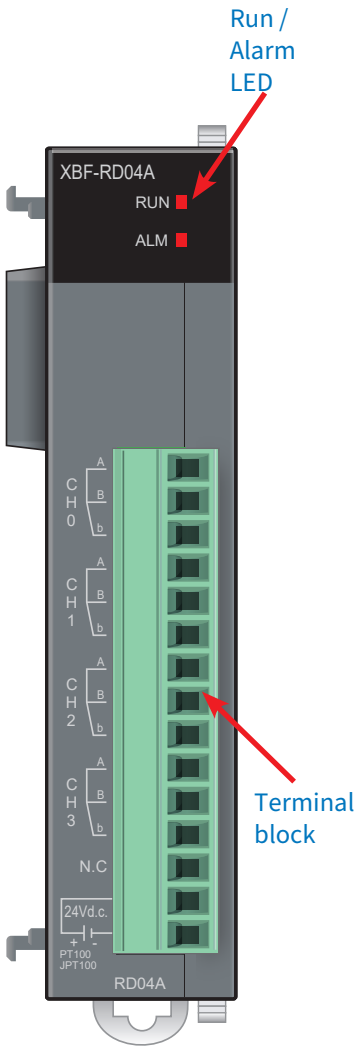
XBF-RD04A Temperature Input Module

XBF-RD04A temperature sensing module provides the XGB PLC with the capability to monitor 4 independent RTD style temperature sensors.

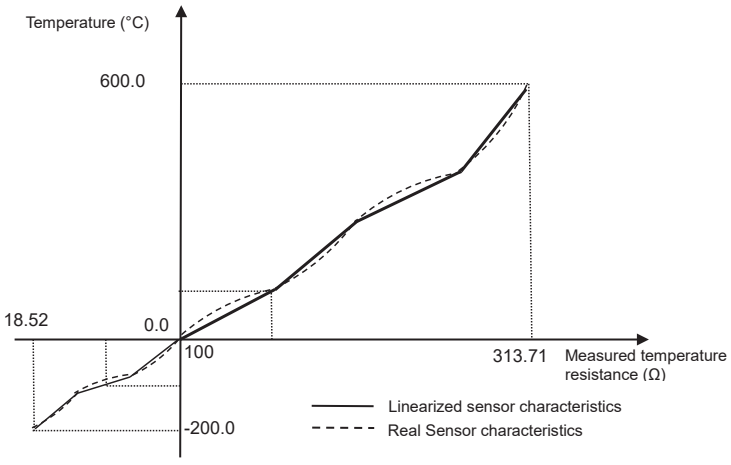
Part Number	Price	Classification	Description	# of Channels	Drawing
XBF-RD04A	$199.00	Temperature Input Module	LS Electric XGB temperature input module, RTD, 4-channel, 14-bit resolution, input RTD type(s): Pt100 and JPt100. Removable terminal block included.	4	PDF

Input Specifications		XBF-RD04A
Input Channels		4
Input Sensor Type	PT100	JIS C1604-1997
	JPT100	JISC1604-1981, KS C1603-1991
Temperature Input Range	PT100	-200 to 600 ℃
	JPT100	-200 to 600 ℃
Scaling Value	PT100	-2000 to 6000
	JPT100	-2000 to 6000
Accuracy	Normal temp (25℃)	Within ± 0.3%
	Full temp (0–55℃)	Within ± 0.5%
Conversion speed		40ms/channel
Insulation	Channel to Channel	Non-insulation
	Terminal to PLC Power	Insulation (photocoupler)
Terminal Block		15-point terminal block
I/O Points Occupied		Fixed type: 64 points
Wiring Method		3-wire
Max. number per CPU		7
Function	Filtering	Digital filter (160–64000 ms)
	Alarm	Disconnection detection
Current Consumption	Inner 5VDC	100mA
	External 24VDC	100mA
Weight		63g

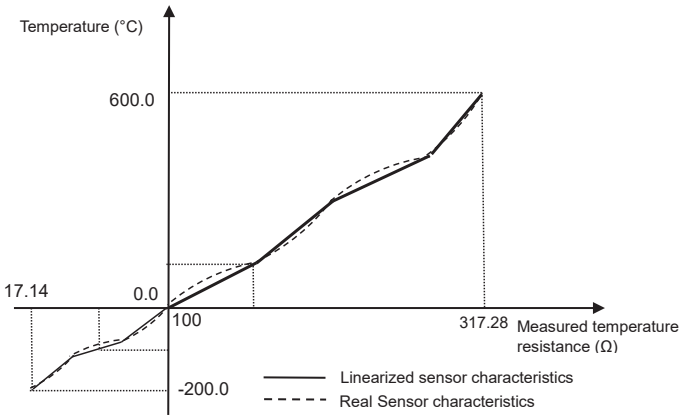


Temperature Conversion

PT100 Sensor



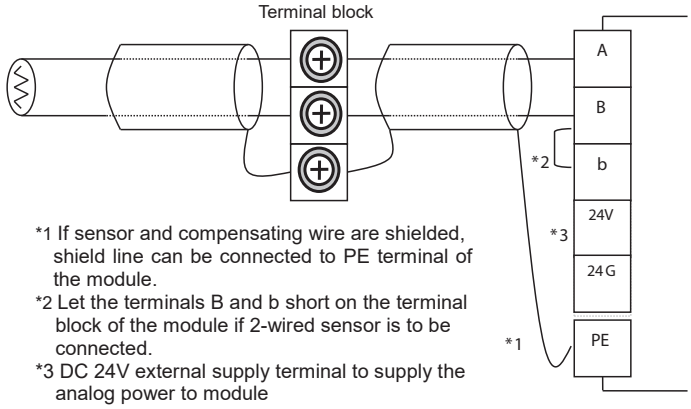
JPT100 Sensor



XBF-RD04A Analog Combo Module, *continued*

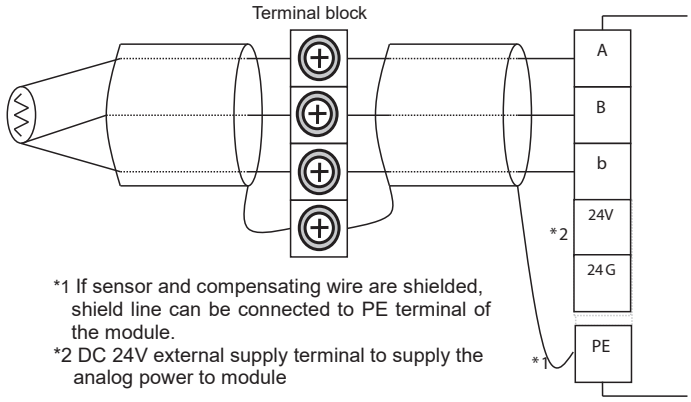
Wiring

Two-wired Sensor



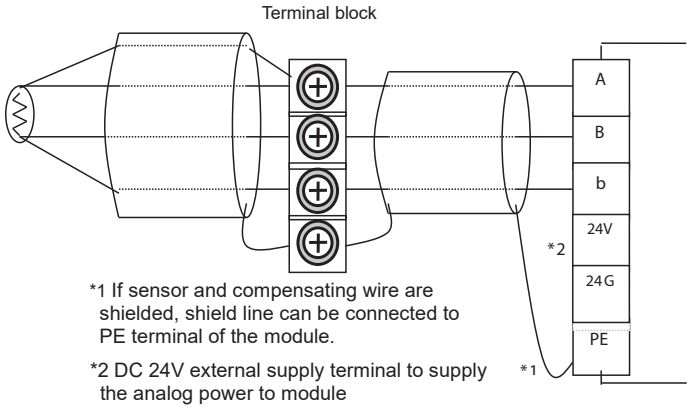
*1 If sensor and compensating wire are shielded, shield line can be connected to PE terminal of the module.
*2 Let the terminals B and b short on the terminal block of the module if 2-wired sensor is to be connected.
*3 DC 24V external supply terminal to supply the analog power to module

Three-wired Sensor



*1 If sensor and compensating wire are shielded, shield line can be connected to PE terminal of the module.
*2 DC 24V external supply terminal to supply the analog power to module

Four-wired Sensor



*1 If sensor and compensating wire are shielded, shield line can be connected to PE terminal of the module.
*2 DC 24V external supply terminal to supply the analog power to module

XBF-RD04A Analog Combo Module Configuration

Follow the Quick start video to learn how to Register and Configure any Analog Module:

Analog Module Setup

Direct Variables

All XGB series analog modules are assigned 32 words in the "U" memory area based on the slot number assignment. (%UW0.z.0 - %UW0.z.31 , z= slot number). The actual memory address used within the 32 word block are specific to each module. See the table below for Direct Variable assignments.

For Direct Variable nomenclature explanation, see Direct Variable User Programming Memory.

Symbolic Variables

Symbolic variables for the analog module can be automatically created in XG5000 software by using the top MENU bar: Edit > Register Module Variable Comments.

Symbolic variables and direct variables for XBF-RD04A are as follows (z refers to module slot number (2 to 8)).

Type	Scope	Variable (Symbolic)	Address (Direct Variable Alias)	Data Type	Comment
Tag	GlobalVariable	_0z_CH0_ACT	%UX0.z.16	BOOL	Temp. Measuring Module : CH0 Activation Status
Tag	GlobalVariable	_0z_CH0_BOUT	%UX0.z.20	BOOL	Temp. Measuring Module : CH0 Disconnection Flag
Tag	GlobalVariable	_0z_CH0_SCAL	%UW0.z.8	WORD	Temp. Measuring Module : CH0 Scaling Data
Tag	GlobalVariable	_0z_CH0_TEMP	%UW0.z.4	WORD	Temp. Measuring Module : CH0 Temp. Data
Tag	GlobalVariable	_0z_CH1_ACT	%UX0.z.17	BOOL	Temp. Measuring Module : CH1 Activation Status
Tag	GlobalVariable	_0z_CH1_BOUT	%UX0.z.21	BOOL	Temp. Measuring Module : CH1 Disconnection Flag
Tag	GlobalVariable	_0z_CH1_SCAL	%UW0.z.9	WORD	Temp. Measuring Module : CH1 Scaling Data
Tag	GlobalVariable	_0z_CH1_TEMP	%UW0.z.5	WORD	Temp. Measuring Module : CH1 Temp. Data
Tag	GlobalVariable	_0z_CH2_ACT	%UX0.z.18	BOOL	Temp. Measuring Module : CH2 Activation Status
Tag	GlobalVariable	_0z_CH2_BOUT	%UX0.z.22	BOOL	Temp. Measuring Module : CH2 Disconnection Flag
Tag	GlobalVariable	_0z_CH2_SCAL	%UW0.z.10	WORD	Temp. Measuring Module : CH2 Scaling Data
Tag	GlobalVariable	_0z_CH2_TEMP	%UW0.z.6	WORD	Temp. Measuring Module : CH2 Temp. Data
Tag	GlobalVariable	_0z_CH3_ACT	%UX0.z.19	BOOL	Temp. Measuring Module : CH3 Activation Status
Tag	GlobalVariable	_0z_CH3_BOUT	%UX0.z.23	BOOL	Temp. Measuring Module : CH3 Disconnection Flag
Tag	GlobalVariable	_0z_CH3_SCAL	%UW0.z.11	WORD	Temp. Measuring Module : CH3 Scaling Data
Tag	GlobalVariable	_0z_CH3_TEMP	%UW0.z.7	WORD	Temp. Measuring Module : CH3 Temp. Data
Tag	GlobalVariable	_0z_CH_ACT_ARY	%UX0.z.16	ARRAY[0..3] OF BOOL	Temp. Measuring Module : Each CH Activation Status
Tag	GlobalVariable	_0z_CH_SCAL_ARY	%UW0.z.8	ARRAY[0..3] OF WORD	Temp. Measuring Module : Each CH Scaling Data
Tag	GlobalVariable	_0z_CH_TEMP_ARY	%UW0.z.4	ARRAY[0..3] OF WORD	Temp. Measuring Module : Each CH Temp. Data
Tag	GlobalVariable	_0z_ERR	%UX0.z.0	BOOL	Temp. Measuring Module : Module Error
Tag	GlobalVariable	_0z_RDY	%UX0.z.15	BOOL	Temp. Measuring Module : Ready Flag