



Features:

- 1- Phase and 3- Phase Current Sensor
- 13.8mm Dia Centre Hole
- Current: 0 - 40Amp - Single Phase
- Frequency Range: DC to 1KHz
- Fully Isolated Pri - Sec >4000Vrms
- Materials: UL94-V0
- RoHS and REACH Compliant
- Safety: UKCA, CE
- Compliance Standards: IEC 62955:2018



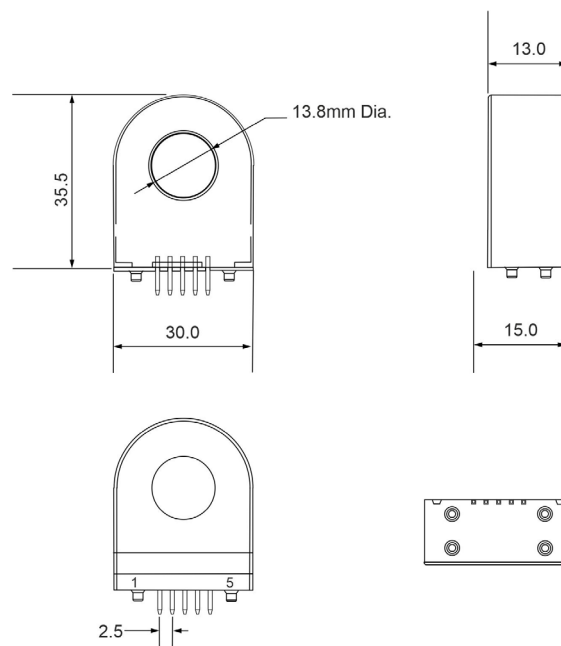
Description

VTX-151-1711 series are specially designed for EV Charging applications where a sensor is required to meet the standard IEC 62955. The current sensor has high accuracy and suitable for RCD Module applications. The sensor is a Fluxgate current sensor using a toroidal core.

Selection Guide

Part No.	Condition	Input Voltage (VDC)	Primary		Frequency Range
			Typical RMS (Current)	Current Range	
VTX-151-1711	1&3-Phase	5v	32	0 to 40	DC to 1KHz

Dimensions

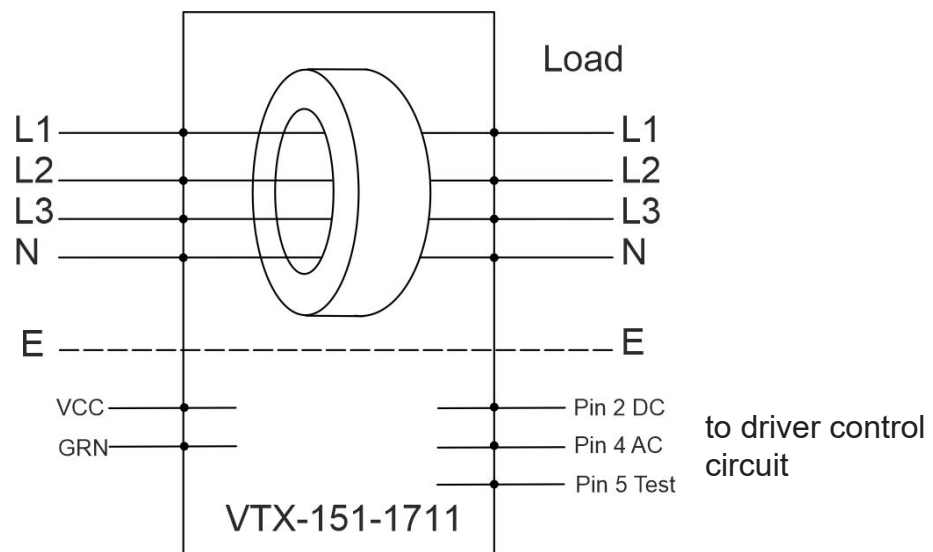


Please contact Vigortronix for any enquiries. Products can be altered to suit custom requirements. The information contained in this document is subject to change without notice.

Application Note

The VTX-151-1711 Sensor is sensitive to AC and DC current and can be used for fault current detection in RDC-MD applications. The Sensor detects AC and DC fault currents according to IEC62955:2018. In the event of a DC fault current, PIN 3 will change its state from a low level (GND) to high impedance state. In the event of an AC fault current, PIN 4 will change state from a low level (GND) to a high impedance state.

Pin No	Description
Pin 1 -> VCC	Supply Voltage +5VDC
Pin 2 -> X6-Out (Open Collector Output)	If the residual current is below 6mA dc and no system fault occur the output on PIN 3 is a low level (GND). In any other case output PIN 3 is in a high impedance state.
Pin 3 -> GND	Ground connection
PIN 4 --> X30-OUT (open collector output)	If the residual current is below or equal to the 30mA rms. and no system fault occur the Output on PIN 4 is a low level (GND).
PIN 5 --> TEST (refer to figure)	A function test is activated if this PIN is connected to high level. Attention: During the functional test no differential current shall flow. If a push-pull switch is used, the voltage range must be 0V...5V.



DC (Pin 2)	AC (Pin 4)	State
GND	GND	Normal Condition
High Impedance	GND	>6mADC
GND	High Impedance	->30mArms
High Impedance	High Impedance	DC>6mADC AC>30mA

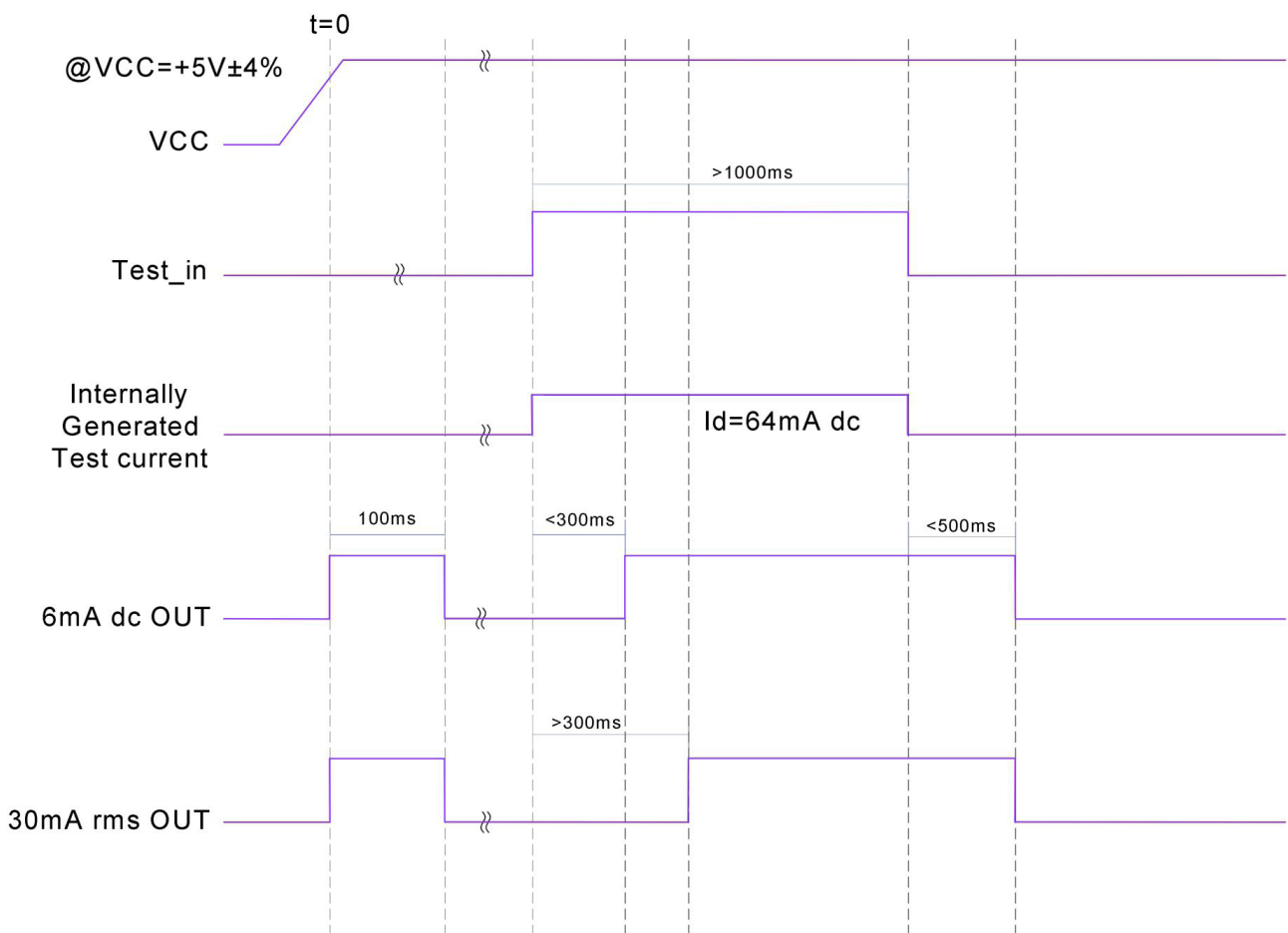
Please contact Vigortronix for any enquiries. Products can be altered to suit custom requirements. The information contained in this document is subject to change without notice.

Electrical Specification							
Symbol	Parameter	Conditions	Min	Typical	Max	Unit	Remark
I_p	Primary rated current	(1phase) (3phase)	0	32	40	A	
$I_{\Delta N,max}$	Measuring range (peak)		-300	-	+300	mA	
f_{BW}	Frequency range		DC	-	1	kHz	
$I_{\Delta N1}$	Rated residual operating current 1		3.5	4.8	6	mA DC	
$I_{\Delta N2}$	Rated residual operating current 2		30	-	420	mA RMS	(1) $f = DC$ to 150Hz (2) $f = 150Hz$ to 1kHz
T_r	Non-operating time	AC: $I_n=1 \cdot I_{\Delta N2}$	No Tripping			mS	Interrupting Time according to IEC62955: 2018 Table 2 + 3
		AC: $I_n=2 \cdot I_{\Delta N2}$	300				
		AC: $I_n=5 \cdot I_{\Delta N2}$	80				
	Response time	DC: $I_n=1 \cdot I_{\Delta N1}$		300	10000		
		DC: $I_n=10 \cdot I_{\Delta N1}$		90	300		
		DC: $I_n=33 \cdot I_{\Delta N1}$		25	100		
$I_{\Delta R1}$	Hysteresis recovery current level for $I_{\Delta N1}$ (absolute value dc)			2.5		mA	X6 will remain in their states until I_{Δ} is below the recovery threshold $I_{\Delta R1}$
$I_{\Delta R2}$	Hysteresis recovery current level for $I_{\Delta N2}$ (absolute value rms)			10		mA	X30 will remain in their states until I_{Δ} is below the recovery threshold $I_{\Delta R2}$
V_{cc}	Supply voltage		4.8	5	5.2	VDC	
I_{cc}	Consumption current		TBA	-	TBA	mA	
T_a	Ambient operation temperature		-40		+85	°C	

Please contact Vigortronix for any enquiries. Products can be altered to suit custom requirements.
The information contained in this document is subject to change without notice.

Electrical Specification - Continued							
Symbol	Parameter	Conditions	Min	Typical	Max	Unit	Remark
V _{PIN}	Voltage on pins with respect to GND (PINs 1, 2, 4 and 5)				5.5	V	
I _{PIN}	Current on pin (PINs 1, 3 and 4)				50	mA	
U _{Max}	Maximum rated voltage of primary conductors				440	V	

After activating the test sequence, the end product has to monitor the correct state of the switching outputs being used at the following points in time.



Please contact Vigortronix for any enquiries. Products can be altered to suit custom requirements.
The information contained in this document is subject to change without notice.