



UF-4000A standard version



UF-R4000A remote version

UF Series

Hot Bar Soldering Control

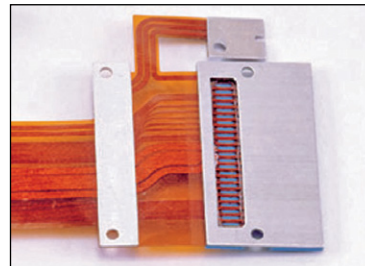
The UF Series provides targeted heating and precision temperature control for **hot bar soldering** applications such as the connection of flexible circuits, ribbon cables, wires, SMT components, single or dual sided edge connectors and thermocompression bonding of gold ribbon.

UF-4000A is available as a standard reflow soldering unit with a built-in transformer, or as a remote unit (UF-R4000A) with a smaller control unit and separate remote transformer— an ideal option for many automation installations.

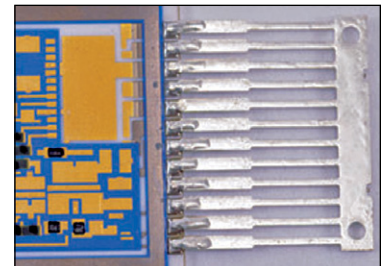
KEY FEATURES

- Closed-loop temperature and time control
- Stores 63 heating profiles
- Remote programming via RS-232/485
- Two thermocouples for process control and auxiliary monitoring
- Comprehensive and informative user interface:
 - Graphic and numeric process data
 - Status and alarm messages
 - Heat profile settings and envelope limits
 - Temperature error indicators
 - User scalable time axis
 - Real time temperature plot

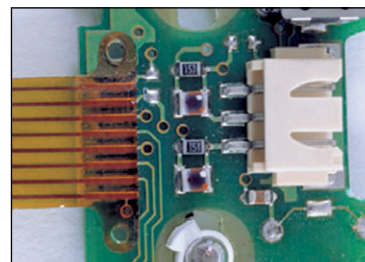
TYPICAL APPLICATIONS



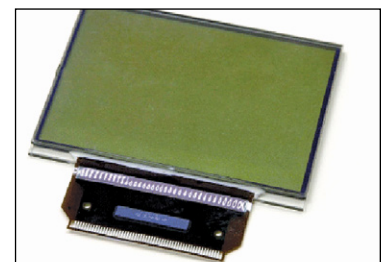
Open-windowed flex attachment



Lead frame to substrate pads



Flex to PCB



Flex to LCD

TECHNICAL SPECIFICATIONS

Temperature profile specifications		
Temperature range	Idle Base heat Preheat Heat Heat extended range Postheat	25 to 300° C 25 to 300° C 60 to 500° C 60 to 600° C 60 to 999° C 25 to 999° C
Time periods (in 0.1 sec. increments)	Base heat Rise to preheat time Preheat Rise to heat time Heat Postheat	0 to 99.9 seconds 0 to 9.9 seconds 0 to 99.9 seconds 0 to 9.9 seconds 0.1 to 99.9 seconds 0 to 99.9 seconds
Temperature Control	Accuracy Repeatability	±2% of reading or ±6° C, whichever is greater ±1% of reading
Thermocouple input Type E, J or K		
Heating rate control Three integrated user-set parameters optimize temperature profile		
Programmable heat profiles Sixty three (63) non-volatile memory		

Optional Equipment Ordering Guide		
Suggested basic system: power supply, reflow head, thermode, footswitch, auxiliary thermocouple		
Reflow heads	Force range lbf (Newtons)	Application guideline
LT-050B-F/LRF	0.08 - 2.2 (0.4 - 9.8)	Light force pinpoint soldering
LT-050B-F/RF	0.275 - 2.2 (1.22 - 9.8)	Light force pinpoint soldering
TL-087B-EZ	0.5 - 20 (2.2 - 89)	Small/medium soldering
TL-087B-F	0.25 - 20 (1.1 - 89)	Small/medium soldering
TL-087B-SA/REFLOW	2 - 20 (8.9 - 88.9)	Flex soldering/bonding
TL-084B-SA/REFLOW	5 - 40 (22.2 - 177.9)	Flex soldering/ACF/heat staking
TL-180B-SA	7 - 100 (31.1 - 444.0)	Flex soldering/ACF/heat staking
SH80	1.8 - 18 (8 - 80)	Flex soldering/ACF/heat staking
SH500	6.7 - 112.4 (30 - 500)	Flex soldering/ACF/heat staking
System solutions:		
Desktop bonders	1.8 - 112.4 (8 - 500)	Small to large soldering, flex soldering & ACF bonding; request/see datasheet #991-006
Auxiliary thermocouples		
AUXTC/E	Auxiliary thermocouple, type E, 5 ft. long	
AUXTC/K	Auxiliary thermocouple, type K, 5 ft. long	
AUXTC/J	Auxiliary thermocouple, type J, 5 ft. long	

Switched Input electrical specifications	
Operator initiation	1 or 2 level footswitch
Dedicated relays	24 VAC/24 VDC 0.3 A
Air head	ON/OFF for head actuation
Head cool	ON/OFF for cooling thermode holder
Solder cool	ON@COOL, OFF@PREHEAT
Programmable relays	7 each, electromechanical (24 VAC or +24 DC)
Contact rating	24 VAC/24DC, 0.3 A
Communication ports	RS-232, RS-485
Programmable relay functions –	Reflow, preheat, baseheat, idle on, alarm, out of limits, clean thermode, replace thermode, end reflow, heat on, head valve active, system ready
Operating temperatures	59° F (15° C) – 104° F (40° C)
Relative humidity, max.	93% @ 104° F (40° C)

Power Supply Ordering Guide		
Power Supplies	Description	Electrical
UF-4000A/240	UF-4000A power supply, 240 VAC, 4 kVA transformer	15 A, single phase 50 or 60 Hz
UF-4000A/240/EAPRO	UF-4000A power supply, 240 VAC, 4 kVA transformer	15 A, single phase 50 or 60 Hz
UF-R4000A/240	UF-4000A power supply, 240 VAC, no transformer	15 A, single phase 50 or 60 Hz
UF-R4000A/240/EAPRO	UF-4000A power supply, 240 VAC, no transformer	15 A, single phase 50 or 60 Hz

Remote Transformer Ordering Guide

(select one for use with UF-R4000A)

Remote Transformer	Description
MT-L040A2	4 kVA transformer secondary voltage range 0.95 - 3.81 V
MT-M040A2	4 kVA transformer secondary voltage range 1.90 - 7.62 V
MT-J020A2	2 kVA transformer secondary voltage range 0.95 - 3.81 V
MT-K020A2	2 kVA transformer secondary voltage range 1.90 - 7.62 V

Pulse Heated Thermodes	Description	Application/Size*: Inches (mm)
17P	Peg tip - (circular probe tip)	Thermocompression bonding-single point soldering / weld face diameter .020 - .093 (0.5 - 2.4)
17T	"T" tip - (rectangular probe tip)	Thermocompression bonding-single point soldering / weld face .008 x .010 (0.2 x 0.25)
17BM	Blade	Multiple contacts / 0.030 - 1.0 (0.76 - 25.4)
17F	Nichrome fold-up	Multiple contacts / 0.250 - 1.0 (6.45 - 25.4)
17TD	Three dimensional	Multiple contacts / 1.0 - 3.0 (25.4 - 76.2)

*NOTE: Standard size ranges are listed, consult AMADA WELD TECH for custom requirements and application advice.

WEIGHT & DIMENSIONS

	UF-4000A	UF-R4000A	MT-J020A2	MT-L040A2
Dimensions (L x W x H)	18.33 in x 10.0 in x 12.6 in (466 mm x 254 mm x 319 mm)	11.12 in x 11.21 in x 5.18 (282 mm x 285 mm x 132 mm)	11.91 in x 7.04 in x 7.81 in (303 mm x 179 mm x 198 mm)	14.55 in x 7.04 in x 7.81 in (370 mm x 179 mm x 198 mm)
Weight	2 kVA: 48 lb (21.8 kg) 4 kVA: 60 lb (27.2 kg)	19 lb (8.6 kg)	31 lb (14.1 kg)	48 lb (21.8 kg)



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