

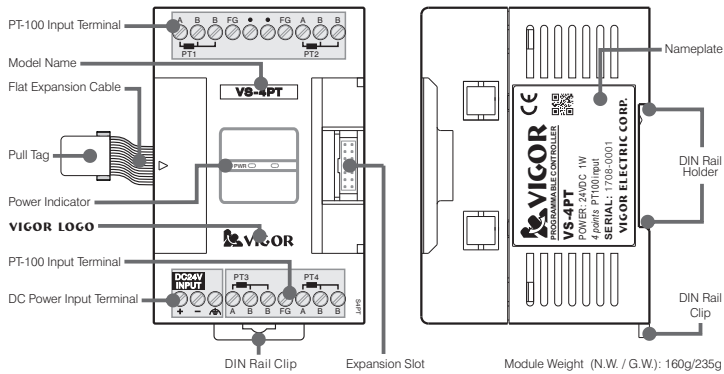
# VIGOR VS-4PT PT-100 Temperature Input Module

## Forward

The VS-4PT PT-100 Temperature Input Module can receive external 4 channels of platinum resistance thermometer RTD signals and convert those into digital temperature values. When the FROM instruction is executed, the VS Main Unit reads out temperature data from the VS-4PT module and stores that into registers. Thus, it provides the reference data for digital monitoring and related controls.

The VS-4PT PT-100 Temperature Input Module requires a DC 24V external power input for the isolated DC to DC regulated power to provide its temperature converter. Also, between the PLC inner circuit and the converter are isolated by the Magnetic-coupler thus the module can get a stable temperature conversion. Please read following instructions before use.

## Component Designation



## Specification

Temperature Input Specification

Item	Specification
Sensor Type	PT-100, Platinum resistance thermometer (RTD), 3-Wire, $\Omega$ 100 @ 0 °C, 3850 PPM/°C
Measurable Range	-200 °C ~ 850 °C (-328 °F ~ 1562 °F)
Converted Value	The measurement results are indicated by the unit of 0.1 °C or 0.1 °F
Resolution	0.1 °C (0.1 °F)
Overall Accuracy	Ambient temp. 25 ±5°C is ±0.5% full scale; Ambient temp. 0~55°C is ±1% full scale
Response Time	300 ms

Basic Specification

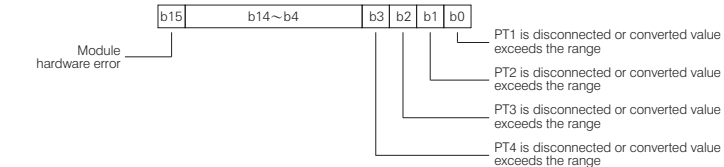
Item	Specification
Isolation Method	The external DC 24V input through an isolated DC/DC power to provide temp. convert circuits; Magnetic-coupler isolation between PLC and temperature converters; No isolation between input channels
Power Consumption	DC 24V ± 20%, 30mA (Max.) from external + DC 5V 15mA from PLC's inner power

## Definition of Buffer Memory BFM in the VS-4PT Module

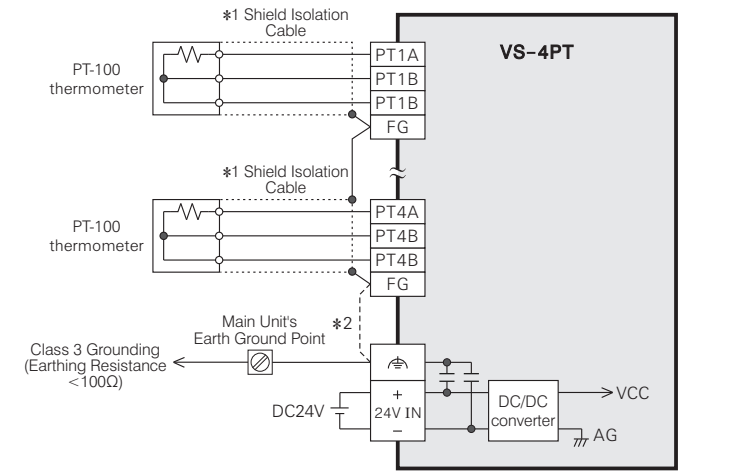
The VS-4PT module uses the BFM to communicate with the VS Main Unit for the parameter setting and converted value access.

BFM No.	Component Description
#2	To assign the scale of temperature measurement. 0: °C; 1: °F; other values: °C. When the power is turned from OFF to ON, the default value is 0.
#3	To set the average times of PT1.
#4	To set the average times of PT2.
#5	To set the average times of PT3.
#6	To set the average times of PT4.
#11	Converted temperature value of PT1, with unit as 0.1 °C or 0.1 °F.
#12	Converted temperature value of PT2, with unit as 0.1 °C or 0.1 °F.
#13	Converted temperature value of PT3, with unit as 0.1 °C or 0.1 °F.
#14	Converted temperature value of PT4, with unit as 0.1 °C or 0.1 °F.
#29	Status and error flag.
#30	Identification code: VS-4PT = K208 (can use the FROM instruction to check whether the place is this module or not)
#31	The version number of this module. (the content value XX indicates Ver. X.X)

BFM #29 Status and Error Flag: (0: normal; 1: error)



## External Wiring



- \*1: Please use the shield isolation cable for every temperature input, and keep the signal cable away from power lines to minimize external interference.
- \*2: Please connect the end of cable shield to the FG terminal. If the noise is huge, should connect the FG to the terminal at the Main Unit.

## Example Program

The VS-4PT is installed next to the Main Unit and became the 1st. special module. Its temperature converted values of PT1~PT4 are sequentially stored at D100~D103.

