MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6AV3515-1MA22-1AA0

OP15/C2 OPERATOR PANEL

Used with the applicable SIMATIC OP15 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens OP5/OP15 Manual J31069-D0840-U001-A2-7618; OP15/C2 technical data and interface assignments.

SIEMENS

SIMATIC HMI

OP5, OP15
Operator Panel

Equipment Manual

Preface, Contents

Teil I: Introduction 1 ▽ 2

Teil II: Basic Functions 3 ▽ 10

Teil III: Expanded, Configurable Functions 11 ▽ 13

Teil IV: Commissioning and Description of Devices 14 ▽ 20

Teil V: Appendix A ▽ F

Glossary, Index

6AV3991–1 AB20–0AB0

Release 01/96

Technical Data

C

OP5		OP15					
A1	**A2**	**A1**	**A2**	**A1-VF**	**A2-VF**	**C1**	**C2**

Housing		
• External Dimensions BxHxD	120x168x48 mm	240x168x48 mm
• Mounting cutout BxH	112x160 mm	230x158 mm
• Useful depth	Approx. 40 mm	
• Degree of protection (front/rear)	IP65/IP20	
• Weight	Approx. 0.8 kg	Approx. 1.1 kg

Processor	
• Type	V25
• Clock frequency	12 MHz

Memories	
• Flash memory for configuration data	128 KBytes
• SRAM working memory	128 KBytes
• EPROM Firmware	512 KBytes

Display				
• Type	LCD		VF	LCD
• Number of lines	4	2	2	4 (8)
• Characters per line	20	40	40	20 (40)
• Character height	5 mm	5 mm	5 mm	8 (4) mm

OP5		OP15					
A1	**A2**	**A1**	**A2**	**A1-VF**	**A2-VF**	**C1**	**C2**

Keyboard		
• Type	Membrane keyboard	
• Number of system keys	24	
• Number of LEDs	4	20
• Number of function keys	6	16
• Softkeys	4	8

Supply voltage		
• Rated voltage	24 VDC	
• Permissible range	18 to 30 VDC	
• Maximum permissible transients	35 V (500 ms)	
• Time between transients	min. 50 sec.	
• Power input		
Typically	180 mA	200 mA
Maximum	250 mA	300 mA
• Fuse	internal	

Backup battery[1]	
• Type	Lithium cell
• Voltage	3.6 V
• Capacity	1.5 Ah

1 Subject to change

Authorization input	
• Inhibited	U < 3.6 V or open input
• Enabled	15 V < U < 30 V

OP5		OP15					
A1	**A2**	**A1**	**A2**	**A1-VF**	**A2-VF**	**C1**	**C2**

Ambient Conditions			
• Ambient temperature, operation Vertical installation Horizontal installation • Transportation, storage	 0° C to 45° C 0° C to 35° C –25° C to 70° C	 0° C to 55° C 0° C to 45° C –25° C to 70° C	 0° C to 45° C 0° C to 35° C –25° C to 70° C
• Relative humidity Operation Transportation, storage	≤ 95%, no condensation ≤ 95%		
• Shock load Operation Transportation, storage	5 g/11 msec 25 g/6 msec		
• Vibration Operation Transportation, storage	0.075 mm/1 g 3.5 mm/1 g		
• Max. pressure difference (front, back)	2 hPa		
• Air pressure Operation Transportation, storage	706 to 1030 hPa 581 to 1030 hPa		

Interference Immunity (EN 50082-1)	
• Static discharge (contact discharge)	IEC 801-2 class 3
• RF irradiation	ENV 50140 class 3
• Burst interference	IEC 801-4 class 3
• Pulse modulation	ENV 50204

Interference Emission (EN 50081-1)	
• RFI suppression level	In accordance with VDE 0878, EN 55022

Interface Assignment

D

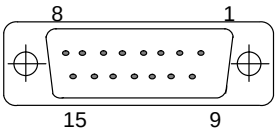
D.1 Interface Configuration

The table below shows the interface configuration of the different OPs. The numbers **1** to **3** indicate the pin assignment (refer to D.2).

Interface designation	OP Device Family							
	OP5 A1	OP5 A2	OP15 A1	OP15 A2	OP15 A1-VF	OP15 A2-VF	OP15 C1	OP15 C2
IF1A	**1**	**1**	–	–	–	–	–	–
IF1B	–	**2 / 3**	–	–	–	–	–	–
IF1	–	–	**1**	**1**	**1**	**1**	**1**	**1**
IF2A	–	–	**1**	**1**	**1**	**1**	**1**	**1**
IF2B	–	–	**2**	**3**	**2**	**3**	**2**	**3**

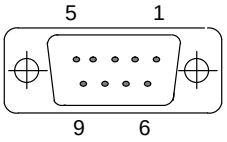
D.2 Pin Assignment

1: 15-pin sub-D socket



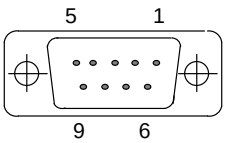
Pin	General	V.24	TTY
1	Protective conductor		
2			RxD–
3		RxD	
4		TxD	
5		CTS	
6			TxD+
7			TxD–
8	Protective conductor		
9			RxD+
10		RTS	
11			+20 mA
12	GND		
13			+20 mA
14	+5 Volt		
15	GND		

2: 9-pin sub-D socket



Pin	RS 422	RS 485
1		
2		
3	TxD (B)	Data B
4	RxD (B)	
5	GND	GND
6	+5 V	+5 V
7		
8	TxD (A)	Data A
9	TxD (A)	

3: 9-pin sub-D socket



Pin	L2–DP/MPI/PPI
1	
2	
3	Data B (isolated)
4	
5	GND (isolated)
6	+5 V (isolated)
7	
8	Data A (isolated)
9	

ESD Guidelines

E

In this chapter

This chapter describes the most important precautions which must be taken to avoid damage toe the electrostatically sensitive devices in the OP3.

E.1 What Does ESD Mean?

Electrostatically sensitive devices

Nearly all SIMATIC assemblies incorporate highly integrated MOS devices or components. For technological reasons, these electronic components are very sensitive to overvoltages and consequently therefore to electrostatic discharge.

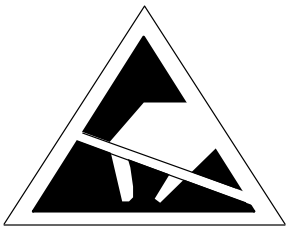
These devices are known internationally as:

”ESD” (Electrostatic Sensitive Devices)

The German abbreviation for such devices is:

”EGB” (Elektrostatisch Gefährdete Bauelemente Baugruppen)

The following symbol on plates on cabinets, mounting racks or packages draws attention to the use of electrostatic sensitive devices and thus to the contact sensitivity of the assemblies concerned:



ESDs may be destroyed by voltages and energies well below the perception threshold of persons. Voltages of this kind occur as soon as a device or an assembly is touched by a person who is not electrostatically discharged. Devices exposed to such overvoltages cannot immediately be detected as defective in the majority of cases, since faulty behavior may occur only after a long period of operation.