

## HC900 Process Control System - Legacy

## Model Selection Guide

<b>Racks</b>		<b>MODEL NUMBER</b>
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
<b>Remote I/O Rack</b>		
I/O Scanner - 2 Port (1 per I/O rack)		900C73R-0100-44
I/O Scanner (for remote rack)		900C53-0244-00
<b>Power Supplies</b>		
120/240VAC, 60W	<b>Note 7</b>	900P01-0001
120/240VAC, 28W	<b>Note 5 &amp; 7</b>	900P02-0001
24Vdc, 60W	<b>Note 7</b>	900P24-0001
<b>CPU Assemblies</b>		
Controller C70 CPU	<b>Note 1 &amp; 8</b>	900C72-0144-00
Controller C50 CPU	<b>Note 1 &amp; 8</b>	900C52-0244-00
Controller C30 CPU	<b>Note 1 &amp; 8</b>	900C32-0244-00
<b>Redundant Controller Rack and CPU</b>		
Redundant CPU Rack		900RR0-0001
Redundant Controller C70R CPU	<b>Note 1 &amp; 8</b>	900C72R-0100-44
Redundant Switch Module		900RSM-0001
<b>I/O Card Selections</b>		
Analog Input (8 channel)		900A01-0102
Analog Input Hi level (16ch)		900A16-0001
Analog Output, 0 to 20mA, (4 channel)	<b>Note 7</b>	900B01-0201
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)	<b>Note 7</b>	900K01-0101

Terminal Blocks, Cables, Jumpers		MODEL NUMBER
Low Voltage Terminal Block (Euro style)	<b>Note 3</b>	900TEK-0001
Low Voltage Terminal Block (Barrier Style)	<b>Note 3</b>	900TBK-0001
High Voltage Terminal Block (Euro style)	<b>Note 3</b>	900TER-0001
High Voltage Terminal Block (Barrier Style)	<b>Note 3</b>	900TBR-0001
Low voltage Terminal Block (36 pos)	<b>Note 3</b>	900TCK-0001
Analog Input Remote Terminal Panel (RTP)	<b>Note 6</b>	900RTA-L001
Relay Output Remote Terminal Panel (RTP)	<b>Note 6</b>	900RTR-H001
DI, DO, AO Remote Terminal Panel (RTP)	<b>Note 6</b>	900RTS-0001
Low Voltage RTP Cable (1.0M, 3.28ft.)	<b>Note 6</b>	900RTC-L010
Low Voltage RTP Cable (2.5M, 8.2ft.)	<b>Note 6</b>	900RTC-L025
Low Voltage RTP Cable (5.0M, 16.4ft.)	<b>Note 6</b>	900RTC-L050
High Voltage RTP Cable (1.0M, 3.28ft.)	<b>Note 6</b>	900RTC-H010
High Voltage RTP Cable (2.5M, 8.2ft.)	<b>Note 6</b>	900RTC-H025
High Voltage RTP Cable (5.0M, 16.4ft.)	<b>Note 6</b>	900RTC-H050
LV RTP Cable (32/16 channel) (1.0M, 3.28ft)	<b>Note 6</b>	900RTC-3210
LV RTP Cable (32/16 channel) (2.5M, 8.2ft)	<b>Note 6</b>	900RTC-3225
LV RTP Cable (32/16 channel) (5.0M, 16.4ft)	<b>Note 6</b>	900RTC-3250
8 ch A/O RTP Cable (1M, 3.3ft)	<b>Note 6</b>	900RTC-B810
8 ch A/O RTP Cable (2.5M, 8.2ft)	<b>Note 6</b>	900RTC-B825
8 ch A/O RTP Cable (5.0M, 16.4ft)	<b>Note 6</b>	900RTC-B850
Filler Block Terminal Cover		900TNF-0001
Shield Terminal Strip (package of 2)		900TSS-0001
Terminal board jumpers (10, two pos jumpers)	<b>Note 4</b>	900J02-0001
Terminal board jumpers (10, ten pos. jumpers)	<b>Note 4</b>	900J10-0001
<b>Manuals</b>		
Full Document set on CD	<b>Note 2 &amp; 7</b>	900ME1-0060-00
<b>Software</b>		
HC Designer Config. Software CD (with Matrikon OPC Server)	<b>Note 2 &amp; 7</b>	900W01-0060-00
HC Utilities Software/Documentation CD	<b>Note 2 &amp; 7</b>	900W02-0060-00
HC Historian Software	<b>Note 2</b>	50045756-001

**Note 1:** Documentation and Designer Configuration Software are not provided with this model. Please specify model numbers under Manuals and software section to order documentation and configuration software.

**Note 2:** Documentation set and configuration software do not come along with the CPU and need to be ordered separately.

**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.

**Note 7:** Model Numbers have changed for the models below

Description	Old Model Numbers	New
120/240VAC, 60W	900P01 -0001	900P01-0101
120/240VAC, 28W	900P02 -0001	900P02-0101
24Vdc, 60W	900P24 -0001	900P24-0101
Analog Output, 0 to 20mA, (4 channel)	900B01 -0101	900B01-0201
Pulse/Freq/Quad (4chan, 1Quad)	900K01 - 0001	900K01-0101
Full Document set on CD	900ME1-0044-44	900ME1-0060-00
Full document set, hard copy - English	900ME2-0044-44	900ME2-0060-00
HC Designer Config. Software CD	900W01-0044-44	900W01-0060-00
HC Utilities Software/Documentation CD	900W02-0044-44	900W02-0060-00

**Note 8:** Model numbers in the legacy system such as 900C31-0244-00, 900C51-0244-00, 900C71-0144-00, 900C71R-0100-44 which included the configuration software and documents have been discontinued and will not be offered with the new and SIL systems also. Documentation set and configuration software have to be ordered separately.

Description	Discontinued
Controller C70 CPU Config. SW & Docs	900C71-0144-00
Controller C50 CPU Config. SW & Docs	900C51-0244-00
Controller C30 CPU Config. SW & Docs	900C31-0244-00
<b>Redundant Controller Rack and CPU</b>	
Controller C70R CPU Config. SW & Docs	900C71R-0100-44

Card Type	Model #	Terminal Blocks	
		Euro Style	Barrier Style
Analog Input (8 channel)	900A01-0102	900TEK-0001	900TBK-0001
Analog Output, 0 to 20mA, (4 channel)	900B01-0201	900TEK-0001	900TBK-0001
Analog Output, 0 to 20mA, (8 channel)	900B08-0001	900TCK-0001	
Analog Output, 0 to 20mA, (16 channel)	900B16-0001	900TCK-0001	
Digital Input, Contact type, (16 channel)	900G01-0102	900TEK-0001	900TBK-0001
Digital Input, 24VDC (16 channel)	900G02-0102	900TEK-0001	900TBK-0001
Digital Input, 120/240 VAC, (16 channel)	900G03-0102	900TER-0001	900TBR-0001
Digital In, 120/240 VAC, 125 VDC(16 channel-Isolated)	900G04-0001	900TCK-0001	
Digital Output, Relays ( 8 channel)	900H01-0102	900TER-0001	900TBR-0001
Digital Output, 24VDC (16 Channel)	900H02-0102	900TEK-0001	900TBK-0001
Digital Output, 120/240 VAC (8 channel)	900H03-0102	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

## HC900 Process Control System Assemblies

## Accessories / Kits & Manuals

Kits	Part Number
Spare I/O Label Kit	51452262-501
Replacement Battery Kit	51500638-501
Redundant Power, Rack Extension Kit	900RPE-0001
Replacement C30 CPU for systems built prior to 4/2006	900C32-0123-00
Replacement C50 CPU for systems built prior to 4/2006	900C52-0123-00
Replacement Scanner for systems built prior to 4/2006	900C53-0123-00

Accessories	Part Number
Ethernet Cable (10 feet)	51451432-010
Ethernet Cable (20 feet)	51451432-020
Ethernet Cross-over Cable (20 feet) *	51451996-020
Null Modem Cable for CPUs built before 1/2006**	51404755-501
Null Modem Cable for CPUs built after 1/ 2006**	50004820-501
250 ohm Shunt Resistor Kit (for mA ranges) (8/pkg.)	51205995-501
Industrial Ethernet Switch (8 Ports)	50008930-001
24 VDC Power Supply (1.3A)	51452041-501
24 VDC Power Supply (2.5A)	50047098-001

Manuals	Part Number
HC900 Controller Manual	51-52-25-107
HC900 Controller Manual, Spanish	51-52-25-107-SP
HC900 Controller Manual, French	51-52-25-107-FR
Designer Configuration Software Manual	51-52-25-110
Function Block Reference Guide	51-52-25-109
Communications Manual	51-52-25-111

\* Used to connect Remote I/O Hubs and to connect PC to Controller (Ethernet Port) with CPUs and Scanners built prior to 1/2006

\*\* Used to connect PC to Controller (Serial Port)