PRODUCT NEWS

Product Discontinuation Notice

Measuring / Motor Protective Relays

OMRON

Issue Date
February, 2023

No. 2021054CE

Discontinuation Notice of Some products of Digital Heater Element Burnout Detector model K8AC series.

Product Discontinuation	Recommended Replacement
Digital Heater Element Burnout Detector Models for ON/OFF control (e.g., SSRs or contactors) **Model K8AC-H2[]C[]-FLK**	Heater Element Burnout Detector **Model K2CU-F series** **Or No recommended replacement**
Models for phase control and cyclic control **Model K8AC-H2[]P[]-FLK**	**No recommended replacement**
Current transformer for K8AC series **Model K8AC-CT[]** **(excluding K8AC-CT200L)**	**No recommended replacement**

[Final order entry date]

The end of March, 2023

[Date of The Last Shipping]

The end of June, 2023

[Caution on recommended replacement]

The K2CU-F series is a heater disconnection alarm, but its function is limited as an alternative model, so please be careful when replacing it.
The K2CU-F series does not have the following functions,. so please consult with our sales department.

- Heater element burnout detection by Cyclic and phase control
- Current value display
- Approval safety standard
- Heater element burnout detection linked to gate signal 4-20mA
- One disconnection detection when using five or more heaters
- Current input range(10A max,80A min)

[Difference from discontinued product]

Recommended replacement Model	Body Color	Dimen-sions	Wire connection	Mounting Dimensions	Charac-teristics	Operation ratings	Operation methods
K2CU series	-	-	-	-	-	*	-

** : Compatible
* : The change is a little/Almost compatible
-- : Not compatible
- : No corresponding specification

[Product Discontinuation and recommended replacement]

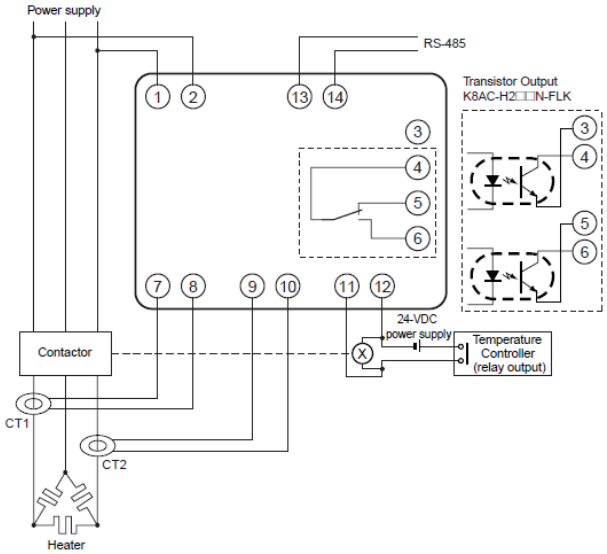
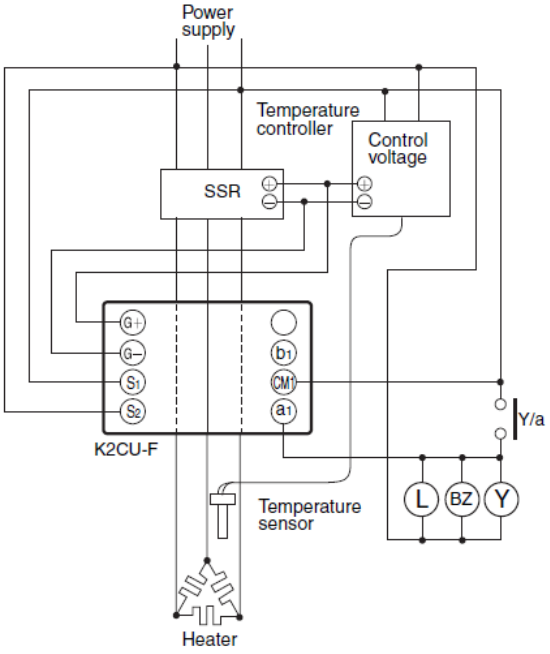
Product discontinuation	Recommended replacement
K8AC-CT200	No recommended replacement
K8AC-CT20L	No recommended replacement
K8AC-CT20S	No recommended replacement
K8AC-H21CC-FLK	No recommended replacement *Note
K8AC-H21CN-FLK	No recommended replacement *Note
K8AC-H21PC-FLK	No recommended replacement
K8AC-H21PN-FLK	No recommended replacement
K8AC-H22CC-FLK	K2CU-F10A-CGS
	K2CU-F40A-CGS
	K2CU-F10A-DGS
	K2CU-F40A-DGS
	K2CU-F10A-EGS
	K2CU-F40A-EGS
	K2CU-F10A-FGS
	K2CU-F40A-FGS
K8AC-H22CN-FLK	K2CU-F10A-CGS
	K2CU-F40A-CGS
	K2CU-F10A-DGS
	K2CU-F40A-DGS
	K2CU-F10A-EGS
	K2CU-F40A-EGS
	K2CU-F10A-FGS
	K2CU-F40A-FGS
K8AC-H22PC-FLK	No recommended replacement
K8AC-H22PN-FLK	No recommended replacement
K8AC-H23CC-FLK	K2CU-F40A-CGS
	K2CU-F80A-CGS
	K2CU-F40A-DGS
	K2CU-F80A-DGS
	K2CU-F40A-EGS
	K2CU-F80A-EGS
	K2CU-F40A-FGS
	K2CU-F80A-FGS
K8AC-H23CN-FLK	K2CU-F40A-CGS
	K2CU-F80A-CGS
	K2CU-F40A-DGS
	K2CU-F80A-DGS
	K2CU-F40A-EGS
	K2CU-F80A-EGS
	K2CU-F40A-FGS
	K2CU-F80A-FGS
K8AC-H23PC-FLK	No recommended replacement
K8AC-H23PN-FLK	No recommended replacement

*Note: If you are not using gate input, Small-capacity, Plug-in Model K2CU-P series can be used as a substitute.

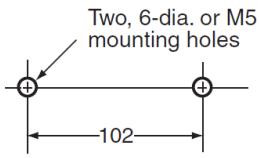
[Body color]

Product discontinuation Model K8AC series	Recommendable replacement Model K2CU-F series
Black 	**Gray** 

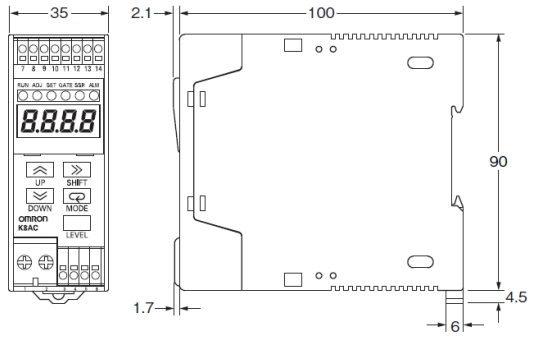
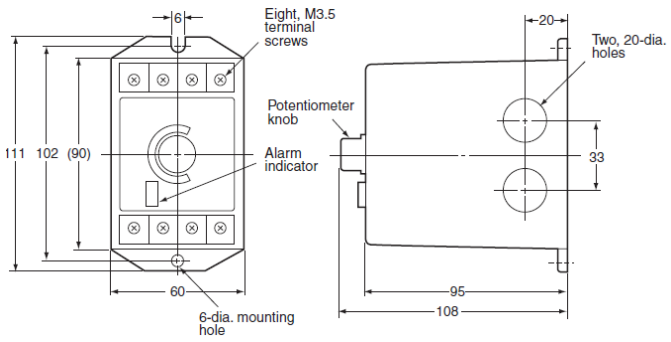
[Wire connection]

Product discontinuation Model K8AC series	Recommendable replacement Model K2CU-F series
External Connection Wiring Method When Using the K8AC-H with ON/OFF Control Heaters 	**External Connections** **Three-phase Heater** 

[Mounting dimensions]

Product discontinuation Model K8AC series	Recommendable replacement Model K2CU-F series
Mounting DIN rail mounting	**Mounting** Screw mounting **Mounting Holes** 

[Dimensions]

Product discontinuation Model K8AC series	Recommendable replacement Model K2CU-F series
	

[Characteristics]

Item	Product discontinuation Model K8AC series	Recommendable replacement Model K2CU-F series
Power supply voltage	100 to 240 VAC (50/60 Hz)	100, 110, 200, 220 VAC (50/60 Hz)
Operating voltage range	85% to 110% min. of the rated power supply voltage (85 to 264 V)	85% to 110% of control supply voltage
Power consumption (at max. load)	35 VA max.	Input: 0.5 VA max. Power supply: 5 VA max.
Applicable circuits	Single-phase or three-phase (with same model)	Single-phase or three-phase (with same model)
Applicable control methods	ON/OFF control (e.g., temperature controller with relay output) SSR control (e.g., temperature controller with voltage output) Cyclic control (e.g., temperature controller with current output) Phase control (e.g., temperature controller with current output)	ON/OFF control (e.g., temperature controller with relay output) SSR control (e.g., temperature controller with voltage output)
Input signal and applicable Current Transformer	Current measurement via two special Current Transformers (Burnout alarm set value can be set separately for each Current Transformer.)	Bilt-in current transformer
Measurement method	Effective value calculation based on instantaneous measurement value	Mean measurement by analog circuit

[Characteristics]

Item		Product discontinuation Model K8AC series	Recommendable replacement Model K2CU-F series
Gate input signa	**ON/OFF control**	Models for ON/OFF control (e.g., SSRs or contactors) K8AC-H2[]C[]-FLK Voltage = 12/24 VDC (continuous input possible to 30 VDC) Input impedance = 4 kΩ min.	ON/OFF control DC5 to 30V
	SSR control	Models for ON/OFF control (e.g., SSRs or contactors) K8AC-H2[]C[]-FLK ON voltage: 9.6 VDC max., OFF voltage: 1 VDC min. Minimum voltage pulse ON time for burnout detection: 200 ms min. Input impedance = 4 kΩ min.	ON/OFF control DC5 to 30V
	Cyclic control	Models for phase control and cyclic control K8AC-H2[]P[]-FLK 4 to 20 mA DC (Burnout detection is possible for an input of 7 mA or greater.) Input impedance = 50 Ω max.	None
	Phase control	Models for phase control and cyclic control K8AC-H2[]P[]-FLK 4 to 20 mA DC (Burnout detection is possible for an input of 7 mA or greater.) Input impedance = 50 Ω max.	None
Outputs	**Relay contact outputs: K8AC-H2[][]C-FLK**	One SPDT relay contact output 0.3 A at 125 VAC (resistive load), 1 A at 30 VDC (resistive load)	One SPDT relay contact output 2 A at 220 VAC, (cosφ = 0.4)
	Transistor outputs: K8AC-H2[][]N-FLK	Two transistor outputs: Can be used either NPN open-collector outputs or PNP equivalent outputs. 12 to 24 VDC, 50 mA OFF leakage current: 100 μA max., ON residual voltage: 1.5 V max.	None
Communications		RS-485 1200, 2400, 4800, 9600, 19200 bps (CompoWay/F)	None
Indication method		7-segment digital display: No. of display digits	LED (Lights when heater disconnection is detected)
Main functions		Heater burnout alarm, heater layer short circuit alarm, SSR short circuit detection, SSR open circuit detection, voltage fluctuation compensation, output ON-delay timer, energy-saving mode, key protection, and power supply voltage measurement	Heater burnout alarm Voltagefluctuation compensation
Ambient temperature	**Operating**	−10 to 55°C (with no icing or condensation)	−10 to 55°C (with no icing or condensation)
	Storage	−25 to 65°C (with no icing or condensation)	−25 to 65°C (with no icing or condensation)
Ambient humidity	**Operating**	25% to 85% (with no condensation)	45% to 85% (with no condensation)
	Storage	25% to 85% (with no condensation)	25% to 85% (with no condensation)

[Characteristics]

Item		Product discontinuation Model K8AC series	Recommendable replacement Model K2CU-F series
Heater current input (at 10 to 30°C) category II	**Input range**	K8AC-H21[][]: 0.200 to 2.200 A (Current Transformer: K8AC-CT20S (5.8 dia.), K8AC-CT20L (12 dia.)) K8AC-H22[][]: 2.00 to 22.00 A (Current Transformer: K8AC-CT20S (5.8 dia.), K8AC-CT20L (12 dia.)) K8AC-H23[][]: 20.0 to 200.0 A (Current Transformer: K8AC-CT200 (12 dia.), K8AC-CT200L (30 dia.))	K2CU-F10A-[]GS: AC 4 to 10 A K2CU-F20A-[]GS: AC 8 to 20 A K2CU-F40A-[]GS: 16 to 40 A K2CU-F80A-[]GS: 32 to 80 A (Continuously variable)
	Measurement accuracy	K8AC-H2[]C[]-FLK: ±3% rdg ±10 digits max. K8AC-H2[]P[]-FLK: ±6% rdg ±10 digits max. (at control level of 100%)	Setting accuracy: ±7% max. Repeat accuracy: ±3% max.
Voltage fluctuation compensation category II	**Input range**	85 to 264 VAC	85% to 110% of control supply voltage
	Measurement accuracy	±3% rdg ±10 digits max. Gate input Input range 0 to12 VDC or 0 to 24 VDC ON: 9.6 VDC max., OFF: 1 VDC	±5% max. of the logical value, on condition that the voltage fluctuation is 85% to 110% of the control supply voltage. (see note)
Display cycle		Selectable: Immediate, 0.2 s, 0.5 s, 1.0 s	None
Output ON-delay time		0.0 to 99.9 s (operating time)	None
Soft start time		0.0 to 99.9 s (used when using the soft start function of a Power Controller)	None
Output reset method		Automatic reset	Automatic reset
Alarm hysteresis		1 to 999 digits	None
Output response time		K8AC-H2[]C[]-FLK: 500 ms max. K8AC-H2[]P[]-FLK: 3.5 s max.	0.5 s max. (when current changes from 150% to 0%)
Insulation resistance		20 MΩ min. Between terminals and case Between power supply terminals/CT primary terminals and gate input terminals/communications terminals Between power supply terminals/CT primary terminals and output terminals,between gate input terminal/communications terminals and output terminals	10 MΩ min. (at 500 VDC) between electric circuits and mounting panel
Dielectric strength		2,000 V for 1 min Between terminals and case Between power supply terminals/CT primary terminals and gate input terminals/communications terminals Between power supply terminals/CT primary terminals and output terminals Between gate input terminal/communications terminals and output terminals	2,000 VAC, 50/60 Hz for 1 min between electric circuits and mounting panel
Vibration resistance		Vibration: 10 to 55 Hz, Acceleration: 50 m/s^2 for 5 min with 10 sweeps each in X, Y, and Z directions	Destruction: 16.7 Hz, 1-mm double amplitude for 10 min each in X, Y, and Z directions
Shock resistance		150 m/s^2 (100 m/s^2 for relay contacts) 3 times in 6 directions in X, Y, and Z directions	98 m/s^2 (approx. 10G)

[Characteristics]

Item		Product discontinuation Model K8AC series	Recommendable replacement Model K2CU-F series
Maximum allowable input	**Current Transformer primary current**	K8AC-H21[][]: 4 A: 30 s, 12 A: 1 s K8AC-H22[][]: 40 A: 30 s, 120 A: 1 s K8AC-H23[][]: 400 A: 30 s, 1,200 A: 1 s	1.25 times as large as each model's maximum operating current
	Gate signal: 4 to 20 mA	40 mA DC continuous	
	Voltage pulse gate input	30 VDC continuous	
Input impedance	**Gate signal: 4 to 20 m**	50 Ω max.	None
	Voltage pulse gate input	4 kΩ min.	
Memory protection		Non-volatile memory (number of writes: 100,000 operations)	None
Approved standards		UL61010-1 and CAN/CSA C22.2 No.61010-1 EN 61010-1 (IEC 61010-1)	None
EMC		EMI: EN61326-1 Industrial electromagnetic environment Radiated Interference Electromagnetic Field Strength: EN55011 Group 1, class A Noise Terminal Voltage: EN55011 Group 1, class A EMS: EN61326-1 Industrial electromagnetic environment ESD Immunity: EN61000-4-2: 4 kV (contact discharge) 8 kV (air discharge) Electromagnetic Immunity: EN61000-4-3: 10 V/m 1 kHz sine wave amplitude modulation (80 MHz to 1 GHz) Fast Transient Burst Immunity: EN61000-4-4: 2 kV (power line) 1 kV (I/O signal line) Surge immunity: EN61000-4-5: 1 kV (line to line, power line) 2 kV (line to ground, power line) Conducted Noise Immunity EN61000-4-6: 3 V (0.15 to 80 MHz) Voltage Dip/Interrupting Immunity EN61000-4-11: 0.5 cycle, 0.180°,100% (rated voltage)	None

Specifications and prices in this product news are as of the issue date and are subject to change without notice.
Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.