



CPI 3000



Electrical Analog Transducers CE - T Series

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Introduction

Shenzhen Sensor Electronic Technology Co., Ltd specializes in research, development, and manufacturing of electrical transducers. Our advanced test instrumentation and engineering capabilities provide a most favorable environment for transducer manufacturing. Our quality and inspection departments are among the most advanced in China. The output of our production facility is over one hundred thousand units annually.

The most important aspect of our production is "Quality". Our products are manufactured and certified to the 2000 quality standards of ISO 2001. The transducers have been approved for safety by numerous agencies such as UL, CUL, CME and CE. The US Council of International Quality Authentication has recommended us for our high quality standards. Shenzhen Sensor Electronic Technology Co., Ltd. is the only manufacturer of electrical transducers in China to have obtained all of these certifications.

Our corporate psychology of Research & Development and efficient manufacturing has made us predominant worldwide in the electrical transducer market. Our diverse lines of products are used for signal isolation and modulation, analog and digital communication in standard and smart instrumentation networks. The complete line consists of nearly one hundred sub-categories with numerous standard and custom versions available in each of these sub-categories.

The CE Series of products is used for monitoring electrical parameters of current, voltage, power and frequency. Technologies such as electrical induction, Hall Effect and magnetic modulation are used in our product line for monitoring alternating and direct current systems.

The CE Series of products consists of three main categories.

- CE-T series for providing analog output signal such as 0-5 Vdc and 4-20 ma
- CE-A series for "Intelligent" network communication.
- CE-R series for remote measurement, communication and control.

The principal characteristics of our products are:

- Micro miniaturization, utilizing surface mount technology.
- Modularization, each function provided by a unique PCB.
- High reliability, all components are high-rel, precision grade.
- Low power consumption, high efficiency regulators and dc-dc power supplies.
- High dielectrics withstand voltage, designed into each product.
- Single sided input power requirement, for easy installation.

High quality, reliability and low price have made our transducers most efficient for application in the areas of communication, electric power, automotive energy production, and industrial control. We have received high praise from thousands of customers. We currently provide our products to 7 countries in areas of America, Europe and Asia.

OUR MANAGEMENT CONCEPT: Green is the symbol of life;
CE is a pledge of reliability.

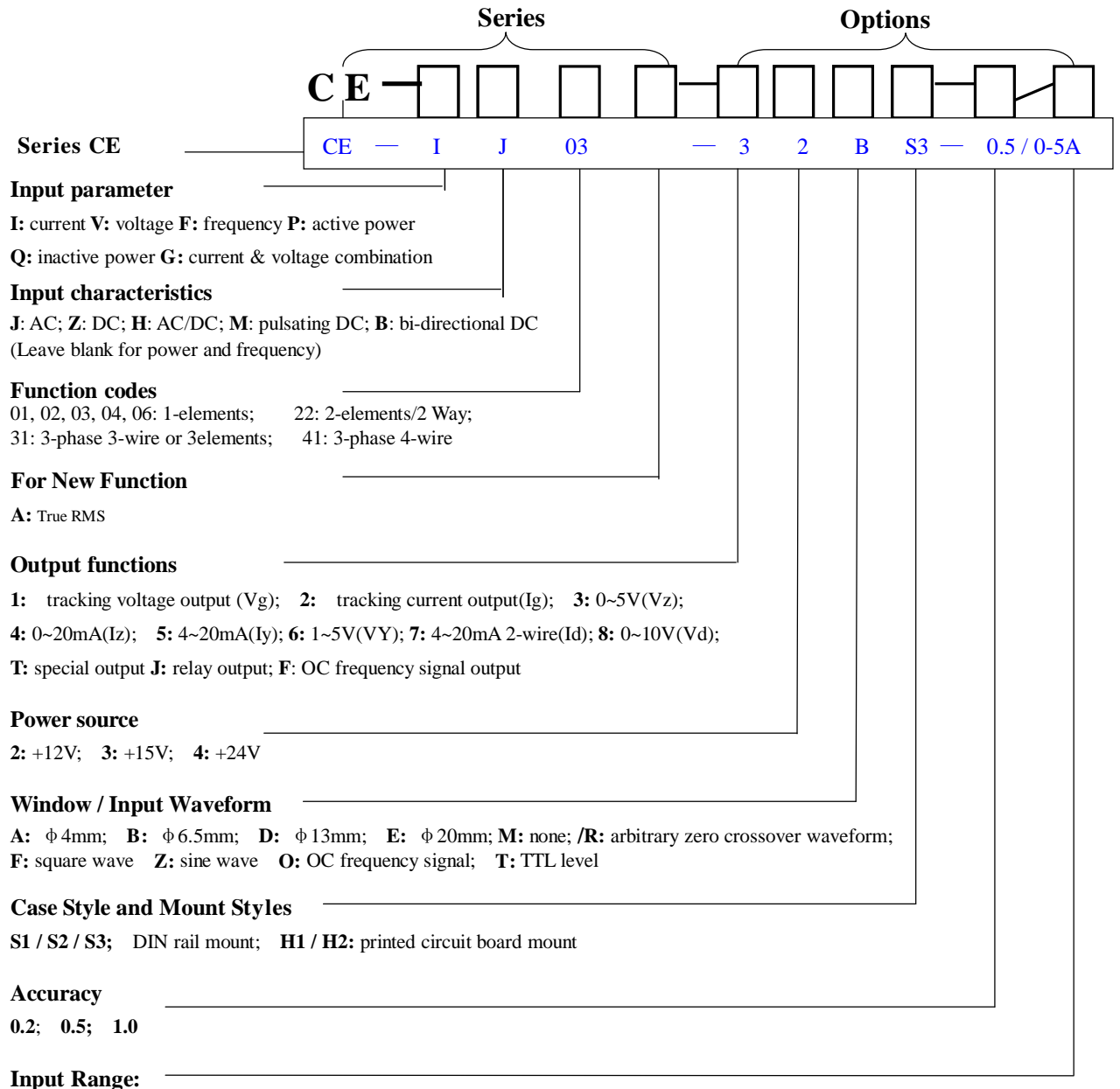
OUR MISSION STATEMENT: Research, develop and manufacture a complete line of electrical monitoring products. Quality, Reliability and Customer satisfaction are our utmost

concern.

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Chapter 1 Part Number Selection Guide



Typical Example

CE-IJ03-32BS3-0.5/0-5A: 1 element AC Current Transducer, Output: 0-5V, Power Source: +12V, Window: ϕ 6.5mm, Accuracy: 0.5, Case Style: S3, Input Range: 0 – 5 A

Chapter 2 Main Series List

MAIN SERIES LIST FOR CE-T ANALOG ELECTRICAL PARAMETER TRANSDUCER					
FUNCTION TYPE			SERIES	SENSING / ISOLATION PRICEPLE	RATED INPUT
Current	AC	1 element	CE-IJ03	Electromagnetic Induction	0-0.5A~300A
			CE-IJ03A (RMS)		
		3 elements	CE-IJ31		0-0.5A~25A
			CE-IJ31A (RMS)		
	DC	1 element	CE-IZ01	Linear Photoelectrical Isolation	0-20mA~5A
			CE-IZ02	Magnetic Modulation	
			CE-IZ04	Hall Effect	0-30A~200A
			CE-IZ06	Magnetic Modulation	0-1A~25A
Voltage	AC	1 element	CE-VJ03	Electromagnetic Induction	0-1V~1000V
			CE-VJ03A (RMS)		
		3-phase 3-wire	CE-VJ31		0-1V~500V
			CE-VJ31A (RMS)		
		3-phase 4-wire	CE-VJ41		0-75V~500V ; 0-0.5A~25A
			CE-VJ41A (RMS)		
	DC	1-element	CE-VZ01	Linear Photoelectrical Isolation	0-10mV~1000V
			CE-VZ02	Electromagnetic Isolation	
Power	AC	1 element	CE-PJ02	Electromagnetic Induction	0-75V~500V ; 0-0.5A~25A
			CE-QJ02		
		3-phase 3-wire	CE-PJ31		
			CE-QJ31		
		3-phase 4-wire	CE-PJ41		
			CE-QJ41		
Frequency			CE-FJ01	Linear Photoelectric Isolation	0-55Hz~5KHz
Offside Alarm Transducer	AC	1 element	CE-IJ03	Electromagnetic Induction	0-1A~300A
			CE-VJ03		0-75mV~1000V
	DC		CE-IZ04	Hall Effect	0-10A~300A
			CE-VZ01	Linear Photoelectrical Isolation	0-75mV~1000V

Chapter 3 Product Overview

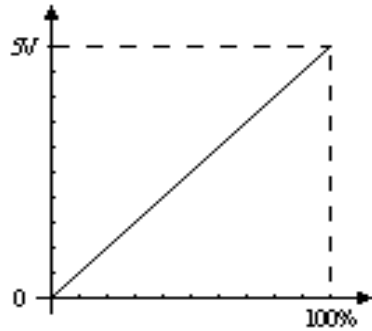
3.1 Output Function Codes

Code	Symbol	Definition	Applications
1	V _g	Tracking Voltage Output	0-5V (RMS), suitable for AC or peak value sampling system, quick response, and high precision.
2	I _g	Tracking Current Output	AC tracking current output, suitable for AC or peak value sampling system, high precision, and quick response.
3	V _z	DC Voltage Output	0-5 Vdc, can be connected direct to A/D converter, digit panel, indicator, PLC
4	I _z	DC Current Output	0-20 mAdc, suitable for long distance signal transmission, resistance to interference.
5	I _y	DC Current Output	4-20 mAdc, suitable for long distance signal transmission, resistance to interference.
7	I _d	2-wire DC Current	4-20 mAdc, 2-wire, loop powered connection, resistance to interference.
8	V _d	DC Voltage Output	0-10 Vdc, can be connected direct to digit panel, indicator etc. (auxiliary power source $\geq 15V$).
J	J	Relay contact	Apply to offside alarm for AC/DC current and voltage
F	F	OC frequency signal output	0~10 k Hz frequency signal, photoelectric isolation OC output
T	T	Special Output	Reserved for special output configurations.

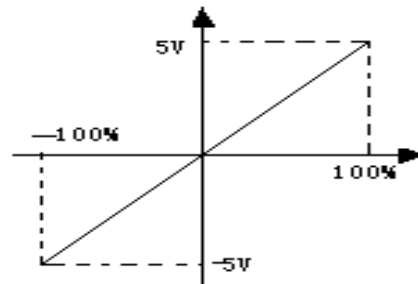
3.2 Typical Operating Specifications

Item	Test Condition	Data	
		Accuracy 0.2	Accuracy 0.5
Thermal Drift	+12V, 25°C	≤200ppm/°C	≤500ppm/°C
Output Ripple	+12V, 25°C	10mV	15mV
Output Load	+12V, 25°C Vz (3) output	≥2K Ω	
	+12V, 25°C Iz (4) and Iy (5) output	≤250 Ω	
Operating Temperature	+12V	0~50 °C	
Isolation Withstanding Voltage	1 min.	≤2500 V dc	
	1 min.	≤1500 V ac RMS	

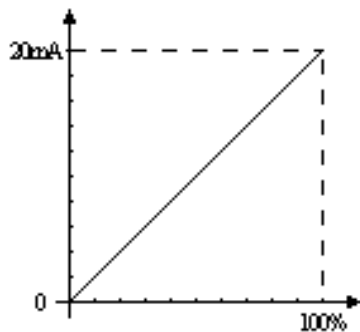
3.3 Input / Output Graphs.



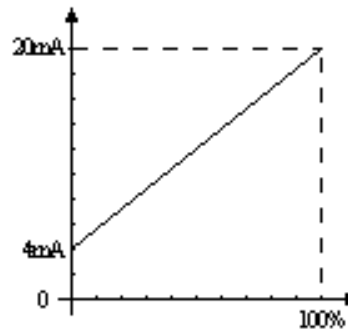
Uni-direction input vs 0-5V output



Bi-direction input vs bi-directional output



Uni-direction input vs 0-20 mA output



Uni-direction input vs 4-20 mA output

Chapter 4 Details of the Electric Parameter Isolation Transducer

4.1 Current Transducer

4.1.1 1-element AC Current Transducer

Specifications:

Series	Operating Principle	Isolation Voltage	Response Time Range 0 to 90 % FS	Overload Capacity	Quiescent Power (mW)		Mounting
					Vz, Vd, Vg, Iz Output	Iy Output	
CE-IJ03 CE-IJ03A	Electro-magnetic	≤2500VDC	≤400mS	20 times or <5/sec at 500A	180 (accuracy 0.2)	300 (accuracy 0.2)	PCB Surface or Din Rail
					200 (accuracy 0.5)	250 (accuracy 0.5)	

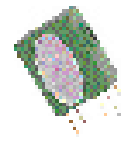
Case style (see Chapter 5. 2.1 for outline dimensions)



S2



S3



H1

Part Numbers:

Series	Output	Power Source	Window mm	Case style	Accuracy %	Rated Input	
CE-IJ03	3---0~5V DC (Vz) 8---0~10V DC (Vd)	2---12V 3---15V	A--- φ 4 B--- φ 6.5	H1	0.5	0.5A,1A,5A,10A,15A, 25A	
CE-IJ03 CE-IJ03A	1---0~5V RMS (Vg)* 3---0~5V DC (Vz) 4---0~20mA (Iz) 5---4~20mA (Iy)** 7---4~20mA (Id) *** 8---0~10V DC (Vd)	2---12V 3---15V 4---24V	M---no window A--- φ 4 B--- φ 6.5 D--- φ 13 E--- φ 20	S2	0.2 0.5	0.5A,1A,5A	
							5A,10A,15A,25A
					S3	0.5	30A,50A,75A,100A
							120A,150A,200A,250 A,300A

* Tracking output (Vg) type not available in series CE-IJ03A.

** Loop resistance from 0 to 250 Ω . Contact factory for loop resistance above 250 Ω

*** Select 24V power source for 2-wire 4~20mA; Tracking output (Id) type not available in series CE-IJ03A.

Part Number Example: CE-IJ03-32BS2-O.5/0~5A

Description: 1-element AC Current Transducer, average responding, Input: 0~5Aac Output: 0~5Vdc, Power source: +12Vdc, Window: φ 6.5mm, Accuracy: 0.5%, Case style: S2

Connection Diagrams (See Chapter5, 2.2 for mounting dimensions)

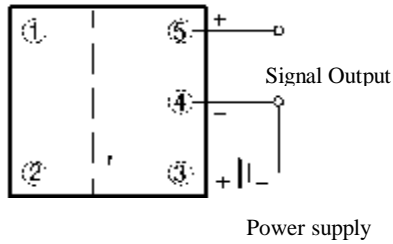


Diagram 4.1 for CE-IJ03 Case-H1

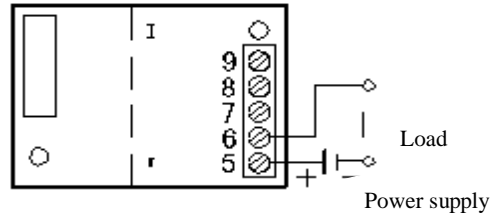


Diagram 4.2 for CE-IJ03 2-wire Output Case-S

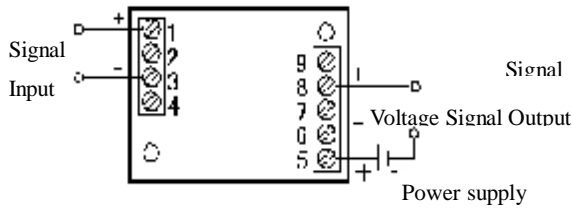


Diagram 4.3 for CE-IJ03, CE-IJ03A
Terminal Input, Voltage Output, Case-S

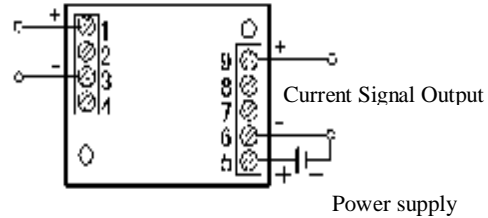


Diagram 4.4 for CE-IJ03, CE-IJ03A
Terminal Input, Current Output, Case-S

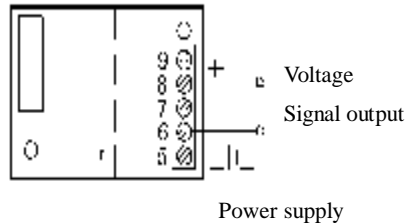


Diagram 4.5 for CE-IJ03, CE-IJ03A
Window Input, Voltage Output, Case style S

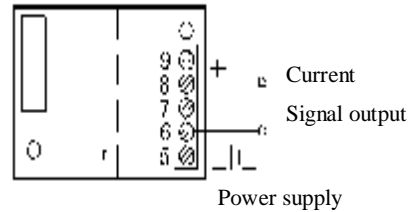


Diagram 4.6 for CE-IJ03, CE-IJ03A
Window Input, Current Output, Case style S

Typical Application:

1. Current monitor of AC motor.
2. Current monitor/control of mutual inductor (CT).

Notice:

1. The size of window must be fit for the conducting wire to pass through. When the rated current $\leq 5A$, you can use terminal input.
2. All connections of the positive and negative polarities must be correct. The output signal and the power source must be grounded in common at terminal 6.
3. The connection diagrams are the top view of the devices.

4.1.2 3 elements AC Current Transducer: CE-IJ31, CE-IJ31A

Specifications:

Series	Operating Principle	Isolation Voltage	Response Time Range 0 to 90 % FS	Overload Capacity	Quiescent Power (mW)		Mounting
					Vz, Vd, Vg, Iz Output	Iy Output	
CE-IJ31 CE-IJ31A	Electro-magnetic	≤2500VDC	≤400mS	200 times or <5/sec at 500A	300 (accuracy 0.2) 350 (accuracy 0.5)	480 (accuracy 0.2) 450 (accuracy 0.5)	Din Rail

Case style (see Chapter 5.2.1 for outline dimensions)



S3

Part Numbers:

Series	Output	Power Source	Window (mm)	Case style	Accuracy %	Rated Input (RMS)
CE-IJ31 CE-IJ31A	1: 0~5V RMS (Vg)* 3: 0~5V DC (Vz) 4: 0~20 mA (Iz) 5: 4~20 mA (Iy)** 8: 0~10V DC (Vd)	2: 12V 3: 15V 4: 24V	A: φ 4 B: φ 6.5	S3	0.2 0.5	1A, 2A, 5A, 10A, 15A, 25A

* Tracking output (Vg) type not available in series CE-IJ31A and now the accuracy only 0.5.

** Loop resistance from 0 to 250 Ω . Contact factory for loop resistance above 250 Ω

Part Number Example: CE-IJ31-32BS3-0.5/0~5A

Description: 3 elements AC Current Transducer, average responding, Input: 0-5Aac, Output: 0-5Vdc, Power source: +12Vdc, Window: Φ6.5mm, Case style: S3 Accuracy: 0.5 %,

Connection Diagram (See Chapter5, 5.2 for mounting dimensions)

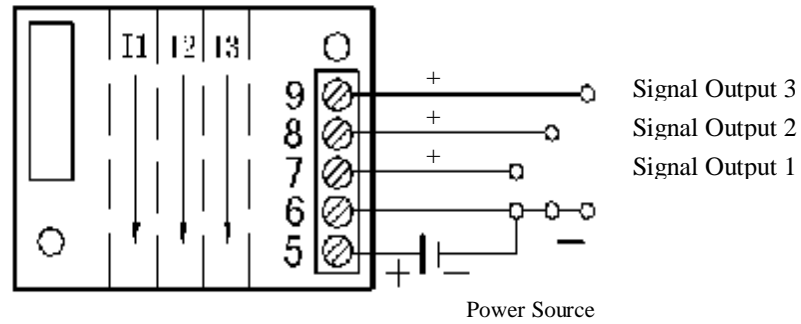


Diagram 4.7 CE-IJ31, CE-IJ31A, Output Signal Case style S

Typical Application:

1. To monitor electrical power system.
2. To monitor loads of 3-phase motor.

Notice:

1. There is no polarity requirement for the input signal connection.
2. For application above 25 Amp, It is suggested to use an external current transformer. Connect the secondary output of the current transformer to the input of the transducers.
3. The output signal and the power source must be grounded in common at terminal 6.

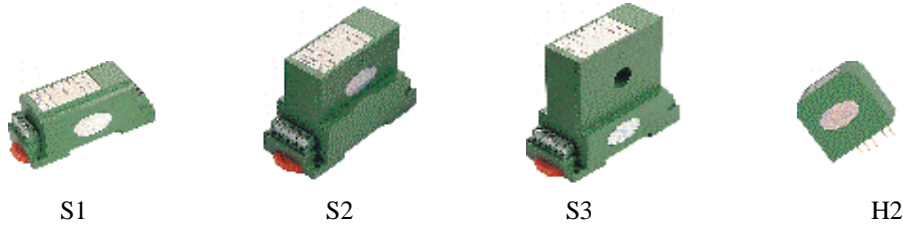
4.1.3 1-element DC Current Transducer: CE-IZ01, CE-IZ02, CE-IZ04, CE-IZ06

Specifications:

Series	Operating Principle	Isolation Voltage	Response Time Range 0 to 90 % FS	Overload Capacity	Quiescent Power (mW)		Mounting
					Vz, Vd, Vg, Iz Output	Iy Output	
CE-IZ01	Photoelectric Isolation/ Treble isolation	≤2500 VDC	≤10mS	5 Times 5/sec	180	300	PCB surface or Din Rail
CE-IZ02	Modulation Isolation		≤15mS		50	120	
CE-IZ04	Hall Effect Isolation		≤10mS		350	550	
CE-IZ06	Modulation Isolation		≤100mS		250	350	

* Treble isolations: Isolations among input of transducer, output of transducer and power source.

Case style (see Chapter 5.2.1 for outline dimensions)



Part Numbers:

Series	Output	Power Source	Window mm	Case style	Accuracy %	Rated Input (RMS)
CE-IZ01	3: 0~5VDC(Vz) 4: 0~20 mA(Iz)	2: 12V 3: 15V 4: 24V	M: No window	H2	0.2 0.5	20mA, 50 mA, 100 mA, 200 mA, 500mA
				S1		1A, 2A, 5A
CE-IZ02	5: 4~20 mA(Iy)* 8: 0~10VDC(Vd)			H2		20 mA, 50 mA, 100 mA, 200 mA, 500 mA
				S1		1A, 2A, 5A
CE-IZ04	F: Frequency signal		D: Φ13 E: Φ20	S3	1.0	30A, 50A, 80A, 100A, 120A, 150A, 200A
CE-IZ06			D: Φ13			1A, 2A, 5A, 10A, 25A

* Loop resistance from 0 to 250 Ω . Contact factory for loop resistance above 250 Ω

Part Number Example: CE-IZ01-32MS2-0.2/4~20mA

Description: One Element DC Current Transducer, average responding, Input: 4~20mA, Output: 0~5Vdc, power source: +12Vdc, No window (Terminal input), Accuracy: 0.2%, Case style: S2

Connection Diagram (see Chapter 5.2.2 for mounting dimensions)

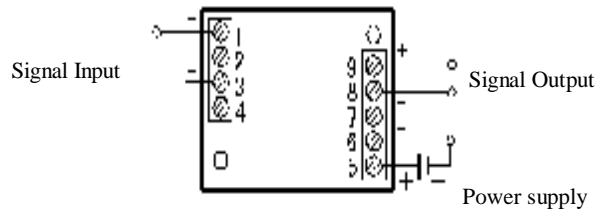


Diagram 4.8 CE-IZ01 Case style S1

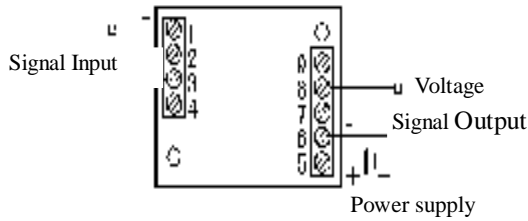


Diagram 4.9 CE-IZ02
Voltage Output, Case style S2

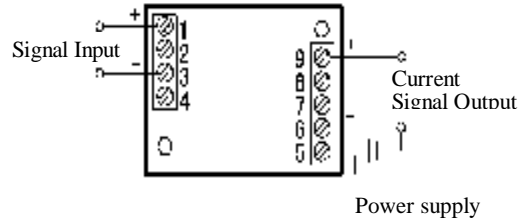


Diagram 4.10 CE-IZ02
Current Output, Case style S2

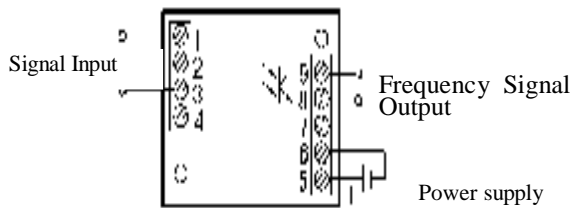


Diagram 4.11 CE-IZ02,
Frequency Output, Case style S2

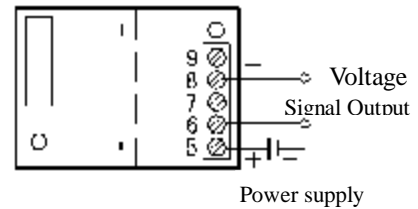


Diagram 4.12 CE-IZ04, CE-IZ06
Window Input, Voltage Output, Case style S2

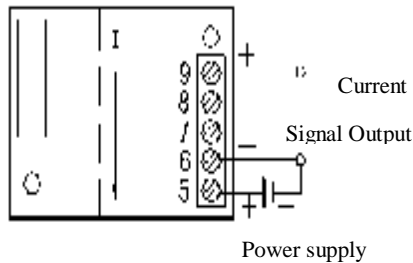


Diagram 4.13 CE-IZ04, CE-IZ06
Window Input, Current Output, Case style S3

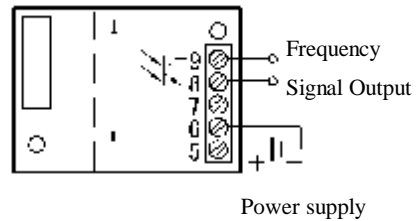


Diagram 4.14 CE-IZ04, CE-IZ06
Frequency Output, Case style S3

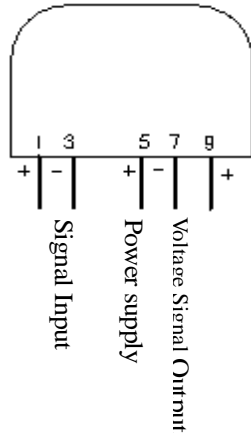


Diagram 4.15 CE-IZ02
Voltage Output, Case style H2

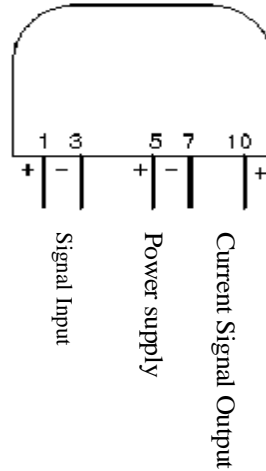


Diagram 4.16 CE-IZ02
Current Output, Case style H2

Typical Applications:

1. Isolation conversion of DC plate DC current signal.
2. Isolation conversion of industrial standard signal.

Notice:

1. If the input signal is bi-directional DC or pulsant DC, please give clear indication in your order.
2. In case a current (>1A) is input through the terminals, it is advisable to connect terminals 1&2 in parallel, and terminals 3&4 in parallel respectively in order to reduce the input resistance at the terminals.
3. CE-IZ01 works on Treble isolation Principle, the output signal and the power source may not be grounded in common. (While that of other part numbers must be grounded in common)

4.2 Voltage Transducer

4.2.1 1-element AC Voltage Transducer: CE-VJ03, CE-VJ03A

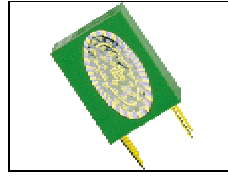
Specifications:

Series	Operating Principle	Isolation Voltage	Response Time Range 0 to 90% FS	Overload Capacity	Quiescent Power (mW)		Mounting
					Vz, Vd, Vg, Iz Output	Iy Output	
CE-VJ03 CE-VJ03A	Electromagnetic Isolation	≤2500 VDC	≤400mS	2 Times 10/sec	50(H) 180(S)	300	PCB surface or Din rail

Case style (see Chapter5.2.1 for outline dimensions)



S2



H1

Part Numbers:

Series	Output	Power Source	Window (mm)	Case style	Accuracy %	Rated Input (RMS)
CE-VJ03	3: 0~5V DC (Vz) 8: 0~10V DC (Vd)	2: 12V 3: 15V	M: No Window	H1, S2, S3	0.5	100V, 110V, 220V, 250V, 380V, 400V, 500V, 1000V
CE-VJ03A	1: 0~5V RMS (Vg)* 3: 0~5V DC (Vz) 4: 0~20mA (Iz) 5: 4~20mA (Iy)** 7: 4~20mA (Id)** 8: 0~10V DC (Vd)	2: 12V 3: 15V 4: 24V				

* Tracking output (Vg) type not available now in series CE-VJ03A and now the accuracy only 0.5.

** Loop resistance from 0 to 250 Ω . Contact factory for loop resistance above 250 Ω

*** Please select 24V auxiliary power source for 2-wire 4~20mA. CE-VJ03A has no Id output.

Part Number Example: CE-VJ03-52M52-0.2/0~250V

Description: 1-elements AC Voltage Transducer, Input: 0~250V, Output: 4~20mA, Power source: +12V, Without Window opening (terminal input), Accuracy: 0.2, Case style: S2.

Connection Diagram (see Chapter 5.2.2 for mounting dimensions)

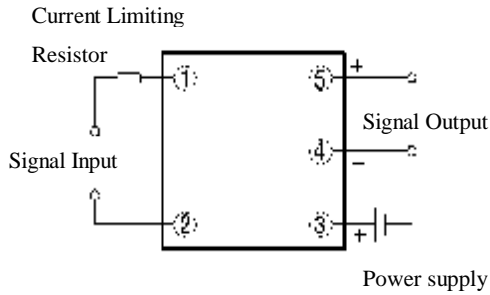


Diagram 4.17 CE-VJ03
Case style H1

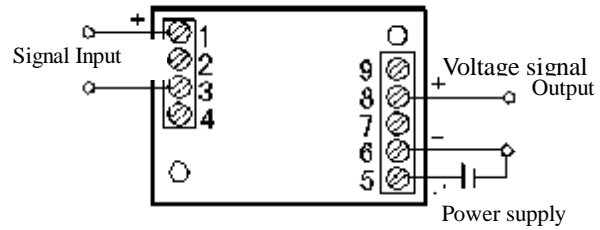


Diagram 4.18 CE-VJ03, CE-VJ03A
Voltage Output, Case style S

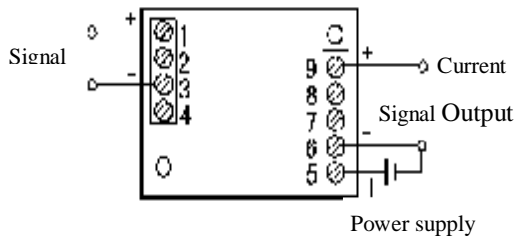


Diagram 4.19 CE-VJ03, CE-VJ03A
Current Output, Case style S

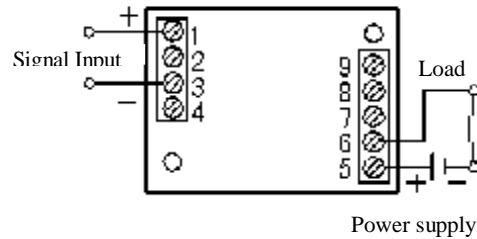


Diagram 4.20 CE-VJ03
2-wire Current Output, Case style S

Typical Application:

1. Voltage detection for AC motor.
2. Secondary voltage detection for PT (voltage inductor).

Notice:

1. Selection of output signal: Please select power source >12V when you need 0~10V output.
2. The H1 type must be used with corresponding current limiting resistor. The current limiting resistance should not be near the output terminal (to avoid larger voltage drop).
3. The output signal and the power source must be grounded in common. Please keep right polarity connection, don't in error set.

4.2.2 3-phase AC Voltage Transducer: CE-VJ31, CE-VJ31A, CE-VJ41, CE-VJ41A

Specifications:

Series	Operating Principle	Isolation Voltage	Response Time Range 0 to 90% FS	Overload Capacity	Quiescent Power (mW)		Mounting
					Vz, Vd, Vg, Iz Output	Iy Output	
CE-VJ31 CE-VJ31A	Electromagnetic Isolation	≤2500 V DC	≤400mS	2 Times 10/sec	500	750	PCB surface or Din rail
CE-VJ41 CE-VJ41A					500	750	

Case style (see Chapter 5.2.1 for outline dimensions)



S3

Part Numbers:

Series	Output	Power Source	Window (mm)	Case style	Accuracy %	Rated Input (RMS)
CE-VJ31 CE-VJ31A	1: 0~5V RMS (Vg)* 3: 0~5V DC (Vz) 4: 0~20mA (Iz) 5: 4~20mA (Iy)** 8: 0~10V DC (Vd)	2: 12V 3: 15V 4: 24V	M: No window	S3	0.2 0.5	50V, 75V, 100V, 200V, 250V, 300V, 380V, 400V, 500V
CE-VJ41 CE-VJ41A						

* Tracking output (Vg) type not available in series CE-VJ31A, CE-VJ41A and now the accuracy only 0.5.

** Loop resistance from 0 to 250 Ω . Contact factory for loop resistance above 250 Ω .

Part Number Example: CE-VJ41-32MS3-0.5/0~250V

Description: 3-phase 4-wire AC Voltage Transducer, Input: 0-250V, Output: 0-5V, Power source: +12V, no Window, Accuracy: 0.5, Case style S3

Connection Diagram (see Chapter 5.2.2 for mounting dimensions)

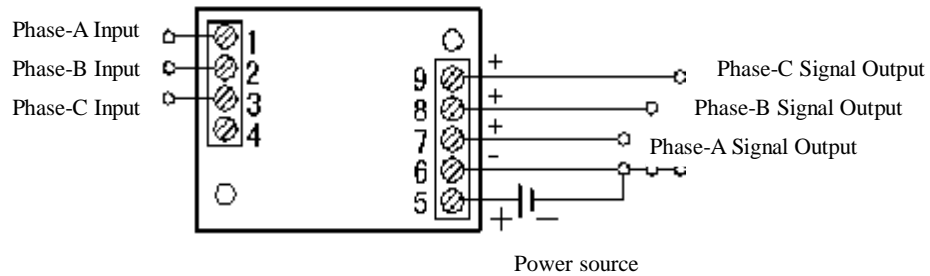


Diagram 4.21 CE-VJ31, CE-VJ31A Case style S3

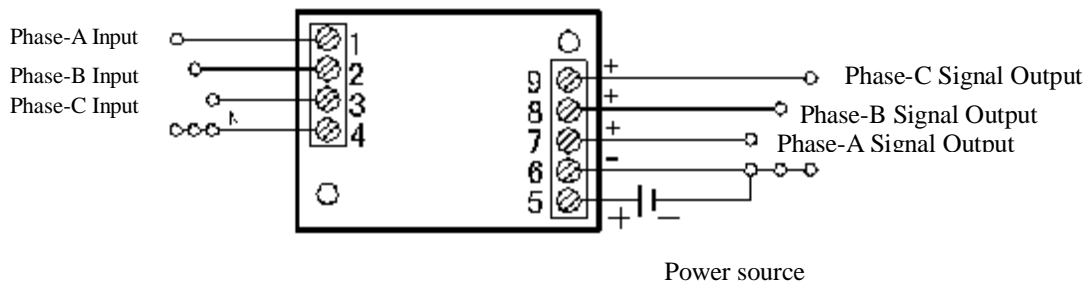


Diagram 4.22 CE-VJ41, CE-VJ41A Case style S3

Typical Application:

1. Voltage detection of the primary circuit in power system.
2. Voltage detection of the power source of 3-phase motor.

Notice:

1. In case the input is 3-phase-3-wire system, the first output corresponds to the line voltage between V_{ab} , the second output corresponds to line voltage between V_{bc} , and the third output corresponds to line voltage between V_{ca} . In case the input is 3-phase-4-wire, three outputs correspond respectively to phase voltage of A, B and C phases.
2. The output signal and the power source must be grounded in common. Please keep right polarity connection, don't in error set.

4.2.3 1-element DC Voltage Transducer: CE-VZ01, CE-VZ02

Specifications:

Series	Operating Principle	Isolation Voltage	Response Time Range 0 ~90% FS	Overload Capacity	Quiescent Power (mW)		Mounting
					Vz, Vd, Vg, Iz Output	Iy Output	
CE-VZ01	Linear Photoelectric Isolation *Treble Isolation	≤2500 VDC	≤ 400mS	20 Times 1 sec	180	300	PCB Surface or Din rail
CE-VZ02	Electromagnetic Isolation				50	120	

* Treble Isolation: the input, output and power source of the transducer are isolated each from others.

Case style (see Chapter5.2 .1for outline dimensions)



Part Numbers:

Series	Output	Power Source	Window (mm)	Case style	Accuracy (%)	Rated Input (RMS)
CE-VZ01	3: 0~5V DC (Vz) 4: 0~20mA (Iz) 5: 4~20mA (Iy)* 8: 0~10V DC (Vd)	2: 12V 3: 15V 4: 24V	M: No window	S1 S2	0.2	10mV, 50mV, 75mV, 75V, 100V, 200V, 500V, 1000V
CE-VZ-02	F: OC frequency signal output			S1 S2 H2		

* Loop resistance from 0 to 250 Ω . Contact factory for loop resistance above 250 Ω .

Part Number Example: CE-VZ02-52MS1-0.2/0-75mV

Description: Single way DC Transducer, Input Voltage: 0-75mV, Output: 4-20mA, Power source: +12V, No window, Accuracy: 0.2, Case Style: S1

Connection Diagram (see Chapter 5.2.2 for mounting dimensions)

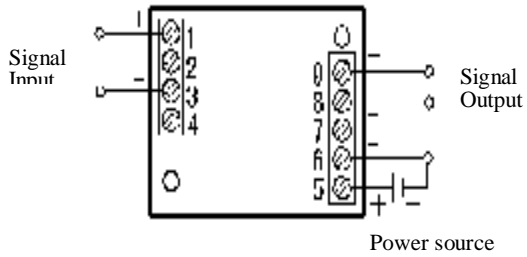


Diagram 4.23 CE-VZ01
Case style S

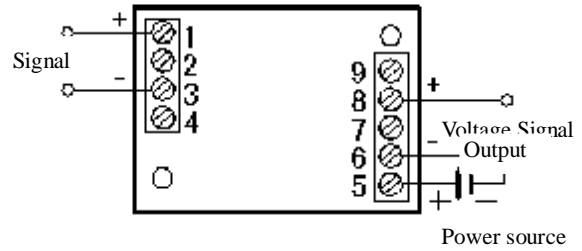


Diagram 4.24 CE-VZ02
Voltage Output, Case style S

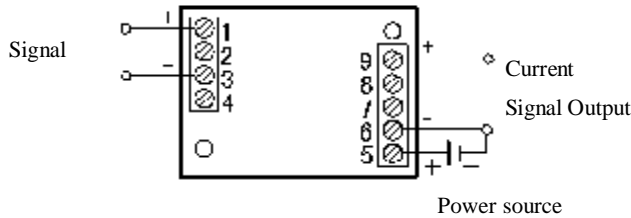


Diagram 4.25 CE-VZ02
Current Output, Case style S,

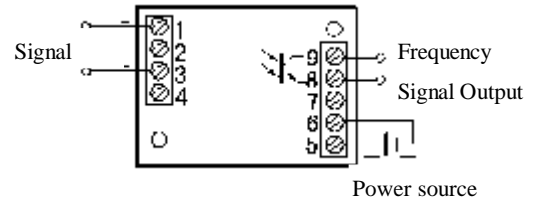


Diagram 4.26 CE-VZ01, CE-VZ02
Frequency Output

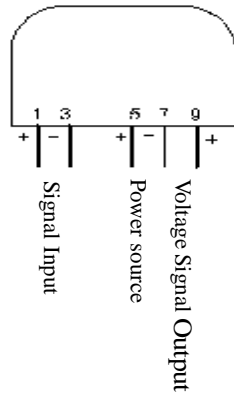


Diagram 4.27 CE-VZ02
Voltage Output, Case style H2,

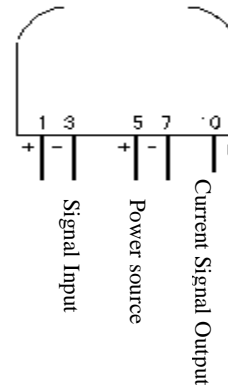


Diagram 4.28 CE-VZ02
Current Output, Case style H2,

Typical Application:

1. Isolation monitoring of DC plate DC voltage signal.
2. Isolation monitoring of voltage at output terminal of DC current shunt.
3. Monitoring of the voltage and charging/Discharging voltage of storage battery.

Notice:

1. In case the input signal is bi-directional DC or pulsed DC, please give clear indication in your order.
2. Since CE-VZ01 is provided with treble isolations, the output signal and power source may not be grounded in common. (While that of other series must be grounded in common.)

4.3 Frequency Transducer: CE-FJ01

Specifications:

Series	Operating Principle	Isolation Voltage	Response Time Range 0~90% FS	Overload Capacity	Static Power Consumption (mW)		Mounting
					Vz, Vd, Vg, Iz Output	Iy Output	
CE-FJ01	Photoelectric Isolation	≤2500V DC	≤400mS	2 Times 10/sec	200	250	PCB or Din rail

Case style (see Chapter5.2.1 for outline dimensions)



S2

Part Numbers:

Series	Output	Power Source	Input Waveform	Case style	Accuracy (%)	Rated Input (RMS)	
						Frequency	Voltage
CE-FJ01	3: 0~5VDC (Vz) 4: 0~20mA (Iz) 5: 4~20mA (Iy)*	2: 12V 3: 15V 4: 24V	R: Any wave zero crossover. F: Square Wave. Z: Sine Wave. O: OC frequency signal T: TTL electricity level	S2	0.5	55Hz, 100Hz, 1KHz, 2KHz, 5KHz.	50V, 110V, 250V, 400V, 500V.

* Loop resistance from 0 to 250 Ω . Contact factory for loop resistance above 250 Ω .

Part Number Example: CE-FJ01-32FS2-0.5/0~55Hz (250V)

Description: Frequency Transducer, Input: 0~55Hz Square Wave Signal (250V), Output: 0~5V, Power source: +12V, Accuracy: 0.5, Case style: S2

Connection Diagram (see Chapter 5.2.2 for mounting dimensions)

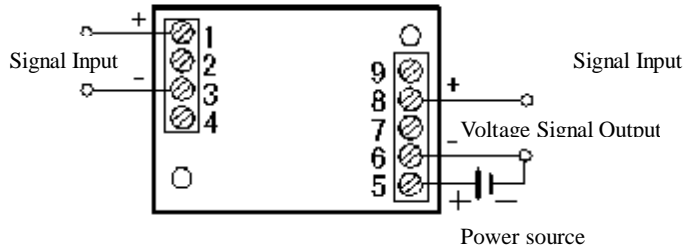


Diagram 4.29 CE-FJ01
Voltage Output, Case style S,

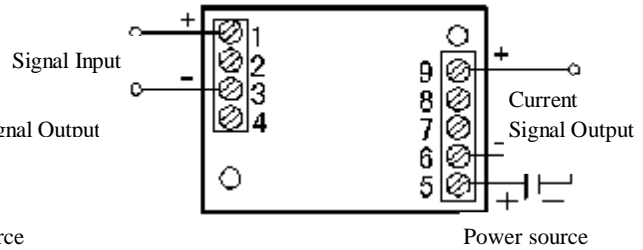


Diagram 4.30 CE-FJ01
Current Output, Case style S,

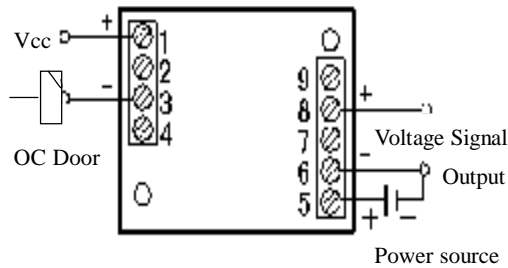


Diagram 4.31 CE-FJ01
OC Frequency Input, Voltage Output

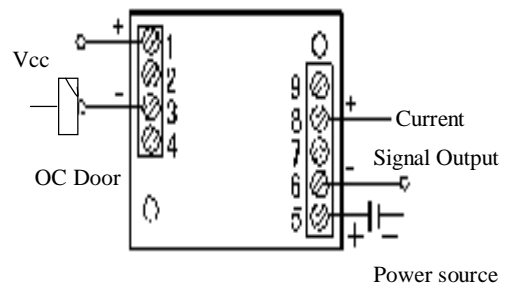


Diagram 4.32 CE-FJ01
OC Frequency Input, Current Output

Typical Application:

1. Monitor frequency of AC power source.
2. Synchronization of industrial course.
3. Monitor frequency of medium frequency signal.

Notice:

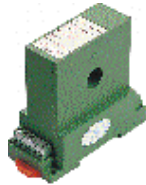
1. Response of amplitude of frequency signal must not be lower than 20% of rated voltage.
2. There is no polarity requirement for the input signal connection. The responsive amplitude of frequency signal must not be lower than 20% of rated voltage.
3. The output signal and the power source must be grounded in common. Please keep right polarity connection of output.

4.4 Power Transducer: CE-PJ02, CE-QJ02, CE-PJ31, CE-QJ31, CE-PJ41, CE-QJ41

Specifications

Series	Operating Principle	Isolation Voltage	Response Time Range 0 to 90% FS	Overload Capacity	Static Power (mW)		Mounting
					Vz, Vd, Vg, Iz Output	Iy Output	
CE-PJ02 CE-QJ02	Electro-magnetic Isolation	≤2500V DC	≤600mS	Current: 2 Times 5/sec Voltage: 2 Times 10/sec	300	420	PCB or Din rail
CE-PJ31 CE-QJ31 CE-PJ41 CE-QJ41					840	960	

Case style (see Chapter5.2 .1for outline dimensions)



S3



S3

Part Numbers

Series	Output	Power Source	Window (mm)	Case style	Accuracy %	Rated Input (RMS)	
						Voltage	Current
CE-PJ02 CE-QJ02 CE-PJ31 CE-QJ31 CE-PJ41 CE-QJ41	3: 0~5V DC (Vz) 4: 0~20mA (Iz) 5: 4~20mA (Iy)* 8: 0~10V DC (Vd)	2: 12V 3: 15V	A: φ 4 B: φ 6.5	S3	0.5	75V, 110V, 220V, 250V, 380V, 400V, 500V.	1A, 2A, 5A, 10A, 15A, 20A, 25A.

* Loop resistance from 0 to 250 Ω . Contact factory for loop resistance above 250 Ω .

Part Number Example: CE-PJ41-52BS3-0.5/0~250V*0~5A

Description: 3-phase 4-wire Active Power Transducer, Input Voltage: 0~250V, Current: 0~5A, Output: 4~20mA, Power source: +12V, Window: φ 6.5, Accuracy: 0.5, Case style: S3

Connection Diagram (see Chapter 5.2.2 for mounting dimensions)

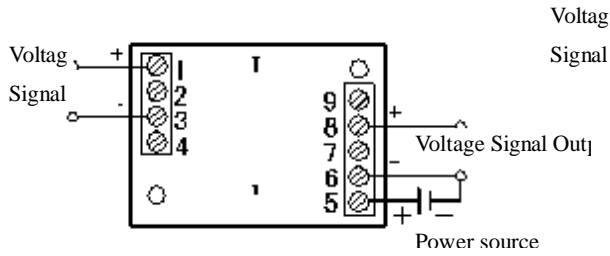


Diagram 4.33 CE-PJ02, CE-QJ02
Voltage Output, Case style S

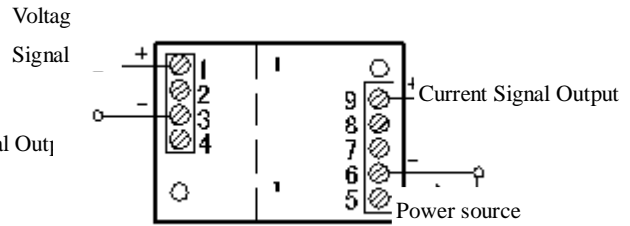


Diagram 4.34 CE-PJ02, CE-QJ02
Current Output, Case style S

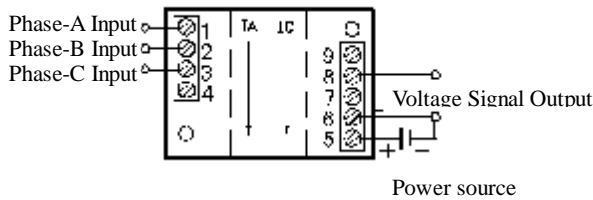


Diagram 4.35 CE-PJ31, CE-QJ31
Voltage Output, Case style S,

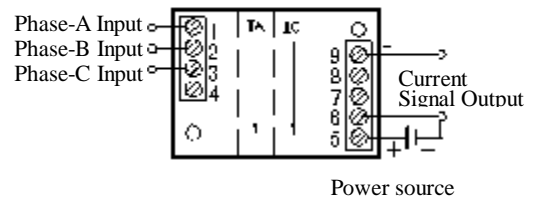


Diagram 4.36 CE-PJ31, CE-QJ31
Current Output, Case style S,

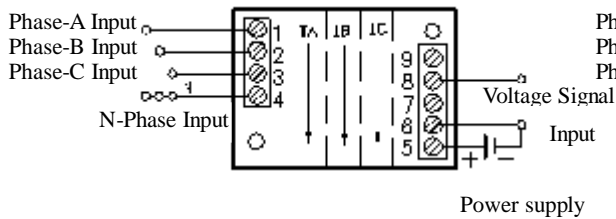


Diagram 4.37 CE-PJ41, CE-QJ41
Voltage Output, Case style S,

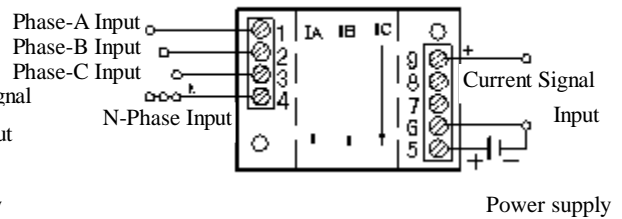


Diagram 4.38 CE-PJ41, CE-QJ41
Current Output, Case style S

Typical Application:

1. Monitor active power and inactive power of single element power source.
2. Monitor active power and inactive power of 3-phase power source.
3. Monitor output power of dynamo.

Notice:

1. The input current must pass through the window in the direction shown in Reference Diagram of Connection.
2. The output signal of 3-phase power transducer corresponds to total power of three phases.
3. In case the current to be measured is larger than 25A, it would be advisable to add AC current mutual inductor (CT) to each phase and take the secondary signal as input signal.

4.5 1-element AC/DC Offside Alarm Transducer: CE-VJ03-J, CE-VZ01-J, CE-IJ03-J, CE-IZ04-J

Specifications:

Series	Operating Principle	Isolation Voltage	Input Frequency Range	Response Time Range 0~90% FS	Overload Capacity	Static Power consumption (mW)	Mounting
CE-VJ03-J	Electromagnetic Isolation	≤2500VDC	25~3kHz	<200	5 Times 5/sec, relay contact current: ≤2A DC/AC	<600	Din Rail
CE-VZ01-J	Treble Isolation*		DC	<50		<600	Din Rail
CE-IJ03-J	Electromagnetic Isolation		25~3kHz	<200		<600	Din Rail
CE-IZ04-J	Hall Effect Isolation		DC	<300		<600	Din Rail

* Treble Isolation: Isolations among input of transducer, output of transducer and power source.

** Static Power with power source 24V

Case style (see Chapter5.2 .1for outline dimensions)



for CE-VJ03-J, CE-VZ01-J

for CE-IJ03-J, CE-IZ04-J

S3 Case Style

Part Numbers:

Series	Output	Power source (DC)	Window	Case style	Accuracy %	Threshold Value input	Return difference input
						Voltage / current	%
CE-VJ03-J	Relay contacts	4--24V	M	S3	2.0	75mV, 10V, 50V, 100V, 250V, 500V, 1000V	-5, -10, -15, -30, -40, -50
CE-VZ01-J		4--24V	M	S3	2.0	75mV, 10V, 50V, 100V, 250V, 500V, 1000V	
CE-IJ03-J		4--24V	A: Φ4 B: Φ6.5 D: Φ13 E: Φ20	S3	2.0	1A, 10A, 30A, 50A, 75A, 100A, 150A, 200A, 250A, 300A	
CE-IZ04-J		4--24V	S3	2.0	10A, 30A, 50A, 75A, 100A, 150A, 200A, 250A, 300A		

Part Number Example: CE-IJ03-J4DS3/2.0*75A*.-30

Description: AC Current Offside Alarm Transducer, Relay contacts Output, Power source: 24V, Window: Φ13mm, Case style: S3, Accuracy: 2.0, Threshold Value: 75A, Return Input: -30%

Connection Diagram (see Chapter 5.2 .2 for mounting dimensions)

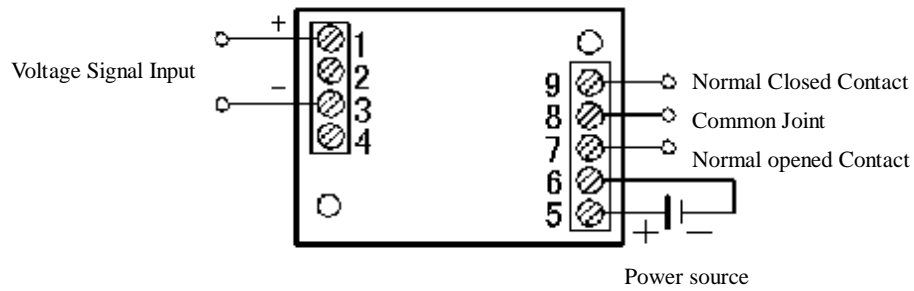


Diagram 4.39 CE-VJ03-J, CE-VZ02-J
Case style S3,

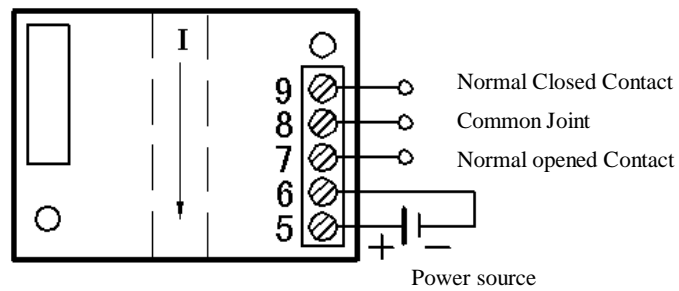


Diagram 4.40 CE-IJ03-J, CE-IZ04-J
Case style S3,

Typical Application:

- a) Load monitoring of DC power source system
- b) Safety Protect for safety system of various electric control equipments.

Notice:


- 1、 The load current of output should not exceed the maximal current value, which relay contacts allow to pass.
- 2、 24V power source should be stabilized within $\pm 5\%$.
- 3、 We can set threshold value and return value to meet your request if the above value can't meet your request.

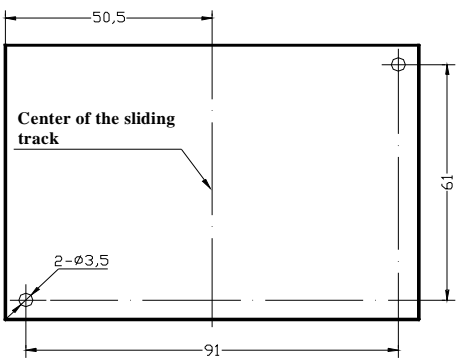
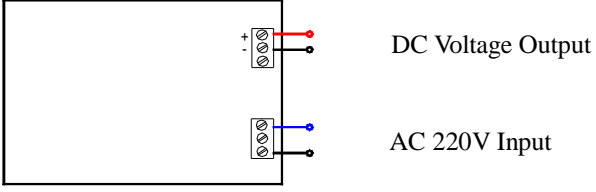
Chapter 5 Power source and Case style

5.1 Power source Type and Dimension (mm) : CE-WYS-1, CE-WYS-2

CE-WYS-1


Specifications	
Input Voltage	220V ± 10% 50Hz
Rated Output	200mA
Output Voltage	DC +12V, +15V, +24V
Output Ripple	≤ 10mV

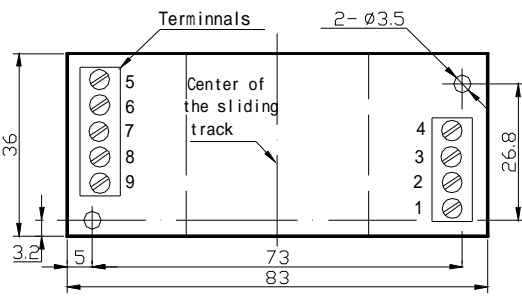
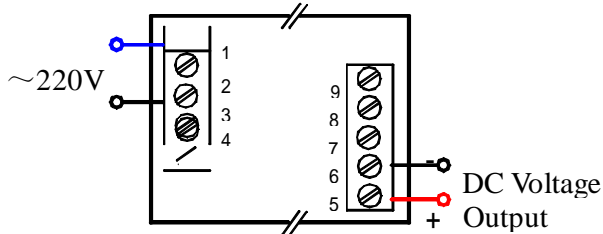


CE-WYS-2

Specifications	
Input Voltage	220V ± 10% 50Hz
Rated Output	200mA
Output Voltage	DC +12V, +15V, +24V
Output Ripple	≤ 10mV



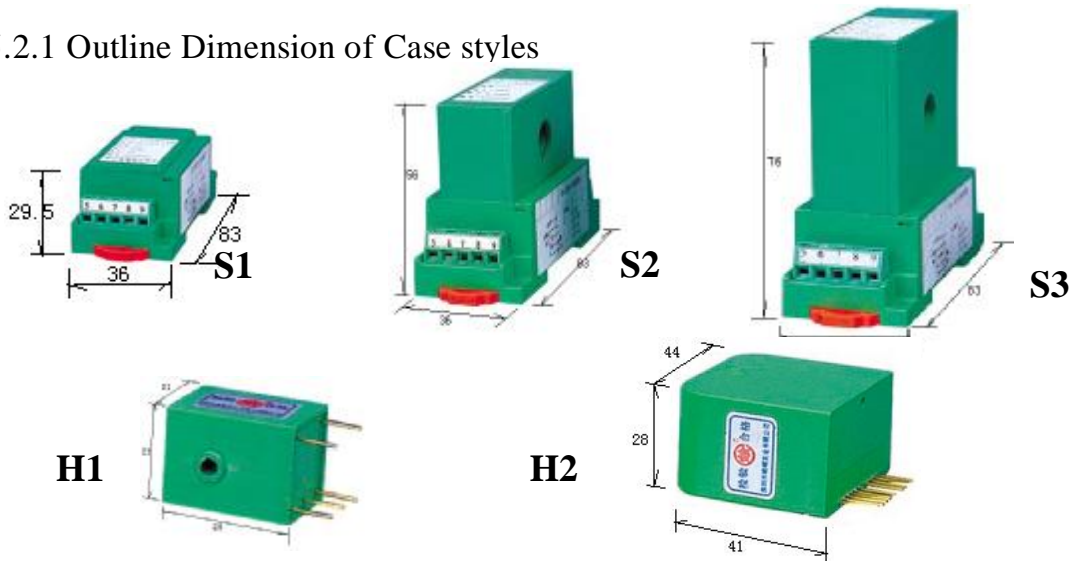



Note: There are two types: CE-WYS-1 and CE-WYS-2. For order, you should fill in output voltage after the part number and blocked off with “/”. For example: CE-WYS-1 power source, output: 12V, the complete part number is CE-WYS-1/12V.

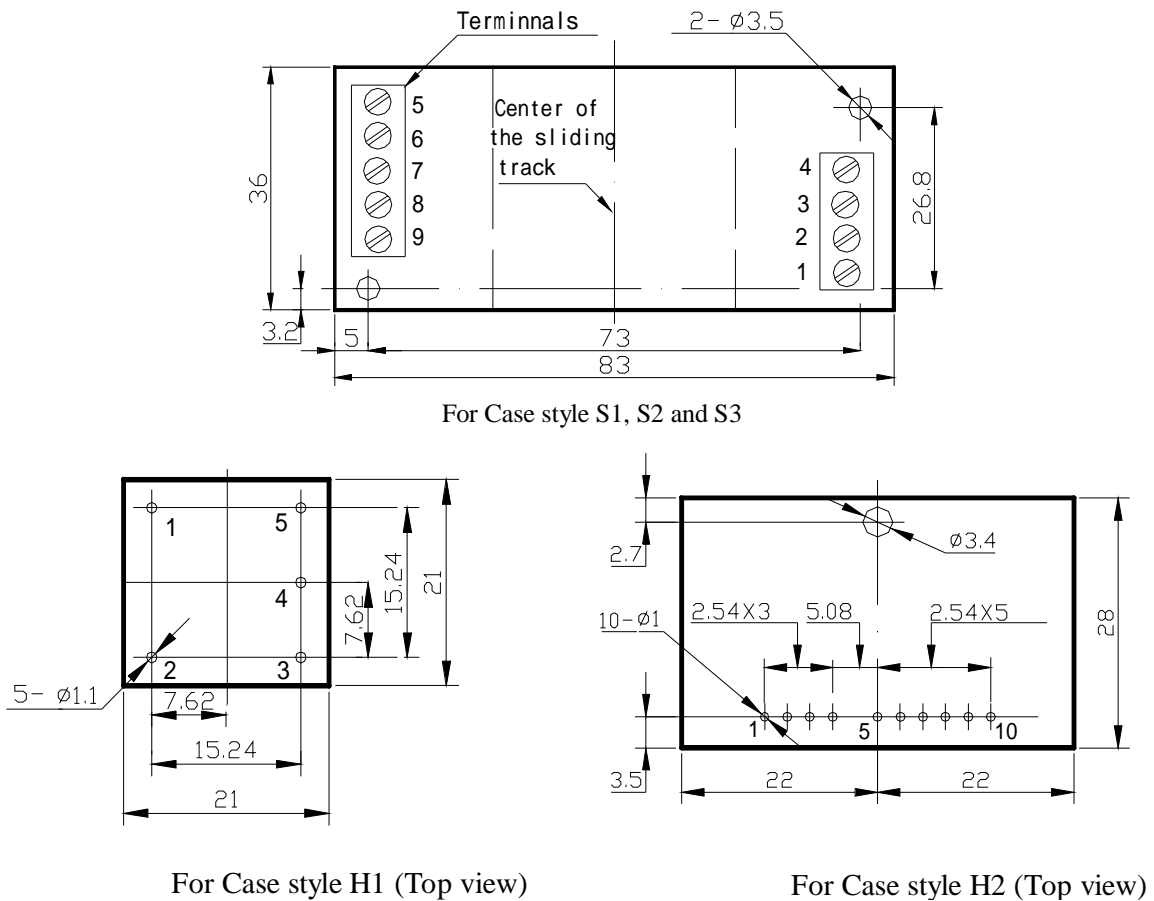
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5.2 Case style and Mounting Diagramme

5.2.1 Outline Dimension of Case styles



5.2.2 Mounting Dimensions (mm)



Chapter 6 Ordering Instruction, Installation Notes and Warranty Service

6.1 Ordering Instructions

1. Ensure a complete correct part number and product descriptions are used according to instructions in Chapter 1. The ordering information must include the complete description including input and output parameters such as rated value, output functions, power source and case style etc.
Included with your order must be quantity, delivery and shipping requirements. Provide complete company name, address, fax number, and email address. Be sure to provide the name of the contact person that we can contact with any questions.
2. The complete order must be signed by both the seller and buyer.
3. Payment is by irrevocably L/C at sight for large quantities or 50% in advance and the remaining to be paid before shipment for small quantity.

6.2 Installation Notes

1. Verify the part number and description are correct according to the packing list and product labels.
2. Apply power to the transducers only after a through check of the input signal, power source, and connection diagram.
3. The Power source voltage must be within $\pm 2\%$ with noise less than 0.4%. V_{pp}
4. The transducers with current output may only be used with load resistance of less than 250Ω . The voltage output transducers must be connected to a load of greater than $2K \Omega$
5. The transducers should only be used in environments having no static electricity, excessive dust, corrosive or explosive gases.
6. Ensure the terminal screws are tightened securely. An electrical test with a multimeter directly at the screw terminal will ensure a reliable installation
7. Calibration of the units with equipment that has accuracy ratings greater than the rating of the transducers. Ensure that the equipment and transducers have been operating for a minimum of 15 minutes before calibration.
8. The transducers should not be used in environments with strong electromagnetic interference. Standard precautions such as shielding the input and/or output lines should be observed. All lines should be kept as short as possible. If several transducers are used together, keep a minimum of 10 mm space between each unit. A 35mm (width) track is to be used for DIN rail mounting with $\phi 3$ screw for PCB surface mounting.
9. The transducers have been calibrated at the factory. Contact the factory if field adjustments are required.
10. Do not remove or destroy the product labels.

6.3 Warranty service

- 1 SHENZHEN SENSOR ELECTRONIC TECHNOLOGY CO., LTD. warrants its products against all defects in workmanship and material. If you experience a problem with the product, our technicians are available to help you.
- 2 In case the product does not operate properly, please contact our Marketing Department or Technical Department by fax or by e-mail and explain the phenomenon of the problem, your operation environment and appoint a technician to contact.



CPI 3000

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