

## Specifications

### Inputs

#### Input (Universal input)

- a) Thermocouple : K, J, R, S, B, E, T, N (JIS/IEC), PLII (NBS)  
W5Re/W26Re (ASTM), U, L (DIN)
- Influence of external resistance : Approx. 0.35 $\mu$ V/ $\Omega$
  - Input break action : Up-scale
- b) RTD : Pt100 (JIS/IEC), JPt100 (JIS)
- Influence of input lead resistance : Approx. 0.01[%/ $\Omega$ ] of reading  
• Maximum 10 $\Omega$  per wire
  - Input break action : Up-scale
- c) DC voltage : 0 to 5V, 1 to 5V (0.0 to 100.0% fixed)
- Input break action : Down-scale
- d) DC current : 0 to 20mA, 4 to 20mA (0.0 to 100.0% fixed)
- Input break action : Down-scale

#### Sampling time

0.5 sec

### Performance

#### Measuring accuracy

- a) Thermocouple
- ±(0.5% of reading + 1 digit) or ±3°C (6°F) whichever is larger
  - R, S inputs: ±6°C (12°F) between 0 and 399°C (0 and 799°F)
  - Accuracy is not guaranteed between 0 and 399°C (0 and 799°F) for type B.
- b) RTD
- ±(0.5% of reading + 1 digit) or ±0.8°C (1.6°F) whichever is larger
- c) DC voltage and DC current
- ±(0.5% of span + 1 digit)

#### Insulation resistance

More than 20M $\Omega$  (500V DC) between measured and ground terminals  
More than 20M $\Omega$  (500V DC) between power and ground terminals

#### Dielectric strength

1000V AC for one minute between measured and ground terminals  
1500V AC for one minute between power and ground terminals

### Control

#### Control method

- a) PID control with autotuning
- Available for reverse and direct action (Specify when ordering)
- b) Heat/cool PID control with autotuning (Not available on REX-C100)
- Available for air and water cooling type (Specify when ordering)

#### Major setting range

- Setting range : Same as input range.
- Heat-side proportional band: 1 to span or 0.1 to span  
(ON/OFF action when P=0)
- Differential gap at ON/OFF action is 2°C (°F) as standard  
(Factory set value)
- Cool-side proportional band: 0 to 1000% of heat-side proportional band  
(Heat/cool ON/OFF action when Pc=0)
- Integral time : 0 to 3600sec. (PD action when I=0)
- Derivative time : 0 to 3600sec. (PI action when D=0)
- Anti-reset windup (ARW) : 1 to 100% of heat-side proportional band
- Deadband/overlap : -10 to 10°C (°F) or -10.0 to 10.0°C (°F)
- Proportional cycle : 1 to 100 sec.

#### Control output

- Relay output : Form C contact, 250V AC 3A (resistive load)  
(Form A contact : REX-C100)
- Voltage pulse output : 0/12V DC  
(Load resistance : More than 600 $\Omega$ )
- Current output : 4 to 20mA DC  
(Load resistance : Less than 600 $\Omega$ )
- Triac trigger output : For medium capacity triac drive  
(less than 100A)

### Alarms

(Optional)

#### Temperature alarm

- a) Number of alarm : 2 points (Maximum)
- b) Alarm action : Deviation High, Low, High/Low, Band  
Process High, Low
- c) Alarm differential gap : 2°C (°F) or 2.0°C (°F) as standard.

#### Heater break alarm (For single phase)

- a) Number of inputs : 1 point
- b) CT type : CTL-6-P-N(30A), CTL-12-S56-10L-N(100A)
- c) Display range : 0.0 to 100.0A
- d) Accuracy : ± 5% of input value or 2A  
(whichever is larger)
- Output from alarm 2 terminal.

#### Control loop break alarm (LBA)

- a) LBA time setting : 0 to 7200 sec.
- b) LBA deadband : 0 to 999 °C[°F] or 100% of span  
(OFF when LBA deadband = 0)
- Not available for triac trigger output type.
  - Not available for heat/cool type.

#### Alarm output

Relay output, Form A contact 250V AC 1A (resistive load)

### General specifications

#### External Dimensions (W x H x D)

REX-C100 : 48 x 48 x 100mm  
REX-C400 : 48 x 96 x 100mm  
REX-C410 : 96 x 48 x 100mm  
REX-C700 : 72 x 72 x 100mm  
REX-C900 : 96 x 96 x 100mm

#### Supply voltage

- a) 85 to 264V AC (Including supply voltage variation)  
[Rating : 100 to 240V AC] (50/60Hz common)
- b) 21.6 to 26.4V AC (Including supply voltage variation)  
[Rating : 24V AC] (50/60Hz common)
- c) 21.6 to 26.4V DC (Ripple rate 10% p-p or less)  
[Rating : 24V DC]

#### Power consumption

Less than 17VA for standard AC type  
Less than 7.5VA for 24V AC type  
Less than 200mA for 24V DC type

#### Effect by power failure

A power failure of 20msec or less will not affect the control action.  
If power failure of more than 20msec occurs, controller will restart.

Operating environment : 0 to 50°C [32 to 122°F] , 45 to 85% RH

Memory backup : Backed up by Non-volatile memory.

#### Net weight

REX-C100 : Approx. 170g  
REX-C400 : Approx. 260g  
REX-C410 : Approx. 260g  
REX-C700 : Approx. 250g  
REX-C900 : Approx. 340g