Current Sensor Expert
LIOU ELECTRONICS

Description

- ♦ 20-1000 Hz，Single Phase，AC Current Sensor
- ♦ Dynamic Range from 20 to 200Amps
- ♦ Meets IEC62053-21 class 1
- ♦ Meets IEC 60044-1 class 0.1 Phase error < 5'
- ♦ Very low temperature coefficient
- ♦ Meets UL class B (130℃) thermal insulation system
- ♦ Meets UL 94V-0
- ▲ AC isolation resistance: 4KV for 60s

Application

- Electricity meter
- Recording
- Power monitoring
- Energy management
- Alternative energy monitoring

ELECTRIC SPECIFICAITON AT 25℃(60Hz)								
Model number	Turns Ration	Ir[4]	VmaxRMS[5]	Te[6](typ)	Accuracy Class[3]	DCR	Weight	Frequency range
		Amps	**V**			**Ohms**	**(g)**	**(Hz)**
LO-GP0001	1:1000	20	7.0	1023	0.1	24		20-1000
LO-GP0002	1:2000	50	13.7	2046	0.1	106		20-1000
LO-GP0003	1:1000	50	11.6	1016	0.1	35		20-1000
LO-GP0004	1:1500	75	15.5	1520	0.1	80		20-1000
LO-GP0005	1:1000	100	16.5	1021	0.1	22		20-1000
LO-GP0006	1:2000	200	31.0	2037	0.1	73		20-1000

Note:

1.Output voltage is proportional to the derivative(di/dt)of the input current based on the Rogowski Coil principle.

2.All current and voltages assumed to be sinusoidal waveforms at Fr, the constant rated frequency in Hz, measured as RMS value.

3.Accuracy class per IEC60044-1Table 11.

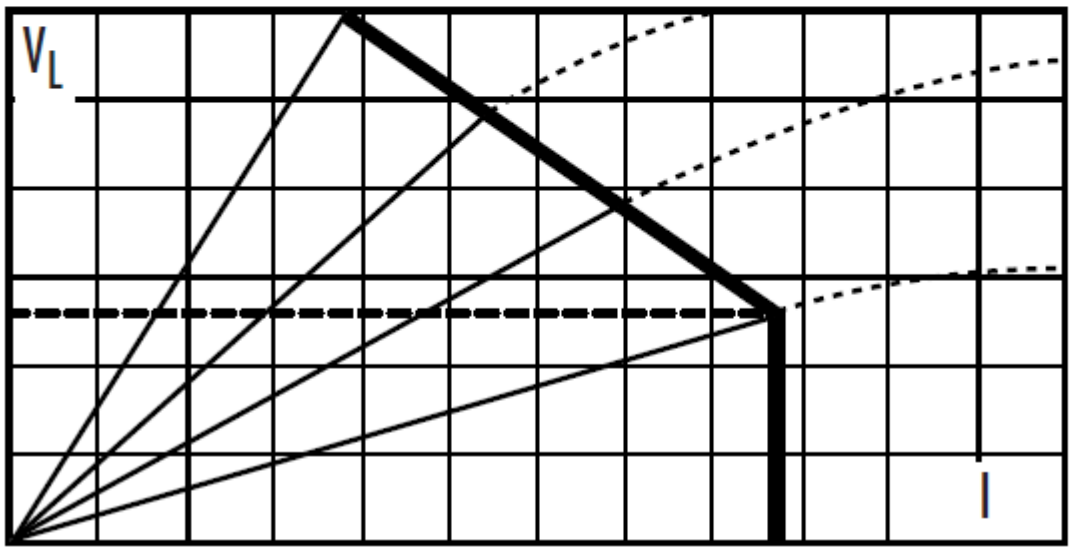
4.Ir=Maximum input current to be linearly sensed

5.VmaxRMS=Maximum voltage (saturation) CT will develop

6.Te=Effective turns ratio including losses

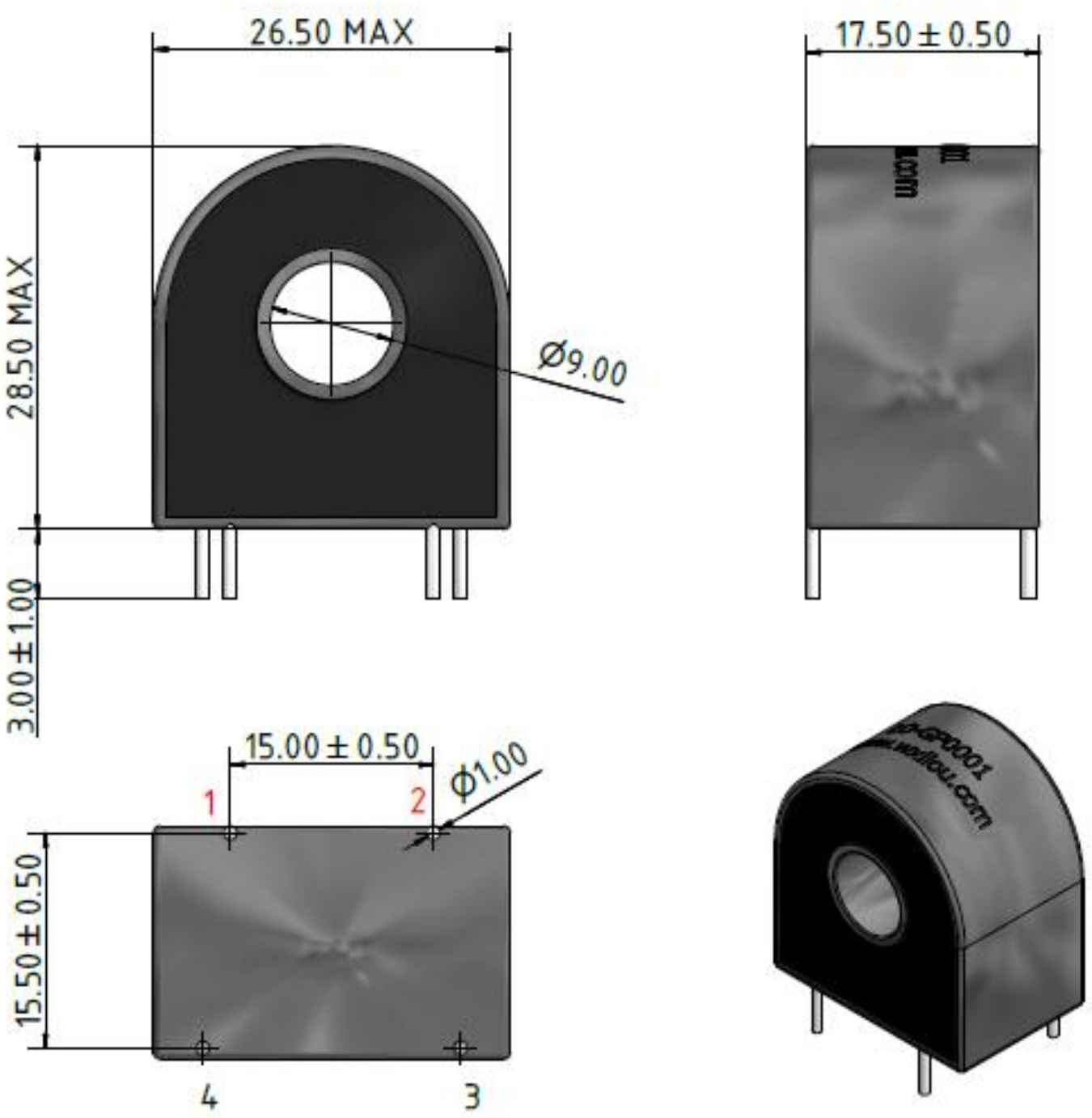
$$V = \frac{I \times R}{T_e} \qquad V_L = Vmax - \left[\frac{I \times DCR}{T_e} \right]$$

For best linearity, choose R such that $V < 0.8\ V_L$



ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40℃ to 85℃
Storage temperature range	-40℃ to 100℃
SOLDERING INFORMATION	
Peak wave solder temperature	300℃ for 10Seconds
Pin finish	Tin

Mechanical Specifications



Current Sensor Expert
LIOU ELECTRONICS

Description

- ♦ 50/60 Hz，Single Phase，AC Current Sensor
- ♦ Dynamic Range from 5 to 80Amps
- ♦ Accuracy class 0.05 Phase error < 2'
- ♦ Very low temperature coefficient
- ♦ Meets UL class B (130℃) thermal insulation system
- ♦ Meets UL 94V-0
- ♦ AC isolation resistance: 4KV for 60s

Application

- Digital electricity meter
- Recording
- Power monitoring
- Energy management
- Alternative energy monitoring

ELECTRIC SPECIFICAITON AT 25℃										
Model number	Turns Ration	Ipri[4]	Iout[5]	Iprimax[6]	Ioutmax[7]	R_S	Accuracy Class	R_L[8]	Weight	Frequency range
		Amps	**mA**	**Amps**	**mA**	**Ohms**		**Ohms**	**(g)**	**(Hz)**
LO-GP0007	1:1000	5	2.5	80	40		0.05	20		50-60

Note:

1.Output voltage is proportional to the derivative(di/dt)of the input current based on the Rogowski Coil principle.

2.All current and voltages assumed to be sinusoidal waveforms at Fr, the constant rated frequency in Hz, measured as RMS value.

3.Ipri=Rated primary current.

4.Iout=Rated secondary current.

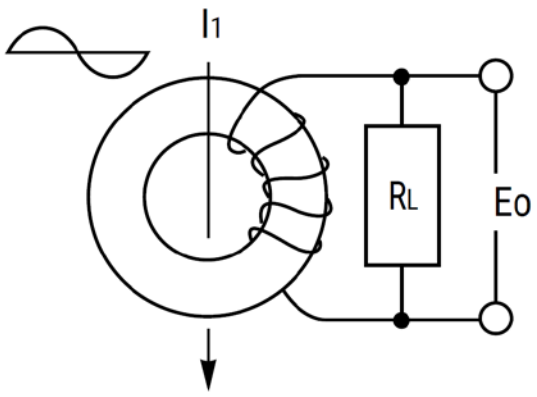
5.Iprimax=Sensed max primary current.

6.Loutmax=Sensed max secondary current.

7.R_L=Terminating resistance. Varying terminating resistance increases or decreases output Voltage /Ampers according to following equation R_L=Vout*Nsec/Ipri

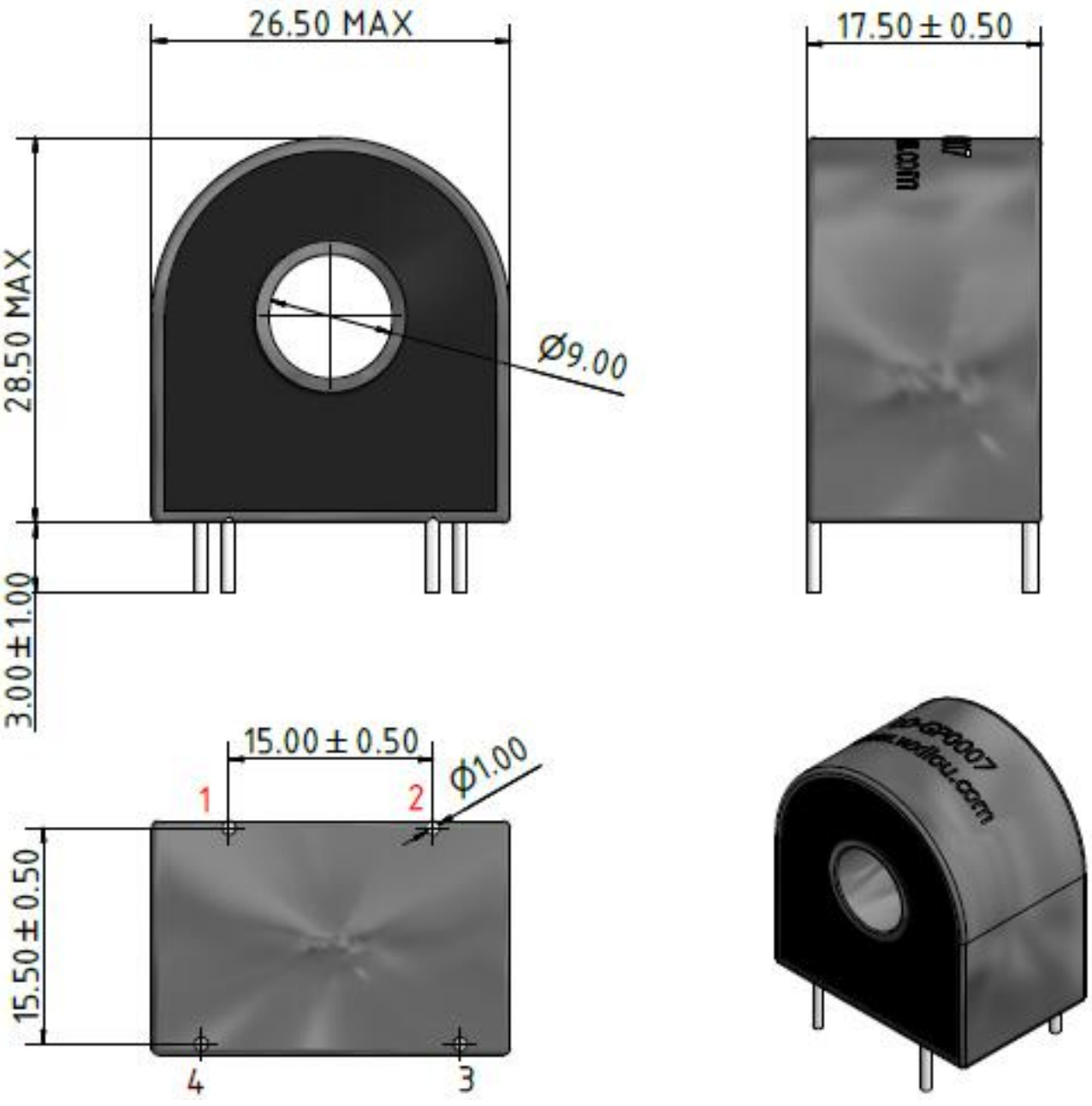
ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40℃ to 85℃
Storage temperature range	-40℃ to 100℃
SOLDERING INFORMATION	
Peak wave solder temperature	300℃ for 10Seconds
Pin finish	Tin

Measuring Circut



I_1 : Primary current (AT)
R_L : Load resistance (Ω)
Eo : Output voltage (mV_{rms})

Mechanical Specifications



Current Sensor Expert
LIOU ELECTRONICS

Description

- ♦ 50/60 Hz，Single Phase，AC Current Sensor
- ♦ Dynamic Range from 25 to 30Amps
- ♦ Meets IEC 60044-1 class 3
- ♦ Very low temperature coefficient
- ♦ Meets UL class B (130℃) thermal insulation system
- ♦ Meets UL 94V-0
- ♦ AC isolation resistance: 4KV for 60s

Application

- Digital electricity meter
- Recording
- Power monitoring
- Energy management
- Alternative energy monitoring

ELECTRIC SPECIFICAITON AT 25℃										
Model number	Turns Ration	Ipri[4]	Iout[5]	Iprimax[6]	Ioutmax[7]	R_S	Accuracy Class[3]	R_L[8]	Weight	Frequency range
		Amps	**mA**	**Amps**	**mA**	**Ohms**		**Ohms**	**(g)**	**(Hz)**
LO-GP0008	1:1000	25	25	30	30		3	20		50-60

Note:

1.Output voltage is proportional to the derivative(di/dt)of the input current based on the Rogowski Coil principle.

2.All current and voltages assumed to be sinusoidal waveforms at Fr, the constant rated frequency in Hz, measured as RMS value.

3.Accuracy class per IEC60044-1Table 11.

4.Ipri=Rated primary current.

5.Iout=Rated secondary current.

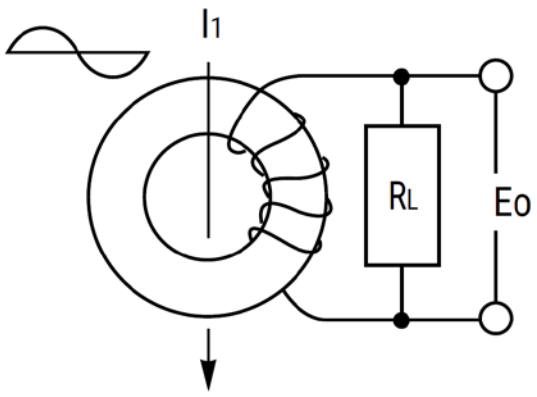
6.Iprimax=Sensed max primary current.

7.Loutmax=Sensed max secondary current.

8.R_L=Terminating resistance. Varying terminating resistance increases or decreases output Voltage /Ampers according to following equation R_L=Vout*Nsec/Ipri

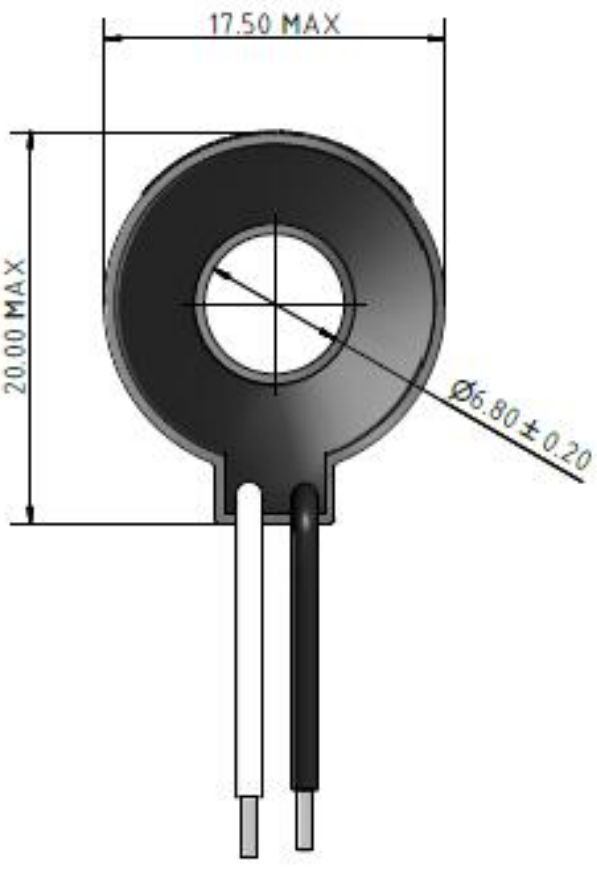
ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40℃ to 85℃
Storage temperature range	-40℃ to 100℃
LEADS INFORMATION	
24AWG UL1015 Lead wires	Leads length:30±3mm
Stripped and tinned	4±1mm

Measuring Circut

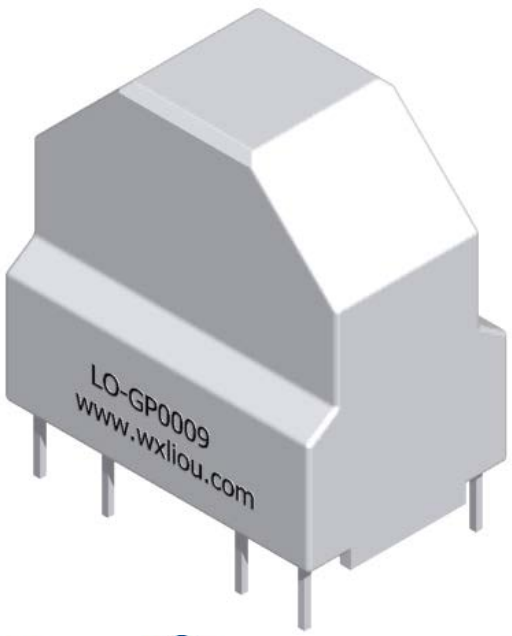


I_1 : Primary current (AT)
R_L : Load resistance (Ω)
Eo : Output voltage (mV_{rms})

Mechanical Specifications



Current Sensor Expert
LIOU ELECTRONICS



Description

- ♦ 50/60 Hz，Single Phase，AC Current Sensor
- ♦ Dynamic Range from 4 to 8Amps
- ♦ Accuracy class 5
- ♦ Very low temperature coefficient
- ♦ Meets UL class B (130℃) thermal insulation system
- ♦ Meets UL 94V-0
- ♦ AC isolation resistance: 3KV for 60s

Application

- Recording
- Power monitoring
- Energy management
- Alternative energy monitoring

ELECTRIC SPECIFICAITON AT 25℃										
Model number	Turns Ration	Ipri[4]	Iout[5]	Iprimax[6]	Ioutmax[7]	R_S	Accuracy Class	R_L[8]	Weight	Frequency range
		Amps	**mA**	**Amps**	**mA**	**Ohms**		**Ohms**	**(g)**	**(Hz)**
LO-GP0009	6:1500	4	16	8	32		5	100		50-60

Note:

1.Output voltage is proportional to the derivative(di/dt)of the input current based on the Rogowski Coil principle.

2.All current and voltages assumed to be sinusoidal waveforms at Fr, the constant rated frequency in Hz, measured as RMS value.

3.Ipri=Rated primary current.

4.Iout=Rated secondary current.

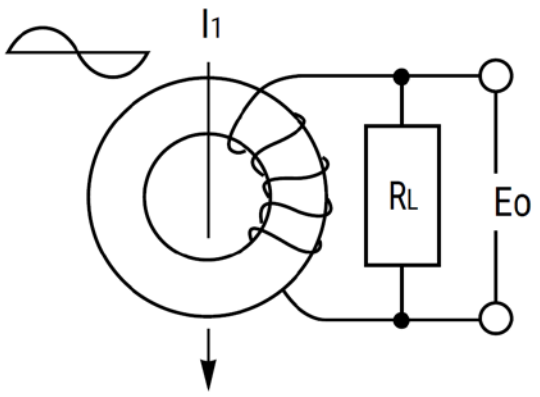
5.Iprimax=Sensed max primary current.

6.Loutmax=Sensed max secondary current.

7.R_L=Terminating resistance. Varying terminating resistance increases or decreases output Voltage /Ampers according to following equation R_L=Vout*Nsec/Ipri

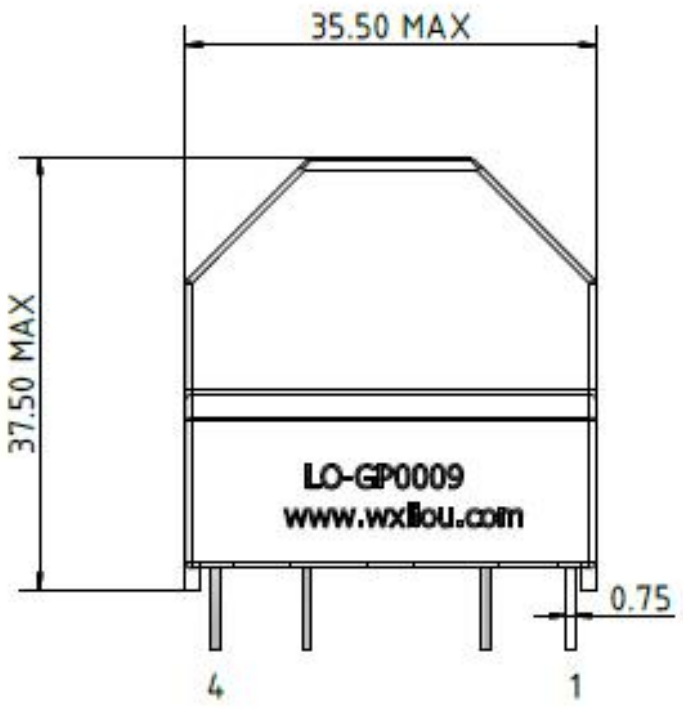
ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40℃ to 85℃
Storage temperature range	-40℃ to 100℃
SOLDERING INFORMATION	
Peak wave solder temperature	300℃ for 10Seconds
Pin finish	Tin

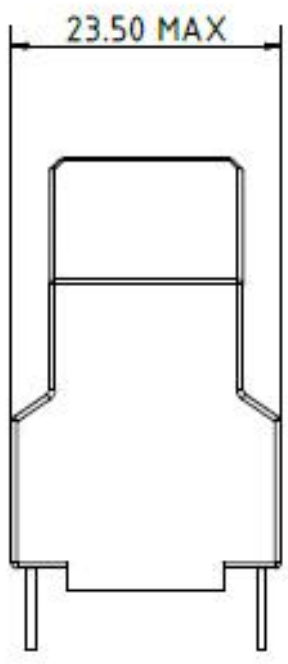
Measuring Circut

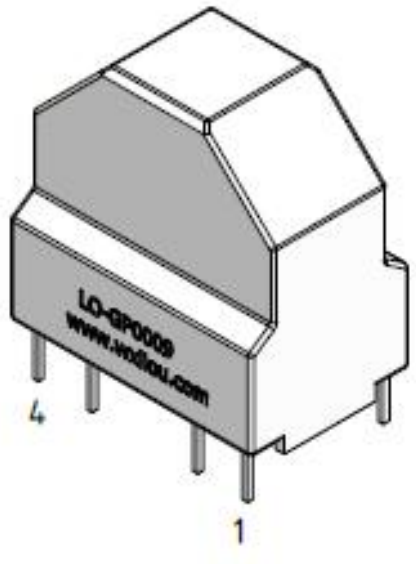


I_1 : Primary current (AT)
R_L : Load resistance (Ω)
Eo : Output voltage (mV_{rms})

Mechanical Specifications







Product Description

Technical Date P/N Series: LO-GP www.wxliou.com

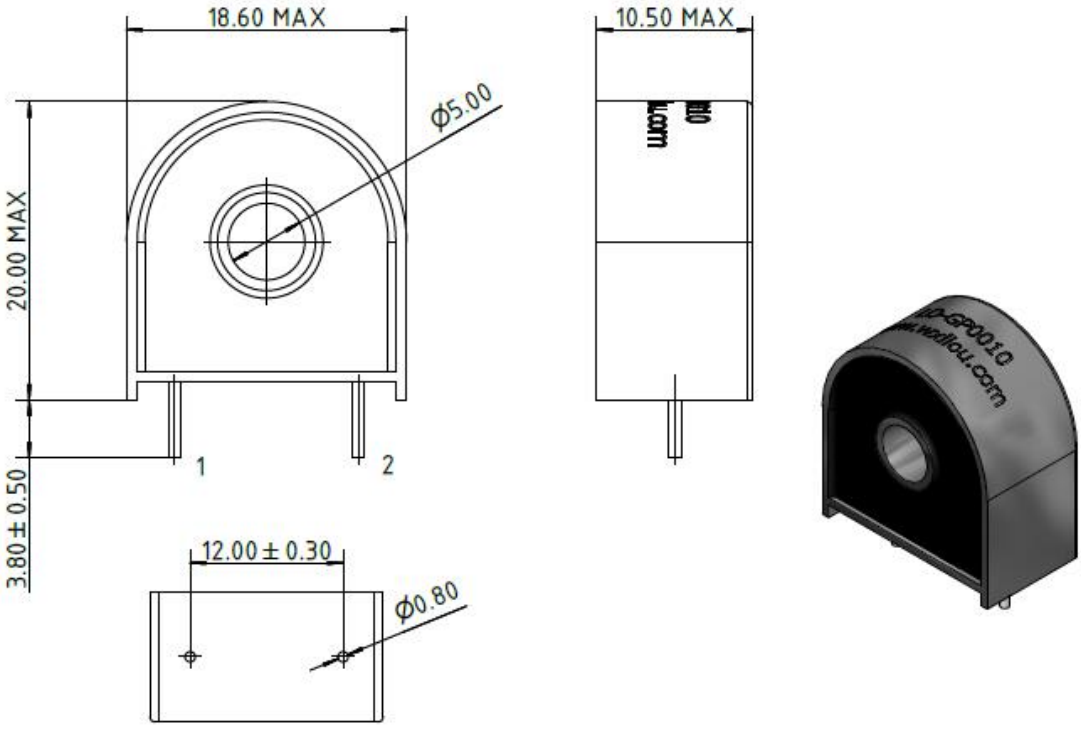
Description

- 50/10KHz,Single Phase,AC Current Sensor
- Dynamic Range from 0.1 to 15Amps
- Meets IEC62053-21 class 1
- Meets IEC 60044-1 class 0.1 Phase error < 5'
- Immune to external AC magnetic field. Immune to DC current & DC magnetic field
- Very low temperature coefficient
- Meets UL class B (130ºC) thermal insulation system
- Meets UL 94V-0
- AC isolation resistance: 4KV for 60s

Application

- Electricity meter
- Recording
- Power monitoring
- Energy management
- Alternative energy monitoring

Mechnical specificaiton



ELECTRIC SPECIFICAITON AT 25ºC										
Model number	Turns Ration	Ipri[4]	Iout[5]	Iprimax[6]	Ioutmax[7]	R_S	Accuracy Class[3]	R_L[8]	Weight	Frequency range
		Amps	**mA**	**Amps**	**mA**	**Ohms**		**Ohms**	**(g)**	**(Hz)**
LO-GP0010	1:2000	5	2.5	15	7.5		0.1	100	20	50-10000

Note:

1.Output voltage is proportional to the derivative(di/dt)of the input current based on the Rogowski Coil principle.

2.All current and voltages assumed to be sinusoidal waveforms at Fr, the constant rated frequency in Hz, measured as RMS value.

3.Accuracy class per IEC60044-1Table 11.

4.Ipri=Rated primary current.

5.Iout=Rated secondary current.

6.Iprimax=Sensed max primary current.

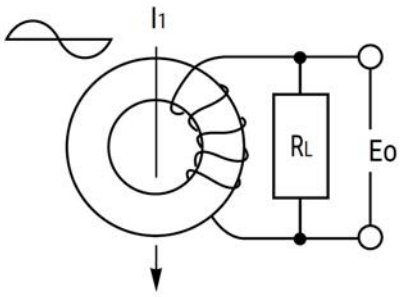
7.Loutmax=Sensed max secondary current.

8.R_L=Terminating resistance. Varying terminating resistance increases or decreases output Voltage /Ampers according to following

equation R_L=Vout*Nsec/Ipri

ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40ºC to 85ºC
Storage temperature range	-40ºC to 125ºC
SOLDERING INFORMATION	
Peak wave solder temperature	300ºC for 10Seconds
Pin finish	Tin

Measuring Circut



I1 : Primary current (AT)
RL : Load resistance (Ω)
Eo : Output voltage (mV_{rms})

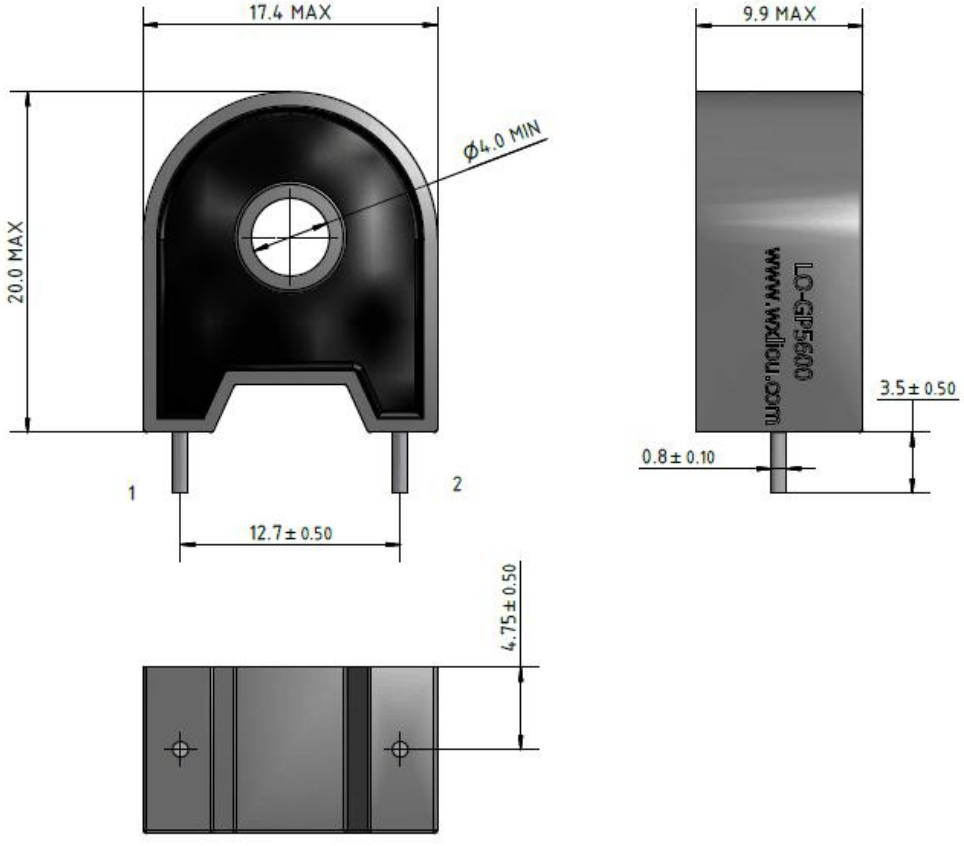
DESCRIPTION

The LO-GP5600 series of current sense transformers are designed to monitor AC currents. They can be used for
high frequency current sensing, for example in switched-mode power supplies, motor control and electronic lighting ballasts.

FEATURES

RoHS compliant
50, 100, 200 & 300 Turn variants
Primary current rating 10A
20kHz-200kHz frequency range
Centre tapped variants available

MECHANICAL SPECIFICATION



SELECTION GUIDE				
Order Code	Number of Turns	Inductance Min.	DC Resistance	Terminating Resistance to Produce 1VOUT/1AIN
	±1Turn	Pins 1&3	Pins 1&3, Ω	Ω
LO-56050C	50	4.5mH @1V, 50kHz	0.133 - 0.199	50
LO-56100C	100	18mH @1V, 50kHz	0.93 - 1.40	100
LO-56200C	200	72mH @1V, 10kHz	1.87 - 2.81	200
LO-56300C	300	160mH @1V, 10kHz	5.73 - 8.59	300
LO-56T100C	100CT	18mH @1V, 50kHz	0.93 - 1.40	100
LO-56T200C	200CT	72mH @1V, 10kHz	1.87 - 2.81	200
LO-56T300C	300CT	160mH @1V, 10kHz	5.73 - 8.59	300

ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 100°C

SOLDERING INFORMATION1	
Peak wave solder temperature	300˚C for 10 seconds
Pin finish	Tin

TECHNICAL NOTES

ISOLATION VOLTAGE

All LO-5600 current sense transformers are tested at 500Vdc for a minimum of 1 second during our standard test procedure.

In addition, as part of our qualification process carried out prior to product launch, the 5600 series demonstrated no isolation breakdown at 10kVdc or 6kVac with a bare conductor as the primary winding. Whilst this does not imply these parts are designed for environments where such high voltages may be present, it does demonstrate the level of isolation voltage these products are able to withstand. Full mains safety isolation can be achieved with appropriately insulated wire on the primary winding.

Product Description

Technical Date P/N Series: LO-GP www.wxliou.com

DESCRIPTION

The LO-0062B1 series of current sense transformers are designed to monitor AC currents. They can be used for

high frequency current sensing, for example in switched-mode power supplies, motor control and electronic lighting ballasts.

FEATURES

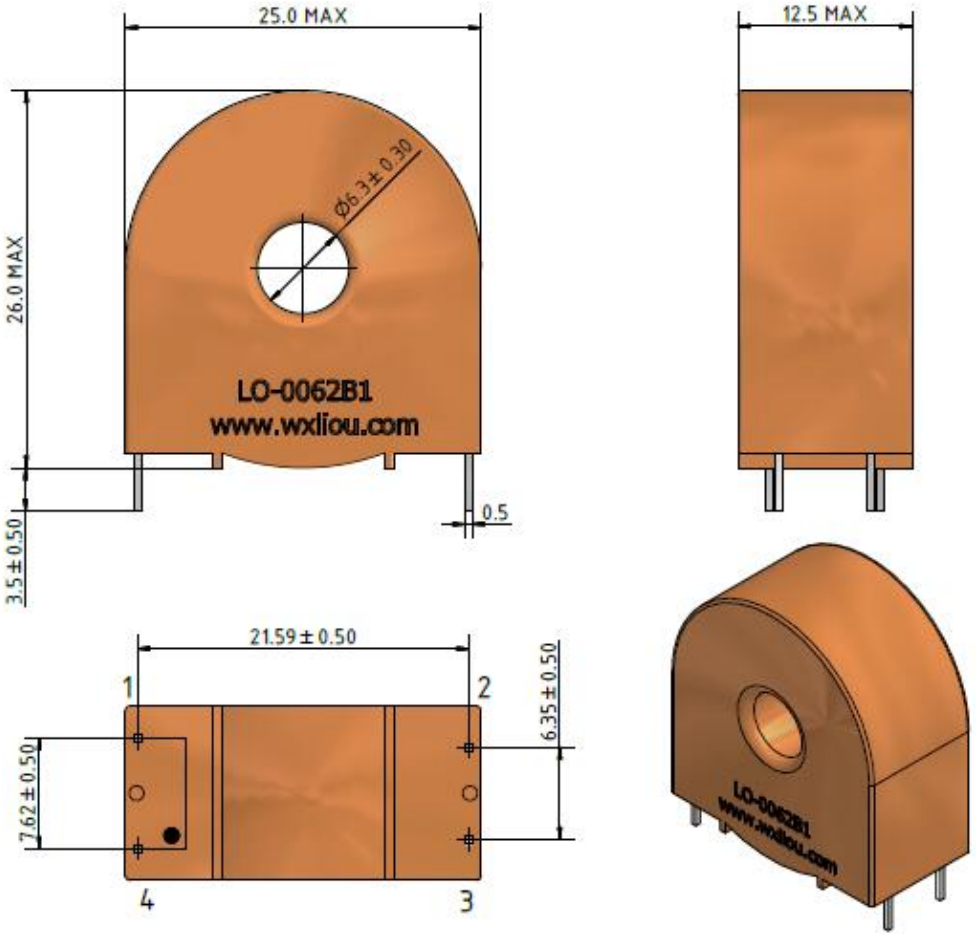
RoHS compliant

1000, 1500, 2000 & 2500 Turn variants

Primary current up to 15A

50Hz-20kHz frequency range

MECHANICAL SPECIFICATION



ELECTRIC SPECIFICATIONS @25C

SELECTION GUIDE				
Order Code	Number of Turns	Inductance Min.	DC Resistance	Terminating Resistance
	±5 Turn	Pins B&R	Pins 4-1, Ω	Ω
LO-0062B1	2000	35.4H @0.3V, 50Hz	110MAX	100

ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 100°C

SOLDERING INFORMATION	
Peak wave solder temperature	300ºC for 10Seconds
Pin finish	Tin

TECHNICAL NOTES

ISOLATION VOLTAGE

All LO-0062B1 current sense transformers are tested at 2500VAC for a minimum of 3 seconds during our standard test procedure.

In addition, as part of our qualification process carried out prior to product launch, the LO-0062B1 series demonstrated no isolation breakdown at 10kVdc or 6kVac with a bare conductor as the primary winding. Whilst this does not imply these parts are designed for environments where such high voltages may be present, it does demonstrate the level of isolation voltage these products are able to withstand. Full mains safety isolation can be achieved with appropriately insulated wire on the primary winding.

Product Description

Technical Date P/N Series: LO-GP www.wxliou.com

DESCRIPTION

The LO-0201-A1 series of current sense transformers are designed to monitor AC currents. They can be used for

high frequency current sensing, for example in switched-mode power supplies, motor control and electronic lighting ballasts.

FEATURES

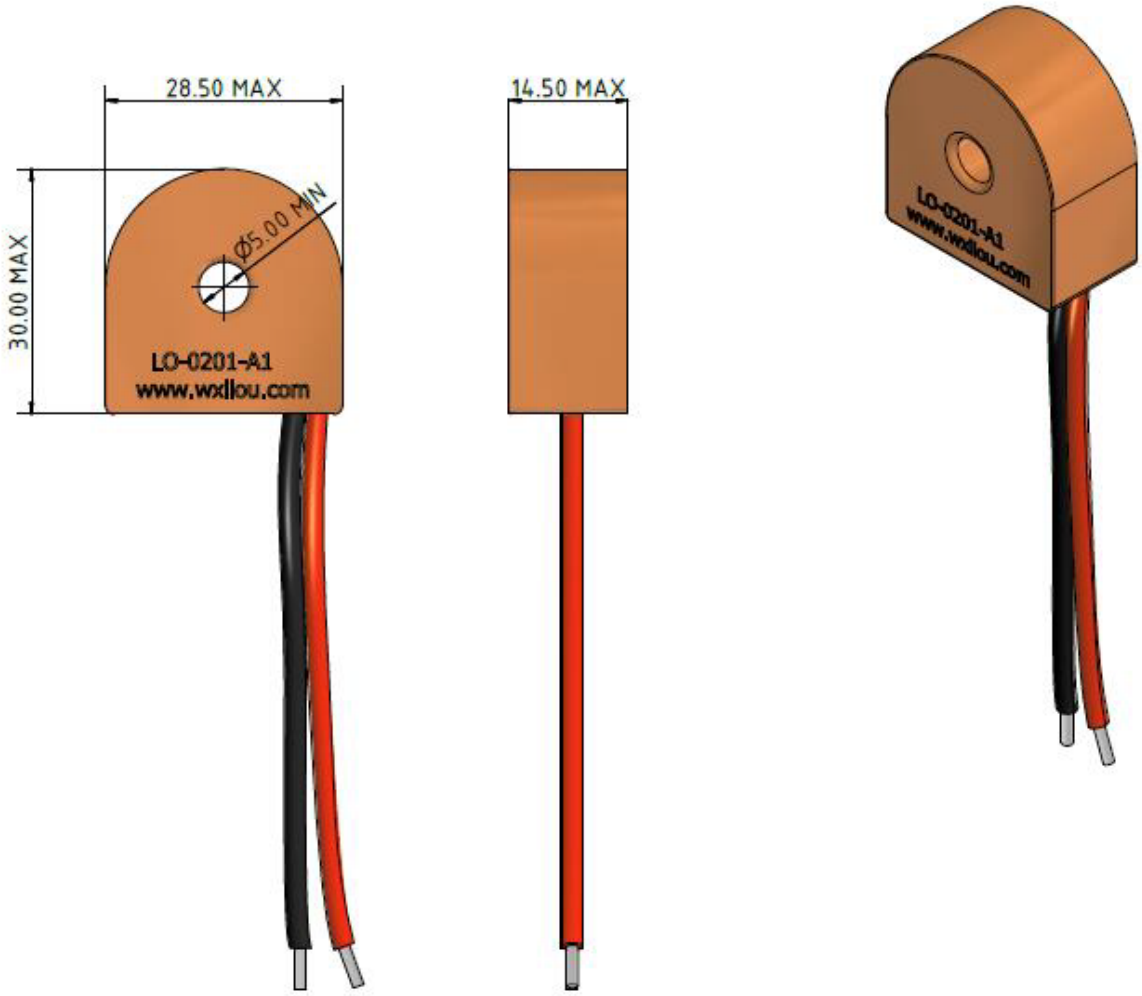
RoHS compliant

1000, 1500, 2000 & 2500 Turn variants

Primary current up to 30A

50Hz-20kHz frequency range

MECHANICAL SPECIFICATION



SELECTION GUIDE				
Order Code	Number of Turns	Inductance Min.	DC Resistance	Terminating Resistance
	±5 Turn	Pins B&R	Pins B&R, Ω	Ω
LO-0201-A1	2500	62.5H @0.5V, 50Hz	170.0MAX	100

ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 100°C

LEADS INFORMATION	
UL1015 20AWG BLACK & RED	Leads length:200mm±6
Stripped and Tinned	8±2

TECHNICAL NOTES

ISOLATION VOLTAGE

All LO--0201-A1 current sense transformers are tested at 2500VAC for a minimum of 3 seconds during our standard test procedure.

In addition, as part of our qualification process carried out prior to product launch, the 1001A3 series demonstrated no isolation breakdown at 10kVdc or 6kVac with a bare conductor as the primary winding. Whilst this does not imply these parts are designed for environments where such high voltages may be present, it does demonstrate the level of isolation voltage these products are able to withstand. Full mains safety isolation can be achieved with appropriately insulated wire on the primary winding.

Product Description

Technical Date | P/N Series: LO-GP | www.wxliou.com

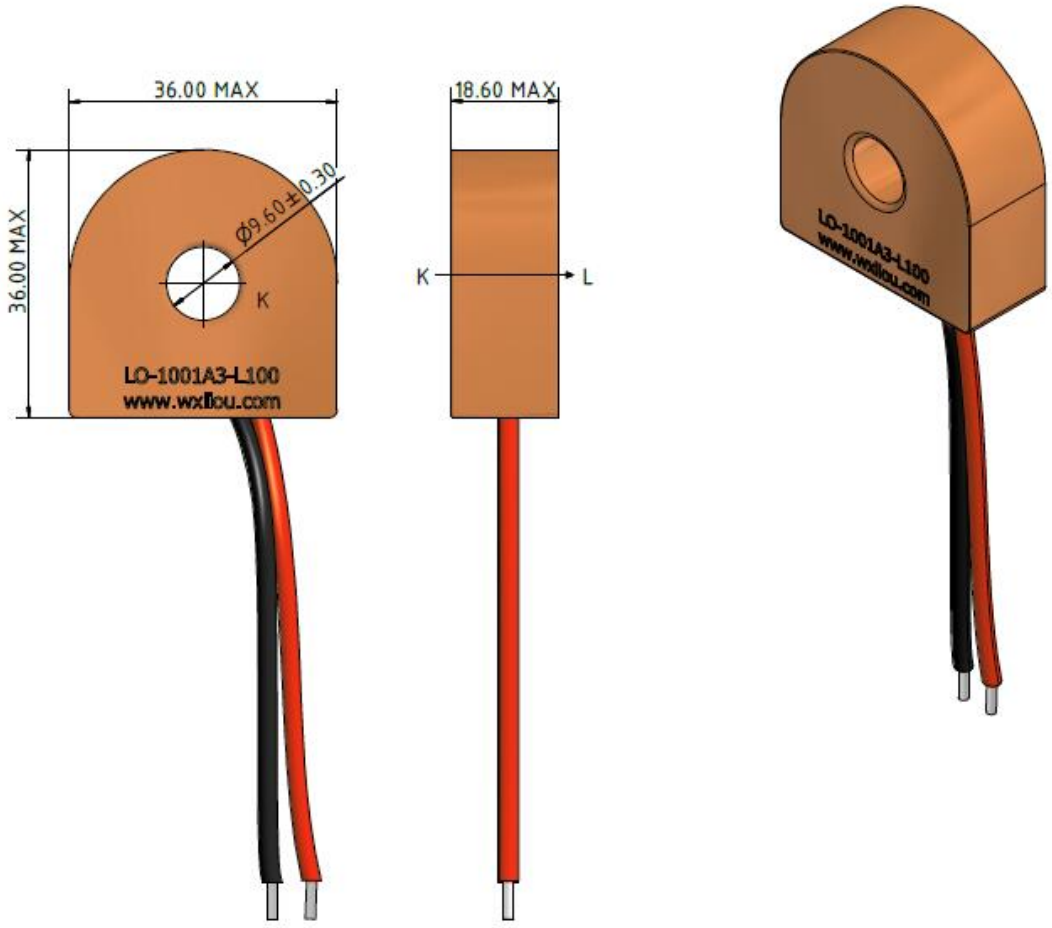
DESCRIPTION

The LO-1001A3-L100 series of current sense transformers are designed to monitor AC currents. They can be used for
high frequency current sensing, for example in switched-mode power supplies, motor control and electronic lighting ballasts.

FEATURES

RoHS compliant
1000, 1500, 2000 & 2500 Turn variants
Primary current up to 80A
50Hz-20kHz frequency range

MECHANICAL SPECIFICATION



ELECTRIC SPECIFICATIONS @25C

SELECTION GUIDE				
Order Code	Number of Turns	Inductance Min.	DC Resistance	Terminating Resistance
	±5 Turn	Pins B&R	Pins B&R, Ω	Ω
LO-1001A3-L100	2500	180H @0.5V, 50Hz	169.0MAX	100

ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 100°C

LEADS INFORMATION	
UL1015 20AWG BLACK & RED	Leads length:1010mm±10
Stripped and Tinned	10±3

TECHNICAL NOTES

ISOLATION VOLTAGE

All LO-1001A3-L100 current sense transformers are tested at 2500VAC for a minimum of 3 seconds during our standard test procedure.

In addition, as part of our qualification process carried out prior to product launch, the 1001A3 series demonstrated no isolation breakdown at 10kVdc or 6kVac with a bare conductor as the primary winding. Whilst this does not imply these parts are designed for environments where such high voltages may be present, it does demonstrate the level of isolation voltage these products are able to withstand. Full mains safety isolation can be achieved with appropriately insulated wire on the primary winding.

Product Description

Technical Date P/N Series: LO-GP www.wxliou.com

DESCRIPTION

The LO-N0396-3814 series of current sense transformers are designed to monitor AC currents. They can be used for

high frequency current sensing, for example in switched-mode power supplies, motor control and electronic lighting ballasts.

FEATURES

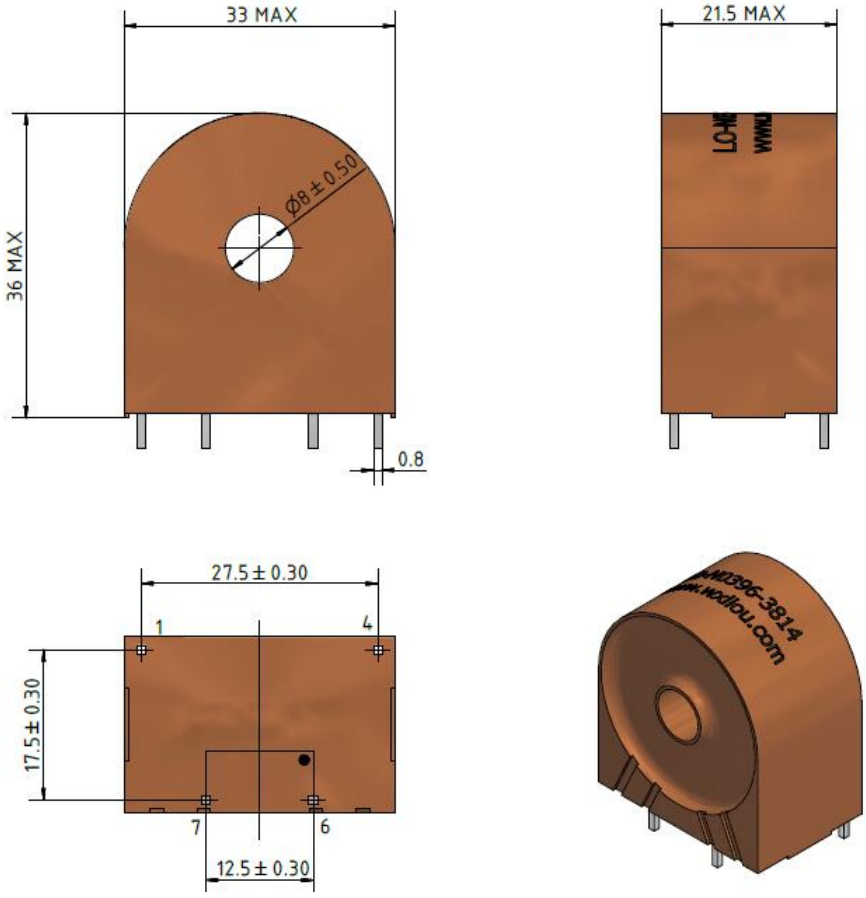
RoHS compliant

1000, 1500, 2000 & 2500 Turn variants

Primary current up to 80A

50Hz-20kHz frequency range

MECHANICAL SPECIFICATION



ELECTRIC SPECIFICATIONS @25C

SELECTION GUIDE				
Order Code	Number of Turns	Inductance Min.	DC Resistance	Terminating Resistance
	±5 Turn	Pins 6&7	Pins 6-7, Ω	Ω
LO-N0396-3814	2500	1.44H @0.1V, 50Hz	82.5MAX	100

ABSOLUTE MAXIMUM RATINGS	
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 100°C

SOLDERING INFORMATION	
Peak wave solder temperature	300ºC for 10Seconds
Pin finish	Tin

TECHNICAL NOTES

ISOLATION VOLTAGE

All LO-N0396-3814 current sense transformers are tested at 2500VAC for a minimum of 3 seconds during our standard test procedure.

In addition, as part of our qualification process carried out prior to product launch, the LO-0396-3814 series demonstrated noisolation breakdown at 10kVdc or 6kVac with a bare conductor as the primary winding. Whilst this does not imply these parts are designed for environments where such high voltages may be present, it does demonstrate the level of isolation voltage these products are able to withstand. Full mains safety isolation can be achieved with appropriately insulated wire on the primary winding.