

# © CONTENTS ©

## Chapter 1. INTRODUCTION

<b>1.1</b>	<b>Features</b>	<b>1 – 1</b>
<b>1.2</b>	<b>Glossary</b>	<b>1 – 2</b>
1.2.1	A – Analog Value	1 – 2
1.2.2	D – Digital Value	1 – 2
1.2.3	PT	1 – 2
1.2.4	Burn-out Detection Function	1 – 2

## Chapter 2. SPECIFICATIONS

<b>2.1</b>	<b>General Specifications</b>	<b>2 – 1</b>
<b>2.2</b>	<b>Performance Specifications</b>	<b>2 – 2</b>
<b>2.3</b>	<b>Names of Parts and Functions</b>	<b>2 – 3</b>
2.3.1	K7F-RD3A	2 – 3
2.3.2	K4F-RD2A	2 – 4
<b>2.4</b>	<b>RTD Input Module Characteristics</b>	<b>2 – 5</b>
2.4.1	Temperature Conversion Characteristics	2 – 5
2.4.2	Conversion Speed	2 – 5
2.4.3	Accuracy	2 – 5
2.4.4	Burn-out Detection Function	2 – 6
<b>2.5</b>	<b>Connection between a Pt and RTD Input Module</b>	<b>2 – 7</b>

## Chapter 3. BUFFER MEMORY CONFIGURATION AND FUNCTIONS

<b>3.1</b>	<b>Buffer Memory Configuration</b>	<b>3 – 1</b>
3.1.1	K7F-RD3A Buffer Memory	3 – 1
3.1.2	K4F-RD2A Buffer Memory	3 – 2
<b>3.2</b>	<b>Functions of Buffer Memory</b>	<b>3 – 3</b>
3.2.1	Specifying Channel Enable/Disable (K7F-RD3A : Address 0, K4F-RD2A : Address 0)	3 – 3
3.2.2	Specifying the Type of the RTD	3 – 3

	(K7F-RD3A : Addresses 1 to 8, K4F-RD2A : Addresses 1 to 4)	
3.2.3	Detected Temperature Value .....	3 – 4
	(K7F-RD3A : Addresses 9, 12, 15, 18, 21, 24, 27 and 30, K4F-RD2A : Addresses 5, 8, 11 and 14)	
3.2.4	Digital Conversion Value .....	3 – 4
	(K7F-RD3A : Addresses 10, 13, 16, 19, 22, 25, 28 and 31, K4F-RD2A : Addresses 6, 9, 12 and 15)	
3.2.5	Error Code .....	3 – 4
	(K7F-RD3A : Addresses 11, 14, 17, 20, 23, 26, 29 and 32, K4F-RD2A : Addresses 7, 10, 13 and 16)	
3.2.6	Specifying SET Data .....	3 – 5
	(K7F-RD3A : Address 33, K4F-RD2A : Address 17)	
3.2.7	Information on Run Channel .....	3 – 5
	(K7F-RD3A : Address 34, K4F-RD2A : Address 18)	
3.2.8	Information on RTD Specification Error .....	3 – 6
	(K7F-RD3A : Address 35, K4F-RD2A : Address 19)	

## Chapter 4. DEDICATED INSTRUCTIONS FOR SPECIAL MODULES (Read from/Write to Buffer Memory)

4.1	Local .....	4 – 1
4.1.1	Read from Buffer Memory...GET, GETP.....	4 – 1
4.1.2	Write to Buffer Memory...PUT, PUTP.....	4 – 2
4.2	Remote .....	4 – 3
4.2.1	Read from Buffer Memory...RGET .....	4 – 3
4.2.2	Write to Buffer Memory...RPUT .....	4 – 4

## Chapter 5. PROGRAMMING

5.1	Basic Programming .....	5 – 1
5.1.1	K7F-RD3A .....	5 – 1
5.1.2	K4F-RD2A .....	5 – 2
5.2	Application Programming .....	5 – 3
5.2.1	A Program for Output of the Detected Temperature Value as a BCD Value .....	5 – 3
5.2.2	A Program for Converting the Detected Temperature Value(°C) into Fahrenheit(°F) and Output as a BCD Value .....	5 – 4
5.2.3	A Program when Loading the RTD Input Module onto the Remote I/O Station .....	5 – 6

## Chapter 6. INSTALLATION AND WIRING

6.1	Installation .....	6 – 1
6.1.1	Installation Ambience .....	6 – 1
6.1.2	Handling Precautions .....	6 – 1

6.2	Wiring Precautions .....	6 – 2
-----	--------------------------	-------

## Chapter 7. TROUBLESHOOTING

7.1	Errors Indicated by RUN LED Flickering .....	7 – 1
7.2	Troubleshooting Procedure .....	7 – 2
7.2.1	RUN LED Flickering .....	7 – 2
7.2.2	RUN LED Off .....	7 – 2
7.2.3	Detected Temperature Value Unreadable from the CPU Module .....	7 – 3
7.2.4	Input Value of the RTD Is Not Consistent with The Detected Temperature Value .....	7 – 4
7.2.5	RTD Input Module Hardware Defect .....	7 – 4

## Chapter 8. DIMENSIONS.

8.1	K7F-RD3A Dimensions .....	8 – 1
8.2	K4F-RD2A Dimensions .....	8 – 2

## Chapter 9. Standard Resistance Value of Pt/RTD .....

9 – 1