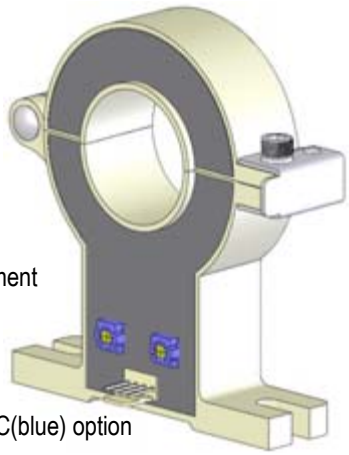
Topstek True RMS Current Transducer TFC30P80A..TFC1500A-CL420



TFC30P80A~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

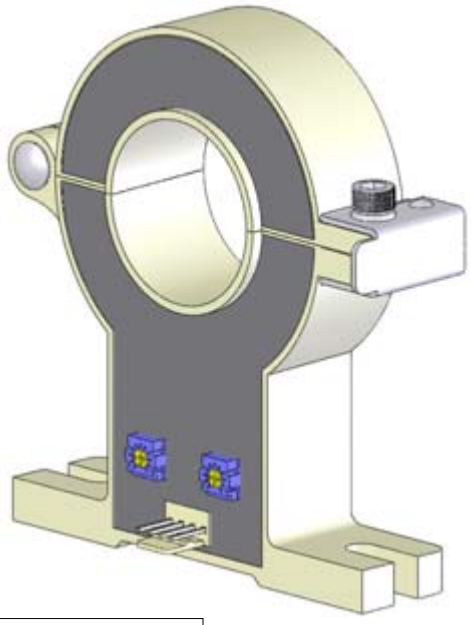
- ♦ Plastic case material:
  PBT+30%GF(white) standard and PC(blue) option
- ♦ Operating temperature range:
  70°C standard and option 85°C available
- ♦ Connector type: specify –E or –M. If other types of connector required, please contact factory for other possibilities.
  –M: Molex 5045 type (2.54mm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

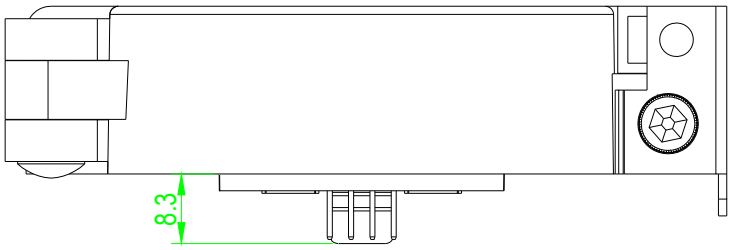
Specifications

Parameter	Symbol	Unit	80A	100A	200A	300A	400A	500A	600A	1000A	1500A
Nominal Input Current	I_{PN}	A RMS	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	Ω	<300 Ω								
Supply Voltage	V_{CC}	V	+20V .. +32V								
Accuracy @ I_{PN}		%	Within ±1% of I_{PN} @25°C(excluding offset)								
Linearity	ρ	%	Within ±1% of I_{PN}								
Consumption Current	I_{CC}	mA	4-20 mA (= I_{OUT})								
Response Time (90% I_{PN} Step)	T_r	μsec	<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	-	μA/°C	< ±3μA/°C(0-60°C), < ±6μA/°C(-40 .. 70°C)								
Dielectric Strength	-	V	AC3KV X 60 sec								
Isolation Resistance @ 1000 VDC	R_{IS}	MΩ	>1000 MΩ								
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								

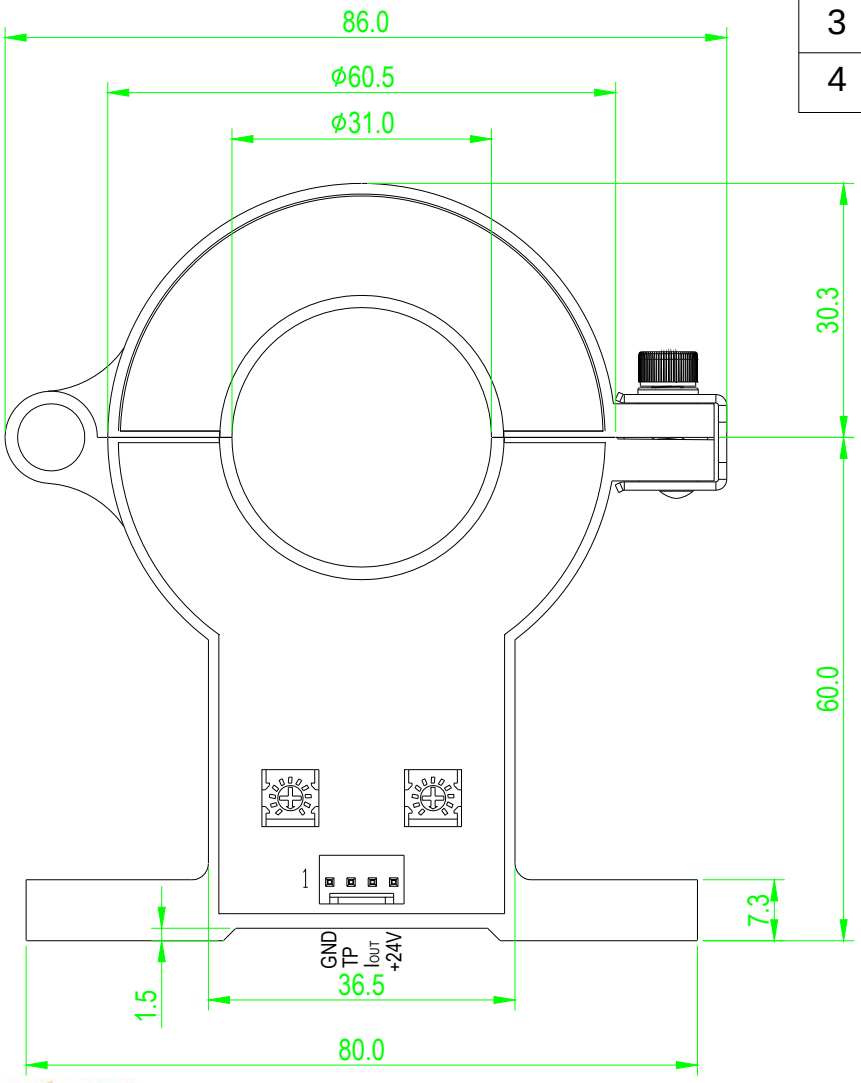
Appearance, dimensions and pin identification of TFC30P-CL420-M

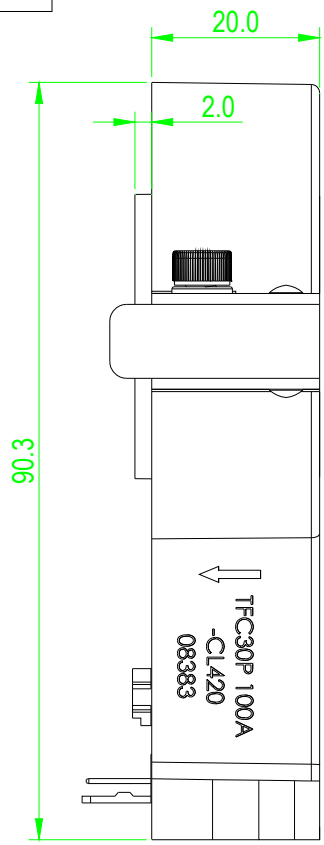
All dimensions in mm ±0.2, holes –0, +0.2 except otherwise noted.





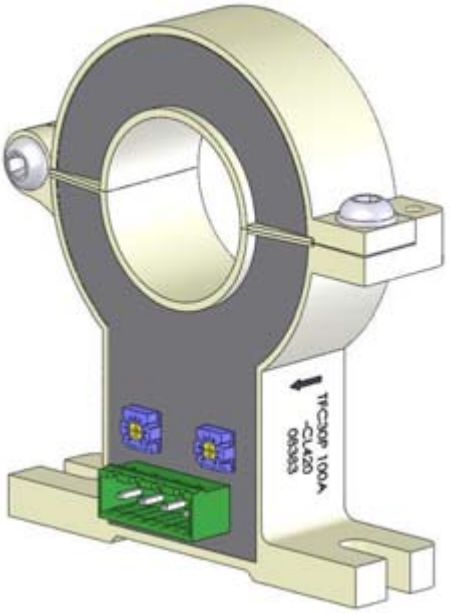
Pin Assignment	
1	0V
2	TP
3	Iout
4	+24V

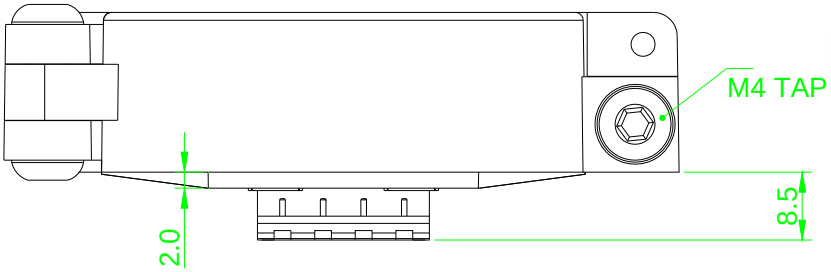


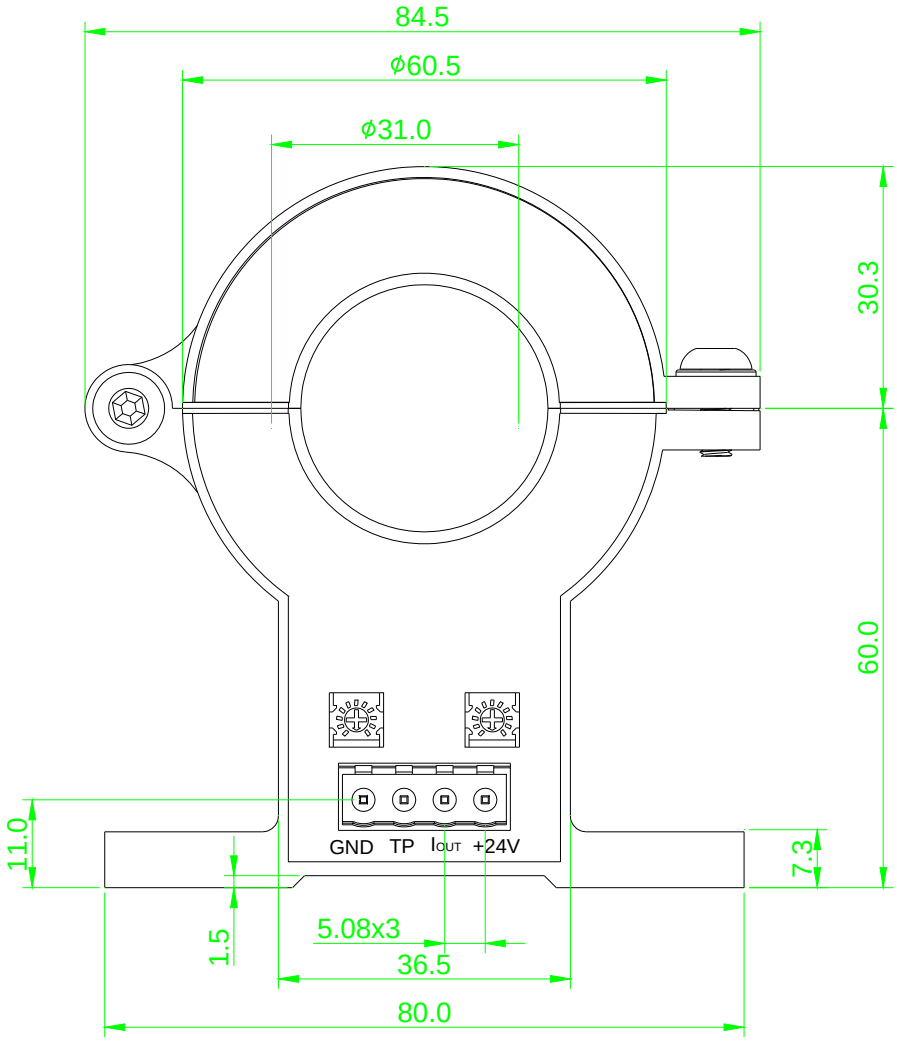


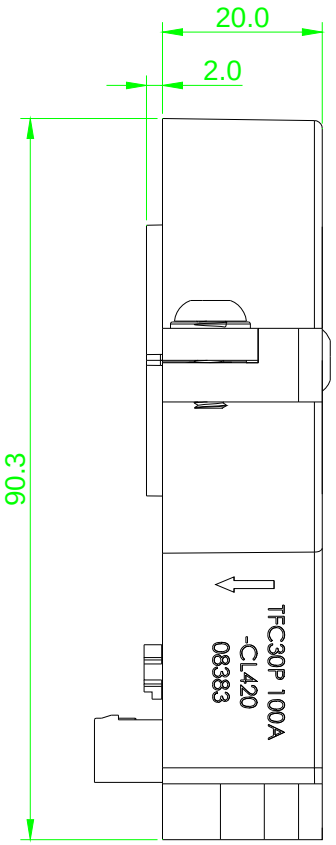
Appearance, dimensions and pin identification of TFC30P-CL420-E

All dimensions in mm ±0.2, holes –0, +0.2 except otherwise noted.









Application Connections

TTFC30P-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.