

INTEGRATED SYSTEM & SIGNAL CONVERTER

ZEST - SERIES

■ FEATURE

- 1&2 Isolated output
- Actualization of high accuracy
- Digital communications(RS-485, RS-422A)
- Common power supply to each I/O module
- via the instillation BASE terminals
- Max16ch input modules mounted on the base
- Free voltage power (AC85~264V)/ DC24V
- CE Approved



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General Specifications

19 INCH STD MODULE MOUNTING FRAME



CE

The ZEST-2000 Series isolation modules have two outputs channels that are totally isolated.

This will greatly increase a flexibility in designing process monitoring system and reduce the overall cost customers can use one of the outputs for input of process monitoring computer system and use the rest for event recording or control system at the field.

At the same time, it is very easy to design dual mutual stand-by system using single sensors.

SPECIFICATIONS

ITEMS	DESCRIPTIONS		
MODULE POINT	8 Channel, 16 Channel		
WIRING	M3, 5 Screw Connector		
MOUNT	Wall mount		
INSULATION RESISTANCE	Input - Output1 - Output2 - Power - FG Greater than 100MΩ at DC 500V		
DIELECTRIC - STRENGTH	Input - Power - FG	AC 1,500V	1 Minute
	Input - Output	AC 1,500V	
	Output1 - Output2	AC 500V	
POWER SUPPLY	AC 85 ~ 264V, DC 24V		
MODULE POWER	DC 24V ±10% / 2A		
HUMIDITY	Less than 90% RH (no condensation)		
AMBIENT-TEMP	0 ~ +50℃		
DIMENSION	Refer to attached channel Dimension		

ORDERING CODE

MODEL : ZEST2000 - - -

• MODULE POINT

08 . 8 Channel
16 . 16 Channel

• WIRING

T . M3, 5 Screw terminal

• POWER SUPPLY

1 . AC 85 ~ 264V 3 . DC 24V

General Specifications

COMMUNICATION MODULE UNIT 通信 UNIT



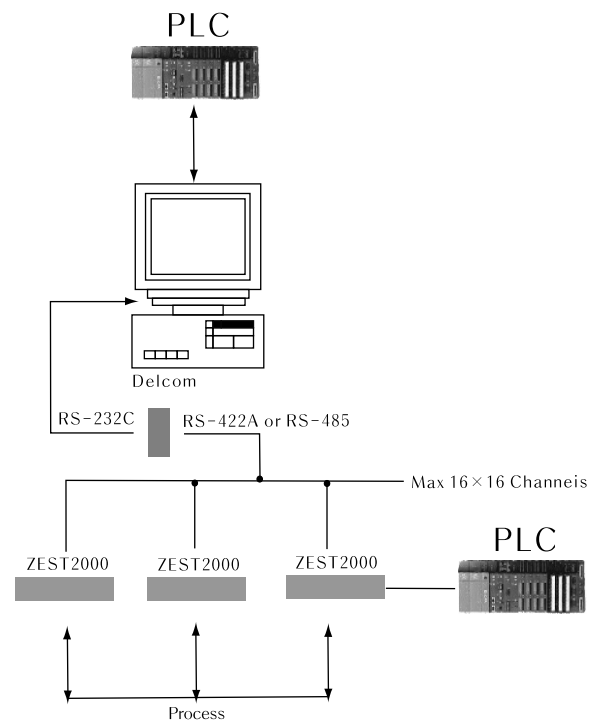
SC2000 Communication module does A/D conversion with input module's first output and interface it's data with host computer through RS-422A / RS-485 communication according to command.

SPECIFICATIONS

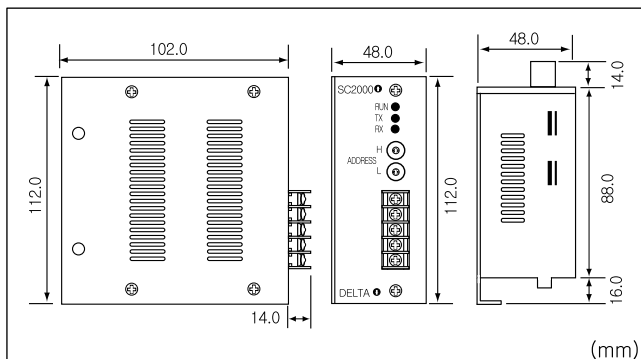
ITEMS	DESCRIPTIONS
INPUT	1 ~ 5V DC
CHANNEL POINT	MAX, 16Channels
A/D RESOLUTION	16 bit
SAMPLING RATE	100KHz
INTER FACE	① EIA standard based on RS-422A ② EIA standard based on RS-485
MULTY-DROP	Max, 16 stations (Max, 16×16 Channels)
SPEED	1200bps, 2400bps, 4800bps, 9600bps, 19200bps, 38400bps
FORMAT	① Start bit : 1 ② Data bit : 7 or 8 ③ Parity bit : None or Odd number or even number ④ Stop bit : 1 or 2
PROTOCOL	SC protocol
DETAILS OF TERMINALS	① RS-422A (4-wire system) ② RS-485 (2-wire system)
SEQUENTIAL DATA READ	From channel 1 to channel 16
POLLING TIME BETWEEN CHANNELS	Max, 25msec
DATA FORMAT	Upload up to 0.001V
DATA ACCURACY	Assurance for ± 0.001V
POWER SUPPLY	DC 24V ±10%
POWER CONSUMPTION	100mA or less
POWER FUSE	2.2Ω fusible resistor
AMBIENT TEMP	0 ~ 50℃
HUMIDITY	45 ~ 85% RH (no condensation)
COLOR	Black
WEIGHT	About 200g
DIMENSION	W48 × H112 × D88mm
COMMUNICATION OPTION SET	Select DIP S/W for options Set rotary S/W for station address

ORDERING CODE

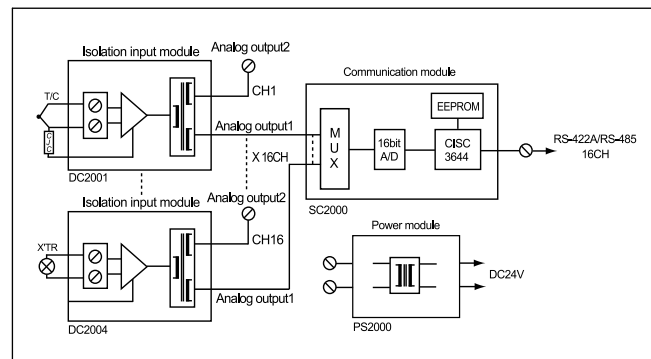
MODEL : SC2000



DIMENSION



BLOCK DIAGRAM



General Specifications

THERMOCOUPLE INPUT MODULE 熱電對入力 MODULE



DC2001 Thermocouple input module is a high accuracy converter which accepts various thermocouple as input signal and do cold-junction compensation and amplification linearizer compensation according to a temperature signal and converts it into isolated 2 channels DC output signal.

- * Cold - junction compensation, linearizer, burn-out function.
- * Base type with easy maintenance and high density mounting rate.
- * Isolation between input and output and between output 1 and output 2.
- * Embedded fuse on power line.

SPECIFICATIONS

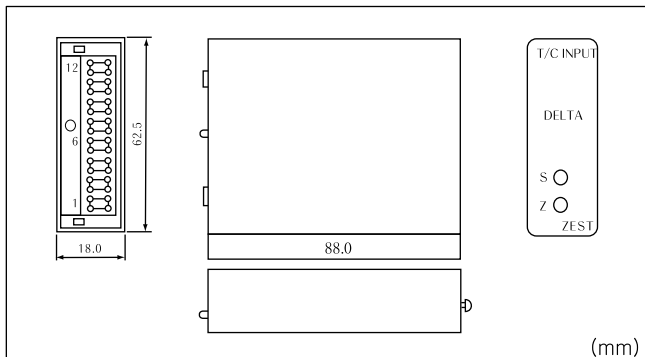
ITEMS	DESCRIPTIONS		
INPUT	Thermocouple (K, J, T, R,)		
BURN - OUT	Up scale or down scale		
INPUT IMPEDANCE	1M Ω or more		
OUTPUT	DC Current or DC Voltage signal		
ACCURACY	$\pm 0.3\%$ Max.		
TEMP. COEFFICIENT	$\pm 0.02\%$ / $^{\circ}\text{C}$		
COLD JUNCTION COMPENSATION ERROR	K, J, T, R : $\pm 1^{\circ}\text{C}$		
RESPONSE TIME	Less than 100msec (0~90%)		
INSULATION RESISTANCE	Greater than 100M Ω at DC 500V		
DIELECTRIC - STRENGTH	Input - Power	AC 1,500V	1 Minute
	Input - Output1 - Output2	AC 1,500V	
	Output1 - Output2	AC 500V	
POWER SUPPLY	DC 24V $\pm 10\%$		
POWER CONSUMPTION	Less than 50mA		
POWER FUSE	2.2 Ω fusible resistor		
AMBIENT - TEMP	0 ~ +50 $^{\circ}\text{C}$		
HUMIDITY	45 ~ 85% RH (no condensation)		
COLOR	Black		
WEIGHT	About 100g		
DIMENSION	W18 X H62.5 X D88mm		

STANDARD INPUT RANGE

(UNIT : $^{\circ}\text{C}$)

INPUT	RANGE
K	-50~+100, 0~300, 0~400, 0~500, 0~600 0~800, 0~1000, 0~1200
J	0~200, 0~300, 0~400, 0~800
T	-20~80, 0~100, 0~200
R	600~1600

DIMENSION



ORDERING CODE

MODEL : DC2001 - [] [] [] - []

INPUT SIGNAL

1. K(CA)
2. J(IC)
3. T(CC)
4. R

OUTPUT1 SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
7. 4~20mA DC(Option)

OUTPUT2 SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
7. 4~20mA DC
- N. None

BURN OUT

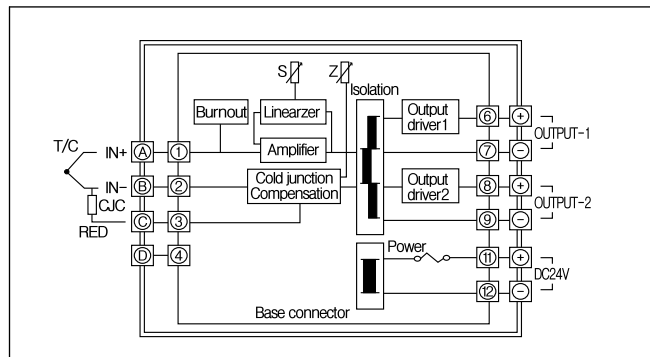
- D. Down scale
- U. Up scale

* Please Specify the Input Range When you Order.

OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 350 Ω
DC 1~5V	More than 2.5K Ω
DC 0~10V	More than 5K Ω

BLOCK DIAGRAM



General Specifications

R.T.D INPUT MODULE 測溫抵抗體 MODULE



DC2002 RTD input module is a high accuracy converter which accepts RTD signal as input signal and converter it into isolated 2 channels DC output signal.

- * linearizer, burn-out function,
- * Base type with easy maintenance and high density mounting rate,
- * Isolation between input and output and between output 1 and output 2,
- * Embedded fuse on power line,

SPECIFICATIONS

ITEMS	DESCRIPTIONS		
INPUT	Pt 100Ω 3-Wire (Over 50deg) Adjustment needed for 2wire Bulb Permissible resistance of cable less than 10Ω		
SUPPLY CURRENT TO Pt BULB	DC 2mA		
BURN - OUT	Up scale		
OUTPUT	DC Current or DC Voltage signal		
ACCURACY	±0.15% Max.		
TEMP. COEFFICIENT	±0.02% / °C		
RESPONSE TIME	Less than 50msec (0~90%)		
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V		
DIELECTRIC - STRENGTH	Input - Power	AC 1,500V	1 Minute
	Input - Output1 - Output2	AC 1,500V	
	Output1 - Output2	AC 500V	
POWER SUPPLY	DC 24V ±10%		
POWER CONSUMPTION	Less than 50mA		
POWER FUSE	2.2Ω fusible resistor		
AMBIENT - TEMP	0 ~ +50°C		
HUMIDITY	45 ~ 85% RH (no condensation)		
COLOR	Black		
WEIGHT	About 100g		
DIMENSION	W18 X H62.5 X D88mm		

ORDERING CODE

MODEL : DC2002 - [] [] [] - []

- INPUT SIGNAL
 - 1. Pt 100Ω 3-Wire
 - 2. JPt 100Ω 3-Wire
- OUTPUT1 SIGNAL
 - C. 0~1V DC
 - D. 0~5V DC
 - E. 0~10V DC
 - F. 1~5V DC
 - 7. 4~20mA DC (Option)
- OUTPUT2 SIGNAL
 - C. 0~1V DC
 - D. 0~5V DC
 - E. 0~10V DC
 - F. 1~5V DC
 - 7. 4~20mA DC
 - N. None
- BURN OUT
 - U. Up scale

* Please Specify the Input Range When you Order.

STANDARD INPUT RANGE

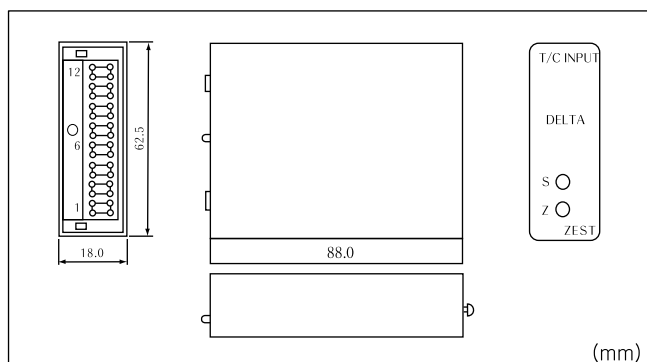
(UNIT : °C)

INPUT	RANGE
Pt 100Ω	0~50, 0~100, 0~150, 0~200, 0~250, 0~300, 0~400 0~500, -20 ~ +80, -50 ~ +50, -50 ~ +150, 50~100 50~150, 100~200, 100~300, 200~400

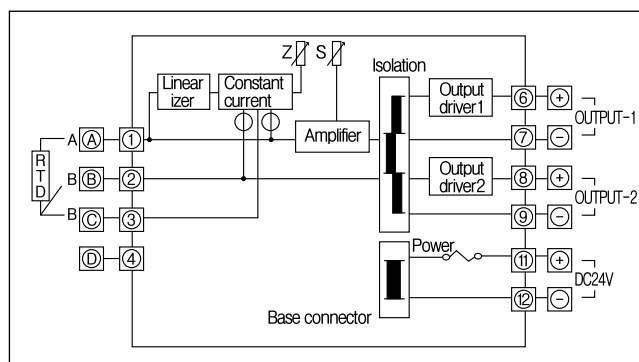
OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 350Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

DIMENSION



BLOCK DIAGRAM



General Specifications

DC SIGNAL INPUT MODULE

直流入力 MODULE



DC2003 DC signal input module is a high accuracy converter which accepts DC signal and converts it into isolated 2 channels DC output signal.

- * Base type with easy maintenance and high density mounting rate.
- * Isolation between input and output and between output 1 and output 2.
- * Embedded fuse on power line.

SPECIFICATIONS

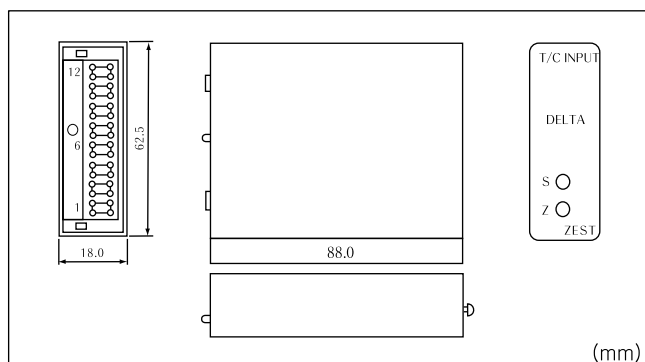
ITEMS	DESCRIPTIONS
INPUT	DC signals (DC Current or DC Voltage Signal)
INPUT IMPEDANCE	DC 4 ~ 20 mA : 250Ω DC Voltage : 1MΩ or more
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.1% Max.
TEMP. COEFFICIENT	±0.01% / °C
RESPONSE TIME	Less than 50msec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output1- Output2 AC 1,500V
	Output1 - Output2 AC 500V
POWER SUPPLY	DC 24V ±10%
POWER CONSUMPTION	Less than 50mA
POWER FUSE	2.2Ω fusible resistor
AMBIENT - TEMP	0 ~ +50°C
HUMIDITY	45 ~ 85% RH (no condensation)
COLOR	Black
WEIGHT	About 100g
DIMENSION	W18 X H62.5 X D88mm

* Note : High speed response type the ordering code is "H"

OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 350Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

DIMENSION



ORDERING CODE

MODEL : DC2003 - [] [] [] - []

INPUT SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
- 7. 4~20mA DC
- 0. Other

OUTPUT1 SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
- 7. 4~20mA DC (Option)

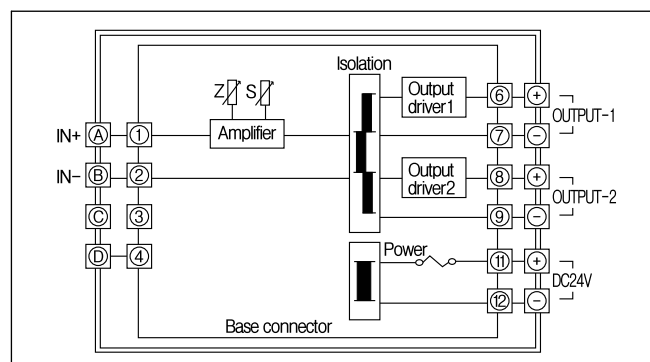
OUTPUT2 SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
- 7. 4~20mA DC
- N. None

BLANK : General type

- H. High speed type (1msec)

BLOCK DIAGRAM



General Specifications

POWER DISTRIBUTOR MODULE

電送器用 MODULE



DC2004 Power Distributor module is a high accuracy converter which provides to 2 wire transmitter with power. At the same, it outputs the 2 wire transmitter with power as isolated 2 channels DC Voltage and current.

- * Base type with easy maintenance and high density mounting rate.
- * Isolation between input and output and between output 1 and output 2.
- * Embedded fuse on power line.

SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT IMPEDANCE	250Ω
OUTPUT RATING SUPPLY TO XTR	DC 24V 30 mA (Ripple : Less than 0.1V p-p)
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.1% of span
TEMP. COEFFICIENT	±0.02% / °C
RESPONSE TIME	Less than 50msec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output1 - Output2 AC 1,500V
	Output1 - Output2 AC 500V
	1 Minute
POWER SUPPLY	DC 24V ±10%
POWER CONSUMPTION	Less than 70mA
POWER FUSE	2.2Ω fusible resistor
AMBIENT - TEMP	0 ~ 50°C
HUMIDITY	45 ~ 85% RH (no condensation)
COLOR	Black
WEIGHT	About 100g
DIMENSION	W18 X H62.5 X D88mm

ORDERING CODE

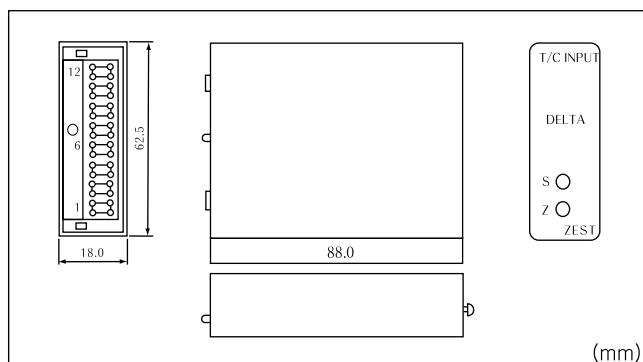
MODEL : DC2004 -

- INPUT SIGNAL _____
7. 4~20mA DC 2Wire (DC24V)
- OUTPUT1 SIGNAL _____
F. 1~5V DC
- OUTPUT2 SIGNAL _____
F. 1~5V DC
7. 4~20mA DC
N. None

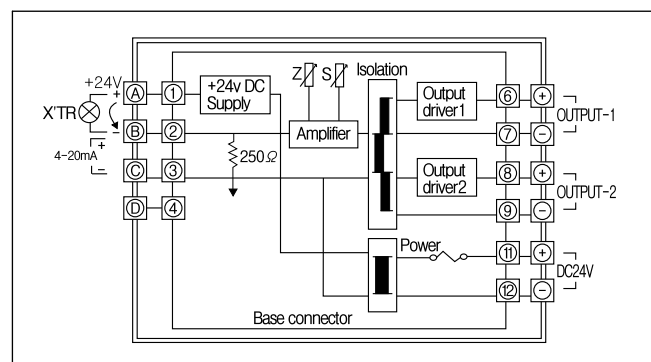
OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 350Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

DIMENSION



BLOCK DIAGRAM



General Specifications

POTENTIOMETER MODULE

可變抵抗 MODULE



DC2005 Potentiometer module is a high accuracy converter which accepts 3-wire potentiometers resistance(100Ω ~ 10KΩ) into isolated 2 channels DC output signal.

- * Base type with easy maintenance and high density mounting rate.
- * Isolation between input and output and between output 1 and output 2.
- * Embedded fuse on power line.

SPECIFICATIONS

ITEMS	DESCRIPTIONS		
INPUT	Potentiometer (100Ω ~ 10KΩ)		
SENSOR CURRENT	About DC 1mA		
MAX. LEAD RESISTANCE	Less than 10Ω		
OUTPUT	DC Current or DC Voltage signal		
ACCURACY	±0.15% of span		
TEMP. COEFFICIENT	±0.02% / °C		
RESPONSE TIME	Less than 50msec (0~90%)		
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V		
DIELECTRIC - STRENGTH	Input - Power	AC 1,500V	1 Minute
	Input - Output1 - Output2	AC 1,500V	
	Output1 - Output2	AC 500V	
POWER SUPPLY	DC 24V ±10%		
POWER CONSUMPTION	Less than 50mA		
POWER FUSE	2,2Ω fusible resistor		
AMBIENT - TEMP	0 ~ 50°C		
HUMIDITY	45 ~ 85% RH (no condensation)		
COLOR	Black		
WEIGHT	About 100g		
DIMENSION	W18 X H62,5 X D88mm		

ORDERING CODE

MODEL : DC2005 -

• INPUT SIGNAL
Potentiometer 100Ω ~ 10KΩ

• OUTPUT1 SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC

• OUTPUT2 SIGNAL

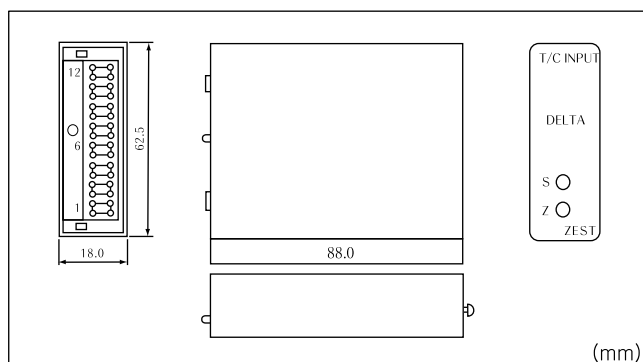
- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
- 7. 4~20mA DC
- N. None

* Please Specify the Input Range When you Order.

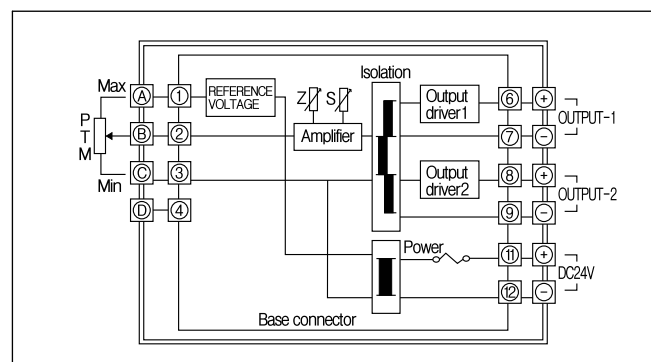
OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 350Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

DIMENSION



BLOCK DIAGRAM



General Specifications

AC CURRENT TRANSDUCER MODULE 交流電流 MODULE



DC2006 AC Current Transducer modules has alternating sinusoidal current as an input, and then calculates as average value and converts it into DC signal proportional to an effective value of input.

- * Base type with easy maintenance and high density mounting rate.
- * Isolation between input and output and between output 1 and output 2.
- * Embedded fuse on power line.

SPECIFICATIONS

ITEMS	DESCRIPTIONS	
INPUT LOSS	Less than 0,5A	
OVER - INPUT	200% 1minute	
OUTPUT	DC Current or DC Voltage signal	
ACCURACY	±0,3% of span	
TEMP. COEFFICIENT	±0,02% / °C	
RESPONSE TIME	Less than 70msec (0~90%)	
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V	
DIELECTRIC - STRENGTH	Input - Power AC 1,500V	1 Minute
	Input - Output1 - Output2 AC 1,500V	
	Output1 - Output2 AC 500V	
POWER SUPPLY	DC 24V ±10%	
POWER CONSUMPTION	Less than 50mA	
POWER FUSE	2,2Ω fusible resistor	
AMBIENT - TEMP	0 ~ 50°C	
HUMIDITY	45 ~ 85% RH (no condensation)	
COLOR	Black	
WEIGHT	About 100g	
DIMENSION	W18 X H62,5 X D88mm	

ORDERING CODE

MODEL : DC2006 -

• INPUT SIGNAL

1. AC 0~1A
2. AC 0~5A
3. Other

• OUTPUT1 SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC

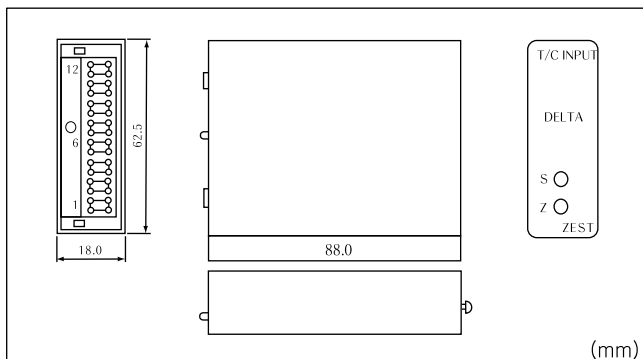
• OUTPUT2 SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
- G. 4~20mA DC
- N. None

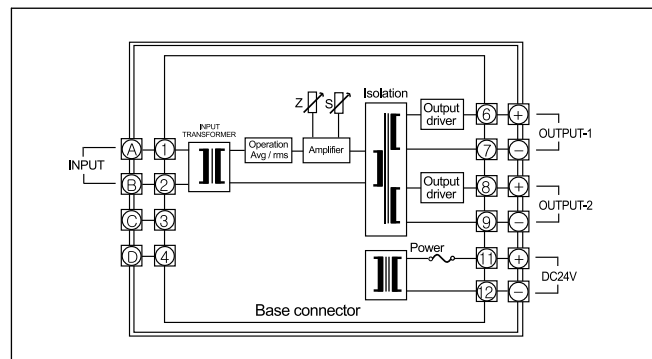
■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 350Ω
DC 1~5V	More than 2,5KΩ
DC 0~10V	More than 5KΩ

DIMENSION



BLOCK DIAGRAM



General Specifications

AC VOLTAGE TRANSDUCER MODULE 交流電壓 MODULE



DC2007 AC Voltage Transducer modules has alternating sinusoidal voltage as an input, and then calculates as average value and converts it into DC signal proportional to an effective value of input.

- * Base type with easy maintenance and high density mounting rate.
- * Isolation between input and output and between output 1 and output 2.
- * Embedded fuse on power line.

SPECIFICATIONS

ITEMS	DESCRIPTIONS	
INPUT LOSS	Less than 0.5A	
OVER - INPUT	Continuous : 120% of rated input value	
OUTPUT	DC Current or DC Voltage signal	
ACCURACY	±0.3% of span	
TEMP. COEFFICIENT	±0.02% / °C	
RESPONSE TIME	Less than 70msec (0~90%)	
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V	
DIELECTRIC - STRENGTH	Input - Power AC 1,500V	1 Minute
	Input - Output1 - Output2 AC 1,500V	
	Output1 - Output2 AC 500V	
POWER SUPPLY	DC 24V ±10%	
POWER CONSUMPTION	Less than 50mA	
POWER FUSE	2.2Ω fusible resistor	
AMBIENT - TEMP	0 ~ 50°C	
HUMIDITY	45 ~ 85% RH (no condensation)	
COLOR	Black	
WEIGHT	About 100g	
DIMENSION	W18 X H62.5 X D88mm	

ORDERING CODE

MODEL : DC2007 -

• INPUT SIGNAL

1. AC 0~110V
2. AC 0~150V
3. Other

• OUTPUT1 SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC

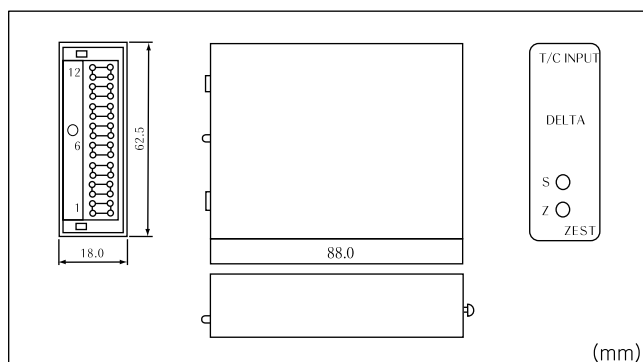
• OUTPUT2 SIGNAL

- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
7. 4~20mA DC
- N. None

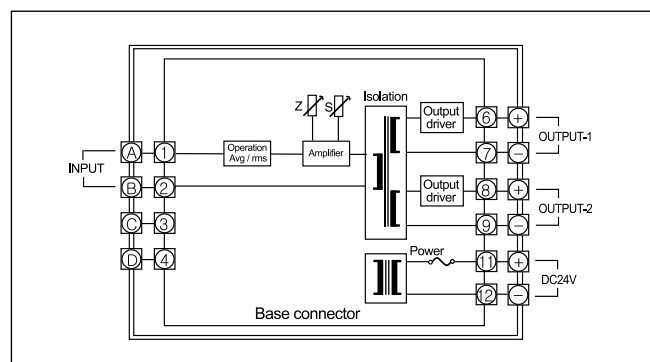
■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 350Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

DIMENSION



BLOCK DIAGRAM



General Specifications

19 INCH STD MODULE MOUNTING FRAME DIMENSION 8/16 CHANNEL

