Company Profile

BYD Microelectronics,a subsidiary of BYD Company Ltd., is dedicated to the development of integrated circuits and power devices since 2003,and provides the full solutions of product application.Based on independent research and development, BYD Microelectronics successfully developed world advanced products with advanced technology. And it has many national and international patents. Many of its ICs and power devices have been qualified and been used by the world class customers like Nokia and Samsung.

In recent years, BYD Microelenctronics has been dedicating to the design and development of power devices and power management devices. Since 2005,our company has established R&D center of current sensors, and has brought together a group of technical experts talented in the field of electrical measurement technology. Our team boast qualified expertise and rich experience and enjoy first-rate test equipment and world-class manufacturing technology. With leading test equipment and world-class manufacturing technology, BYD creates superior performance & high reliability sensors, which have passed UL certification,CE certification and RoHs certification.

At present, our current sensor products include 24 series totally,i.e. BSX1,BSX2,BSX3,BSY2,BSY3,BST1,BST2,BSF2,BSF3,BSL,BSC1,BSH,BSX5,BSM, BCF2,BCH,BSP1,BSD1, BSM1, BCY2,BLY2, BSP,BSE2 and BSD with rated input measuring range from 0.1A to 2000A.Our products are widely used in PV contribution boxes and inverters in new energy field ,and electric vehicles, welding machines, frequency converters, UPS, trams,and power equipment.All the time, we provide our clients with assuring product quality as well as expert design solution for product applications. What`s more important, BYD applies Auto-class manufacturing process to manufacture products with not only great anti-interference ability, high linearity and excellent precision, but also near-perfect protection functions of transient current suppression and power supply reversion.

Compared with other sensor companies, we have some special advantages. BYD`s four R&D institutes, which incude Central Research Institute, Auto Engineering Research Institute, and Electric Power Research Institute, all provide strong technical support to our current sensor product series. Besides, our company has powerful technical development center and authoritative laboratory for products reliability, which make the products traceable in every manufacturing step, and attach another 'safety lock' to the quality of products.

In the future, our company will stick to the corporate faith of " Technology-based and Innovation-oriented". We will continue to make great efforts to build BYD as the world's largest manufacturing base of current sensors, and our product an international well-known brand.

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Product Naming Codes

BSX1-900IOV1L

1 2 3 4 5 6 7 8 9

1 — B:BYD Microelectronics Co., Ltd.

2 — D: DC only
A: AC only
S: DC,AC and pulse current
L: With lead
K: Detachable

3 — Series

4 — Rated measuring range

5 — I: Current
V: Voltage

6 — O: Open-loop
C: Closed-loop

7 — V1:DC+5V
V2:DC±15V
V3:DC±15V~18V
V4:DC+12V
V5:DC±15V~24V
V6:DC±12V~15V

8 — Quality grade

9 — A: Auto-level
B: Commercial-level
M: Military-level
(Industrial-level by default)

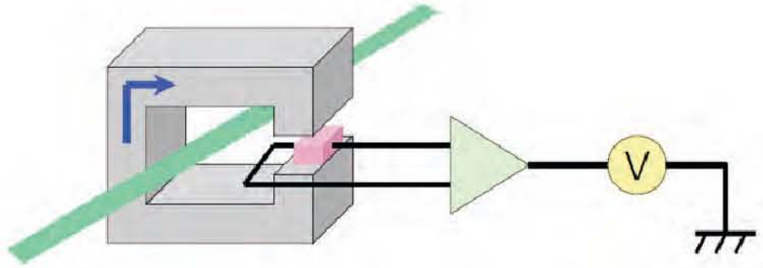
Symbol Terms

BW	Frequency Bandwidth
I_C	Current consumption
V_C	Supply Voltage
t_r	Response Time
X_G	Accuracy (I_{pn} or V_{pn}, T_A=25 ℃)
ε_L	Linearity(I_{pn} or V_{pn}, T_A=25 ℃)
I_S	Output Current
I_{PN}	Primary rated RMS current
I_P	Primary Current
I_O	Electrical Offset Current (T_A=25℃)
I_{OT}	Temperature Coefficient Of Io
K_N	Conversion ratio
V_{ref}	Reference voltage
R_L	Load Resistance
R_{IM}	Measuring Resistance
V_0	Electrical Offset Voltage
V_{0T}	Temperature Coefficient Of Vo
V_{OUT}	± I_{pn} or V_{pn}, the output voltage
V_{PN}	Primary rated RMS voltage
V_P	Primary Voltage
R_1	Primary resistance (Voltage sensor)
V_d	R.M.S Voltage of AC Isolation (50Hz 1min)
T_A	Ambient Temperature

Product Principle

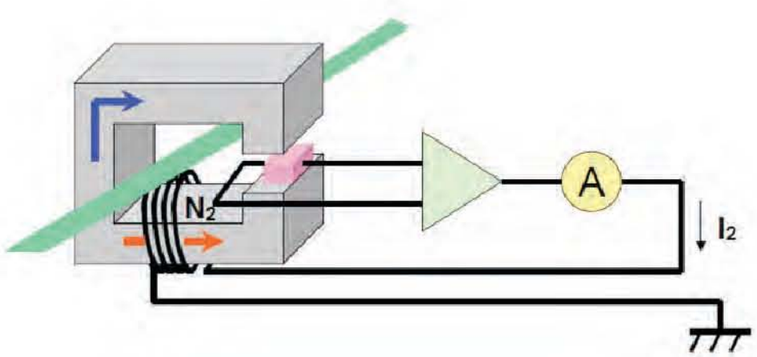
Open Loop Current Sensor

The magnetic flux created by the primary current Ip is concentrated in a magnetic circuit and measured in the air gap using a Hall device. The output from the Hall device is then signal conditioned to provide an exact representation of the primary current at the output.



Closed Loop Current Sensor

The magnetic flux created by the primary current Ip is balanced by a complementary flux produced by driving a current through the secondary windings . A hall device and associated electronic circuit are used to generate the secondary (compensating) current that is an exact representation of the primary current.



Product Applications

BYD Series	Product Application					
	Electric Vehicle	Variable Frequency Drive	Electric Welding Machine	UPS	New Energy	Induction Cooker
BSY2&BLY2 Series		●	●			
BST1 Series		●		●	●	
BST2 Series		●			●	
BSX1 Series	●					
BSX2 Series	●					
BSX3 Series	●	●				
BSY3 Series		●	●			
BSF3 Series		●		●	●	
BST Series	●		●		●	
BSL Series		●	●			
BSH Series					●	
BSF2 Series				●	●	
BSD Series		●			●	●
BSX5 Series	●					
BSM Series	●					
BSM1 Series	●					

Manufacturing Equipment

Production line—line B

Laser marker

High-current generator

Constant temperature and humidity chamber

Vibration test bed

Reliability Laboratory

Reliability Laboratory

Precision high temperature chamber

Reflow soldering

Neutral saline spray

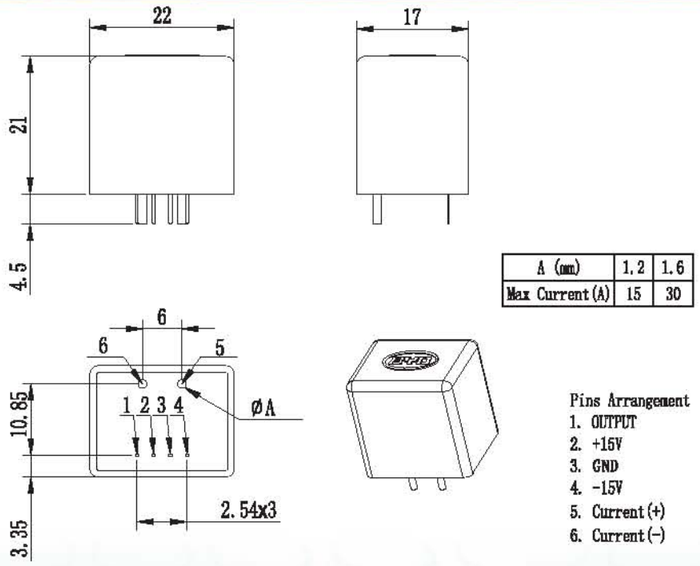
Electric heating tunnel furnace

BST1-IOV2(H/M/L)

Electrical parameters

								H	M	L	
Rated Primary Current	3	5	10	15	20	25	50				A
Measurement current range	±9	±15	±30	±45	±60	±75	±150				A
Power supply voltage								±15			V
Electrical Offset Voltage	@I_P=0,T_A=25°C							<±20	<±40		mV
Rated output voltage	@±I_{PN},R_L=10KΩ,T_A=25°C							±4			V
Frequency Bandwidth	@-3dB							DC~50			kHz
Linearity	@I_{PN},T_A=25°C							<±1			%
Accuracy	@I_{PN},T_A=25°C							<±1			%
Response Time	@90% of I_{PN} step							≤3			μS
Current consumption											mA
Temperature Coefficient Of Output Voltage								±0.1			%/K
Temperature Coefficient Of Offset Voltage								±1.5			mV/K
Ambient Operating Temperature								-40...+105	-40...+85	-20···+85	℃
Ambient Storage Temperature								-40...+105			℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



A (mm)	1.2	1.6
Max Current (A)	15	30

Pins Arrangement
1. OUTPUT
2. +15V
3. GND
4. -15V
5. Current (+)
6. Current (-)

Instruction

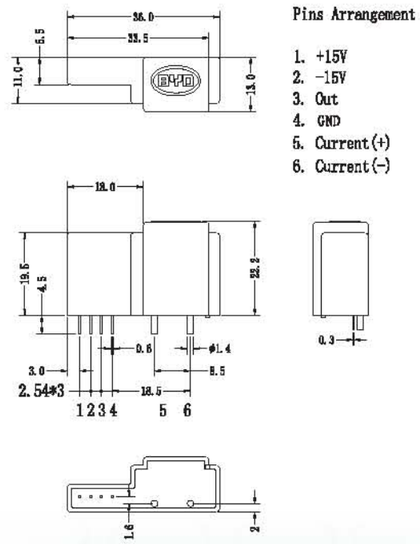
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BST2-IOV2(H/M/L)

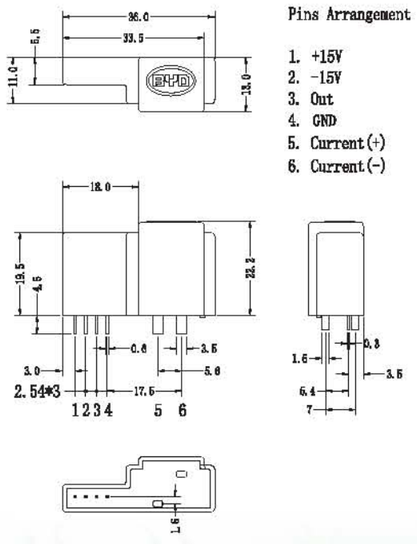
Electrical parameters

					H	M	L	
Rated Primary Current	15	20	25	50				A
Measurement current range	±45	±60	±75	±150				A
Output Voltage	@±I_{PN},R_L=10KΩ,T_A=25°C				±4			V
Power supply voltage					±15			V
Electrical Offset Voltage	@I_P=0,T_A=25°C				<±20	<±40		mV
Magnetic offset voltage					<±15			mV
Linearity	@I_{PN},T_A=25°C				<±1			%
Accuracy	@I_{PN},T_A=25°C				<±1			%
Response Time	@90% of I_{PN} step				<3			μS
Current consumption					±10			mA
Ambient Operating Temperature					-40...+105	-40...+85	-20···+85	℃
Ambient Storage Temperature					-40...+105			℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Pins Arrangement
1. +15V
2. -15V
3. Out
4. GND
5. Current (+)
6. Current (-)



Pins Arrangement
1. +15V
2. -15V
3. Out
4. GND
5. Current (+)
6. Current (-)

Instruction

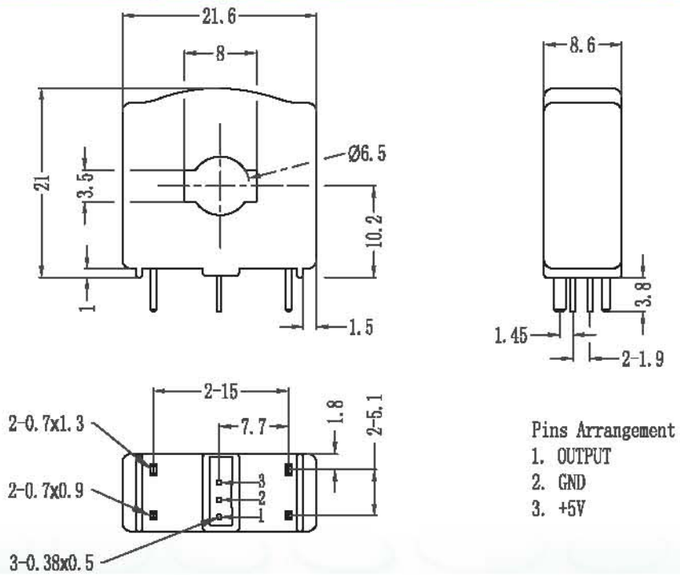
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSM-IOV1HA

Electrical parameters

Rated Primary Current	80	200	250		A
Measurement current range	±80	±200	±250		A
Output Voltage	@T_A=25°C, V_{cc}=5V			V_c/5(2.5+0.025×I_P)80A	V
				V_c/5(2.5+0.01×I_P)200A	V
				V_c/5(2.5+0.008×I_P)250A	V
Supply voltage	@T_A=25°C, B=0			5	V
Quiescent Output Voltage	@I_{PN},T_A=25°C			2.5V±20mV	V
Linearity	@I_{PN},T_A=25°C			<±1	%
Accuracy	@I_{PN},T_A=25°C			<±2	%
Frequency Bandwidth	@-3dB			20	kHz
Output Load Resistance	@T_A=25°C			4.7	KΩ
Output Resistance				1.5	Ω
Current consumption				8.2~10	mA
Magnetic Sensitivity	@T_A=25°C			1.75~11.25	mV/G
Response Time	@90% of I_{PN} step			15~20	μS
Sensitivity Temperature Coefficient	@T_A=25°C			-0.018~0.104	%/°C
Isolation Voltage	@50Hz,1min			2	KV
Ambient Operating Temperature				-40...+125	℃
Ambient Storage Temperature				-40...+150	℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Instruction

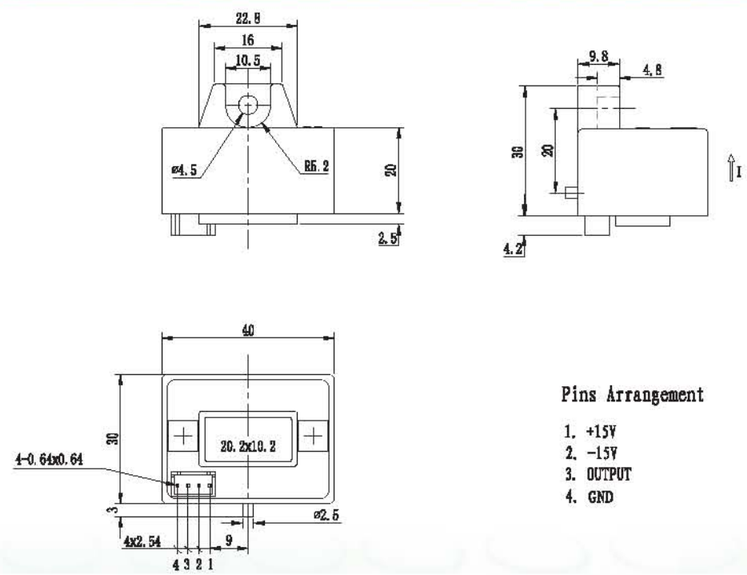
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSY2-IOV2(H/M/L)

Electrical parameters

										H	M	L	
Rated Primary Current	50	75	100	150	200	300	400	500	600				A
Measurement current range	±150	±225	±300	±450	±600	±900	±900	±900	±900				A
Output Voltage	@±I_{PN},R_L=10KΩ,T_A=25°C									±4			V
Power supply voltage										±15			V
Electrical Offset Voltage	@I_P=0,T_A=25°C									<±10	<±20		mV
Magnetic offset voltage										<±20			mV
Linearity	@I_{PN},T_A=25°C									<±1			%
Accuracy	@I_{PN},T_A=25°C									<±1			%
Temperature Coefficient Of Output Voltage										<±0.1			%/K
Temperature Coefficient Of Offset Voltage	@50~75A									<±2			mV/K
	@100~600A									<±1			
Current consumption										<±15			mA
Response Time	@90% of I_{PN} step									<3			μS
Isolation Voltage	@50Hz,1min									3			KV
Ambient Operating Temperature										-40...+105	-40...+85	-20---+85	℃
Ambient Storage Temperature										-40...+105			℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Instruction

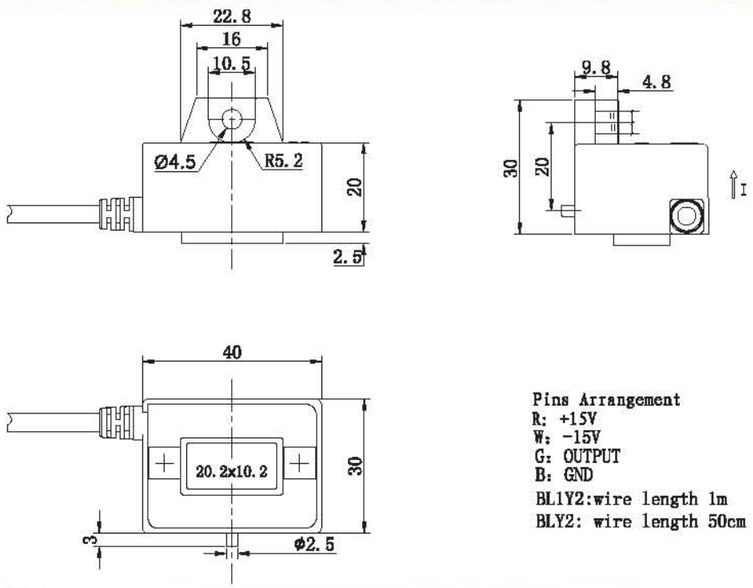
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BLY2-IOV2(H/M/L)

Electrical parameters

										H	M	L	
Rated Primary Current	50	75	100	150	200	300	400	500	600				A
Measurement current range	±150	±225	±300	±450	±600	±900	±900	±900	±900				A
Output Voltage	@±I_{PN},R_L=10KΩ,T_A=25°C										±4		V
Power supply voltage											±15		V
Electrical Offset Voltage	@I_P=0,T_A=25°C									<±10	<±20		mV
Magnetic offset voltage											<±20		mV
Linearity	@I_{PN},T_A=25°C										<±1		%
Accuracy	@I_{PN},T_A=25°C										<±1		%
Temperature Coefficient Of Output Voltage											<±0.1		%/K
Temperature Coefficient Of Offset Voltage	@50~75A										<±2		mV/K
	@100~600A										<±1		
Current consumption											<±15		mA
Response Time	@90% of I_{PN} step										<3		μS
Isolation Voltage	@50Hz,1min										3		KV
Ambient Operating Temperature										-40...+105	-40...+85	-20---+85	℃
Ambient Storage Temperature											-40...+105		℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Pins Arrangement
R: +15V
W: -15V
G: OUTPUT
B: GND
BL1Y2:wire length 1m
BLY2: wire length 50cm

Instruction

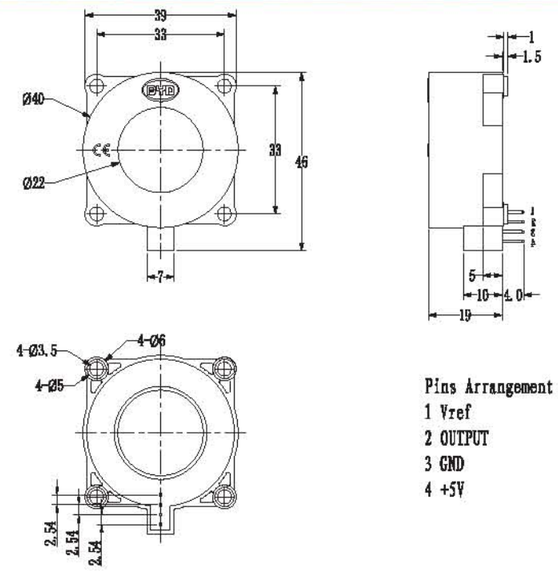
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSX3-IOV1(H/M/L)

Electrical parameters

				H	M	L	
Rated Primary Current	200	400	800				A
Measurement current range	±300	±600	±1200				A
Power supply voltage					4.5~5.5		V
Output Voltage	@T_A=25°C,V_C=5V				V_{ref}±(1.25*I_P/I_{PN})		V
Electrical Offset Voltage	@I_{PN},T_A=25°C			<±20	<±40		mV
Frequency Bandwidth	@-3dB				DC~50		kHz
Linearity	@I_{PN},T_A=25°C				<±0.5		%
Accuracy	@I_{PN},T_A=25°C				<±1		%
Response Time	@90% of I_{PN} step				≤7		μS
Output Resistance					<1		Ω
Current consumption					9.2~12		mA
Isolation Voltage	@50Hz,1min				2		kV
Ambient Operating Temperature				-40...+125	-40...+105	-25...+85	℃
Ambient Storage Temperature					-40...+125		℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Pins Arrangement
1 Vref
2 OUTPUT
3 GND
4 +5V

Instruction

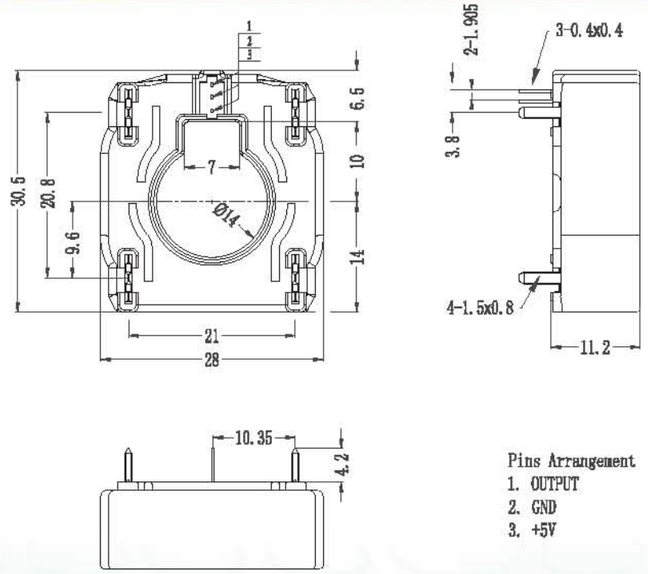
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSM1-IOV1HA

Electrical parameters

Rated Primary Current	200	300	400	500		A
Measurement current range	±200	±300	±400	±500		A
Output Voltage	@T_A=25°C, V_{CC}=5V				V_C/5(2.5+0.01×I_P)200A	V
					V_C/5(2.5+0.0067×I_P)300A	V
					V_C/5(2.5+0.005×I_P)400A	V
					V_C/5(2.5+0.004×I_P)500A	V
Supply voltage					5	V
Quiescent Output Voltage	@T_A=25°C, B=0				2.5V±20mV	V
Linearity	@I_{PN},T_A=25°C				<±1	%
Accuracy	@I_{PN},T_A=25°C				<±2	%
Output Load Resistance					4.7	KΩ
Frequency Bandwidth	@-3dB				30	kHz
Sensitivity Temperature Coefficient	@T_A=25°C				-0.018~0.104	%/°C
Current consumption					8.2~10	mA
Response Time	@90% of I_{PN} step				5~10	μS
Isolation Voltage	@50Hz,1min				2	KV
Ambient Operating Temperature					-40…+125	℃
Ambient Storage Temperature					-40…+150	℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Pins Arrangement
1. OUTPUT
2. GND
3. +5V

Instruction

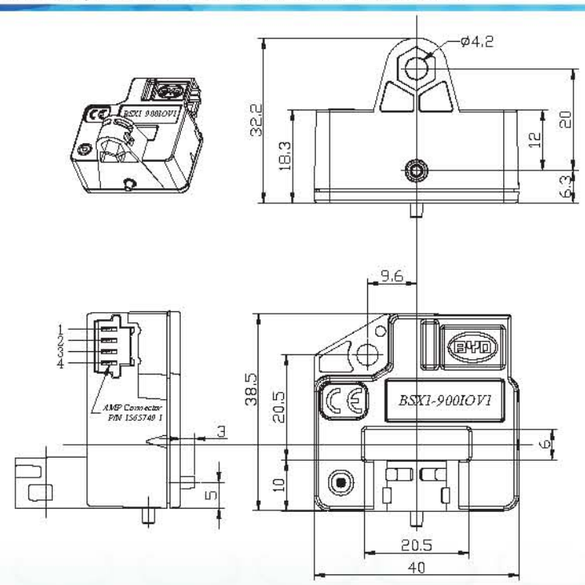
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSX1-900IOV1HA

Electrical parameters

Rated Primary Current	900		A
Measurement current range	±900		A
Power supply voltage		5	V
Output Voltage	@T_A=25°C,V_C=5V	V_C/5(2.5+0.0022×I_P)	V
Current consumption		9.2~12	mA
Linearity	@I_{PN},T_A=25°C	±1	%
Accuracy	@I_{PN},T_A=25°C	±1	%
Output Resistance		<1	Ω
Response Time	@90% of I_{PN} step	5~8	μS
Isolation Voltage	@50Hz,1min	2	kV
Frequency Bandwidth	@-3dB	DC~50	kHz
Ambient Operating Temperature		-40…+125	℃
Ambient Storage Temperature		-40…+150	℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Pins Arrangement
1. NC
2. Vc
3. GND
4. OUTPUT

Instruction

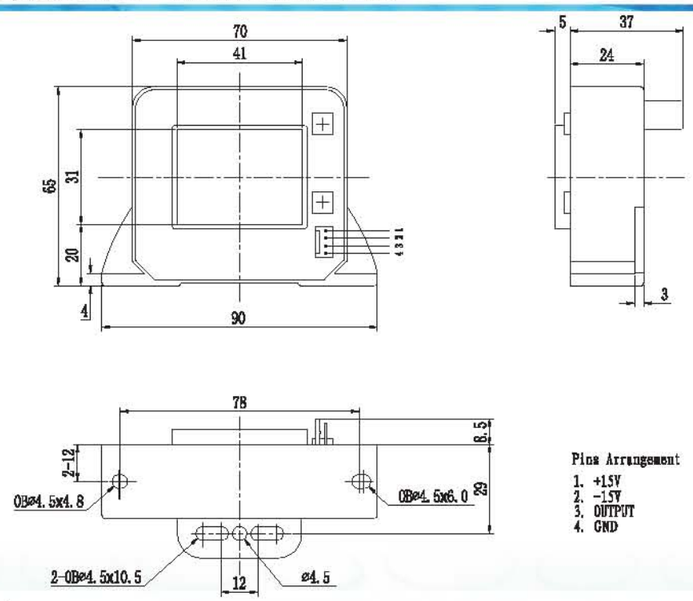
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSY3-IOV2(H/M/L)

Electrical parameters

							H	M	L	
Rated Primary Current	500	600	800	1000	1200	1500				A
Measurement current range	±1500	±1800	±2400	±2500	±2500	±2500				A
Output Voltage	@$\pm I_{PN}$, R_L=10KΩ, T_A=25°C							±4		V
Power supply voltage								±15		V
Electrical Offset Voltage	@I_P=0, T_A=25°C						<±10	<±20		mV
Magnetic offset voltage								<±10		mV
Linearity	@I_{PN}, T_A=25°C							<±1		%
Accuracy	@I_{PN}, T_A=25°C							<±1		%
Frequency Bandwidth	@-3dB							DC~25		kHz
Current consumption								<±15		mA
Response Time	@90% of I_{PN} step							<5		μS
Isolation Voltage	@50Hz, 1min							3		KV
Ambient Operating Temperature							-40...+105	-40...+85	-20---+85	℃
Ambient Storage Temperature								-40 +105		℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Instruction

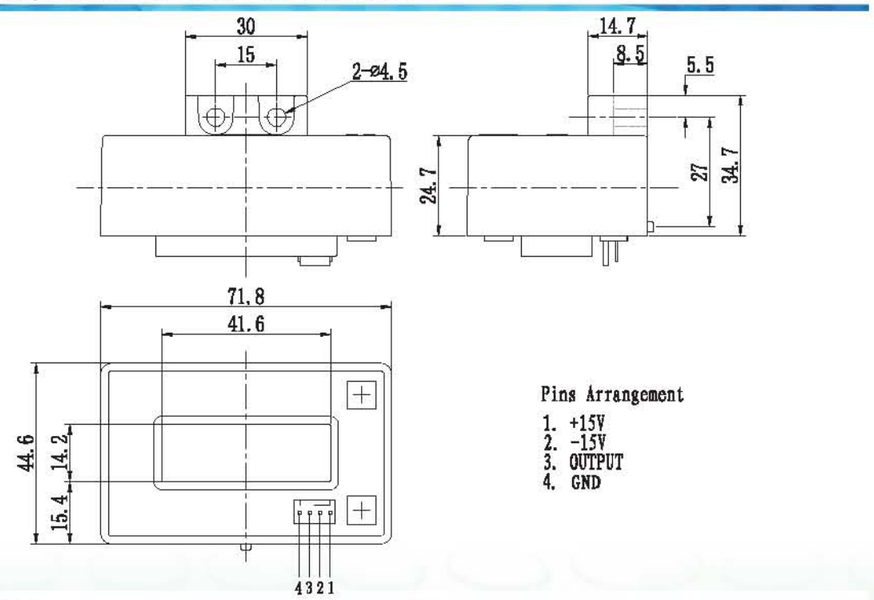
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSL-IOV2(H/M/L)

Electrical parameters

								H	M	L	
Rated Primary Current	200	400	600	800	1000	1500	2000				A
Measurement current range	±400	±800	±1200	±1600	±2000	±3000	±3000				A
Output Voltage	@$\pm I_{PN}$, R_L=10KΩ, T_A=25°C								±4		V
Power supply voltage									±15		V
Electrical Offset Voltage	@I_P=0, T_A=25°C							<±10	<±20		mV
Magnetic offset voltage									<±10		mV
Linearity	@I_{PN}, T_A=25°C								<±1		%
Accuracy	@I_{PN}, T_A=25°C								<±1		%
Current consumption									<±15		mA
Response Time	@90% of I_{PN} step								<5		μS
Isolation Resistance	@500 VDC								>1000		MΩ
Output voltage temperature characteristics									<±0.1		%/K
Frequency Bandwidth	@-3dB								DC~25		kHz
Isolation Voltage	@50Hz, 1min								3		KV
Ambient Operating Temperature								-40...+105	-40...+85	-20---+85	℃
Ambient Storage Temperature									-40...+105		℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Instruction

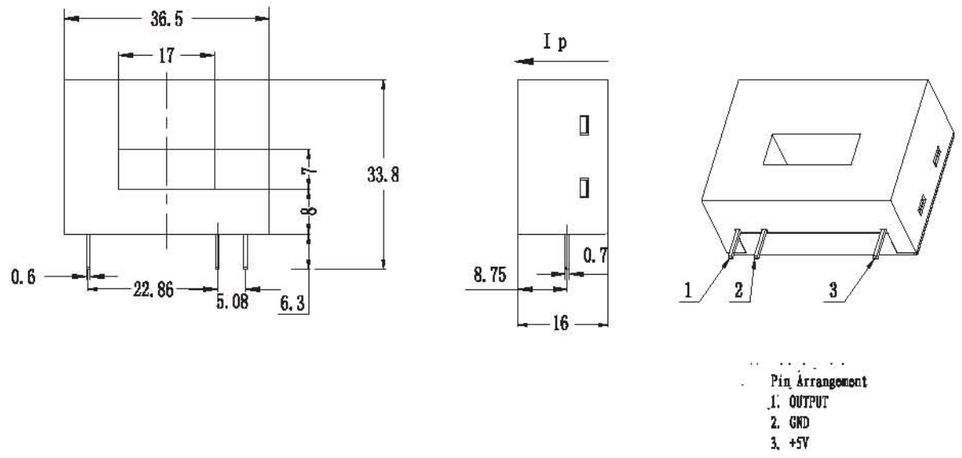
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSX5-ICV1A

Electrical parameters

Rated Primary Current	25		A
Measurement current range	0~±25		A
Turns ratio	1:1000		
Output Voltage	@V_c = +5V, T_A = 25°C	2.5+0.08×I_p	V
Power supply voltage		+5	V
Temperature Coefficient Of Offset Voltage	@I_p = 0, T_A = -40~+125°C	<±1	mV/K
Measuring Resistance		80±1%	Ω
Electrical Offset Voltage	@I_p=0,T_A=25°C	2.5±0.02	V
Current consumption		40	mA
Accuracy	@I_{PN}, V_c = +5V, T_A = 25°C	<±1	%
Linearity	@I_{PN}, V_c = +5V, T_A = 25°C	<±0.2	%
Response Time	@90% of I_{PN} step	<1	μS
Hysteresis offset voltage		<±20	mV
Isolation Voltage	@50Hz,1min	2.5	KV
Frequency Bandwidth	@-1dB	DC~100	kHz
Ambient Operating Temperature		-40...+125	℃
Ambient Storage Temperature		-40...+150	℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Instruction

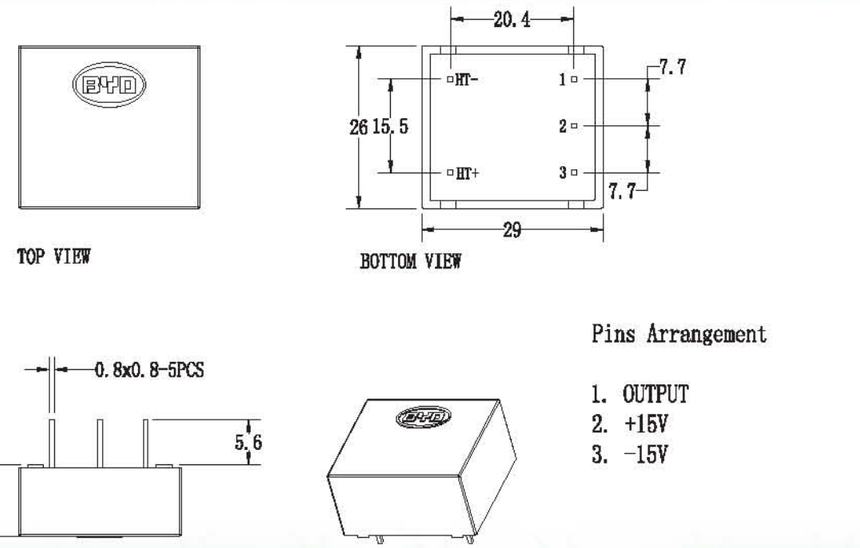
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BST2-IOV2

Electrical parameters

								H	M	L	
Rated Primary Current	5				10						mA
Measurement current range	5	7.5	10	15	10	15	20	30			mA
Measuring Resistance	0~420	0~260	0~160	0~100	0~420	0~260	0~160	0~100			Ω
Turns ratio	1:5000				1:2500						
Power supply voltage									±15		V
Input Voltage Limit									5~1100		V
R.M.S Voltage Ac Isolation	@50Hz,1min								5		KV
Electrical Offset Current	@I_p=0,T_A=25°C								<±0.15		mA
Temperature Coefficient Of Offset Current	@I_p=0,-10…+70°C								<±0.3		mA
Accuracy	@I_{PN},T_A=25°C								<±0.8		%
Linearity	@I_{PN},T_A=25°C								<±0.2		%
Response Time	@90% of I_{PN} step								<30		μS
Ambient Operating Temperature									-40...+105	-40...+85	℃
Ambient Storage Temperature									-40...+125		℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Instruction

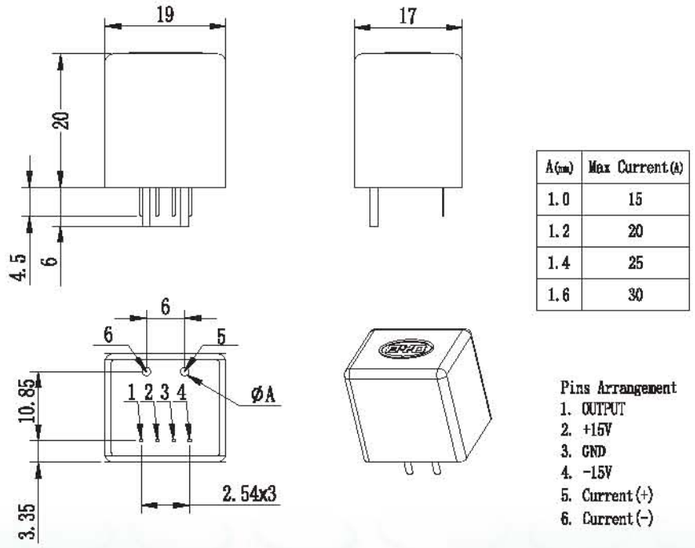
1. By measuring the current at the output,you can calculete the voltage to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
3. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BST1-ICV2

Electrical parameters

Rated Primary Current	15	20	25	30		A
Measurement current range	0~±22.5	0~±30	0~±37.5	0~±45		A
Output Voltage	@±I_{PN}, R_L=10KΩ, T_A=25°C				±4	V
Power supply voltage					±15	V
Temperature Coefficient Of Offset Current					<±0.5	mA/℃
Electrical Offset Voltage	@I_P=0, T_A=25°C				<±30	mV
Linearity	@I_{PN}, T_A=25°C				<±0.25	%
Accuracy	@I_{PN}, T_A=25°C				<±0.8	%
Response Time	@90% of I_{PN} step				<1	μS
Dielectric Strength	@ 500V DC				≥500	MΩ
Isolation Voltage	@50 or 60Hz, 1 min				2	KV
Ambient Operating Temperature					-40...+85	℃
Ambient Storage Temperature					-40...+125	℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



A(mm)	Max Current(A)
1.0	15
1.2	20
1.4	25
1.6	30

Pins Arrangement
1. OUTPUT
2. +15V
3. GND
4. -15V
5. Current(+)
6. Current(-)

Instruction

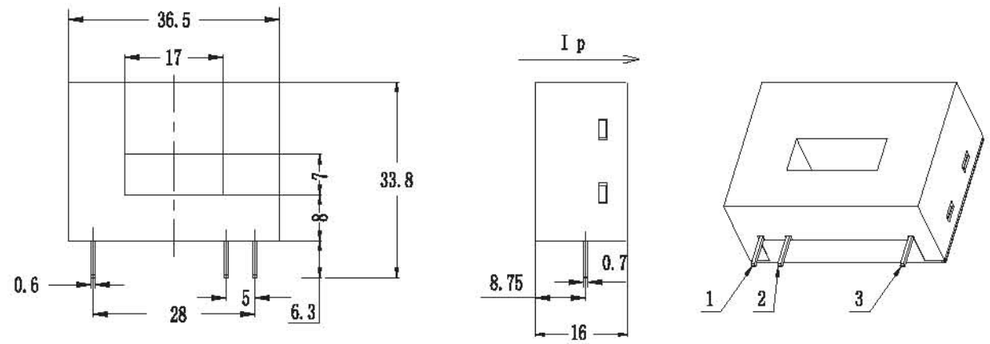
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSD-ICV6

Electrical parameters

Rated Primary Current			50	100	A
Measurement current range			0...±70	0...±150	A
Output Current			50		mA
Power supply voltage			±12...±15		V
Measuring Resistance	with±12V @±50Amax, T_A=70°C	with±12V @±100Amax, T_A=70°C	10~100	0~50	Ω
	with±12V @±70Amax, T_A=70°C	with±12V @±120Amax, T_A=70°C	10~50	0~22	Ω
	with±15V @±50Amax, T_A=70°C	with±15V @±100Amax, T_A=70°C	50~160	0~110	Ω
	with±15V @±70Amax, T_A=70°C	with±15V @±150Amax, T_A=70°C	50~80	0~33	Ω
Electrical Offset Current	@I_P=0, T_A=25°C		±0.2	±0.10	mA
Temperature Coefficient Of Current	@I_P=0, -10···+70°C		<±0.2		mA
Accuracy	@I_{PN}, T_A=25°C , V_C=±15V(±5%)		±0.65	±0.5	%
Linearity	@I_{PN}, T_A=25°C		<±0.15		%
Response Time	@90% of I_{PN} step		<1		μS
Isolation Voltage	@50Hz, 1min		2.5		KV
Frequency Bandwidth	@-1dB		DC~200		kHz
Ambient Operating Temperature			-40...+85		℃
Ambient Storage Temperature			-40...+105		℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Pin Arrangement
1. OUTPUT
2. -15V
3. +15V

Instruction

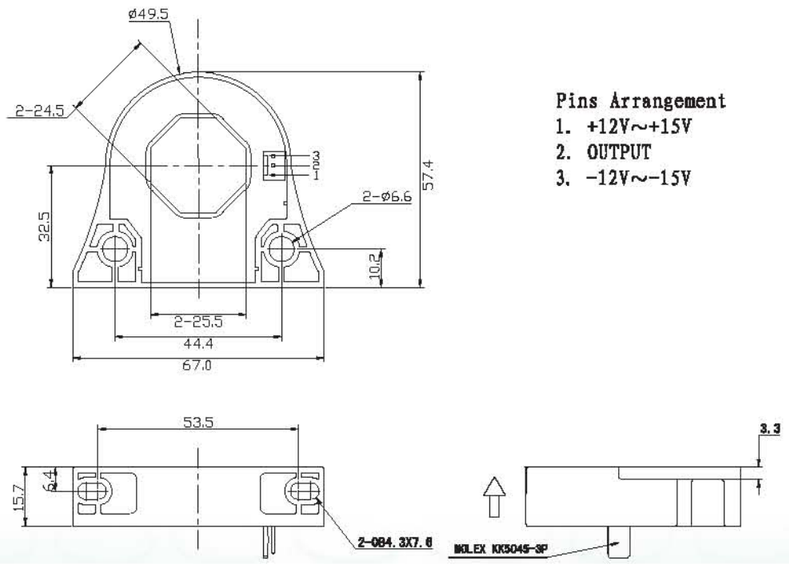
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSF2-300ICV6

Electrical parameters

Rated Primary Current	300		A
Measurement current range	0~±500		A
Power supply voltage		±12...15	V
Output Current		150	mA
Measuring Resistance	with±12V @±300Amax,T_A=70°C	0~37	Ω
	with±12V @±500Amax,T_A=70°C	0~8	Ω
	with±15V @±300Amax,T_A=70°C	10~56	Ω
	with±15V @±500Amax,T_A=70°C	10~20	Ω
Electrical Offset Current	@I_P=0,T_A=25°C	≤±0.2	mA
Temperature Coefficient Of Current	@I_P=0,-25...+70°C	≤±0.64	mA
Accuracy	@I_{PN},T_A=25°C	±0.4	%
Linearity	@I_{PN},T_A=25°C	<±0.1	%
Response Time	@90% of I_{PN} step	<1	μS
Isolation Voltage	@50Hz,1min	6	KV
Frequency Bandwidth	@-1dB	DC~100	kHz
Ambient Operating Temperature		-25...+85	℃
Ambient Storage Temperature		-40...+105	℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Pins Arrangement
1. +12V~+15V
2. OUTPUT
3. -12V~-15V

Instruction

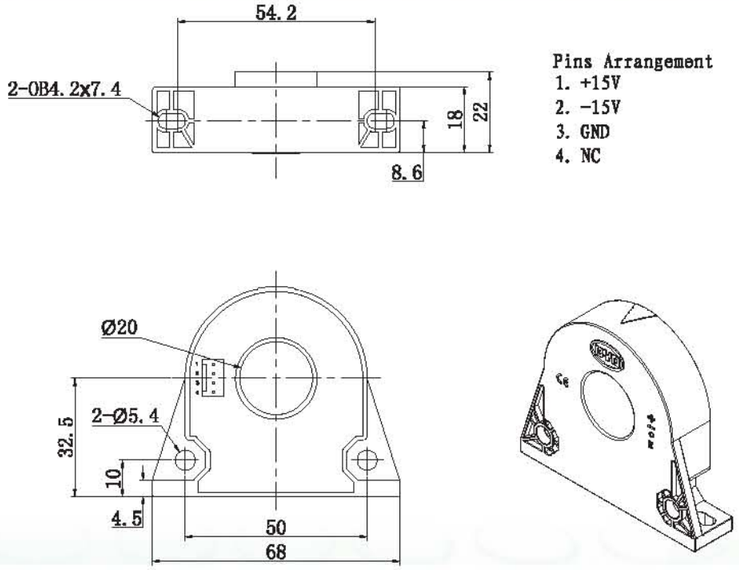
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSF3-ICV2(H/M/L)

Electrical parameters

				H	M	L	
Rated Primary Current	100	200	300				A
Measurement current range	0~±150	0~±300	0~±500				A
Power supply voltage					±15		V
Output Current	50	100	150				mA
Measuring Resistance	I_{PN}=100,with ±15V @±100Amax,T_A=70°C				0~187		Ω
	I_{PN}=100,with ±15V @±150Amax,T_A=70°C				0~112		Ω
	I_{PN}=200,with ±15V @±200Amax,T_A=70°C				0~80		Ω
	I_{PN}=200,with ±15V @±300Amax,T_A=70°C				0~42		Ω
	I_{PN}=300,with ±15V @±300Amax,T_A=70°C				0~40		Ω
	I_{PN}=300,with ±15V @±500Amax,T_A=70°C				0~13		Ω
Electrical Offset Current	@I_P=0,T_A=25°C			<±0.15	<±0.2	<±0.25	mA
Temperature Coefficient Of Current	@I_P=0,-10···+70°C				<±0.6		mA
Accuracy	@I_{PN},T_A=25°C				<±0.5	<±0.6	%
Linearity	@I_{PN},T_A=25°C				<±0.1		%
Response Time	@90% of I_{PN} step				<1		μS
Isolation Voltage	@50Hz,1min				6		KV
Frequency Bandwidth	@-3dB				DC~100		kHz
Ambient Operating Temperature				-40...+105	-40...+85	-25···+85	℃
Ambient Storage Temperature					-40...+105		℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Pins Arrangement
1. +15V
2. -15V
3. GND
4. NC

Instruction

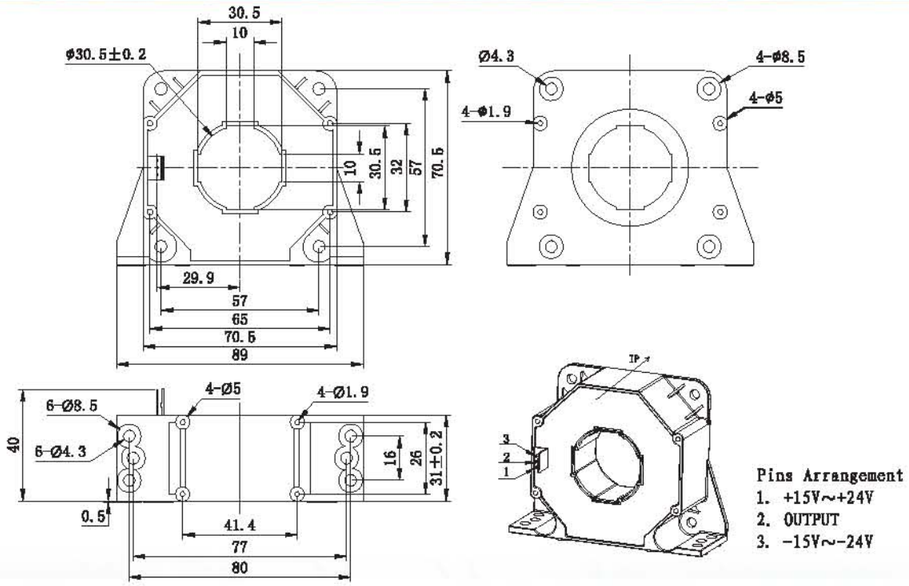
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSH-500ICV5

Electrical parameters

Rated Primary Current	500		A
Measurement current range	0…±800		A
Power supply voltage		±15…24	V
Output Current		100	mA
Measuring Resistance	with±15V @±500Amax,T_A=70°C	0~60	Ω
	with±15V @±800Amax,T_A=70°C	0~11	Ω
	with±18V @±500Amax,T_A=70°C	0~92	Ω
	with±18V @±800Amax,T_A=70°C	0~30	Ω
	With±24V @±500Amax,T_A=70°C	5~149	Ω
	with±24V @±800Amax,T_A=70°C	5~65	Ω
Electrical Offset Current	@I_P=0,T_A=25°C	≤±0.4	mA
Temperature Coefficient Of Current	@I_P=0,-40…+70°C	≤±0.4	mA
Accuracy	@I_{PN},T_A=25°C	±0.6	%
Linearity	@I_{PN},T_A=25°C	<±0.1	%
Response Time	@90% of I_{PN} step	<1	μS
Isolation Voltage	@50Hz,1min	3.6	KV
Frequency Bandwidth	@-1dB	DC~100	kHz
Ambient Operating Temperature		-25…+85	℃
Ambient Storage Temperature		-40…+105	℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Instruction

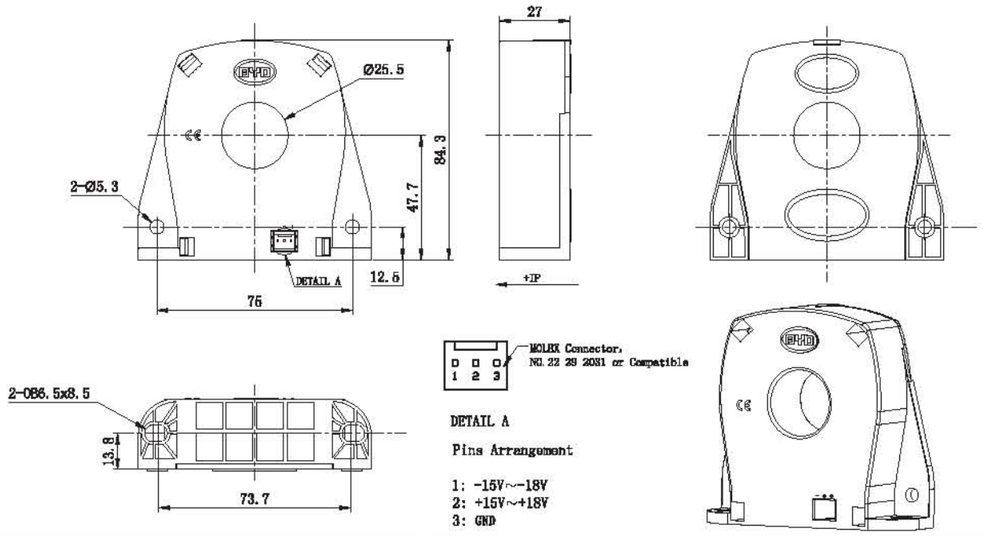
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSX2-ICV3(H/M/L)

Electrical parameters

		H	M	L	
Rated Primary Current	500				A
Measurement current range	0…±1200				A
Power supply voltage			±15~±18		V
Output Current	@±I_{PN},R_L=10KΩ,T_A=25°C		100		mA
Measuring Resistance	with ±15V @±500Amax, T_A=70°C		0~76		Ω
	with ±15V @±1000Amax, T_A=70°C		0~10		Ω
	with ±18V @±500Amax, T_A=70°C		0~100		Ω
	with ±18V @±1200Amax, T_A=70°C		0~5		Ω
Electrical Offset Current	@I_P=0,T_A=25°C	≤±0.1	≤±0.15	≤±0.2	mA
Temperature Coefficient Of Current	@I_P=0,-20…+65°C		<±0.3		mA
Magnetic offset voltage			<±20		mV
Linearity	@I_{PN},T_A=25°C		<±0.1		%
Accuracy	@I_{PN},T_A=25°C		<±0.5		%
Response Time	@90% of I_{PN} step		<1		μS
Isolation Voltage	@50Hz,1min		6		KV
Frequency Bandwidth	@-3dB		DC~100		kHz
Ambient Operating Temperature		-40…+105	-40…+85		℃
Ambient Storage Temperature			-40…+125		℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Instruction

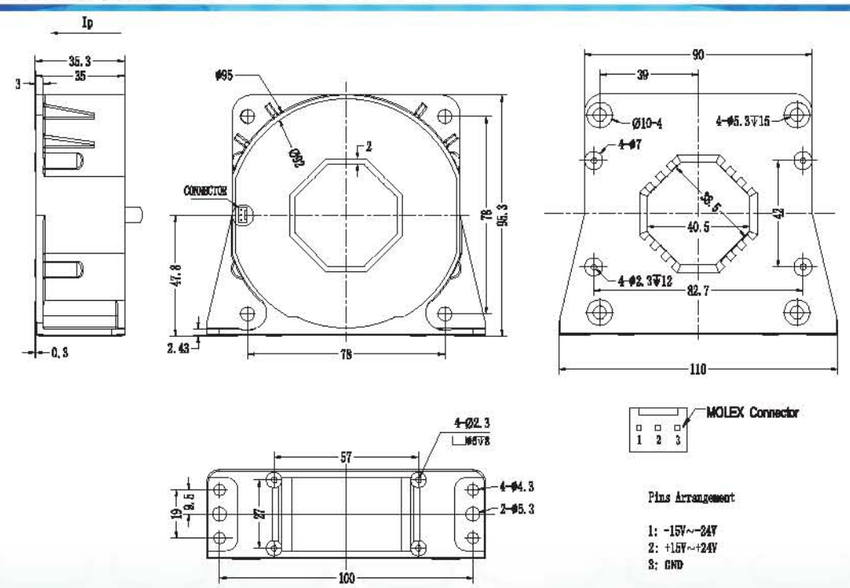
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSH-1000ICV5

Electrical parameters

Rated Primary Current	1000		A
Measurement current range	0...±1500		A
Power supply voltage		±15...24	V
Output Current		200	mA
Measuring Resistance	with ±15V @1000Amax,T_A=70°C	0~18	Ω
	with ±15V @1200Amax,T_A=70°C	0~7	Ω
	with ±24V @1000Amax,T_A=70°C	5~60.5	Ω
	with ±24V @1500Amax,T_A=70°C	5~24	Ω
Electrical Offset Current	@I_P=0,T_A=25°C	<±0.4	mA
Temperature Coefficient Of Current	@I_P=0,-10...+85°C	≤±0.5	mA
Accuracy	@I_{PN},T_A=25°C	±0.4	%
Linearity	@I_{PN},T_A=25°C	<±0.1	%
Response Time	@90% of I_{PN} step	<1	μS
Isolation Voltage	@50Hz,1min	3.8	KV
Frequency Bandwidth	@-1dB	DC~150	kHz
Ambient Operating Temperature		-40...+85	℃
Ambient Storage Temperature		-40...+105	℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



Instruction

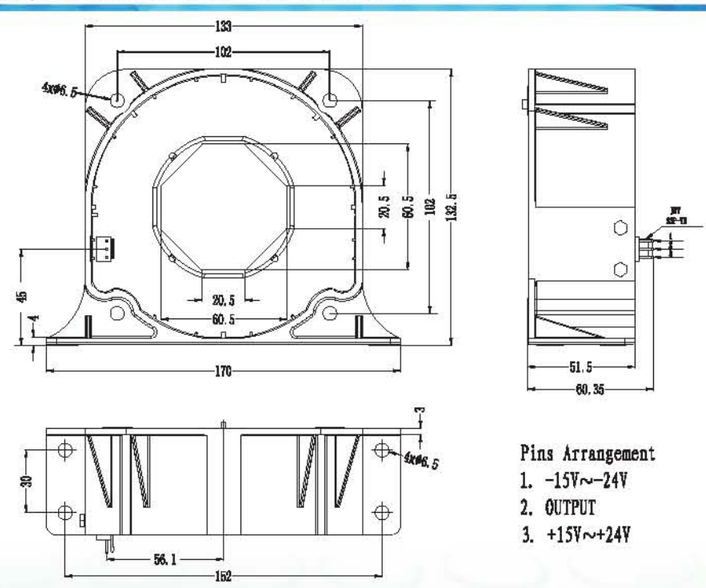
1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

BSH-2000ICV5

Electrical parameters

Rated Primary Current	2000		A
Measurement current range	0~±3000		A
Power supply voltage		±15...24	V
Output Current		400	mA
Measuring Resistance	with ±15V @2000Amax,T_A=70°C	0~8	Ω
	with ±15V @2200Amax,T_A=70°C	0~5	Ω
	with ±24V @2000Amax,T_A=70°C	5~29	Ω
	with ±24V @3000Amax,T_A=70°C	5~11	Ω
Electrical Offset Current	@I_P=0,T_A=25°C	±0.8	mA
Temperature Coefficient Of Current	@I_P=0,-10...+85°C	<±0.5	mA
Accuracy	@I_{PN},T_A=25°C	±0.3	%
Linearity	@I_{PN},T_A=25°C	<±0.1	%
Response Time	@90% of I_{PN} step	<1	μS
Isolation Voltage	@50Hz,1min	6	KV
Frequency Bandwidth	@-1dB	DC~100	kHz
Ambient Operating Temperature		-25...+85	℃
Ambient Storage Temperature		-40...+105	℃

Structural parameters (Unit: mm 1mm=0.0394 in.)



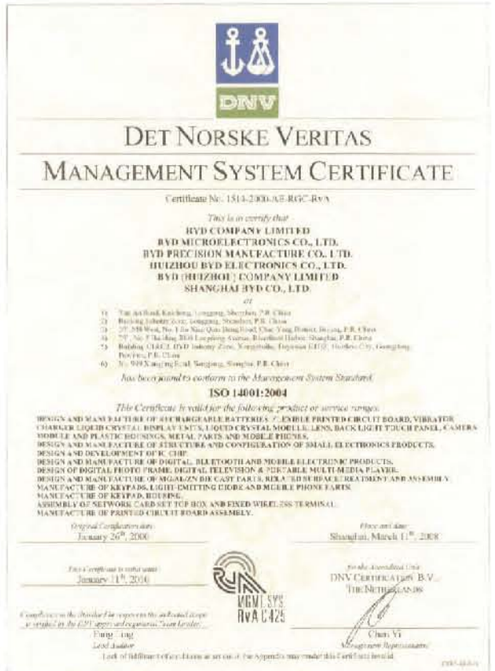
Instruction

1. By measuring the voltage at the output,you can calculete the current to be measured which passes through the sensor.
2. Different input current and output voltage of the sensor can be customized according to need of customers.
   Note: Please connect the pins according to the arrangement.

Current sensor reliability certification programs

Electrical parameters Testing projects	Electric Vehicle	Electric welding machine and power	Electric Welding Machine
Temperature Humidity Bias	●	●	●
Temperature Humidity Storage	●		
Thermal-Humidity Cycling	●		
Temperature Cycling	●	●	●
High temperature Operating LIfe	●	●	●
Low temperature Operating Life	●	●	●
High Temperature Storage	●	●	
Low Temperature Storage	●	●	
Mechanical Vibration	●	●	●
Mechanical Shock	●		
Electro-Static Discharge	●	●	●
Highly accelerated LIfe Test	●		
Drop test	●		
Electro-Magnetic Compatibility	●	●	●
Insulation test	●		

Quality Assurance



DNV

DET NORSKE VERITAS

MANAGEMENT SYSTEM CERTIFICATE

Certificate No: 1514-2300-AE-RGC-RvA

This is to certify that

BYD COMPANY LIMITED
BYD MICROELECTRONICS CO., LTD.
BYD PRECISION MANUFACTURE CO., LTD.
HUIZHOU BYD ELECTRONICS CO., LTD.
BYD (HUIZHOU) COMPANY LIMITED
SHANGHAI BYD CO., LTD.

has been found to conform to the Management System Standard:

ISO 14001:2004

This Certificate is valid for the following product or service ranges:

DESIGN AND MANUFACTURE OF RECHARGEABLE BATTERIES, FLEXIBLE PRINTED CIRCUIT BOARD, VIBRATOR, CHARGER, LIQUID CRYSTAL DISPLAY (LCD), LIQUID CRYSTAL MODULE, LENS, BACK LIGHT, TOUCH PANEL, CAMERA MODULE AND PLASTIC HOUSINGS, METAL PARTS AND MOBILE PHONES.
DESIGN AND MANUFACTURE OF STRUCTURE AND CONFIGURATION OF SMALL ELECTRONICS PRODUCTS.
DESIGN AND DEVELOPMENT OF IC CHIP.
DESIGN AND MANUFACTURE OF DIGITAL, BLUETOOTH AND MOBILE ELECTRONIC PRODUCTS.
DESIGN OF DIGITAL PHOTO FRAME, DIGITAL TELEVISION & PORTABLE MULTI-MEDIA PLAYER.
DESIGN AND MANUFACTURE OF MG&ZN DIE CAST PARTS, RELATED SURFACE TREATMENT AND ASSEMBLY.
MANUFACTURE OF KEYPADS, LIGHT-EMITTING DIODE AND MOBILE PHONE PARTS.
MANUFACTURE OF KEYPAD, RUBBING.
ASSEMBLY OF NETWORK CARD SET TOP BOX AND FIXED WIRELESS TERMINAL.
MANUFACTURE OF PRINTED CIRCUIT BOARD ASSEMBLY.

Original Certification: January 26th, 2006
Shanghai, March 11th, 2008

This Certificate is valid until: January 11th, 2010

for the Accredited Unit: DNV Certification B.V., The Netherlands

RvA C 426

Compliance to the Detailed Fire requirements for the indicated Scope of validity is by EZU approved Inspection Team Leader.

Fang Ling
Lead Auditor

Chen Yi
Management Representative

Lack of fulfillment of Conditions as set out in the Appendix may render this Certificate invalid.

Certificate Number: B-E09030603
EMC Directive 2004/108/EC

Beide Compliance & Laboratory

Certificate of Conformity

Holder.....: BYD Microelectronics Co., Ltd

Address.....: No.1, Yanan Road, Kuichong, Longgang, Shenzhen P. R. China

Manufacturer....: Same as holder

Product.....: Current Sensor

Model No.....: BSY2-600/4IOV2, BSY2-50/4IOV2, BSY2-75/4IOV2, BSY2-100/4IOV2, BSY2-150/4IOV2, BSY2-200/4IOV2, BSY2-300/4IOV2, BSY2-400/4IOV2, BSY2-500/4IOV2

Technical Data....: ±15V, 15mA

The submitted products have been tested by us with the following standard(s) and found to be in compliance with the listed European Directives:

EN 61000-6-2: 2005
EN 61000-6-4: 2007

The test results apply only to the particular sample tested and to the specific tests carried out. Technical Report and documentation are at the Holder's disposal.

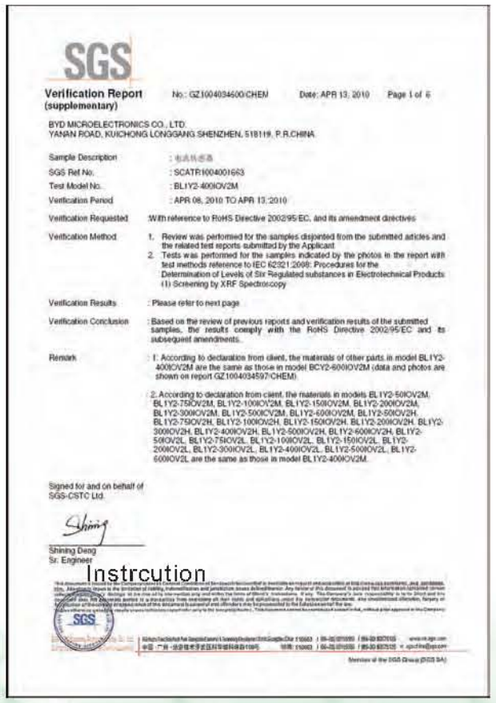
This certificate applies specifically to the sample investigated in our test reference number only. The CE marking(s) as shown below can be affixed on the product after preparation of necessary technical documentation. Other relevant Directives have to be observed.

CE

Manager: Michael Wang
Date: Mar. 18, 2009

Beide Product Service Limited

U.K.: 10 Copnor Street, London WC1H 1NH, England, United Kingdom
China: 5-1301, Bldg. 1, Zone 14, Qianlin 2nd Rd., Baoan District, Shenzhen, China
Tel: +86-755-86174830 E-mail: Eng@szbeide.com



SGS

Verification Report (supplementary) No.: GZI1004034600/CHEN Date: APR 13, 2010 Page 1 of 6

BYD MICROELECTRONICS CO., LTD.
YANAN ROAD, KUICHONG LONGGANG SHENZHEN, 518119, P.R.CHINA

Sample Description : 电流传感器
SGS Ref No. : SCATR1004001663
Test Model No. : BLIY2-400IOV2M
Verification Period : APR 08, 2010 TO APR 13, 2010
Verification Requested : With reference to RoHS Directive 2002/95/EC, and its amendment directives
Verification Method :
1. Review was performed for the samples disported from the submitted articles and the related test reports submitted by the Applicant
2. Tests was performed for the samples indicated by the photos in the report with test methods reference to IEC 62321:2008; Procedures for the Determination of Levels of Six Regulated substances in Electrotechnical Products (1) Screening by XRF Spectroscopy

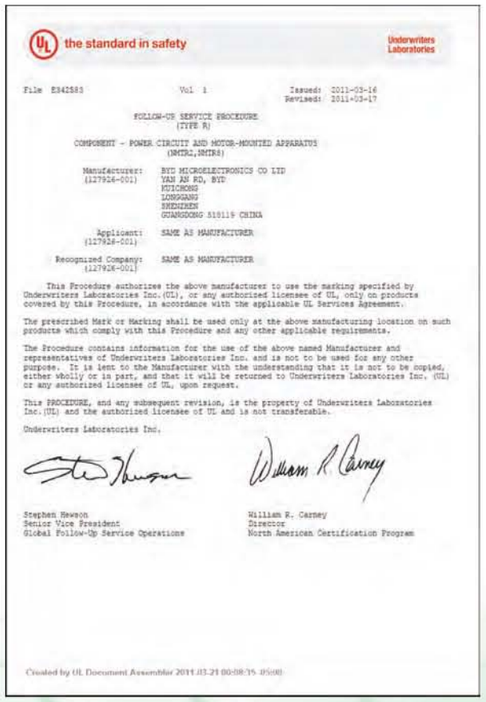
Verification Results : Please refer to next page
Verification Conclusion : Based on the review of previous reports and verification results of the submitted samples, the results comply with the RoHS Directive 2002/95/EC and its subsequent amendments.
Remark : 1. According to declaration from client, the materials of other parts in model BLIY2-400IOV2M are the same as those in model BCY2-600IOV2M (data and photos are shown on report (GZ1004034597/CHEM).

2. According to declaration from client, the materials in models BLIY2-50IOV2M, BLIY2-75IOV2M, BLIY2-100IOV2M, BLIY2-150IOV2M, BLIY2-200IOV2M, BLIY2-300IOV2M, BLIY2-500IOV2M, BLIY2-600IOV2M, BLIY2-50IOV2H, BLIY2-75IOV2H, BLIY2-100IOV2H, BLIY2-150IOV2H, BLIY2-200IOV2H, BLIY2-300IOV2H, BLIY2-400IOV2H, BLIY2-500IOV2H, BLIY2-600IOV2H, BLIY2-50IOV2L, BLIY2-75IOV2L, BLIY2-100IOV2L, BLIY2-150IOV2L, BLIY2-200IOV2L, BLIY2-300IOV2L, BLIY2-400IOV2L, BLIY2-500IOV2L, BLIY2-600IOV2L are the same as those in model BLIY2-400IOV2M.

Signed for and on behalf of SGS-CSTC Ltd.

Shining Deng
Sr. Engineer

Instrcution



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File E342583 Vol. 1 Issued: 2011-03-16 Revised: 2011-03-17

FOLLOW-UP SERVICE PROCEDURE (TYPE R)

COMPONENT - POWER CIRCUIT AND MOTOR-MOUNTED APPARATUS (NMTR2,NMTR8)

Manufacturer: (127926-002) BYD MICROELECTRONICS CO LTD
YAN AN RD, BYD
KUICHONG
LONGGANG
SHENZHEN
GUANGDONG 518119 CHINA

Applicant: (127926-001) SAME AS MANUFACTURER

Recognized Company: (127926-001) SAME AS MANUFACTURER

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

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Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

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Global View


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Chang Sha
Ning Bo
Shen Zhen
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AUSTRALIA