



Customer Part No.		Date Of Issue :	
T.H. Part No.		T.H. Sample No.	



## Type E integrator

Type E integrator is an AC integrator. It applies integrated operational amplifier with excellent dynamic response, low-power consumption, small noise and broad bandwidth.

- ▶ External power supply: 5V DC.
- ▶ Available output signals: 0-2V peak or 333mV rms.

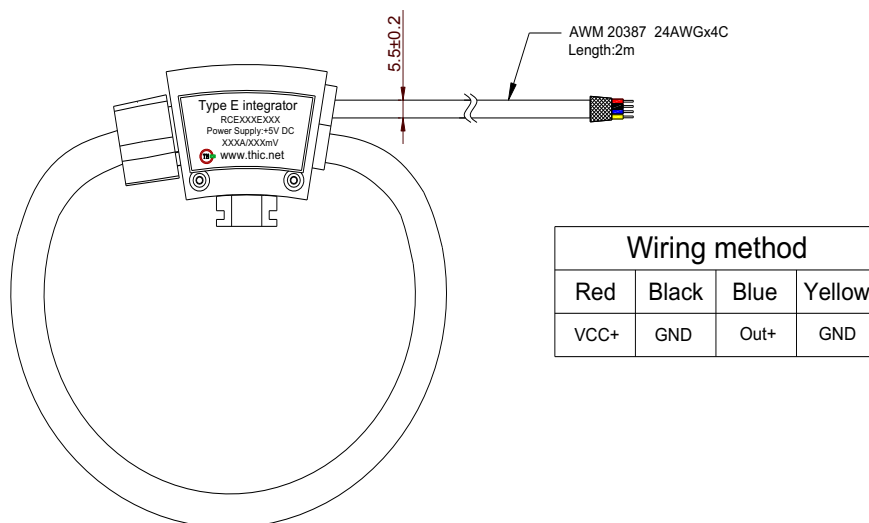
The integrator shall be collaborated with Rogowski coils under measuring. Normally, Rogowski coil is easily interfered when applying on high-frequency and large current. Therefore, T.H focus on minimizing electromagnetic interference by two methods. First, reducing the module connection between the integrator and Rogowski coil. Also, using shielded wire for output signal.

Type E integrators not only have the advantages of excellent accuracy, linearity and stability but also very low thermal drift as well as offset voltage.

## Features:

- ◆ Type E integrator can be utilized with RCE Rogowski coils, the integrator is integrated with Rogowski coil .
- ◆ Type E integrator and Rogowski coil is a very flexible system, suitable for high power load analysis, impulsive current monitoring, DC ripple measurement, etc.
- ◆ Due to its specific features, flexible Rogowski coil is an extremely comfortable solution for current measurement and can be used in a number of cases where traditional current transducer is not the adequate solution
- ◆ On request the input value can be customized according to the application.

## Mechanical Dimensions (Unit : mm) :





# Thousand Hundred Industrial CO.,LTD.

Performance Characteristics (@ $f_{ip}=50\text{Hz}$ ,  $T_A=25^\circ\text{C}$ , unless otherwise noted) :

Part Name	Type E integrator
Rated output Voltage	0-2V peak 333mV AC rms
Phase error	$<1^\circ$ at rated current
Maximum Output(overload)	3V AC peak
Output Ripple factor	1%
Power supply	5V DC
Current consumption	$<25\text{mA}$
Rated Current (A)	500A 3000A 5000A ... 10KA
Read Accuracy	1% typical at 1% ( $\geq 10\text{A}$ ) to 200% of rated Current @ $25^\circ\text{C}$
Bandwidth	50/60Hz
Linearity Error	$\pm 0.2\%$ @10% to 100% of Rated Current
Minimum Current measurement	1A (Ripple 100mA)
Noise (Static State) Output on 0A	Max 5mV (Typ 0.5mV)
Temperature drift	200ppm/ $^\circ\text{C}$
Operating Status Indicator	Green Light
Weight	40g
Mechanical Dimensions	80*26*15mm
Operating temperature	$-20^\circ\text{C}$ to $70^\circ\text{C}$
Storage temperature	$-25^\circ\text{C}$ to $85^\circ\text{C}$
Note	Insulated plastic case recognized according to UL 94-V0
Relative humidity	80% RH or less, no condensation.
Protection degree	IP20



Rogowski coil selection:

Coil Model	Coil diameter (mm)	Output ratio and tolerance	Signal cable length
RCA (without integrator)	130 185 305	100mV/1kA@50Hz±10%	Cable length:-2m Cable length:-5m
RCB (without integrator)	055 080 105 180	7.9mV/1kA@50Hz±20%	Cable length:-2m Cable length:-5m
RCC (without integrator)	055 080 105 180	50mV/1kA@50Hz±1%	Cable length:-2m Cable length:-5m
		85mV/1kA@50Hz±1%	
		100mV/1kA@50Hz±1%	
		105mV/1kA@50Hz±1%	
RCD (without integrator)	120 150 185 240	50mV/1kA@50Hz±1%	Cable length:-2m Cable length:-5m
		85mV/1kA@50Hz±1%	
		100mV/1kA@50Hz±1%	
		105mV/1kA@50Hz±1%	
RCE (without integrator)	100 150 185 240 305	50mV/1kA@50Hz±1%	Cable length:-2m Cable length:-5m
		85mV/1kA@50Hz±1%	
		100mV/1kA@50Hz±1%	
		105mV/1kA@50Hz±1%	
RCF (without integrator)	70 125 175 300	22.5mV/1kA@50Hz±0.5%	Cable length:-2m Cable length:-5m