

Installation Instructions

Combined Input/Output Board

Year	Model	Model description	Model description	Model description
1990-1999	Model 1	Model 1	Model 1	Model 1
2000-2009	Model 2	Model 2	Model 2	Model 2
2010-2019	Model 3	Model 3	Model 3	Model 3
2020-2029	Model 4	Model 4	Model 4	Model 4
2030-2039	Model 5	Model 5	Model 5	Model 5
2040-2049	Model 6	Model 6	Model 6	Model 6
2050-2059	Model 7	Model 7	Model 7	Model 7
2060-2069	Model 8	Model 8	Model 8	Model 8
2070-2079	Model 9	Model 9	Model 9	Model 9
2080-2089	Model 10	Model 10	Model 10	Model 10
2090-2099	Model 11	Model 11	Model 11	Model 11
2100-2109	Model 12	Model 12	Model 12	Model 12
2110-2119	Model 13	Model 13	Model 13	Model 13
2120-2129	Model 14	Model 14	Model 14	Model 14
2130-2139	Model 15	Model 15	Model 15	Model 15
2140-2149	Model 16	Model 16	Model 16	Model 16
2150-2159	Model 17	Model 17	Model 17	Model 17
2160-2169	Model 18	Model 18	Model 18	Model 18
2170-2179	Model 19	Model 19	Model 19	Model 19
2180-2189	Model 20	Model 20	Model 20	Model 20
2190-2199	Model 21	Model 21	Model 21	Model 21
2200-2209	Model 22	Model 22	Model 22	Model 22
2210-2219	Model 23	Model 23	Model 23	Model 23
2220-2229	Model 24	Model 24	Model 24	Model 24
2230-2239	Model 25	Model 25	Model 25	Model 25
2240-2249	Model 26	Model 26	Model 26	Model 26
2250-2259	Model 27	Model 27	Model 27	Model 27
2260-2269	Model 28	Model 28	Model 28	Model 28
2270-2279	Model 29	Model 29	Model 29	Model 29
2280-2289	Model 30	Model 30	Model 30	Model 30
2290-2299	Model 31	Model 31	Model 31	Model 31
2300-2309	Model 32	Model 32	Model 32	Model 32
2310-2319	Model 33	Model 33	Model 33	Model 33
2320-2329	Model 34	Model 34	Model 34	Model 34
2330-2339	Model 35	Model 35	Model 35	Model 35
2340-2349	Model 36	Model 36	Model 36	Model 36
2350-2359	Model 37	Model 37	Model 37	Model 37
2360-2369	Model 38	Model 38	Model 38	Model 38
2370-2379	Model 39	Model 39	Model 39	Model 39
2380-2389	Model 40	Model 40	Model 40	Model 40
2390-2399	Model 41	Model 41	Model 41	Model 41
2400-2409	Model 42	Model 42	Model 42	Model 42
2410-2419	Model 43	Model 43	Model 43	Model 43
2420-2429	Model 44	Model 44	Model 44	Model 44
2430-2439	Model 45	Model 45	Model 45	Model 45
2440-2449	Model 46	Model 46	Model 46	Model 46
2450-2459	Model 47	Model 47	Model 47	Model 47
2460-2469	Model 48	Model 48	Model 48	Model 48
2470-2479	Model 49	Model 49	Model 49	Model 49
2480-2489	Model 50	Model 50	Model 50	Model 50
2490-2499	Model 51	Model 51	Model 51	Model 51
2500-2509	Model 52	Model 52	Model 52	Model 52
2510-2519	Model 53	Model 53	Model 53	Model 53
2520-2529	Model 54	Model 54	Model 54	Model 54
2530-2539	Model 55	Model 55	Model 55	Model 55
2540-2549	Model 56	Model 56	Model 56	Model 56
2550-2559	Model 57	Model 57	Model 57	Model 57
2560-2569	Model 58	Model 58	Model 58	Model 58
2570-2579	Model 59	Model 59	Model 59	Model 59
2580-2589	Model 60	Model 60	Model 60	Model 60
2590-2599	Model 61	Model 61	Model 61	Model 61
2600-2609	Model 62	Model 62	Model 62	Model 62
2610-2619	Model 63	Model 63	Model 63	Model 63
2620-2629	Model 64	Model 64	Model 64	Model 64
2630-2639	Model 65	Model 65	Model 65	Model 65
2640-2649	Model 66	Model 66	Model 66	Model 66
2650-2659	Model 67	Model 67	Model 67	Model 67
2660-2669	Model 68	Model 68	Model 68	Model 68
2670-2679	Model 69	Model 69	Model 69	Model 69
2680-2689	Model 70	Model 70	Model 70	Model 70
2690-2699	Model 71	Model 71	Model 71	Model 71
2700-2709	Model 72	Model 72	Model 72	Model 72
2710-2719	Model 73	Model 73	Model 73	

PRODUCT	3BHE022293R0101 PCD232A
FAMILY	UNITROL 6000 excitation systems
FUNCTION	Combined Input/Output Board
STATUS	Verify exact configuration

Prepared by Amikon Limited from ABB manufacturer documentation. This guide does not replace the complete manufacturer manual, site procedure, hazardous-area drawing, or approval document.

01 CONFIRM THE ORDERED CONFIGURATION

ABB Article Number	3BHE022293R0101
Board Type	PC D232 A
Interface Designation	PEC80-CIO
Primary Function	Combined input and output
Excitation Family	UNITROL 6000
Applicable Platform	UN 6000
Product Generation	UNITROL 6000 X-power

02 MOUNTING AND CONNECTION

- Use PCD232A as the documented PEC80 combined I/O assembly in the UNITROL 6000 excitation platform; retain the configured signal assignment.
- Record board markings, connectors and system-dependent settings before exchange because the ABB spare listing identifies this assembly as configuration dependent.
- Confirm excitation family: UNITROL 6000.
- Complete the documented acceptance check: After replacement, restore the approved UNITROL project and test converter control, measurements, interlocks and protection indications before service.

MANUFACTURER INSTALLATION REFERENCE

Official manufacturer reference reproduced from ABB manufacturer documentation. Use the current source document and all referenced drawings and notes for installation.

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UNITROL® 6000 spare parts included in the offer

Discount valid until December 31, 2019

UNITROL® family	Identification number	Type	Description	System depending settings
UN 6000	3BHE022291R0101	PC D230	CCM Communication Control Measurement UNITROL 6000 X-power	X
UN 6000	3BHE025541R0101	PC D231 B	CCI Converter Control Interface	X
UN 6000	3BHE041343R0102	PC D530 A102	CCM Communication Control Measurement UNITROL 6000 X-power(G2), standard Controller Board	X
UN 6000	3BHE026284R0101	UA D215 A101 15V, 500V	CSI Converter Signal Interface for D5 UN6800 & UNL 13300	
UN 6000	3BHE026284R0102	UA D215 A102 15V, 1000V	CSI Converter Signal Interface for D5 UN6800 & UNL 13300	
UN 6000	3BHE026284R0104	UA D215 A104 30V, 500V	CSI Converter Signal Interface for UNL14300	
UN 6000	3BHE026284R0105	UA D215 A105 30V, 1000V	CSI Converter Signal Interface for UNL14300	
UN 6000	3BHE026284R0106	UA D215 A106 30V, 1500V	CSI Converter Signal Interface for UNL14300	
UN 6000	3BHE051993R0001	Adapter plate UA D215 to UA D209	CSI Adapter plate for UA D209 replacement with UA D215	
UN 6000	3BHE023784R2030	PP D113 B01-20-111000	AC800PEC controller (FPGA Size 10K) 30M	X
UN 6000	3BHE023784R2330	PP D113 B01-23-111000	AC800PEC controller (FPGA Size 10K) Profibus, 30M	X
UN 6000	3BHE023784R2630	PP D113 B01-26-111001	AC800PEC controller (FPGA Size 10K) Modbus RTU, 30M	X
UN 6000	3BHE023784R2530	PP D113 B01-25-111001	AC800PEC controller (FPGA Size 10K) Modbus TCP, 30M	X
UN 6000	3BHE023126R0020	AF D242 A	CCP Converter Control Panel UNITROL 6000 X-power	
UN 6000	3BHE023126R0010	AF D242 A	SCP Service Control Panel	
UN 6000	3BHE022293R0101	PC D232 A: PEC80-CIO	CIO Combined Input Output	X
UN 6000	3BHE032025R0101	PC D235 A: PEC80-CIO FU	CIO Combined Input Output FPGA (standard)	
UN 6000	3BHE039770R0102	PP D539 A102: PEC3-MINI	PEC800 Mini	X
UN 6000	3BHE022287R0101	UC D240	CCM 6080 Communication Control easurement - COATED	X
UN 6000	3BHE022886R0101	GV D241	PIN 6080 Power Interface - COATED	
UN 6000	3ADT220090R0006	SDCS-PIN51	Measurement Card PIN51	
UN 6000	3BHB006338R0001	UNS 0881a-P V1	GDI Gate Driver Interface V1	
UN 6000	3BHB006338R0002	UNS 0881a-P V2	GDI Gate Driver Interface V2	
UN 6000	3BHE022455R1101	KS D211 B101	ICU Input Coupling Unit (70V supervision)	
UN 6000	3BHE018297R0001	UNS 0890 A01: SCI U1= 720V	Snubber Control Interface (SCI)	
UN 6000	3BHE018297R0003	UNS 0890 A01: SCI U1= 1500V	Snubber Control Interface (SCI)	
UN 6000	3BHE016542R0003	RH31C-2DK3.3I.1R	Fan Unit 50Hz	
UN 6000	3BHE016542R0005	RH31C-2DK3.3I.3R (ErP2015)	Fan Unit 60Hz	
UN 6000	HIEE305114R0001	UNS 4684a-PV.1	OVP PCP	
UN 6000	3BHE018893R0001	GDRM 42-133b-2	Single Fan UNL133xx 50/60Hz ErP2013	
UN 6000	3ADT754021P0001	4184 NXM, 24Vdc, 3.5W	D1...3 DC-Fan	
UN 6000	3BHE003088R0004	W1G200-HH77-52, 24Vdc, 55W	D2...4 DC-Fan (used for redundant fan box)	
UN 6000	3BHE003088R0005	W1G250-HH37-52 (24Vdc)	D4 DC-Fan	
UN 6000	3ADT754018P0001	D2E 160-AH02-15, 230V, 550W	D5 AC-Fan	
UN 6000	3ADT754028P0001	W2E250-HL06-10, 230V, 127W	D4 AC-Fan 127W	

04 CABLE ROUTING AND CONNECTION

- Record board markings, connectors and system-dependent settings before exchange because the ABB spare listing identifies this assembly as configuration dependent.
- Restore the documented product generation and verify UNITROL 6000 X-power.
- Support all cables, connectors or mechanical interfaces without strain.
- Inspect shields, earth paths, fasteners and adjacent hardware before service.

05 INITIAL SYSTEM CHECKS

- Confirm exact model identity and compatible system components before energizing.
- Check the saved configuration against the controlled site requirements.
- After replacement, restore the approved UNITROL project and test converter control, measurements, interlocks and protection indications before service.
- Record the installed model, baseline values and final status.

06 CONTROLLED DOCUMENTS

Official source	ABB manufacturer documentation
Product record	3BHE022293R0101 PCD232A
Manufacturer	ABB
Support	INFO@AMIKON.CN