

## HC900 Process and Safety System (SIL2)

## Model Selection Guide

Racks		NEW VER 6.0 MODEL NUMBER
4 I/O Slot Rack		900R04-0200
8 I/O Slot Rack		900R08-0200
12 I/O Slot Rack		900R12-0200
8 Slot Rack -Red. Power		900R08R-0200
12 Slot Rack - Red. Power		900R12R-0200
Redundant Power Status Module		900PSM-0101
<b>Remote I/O Rack</b>		
I/O Scanner - 2 Port (1 per I/O rack)		900S75-0360-00
I/O Scanner (for remote rack)		900S50-0360-00
<b>Power Supplies</b>		
120/240VAC, 60W		900P01-0101
120/240VAC, 28W	<b>Note 5</b>	900P02-0101
24Vdc, 60W	<b>(P24 NOT ALLOWED IN SAFETY)</b>	900P24-0101
<b>CPU Assemblies</b>		
Controller C70 CPU	<b>Note 1 &amp; 7</b>	900C70-0360-00
Controller C50 CPU	<b>Note 1 &amp; 7</b>	900C50-0360-00
Controller C30 CPU	<b>Note 1 &amp; 7</b>	900C30-0360-00
<b>Redundant Controller Rack and CPU</b>		
Redundant CPU Rack		900RR0-0101
Redundant Controller C75 CPU	<b>Note 1 &amp; 7</b>	900C75-0360-00
Redundant Switch Module		900RSM-0101
<b>CPU Assemblies - SIL2 SAFETY SYSTEM</b>		
Controller C70 CPU - SIL	<b>Note 1 &amp; 7</b>	900C70S-0360-00
Controller C50 CPU - SIL	<b>Note 1 &amp; 7</b>	900C50S-0360-00
Controller C30 CPU - SIL	<b>Note 1 &amp; 7</b>	900C30S-0360-00
<b>Redundant Controller Rack - SIL2 SAFETY SYSTEM</b>		
Redundant CPU Rack		900RR0-0101
Redundant Controller C75 CPU-SIL	<b>Note 1 &amp; 7</b>	900C75S-0360-00
Redundant Switch Module		900RSM-0101
<b>Remote I/O Rack - SIL2 SAFETY SYSTEM</b>		
I/O Scanner - 2 Port (1 per I/O rack) - SIL		900S75S-0360-00
I/O Scanner - 1 Port (1 per I/O rack) - SIL		900S50S-0360-00
<b>Power Supplies - SIL2 SAFETY SYSTEM</b>		
120/240VAC, 60W		900P01-0201
120/240VAC, 28W	<b>Note 5</b>	900P02-0201
<b>I/O Card Selections</b>		
Analog Input (8 channel)		900A01-0202
Analog Input Hi level (16ch)		900A16-0101
Analog Output, 0 to 20mA, (4 channel)		900B01-0301
Analog Outputs 0 to 20mA (8 channel, 5 modules/rack)		900B08-0202
Analog Outputs 0 to 20mA (16 channel, 2 modules per rack)		900B16-0202
Digital Input, Contact type, (16 channel)		900G01-0202
Digital Input, 24VDC (16 channel)		900G02-0202
Digital Input, 120/240 VAC, (16 channel)		900G03-0202
Digital Input, 120/240 VAC-125VDC, (16 channel Isolated)		900G04-0101
Digital Input, 24VDC (32 channel)		900G32-0101
Digital Output, Relays ( 8 channel)		900H01-0202
Digital Output, 24VDC (16 channel)		900H02-0202
Digital Output, 120/240 VAC (8 channel)		900H03-0202
Digital Output, 24VDC (32 channel)		900H32-0102
Pulse/Freq/Quad (4chan, 1Quad)	<b>(NOT FOR SIL2 SYSTEMS)</b>	900K01-0201

Terminal Blocks, Cables, Jumpers		NEW VER 6.0 MODEL NUMBER
Low Voltage Terminal Block (Euro style)	Note 3	900TEK-0101
Low Voltage Terminal Block (Barrier Style)	Note 3	900TBK-0101
High Voltage Terminal Block (Euro style)	Note 3	900TER-0101
High Voltage Terminal Block (Barrier Style)	Note 3	900TBR-0101
Voltage Terminal Block (36 channel)	Note 3	900TCK-0101
Analog Input Remote Terminal Panel (RTP)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTA-L001
Relay Output Remote Terminal Panel (RTP)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTR-H001
DI, DO, AO, 16pt AI, Remote Terminal Panel (RTP)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTS-0001
Low Voltage RTP Cable (1.0M, 3.28ft.)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-L110
Low Voltage RTP Cable (2.5M, 8.2ft.)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-L125
Low Voltage RTP Cable (5.0M, 16.4ft.)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-L150
High Voltage RTP Cable (1.0M, 3.28ft.)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-H110
High Voltage RTP Cable (2.5M, 8.2ft.)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-H125
High Voltage RTP Cable (5.0M, 16.4ft.)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-H150
LV RTP Cable (32/16 channel) (1.0M, 3.28ft)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-3310
LV RTP Cable (32/16 channel) (2.5M, 8.2ft)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-3325
LV RTP Cable (32/16 channel) (5.0M, 16.4ft)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-3350
8 ch A/O RTP Cable (1.0M, 3.3ft)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-B910
8 ch A/O RTP Cable (2.5M, 8.2ft)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-B925
8 ch A/O RTP Cable (5.0M, 16.4ft)	Note 6 (NOT FOR SIL2 SYSTEMS)	900RTC-B950
Filler Block Terminal Cover		900TNF-0101
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
<b>Manuals</b>		
Full Document set on CD	Note 2	900ME1-0060-00
Full Document set on CD - SIL	Note 2	900ME1S-0060-00
<b>Software</b>		
Designer Config. Software CD (with Matrikon OPC Server)	Note 2	900W01-0060-00
Utilities Software/Documentation CD	Note 2	900W02-0060-00
Historian Software w Documentation	Note 2	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. S

**Note 7:** 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)	900A01-0202	900TEK-0001	900TBK-0001
Analog Output, 0 to 20mA, (4 channel)	900B01-0301	900TEK-0001	900TBK-0001
Analog Outputs 0 to 20mA (8 channel, 5 modules/rack)	900B08-0202	900TCK-0001	
Analog Outputs 0 to 20mA (16 channel, 2 modules per rack)	900B16-0202	900TCK-0001	
Digital Input, Contact type, (16 channel)	900G01-0202	900TEK-0001	900TBK-0001
Digital Input, 24VDC (16 channel)	900G02-0202	900TEK-0001	900TBK-0001
Digital Input, 120/240 VAC, (16 channel)	900G03-0202	900TER-0001	900TBR-0001
Digital Input, 120/240 VAC-125VDC, (16 channel Isolated)	900G04-0101	900TCK-0001	
Digital Output, Relays (8 channel)	900H01-0202	900TER-0001	900TBR-0001
Digital Output, 24VDC (16 Channel)	900H02-0202	900TEK-0001	900TBK-0001
Digital Output, 120/240 VAC (8 channel)	900H03-0202	900TER-0001	900TBR-0001

**Note 4:** Jumpers available for Barrier Style terminals only.

**Note 5:** How to choose an AC Power Supply

Module type	A Enter Quantity	B Max Current @ 5 V	C Max Current @ 24 V	D Calculate 5V current (D = A * B)	E Calculate 24V current (E = A * C)
Controller (C30 and C30S)	( )	820 mA legacy. 1100 mA New.	0 mA	( )	( 0 )
Controller (C50 and C50S)	( )	930 mA legacy. 1100 mA New.	0 mA	( )	( 0 )
Controller (C70 and C70S)	( )	1150mA legacy. 1350 mA New.	0 mA	( )	( 0 )
Controller (C75/ C75S)	( )	1500 mA legacy. 1500 mA New.	0 mA	( )	( 0 )
Scanner 1 Port (S50/S50S)	( )	670 mA legacy. 750 mA New.	0 mA	( )	( 0 )
Scanner 2 Port (S75/S75S)	( )	770 mA . legacy. 950 mA New.	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 )
AC/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, 4 channel Analog Output modules per I/O rack.				Total mA @ 5V =	Total mA @ 24V=
** Limit 4 PFQ modules per I/O rack.				( )	( )
Complete columns A, D and E above.					
1. Is column D total mA @ 5V less than 2000mA? Yes/No					
2. Is column E total mA @ 24V less than 900mA? Yes/No					
3. 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.					
4. Multiple column D total by 5.1					
5. Multiple column E total by 24.5					
6. Sum results of 4 and 5.					
7. Divide results of 6 by 1000					
8. 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	900A01-020X	900RTA-L001	900RTC-L110 900RTC-L125 900RTC-L150
Relay Output Module	900H01-010X	900RTR-H001	900RTC-H110 900RTC-H125 900RTC-H150
Analog Output Module Contact Discrete Input Module DC Discrete Input Module DC Discrete Output Module	900B01-030X 900G01-020X 900G02-020X 900H02-020X	900RTS-0001	900RTC-L110 900RTC-L125 900RTC-L150
AC Discrete Input Module AC Discrete Output Module	900G03-020X 900H03-020X	900RTS-0001	900RTC-H110 900RTC-H125 900RTC-H150
Digital Input, 32 Channel Digital Output, 32 Channel Analog Input, 16 Channel	900G32-010X 900H32-010X 900A16-010X	900RTS-0001 (2 Required)	900RTC-3310 900RTC-3325 900RTC-3350
Analog Output Module 8 Channel	900B08-0202	900RTS-0001	900RTC-B910 900RTC-B925 900RTC-B950
Analog Output Module 16 Channel	900B16-0202	900RTS-0001 (2 Required)	900RTC-3310 900RTC-3325 900RTC-3350

## HC900 Process and Safety System (SIL2) 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-0200
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
<b>Accessories</b>	
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
RS 232 Serial Cable (PC to HC900 serial port)	50004820-501
250 ohm Shunt Resistor Kit ( 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
USB to RS-485 Dongle **	50089787-501
<b>Manuals</b>	
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)

\*\*\* Consult Honeywell Order Entry Systems for current pricing.

## 900 Control Station Operator Interface

Description		Part Number
900 Control Station Interface 10"	Note 1	900CS10-00
900 Control Station Interface 15"	Note 1	900CS15-00
900 Station Designer Software	Note 1, 2	900SDS-12-44-00
CompactFlash Memory Module		50040636-002

Notes:

1 Includes English documentation on CD. For hard copy, specify accessory number below.

## 900 Control Station Parts & Accessories

Description		Part Number
USB Programming Cable		50038817-001
Communications Cable (10 ft) Ethernet and RS485		51451432-010
10" Screen Protective Films (Package of 10)		50038816-501
10" Replacement Backlight		50038818-501
10" Replacement Touch Screen Assy		50038820-501
10" Mounting Plate Adapter (1042 Replacement)		50039118-501
24 Vdc power supply (power for operator interface)	Note 3	51452041-501
900 Control Station User's Manual (paper)		51-52-25-148
900 Station Designer SW User's Manual (paper)		51-52-25-149
Full Documentation Set on CD		900ME1-0044-44
24Vdc Power Supply, 10" and 15" OI Models	Note 4	50047098-001
15" Screen Protective Films (Package of 10)		50038816-502
GSM/GPRS Cellular Modem Kit	Note 5	50047099-501

Note 1: Configuration software (Station Designer) must be ordered separately.

Note 2: Station Designer is compatible with versions 2.109, 2.3, 4.3 and higher Hybrid Control Designer database files.

Note 3: Power supply 51452041-501 may not be used with 900 Control Station 900CS15-00

Note 4 Class 1, Div.2 Class A, B, C, D, approved

Note 5: Field installation kit for cellular wireless access, includes modem, antenna and instructions.

Requires user supplied Cellular Network Provider and Supplier Identity Module (SIM).