

TERMINAL BLOCK TYPE SIGNAL CONVERTER

DQ - SERIES

■ FEATURE

- 1 Isolated output
- Actualization of high accuracy
- DC24V Power supply
- High-density mounting
- Compact shape and easy handling



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General Specifications

TERMINAL BLOCK TYPE POWER DISTRIBUTOR



This device is a compact type 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 used DIN Rail Mounting

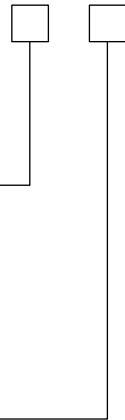
SPECIFICATIONS

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%)		
ZERO/SPAN Adjustment	±10% of span		
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V		
DIELECTRIC - STRENGTH	Power - Input, Output	AC 1,500V	1 Minute
	Input-Output	AC 1,000V	
POWER SUPPLY	DC 24V ± 10%		
POWER CONSUMPTION	Less than 70mA		
AMBIENT - TEMP	-5 ~ +55°C (23 ~ 131 °F)		
HUMIDITY	Less than 90% RH (no condensation)		
CASE MATERIAL	SPC (Steel)		
COLOR	Black		
WEIGHT	About 200g		
DIMENSION	W33 X H108 X D59mm		
MOUNTING	DIN RAIL		

ORDERING CODE

MODEL : DQIP -

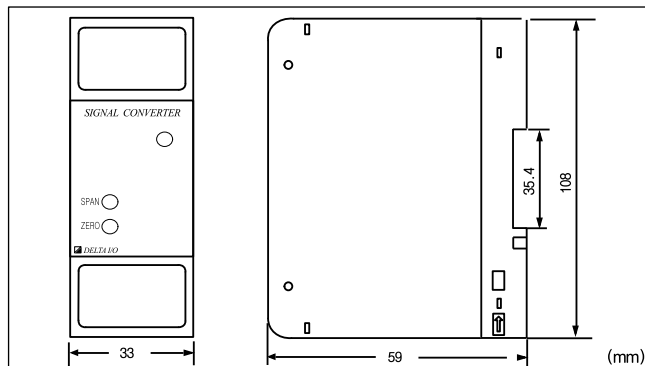
- INPUT SIGNAL
 - 4~20mA DC (2-Wire DC24V)
- OUTPUT SIGNAL
 - 7. 4~20mA DC
 - 0. Other Current (Less than 20mA DC)
 - C. 0~1V DC
 - D. 0~5V DC
 - E. 0~10V DC
 - F. 1~5V DC
 - Z. Other Voltage (Less than 12V DC)
- POWER SUPPLY
 - 1. DC 24V



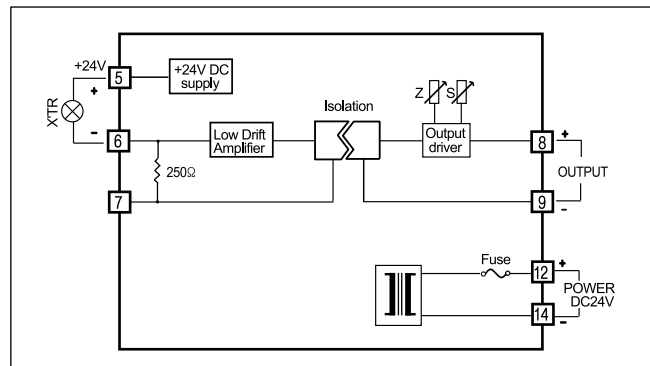
OUTPUT SPECIFICATIONS

OUTPUT SIGNAL	OUTPUT IMPECCANCE	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

TERMINAL BLOCK TYPE R.T.D CONVERTER



This instrument is a compact terminal block typed RTD (Resistance Temperature Detector) Temperature Converter that detects the change of 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 Pt100	DC 200μA		
RTD Max. Lead Resistance	10Ω Max.		
OUTPUT	DC Current or DC Voltage signal		
BURN - OUT	Down or Up scale		
ACCURACY	±0.2% Max.		
TEMP. COEFFICIENT	±0.02% / °C		
RESPONSE TIME	Less than 0.5Sec (0~90%)		
ZERO/SPAN Adjustment	±10% of span		
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V		
DIELECTRIC - STRENGTH	Power - Input, Output	AC 1,500V	1 Minute
	Input-Output	AC 1,000V	
POWER SUPPLY	DC 24V ± 10%		
POWER CONSUMPTION	Less than 70mA		
AMBIENT - TEMP	-5 ~ +55°C (23 ~ 131 °F)		
HUMIDITY	Less than 90% RH (no condenstation)		
CASE MATERIAL	SPC (Steel)		
COLOR	Black		
WEIGHT	About 200g		
DIMENSION	W33 X H108 X D59mm		
MOUNTING	DIN RAIL		

INPUT RANGE

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

ORDERING CODE

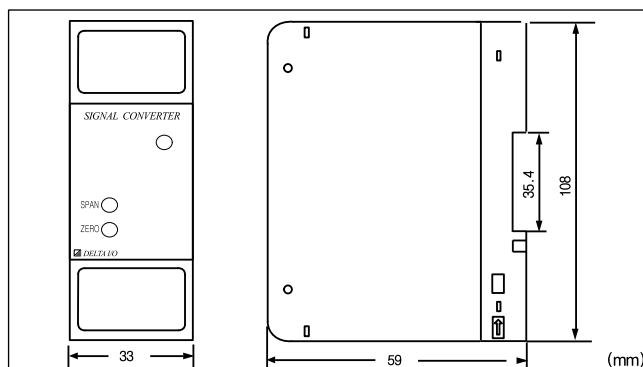
MODEL : DQRB - [] [] - [] / []

- INPUT SIGNAL
 - 1. JPt 100Ω (JIS) 3-Wire
 - 2. Pt 100Ω (DIN) 3-Wire
- OUTPUT SIGNAL
 - 7. 4~20mA DC
 - 0. 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

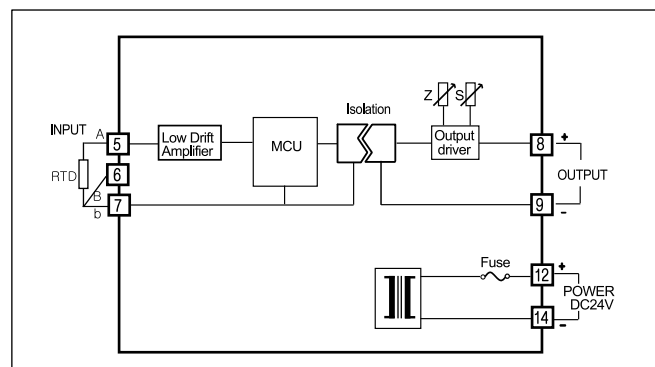
OUTPUT SPECIFICATIONS

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

DIMENSION



BLOCK DIAGRAM



General Specifications

TERMINAL BLOCK TYPE THERMOCOUPLE CONVERTER



This instrument is a compact terminal block typed thermocouple Temperature 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	Thermocoupler (K, J, T, E, R, S, B)		
OUTPUT	DC Current or DC Voltage signal		
BURN - OUT	Down or Up scale		
ACCURACY	±0.3% (Full span)		
TEMP. COEFFICIENT	±0.02% / °C		
RESPONSE TIME	Less than 0.5Sec (0~90%)		
ZERO/SPAN Adjustment	±10% of span		
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V		
DIELECTRIC - STRENGTH	Power - Input, Output	AC 1,500V	1 Minute
	Input-Output	AC 1,000V	
POWER SUPPLY	DC 24V ± 10%		
POWER CONSUMPTION	Less than 70mA		
AMBIENT - TEMP	-5 ~ +55°C (23 ~ 131 °F)		
HUMIDITY	Less than 90% RH (no condensation)		
CASE MATERIAL	SPC (Steel)		
COLOR	Black		
WEIGHT	About 200g		
DIMENSION	W33 X H108 X D59mm		
MOUNTING	DIN RAIL		

ORDERING CODE

MODEL : DQTC - [] [] - [] / []

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
- 0. 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

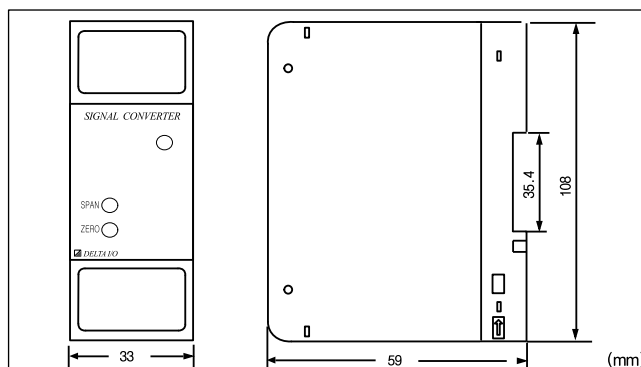
STANDARD INPUT RANGE

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

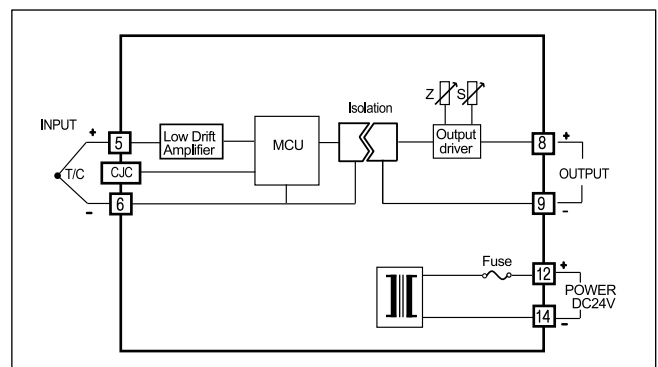
OUTPUT SPECIFICATIONS

OUTPUT SIGNAL	OUTPUT IMPECCANCE	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

TERMINAL BLOCK TYPE POTENTIOMETER CONVERTER



This instrument is a compact terminal block 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 (100Ω ~ 100KΩ 3-wire)		
OUTPUT	DC Current or DC Voltage signal		
ACCURACY	±0.2% Max.		
TEMP. COEFFICIENT	±0.015% / °C		
RESPONSE TIME	Less than 0.5Sec (0~90%)		
ZERO/SPAN Adjustment	±50% of span		
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V		
DIELECTRIC - STRENGTH	Power - Input, Output	AC 1,500V	1 Minute
	Input-Output	AC 1,000V	
POWER SUPPLY	DC 24V ± 10%		
POWER CONSUMPTION	Less than 50mA		
AMBIENT - TEMP	-5 ~ +55°C (23 ~ 131 °F)		
HUMIDITY	Less than 90% RH (no condensation)		
CASE MATERIAL	SPC (Steel)		
COLOR	Black		
WEIGHT	About 200g		
DIMENSION	W33 X H108 X D59mm		
MOUNTING	DIN RAIL		

ORDERING CODE

MODEL : DQPC -

• INPUT SIGNAL

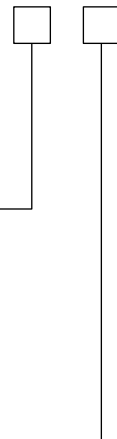
POTENTIOMETER
(Total Resistance 100Ω ~ 100KΩ)

• OUTPUT SIGNAL

7. 4~20mA DC
0. 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

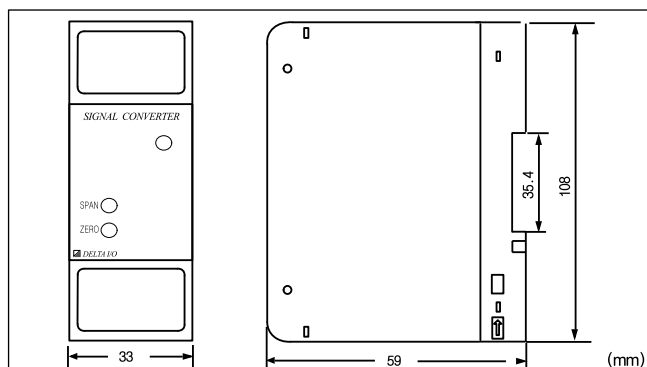
1. DC 24V



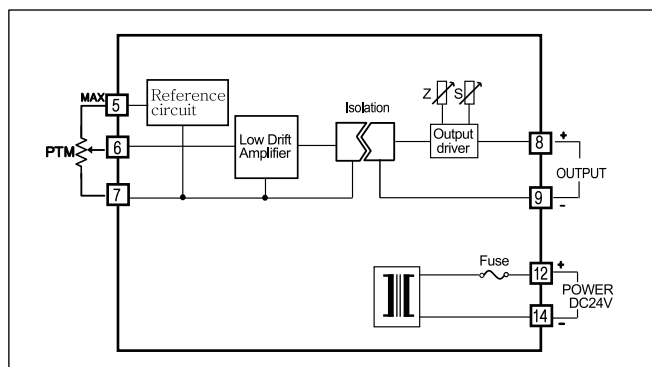
■ OUTPUT SPECIFICATIONS

OUTPUT SIGNAL	OUTPUT 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



BLOCK DIAGRAM



General Specifications

TERMINAL BLOCK TYPE SIGNAL ISOLATOR



This instrument is a compact terminal block typed Signal Isolator with high accuracy that converts DC current or DC voltage 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	±0.2% Max.
TEMP. COEFFICIENT	±0.015% / °C
RESPONSE TIME	Less than 200mSec (0~90%)
ZERO/SPAN Adjustment	±10% of span
INSULATION RESISTANCE	Greater than 100MΩ at DC 500V
DIELECTRIC - STRENGTH	Power - Input, Output
	AC 1,500V 1 Minute
DIELECTRIC - STRENGTH	Input-Output
	AC 1,000V
POWER SUPPLY	DC 24V ± 10%
POWER CONSUMPTION	Less than 50mA
AMBIENT - TEMP	-5 ~ +55°C (23 ~ 131 °F)
HUMIDITY	Less than 90% RH (no condensation)
CASE MATERIAL	SPC (Steel)
COLOR	Black
WEIGHT	About 200g
DIMENSION	W33 X H108 X D59mm
MOUNTING	DIN RAIL

ORDERING CODE

MODEL : DQSI -

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
- Z. Other Voltage

OUTPUT SIGNAL

- 4. 0~20mA DC
- 7. 4~20mA DC
- 0. 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

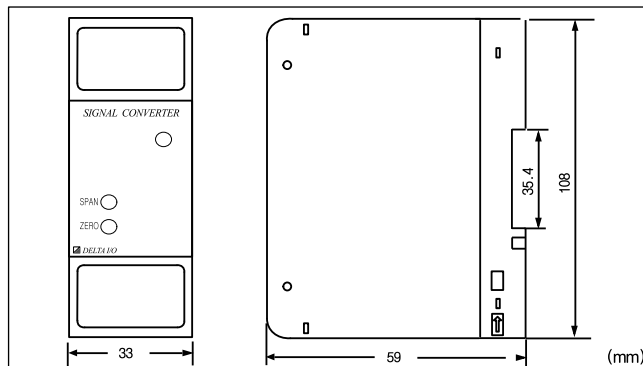
INPUT SPECIFICATIONS

INPUT SIGNAL	INPUT IMPEDANCE
4 ~ 20mA DC	250Ω
0 ~ 10mV DC	Greater than 10KΩ
0 ~ 100mV DC	Greater than 100KΩ
0 ~ 1V DC	Greater than 1MΩ
0 ~ 5V DC	
1 ~ 5V DC	
0 ~ 10V DC	

OUTPUT SPECIFICATIONS

OUTPUT SIGNAL	OUTPUT IMPEANCE	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

