

Siemens 6AV3607-1JC30-0AX2

OP7/DP12 Operator Panel — Official Source Extract

This browser-ready extract maps the exact Siemens order number to the relevant OP7/DP12 identity and selected OP7 equipment-manual pages. The included manual pages retain Siemens' original content and layout.

Order number	6AV3607-1JC30-0AX2
Product	SIMATIC HMI OP7/DP12 operator panel
Display	LED-backlit LC display; four lines; 20 characters per line
Communication	PROFIBUS DP up to 12 Mbaud; SIMATIC S5, S7, M7 and 505 native drivers
Approvals	UL / CSA
Siemens product page	sieportal.siemens.com/en-ww/products-services/detail/6AV3607-1JC30-0AX2
Manual	SIMATIC HMI OP7, OP17 Operator Panel Equipment Manual, 6AV3991-1AE05-1AB0

Selected pages: Siemens manual cover; OP7 design and interface overview; technical data; and DP-12 interface assignments.

SIMATIC HMI

OP7, OP17 Operator Panel

Equipment Manual

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1.3 Design of Operator Panel OP7

OP7 versions

The OP7 has a plastic housing with a touch-sensitive front and is therefore suitable for ungrounded installation. The coloring of the front foil conforms with machinery directive EN 60204.

The OP7 is available in the following versions:

- OP7/PP,
- OP7/DP and
- OP7/DP-12.

The versions differ only in their communication options. figure 1-2 shows the design of Operator Panel OP7.

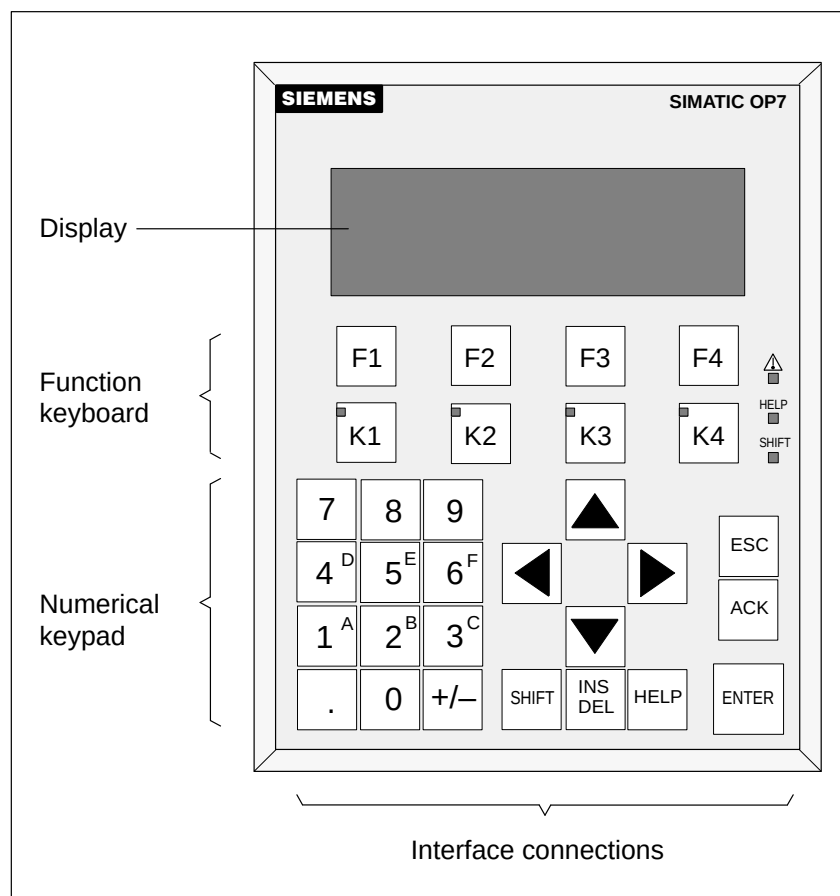


Figure 1-2 Design of Operator Panel OP7

LCD	High-contrast LC display with LED back-lighting. Display of up to 4 lines each having a maximum length of 20 characters; the height of the characters is 8 mm.
Function keyboard	8 keys (F1 to F4 and K1 to K4) for calling freely programmable, generally valid standard functions. The green LEDs embedded in keys K1 to K4 can be driven by the PLC.
Soft keys	All eight function keys may alternatively be configured as soft keys. Each of these keys can be configured with different functions for the various screens.
System keyboard	22 keys for calling universally valid, standard functions (keypad, arrow keys, etc.).
Data buffer	The OP7 operates without a battery and is therefore maintenance-free. Operating data are retained in a non-volatile state in the flash memory on the OP.
Interfaces	• 1 x RS232/TTY for connecting to the PLC/computer/printer • 1 x RS422/485 for connecting to the PLC/computer
Fuse	Maintenance-free electronic fuse.
Compatibility	The OP7 is upwards compatible with the OP5. All cabling can be continue to be used. Existing OP5 configurations can be converted automatically for the OP7 by means of the ProTool configuration software.

Technical Data

C

Housing	OP7			OP17		
	PP	DP	DP-12	PP	DP	DP-12
Overall dimensions W x H x D	144 mm x 180 mm x 42.5 mm			240 mm x 204 mm x 54 mm		
Mounting cutout B x H	135 mm x 171 mm			231 mm x 195 mm		
Mounting depth	38.5 mm			50 mm		
Degree of protection – front – rear	IP65 IP20					
Weight approx.	0.430 kg			0.960 kg		

Memory	OP7			OP17		
	PP	DP	DP-12	PP	DP	DP-12
Flash memory for configuration data and data records	128 kbytes			256 kbytes		

Display	OP7			OP17		
	PP	DP	DP-12	PP	DP	DP-12
Type	LCD with LED backlighting					
Number of lines	4			4 or 8 (configurable)		
Characters per line	20			20 or 40 (depending on number of lines)		
Font size	8 mm			11 mm or 6 mm (depending on number of lines)		

Keyboard	OP7			OP17		
	PP	DP	DP-12	PP	DP	DP-12
Type	Touch-sensitive keyboard					
Number of system keys	22					
Number of LEDs	7			19 (16 of which two two-color)		
Number of function keys of which soft keys	8			24		
	8			16		

Voltage supply	OP7			OP17		
	PP	DP	DP-12	PP	DP	DP-12
Rated voltage	+24 V DC					
Permissible range	+18 ... +30 V DC					
Max. perm. transients	35 V (500 ms)					
Time between two transients	min. 50 sec					
Power input (at 24 V) – typical – max. contin. current	190 mA 240 mA			340 mA 390 mA		
Fusing – internal – external	electronic fuse 1.6 A, quick-acting					

Buffering for OP17		OP17		
		PP	DP	DP-12
Internal	Message buffer Hardware clock	typ. 1 day at 40 °C ¹⁾ several days at 40 °C ¹⁾		
External backup battery ²⁾ (optional)	Type Voltage/capacity Message buffer/hardware clock	Lithium battery 3.6 V/approx. 1.5 Ah > 4 years		

1) The specified backup times apply only when the OP17 has been connected to the power supply for more than 12 hours

2) Subject to change

Interfaces	OP7			OP17		
	PP	DP	DP-12	PP	DP	DP-12
RS232	1	1	1	2	2	2
TTY	1	–	1	2	1	2
RS422/485	1	–	1	1	–	1
PPI/MPI/ PROFIBUS-DP (up to 1.5 Mbd)/ RS422/485	–	1	1	–	1	1
PPI/MPI/ PROFIBUS-DP (up to 12 Mbd)/ RS422/485	–	–	1	–	–	1

Ambient conditions	OP7			OP17		
	PP	DP	DP-12	PP	DP	DP-12
Operating temperature – vertical installation – horizontal installation Transportation, storage	0 °C ... 50 °C 0 °C ... 35 °C –25 °C ... 70 °C					
Relative humidity – operation – transportation, storage	≤ 95% no dew ≤ 95%					
Shock resistance – operation – transportation, storage	5 g/11 ms 25 g/6 ms					
Vibration – operation – transportation, storage	0.075 mm(10 Hz ... 58 Hz) 1 g (58 Hz ... 500 Hz) 3.5 mm (5 Hz ... 12 Hz) 1 g (12 Hz ... 500 Hz)					
Max. pressure difference (front, rear)	2 hPa					
Air pressure – operation – transportation, storage	706 ... 1030 hPa 581 ... 1030 hPa					

Interface Assignment

D

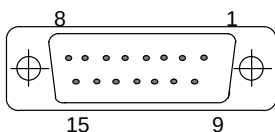
Overview

Table D-1 shows the interface configuration of the different OPs. Entries D-2 to D-5 refer to the corresponding pin assignments in Tables D-2 to D-5.

Table D-1 Interface assignment OP7 and OP17

Interface	OP version					
	OP7 PP	OP7 DP	OP7 DP-12	OP17 PP	OP17 DP	OP17 DP-12
IF1A	D-2	D-2	D-2	D-2	D-2	D-2
IF1B	D-3	D-4	D-5	D-3	D-4	D-5
IF2	–	–	–	D-2	D-2	D-2

Table D-2 Pin assignment 15-pin sub-D socket



Pin	General	RS232	TTY
1	n.c.		
2			RxD–
3		RxD	
4		TxD	
5		CTS	
6			TxD+
7			TxD–
8	n.c.		
9			RxD+
10		RTS	
11			+20 mA ¹⁾
12	GND		
13			+20 mA ¹⁾
14	+5 V		
15	GND		

1) Not with IF2

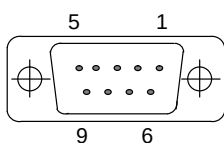


Table D-3 Pin assignment 9-pin sub-D socket

Pin	General	RS422	RS485
1	n.c.		
2	(GND) ¹⁾		
3		TxD (B)	Data B
4		RxD (B)	
5	GND		
6	+5 V		
7	(P24-In) ¹⁾		
8		TxD (A)	Data A
9		RxD (A)	

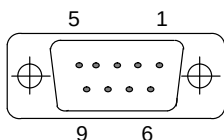


Table D-4 Pin assignment 9-pin sub-D socket

Pin	General	PROFIBUS-DP
1	n.c.	
2	(GND) ¹⁾	
3		Data B
4		RTS ²⁾
5	GND (floating)	
6	+5 V (floating)	
7	(P24-In) ¹⁾	
8		Data A
9		RTS ²⁾

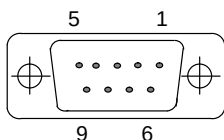


Table D-5 Pin assignment 9-pin sub-D socket

Pin	General	PROFIBUS-DP	RS422	RS485
1	n.c.			
2	(GND) ¹⁾			
3		Data B	TxD (B)	Data B
4		RTS ²⁾	RxD (B) ²⁾	
5	GND (floating)			
6	+5 V (floating)			
7	(P24-In) ¹⁾			
8		Data A	TxD (A)	Data A
9		RTS ²⁾	RxD (A) ²⁾	

1) Reserved for future use. From current-limited source < 1A only.

2) Can be switched by means of the DIP switch (for switch settings refer to Section 14.2.3)