

# Topstek True RMS Current Transducer TU24P5A..TU24P250A-CL420

## TU24P5A~250A-CL420



### Features

- ◆ Highly reliable True RMS current measurement device
- ◆ Clamp on split core structure
- ◆ Faster response time than temperature sensing
- ◆ Excellent linearity of the output voltage over a wide input range
- ◆ VFD and SCR type waveforms current measurement
- ◆ 4-20mA True RMS current loop output
- ◆ High isolation voltage between the measuring circuit and the current-carrying conductor (AC3KV)
- ◆ Flame-Retardant plastic case and silicone encapsulant, using UL classified materials, ensures protection against environmental contaminants and vibration over a wide temperature and humidity range

### Applications

- ◆ Power measurement, power panel
- ◆ True RMS AC current measurement

### Options

- ◆ Plastic case material:  
UL94V0 Nylon 66 (black) standard and PC(blue) option
- ◆ Operating temperature range:  
70°C standard and option 85°C available
- ◆ Connector type: specify –E or –M. If other types of connector required, please contact factory for other possibilities.  
–M: UL 1017 AWG22, Length:150±10mm with Molex 5045 type female connector (2.54mm pitch)  
–Y: UL 1017 AWG18 Wire, Length:3000±50mm, Two Y4.3 Terminals with PVC Tube

### Specifications

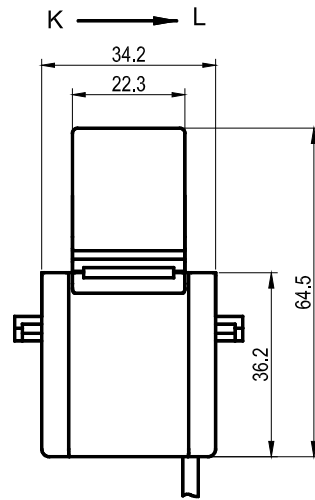
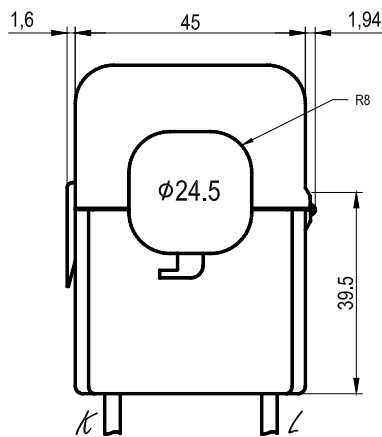
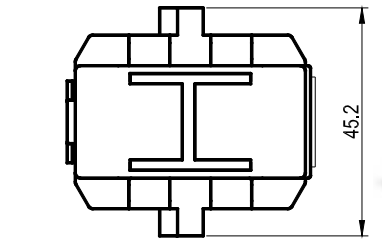
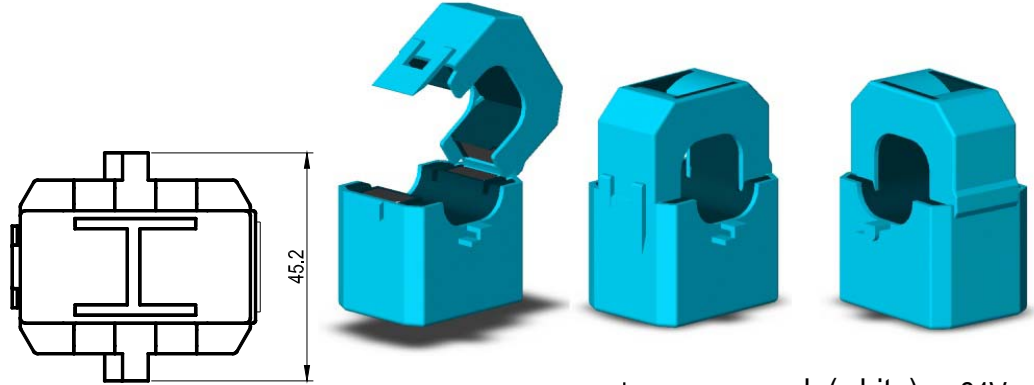
Parameter	Symbol	Unit	5A	10A	20A	30A	50A	75A	100A	150A	200A	250A
Full Scale Input Current	$I_{PN}$	$A_{RMS}$	5	10	20	30	50	75	100	150	200	250
Max Primary Current Peak	$I_{PMax}$	A	±30	±60	±120	±180	±300	±450	±450	±450	±600	±650
Input Crest Factor (Peak/Average Ratio)	CF		6	6	6	6	6	6	4.5	3	3	2.6
Current Output Protocol	$I_{OUT}$	mA	4-20 mA Current Loop, 4mA@ $I_P = 0A$ , 20mA@ $I_P = I_{PN}$									
Output Offset Current	$I_{OS}$	mA	+4 mA									
Over-Scale Output Current	$I_{OL}$	mA	<+23 mA									
Load Resistance	$R_L$	$\Omega$	<300 $\Omega$									
Supply Voltage	$V_{CC}$	V	+20V .. +32V									
Accuracy @ $I_{PN}$		%	Within ±1% of $I_{PN}$ @25°C(excluding offset)									
Linearity	$\rho$	%	Within ±1% of $I_{PN}$									
Consumption Current	$I_{CC}$	mA	4-20 mA (= $I_{OUT}$ )									
Response Time (90% $I_{PN}$ Step)	$T_r$	$\mu$ sec	<200 msec									
Frequency bandwidth (±1dB)	$f_{BW}$	Hz	20 to 6kHz									
Thermal Drift of Output	-	%/°C	Within ±0.1 %/°C @ $I_{PN}$									
Thermal Drift of Zero Current Offset	-	$\mu A/^\circ C$	< ±3 $\mu A/^\circ C$ (0-60°C), < ±6 $\mu A/^\circ C$ (-40 .. 70°C)									
Dielectric Strength	-	V	AC3KV X 60 sec									
Isolation Resistance @ 1000 VDC	$R_{IS}$	M $\Omega$	>1000 M $\Omega$									
Operating Temperature	$T_a$	°C	-40°C to 70°C									
Storage Temperature	$T_s$	°C	-45°C to 85°C									
Mass	W	g	225 g									



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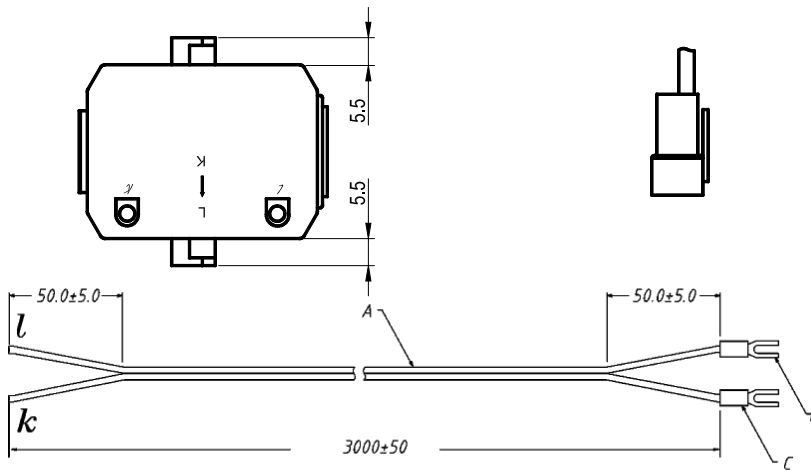
## Appearance, dimensions and pin identification of TU24P-CL420

All dimensions in mm  $\pm 0.2$ , holes  $-0, +0.2$  except otherwise noted.



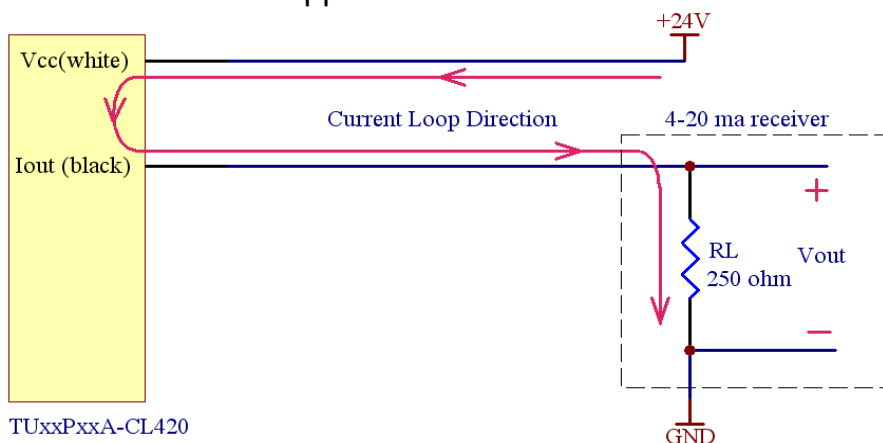
k (white) : +24V  
l (black) : Iout

Standard Terminal



Option Y Terminal

### Application Connection



TUxxPxxA-CL420

