

Orion Kiln Control Solution October 2010

M&H Upgrade to FDC-2010-K5C System

Upgrade from M&H ST100 Sterilizer Control

System utilizes the two analog input cards from existing M&H ST100 2-line display control system

	Price
FDC - 2010- K5C – M&H - <input type="checkbox"/>	\$2,666
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1 Optional Analog Input and Output

0: None	n/c
1: One Analog Input module with 2 analog inputs and one linear 4-20 mA output	\$357
2: Two Analog input modules; each have 2 analog inputs and one linear 4-20 mA output.	\$714
3: Three Analog input modules; each have 2 analog inputs and one linear 4-20 mA output.	\$1,041

Note 1): The base unit above has all components of a new Kiln-Sterilizer system including Display, Power Supply, Cable, all Control Module components less the two standard Analog input/output Modules and Time Delay Relay and Socket.

Note 2): M&H ST100 replacement 2-line display & CPU are available.

ST100 replacement Display with embedded software	\$695
FC4A-D20-RS1 w/Real Time Clock (FC4A-PT1) and Memory Cartridge (FC4A-PM64-K4C)	\$985

Replacement color touch screen display

Price	
FDC-2010-TV3-42-K5C	\$1,200
Display includes CF card with embedded Kiln firmware	

CF and I-Stick Memory Components

Orion-K5C-CD-2GB version x.x	\$250
Orion-xxx-CF-2GB (blank CF card)	\$65
Orion-Istick-2GB	\$40

Software Licensing

Future Design Controls "Software" provided with the Control Module and the Color Touch Screen display is protected by copyright laws, international copyright treaties, intellectual property laws and treaties. For further information refer to the Kiln Control System manual.

This SOFTWARE is licensed at no charge to the end user as long as all Control Module & Display components are supplied by Future Design Controls whether as a new control system or if and when replacement parts are required. Software ownership and rights remain with Future Design Controls. Future Design Controls may terminate this License for failure to comply with these terms & conditions.

Control Module Components

	Price
Control Module CPU: FC5A-D16RS1-K5C with K5C firmware installed	\$895
Real Time Clock: FC4A-PT1	\$45
Memory Cartridge 64KB: FC4A-PM64-K5C	\$45

The Real Time Clock & Memory cartridge are installed within the CPU module and recommend all three be purchased as kit below:

Control Module, RTC and Memory Module Kit combined FC5A-D16RS1-K5C-PT1-PM64	\$985
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Relay Output Module (16 relay outputs) FC4A-R161	\$215
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Digital Input Module (8 digital inputs 24VDC) FC4A-N08B1	\$95
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Power Supply (24VDC 60 watt) PS5R-SD24	\$140
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Communications RS485 Modbus 2-wire Serial Module FC4A-HPC3	\$45
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Connecting Cable – Display to CPU Control Module CA-2011-8	\$25
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Following components are not part of the M&H upgrade but are included with new units.

Analog Input Module (2 temperature inputs & 1 mA output) FC4A-L03AP1 (qty 2 included with new base unit)	\$380
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Time Delay Relay & Socket GE1A-C10MA110 (relay) / SR2P-06 (socket)	\$30
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Miscellaneous Options

	Price
Manuals:	
FDC-2010-K5C_Operators_Manual_v2.x.	\$40
FDC-2010-K5C_OEM_Configuration_Manual	\$30
Manuals above are available on our site at the link http://www.futuredesigncontrols.com/KilnFDC2010K5C.html	

ISTICK-PANEL: USB Panel Mount Adapter for Memory I-Stick or Printer Connection	\$40
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ISTICK-4X-CVR: Nema 4X USB Panel Mount Adapter	\$75
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KilnView Software: PC communication to Orion Control System	\$2,500
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SNA-10A: RS232 to RS485 Converter connects PC RS232 Serial connection to Orion RS485	\$145
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DB9M-DB9F-6ft: Cable [6 ft] to connect SNA10A to PC serial port	\$20
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Printer: HP 6540 (or equal) inkjet printer	\$159
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Low Frequency Ferrite Beads (qty 2) LFBead-240-2282-ND	\$10
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High Frequency Ferrite Beads (qty 2) HFBead-240-4279-ND	\$10
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Low Frequency Ferrite Beads are included for each analog input to provide additional protection for electrical "Noise" typically created by Variable Speed Drives.