

# Topstek True RMS Current Transducer TFC30P80A ..1500A-CL420

## TFC30P 80A~1500A-CL420

### Features

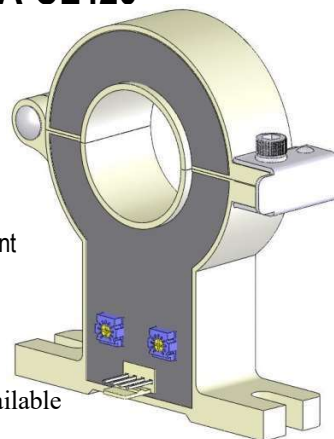
- ◆ Highly reliable Open Loop Hall Effect device
- ◆ Clamp on split core structure
- ◆ Faster response time than temperature sensing
- ◆ Excellent linearity of the output voltage over a wide input range
- ◆ VFD and SCR type waveforms current measurement
- ◆ True RMS output
- ◆ 4-20mA current loop output
- ◆ 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+DC current measurement

### Options

- ◆ Operating temperature range:  
70°C standard and option 85°C available
- ◆ Plastic case material:  
PBT+30%GF(white) standard and PC(blue) option
- ◆ Connector type: specify –E or –M. If other types of connector required, please contact factory for other possibilities.  
–M: Molex 5045 type (2.54mm pitch)  
–E: Euro type connector (5.08mm pitch)



### Specifications

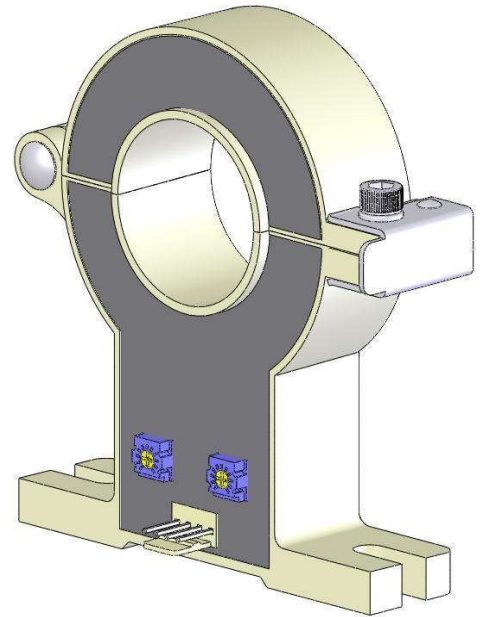
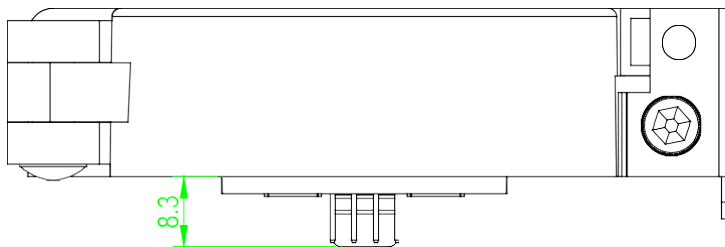
Parameter	Symbol	Unit	80A	100A	200A	300A	400A	500A	600A	1000A	1500A
Nominal Input Current	$I_{PN}$	A <sub>RMS</sub>	80	100	200	300	400	500	600	1000	1500
Max Primary Current Peak	$I_{PMax}$	A	±400	±400	±800	±1200	±1600	±2000	±2400	±3000	±3000
Current Output Protocol	$I_{OUT}$	mA	4-20 mA Current Loop, 4mA@ $I_P=0A$ , 20mA@ $I_P = I_{PN}$								
Output Offset Current	$I_{OS}$	mA	+4 mA								
Over-Scale Output Current	$I_{OL}$	mA	<32 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	<150 msec								
Frequency bandwidth (±1dB)	$f_{BW}$	Hz	DC to 6kHz								
Thermal Drift of Output	-	%/°C	Within ±0.1 %/°C @ $I_{PN}$								
Thermal Drift of Zero Current Offset	-	$\mu$ A/°C	< ±3 $\mu$ A/°C(0-60°C), < ±6 $\mu$ A/°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	240 g								



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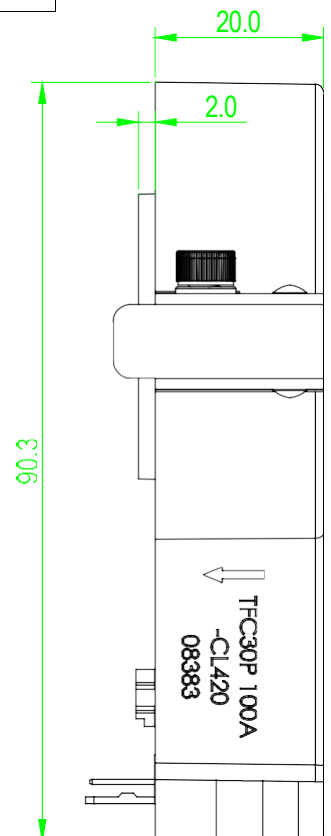
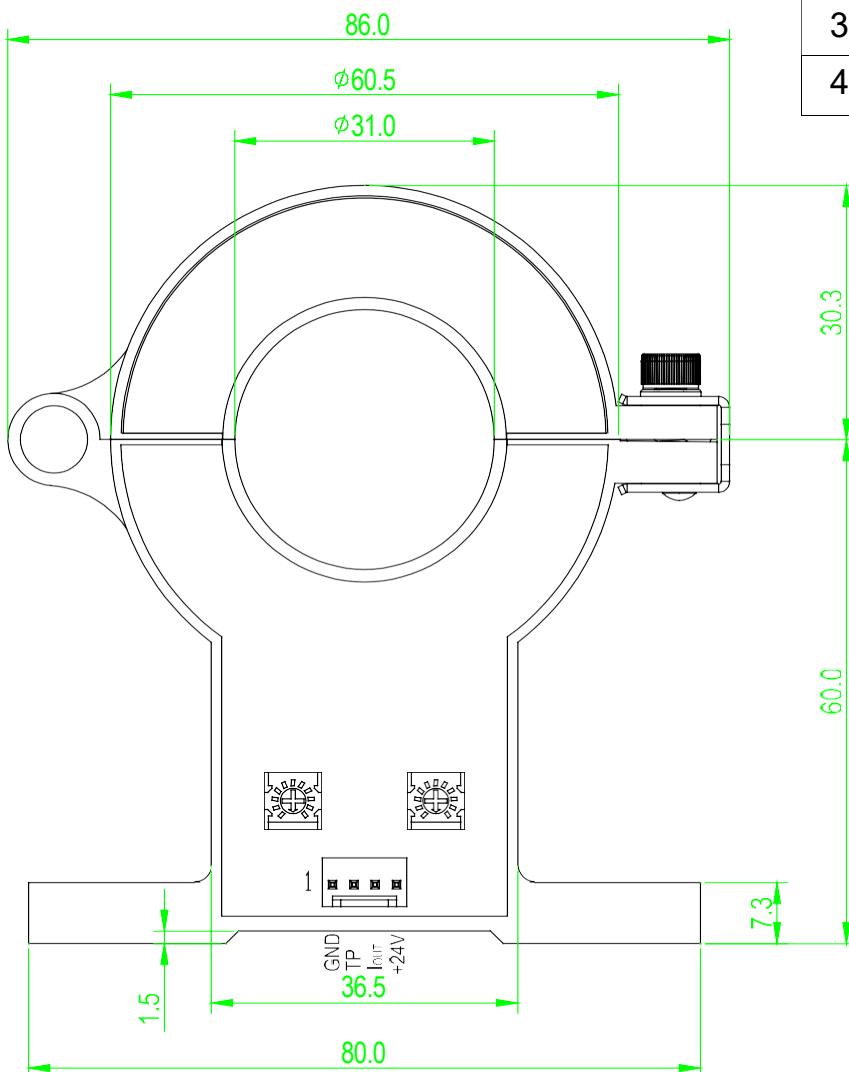
## Appearance, dimensions and pin identification of TFC30P-CL420-M

All dimensions in mm  $\pm 0.5$ , holes  $-0$ ,  $+0.2$  except otherwise noted.



### Pin Assignment

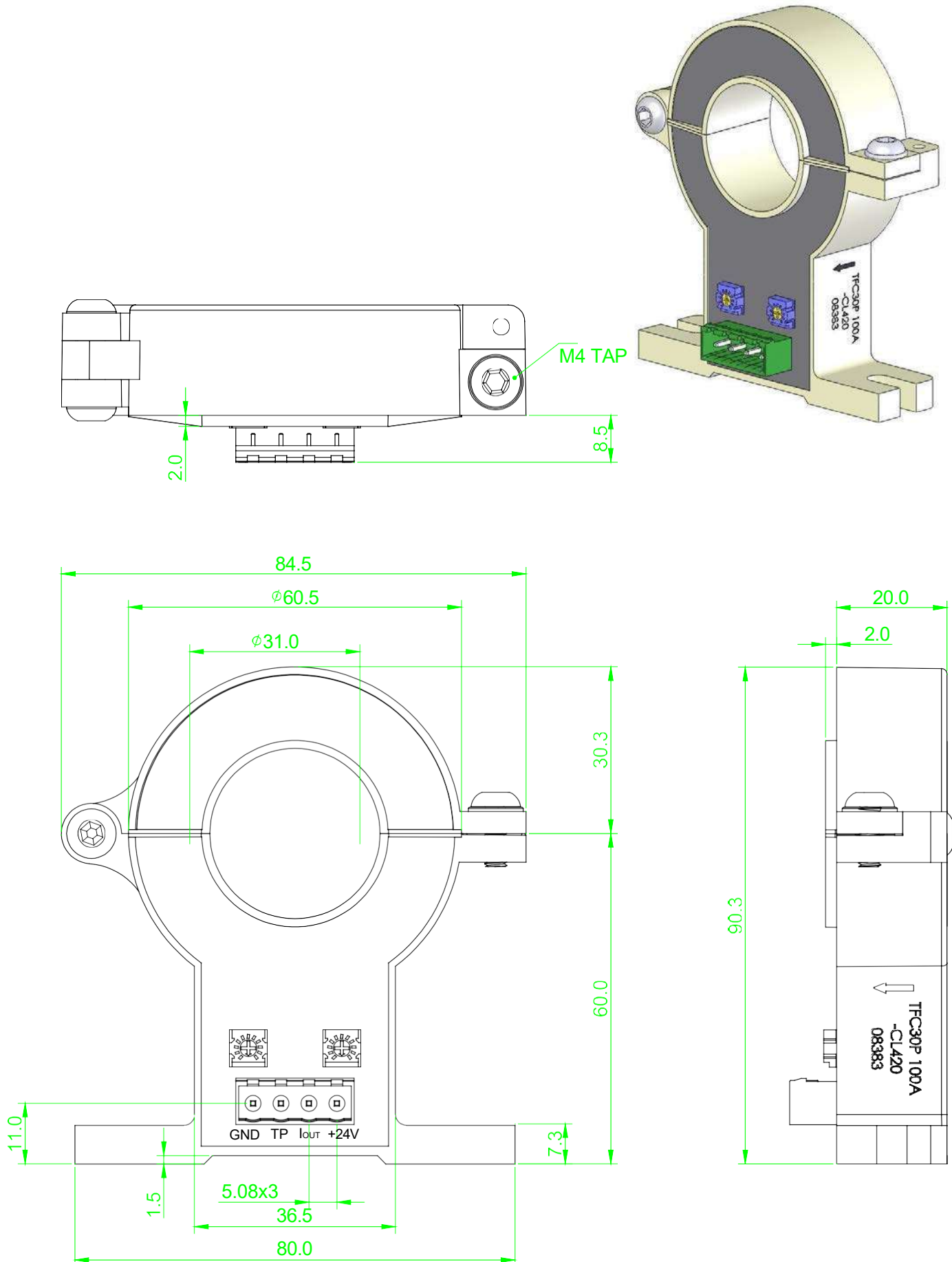
1	0V
2	TP
3	Iout
4	+24V



## Topstek True RMS Current Transducer TFC30P80A ..1500A-CL420

### Appearance, dimensions and pin identification of TFC30P-CL420-E

All dimensions in mm  $\pm 0.5$ , holes  $-0, +0.2$  except otherwise noted.



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## Application Connections

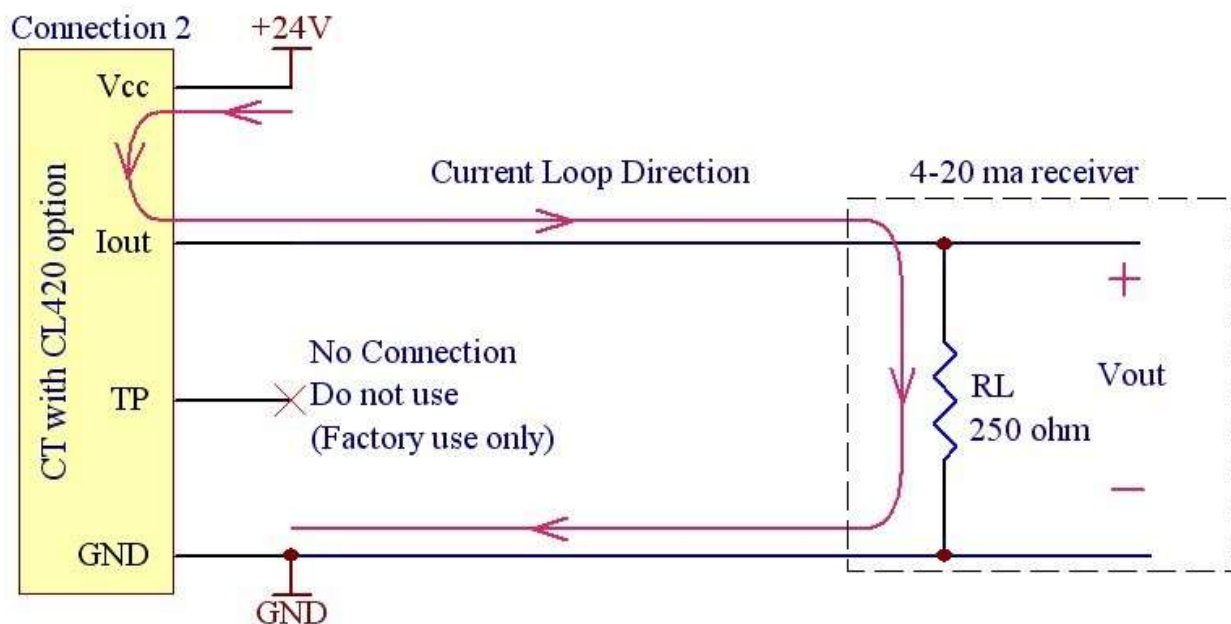
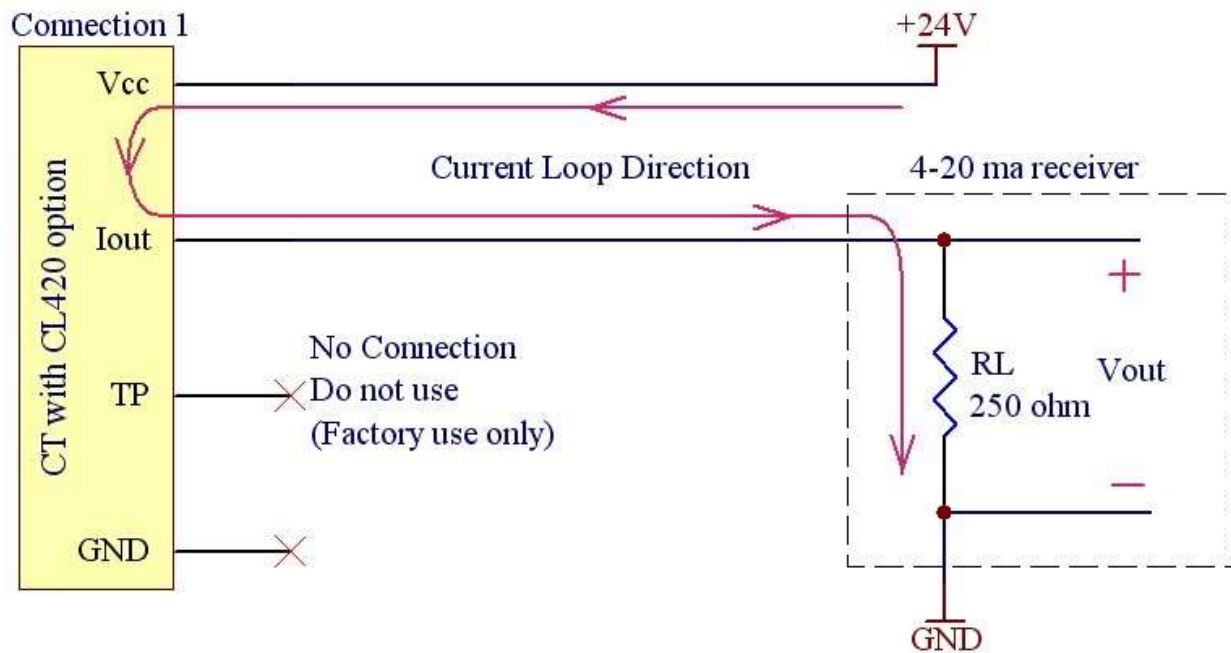
TFC30P-CL420 can be used with two types of connections. In both cases, the GND pin have no internal connection, and TP Pin is for factory calibration only.

### Connection 1:

The power supply is on the receiver side. Only two connector pins are used.

### Connection 2:

The power supply is on the CT side. Make sure you have a proper ground connection to prevent grounding noise.





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#### Additional Information

한국 대리점 : (주)디웰전자 (Diwell Electronics Co., Ltd.)

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