 / 999min, 99.9hr	9.99 / 99.9 / 999sec, 9.59min : sec, 99.9 / 999min, 9.59hr : min, 99.9 / 999hr	99.99, 999.9, 99.59min : sec, 99.59hr : min, 999.9hr, User
TIME SETTING	Pushwheel	Front keypad	--
NO. OF CHANNELS	--	--	8 Channels
RESET/START INPUT	Start : Pulse start. Reset : Front, Remote, Power interruption	Start: Gate / Pulse start (Programmable)	Start, Hold
ACCURACY	±0.05% of F.S. or 50 ms	±0.05% of set time or 50 ms (whichever is greater)	±0.5% of setting or 50 msec (whichever is greater)
OUTPUT CONTACTS	2 C/O DPDT	2 C/O DPDT	--
CONTACT RATING	5A @ 250V AC or 24V DC		
MEMORY RETENTION	--	10 Years	10 Years (User selectable)
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC	85 to 270V AC, 24V AC / DC (optional)	85 to 270V AC / DC

## Terminal Connections



## Dimensions (All are in mm)



## Ordering Information

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
XT56-N	90-270V AC/DC	---
XT56-N-CE	90-270V AC/DC	CE
XT264	90-270V AC/DC	---
XT364	90-270V AC/DC	---
XT546	85-270V AC/DC	CE
XT546-24V	24V AC/DC	---
XT246	85-270V AC/DC	CE
XT246-24V	24V AC/DC	---
XT346	85-270V AC/DC	CE
PT380	85-270V AC/DC	---



TT412  
Size : 36 x 72mm



T1103  
Size : 48 x 96mm



LT920A  
Size : 24 x 48mm



LT945A  
Size : 24 x 48mm

FEATURES	<ul style="list-style-type: none"> <li>• 6 Digits Time Totaliser</li> <li>• Selectable Least Count</li> <li>• Remote Reset</li> </ul>	<ul style="list-style-type: none"> <li>• 4 Digits Time Interval Meter</li> <li>• Range : Auto Ranging, Fixed Ranges</li> </ul>	<ul style="list-style-type: none"> <li>• 8 Digits LCD Time Totaliser</li> <li>• Self Powered</li> <li>• Long Battery Life</li> <li>• Contact / Voltage Input</li> <li>• Front Reset Button</li> </ul>	<ul style="list-style-type: none"> <li>• 8 Digits LCD Time Totaliser</li> <li>• Self Powered</li> <li>• Long Battery Life</li> <li>• Contact / Voltage Input</li> </ul>
DISPLAY	6 digits	4 digits	8 digits	
RANGE	99999.9 / 999999 / sec / min / hr	a) Autoranging: .0001 to 9999 sec b) Fixed ranges: .9999, 9.999, 99.99, 999.9, 9999 sec	a) 9999.59.59 hr:min:sec b) 999999.99 hr	999999.99 hr
ACCURACY	±0.05% + 1 count			
INPUT	Mains, Potential free contact, PNP sensor	Potential free & 3 to 30V DC from solid state devices	a) 24 to 260V AC b) Contact input	a) 24 to 260V AC b) Contact input
RESET	Remote (Reset time: 20 ms)	Front, Remote, Auto	Front, Remote	No reset
MEMORY	10 Years	---	5 years	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC		Battery Powered	

Terminal Connections

<p><b>TT412</b></p>	<p><b>T1103C</b></p>
<p><b>LT920A-C</b> : To turn on short terminal 1 &amp; 2.</p>	<p><b>LT920A-V</b> : To turn on give input signal.</p>
<p><b>LT945A-C</b> : To turn on short terminal 1 &amp; 2.</p>	<p><b>LT945A-V</b> : To turn on give input signal.</p>

Dimensions (All are in mm)

<p><b>TT412</b></p>
<p><b>T1103C</b></p>
<p><b>LT920A, LT945A</b></p>

Ordering Information

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION	
T1103C	90-270V AC/DC	---	
TT412	90-270V AC/DC	---	
PRODUCT CODE	INPUT TYPE		CERTIFICATION
	CONTACT	VOLTAGE	
LT920A-C	■		CE in process
LT920A-V		■	CE in process
LT945A-C	■		CE in process
LT945A-V		■	CE in process

Accessories (Common For All Products)

<p><b>ADAPTER PLATES - Material: ABS plastic</b> To fit smaller products into 92mm x 92mm size or 69mm x 69mm size cut outs</p> <p>Model: AP9672 To fit 72 mm x 72 mm product in to 92 x 92 mm cutout              Model: AP9648 To fit 48 mm x 48 mm product in to 92 mm x 92 mm cutout              Model: AP7248 To fit 48 mm x 48 mm product in to 69 mm x 69 mm cutout              Model: AP6050              Model: AP4848</p>	<p><b>48 x 48 COLLAR CLAMP</b> Model: ACL4802</p>	<p><b>SNUBBER CIRCUIT</b> R - C network to reduce electrical noise Model: APRC01</p>
<p><b>TRANSPARENT FULL COVER</b> Material: Poly carbonate Size: to fit for 48 mm x 48 mm products Model: ACF4801</p>	<p><b>8 PIN SOCKET</b> Mounting: a) DIN rail mounting b) Surface mounting Model: AS08</p>	

# COUNTERS & RATE INDICATORS



- Programmable / Preset Counters
- Totalisers
- Rate Indicators

Applicable EMI / EMC standards		
Product standard : IEC 61326-1		
Category	Standards Compliance	
ESD Immunity	IEC 61000-4-2	Level III
Surge Immunity	IEC 61000-4-5	+/- 2 kV common mode, +/- 1 kV differential mode
Radiated Susceptibility	IEC 61000-4-3	Level III, 80 to 1000MHz Level II, 1.4GHz to 2GHz Level I, 2GHz to 2.7GHz
Conducted Susceptibility	IEC 61000-4-6	Level II
Voltage Dips and Interruptions	IEC 61000-4-11	Dips : 0% residual voltage /1 cycle (Criteria B), 40% residual voltage /10 cycles 50 Hz / 12 cycles 60 Hz (Criteria C) 70% residual voltage / 25 cycles 50 Hz / 30 cycles 60 Hz (Criteria C) Interruptions : 0% residual voltage / 250 cycles 50 Hz / 300 cycles 60 Hz (Criteria C)
Conducted Emission	CISPR-11	
Radiated Emission	CISPR-11	
Electrical Fast Transient	IEC 61000-4-4	Level III

Note : Above standards are applicable only for CE certified Counters



**XC410**  
Size : 36 x 72mm

**XC10D**  
Size : 48 x 96mm



**XC22B**  
Size : 72 x 72mm

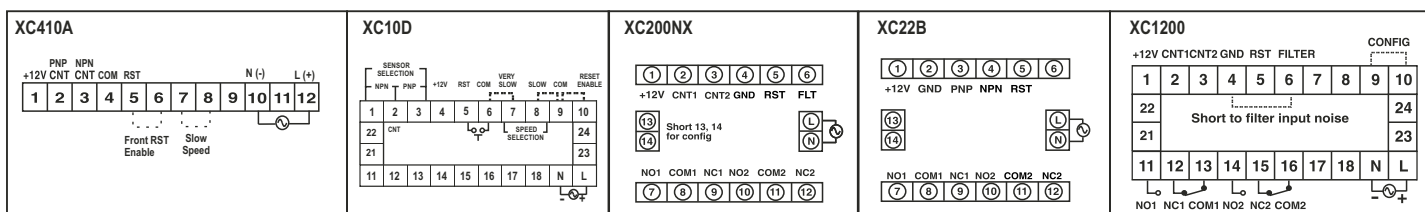


**XC200NX**  
Size : 72 x 72mm

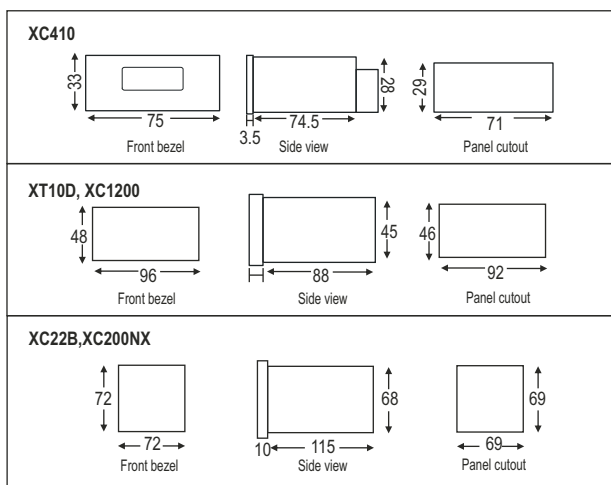
**XC1200**  
Size : 48 x 96mm

FEATURES	<ul style="list-style-type: none"> <li>• 6 Digits, 7 segment LED Totaliser</li> <li>• Compact Size</li> <li>• Inbuilt Sensor Supply</li> </ul>	<ul style="list-style-type: none"> <li>• Preset Counter</li> <li>• Thumbwheel Setting</li> <li>• Auto Reset</li> <li>• Battery Backup</li> </ul>	<ul style="list-style-type: none"> <li>• 6 Digits Counter; 5 Digits RPM Indicator</li> <li>• LED Status Indicator: Relay 1, Relay 2</li> <li>• 2 Setpoints</li> <li>• Programmable Input Scaling</li> <li>• Up, Down, Quadrature &amp; Bi-directional</li> </ul>
OPERATING MODES	---	On delay / Interval delay / Auto reset	On delay / Interval delay / Auto reset / Time pulse repeat
TIME RANGE	999999 counts	9999 counts	Selectable least count: 0.0001, 0.001, 0.01, 0.1 & 1 Rate: 4.00 to 99999 RPM/RPH
RESET	Front, Remote	Front, Remote, Auto (Optional)	Front (user selectable), Remote
MEMORY	Yes	Yes (Optional)	Yes
DIRECTION	Up	Up	Up, Down, Bidirectional, Quadrature
SETPOINT	---	1	2
INPUT SPEED	a) 0 to 20 Hz, b) 0 to 1 kHz	a) 3 Hz, 30 Hz, b) 1 kHz	a) 0 to 30Hz, b) 0 to 2.5kHz, c) 0 to 5kHz
SCALE FACTOR	---	---	0.00001 to 9.99999 x 10 <sup>n</sup> n = -5, -4, -3, -2, -1, 0, 1, 2
OUTPUT CONTACT	---	2 C/O DPDT	
OUTPUT RATING	---	5A @ 250V AC or 24V DC	
SENSOR TYPE	NPN, PNP Potential free contacts	NPN, PNP Potential free contacts	NPN, PNP Potential free contacts, encoder
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC, 24V AC / DC (24V AC / DC is only for XC410)	230V AC, 110V AC (Optional)	90 to 270V AC/DC, 24V AC / DC

Terminal Connections



Dimensions (All are in mm)



Ordering Information

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
XC22B-4-230	230V AC	---
XC22B-4-AR-M1-230		---
XC22B-4-110		---
XC22B-4-AR-M1-110	110V AC	---
XC200NX		90-270V AC/DC
XC1200	90-270V AC/DC	CE
XC1200-CU		CE RoHS,
XC1200-24	24V AC/DC	---
XC410	90-270V AC/DC	CE
XC410-CU		CE RoHS,
XC410-24		24V AC/DC
XC410-24-CU	24V AC/DC	CE,
XC410A-1-230		230V AC
XC10D	90-270V AC/DC	---



**LXC900A**  
Size : 24 x 48mm



**XTC5400**  
Size : 48 x 48mm



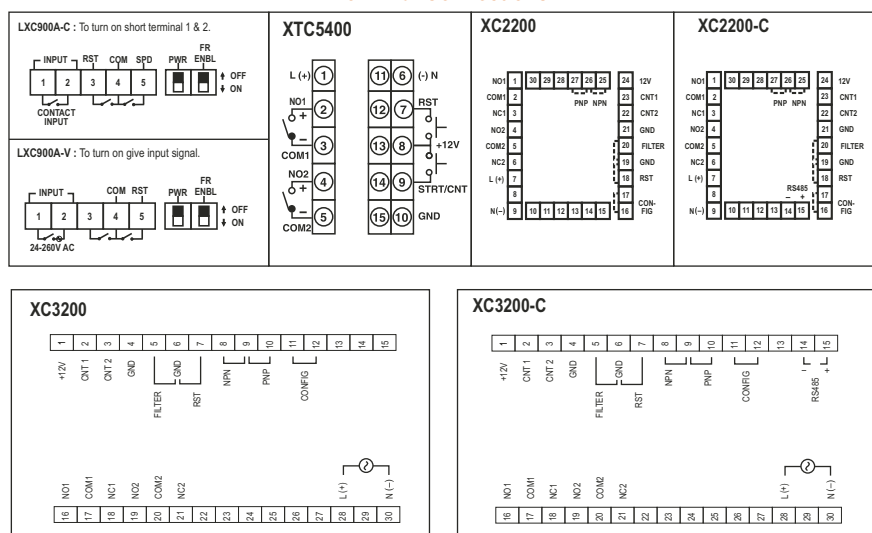
**XC3200**  
Size : 96 x 96mm



**XC2200**  
Size : 72 x 72mm

FEATURES	<ul style="list-style-type: none"> <li>• 8 Digits LCD Counter</li> <li>• Self Powered</li> <li>• Long Battery Life</li> <li>• Contact / Voltage input</li> </ul>	<ul style="list-style-type: none"> <li>• Dual Display, 4 Digits, 7 segment LED</li> <li>• LED Status Indicator:</li> <li>• Relay 1, Relay 2, Seconds, Minutes, Hours</li> <li>• 2 Setpoints</li> <li>• Programmable Input Scaling</li> <li>• Batch Counting</li> </ul>	<ul style="list-style-type: none"> <li>• 6 Digits Counter, 4 Digits RPM Indicator</li> <li>• LED Status Indicator: Relay 1, Relay 2, Rate, Batch</li> <li>• 2 Setpoints</li> <li>• Programmable Input Scaling, RS485 Communication (against order)</li> <li>• User Configurable Relay 2 Operation Mode, Rate/Batch</li> <li>• Unidirectional, Bi-directional &amp; Quadrature with up/down selection</li> </ul>
OPERATING MODES	---	Timer : ON delay / Interval / Cyclic ON first / Cyclic OFF first / Batch. Counter : ON delay / Interval / Auto reset, Time pulse repeat, Batch	ON delay / Interval / Auto reset / Time pulse repeat
TIME RANGE	99999999 counts	Timer : 99.99/999.9/9999sec, 99:59min:sec, 999.9/9999min 99:59hr:min, 999.9/9999hr Counter: -999 to 9999 counts	---
RESET	Front, Remote	Front, Remote, Power Interruption	Front (user selectable), Remote
MEMORY	Yes	Yes	Yes
DIRECTION	Up	Timer : Down Counter : Up / Down	Up/Down
SETPOINT	---	2	2
INPUT SPEED	a) 14 Hz , b) 100 Hz	a) 3Hz b) 30Hz, c) 5kHz	a) 0 to 30Hz b) 0 to 5kHz
SCALE FACTOR	---	0.001 to 9.999 x 10 <sup>n</sup> n = -3, -2, -1, 0, 1, 2	0.00001 to 9.99999 x 10 <sup>n</sup> n = -5, -4, -3, -2, -1, 0, 1, 2
OUTPUT CONTACTS	---	2, 2 Relays each 1 NO	2 C/O DPDT
OUTPUT RATING	---	5A @ 250V AC or 24V DC	
SENSOR TYPE	---	NPN / PWP sensor,	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	Battery powered	90 to 270V AC / DC Optional : 24V AC / DC	90 to 270V AC / DC

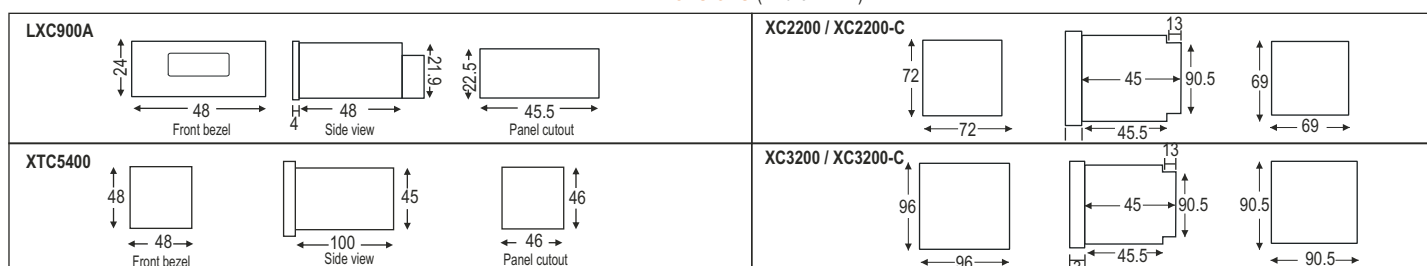
Terminal Connections



Ordering Information

PRODUCT CODE	INPUT TYPE		CERTIFICATION
	Contact	Voltage	
LXC900A-C	■	---	---
LXC900A-V	---	■	---
PRODUCT CODE	SUPPLY VOLTAGE		CERTIFICATION
XTC5400	90-270V AC/DC		
XTC5400-CU	24V AC/DC		CE RoHS
XTC5400-24	24V AC/DC		CE
XTC5400-24-CU	24V AC/DC		CE RoHS
XC3200-C	90 to 270V AC/DC		CE in process
XC3200	90 to 270V AC/DC		CE in process
XC2200-C	90 to 270V AC/DC		CE in process
XC2200	90 to 270V AC/DC		CE in process

Dimensions (All are in mm)

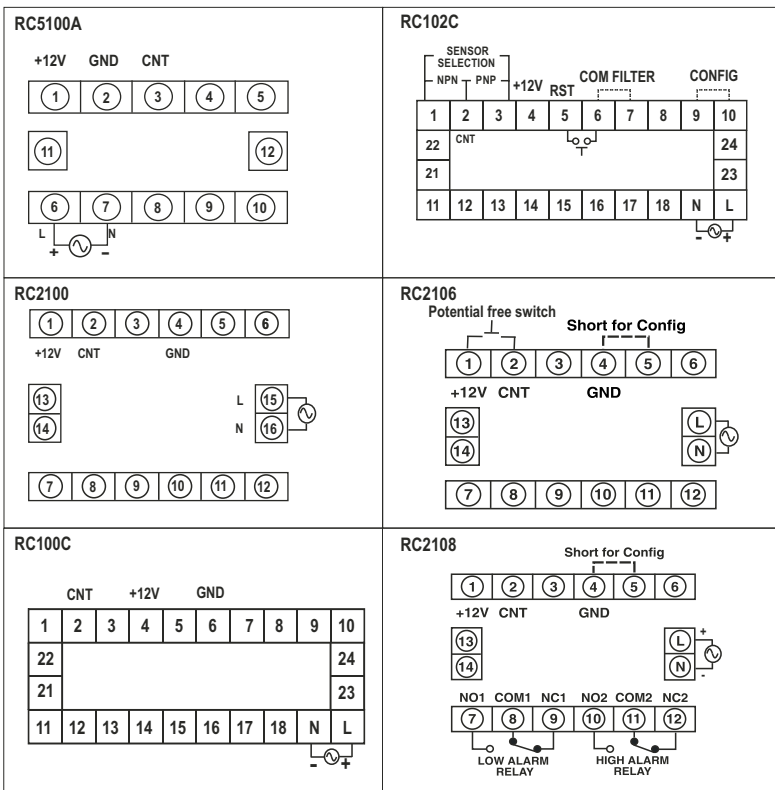




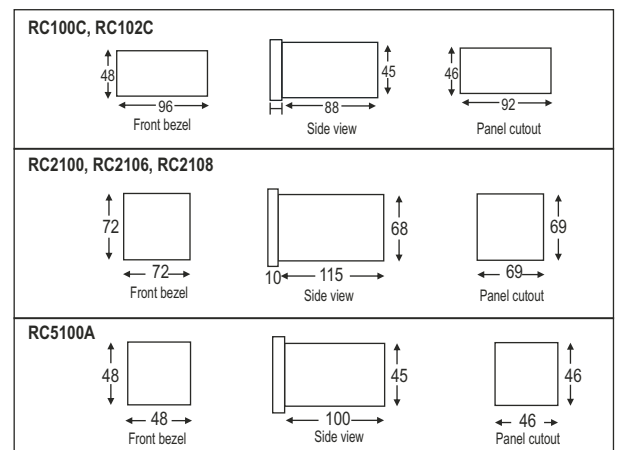
**RC5100** Size : 48 x 48mm     
**RC2100** Size : 72 x 72mm     
**RC100** Size : 48 x 96mm     
**RC102C** Size : 48 x 96mm     
**RC2106** Size : 72 x 72mm     
**RC2108** Size : 72 x 72mm

FEATURES	<ul style="list-style-type: none"> <li>Measures upto 9999 RPM</li> <li>Inbuilt Sensor Supply</li> </ul>			<ul style="list-style-type: none"> <li>6 Digits Counter</li> <li>4 Digits Rate Indicator</li> <li>Programmable Input Scaling</li> <li>Inbuilt Sensor Supply</li> </ul>		<ul style="list-style-type: none"> <li>Auto Ranging RPM Indicator</li> <li>Scalable input</li> <li>Measures upto 9999 RPM</li> </ul>		<ul style="list-style-type: none"> <li>RPS, RPM, RPH Indication</li> <li>Scalable input</li> <li>High &amp; Low Alarm</li> <li>Programmable Alarm Delay</li> </ul>	
DISPLAY	4 digits			Count : 6 digits, Rate : 4 digits		4 digits			
RANGE	4.00 to 9999 RPM			Count: 0.01 to 999999 Rate: 4.00 to 9999 RPM		4.00 to 9999 RPM			
RESET	---			Front, Remote		---			
SETPOINT	---			---		2 (Low alarm & High alarm)			
RELAY RATING	---			---		5 A @ 230V AC / 24V DC			
INPUT SPEED	4 to 9999 pulses per minute			a) 0 to 30Hz, b) 0 to 2.5kHz		upto 3.5kHz			
SCALE FACTOR	---			0.00001 to 9.99999 X 10 <sup>n</sup> n = -3, -2, -1, 0, 1, 2		0.001 to 9.999 X 10 <sup>n</sup> n = -3, -2, -1, 0, 1, 2			
SENSOR TYPE	PNP	PNP / NPN	PNP	PNP / NPN		PNP			
SENSOR SUPPLY	Inbuilt, 12V DC, ±10%, 30mA.								
COUNTING DIRECTION	Unidirectional (Up)								
INPUT TYPE	Voltage Pulse : 3 to 30V DC from proximity switches, encoder solid state devices. b) Potential free contacts.								
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC								

## Terminal Connections



## Dimensions (All are in mm)



## Ordering Information

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
RC100C	90-270V AC/DC	---
RC102C-CE	90-270V AC/DC	CE
RC102C-CU		CE RoHS
RC2108	90-270V AC/DC	---
RC5100A	90-270V AC/DC	---
RC2106	90-270V AC/DC	---
RC2100	90-270V AC/DC	---

# TEMPERATURE CONTROLLERS



- Advanced PID Controllers
- Profile Controller
- Economic Temperature Controllers
- Analog Temperature Controller
- Cooling Controller
- Process Indicators

Applicable EMI / EMC standards		
Product standard : IEC 61326-1		
Category	Standards Compliance	
ESD Immunity	IEC 61000-4-2	Level III
Surge Immunity	IEC 61000-4-5	+/- 2 kV common mode, +/- 1 kV differential mode
Radiated Susceptibility	IEC 61000-4-3	Level III, 80 to 1000MHz Level II, 1.4GHz to 2GHz Level I, 2GHz to 2.7GHz
Conducted Susceptibility	IEC 61000-4-6	Level II
Voltage Dips and Interruptions	IEC 61000-4-11	Dips : 0% residual voltage /1 cycle (Criteria B.), 40% residual voltage /10 cycles 50 Hz / 12 cycles 60 Hz (Criteria C) 70% residual voltage / 25 cycles 50 Hz / 30 cycles 60 Hz (Criteria C) Interruptions : 0% residual voltage / 250 cycles 50 Hz / 300 cycles 60 Hz (Criteria C)
Conducted Emission	CISPR-11	
Radiated Emission	CISPR-11	
Electrical Fast Transient	IEC 61000-4-4	Level II

Note : Above standards are applicable only for CE certified Temperature Controllers

Advanced PID Controllers / Profile Controller



PID500-T  
Size : 48 x 48mm



PID110  
Size : 96 x 48mm



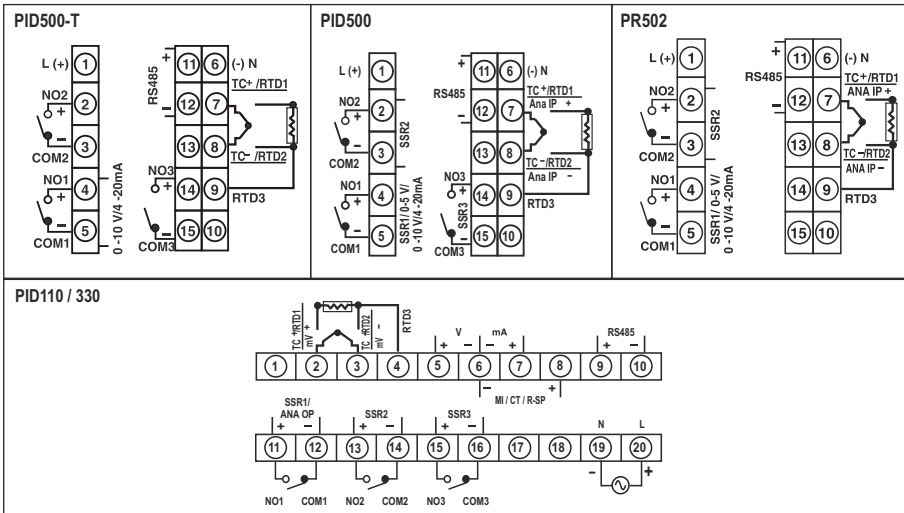
PID330  
Size : 96 x 96mm



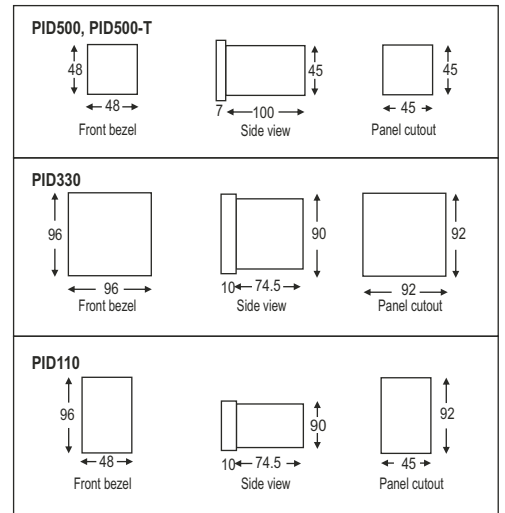
PR502  
Size : 48 x 48mm

FEATURES	<ul style="list-style-type: none"> <li>TC / RTD Inputs</li> <li>Ramp Soak</li> <li>Max 3 Output</li> <li>Retransmission</li> <li>RS485 Communication</li> <li>MODBUS RTU Protocol (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Universal Inputs</li> <li>Ramp Soak</li> <li>Max 3 Output</li> <li>Retransmission, RS485 Communication MODBUS RTU Protocol (optional)</li> <li>Only for PID500: Remote Setpoint input (0 to 20mA, 0 to 10V), Motorized Valve Control, Heater Current Monitoring and Break Alarm)</li> </ul>	<ul style="list-style-type: none"> <li>In Depth Ramp / Soak Control</li> <li>10 Programs, 16 Steps Each</li> <li>Alarm at Each Stage</li> <li>Memory Retention</li> </ul>
DISPLAY	4 + 4 digits, 7 segment LED Dual display		
INPUT TYPE	Thermocouple: J, K, T, R, S, C, E, B, N, L, U, W, Platinel II RTD: Pt100	Thermocouple: J, K, T, R, S, C, E, B, N, L, U, W, Platinel II RTD: Pt100 Signal Inputs (DC): -5 to 56 mV, 0 to 10 V, 0 to 20 mA	
RESOLUTION	TC / RTD : 1 / 0.1° Analog input : 1 / 0.1 / 0.01 / 0.001.		
ACCURACY	For TC inputs: 0.25% of F.S. ±1°; For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time); For RTD inputs: 0.1% of F.S. ±1°; Cold junction accuracy ± 5°C; Signal input: ±0.5%, ± 1 digit (not for PID500-T)		
CONTROL MODE	Autotune PID or ON - OFF		
CONTROL OUTPUT	Relay : 5A @ 230V AC / 30V DC or SSR : 18V DC, 20mA or Current : 0/4 to 20 mA DC (max load 500E) or Voltage : 0 to 5/10V DC (min load 10K)		
AUXILIARY OUTPUT	(Maximum 2) Relay or SSR (Mode: Set point or Alarm mode) Relay : 5A @ 230V AC or 30V DC / SSR : 12V DC, 20mA		
OPTIONAL FEATURES	Extra alarm output (relay3), RS485 Modbus Communication, Retransmission analog output	Extra alarm output (relay3), RS-485 Modbus Communication Retransmission analog output <b>(Only for PID500 : Remote Setpoint Input (0 to 20mA, 0 to 10V), Motorized valve Control, Heater current monitoring and Break Alarm)</b>	No. of Profiles : 10 (16 Steps each), Ramp/Soak Time Range : 0.01 to 99.99 Hrs, Other Profile Parameters : Link profiles, Programmable repeat cycle, Power down resume, Reset option, Deviation hold, Alarm at each step with settable alarm duration RS-485 (MODBUS), Retransmission analog output
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	85 to 270V AC/DC	85 to 270V AC/DC, 24V AC/DC (optional)	
		85 to 270V AC/DC	

Terminal Connections



Dimensions (All are in mm)











Ordering Information

PRODUCT CODE	OUTPUT 1	OUTPUT 2	OUTPUT 3		SUPPLY VOLTAGE	CERTIFICATION
			RELAY / SSR	COMMUNICATION		
PID500-T-0-0-00	RELAY	RELAY	--	--	85-270V AC/DC	--
PID500-T-0-0-01	RELAY	RELAY	RELAY	--	85-270V AC/DC	--
PID500-T-1-0-01	18VDC SSR	RELAY	RELAY	--	85-270V AC/DC	--
PID500-T-0-0-04	RELAY	RELAY	RELAY	YES	85-270V AC/DC	--
PID500-T-1-0-00	18VDC SSR	RELAY	--	--	85-270V AC/DC	--
PID500-T-2-0-00	4 -20mA	RELAY	--	--	85-270V AC/DC	--
PID500-T-3-0-00	0 - 10V	RELAY	--	--	85-270V AC/DC	--



PID500 / PID110 / PID330

PRODUCT CODE	OUTPUT 1	OUTPUT 2	OUTPUT 3			SUPPLY VOLTAGE	CERTIFICATION
			RELAY / SSR	COMMUNICATION (RS485)	ADDITIONAL INPUT		
PID500/110/330-0-0-00	RELAY	RELAY	--	--	--	85-270V AC/DC	CE
PID500/110/330-0-0-00-24V	RELAY	RELAY	--	--	--	24V AC/DC	CE
PID500/110/330-0-0-0-01	RELAY	RELAY	RELAY	--	--	85-270V AC/DC	CE
PID500/110/330-0-0-04	RELAY	RELAY	RELAY	YES	--	85-270V AC/DC	CE
PID500/110/330-0-0-04-24V	RELAY	RELAY	RELAY	YES	--	24V AC/DC	CE
PID500/110/330-0-1-05	RELAY	12VDC SSR	12VDC SSR	YES	--	85-270V AC/DC	CE
PID500-0-0-07	RELAY	RELAY	RELAY	--	CT input	85-270V AC/DC	CE
PID500-0-1-09	RELAY	12VDC SSR	--	YES	CT input	85-270V AC/DC	CE
PID500-0-0-11-P	RELAY	RELAY	--	YES	Potentiometric f/b input	85-270V AC/DC	CE
PID500-0-0-11-C	RELAY	RELAY	--	YES	4-20 mA f/b input	85-270V AC/DC	CE
PID500-0-0-11-V	RELAY	RELAY	--	YES	0-10 V f/b input	85-270V AC/DC	CE
PID500-0-0-13-C	RELAY	RELAY	--	YES	4-20 mA input	85-270V AC/DC	CE
PID500-0-0-13-V	RELAY	RELAY	--	YES	0-10 V input	85-270V AC/DC	CE
PID500/110/330-1-0-00	18VDC SSR	RELAY	--	--	--	85-270V AC/DC	CE
PID500/110/330-1-0-00-24V	18VDC SSR	RELAY	--	--	--	24V AC/DC	CE
PID500/110/330-1-0-01	18VDC SSR	RELAY	RELAY	--	--	85-270V AC/DC	CE
PID500/110/330-1-1-01	18VDC SSR	12VDC SSR	RELAY	--	--	85-270V AC/DC	CE
PID500/110/330-1-0-04	18VDC SSR	RELAY	RELAY	YES	--	85-270V AC/DC	CE
PID500/110/330-1-0-04-24V	18VDC SSR	RELAY	RELAY	YES	--	24V AC/DC	CE
PID500/110/330-1-1-05	18VDC SSR	12VDC SSR	12VDC SSR	YES	--	85-270V AC/DC	CE
PID500-1-0-07	18VDC SSR	RELAY	RELAY	--	CT input	85-270V AC/DC	CE
PID500-1-1-09	18VDC SSR	12VDC SSR	--	YES	CT input	85-270V AC/DC	CE
PID500/110/330-2-0-00	4-20mA	RELAY	--	--	--	85-270V AC/DC	CE
PID500/110/330-2-0-00-24V	4-20mA	RELAY	--	--	--	24V AC/DC	CE
PID500/110/330-2-0-01	4-20mA	RELAY	RELAY	--	--	85-270V AC/DC	CE
PID500/110/330-2-0-04	4-20mA	RELAY	RELAY	YES	--	85-270V AC/DC	CE
PID500/110/330-2-0-04-24V	4-20mA	RELAY	RELAY	YES	--	24V AC/DC	CE
PID500/110/330-2-1-05	4-20mA	12VDC SSR	12VDC SSR	YES	--	85-270V AC/DC	CE
PID500-2-0-13-C	4-20mA	RELAY	--	YES	4-20 mA input	85-270V AC/DC	CE
PID500-2-0-13-V	4-20mA	RELAY	--	YES	0-10 V input	85-270V AC/DC	CE
PID500/110/330-3-0-00	0 - 10V	RELAY	--	--	--	85-270V AC/DC	CE
PID500/110/330-3-0-00-24V	0 - 10V	RELAY	--	--	--	24V AC/DC	CE
PID500/110/330-3-0-01	0 - 10V	RELAY	RELAY	--	--	85-270V AC/DC	CE
PID500/110/330-3-0-04	0 - 10V	RELAY	RELAY	YES	--	85-270V AC/DC	CE
PID500/110/330-3-0-04-24V	0 - 10V	RELAY	RELAY	YES	--	24V AC/DC	CE
PID500/110/330-3-1-05	0 - 10V	12VDC SSR	12VDC SSR	YES	--	85-270V AC/DC	CE
PID500-3-0-13-C	0 - 10V	RELAY	--	YES	4-20 mA input	85-270V AC/DC	CE
PID500-3-0-13-V	0 - 10V	RELAY	--	YES	0-10 V input	85-270V AC/DC	CE
PID500/110/330-5-0-04	0 - 20mA	RELAY	RELAY	YES	--	85-270V AC/DC	CE
PID500/110/330-5-1-05	0 - 20mA	12VDC SSR	12VDC SSR	YES	--	85-270V AC/DC	CE
PID500/110/330-4-0-04	0 - 5V	RELAY	RELAY	YES	--	85-270V AC/DC	CE
PID500/110/330-4-1-05	0 - 5V	12VDC SSR	12VDC SSR	YES	--	85-270V AC/DC	CE
Order codes with suffix - CU							
PID500-0-0-00-CU	RELAY	RELAY	--	--	--	85-270V AC/DC	CE, 
PID500-1-0-00-CU	18V DC SSR	RELAY	--	--	--	85-270V AC/DC	CE, 
PID500-2-0-04-CU	4-20mA	RELAY	RELAY	YES	--	85-270V AC/DC	CE, 
PID500-3-0-04-CU	0-10V	RELAY	RELAY	YES	--	85-270V AC/DC	CE, 
PID110-0-0-00-CU	RELAY	RELAY	--	--	--	85-270V AC/DC	CE, 
PID110-1-0-00-CU	18V DC SSR	RELAY	--	--	--	85-270V AC/DC	CE, 
PID330-0-0-00-CU	RELAY	RELAY	--	--	--	85-270V AC/DC	CE, 
PID330-1-0-00-CU	18V DC SSR	RELAY	--	--	--	85-270V AC/DC	CE, 

PR502

PRODUCT CODE	OUTPUT 1	OUTPUT 2	COMMUNICATION (RS485)	SUPPLY VOLTAGE	CERTIFICATION
PR502-0-0-0	RELAY	RELAY	--	85-270V AC/DC	CE
PR502-0-0-1	RELAY	RELAY	Yes	85-270V AC/DC	CE
PR502-0-1-1	RELAY	12VDC SSR	Yes	85-270V AC/DC	CE
PR502-0-1-0	RELAY	12VDC SSR	--	85-270V AC/DC	CE
PR502-1-0-1	18VDC SSR	RELAY	Yes	85-270V AC/DC	CE
PR502-1-0-0	18VDC SSR	RELAY	--	85-270V AC/DC	CE
PR502-1-1-0	18VDC SSR	12VDC SSR	--	85-270V AC/DC	CE
PR502-1-1-1	18VDC SSR	12VDC SSR	Yes	85-270V AC/DC	CE
PR502-2-0-0	4-20mA	RELAY	--	85-270V AC/DC	CE
PR502-2-0-1	4-20mA	RELAY	Yes	85-270V AC/DC	CE
PR502-3-0-0	0 - 10V	RELAY	--	85-270V AC/DC	CE

Economical Temperature Controllers



TC544A Size : 48 x 48mm  
 TC244AX Size : 72 x 72mm  
 TC344AX Size : 96 x 96mm



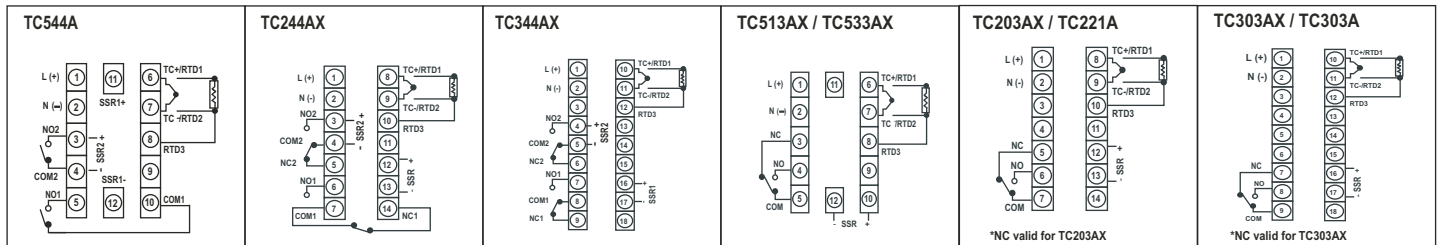
TC513AX Size : 48 x 48mm  
 TC203AX Size : 72 x 72mm  
 TC303AX Size : 96 x 96mm



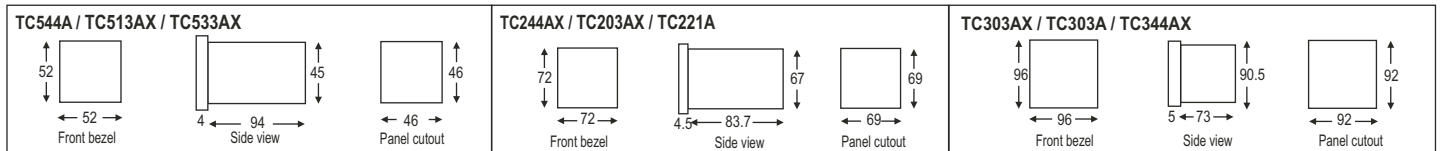
TC533AX Size : 48 x 48mm

FEATURES	<ul style="list-style-type: none"> <li>Dual Display, Dual Setpoint</li> <li>TC / RTD inputs</li> <li>Control Output : Relay or SSR</li> <li>Auxiliary Output : Relay</li> <li>Dwell Timer , Heat Cool PID</li> </ul>	<ul style="list-style-type: none"> <li>Single Display, Single Setpoint</li> <li>TC / RTD inputs</li> <li>Control Output : Relay or SSR</li> </ul>	<ul style="list-style-type: none"> <li>Dual Display, Single Setpoint</li> <li>TC / RTD inputs</li> <li>Control Output : Relay or SSR</li> </ul>
DISPLAY	4 + 4 digits, 7 segment LED Dual display	3 digits, 7 segment LED Single display	3 + 3 digits, 7 segment LED Dual display
CONTROL MODE	Autotune PID or ON - OFF		
INPUT TYPE	Thermocouple (J,K,T,R,S) / RTD (Pt100)		
RESOLUTION	0.1/1° for TC/RTD (fixed 1° for R & S TC)	Fixed 1° resolution	
ACCURACY	For TC (J,K,T) inputs : 0.25% of F.S. ±1° ; For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time); For RTD inputs: 0.1% of F.S. ±1°		
SETPOINT	2	1	
CONTROL OUTPUT	Relay : 5A resistive @ 230V AC / 30V DC or SSR (Field Selectable) : 12V DC, 50mA	Relay : 10A resistive @ 230V AC / 30V DC or SSR : 12V DC, 50mA	
AUXILIARY OUTPUT	Relay : 5A resistive @ 230V AC / 30V DC optional SSR : 12V DC, 50mA	--	
SPECIAL FUNCTIONS	Heat cool PID Dwell timer	--	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	85 to 270V AC / DC, 24V AC / DC (optional)	85 to 270V AC / DC	

Terminal Connections



Dimensions (All are in mm)



Ordering Information

PRODUCT CODE	OUTPUT 1		OUTPUT 2		SUPPLY VOLTAGE		CERTIFICATION	PRODUCT CODE	OUTPUT 1		SUPPLY VOLTAGE		CERTIFICATION
	RELAY	SSR (12V DC)	RELAY	SSR (12V DC)	85-270V AC/DC	24V AC/DC			RELAY	SSR (12V DC)	85-270V AC/DC	24V AC/DC	
TC544A	■	■	■	--	■	--	CE	TC513AX	■	■	■	--	CE
TC544A-CU	■	■	■	--	■	--	CE RoHS	TC513AX-CU	■	■	■	--	CE RoHS
TC544A-1	■	■	--	■	■	--	CE	TC513AX-24V	■	■	--	■	CE
TC544A-24V	■	■	■	--	■	--	CE	TC203AX	■	■	■	--	CE
TC244AX	■	■	■	--	■	--	CE	TC203AX-CU	■	■	■	--	CE RoHS
TC244AX-CU	■	■	■	--	■	--	CE RoHS	TC303AX	■	■	■	--	CE
TC244AX-24V	■	■	■	--	■	--	CE	TC303AX-CU	■	■	■	--	CE RoHS
TC344AX	■	■	■	--	■	--	CE	TC221A	■	■	■	--	--
TC344AX-CU	■	■	■	--	■	--	CE RoHS	TC303A	■	■	■	--	CE
TC344AX-24V	■	■	■	--	■	--	CE	TC533AX	■	■	■	--	CE
								TC533AX-CU	■	■	■	--	CE RoHS

Economical Temperature Controllers



TC518  
Size : 48 x 48mm



PID528  
Size : 48 x 48mm



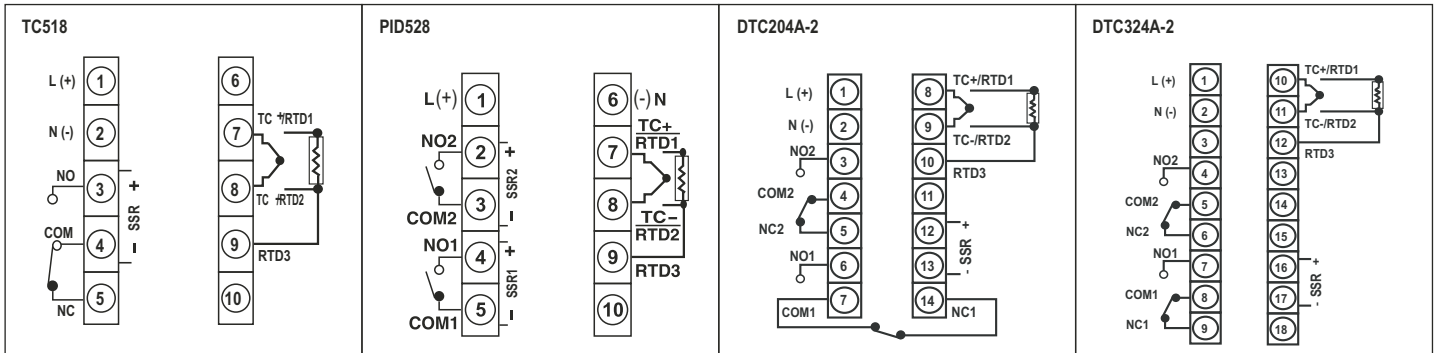
DTC204A-2  
Size : 72 x 72mm



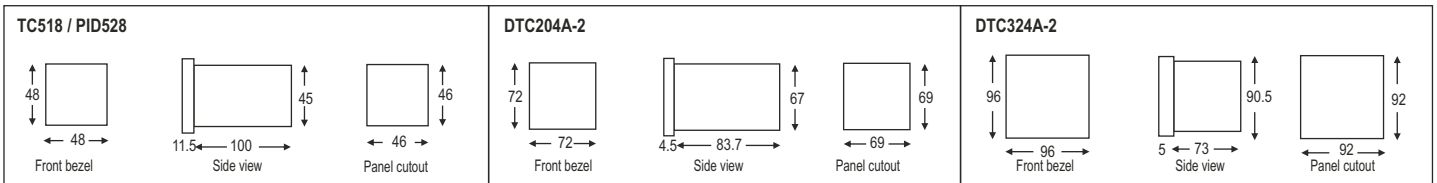
DTC324A-2  
Size : 96 x 96mm

FEATURES	<ul style="list-style-type: none"> <li>Dual Display, Single Setpoint</li> <li>TC / RTD inputs</li> <li>Control aOutput : Relay or SSR</li> </ul>	<ul style="list-style-type: none"> <li>Dual Display, Dual Setpoint</li> <li>TC / RTD inputs</li> <li>Control Output : Relay or SSR</li> <li>Auxiliary Output : Relay</li> </ul>	<ul style="list-style-type: none"> <li>Single Display, Dual Setpoint</li> <li>TC / RTD inputs</li> <li>Control Output : Relay or SSR</li> <li>Auxiliary Output : Relay</li> </ul>
DISPLAY	4 + 4 digits, 7 segment LED display		4 digits, 7 segment LED display
CONTROL MODE	Autotune PID or ON - OFF		
INPUT TYPE	Thermocouple (J,K,T,R,S) / RTD (PT 100)		
RESOLUTION	0.1/1° for TC/ RTD inputs (fixed 1° for R & S type TC input)		
ACCURACY	For TC (J,K,T) inputs : 0.25% of F.S. ±1° ; For R & S inputs : 0.5% of F.S. ±2° (20 min of warm up time); For RTD inputs: 0.1% of F.S. ±1°		
SETPOINT	1	2	
CONTROL OUTPUT	Relay : 10A resistive @ 230V AC / 30V DC or Optional : SSR : 18V DC, 20mA	Relay : 5A resistive @ 230V AC / 30V DC Optional : SSR : 12V DC, 30mA	Relay : 10A resistive @ 230V AC / 30V DC SSR : 12V DC, 30mA
AUXILIARY OUTPUT	Relay : 5A resistive @ 230V AC / 30V DC		
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	85 to 270V AC / DC		

Terminal Connections



Dimensions (All are in mm)



Ordering Information

PRODUCT CODE	OUTPUT 1		OUTPUT 2	SUPPLY VOLTAGE	CERTIFICATION
	RELAY	SSR (18V DC)	RELAY		
TC518	■	--	--	■	CE
TC518-SSR	--	■	--	■	CE
PID528-1	■	--	■	■	CE
PID528-2	--	■	■	■	CE
DTC204A-2	■	■	■	■	--
DTC324A-2	■	■	■	■	--

**Economical Temperature Controllers with short depth**



**TC544B**  
Size : 48 x 48mm



**TC513BX**  
Size : 48 x 48mm



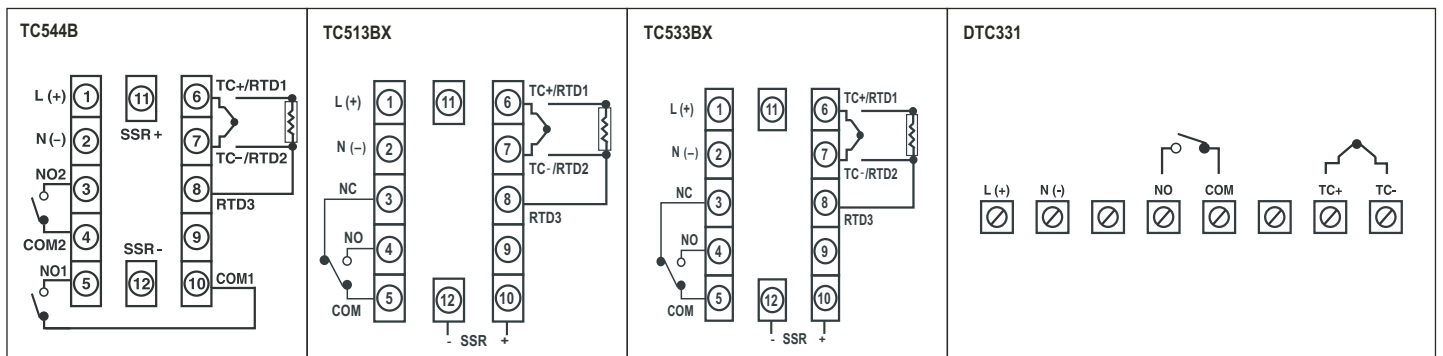
**TC533BX**  
Size : 48 x 48mm



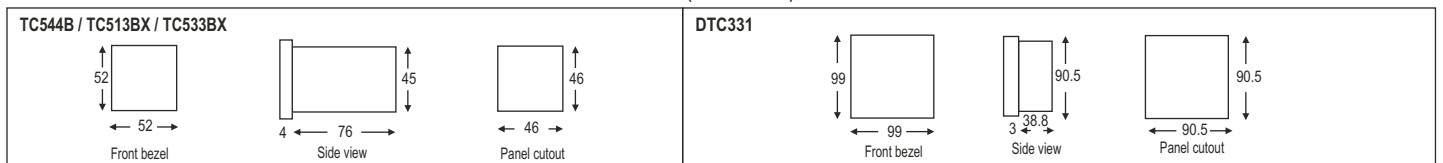
**DTC331**  
Size : 96 x 96mm

FEATURES	<ul style="list-style-type: none"> <li>Dual Display, Dual Set Point</li> <li>Short Depth TC</li> <li>TC / RTD input</li> <li>Control Output : Relay or SSR</li> <li>Dwell Timer, Heat Cool PID</li> </ul>	<ul style="list-style-type: none"> <li>Single Display, Single Set Point</li> <li>Short Depth TC</li> <li>TC / RTD input</li> <li>Control Output : Relay or SSR</li> </ul>	<ul style="list-style-type: none"> <li>Dual Display, Single Set Point</li> <li>Short Depth TC</li> <li>TC / RTD input</li> <li>Control Output : Relay or SSR</li> </ul>	<ul style="list-style-type: none"> <li>3 Digit Single Display</li> <li>J, K TC input</li> <li>ON-OFF Control</li> <li>Economical TC</li> </ul>
DISPLAY	4 + 4 digits, 7 segment LED dual display	3 digits, 7 segment LED single display	3 + 3 digits, 7 segment LED dual display	3 digits, 7 segment single display
INPUT TYPE	Thermocouple (J,K,T,R,S) / RTD (PT 100)			Thermocouple (J,K)
RESOLUTION	0.1/1° for TC/ RTD inputs (fixed 1° for R & S type TC input)	Fixed 1° resolution		Fixed 1° resolution
ACCURACY	For J, K & T TC inputs : 0.25% of F.S ±1° ; For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time for TC inputs); For RTD input: 0.1% of F.S ±1°			0.25% of F.S ±1° (20 min warm up time)
SETPOINT	2	1		1
CONTROL MODE	Auto tune / self tune PID or ON-OFF			ON-OFF
CONTROL OUTPUT	Relay : 5A resistive @ 230V AC / 30V DC or SSR : 12V DC,30mA	Relay : 10A resistive @ 230V AC / 30V DC or SSR : 12V DC,50mA		Relay : 10A resistive @ 230V AC / 30V DC
AUXILIARY OUTPUT	Relay : 5A resistive @ 230V AC / 30V DC	---	---	---
SPECIAL FUNCTIONS	Heat Cool PID, Dwell timer	---	---	---
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	85 to 270V AC / DC			

**Terminal Connections**



**Dimensions (All are in mm)**



**Ordering Information**

PRODUCT CODE	OUTPUT 1		OUTPUT 2	SUPPLY VOLTAGE	CERTIFICATION
	RELAY	SSR (18V DC)	RELAY	85-270V AC/DC	
TC544B	■	■	■	■	CE in process
TC533BX	■	■	--	■	CE in process
TC513BX	--	■	--	■	CE in process
DTC331	■	--	--	■	--

Cooling Controller



CH403A-1-NTC  
Size : 36 x 72mm



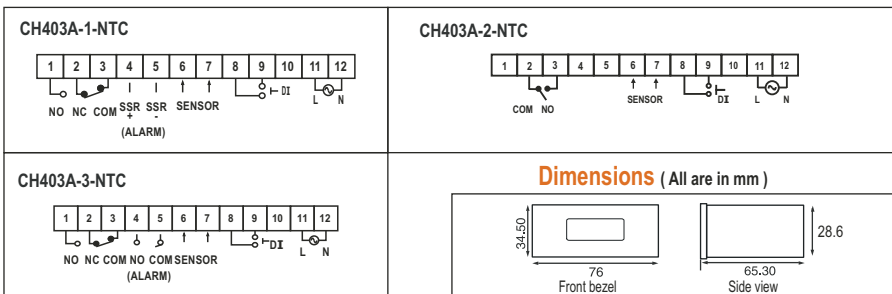
CH403A-2-NTC  
Size : 36 x 72mm



CH403A-3-NTC  
Size : 36 x 72mm

FEATURES	<ul style="list-style-type: none"> <li>• 2½ Digit</li> <li>• Defrost Management</li> <li>• High / Low Temperature Alarms</li> <li>• Output : 1 Relay &amp; 1 SSR</li> <li>• Compact Size &amp; Easy to Use</li> </ul>	<ul style="list-style-type: none"> <li>• 2½ Digit</li> <li>• Defrost Management</li> <li>• High / Low Temperature Alarms</li> <li>• Output : 20A Relay</li> <li>• Compact Size &amp; Easy to Use</li> </ul>	<ul style="list-style-type: none"> <li>• 2½ Digit</li> <li>• Defrost Management</li> <li>• High / Low Temperature Alarms</li> <li>• Output : 2 Relay</li> <li>• Compact Size &amp; Easy to Use</li> </ul>
DISPLAY	2½ digits, 7 segment display		
INPUT TYPE	NTC type sensor		
RESOLUTION	1 / 0.1°		
ACCURACY	0.25% of full scale ±1°		
CONTROL MODE	ON - OFF ( Hysteresis - 0.1 to 9.9°)		
SETPOINT	1		
CONTROL OUTPUT	10A @ 230V AC / 30V DC	20A @ 230V AC / 30V DC	10A @ 230V AC / 30V DC
AUXILIARY OUTPUT	12V DC, 10mA	--	5A @ 230V AC / 30V DC
HYSTERESIS	0.1 to 9.9°		
DISPLAY OFFSET	-19.9° to 19.9°		
RESTART TIME DELAY	Adjustable from 00 to 19.9 min		
RELAY ACTION	Heat & Cool Mode		
DEFROST TIME	Programmable from 00 to 99 min		
DEFROST FREQUENCY	Programmable from 00 to 99(hr / min / sec)		
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	230V AC	85 to 270V AC / DC	230V AC

Terminal Connections



Ordering Information

PRODUCT CODE	OUTPUT		SUPPLY VOLTAGE	CERTIFICATION
	CONTROL OUTPUT	ALARM OUTPUT		
CH403A-1-NTC	RELAY	SSR	230V AC	CE in process
CH403A-2-NTC	RELAY	--	85 to 270V AC / DC	CE in process
CH403A-3-NTC	RELAY	RELAY	230V AC	CE in process

Analog Temperature Controller



TC52  
Size : 48 x 48mm  
Panel Cutout : 46 x 46

- Features:
- Dial setting
- TC Inputs
- Single relay output
- Easy to use

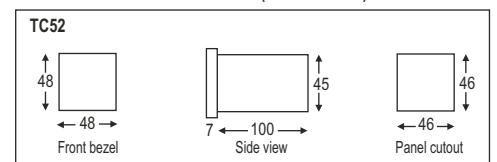
DISPLAY	Dial Setting
CONTROL MODES	Time Proportional & ON-OFF controller
INPUT TYPE	Thermocouple (J,K)
RESOLUTION	Fixed 1° resolution
ACCURACY	Setting ± 3% of full scale ±0.5% of full scale
SETPOINT	1
CONTROL OUTPUT	Relay
SUPPLY VOLTAGE (AC : 50/60 Hz)	230V AC

Ordering Information

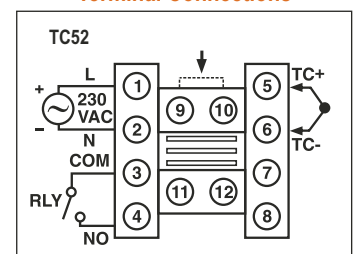
PRODUCT CODE	OUTPUT	SUPPLY VOLTAGE	CERTIFICATION
TC52-400-J-230	RELAY	230V AC	--
TC52-400-K-230	RELAY	230V AC	--

TEMPERATURE CONTROLLERS

Dimensions (All are in mm)



Terminal Connections



Process Indicators



PIC1000N  
Size : 48 x 96mm



PIC152N  
Size : 48 x 96mm



PIC101N  
Size : 48 x 96mm



PIC101A-T-230 /  
PIC101A-VI-230  
Size : 48 x 96mm



PIC501A-VI-230  
Size : 48 x 48mm

FEATURES	<ul style="list-style-type: none"> <li>• Universal input</li> <li>• 4 Alarm Output</li> <li>• Retransmission</li> <li>• RS485 Communication MODBUS RTU Protocol (Optional)</li> </ul>	<ul style="list-style-type: none"> <li>• TC / RTD / Analog input</li> <li>• 2 Alarm Output</li> <li>• Retransmission (Optional)</li> </ul>	<ul style="list-style-type: none"> <li>• TC / RTD / Analog input</li> <li>• Basic Scalable Indicator</li> </ul>	<ul style="list-style-type: none"> <li>• Scalable Analog input</li> <li>• Digital Filtering for Display.</li> <li>• 2 Models -                             <ol style="list-style-type: none"> <li>1. TC / RTD input type</li> <li>2. Voltage / Current input type</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Scalable Analog input</li> <li>• Digital Filtering for Display.</li> <li>• Voltage / Current input type</li> </ul>
DISPLAY	4 digits, 7 segment LED				
INPUT TYPE	Thermocouple: J, K, T, R, S, C, E, B, N, L, U, W, Platinum II RTD: Pt100, Pt1000 Signal Inputs (DC): -5 to 56mV, 0 to 100mV, 0 to 10V, 0/4 to 20mA	Thermocouple: J, K, T, R, S RTD: Pt100 Signal Inputs (DC): -5 to 56mV, 0 to 10V, 0/4 to 20mA	Thermocouple: J, K, T, R, S RTD: Pt100 Signal Inputs (DC): 0 to 56mV, 0 to 10V, 0/4 to 20mA	<b>PIC101A-T-230:</b> Thermocouple: J, K, T, R, S RTD: Pt100 <b>PIC101A-VI-230:</b> Signal Inputs (DC): 0 to 10V, 0/4 to 20mA	Signal Inputs (DC): 0 to 10V, 0/4 to 20mA
RESOLUTION	TC / RTD : 1 / 0.1, Analog input : 1 / 0.1 / 0.01 / 0.001.			1 / 0.1° (Fix 1° resolution for R & S type TC) Decimal Point position selectable : 1/0.1/0.01/0.001	Decimal Point position selectable : 1/0.1/0.01/0.001
ACCURACY	For TC inputs: 0.25% of F.S. ±1° For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time) For RTD inputs: 0.1% of F.S. ±1° Cold junction accuracy ± 5°C ; Signal input: ±0.5% of F.S, ± 1 digit			TC : 0.25% of F.S. ±1°; R & S TC: 0.5% of F.S. ±2° (20 min of warm up time) RTD : 0.1% of F.S. ±1° Signal input: ±0.5% of full scale, ± 1 digit	Signal input: ±0.5% of full scale, ± 1 digit
OUTPUT	4 Alarms : 5A @ 230V AC / 24V DC, Programmable delay timer	2 Alarms : 5A @ 230V AC / 24V DC	--		
OPTIONAL FEATURES	Retransmission output : 0/4 to 20mA DC, 0 to 5V DC, 0 to 10V DC		--		
COMMUNICATION	RS485 Communication MODBUS RTU Protocol (Optional)		--		
SENSOR SUPPLY	24V DC output to power the sensor, 30mA			--	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	85 to 270V AC / DC, 24V DC (optional)			230V AC, ±20%	

Terminal Connections

**PIC1000N**

**PIC152N**

**PIC101N**

**PIC101A-T-230**

**PIC101A-VI-230**

**PIC501A-VI-230**

**Dimensions (All are in mm)**

PIC1000N / PIC152N / PIC101N / PIC101A-T-230 / PIC101A-VI-230		PIC501A-VI-230	
Front bezel	97.5	Front bezel	52
Side view	88	Side view	45
Panel cutout	92	Panel cutout	46

Ordering Information

PRODUCT CODE	RETRANSMISSION	Comm. (RS485)	SUPPLY VOLTAGE		CERTIFICATION	PRODUCT CODE	RETRANSMISSION	SUPPLY VOLTAGE			CERTIFICATION
			85-270V AC/DC	24V AC/DC				85-270V AC/DC	230V AC	24V AC/DC	
PIC1000N-A	--	--	■	--	CE	PIC152N-A	--	■	--	--	CE
PIC1000N-A-24V	--	--	■	■	CE	PIC152N-A-CU	--	■	--	--	CE RoHS
PIC1000N-D-2	4-20mA	--	■	--	CE	PIC152N-B-1	0-20mA	■	--	--	CE
PIC1000N-D-2-24V	4-20mA	--	■	■	CE	PIC152N-B-1-CU	0-20mA	■	--	--	CE RoHS
PIC1000N-E-1	0-20mA	■	■	--	CE	PIC152N-B-2	4-20mA	■	--	--	CE
PIC1000N-E-2	4-20mA	■	■	--	CE	PIC152N-B-2-CU	4-20mA	■	--	--	CE RoHS
PIC1000N-E-3	0-5V	■	■	--	CE	PIC152N-B-2-24V	4-20mA	--	■	■	CE
PIC1000N-E-4	0-10V	■	■	--	CE	PIC152N-B-4	0-10V	■	--	--	CE
PIC101N	--	--	■	--	CE	PIC152N-B-4-CU	0-10V	■	--	--	CE RoHS
PIC101N-CU	--	--	■	--	CE RoHS	PIC152N-B-4-24V	0-10V	--	■	■	CE
PIC101N-24V	--	--	■	■	CE	PIC101A-T-230	--	--	■	--	--
						PIC101A-VI-230	--	--	■	--	--
						PIC501A-VI-230	--	--	■	--	--