

# Topstek True RMS Current Transducer TMQ80A..1000A-CL420

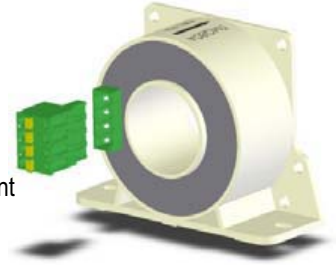
## TMQ80A~1000A-CL420

### Features

- ◆ Highly reliable Open Loop Hall Effect device
- ◆ 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.

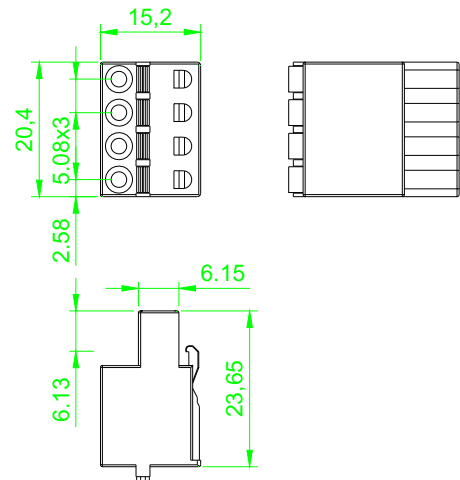
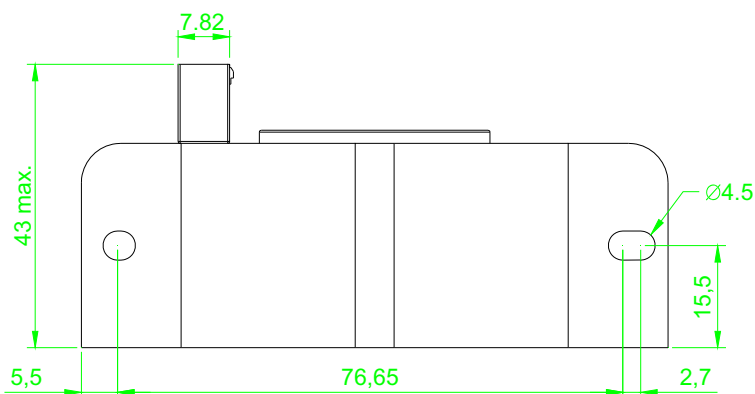
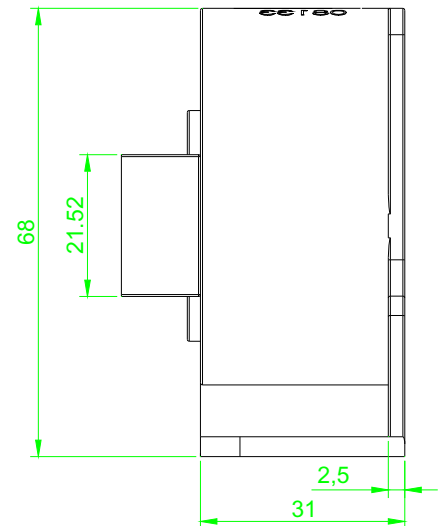
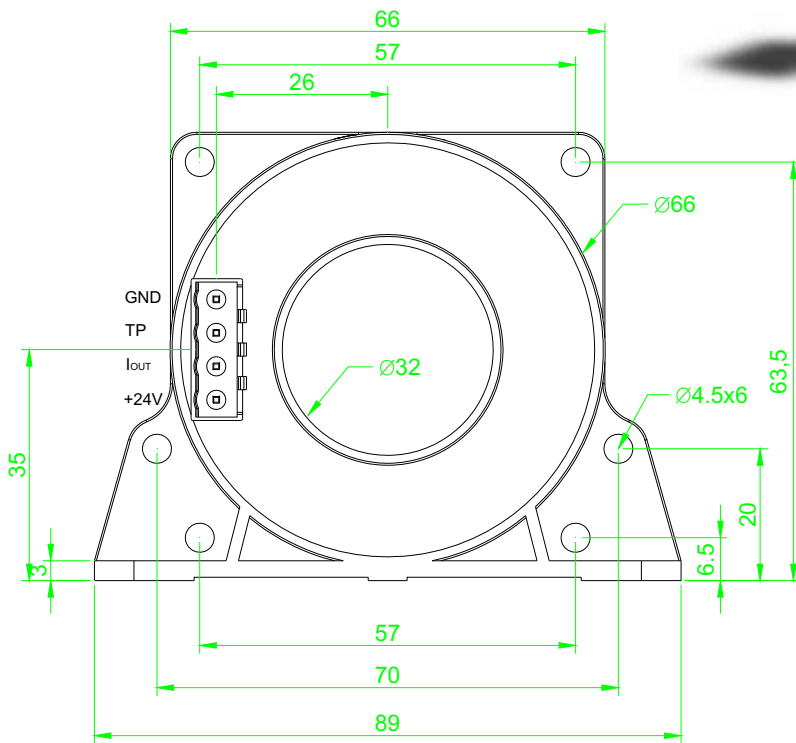
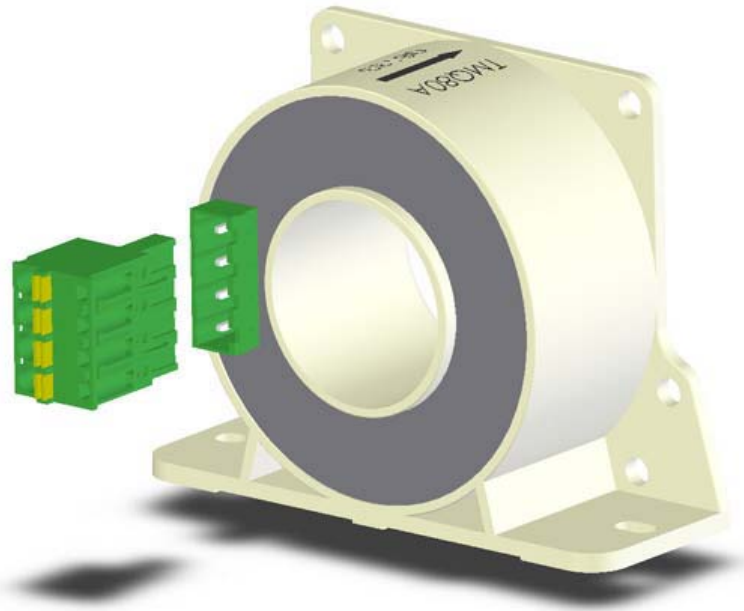
### Specifications

Parameter	Symbol	Unit	80A	100A	200A	300A	400A	500A	600A	1000A
Nominal Input Current	$I_{PN}$	$A_{RMS}$	80	100	200	300	400	500	600	1000
Max Primary Current Peak	$I_{PMax}$	A	±400	±400	±800	±1200	±1600	±2000	±2400	±2400
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							

# Topstek True RMS Current Transducer TMQ80A..1000A-CL420

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

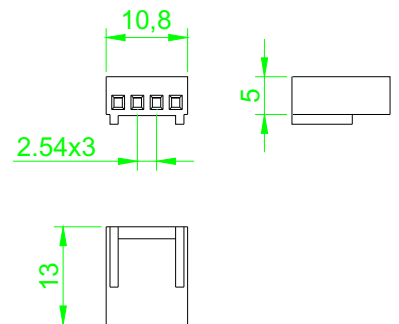
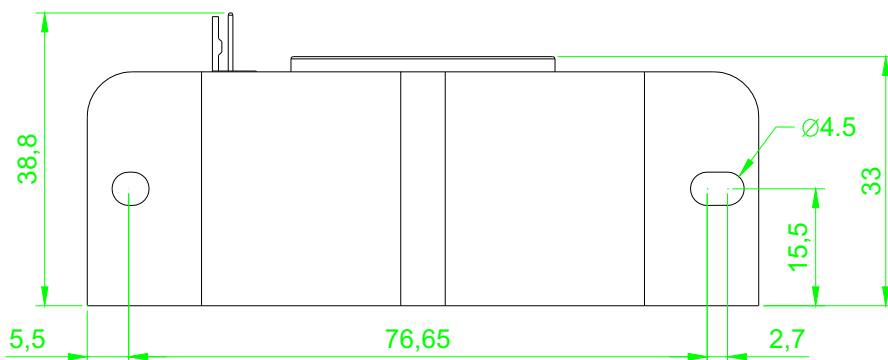
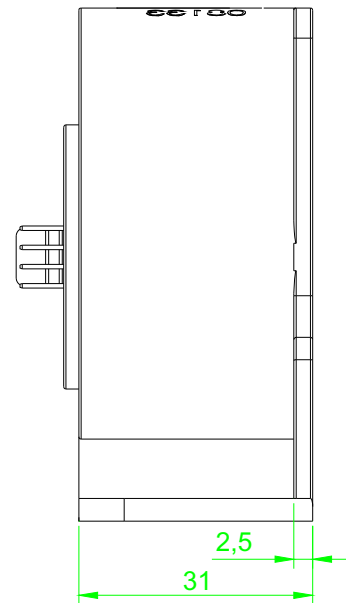
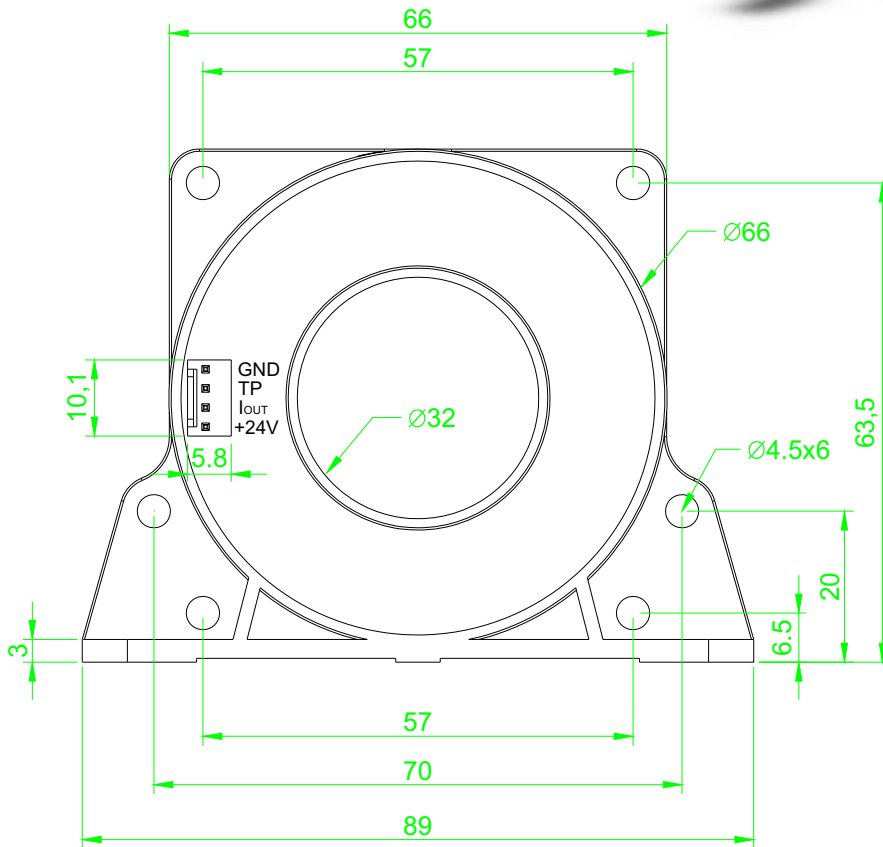
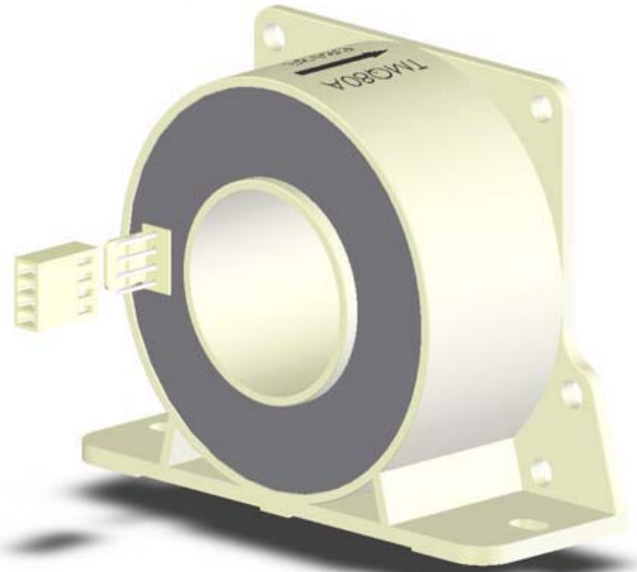
All dimensions in mm  $\pm 0.2$ , holes  $-0, +0.2$  except otherwise noted.



# Topstek True RMS Current Transducer TMQ80A..1000A-CL420

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

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



# Topstek True RMS Current Transducer TMQ80A..1000A-CL420

## Application Connections

TMQ-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.

