

# SLIM TYPE SIGNAL CONVERTER

## ■ FEATURE

- 1 Isolated output / 2 Isolated output(DL2IP)
- Actualization of high accuracy
- DC24V Power supply
- High-density mounting
- CE Approved

DL2 - SERIES



## Contents

	ITEMS		MODEL	PAGE
1	SLIM TYPE SIGNAL ISOLATOR & POWER DISTRIBUTOR (2OUTPUT)	信號絕緣 變換器 & 傳送器用電源(2出力)	DL2IP	142
2	SLIM TYPE R.T.D CONVERTER	測溫抵抗體 變換器	DL2RB	143
3	SLIM TYPE THERMOCOUPLE CONVERTER	熱電對 變換器	DL2TC	144
4	SLIM TYPE POTENTIOMETER CONVERTER	可變抵抗 變換器	DL2PC	145
5	SLIM TYPE SIGNAL ISOLATOR	信號絕緣 變換器	DL2SI	146
6	SLIM TYPE 2WIRE TRANSMITTER	2線式 信號 變換器	DL2LP	147

# General Specifications

## SLIM TYPE SIGNAL ISOLATOR & POWER DISTRIBUTOR (2OUTPUT) 信號絕緣 變換器 & 傳送器用 電源(2出力)



This instrument is a slim typed of high accuracy Signal Converter with power supply that supplies DC power to 2wire transmitters and derives 4~20mA of DC signal from the DC power as an input, and then outputs the isolated DC voltage & DC current. It uses DIN Rail Mounting.

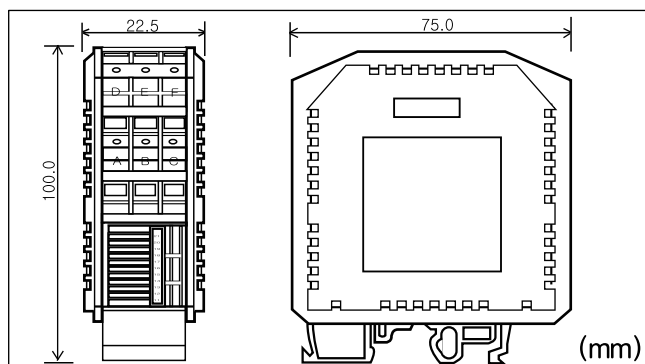
### SPECIFICATIONS

ITEMS	DESCRIPTIONS	
OUTPUT RATING SUPPLY TO X' TR	DC 24V 30mA Max, (DC19~24V)	
OUTPUT	DC Current or DC Voltage signal	
INPUT IMPEDANCE	250Ω	
ACCURACY	±0.1% Max.	
TEMP. COEFFICIENT	±0.015% / °C	
RESPONSE TIME	Less than 200msec (0~90%)	
ISOLATION	Input - Output1 - Output2 - Power	
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V	
DIELECTRIC - STRENGTH	Power - Input, Output1, 2	AC 1,500V
	Input-Output1, 2	AC 1,500V
	Output1 - Output2	AC 1,000V
POWER SUPPLY	DC 24V ± 10%	
POWER CONSUMPTION	Less than 70mA	
POWER FUSE	2.2Ω Fusible Resistor	
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)	
HUMIDITY	Less than 90% RH ( no condensation )	
CASE MATERIAL	Frame - resistant resin	
COLOR	Gray	
WEIGHT	About 100g	
DIMENSION	W22.5 X H75 X D100mm	
MOUNTING	DIN RAIL	

### OUTPUT SPECIFICATIONS

OUTPUT SIGNAL	OUTPUT IMPECANCE	LOAD RESISTANCE
DC 4 ~ 20mA	More than 5MΩ	0 ~ 500Ω
DC 0 ~ 10mV	approx 5Ω	More than 10kΩ
DC 0 ~ 100mV	approx 50Ω	More than 100kΩ
DC 0 ~ 1V	Less than 0.1Ω	More than 500Ω
DC 0 ~ 10V	Less than 0.1Ω	More than 5kΩ
DC 0 ~ 5V	Less than 0.1Ω	More than 2.5kΩ
DC 1 ~ 5V	Less than 0.1Ω	More than 2.5kΩ

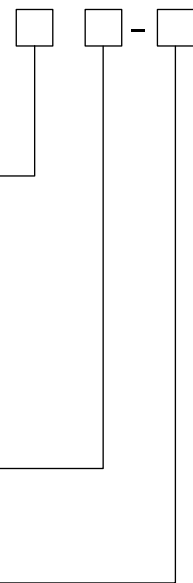
### DIMENSION



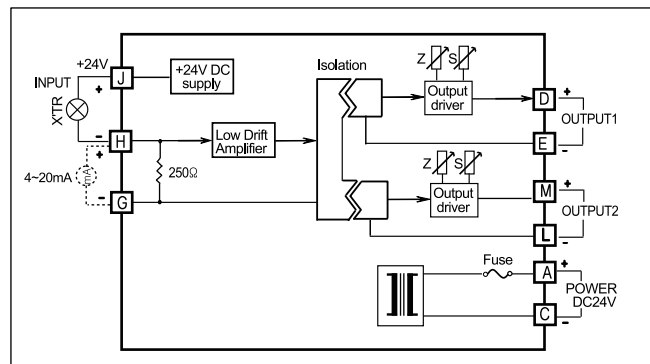
### ORDERING CODE

MODEL : DL2IP -

- INPUT SIGNAL
  - 4~20mA DC (2-Wire DC24V)
- OUTPUT1 SIGNAL
  - A. 0~10mV DC
  - B. 0~100mV DC
  - C. 0~1V DC
  - D. 0~5V DC
  - E. 0~10V DC
  - F. 1~5V DC
  - Z. Other Voltage (Less than 12V)
  - 4. 0~20mA DC
  - 7. 4~20mA DC
  - 0. Other Current (Less than 20mA)
- OUTPUT2 SIGNAL
  - F. 1~5V DC
  - N. None
- POWER SUPPLY
  - 1. DC 24V



### BLOCK DIAGRAM



# General Specifications

## SLIM TYPE R.T.D CONVERTER

### 測溫抵抗體 變換器



This instrument is a slim typed RTD Converter with high accuracy that detects the variation of resistance with RTD and outputs the isolated DC voltage and current signals.  
It uses DIN Rail Mounting.

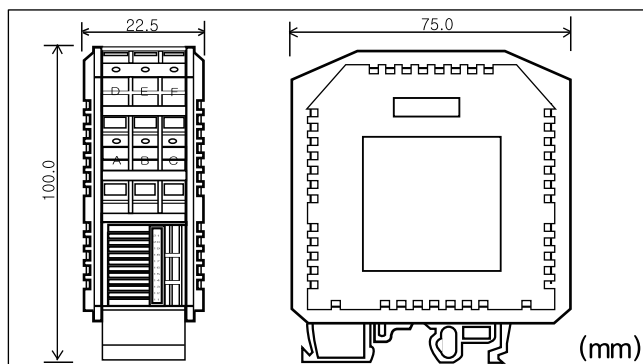
### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT	Pt 100Ω 3-Wire
SUPPLY CURRENT TO Pt BULB	DC 2mA
OUTPUT	DC Current or DC Voltage signal
BURN - OUT	Up scale
ACCURACY	±0.2% Full scale
TEMP. COEFFICIENT	±0.02% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
ZERO/SPAN Adjustment	±10% of Full span
ISOLATION	Input - Output - Power
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Output -Power AC 1,500V 1 Minute
POWER SUPPLY	DC 24V ± 10%
POWER CONSUMPTION	Less than 55mA
POWER FUSE	2.2Q Fusible Resistor
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	Frame - rsistant resin
COLOR	Gray
WEIGHT	About 100g
DIMENSION	W22.5 X H75 X D100mm
MOUNTING	DIN RAIL

### INPUT RANGE

INPUT SIGNAL	INPUT RANGE
JPt100	-200 ~ 600°C
Pt100	-200 ~ 850°C

### DIMENSION



### ORDERING CODE

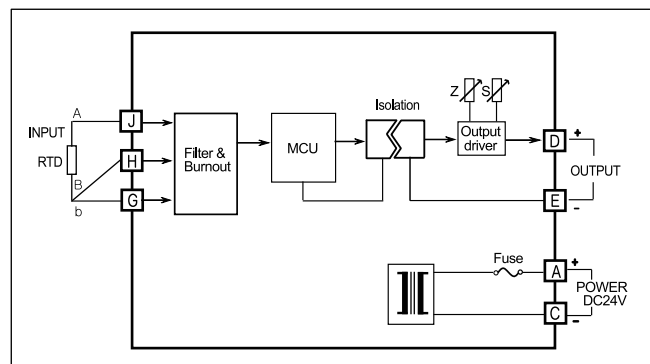
MODEL : DL2RB - [ ] - [ ] / [ ]

- INPUT SIGNAL**
  - 1. JPt 100Ω (JIS) 3-Wire
  - 2. Pt 100Ω (DIN) 3-Wire
- OUTPUT SIGNAL**
  - 7. 4~20mA DC
  - 8. Other Current (Less than 20mA DC)
  - C. 0~1V DC
  - D. 0~5V DC
  - E. 0~10V DC
  - F. 1~5V DC
  - Z. Other Voltage (Less than 12V DC)
- POWER SUPPLY**
  - 1. DC 24V
- BURN OUT**
  - U. Up scale
  - \* Option : Down scale

### OUTPUT SPECIFICATIONS

OUTPUT SIGNAL	OUTPUT IMPECANCE	LOAD RESISTANCE
DC 4 ~ 20mA	More than 5MΩ	0 ~ 500Ω
DC 0 ~ 10mV	approx 5Ω	More than 10kΩ
DC 0 ~ 100mV	approx 50Ω	More than 100kΩ
DC 0 ~ 1V	Less than 0.1Ω	More than 500Ω
DC 0 ~ 10V	Less than 0.1Ω	More than 5kΩ
DC 0 ~ 5V	Less than 0.1Ω	More than 2.5kΩ
DC 1 ~ 5V	Less than 0.1Ω	More than 2.5kΩ

### BLOCK DIAGRAM



# General Specifications

## SLIM TYPE THERMOCOUPLE CONVERTER

### 熱電對 變換器



This instrument is a slim typed Thermocouple Converter with high accuracy that takes various Thermocouple as the input and outputs the isolated DC voltage and current signals. It uses DIN Rail Mounting.

### SPECIFICATIONS

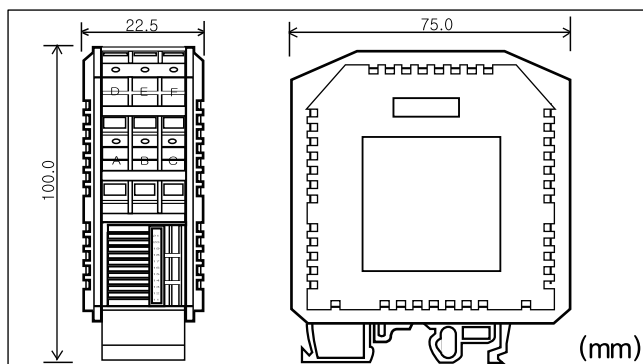
ITEMS	DESCRIPTIONS
INPUT	Thermocouple (K, J, T, E, R, S, B,)
OUTPUT	DC Current or DC Voltage signal
BURN - OUT	Down or Up scale
ACCURACY	±0.5% Full scale
TEMP. COEFFICIENT	±0.02% / °C
RESPONSE TIME	Less than 0.5Sec (0~90%)
ZERO/SPAN Adjustment	±10% of Full span
ISOLATION	Input - Output - Power
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Output -Power AC 1,500V 1 Minute
POWER SUPPLY	DC 24V ± 10%
POWER CONSUMPTION	Less than 55mA
POWER FUSE	2.2Q Fusible Resistor
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	Frame - rsistant resin
COLOR	Gray
WEIGHT	About 100g
DIMENSION	W22.5 X H75 X D100mm
MOUNTING	DIN RAIL

\* R, S, B type : 0~600°C does not guaranteed for the Accuracy  
 \* T type : -200 ~ 100°C does not guaranteed for the Accuracy

### STANDARD INPUT RANGE

INPUT	INPUT RANGE
K	-270 ~ 1370°C
J	-210 ~ 1200°C
T	-270 ~ 400°C
E	-270 ~ 1000°C
B	0 ~ 1800°C
S	0 ~ 1760°C
R	0 ~ 1760°C

### DIMENSION



### ORDERING CODE

MODEL : DL2TC - [ ] - [ ] / [ ]

#### INPUT SIGNAL

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

#### OUTPUT SIGNAL

- 7. 4~20mA DC
- 8. Other Current (Less than 20mA DC)
- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
- Z. Other Voltage (Less than 12V DC)

#### POWER SUPPLY

- 1. DC 24V

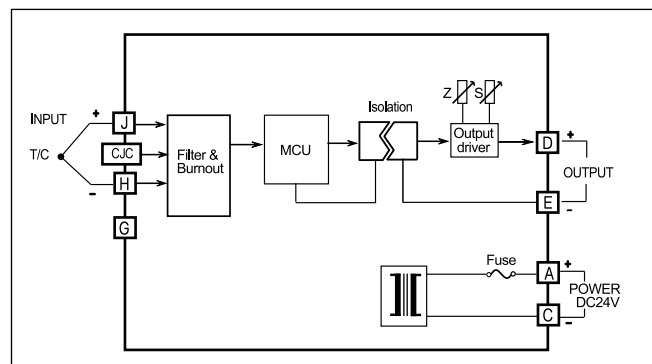
#### BURN OUT

- D. Down scale
- U. Up scale

### OUTPUT SPECIFICATIONS

OUTPUT SIGNAL	OUTPUT IMPECANCE	LOAD RESISTANCE
DC 4 ~ 20mA	More than 5MΩ	0 ~ 500Ω
DC 0 ~ 10mV	approx 5Ω	More than 10kΩ
DC 0 ~ 100mV	approx 50Ω	More than 100kΩ
DC 0 ~ 1V	Less than 0.1Ω	More than 500Ω
DC 0 ~ 10V	Less than 0.1Ω	More than 5kΩ
DC 0 ~ 5V	Less than 0.1Ω	More than 2.5kΩ
DC 1 ~ 5V	Less than 0.1Ω	More than 2.5kΩ

### BLOCK DIAGRAM



# General Specifications

## SLIM TYPE POTENTIOMETER CONVERTER

### 可變抵抗 變換器



This instrument is a slim typed Potentiometer Converter with high accuracy that detects the resistance change of Potentiometer sensor and outputs the isolated DC voltage and current signals.

It uses DIN Rail Mounting.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT	Potentiometer (from 100Ω ~ 100KΩ 3-wire)
OUTPUT	DC Current or DC Voltage signal
ACCURACY	±0.2% Full scale
TEMP. COEFFICIENT	±0.015% / °C
RESPONSE TIME	Less than 200msec (0~90%)
ZERO/SPAN Adjustment	±50% of Full span
ISOLATION	Input - Output - Power
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Output - Power AC 1,500V 1 Minute
POWER SUPPLY	DC 24V ± 10%
POWER CONSUMPTION	Less than 50mA
POWER FUSE	2.2Ω Fusible Resistor
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	Frame - resistant resin
COLOR	Gray
WEIGHT	About 100g
DIMENSION	W22.5 X H75 X D100mm
MOUNTING	DIN RAIL

### ORDERING CODE

MODEL : DL2PC -

#### • INPUT SIGNAL

POTENTIOMETER  
(Total Resistance 100Ω ~ 100KΩ)

#### • OUTPUT SIGNAL

- 7. 4~20mA DC
- 8. Other Current (Less than 20mA DC)
- C. 0~1V DC
- D. 0~5V DC
- E. 0~10V DC
- F. 1~5V DC
- Z. Other Voltage (Less than 12V DC)

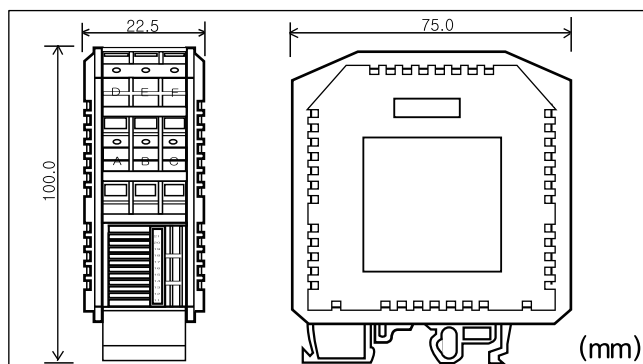
#### • POWER SUPPLY

- 1. DC 24V

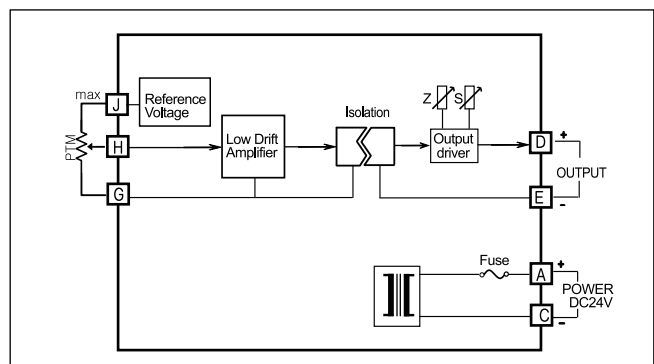
### ■ OUTPUT SPECIFICATIONS

OUTPUT SIGNAL	OUTPUT IMPEACANCE	LOAD RESISTANCE
DC 4 ~ 20mA	More than 5MΩ	0 ~ 500Ω
DC 0 ~ 10mV	approx 5Ω	More than 10kΩ
DC 0 ~ 100mV	approx 50Ω	More than 100kΩ
DC 0 ~ 1V	Less than 0.1Ω	More than 500Ω
DC 0 ~ 10V	Less than 0.1Ω	More than 5kΩ
DC 0 ~ 5V	Less than 0.1Ω	More than 2.5kΩ
DC 1 ~ 5V	Less than 0.1Ω	More than 2.5kΩ

### DIMENSION



### BLOCK DIAGRAM



# General Specifications

## SLIM TYPE SIGNAL ISOLATOR

### 信號絕緣 變換器



This instrument is a Slim typed Signal Isolator with high accuracy converts DC voltage or DC current signals to various isolated DC signals.  
It uses DIN Rail Mounting.

### SPECIFICATIONS

ITEMS	DESCRIPTIONS
INPUT	DC Current or DC Voltage signal
OUTPUT	DC Current or DC Voltage signal
ACCURACY	$\pm 0.1\%$ Full scale
TEMP. COEFFICIENT	$\pm 0.015\%$ / $^{\circ}\text{C}$
RESPONSE TIME	Less than 200msec (0~90%)
ZERO/SPAN Adjustment	$\pm 10\%$ of Full span
ISOLATION	Input - Output - Power
INSULATION RESISTANCE	Greater than 100M $\Omega$ at DC 500V
DIELECTRIC - STRENGTH	Input - Output - Power   AC 1,500V   1 Minute
POWER SUPPLY	DC 24V $\pm 10\%$
POWER CONSUMPTION	Less than 50mA
POWER FUSE	2,2 $\Omega$ Fusible Resistor
AMBIENT - TEMP	-5 ~ +55 $^{\circ}\text{C}$ ( 23 ~ 131 $^{\circ}\text{F}$ )
HUMIDITY	Less than 90% RH ( no condensation )
CASE MATERIAL	Frame - resistant resin
COLOR	Gray
WEIGHT	About 100g
DIMENSION	W22.5 X H75 X D100mm
MOUNTING	DIN RAIL

### ORDERING CODE

MODEL : DL2SI -

#### INPUT SIGNAL

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

#### OUTPUT SIGNAL

- 7 . 4~20mA DC
- 8 . Other Current (Less than 20mA DC)
- C . 0~1V DC
- D . 0~5V DC
- E . 0~10V DC
- F . 1~5V DC
- Z . Other Voltage (Less than 12V DC)

#### POWER SUPPLY

- 1 . DC 24V

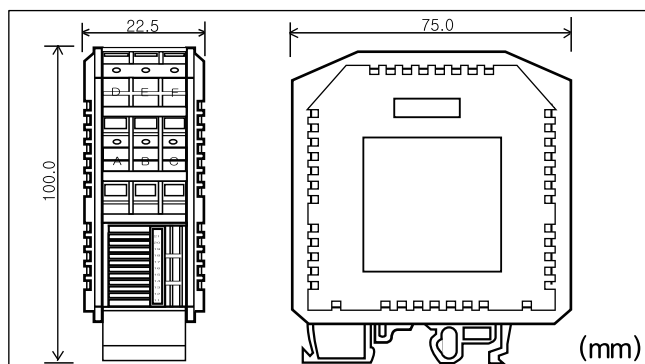
### INPUT SPECIFICATIONS

INPUT SIGNAL	INPUT IMPEDANCE
4 ~ 20mA DC	250 $\Omega$
0 ~ 10mV DC	Greater than 10K $\Omega$
0 ~ 100mV DC	Greater than 100K $\Omega$
0 ~ 1V DC	Greater than 1M $\Omega$
0 ~ 5V DC	
1 ~ 5V DC	
0 ~ 10V DC	

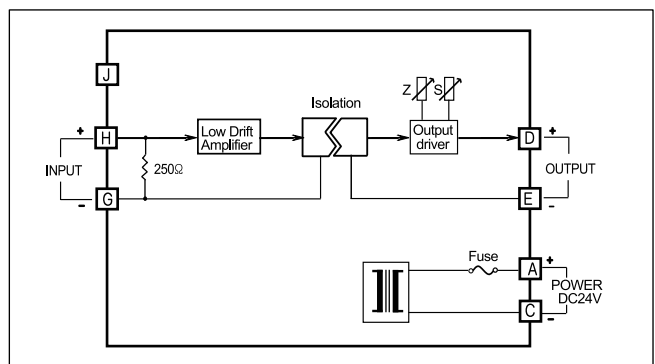
### OUTPUT SPECIFICATIONS

OUTPUT SIGNAL	OUTPUT IMPECANCE	LOAD RESISTANCE
DC 4 ~ 20mA	More than 5M $\Omega$	0 ~ 500 $\Omega$
DC 0 ~ 10mV	approx 5 $\Omega$	More than 10k $\Omega$
DC 0 ~ 100mV	approx 50 $\Omega$	More than 100k $\Omega$
DC 0 ~ 1V	Less than 0,1 $\Omega$	More than 500 $\Omega$
DC 0 ~ 10V	Less than 0,1 $\Omega$	More than 5k $\Omega$
DC 0 ~ 5V	Less than 0,1 $\Omega$	More than 2,5k $\Omega$
DC 1 ~ 5V	Less than 0,1 $\Omega$	More than 2,5k $\Omega$

### DIMENSION



### BLOCK DIAGRAM



# General Specifications

## SLIM TYPE 2WIRE TRANSMITTER

### 2線式 信號 變換器



This instrument is a slim typed of high accuracy Signal Converter with Power Supply that supplies DC power to 2wire transmitters and derives 4~20mA of DC signal from the DC power as an input, and then outputs the isolated 4~20mA DC signal.  
It uses DIN Rail Mounting.

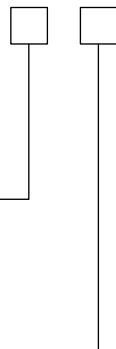
### SPECIFICATIONS

ITEMS	DESCRIPTIONS
OUTPUT RATING SUPPLY TO XTR	DC 24V 30mA Max, (DC19 ~ 24V)
OUTPUT	4~20mA DC (DC12~28V)
OUTPUT LOAD RESISTANCE	600Ω Max, (at DC24V)
ACCURACY	±0.1% Full scale
TEMP. COEFFICIENT	±0.015% / °C
RESPONSE TIME	Less than 50msec (0~90%)
ZERO/SPAN Adjustment	±10% of Full span
ISOLATION	Input - Output - Power
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Input - Output - Power   AC 1,500V   1 Minute
POWER SUPPLY	DC 24V ± 10%
POWER CONSUMPTION	Less than 50mA
POWER FUSE	2.2Ω Fusible Resistor
AMBIENT - TEMP	-5 ~ +55°C ( 23 ~ 131 °F)
HUMIDITY	Less than 90% RH ( no condenstation )
CASE MATERIAL	Frame - rsistant resin
COLOR	Gray
WEIGHT	About 100g
DIMENSION	W22.5 X H75 X D100mm
MOUNTING	DIN RAIL

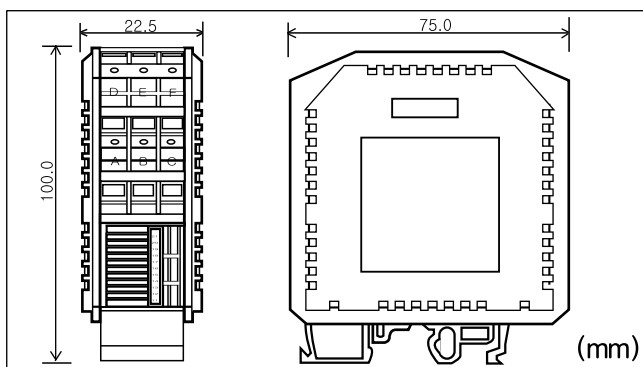
### ORDERING CODE

MODEL : DL2LP -

- INPUT SIGNAL  
DC 4~20mA (2-Wire DC24V)
- OUTPUT SIGNAL  
7. 4~20mA DC  
SUPPLY VOLTAGE  
DC 12 ~ 28V
- POWER SUPPLY  
1. DC 24V



### DIMENSION



### BLOCK DIAGRAM

