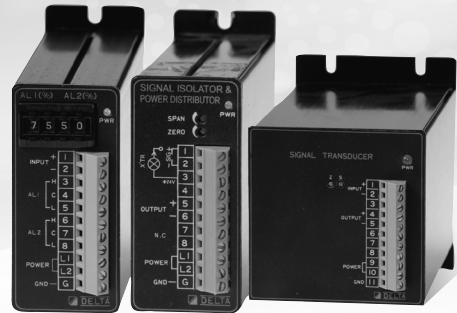


# WALL MOUNTING TYPE CONVERTER (10OUTPUT)

DS - SERIES

## ■ FEATURE

- 1 Isolated output
- Actualization of high accuracy
- AC110V, AC220V Power supply
- Improvement on reliability by hybrid package



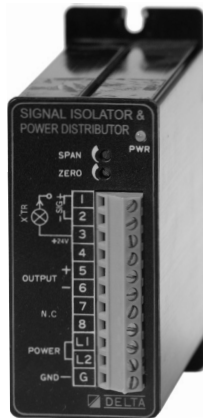
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# General Specifications

## SIGNAL ISOLATOR & POWER DISTRIBUTOR

### 信號絕緣 變換器 & 傳送器用 電源



This instrument is a high and accurate converter that has provides all transmitters such as pressure transmitter, flow and overvoltage protection circuit inside with power supply and signal conversion. It is totally isolated between input signal from transmitter and output signal of a converter so it does not need extra isolator when the loop is constructed.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
OUTPUT RATING SUPPLY TO X'TR	DC 24V 30mA Max. Riffle : less than 0.1Vp-p
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.1% Max.
TEMP. COEFFICIENT	±0.015% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V 1 Minute
POWER SUPPLY	AC 110 / 220V ±10%, 50/60Hz
	ISOLATOR : 3.5VA POWER DISTRIBUTOR : 4VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condenstation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSIP -

#### • INPUT SIGNAL

4~20mA DC (2-Wire DC24V)

#### • OUTPUT SIGNAL

- |                                      |                  |
|--------------------------------------|------------------|
| 1. 0~1mA DC                          | A. 0~10mV DC     |
| 2. 0~10mA DC                         | B. 0~100mV DC    |
| 3. 0~16mA DC                         | C. 0~1V DC       |
| 4. 0~20mA DC                         | D. 0~5V DC       |
| 5. 1~5mA DC                          | E. 0~10V DC      |
| 6. 2~10mA DC                         | F. 1~5V DC       |
| 7. 4~20mA DC                         | Z. Other Voltage |
| 0. Other Current<br>(Less than 20mA) | (Less than 12V)  |

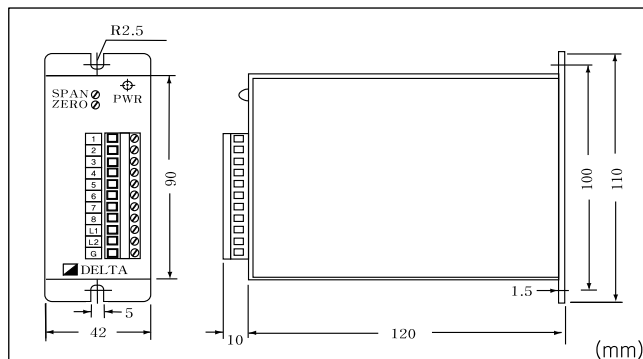
#### • POWER SUPPLY

- |            |            |
|------------|------------|
| 1. AC 110V | 2. AC 220V |
|------------|------------|

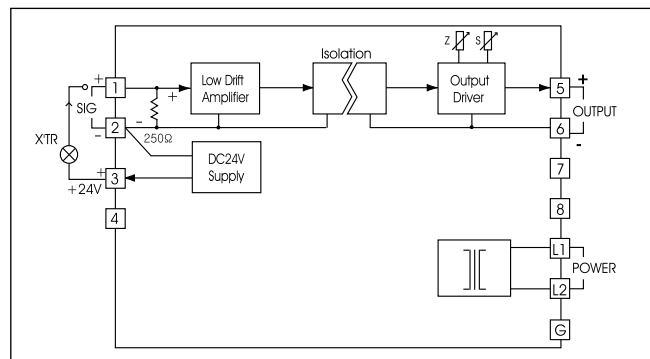
### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION

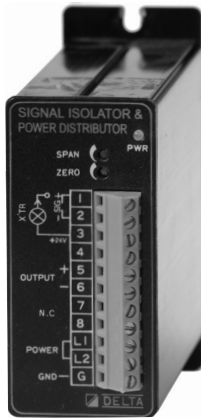


### BLOCK DIAGRAM



# General Specifications

## R.T.D CONVERTER 測溫抵抗體 變換器



This instrument is a high and accurate converter that receives RTD as an input signal then converts resistance variations into DC voltage and DC current output signal following the temperature. Also the feed back circuit developed by our company actualized high accurate linearization and compensation of line resistance.

### 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	Upper Limit
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.2% Max.
TEMP COEFFICIENT	±0.02% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V 1 Minute
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSRB -

#### • INPUT SIGNAL

1. JPt 100Ω (JIS) 3-Wire
2. Pt 100Ω (DIN) 3-Wire
3. Others

#### • OUTPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |

#### • POWER SUPPLY

1. AC 110V
2. AC 220V

#### • BURN OUT

- U. Up scale

\* Please Specify the Input Range When you Order.

### ■ STANDARD INPUT RANGE

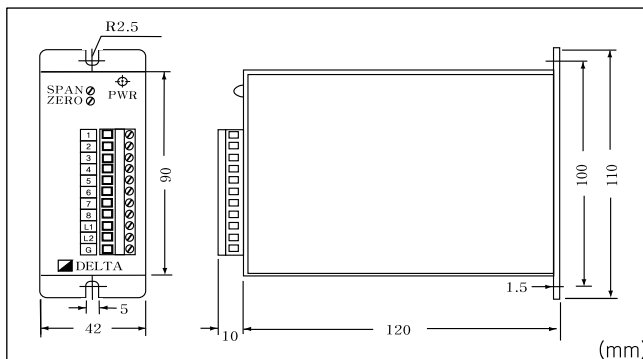
(UNIT : °C)

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

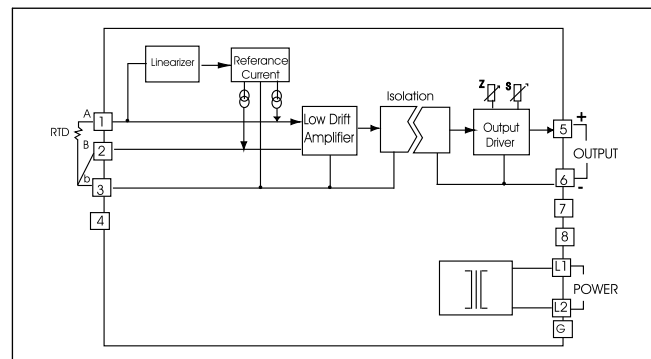
### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



### BLOCK DIAGRAM



# General Specifications

## THERMOCOUPLE CONVERTER

### 熱電對 變換器



This instrument is a high accurate converter that receives various T/C as an input signal and converts the TC temperature into DC current and DC voltage through the temperature compensation and linear circuit that correspond to the various T/C. Input, output and power have isolation circuit that is separated from each other.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT	Thermocouple ( K, J, T, E, B, R, S )
BURN - OUT	Upper Limit
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.5% Max.
TEMP. COEFFICIENT	±0.02% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power
	Input - Output
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 4VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F )
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSTC -

#### • INPUT SIGNAL

- |           |                       |
|-----------|-----------------------|
| 1. K(CA)  | 5. B                  |
| 2. J(IC)  | 6. S                  |
| 3. T(CC)  | 7. R                  |
| 4. E(CRC) | 8. Other Thermocouple |

#### • OUTPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |

#### • POWER SUPPLY

- |            |            |
|------------|------------|
| 1. AC 110V | 2. AC 220V |
|------------|------------|

#### • BURN OUT

- U. Up scale

\* Please Specify the Input Range When you Order.

### ■ STANDARD INPUT RANGE

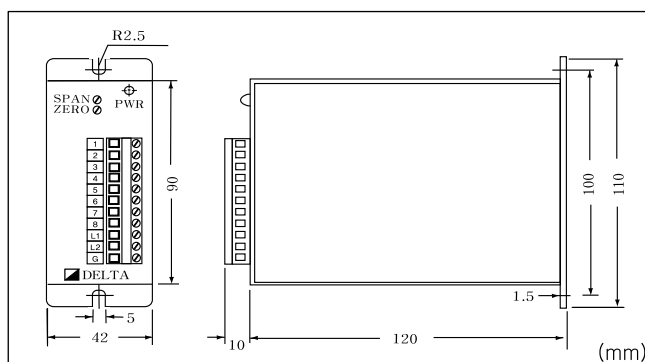
(UNIT : °C)

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

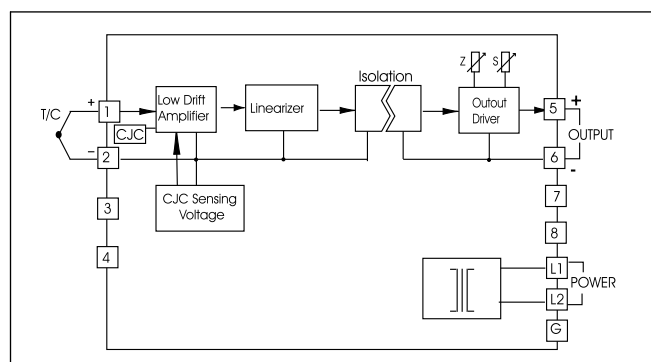
### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



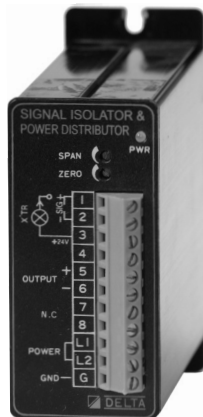
### BLOCK DIAGRAM



# General Specifications

## POTENTIOMETER CONVERTER

### 可變抵抗變換器



This instrument is a high and accurate converter that receives resistance signals of 3 wires potentiometer (100Ω ~ 100KΩ) and converts them into DC voltage and current. Especially, it is widely used for float type water level detector, and mutual interference by Zero adjustment and Span adjustment is hardly occurred.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT	Potentiometer ( from 100Ω ~ 100KΩ )
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.2% Max.
TEMP. COEFFICIENT	±0.015% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power
	Input - Output
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F )
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DS-PC -

#### • INPUT SIGNAL

POTENTIOMETER ( Total resistance 100Ω ~ 100KΩ )

#### • OUTPUT1 SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |
|                  | (Less than 20mA) |

#### • POWER SUPPLY

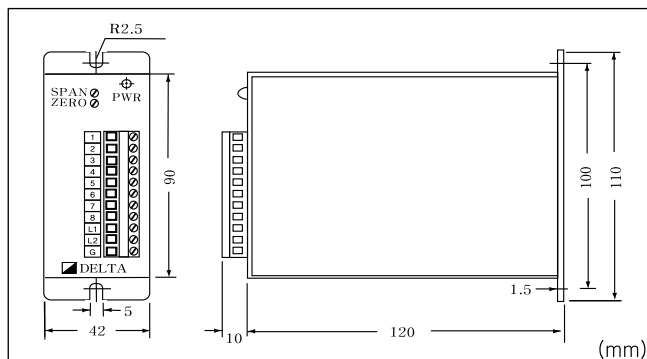
- |            |            |
|------------|------------|
| 1. AC 110V | 2. AC 220V |
|------------|------------|

\* Please Specify the Input Range When you Order.

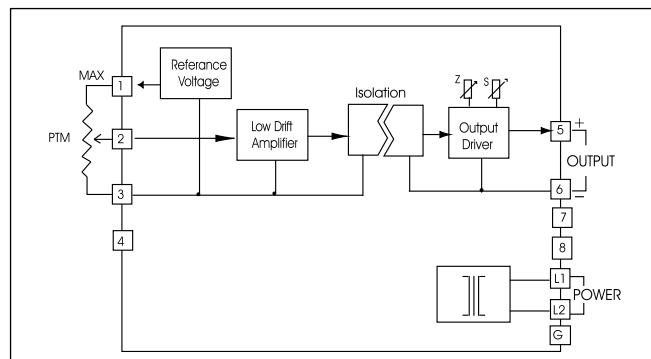
### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



### BLOCK DIAGRAM



# General Specifications

## SIGNAL ISOLATOR

### 信號絕緣 變換器



This instrument receives DC voltage and current as an input signal and provides conversion output when the input & output is separated completely. It especially selects 3ways isolation circuit of which input and output are separated by transformer and power and input/output by transformer.

It is a high and accurate converter that is suitable to protect a pulse noise and a high peak voltage demanded in a computer interface and field instruments.

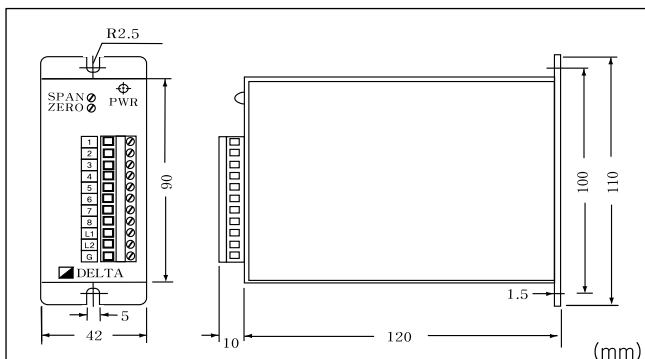
### SPECIFICATIONS

ITEMS	DESCRIPTIONS					
INPUT	DC Signal ( Current input to be combined through the application of precise resistor shunt)					
OUTPUT	DC Current or DC Voltage signal					
ACCURACY	±0.1% Max.					
TEMP. COEFFICIENT	±0.015% / °C					
RESPONSE TIME	Less than 0.5Sec (0~90%)					
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V					
DIELECTRIC - STRENGTH	<table border="1"> <tr> <td>Input - Power</td> <td>AC 1,500V</td> <td rowspan="2">1 Minute</td> </tr> <tr> <td>Input - Output</td> <td>AC 1,500V</td> </tr> </table>	Input - Power	AC 1,500V	1 Minute	Input - Output	AC 1,500V
Input - Power	AC 1,500V	1 Minute				
Input - Output	AC 1,500V					
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA					
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)					
HUMIDITY	Less than 90% RH ( no condensation )					
CASE MATERIAL	AL					
COLOR	Black					
WEIGHT	About 500g					
DIMENSION	W42 X H90 X D120mm					
MOUNTING	WALL					

### OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



### ORDERING CODE

MODEL : DSSI -

#### INPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current |                  |

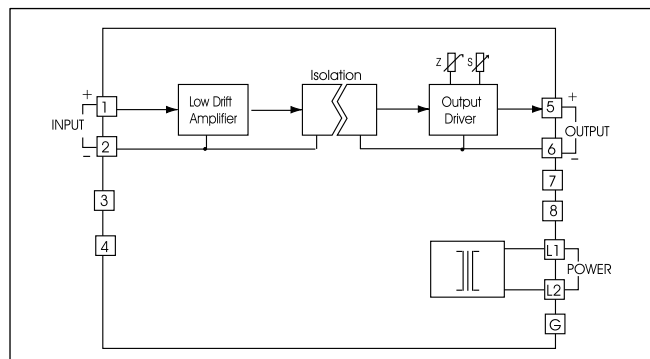
#### OUTPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |

#### POWER SUPPLY

- |            |            |
|------------|------------|
| 1. AC 110V | 2. AC 220V |
|------------|------------|

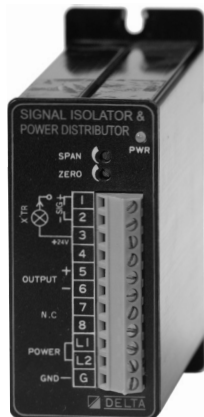
### BLOCK DIAGRAM



# General Specifications

## REVERSE CONVERTER

### 逆信號 變換器



This instrument is a high and accurate converter that has DC voltage and current as an input signal.

It is possible to design loop freely and synthetically using input and output of all instruments.

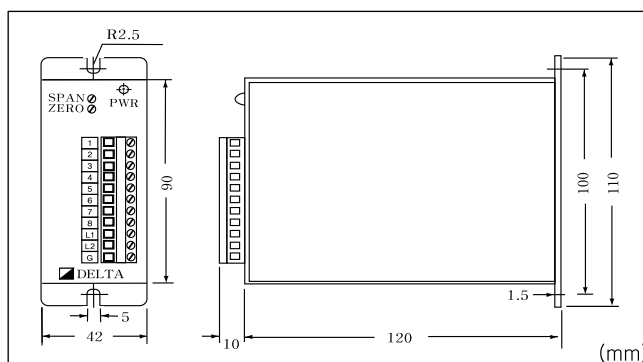
### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT	DC Current or DC Voltage signal
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.1% Max.
TEMP. COEFFICIENT	±0.015% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V
	1 Minute
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



### ORDERING CODE

MODEL : DSRC -

#### INPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current |                  |

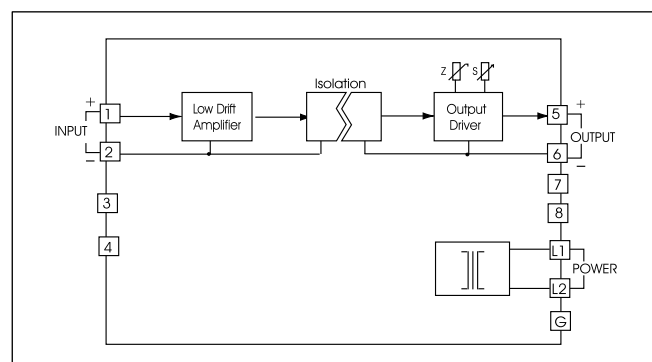
#### OUTPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 1~0mA DC      | A. 10~0mV DC     |
| 2. 10~0mA DC     | B. 100~0mV DC    |
| 3. 16~0mA DC     | C. 1~0V DC       |
| 4. 20~0mA DC     | D. 5~0V DC       |
| 5. 5~1mA DC      | E. 10~0V DC      |
| 6. 10~2mA DC     | F. 5~1V DC       |
| 7. 20~4mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |

#### POWER SUPPLY

- |            |            |
|------------|------------|
| 1. AC 110V | 2. AC 220V |
|------------|------------|

### BLOCK DIAGRAM



# General Specifications

## STRAIN GAUGE CONVERTER

Strain gauge 變換器



This instrument converts Load cell or strain gauge as an input signal into DC voltage or current.

It actualizes a high and accurate performance that residual magnetic voltage selects constant voltage and amplifier circuit select low noise type.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
LOAD CELL TO BE COMBINED	Bridge Resistance 350Ω or more rated output Voltage 2mV/V and other
APPLIED VOLTAGE	DC 10V (Standard)
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.2% Max.
TEMP. COEFFICIENT	±0.02% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V
	1 Minute
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 4VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSLS -

#### • EXT. VOLTAGE

1. DC 5V
2. DC 10V
3. Other Voltages

#### • EXT. VOLTAGE

1. 2mV/V
2. Other

#### • OUTPUT SIGNAL

- |                                      |                  |
|--------------------------------------|------------------|
| 1. 0~1mA DC                          | A. 0~10mV DC     |
| 2. 0~10mA DC                         | B. 0~100mV DC    |
| 3. 0~16mA DC                         | C. 0~1V DC       |
| 4. 0~20mA DC                         | D. 0~5V DC       |
| 5. 1~5mA DC                          | E. 0~10V DC      |
| 6. 2~10mA DC                         | F. 1~5V DC       |
| 7. 4~20mA DC                         | Z. Other Voltage |
| 0. Other Current<br>(Less than 20mA) | (Less than 12V)  |

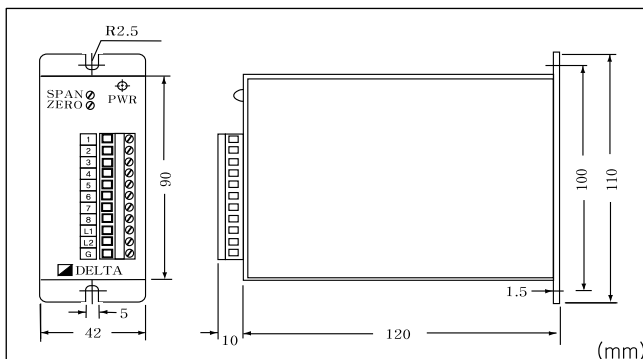
#### • POWER SUPPLY

1. AC 110V
2. AC 220V

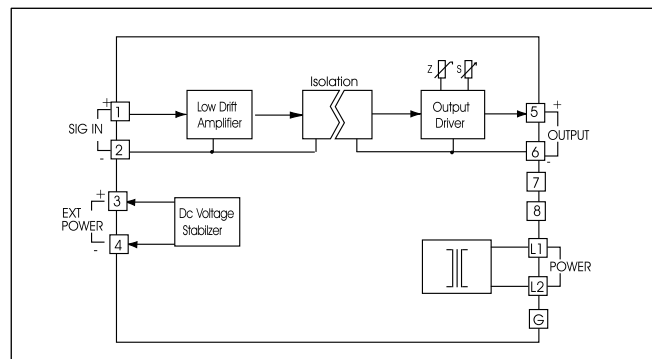
### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



### BLOCK DIAGRAM

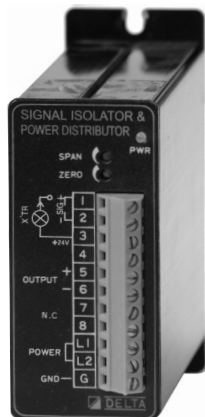




# General Specifications

## TACHOGENERATOR CONVERTER

### 回轉數 變換器



This is a high and accurate instrument that has an output signal by Techogenerator Converter as an input and converts values correspond to RPM of Tachogenerator to DC and voltage signals.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT IMPEDANCE	150KΩ or More
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.3% Max.
TEMP. COEFFICIENT	±0.02% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condenstation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSTG -

#### • INPUT SIGNAL

1. AC 0 ~ 35V (100Hz ~ 1KHz)
2. Specify Range (AC 20 ~ 150V)

#### • OUTPUT1 SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |

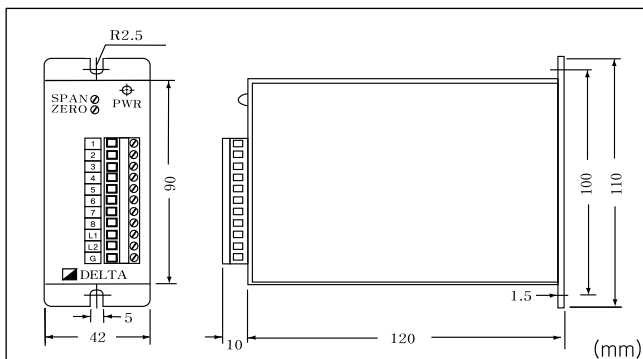
#### • POWER SUPPLY

1. AC 110V
2. AC 220V

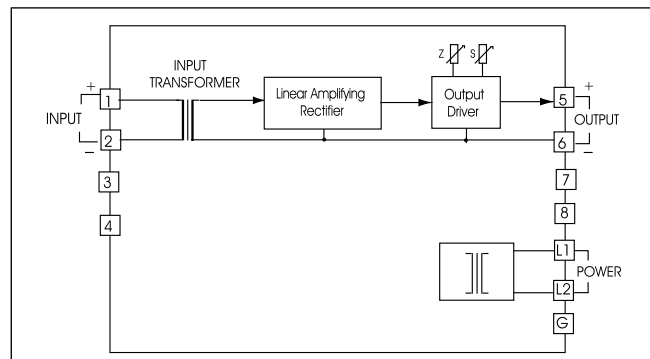
### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



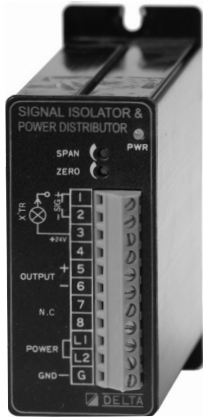
### BLOCK DIAGRAM



# General Specifications

## SIGNAL LIMITER

### 信號制限器



This converter is possible to limit output range to high/low limit 0~100% as being Input of DC voltage and current output signal. It is used in limit control system in combination with output signal of main controller.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT	DC Current or DC Voltage Signal
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.2% Max.
TEMP. COEFFICIENT	±0.015% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSSL - [ ] [ ] [ ] - [ ]

#### • SELECTING FUNCTION

1. Low Signal
2. High Signal

#### • INPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current |                  |

#### • OUTPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |

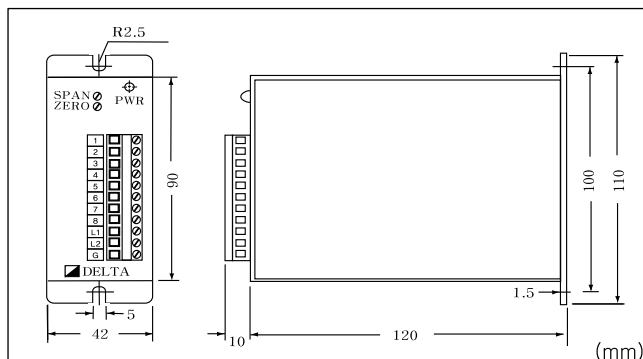
#### • POWER SUPPLY

1. AC 110V
2. AC 220V

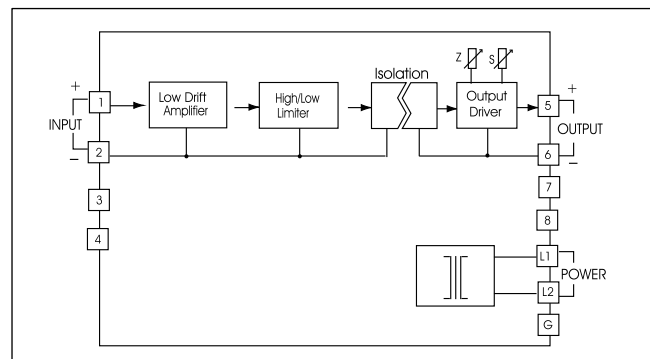
### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



### BLOCK DIAGRAM



# General Specifications

# ADDER & SUBTRACTOR 加減演算器



This converter is used for addition and subtraction process of temperature and flow, etc.

This converter completes the best system combining computer console with each instrument such as controller, recorder, and integrator according to application positions.

## SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT	DC Current(4~20mA) or DC Voltage(1~5V) Signal
OUTPUT	DC Current(4~20mA) or DC Voltage(1~5V) Signal
NUMBER OF INPUT	2
ACCURACY	±0.2% Max.
TEMP. COEFFICIENT	±0.015% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V
	1 Minute
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condenstation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

## ORDERING CODE

MODEL : DSAS -    -

### • SELECTING FUNCTION

- Adder
- Subtractor

### • INPUT SIGNAL

- 4~20mA DC
- Other Current
- 1~5V DC
- Other Voltage

### • OUTPUT SIGNAL

- 4~20mA DC
- Other Current (Less than 20mA)
- 1~5V DC
- Other Voltage (Less than 12V)

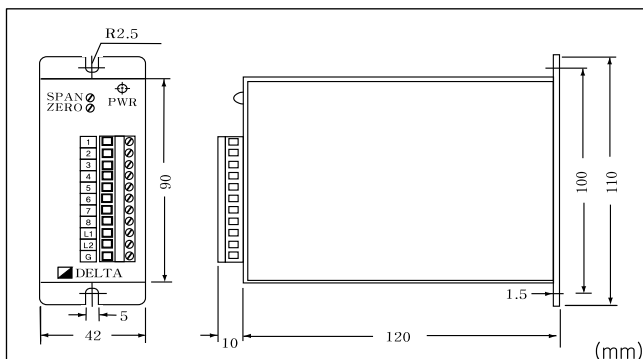
### • POWER SUPPLY

- AC 110V
- AC 220V

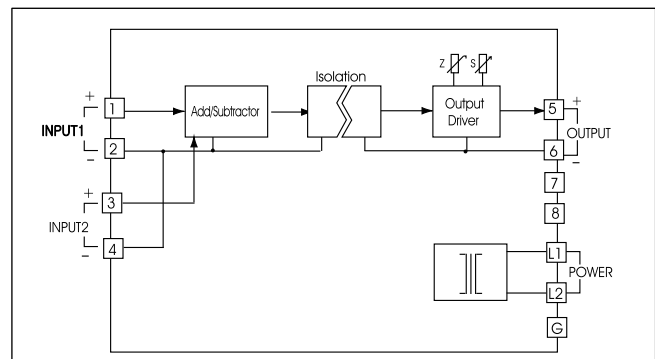
## ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

## DIMENSION



## BLOCK DIAGRAM



# General Specifications

## MANUAL SETTER

### 手動設定器



This is a manual operator that performs safe control by combination when there is no remote setting and manual function in automatic controller by setting switch.

This is a high and accurate converter that setting output is generated as DC voltage and current.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
SETTING SIGNAL	DC Current or DC Voltage Signal
SETTING	Digital switch
SETTING ACCURACY	±0.1% Max.
TEMP. COEFFICIENT	±0.015% / °C
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V 1 Minute
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSMS -

#### • OUTPUT SIGNAL

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| 1. 0~1mA DC                       | A. 0~10mV DC                     |
| 2. 0~10mA DC                      | B. 0~100mV DC                    |
| 3. 0~16mA DC                      | C. 0~1V DC                       |
| 4. 0~20mA DC                      | D. 0~5V DC                       |
| 5. 1~5mA DC                       | E. 0~10V DC                      |
| 6. 2~10mA DC                      | F. 1~5V DC                       |
| 7. 4~20mA DC                      | Z. Other Voltage (Less than 12V) |
| 0. Other Current (Less than 20mA) |                                  |

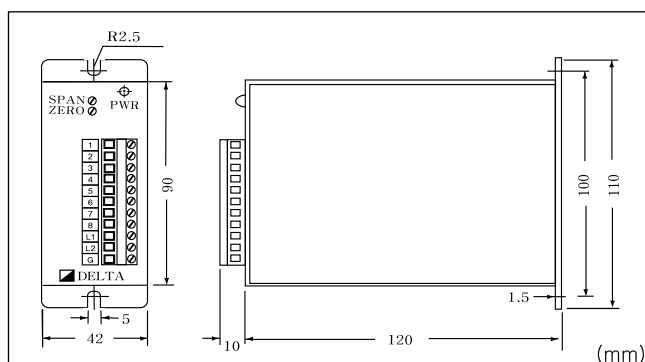
#### • POWER SUPPLY

- |            |            |
|------------|------------|
| 1. AC 110V | 2. AC 220V |
|------------|------------|

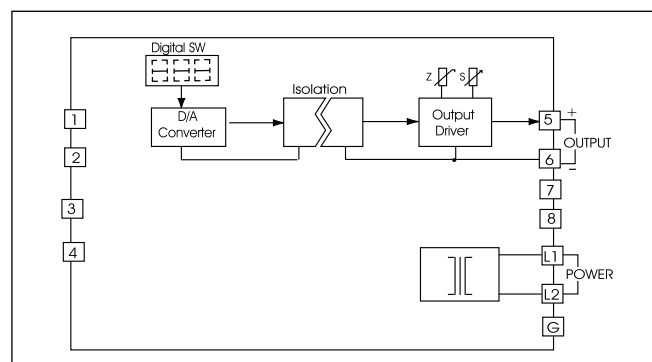
### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



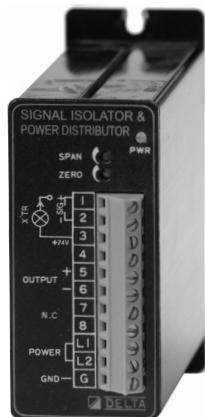
### BLOCK DIAGRAM



# General Specifications

## HIGH / LOW SETTER

### 上下限 警報器



This is a converter that receives DC voltage and current as inputs transmitted from field instrument or regulator, and then generates an alarm occurred by a point of contact output by an establishment of maximum and minimum values.

It is used for effective interlock according to the process condition.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS		
INPUT	DC Current or DC Voltage Signal		
OUTPUT	Relay Contact		
OUTPUT RATING	AC120V 1A, AC240V 0.5A, DC30V 1A		
INPUT IMPEDANCE	More than 1MΩ(DC Voltage signal)		
SETTING ACCURACY	±1% Max.		
TEMP. COEFFICIENT	±0.015% / °C		
SETTING	Digital Switch		
SETTING RANGE	0~99%		
HYSTERESIS	0.5% ~ 1%		
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V		
DIELECTRIC - STRENGTH	Input - Power	AC 1,500V	1 Minute
	Input - Output	AC 1,500V	
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA		
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)		
HUMIDITY	Less than 90% RH ( no condensation )		
CASE MATERIAL	AL		
COLOR	Black		
WEIGHT	About 500g		
DIMENSION	W42 X H90 X D120mm		
MOUNTING	WALL		

### ORDERING CODE

MODEL : DSHS -

#### • INPUT SIGNAL

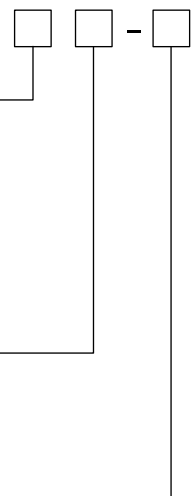
- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current |                  |

#### • OUTPUT1 SIGNAL

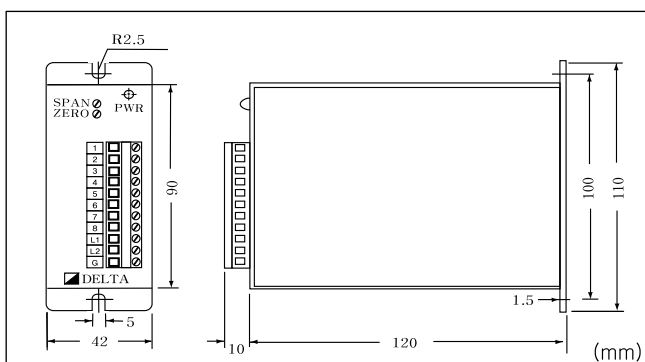
1. HH - H
2. H - L
3. L - LL

#### • POWER SUPPLY

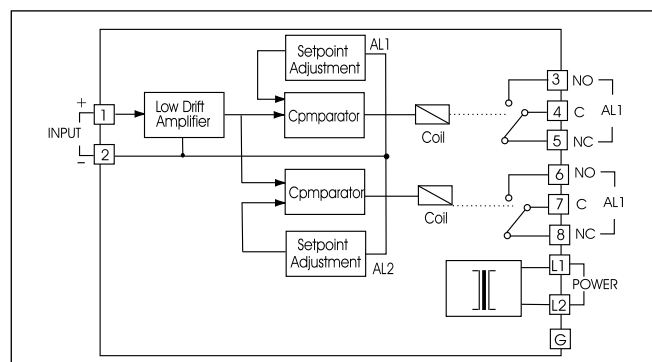
1. AC 110V
2. AC 220V



### DIMENSION



### BLOCK DIAGRAM



# General Specifications

## AC VOLTAGE TRANSDUCER

### 交流電壓 變換器



This instrument has alternating sinusoidal voltage as an input, and then calculates an average value and converts it into DC signal proportional to an effective value of input.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT LOSS	Less than 0,5VA
OVER - INPUT	200% 1 minute
OUTPUT	DC Current or DC Voltage Signal
ACCURACY	±0,3% Max.
TEMP. COEFFICIENT	±0,02% / °C
RESPONSE TIME	Less than 0,5Sec (0~90%)
RIPPLE	± 0,2% rms Max
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3,5VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSPT -

#### • INPUT SIGNAL

1. AC 0 ~ 110V
2. AC 0 ~ 150V
3. AC 0 ~ 300V
4. AC 0 ~ 600V
5. Other Voltage by specified

#### • OUTPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |
| (Less than 20mA) |                  |

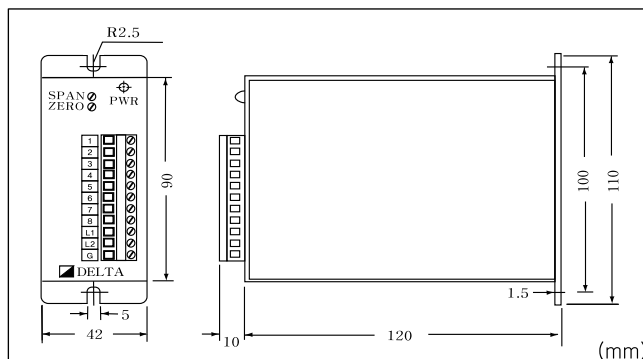
#### • POWER SUPPLY

1. AC 110V
2. AC 220V

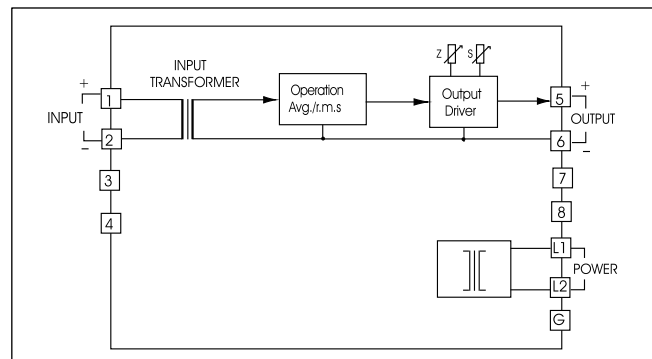
### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2,5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



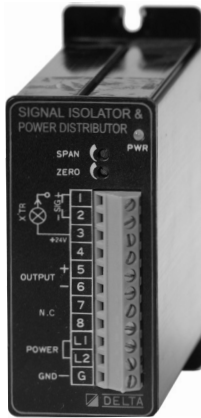
### BLOCK DIAGRAM



# General Specifications

## AC CURRENT TRANSDUCER

### 交流電流 變換器



This instrument has alternating sinusoidal current as an input, and then calculates an average value and converts it into DC signal proportional to an effective value of input.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT LOSS	Less than 0,5VA
OVER - INPUT	200% 1 minute
OUTPUT	DC Current or DC Voltage Signal
ACCURACY	$\pm 0,3\%$ Max.
TEMP. COEFFICIENT	$\pm 0,02\%$ / $^{\circ}\text{C}$
RESPONSE TIME	Less than 0,5Sec (0~90%)
RIPPLE	$\pm 0,2\%$ rms Max
INSULATION RESISTANCE	Greater than 100M $\Omega$ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V
POWER SUPPLY	AC 110 / AC 220V $\pm 10\%$ , 50/60Hz, 3,5VA
AMBIENT - TEMP	-5 ~ +55 $^{\circ}\text{C}$ ( 23 ~ 131 $^{\circ}\text{F}$ )
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSCT -

#### INPUT SIGNAL

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

#### OUTPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |
| (Less than 20mA) |                  |

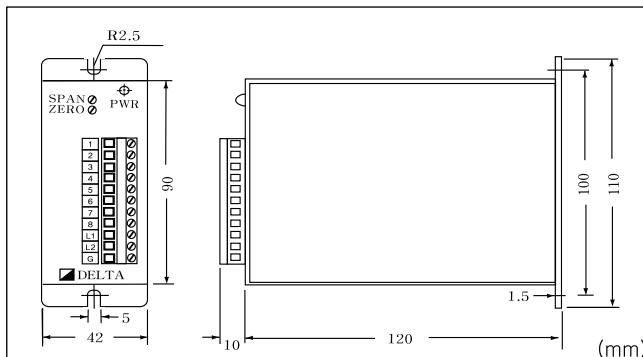
#### POWER SUPPLY

1. AC 110V
2. AC 220V

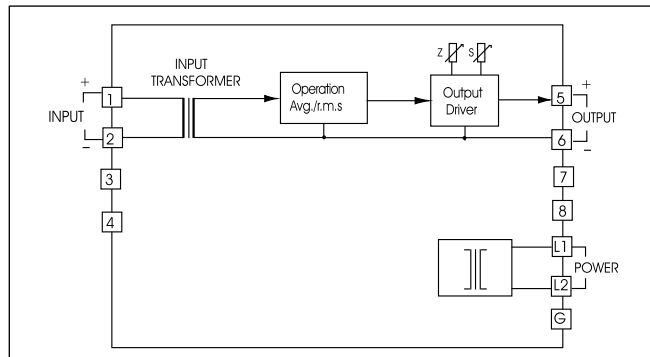
### OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600 $\Omega$
DC 1~5V	More than 2,5K $\Omega$
DC 0~10V	More than 5K $\Omega$

### DIMENSION



### BLOCK DIAGRAM



# General Specifications

## ALALOG TO PULSE CONVERTER

### 直流/PULSE 變換器



This instrument has a DC voltage and current signal that generated from electromagnetic flow meter and area type flow meter etc, as an input. Then it converts them into pulse. Input and output power select separated each isolation circuit.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS		
INPUT	DC Current or DC Voltage Signal		
OUTPUT	Open Collector, Voltage Pulse		
OUTPUT RATING	DC24V 50mA Max		
OUTPUT FREQUENCY	Less than 1KHz		
ACCURACY	±0.3% Max.		
TEMP. COEFFICIENT	±0.02% / °C		
RESPONSE TIME	Less than 0.5Sec (0~90%)		
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V		
DIELECTRIC - STRENGTH	Input - Power	AC 1,500V	1 Minute
	Input - Output	AC 1,500V	
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA		
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)		
HUMIDITY	Less than 90% RH ( no condensation )		
CASE MATERIAL	AL		
COLOR	Black		
WEIGHT	About 500g		
DIMENSION	W42 X H90 X D120mm		
MOUNTING	WALL		

### ORDERING CODE

MODEL : DSAP -

#### • INPUT SIGNAL

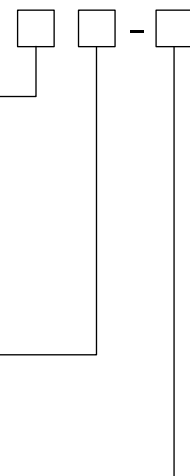
- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current |                  |

#### • OUTPUT SIGNAL

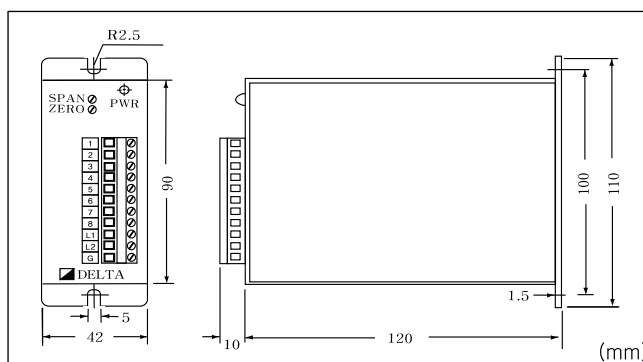
1. Open Collector
2. Voltage Pulse

#### • POWER SUPPLY

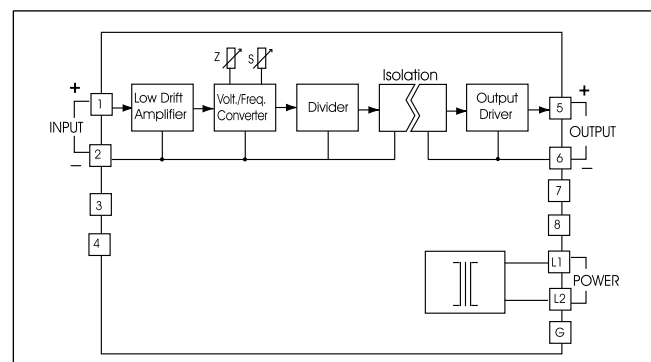
1. AC 110V
2. AC 220V



### DIMENSION



### BLOCK DIAGRAM





# General Specifications

## PULSE TO ANALOG CONVERTER PULSE/直流 變換器



This instrument has various pulse signals as an input then converts it into DC current and voltage signals to output. Also it is a converter that an input, an output and a power are isolated electrically.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT LOSS	Dry Contact, Open Collector, Voltage Pulse
DETECTING CURRENT	30mA Max, DC12V
OUTPUT	DC Current or DC Voltage Signal
ACCURACY	±0.3% Max.
TEMP. COEFFICIENT	±0.02% / °C
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Power AC 1,500V
	Input - Output AC 1,500V
POWER SUPPLY	AC 110 / AC 220V ±10%, 50/60Hz, 3.5VA
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	AL
COLOR	Black
WEIGHT	About 500g
DIMENSION	W42 X H90 X D120mm
MOUNTING	WALL

### ORDERING CODE

MODEL : DSPA -

#### • INPUT SIGNAL

1. Dry Contact (Max, 130pulse / 1min)
2. Open Collector (Max, Frequency 10KHz)
3. Voltage Pulse (Max, Frequency 10KHz)
4. Others

#### • OUTPUT SIGNAL

- |                  |                  |
|------------------|------------------|
| 1. 0~1mA DC      | A. 0~10mV DC     |
| 2. 0~10mA DC     | B. 0~100mV DC    |
| 3. 0~16mA DC     | C. 0~1V DC       |
| 4. 0~20mA DC     | D. 0~5V DC       |
| 5. 1~5mA DC      | E. 0~10V DC      |
| 6. 2~10mA DC     | F. 1~5V DC       |
| 7. 4~20mA DC     | Z. Other Voltage |
| 0. Other Current | (Less than 12V)  |
| (Less than 20mA) |                  |

#### • POWER SUPPLY

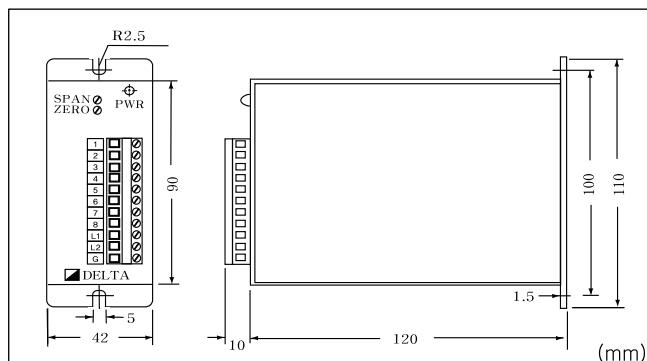
1. AC 110V
2. AC 220V

\* Please Specify the Input Range When you Order.

### ■ OUTPUT LOAD RESISTANCE

OUTPUT SIGNAL	LOAD RESISTANCE
DC 4~20mA	Less than 600Ω
DC 1~5V	More than 2.5KΩ
DC 0~10V	More than 5KΩ

### DIMENSION



### BLOCK DIAGRAM

