

DIN size

REX-ZERO series



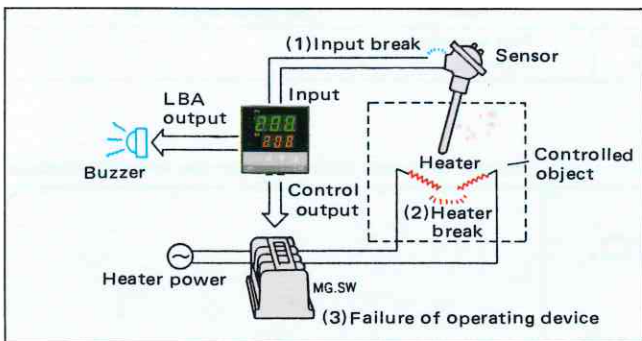
The Strong Lineup to REX Family

GENERAL DESCRIPTION

REX-Zero series are economical versions of the popular REX-F and REX-C series. REX-Zero series incorporate basic functions only that are required in temperature control. This concept has made REX-Zero series much easier to use and available at reasonable prices. For more sophisticated applications, our REX-F and REX-C series are recommended. Thus, RKC offers many different types of controllers according to customers requirements.

WHAT IS LBA?

LBA is an abbreviation of Loop Break Alarm which detects failure in process and produces alarm output. LBA can detect (1)Heater break, (2)Input disconnection or short-circuit, (3)Failure of operating device, etc. LBA can be used alone or in combination with temperature alarm. (When LBA is used in combination with temperature alarm, indication is independent, but output is produced from the same relay)



FEATURES

- * Two types of alarm (LBA + temperature) can be incorporated in the same hardware.
- * Field selectable alarm type and input.
- * Easy key operation.
- * PID autotuning is supplied as standard.
- * Single power supply (85 to 264V AC).

STANDARD SCALE RANGES

Input		Standard Ranges
THERMO COUPLE	Type K	IEC/JIS 0~200°C, 0~400°C, 0~600°C, 0~800°C, 0~999°C (1°C)
		IEC * 0~800°F, 0~999°F (1°F)
	Type J	IEC/JIS 0~200°C, 0~400°C, 0~600°C, 0~999°C (1°C)
		IEC * 0~800°F, 0~999°F (1°F)
	Type L	DIN 0~900°C (1°C)
	Type E	IEC/JIS 0~800°C, 0~999°C (1°C)
		IEC * 0~999°F (1°F)
	Type T	IEC/JIS -199~400°C, 0~400°C (1°C), -19.9~99.9°C (0.1°C)
		IEC * -199~752°F (1°F), -19.9~99.9°F (0.1°F)
	Type U	DIN -199~400°C, 0~400°C (1°C), -19.9~99.9°C (0.1°C)
RTD Pt100 or JPt100	IEC/JIS -199~200°C, -100~100°C, 0~200°C, 0~400°C, 0~600°C (1°C) -19.9~99.9°C, 0.0~50.0°C, 0.0~99.9°C (0.1°C)	
	IEC * -199~999°F, -199~400°F, 0~200°F, 0~500°F, 0~999°F (1°F) -19.9~99.9°F (0.1°F)	

- * Other scale ranges are also field configurable.
- * 0.1 and 1 resolution type (of RTD) are supplied in different hardware and have no interchangeability.
- * ANSI, DIN and JIS are same as IEC(International Electrotechnical Commission). Calibration of types L and U is IEC equivalent.

SPECIFICATION

Input		Alarm	
Input	: Thermocouple K,J (ANSI/JIS) RTD Pt100 (DIN/JIS)	Temperature alarm	: Deviation or process alarm (field selectable) Alarm type (high, low, high/low, band alarm) is field configurable as well as HOLD function. Relay contact output, 250V AC 1A (resistive load) 1a contact (common output with LBA when it is supplied.) Setting range : $-199 \sim 999^{\circ}\text{C}[^{\circ}\text{F}]$ or $-19.9 \sim 99.9^{\circ}\text{C}[^{\circ}\text{F}]$ Hysteresis width : $2^{\circ}\text{C}[^{\circ}\text{F}]$
Effect by external resistance	: $0.35\mu\text{V}/\text{ohm}$	Loop break alarm (LBA)	: Setting range : $0.1 \sim 99.9$ min. and $0 \sim 999^{\circ}\text{C}$ (1°C) or 200.0°C (0.1°C). Relay contact output 250V AC 1A (resistive load), 1 form A contact (Common output if temperature output is supplied).
Effect by input leadwire resistance	: Apporx. 0.01% of reading (RTD input)	Accuracy	
Input break protection	: Thermocouple input : UP scale as standard. (DOWN scale as option) RTD input : UP scale.	Setting accuracy	: T/C input : $\pm(0.5\%$ of set value + 1 digit) or $\pm 3^{\circ}\text{C}[6^{\circ}\text{F}]$, whichever is larger. RTD input : $\pm(0.5\%$ of set value + 1 digit) or $\pm 0.8^{\circ}\text{C}[1.6^{\circ}\text{F}]$, whichever is larger. Other set items : $\pm 0.5\%$ of setting range.
Input short-circuit protection	: DOWN scale (RTD input)	Display accuracy	: Same as setting accuracy.
Sampling time	: 0.5 sec.	Others	
Control		Supply voltage	: $85 \sim 264\text{V AC}$, 50/60Hz including supply voltage variation (Rating: $100 \sim 240\text{V AC}$)
Control action	: PID action with autotuning (AT). Reverse or direct action (field selectable). Proportional band : $1(0.1) \sim \text{span}$ (but below $200^{\circ}\text{C}[^{\circ}\text{F}]$) Integral time : $1 \sim 999$ sec. Derivative time : $1 \sim 999$ sec. Anti-Reset Windup : $1 \sim 100\%$ of proportional band. Cycle time : $1 \sim 100$ sec.	Power consumption	: Less than 15VA.
Control output	: Relay contact, 250V AC 3A (resistive load), 1c contact. (REX-C10:1a contact) SSR drive pulse voltage, 0/12V DC (load resistance more than 800Ω).	Operating conditions	: $0 \sim 50^{\circ}\text{C}$ (32 to 122°F), $45 \sim 85\%$ RH.
		Net weight	: 0.3kg (REX-C90), 0.25kg (REX-C70), 0.23kg (REX-C40/41), 0.17kg (REX-C10)

NEWS! 4-digit ranges and heat/cool options available soon!

MODEL and SUFFIX CODE

Model	Suffix code							Description	
REX-C10 REX-C40 REX-C41 REX-C70 REX-C90	F	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	*	<input type="checkbox"/>	<input type="checkbox"/>	48 x 48mm DDC 96 x 48mm DDC (vertical) 48 x 96mm DDC (horizontal) 72 x 72mm DDC 96 x 96mm DDC
Control	F								PID with auto-tuning
Alarm		N L S P							Not supplied LBA Temperature alarm LBA + temperature alarm
Input			C R						Thermocouple input RTD input
Control output				M V					Relay output SSR drive pulse voltage output
To be specified when alarm is ordered.	Alarm type			1 2					Process alarm Deviation alarm
	Alarm action				A B C D				High alarm Low alarm High/Low alarm (Deviation alarm only) Band alarm (Deviation alarm only)
	HOLD function					N H			Not supplied Supplied

Note: For more details, please ask for C-1840-E.

Subject to change without notice due to design changes.

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