

HC900 Hybrid Controller Assemblies

Model Selection Guide

RACKS	MODEL NUMBER
4 I/O Slot Rack	900R04 - 0001
8 I/O Slot Rack	900R08 - 0101
12 I/O Slot Rack	900R12 - 0101
8 Slot Rack -Red. Power	900R08R - 0101
12 Slot Rack - Red. Power	900R12R - 0101
Redundant Power Status Module	900PSM - 0001
Power Supplies	
120/240VAC, 60W	900P01 -0001
120/240VAC, 28W Note 5	900P02 -0001
24Vdc, 60W	900P24 -0001
CPU Assemblies	
Controller C70 CPU Config. SW & Docs	900C71 - 0144-00
Controller C70 CPU Note 1	900C72 - 0144-00
Controller C50 CPU Config.SW & Docs	900C51 - 0244-00
Controller C50 CPU Note 1	900C52 - 0244-00
Controller C30 CPU Config. SW & Docs	900C31 - 0244-00
Controller C30 CPU Note 1	900C32 - 0244-00
I/O Scanner (for remote rack)	900C53 - 0244-00
I/O Card Selections	
Analog Input (8 channel)	900A01 - 0102
Analog Input Hi level (16ch)	900A16 - 0001
Analog Output, 0 to 20mA, (4 channel)	900B01 -0101
Analog Output, 0 to 20mA, (8 channel)	900B08-0001
Analog Output, 0 to 20mA, (16 channel)	900B16-0001
Digital Input, Contact type, (16 channel)	900G01 - 0102
Digital Input, 24VDC (16 channel)	900G02 - 0102
Digital Input, 120/240 VAC, (16 channel)	900G03 - 0102
Digital In, 120/240 VAC, 125VDC (16 channel-Isolated)	900G04 - 0001
Digital Input, 24VDC (32 channel)	900G32 - 0001
Digital Output, Relays (8 channel)	900H01 - 0102
Digital Output, 24VDC (16 channel)	900H02 - 0102
Digital Output, 120/240 VAC (8 channel)	900H03 - 0102
Digital Output, 24VDC (32 channel)	900H32 - 0001
Pulse/Freq/Quad (4chan, 1Quad)	900K01 - 0001

Terminal Blocks, Cables, Jumpers		MODEL NUMBER
Low Voltage Terminal Block (Euro style)	Note 3	900TEK - 0001
Low Voltage Terminal Block (Barrier Style)	Note 3	900TBK -0001
High Voltage Terminal Block (Euro style)	Note 3	900TER - 0001
High Voltage Terminal Block (Barrier Style)	Note 3	900TBR - 0001
Low voltage Terminal Block (36 pos)	Note 3	900TCK - 0001
Analog Input Remote Terminal Panel (RTP)	Note 6	900RTA - L001
Relay Output Remote Terminal Panel (RTP)	Note 6	900RTR - H001
DI, DO, AO Remote Terminal Panel (RTP)	Note 6	900RTS - 0001
Low Voltage RTP Cable (1.0M, 3.28ft.)	Note 6	900RTC - L010
Low Voltage RTP Cable (2.5M, 8.2ft.)	Note 6	900RTC - L025
Low Voltage RTP Cable (5.0M, 16.4ft.)	Note 6	900RTC - L050
High Voltage RTP Cable (1.0M, 3.28ft.)	Note 6	900RTC - H010
High Voltage RTP Cable (2.5M, 8.2ft.)	Note 6	900RTC - H025
High Voltage RTP Cable (5.0M, 16.4ft.)	Note 6	900RTC - H050
LV RTP Cable (32/16 channel) (1.0M, 3.28ft)	Note 6	900RTC - 3210
LV RTP Cable (32/16 channel) (2.5M, 8.2ft)	Note 6	900RTC - 3225
LV RTP Cable (32/16 channel) (5.0M, 16.4ft)	Note 6	900RTC - 3250
8 ch A/O RTP Cable (1M, 3.3ft)	Note 6	900RTC-B810
8 ch A/O RTP Cable (2.5M, 8.2ft)	Note 6	900RTC-B825
8 ch A/O RTP Cable (5.0M, 16.4ft)	Note 6	900RTC-B850
Filler Block Terminal Cover		900TNF - 0001
Shield Terminal Strip (package of 2)		900TSS - 0001
Terminal board jumpers (10, two pos jumpers)	Note 4	900J02 - 0001
Terminal board jumpers (10, ten pos. jumpers)	Note 4	900J10 - 0001
Manuals		
Full document set on CD	Note 2	900ME1-0044-44
Full document set, hard copy - English	Note 2	900ME2-0044-44
Software		
HC Designer Config. Software CD		900W01-0044-44
HC Utilities Software/Documentation CD		900W02-0044-44
HC Historian Software		50045756-001

Note 1: Documentation and Hybrid Control Designer Configuration Software are not provided with this model. If required, specify CPU model numbers 900C71-NNNN-NN, 900C51-0NNN-NN, 900C31-0NNN-NN or order items separately.

Note 2: A full documentation set on CD is provided with CPU 900C51-00NN-NN and 900C31-00NN-NN. If additional copies or if a hard copy manual set is desired, specify them as separate items. The manual set contains one each of all HC900 product manuals. Doc

Note 3: Terminal blocks for I/O modules must be ordered separately. Two styles are available for each of the two types--Euro style and Barrier style. The type of terminal block (gold and tin contacts) must be matched to the appropriate I/P board type. S

Card Type	Terminal Blocks	
Analog Input (8 channel)	900TEK-0001	900TBK-0001
Analog Output, 0 to 20mA, (4 channel)	900TEK-0001	900TBK-0001
Analog Output, 0 to 20mA, (8 channel)	900TCK - 0001	
Analog Output, 0 to 20mA, (16 channel)	900TCK - 0001	
Digital Input, Contact type, (16 channel)	900TEK-0001	900TBK-0001
Digital Input, 24VDC (16 channel)	900TEK-0001	900TBK-0001
Digital Input, 120/240 VAC, (16 channel)	900TER-0001	900TBR-0001
Digital In, 120/240VAC 125VDC (16ch Iso)	900TCK - 0001	
Digital Output, Relays (8 channel)	900TER-0001	900TBR-0001
Digital Output, 24VDC (16 Channel)	900TEK-0001	900TBK-0001
Digital Output, 120/240 VAC (8 channel)	900TER-0001	900TBR-0001

Note 4: Jumpers available for Barrier Style terminals only.

Note 5: How to choose an AC Power Supply

	A	B	C	D	E
Module type	Enter Quantity	Max Current @ 5 V	Max Current @ 24 V	Calculate 5V current (D = A * B)	Calculate 24V current (E = A * C)
Controller (C30)	()	820 mA	0 mA	()	(0)
Controller (C50)	()	930 mA	0 mA	()	(0)
Controller (C70)	()	1150 mA	0 mA	()	(0)
Controller (C70R)	()	1500 mA	0 mA	()	(0)
Scanner 1 Port	()	670 mA	0 mA	()	(0)
Scanner 2 Port	()	770 mA	0 mA	()	(0)
Power Status Module (PSM)	()	22 mA	0 mA	()	(0)
Analog Input(8 pts)	()	40 mA	25 mA	()	()
Analog Input(16 pts)	()	75 mA	50 mA	()	()
Analog Output(4 pts) [*]	()	40 mA	200 mA	()	()
Analog Output(8 pts) ^{***}	()	225 mA	350 mA	()	()
Analog Output(16 pts) ^{***}	()	350 mA	700 mA	()	()
AC Digital Input (16 pts)	()	130 mA	0 mA	()	(0)
DC Digital Input (16 pts)	()	130 mA	0 mA	()	(0)
Contact Input (16 pts)	()	130 mA	40 mA	()	()
DC Digital Input (32 pts)	()	215 mA	0 mA	()	(0)
AC Digital Output (8 pts)	()	220 mA	0 mA	()	(0)
DC Digital Output (16 pts)	()	340 mA	0 mA	()	(0)
DC Digital Output (32 pts)	()	235 mA	0 mA	()	(0)
Relay Output (8 pts)	()	110 mA	100 mA	()	()
Pulse/Frequency/Quadrature ^{**}	()	110 mA	250 mA	()	()
*Limit 10 Analog Output modules per I/O rack. ** Limit 4 PFQ modules per I/O rack. *** Limit 2 16-pt. modules per rack. Limit 5 8-pt. modules per rack with internal power supply. Use 0 mA for 24V value when using an external 24V supply.				Total mA @ 5V =	Total mA @ 24V=
				()	()
Complete columns A, D and E above.					
Is column D total mA @ 5V less than 2000mA?			Yes/No		
Is column E total mA @ 24V less than 900mA?			Yes/No		
If the answers to 1 <u>and</u> 2 are YES, go to 4. If the answer to 1 <u>or</u> 2 is NO, use power supply 900P01-0001.					
Multiply 5V total by 5.1.			()		
Multiply 24V total by 24.5.			()		
Sum results of 4 and 5.			()		
Divide results of 6 by 1000			()		
Is the result of 7 less than 28?			Yes/No		
If the answer to 8 is Yes, use power supply 900P02-0001					
If the answer to 8 is No, use power supply 900P01-0001					

Note 6

Using the table below, select a Remote Terminal Panel and Cable Assembly to match the module type.

Module Types	Module Model	Remote Terminal Panel	Acceptable Cables
Analog Input Module	900A01 – 010X	900RTA – L001	900RTC – L010 900RTC – L025 900RTC – L050
Relay Output Module	900H01 – 010X	900RTR – H001	900 RTC – H010 900 RTC – H025 900 RTC – H050
Analog Output Module Contact Discrete Input Module DC Discrete Input Module DC Discrete Output Module	900B01 – 010X 900G01 – 010X 900G02 – 010X 900H02 – 010X	900RTS - 0001	900RTC – L010 900RTC – L025 900RTC – L050
AC Discrete Input Module AC Discrete Output Module	900G03 - 010X 900H03 – 010X	900RTS - 0001	900 RTC – H010 900 RTC – H025 900 RTC – H050
Digital Input , 32 channel Digital Output, 32 Channel Analog Input, 16 Channel	900G32-000X 900H32-000X 900A16-000X	900RTS - 0001 (2 required)	900RTC – 3225 900RTC – 3210 900RTC - 3250
Analog Output Module 8 Channel	900B08-0001	900RTS - 0001	900RTC – B810 900RTC – B825 900RTC – B850
Analog Output Module 16 Channel	900B16-0001	900RTS – 0001 (2 required)	900RTC – 3225 900RTC – 3210 900RTC - 3250