

HC900 Redundant Hybrid Controller Assemblies

Model Selection Guide

Power Supplies	MODEL NUMBER
120/240VAC, 60W	900P01 -0001
120/240VAC, 28W	Note 5 900P02 -0001
24Vdc, 60W	900P24 -0001

Redundant Controller Rack	
Redundant CPU Rack	900RR0 - 0001
Controller C70R CPU Config.SW & Docs	900C71R-0100-44
Controller C70R CPU	Note 1 900C72R-0100-44
Redundant Switch Module	900RSM - 0001

Remote I/O Rack	
I/O Scanner - 2 Port (1 per I/O rack)	900C73R-0100-44
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

I/O Module 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, 125 VDC(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 Boards		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 (<i>supplied with CPU 900C71R---</i>)	Note 2	900ME1-0044-44
Full document set, hard copy - English	Note 2	900ME2-0044-44

Software		
HC Designer Config. Software CD (<i>supplied with CPU 900C71R---</i>)		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 number 900C71R-00NN-NN or order items separately.

Note 2: A full documentation set on CD is provided with CPU 900C71R-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. Documentation (CD and hard copy) is available only in English language.

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 or tin contacts) must be matched to the appropriate I/O board type. See table below for proper selections. The CPU, Scanner and power supply cards do not require separate terminal blocks.

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	<i>Enter Quantity</i>	Max Current @ 5 V	Max Current @ 24 V	<i>Calculate 5V current (D = A * B)</i>	<i>Calculate 24V current (E = A * C)</i>
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 – 3210 900RTC – 3225 900RTC - 3250