

LOGO! logic module



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Brochures

For brochures serving as selection guides for SIMATIC products refer to:

<http://www.siemens.com/simatic/printmaterial>

LOGO! logic module

Introduction

LOGO! logic module

Overview



LOGO! logic module

- The compact, easy-to-use and low-cost solution for simple control tasks
- Compact, easy to operate, universally applicable without accessories
- "All in one": Integrated display and operator panel
- 36 different functions can be connected at the click of a button or by means of PC software; up to 130 times over
- Functions are easily changed at the press of a key. No more time-consuming rewiring

SIPLUS LOGO!

- The controller for use in the toughest ambient conditions
- With extended temperature range from -40/-25 °C to +70 °C
- Suitable for medial exposure (harmful gas atmosphere)
- Condensation permissible
- With the proven PLC technology of LOGO!
- Easy to handle, program, maintain, and service
- Ideal for use in automotive engineering, environmental engineering, mining, chemical plants, conveying technology, food industry, etc.

Accessories:

- The front plate mounting set also allows simple and reliable installation of the logic modules in front plates; IP65 protection is thus possible.
- In order to ensure dependable operation of SIPLUS devices supplied by the battery in conjunction with combustion engines, it is necessary to put in a SIPLUS upmiter upstream device between the battery and the SIPLUS LOGO!.

For further information, please go to:

www.siemens.com/siplus-extreme

For brochures serving as selection guides for SIMATIC products refer to:

www.siemens.com/simatic/printmaterial

General technical data of the SIPLUS LOGO

Ambient temperature range	-40/-25 ... +70 °C
Conformal coating	Coating of the printed circuit boards and the electronic components
Technical data	The technical data of the standard product applies except for the ambient conditions.

Ambient conditions

Relative humidity	5 ... 100%, condensation allowed
Biologically active substances	Conformity with EN 60721-3-3, Class 3B2 mold and fungal spores (except fauna)
Chemically active substances	Conformity with EN 60721-3-3, Class 3C4 incl. salt mist and ISA-S71.04 severity level G1; G2; G3; GX ¹⁾²⁾
Mechanically active substances	Conformity with EN 60721-3-3, Class 3S4 including conductive sand, dust ²⁾
Air pressure (depending on the highest positive temperature range specified)	1080 ... 795 hPa (-1000 ... +2000 m) see ambient temperature range 795 ... 658 hPa (+2000 ... 3500 m) derating 10 K 658 ... 540 hPa (+3500 ... +5000 m) derating 20 K

1) ISA-S71.04 severity level GX:

Long-term load:

SO₂ < 4.8 ppm; H₂S < 9.9 ppm; Cl < 0.2 ppm; HCl < 0.66 ppm; HF < 0.12 ppm; NH < 49 ppm; O₃ < 0.1 ppm; NOX < 5.2 ppm

Limit value (max. 30 min/d):

SO₂ < 17.8 ppm; H₂S < 49.7 ppm; Cl < 1.0 ppm; HCl < 3.3 ppm; HF < 2.4 ppm; NH < 247 ppm; O₃ < 1.0 ppm; NOX < 10.4 ppm

2) The supplied plug covers must remain in place over the unused interface when operated in atmospheres containing corrosive gases!

Overview



- The space-saving basic versions
- Interface for the connection of expansion modules, up to 24 digital inputs, 16 digital outputs, 8 analog inputs and 2 analog outputs can be addressed
- With connection option for LOGO! TD text display (can be connected to all LOGO! 0BA6 basic versions)

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Technical specifications

	6ED1 052-1CC01-0BA6	6ED1 052-1MD00-0BA6	6ED1 052-1HB00-0BA6	6ED1 052-1FB00-0BA6
Supply voltages				
Rated value				
• 12 V DC		Yes		
• 24 V DC	Yes	Yes	Yes	
• 115 V DC				Yes
• 230 V DC				Yes
• Permissible range, lower limit (DC)	20.4 V	10.8 V	20.4 V	100 V
• Permissible range, upper limit (DC)	28.8 V	28.8 V	28.8 V	253 V
• 24 V AC			Yes	
• 115 V AC				Yes
• 230 V AC				Yes
• Permissible range, lower limit (AC)			20.4 V	85 V
• Permissible range, upper limit (AC)			26.4 V	265 V
Time				
Time switching clocks				
• Power reserve	80 h	80 h	80 h	80 h
Digital inputs				
Number of digital inputs	8; of which 4 can be used in analog mode (0 to 10 V)	8; of which 4 can be used in analog mode (0 to 10 V)	8	8
Digital outputs				
Number of digital outputs	4; Transistor	4; Relay	4; Relay	4; Relay
Short-circuit protection	Yes; electrical (1 A)	No; external fusing necessary	No; external fusing necessary	No; external fusing necessary
Output current				
• for signal "1" permissible range for 0 to 55 °C, max.	0.3 A			
Relay outputs				
Switching capacity of contacts				
• with inductive load, max.		3 A	3 A	3 A
• with resistive load, max.		10 A	10 A	10 A
EMC				
Emission of radio interference acc. to EN 55 011				
• Emission of radio interference acc. to EN 55 011 (limit value class B)	Yes; Radio interference suppression according to EN55011, limit value class B	Yes	Yes	Yes

LOGO! logic module

LOGO! modular

LOGO! modular basic versions

Technical specifications (continued)

	6ED1 052-1CC01-0BA6	6ED1 052-1MD00-0BA6	6ED1 052-1HB00-0BA6	6ED1 052-1FB00-0BA6
Environmental requirements				
Operating temperature				
• Min.	0 °C	0 °C	0 °C	0 °C
• Max.	55 °C	55 °C	55 °C	55 °C
Degree of protection				
IP20	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CSA approval	Yes	Yes	Yes	Yes
Developed according to IEC1131	Yes	Yes	Yes	Yes
FM approval	Yes	Yes	Yes	Yes
According to VDE 0631	Yes	Yes	Yes	Yes
Marine approval	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
Dimensions and weight				
Dimensions				
• Mounting	on 35 mm DIN rail, 4 spacing units wide	on 35 mm DIN rail, 4 spacing units wide	on 35 mm DIN rail, 4 spacing units wide	on 35 mm DIN rail, 4 spacing units wide
• Width	72 mm	72 mm	72 mm	72 mm
• Height	90 mm	90 mm	90 mm	90 mm
• Depth	55 mm	55 mm	55 mm	55 mm

Ordering data

Order No.	
LOGO! logic module 24C	I
12/24 V DC power supply, 8x 12/24 V DC digital inputs, of which 4 can be used in analog mode (0 to 10 V), 4x 10 A relay outputs, integral time switch; 200 function blocks can be interlinked, modular expansion capability	6ED1 052-1CC01-0BA6
LOGO! logic module 12/24RC	
12/24 V DC power supply, 8 x 12/24 V DC digital inputs, of which 4 can be used in analog mode (0 to 10 V), 4 x 10 A relay outputs, integrated time switch; 200 function blocks can be interlinked, modular expansion capability	6ED1 052-1MD00-0BA6
LOGO! logic module 24RC	
24 V AC/DC power supply, 8x 24 V AC/DC digital inputs, 4x 10 A relay outputs, integral time switch; 200 function blocks can be interlinked, modular expansion capability	6ED1 052-1HB00-0BA6
LOGO! logic module 230RC	
115/230 V AC/DC power supply, 8x 115/230 V AC/DC digital inputs, 4x 10 A relay outputs, integral time switch; 200 function blocks can be interlinked, modular expansion capability	6ED1 052-1FB00-0BA6

Order No.

Accessories	
LOGO! TD text display	6ED1 055-4MH00-0BA0
4-line text display, can be connected to all LOGO! 0BA6 Basic and Pure versions, including connecting cable	
SIPLUS LOGO! TD text display	6AG1 055-4MH00-2BA0
(extended temperature range -10 ... +60 °C and medial exposure)	
4-line text display, can be connected to all LOGO! 0BA6 Basic and Pure versions, including connecting cable	
LOGO! manual	
German	6ED1 050-1AA00-0AE7
English	6ED1 050-1AA00-0BE7
French	6ED1 050-1AA00-0CE7
Spanish	6ED1 050-1AA00-0DE7
Italian	6ED1 050-1AA00-0EE7
Chinese	6ED1 050-1AA00-0KE7

I: Subject to export regulations AL: N and ECCN: EAR99H

Ordering data		Order No.			Order No.
LOGO! Memory Card		6ED1 056-1DA00-0BA0	LOGO! modem cable		6ED1 057-1CA00-0BA0
Program module for copying, with know-how protection			Adapter cable for analog modem communication		
LOGO! battery card		6ED1 056-6XA00-0BA0	Front plate mounting set		
Battery module for backing up the integral real-time clock (not LOGO! 24)			Width 4 modular spacings		6AG1 057-1AA00-0AA0
			Width 4 modular spacings, with keys		6AG1 057-1AA00-0AA3
			Width 8 modular spacings		6AG1 057-1AA00-0AA1
			Width 8 modular spacings, with keys		6AG1 057-1AA00-0AA2
LOGO! memory/battery card		6ED1 056-7DA00-0BA0	LOGO! News Box, 12/24 V		
Combined program and battery module, with know-how protection and for backing up the integral real-time clock (not LOGO! 24)			Contains LOGO! 12/24RC, LOGO! USB PC cable, LOGO!Soft Comfort V6.0, manual, screwdriver, information material		
LOGO! PROM	L	6AG1 057-1AA01-0BA6	German	J	6ED1 057-3BA00-0AA5
Programming device used to simultaneously reproduce program module contents on up to 8 program modules			English	J	6ED1 057-3BA00-0BA5
LOGO!Soft Comfort V6.0	J	6ED1 058-0BA02-0YA0	LOGO! News Box, 230 V		
For programming on the PC in LAD/FBD; executes on Windows 98 SE and higher, Linux, MAC OSX; on CD-ROM			Contains LOGO! 230RC, LOGO! USB PC cable, LOGO!Soft Comfort V6.0, manual, screwdriver, information material		
LOGO!Soft Comfort V6.0 upgrade	J	6ED1 058-0CA02-0YE0	German	J	6ED1 057-3AA02-0AA0
Upgrade from V1.0 to V6.0			English	J	6ED1 057-3AA02-0BA0
LOGO! PC cable		6ED1 057-1AA00-0BA0	LOGO! TD News Box, 12/24 V		
For program transfer between LOGO! and the PC			Contains LOGO! 12/24RCo, LOGO! TD, LOGO! USB PC cable, LOGO! Soft Comfort V6.0, manual, screwdriver, information material		
LOGO! USB PC cable	J	6ED1 057-1AA01-0BA0	German	J	6ED1 057-3BA10-0AA0
For transferring the program between LOGO! and PC, including driver on CD-ROM			English	J	6ED1 057-3BA10-0BA0

J: Subject to export regulations AL: N and ECCN: EAR99S

L: Subject to export regulations AL: 91999 and ECCN: N

LOGO! logic module

LOGO! modular

SIPLUS LOGO! modular basic versions

Overview

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- The space-saving basic versions
- Interface for the connection of expansion modules, up to 24 digital inputs, 16 digital outputs, 8 analog inputs and 2 analog outputs can be addressed
- With connection option for LOGO! text display TD (can be connected to all LOGO! 0BA6 basic versions)

Note:

SIPLUS extreme products are based on Siemens Industry standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

	SIPLUS LOGO! 24	SIPLUS LOGO! 12/24RC	SIPLUS LOGO! 24RC	SIPLUS LOGO! 230RC
Order number	6AG1 052-1CC01-2BA6	6AG1 052-1FB00-2BA6	6AG1 052-1HB00-2BA6	6AG1 052-1MD00-2BA6
Order No. based on	6ED1 052-1CC01-0BA6	6ED1 052-1FB00-0BA6	6ED1 052-1HB00-0BA6	6ED1 052-1MD00-0BA6
Ambient temperature range	-25°C to +70 °C			
Conformal coating	Coating of the printed circuit boards and the electronic components			
Technical data	The technical data of the standard product applies except for the ambient conditions.			
Ambient conditions				
Relative humidity	5 ... 100 % Condensation permissible			
Biologically active substances	Conformity with EN 60721-3-3, Class 3B2 mold and fungal spores (except fauna)			
Chemically active substances	Conformity with EN 60721-3-3, Class 3C4 incl. salt mist and ISA–S71.04 severity level G1; G2; G3; GX ^{1) 2)}			
Mechanically active substances	Conformity with EN 60721-3-3, Class 3S4 including conductive sand, dust ²⁾			
Air pressure (depending on the highest positive temperature range specified)	1080 ... 795 hPa (-1000 ... +2000 m) see ambient temperature range 795 ... 658 hPa (+2000 ... +3500 m) derating 10 K 658 ... 540 hPa (+3500 ... +5000 m) derating 20 K			

¹⁾ ISA-S71.04 severity level GX: Long-term load:

SO₂ < 4.8 ppm; H₂S < 9.9 ppm; Cl < 0.2 ppm; HCl < 0.66 ppm; HF < 0.12 ppm; NH < 49 ppm; O₃ < 0.1 ppm; NOX < 5.2 ppm

Limit value (max. 30 min/d):

SO₂ < 17.8 ppm; H₂S < 49.7 ppm; Cl < 1.0 ppm; HCl < 3.3 ppm; HF < 2.4 ppm; NH < 247 ppm; O₃ < 1.0 ppm; NOX < 10.4 ppm

²⁾ The supplied plug covers must remain in place over the unused interface when operated in atmospheres containing corrosive gases!

The technical documentation on SIPLUS can be found here:

www.siemens.com/siplus-extreme

Ordering data		Order No.	Order No.	
SIPLUS LOGO! 24 (extended temperature range and medial exposure) 24 V DC power supply, 8x 24 V DC digital inputs, of which 4 can be used in analog mode (0 to 10 V), 4x 24 V DC digital outputs, 0.3 A; integrated time switch; 200 function blocks can be interlinked, modular expansion capability	I	6AG1 052-1CC01-2BA6	Accessories	
			SIPLUS Upmister upstream device	L 6AG1 053-1AA00-2AA0
			for reliable operation at the battery of combustion engines	
			Additional accessories	See LOGO! modular basic versions
SIPLUS LOGO! 12/24RC (extended temperature range and medial exposure) 12/24 V DC power supply, 8x 12/24 V DC digital inputs, of which 4 can be used in analog mode (0 to 10 V), 4x 10 A relay outputs, integral time switch; 200 function blocks can be interlinked, modular expansion capability	L	6AG1 052-1MD00-2BA6		
SIPLUS LOGO! 24RC (extended temperature range and medial exposure) 24 V AC/DC power supply, 8x 24 V AC/DC digital inputs, 4x 10 A relay outputs, integral time switch; 200 function blocks can be interlinked, modular expansion capability		6AG1 052-1HB00-2BA6		
SIPLUS LOGO! 230RC (extended temperature range and medial exposure) 115/230 V AC/DC power supply, 8x 115/230 V AC/DC digital inputs, 4x 10 A relay outputs, integral time switch; 200 function blocks can be interlinked, modular expansion capability		6AG1 052-1FB00-2BA6		

I: Subject to export regulations AL: N and ECCN: EAR99H

L: Subject to export regulations AL: 91999 and ECCN: N

LOGO! logic module

LOGO! modular

LOGO! modular pure versions

Overview

2



- The cost-optimized basic versions
- Interface for the connection of expansion modules, up to 24 digital inputs, 16 digital outputs, 8 analog inputs and 2 analog outputs can be addressed
- With connection option for LOGO! TD text display (can be connected to all LOGO! 0BA6 basic versions)

Technical specifications

	6ED1 052-2CC01-0BA6	6ED1 052-2MD00-0BA6	6ED1 052-2HB00-0BA6	6ED1 052-2FB00-0BA6
Supply voltages				
Rated value				
• 12 V DC		Yes		
• 24 V DC	Yes	Yes	Yes	
• 115 V DC				Yes
• 230 V DC				Yes
• permissible range, lower limit (DC)	20.4 V	10.8 V	20.4 V	100 V
• permissible range, upper limit (DC)	28.8 V	28.8 V	28.8 V	253 V
• 24 V AC			Yes	
• 115 V AC				Yes
• 230 V AC				Yes
• permissible range, lower limit (AC)			20.4 V	85 V
• permissible range, upper limit (AC)			26.4 V	265 V
Time of day				
Time switching clocks				
• Number	190	8	8	8
• Power reserve	80 h	80 h	80 h	80 h
Digital inputs				
Number of digital inputs	8; of which 4 can be used in analog mode (0 to 10 V)	8; of which 4 can be used in analog mode (0 to 10 V)	8	8
Digital outputs				
Number of digital outputs	4; Transistor	4; Relay	4; Relay	4; Relay
Short-circuit protection	Yes; electrical (1 A)	No; external fusing necessary	No; external fusing necessary	No; external fusing necessary
Output current				
• for signal "1" permissible range for 0 to 55 °C, max.	0.3 A			
Relay outputs				
Switching capacity of contacts				
• with inductive load, max.		3 A	3 A	3 A
• with resistive load, max.		10 A	10 A	10 A

Technical specifications (continued)

	6ED1 052-2CC01-0BA6	6ED1 052-2MD00-0BA6	6ED1 052-2HB00-0BA6	6ED1 052-2FB00-0BA6
EMC				
Emission of radio interference acc. to EN 55 011				
• Emission of radio interference acc. to EN 55 011 (limit value class B)	Yes; Radio interference suppression according to EN55011, limit value class B	Yes	Yes	Yes
Environmental requirements				
Operating temperature				
• Min.	0 °C	0 °C	0 °C	0 °C
• Max.	55 °C	55 °C	55 °C	55 °C
Degree of protection				
IP20	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CSA approval	Yes	Yes	Yes	Yes
Developed according to IEC1131	Yes	Yes	Yes	Yes
FM approval	Yes	Yes	Yes	Yes
According to VDE 0631	Yes	Yes	Yes	Yes
Marine approval	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
Dimensions and weight				
Dimensions				
• Mounting	on 35 mm DIN rail, 4 spacing units wide	on 35 mm DIN rail, 4 spacing units wide	on 35 mm DIN rail, 4 spacing units wide	on 35 mm DIN rail, 4 spacing units wide
• Width	72 mm	72 mm	72 mm	72 mm
• Height	90 mm	90 mm	90 mm	90 mm
• Depth	55 mm	55 mm	55 mm	55 mm

Ordering data**Order No.****Order No.****LOGO! logic module 24Co** I

24 V DC power supply, 8 digital inputs 24 V DC, of which 4 can be used in analog mode (0 to 10 V), 4 digital outputs 24 V DC, 0.3 A, integrated time switch; without display and keyboard; 200 function blocks can be interlinked, modular expansion capability

6ED1 052-2CC01-0BA6**LOGO! logic module 12/24RCo**

12/24 V DC power supply, 8 digital inputs 12/24 V DC, of which 4 can be used in analog mode (0 to 10 V), 4 relay outputs 10 A, integral time switch; without display and keyboard; 200 function blocks can be interlinked, modular expansion capability

6ED1 052-2MD00-0BA6**LOGO! logic module 24RCo**

24 V AC/DC power supply, 8 digital inputs 24 V AC/DC, 4 relay outputs 10 A, integral time switch; without display and keyboard; 200 function blocks can be interlinked, modular expansion capability

6ED1 052-2HB00-0BA6**LOGO! logic module 230RCo**

115/230 V AC/DC power supply, 8 digital inputs 115/230 V AC/DC, 4 relay outputs 10 A, integral time clock; without display and keyboard; 200 function blocks can be interlinked, modular expansion capability

6ED1 052-2FB00-0BA6

I: Subject to export regulations AL: N and ECCN: EAR99H

LOGO! logic module

LOGO! modular

LOGO! modular pure versions

2

Ordering data	Order No.		Order No.
Accessories		LOGO! memory/battery card	6ED1 056-7DA00-0BA0
LOGO! TD text display	6ED1 055-4MH00-0BA0	Combined program and battery module, with know-how protection and for backing up the integral real-time clock (not LOGO! 24o)	
4-line text display, can be connected to all LOGO! 0BA6 Basic and Pure versions, including connecting cable		LOGO! PROM	L 6AG1 057-1AA01-0BA6
SIPLUS LOGO! TD text display	6AG1 055-4MH00-2BA0	Programming device used to simultaneously reproduce program module contents on up to 8 program modules	
(extended temperature range -10 ... +60 °C and medial exposure)		LOGO!Soft Comfort V6.0	J 6ED1 058-0BA02-0YA0
4-line text display, can be connected to all LOGO! 0BA6 Basic and Pure versions, including connecting cable		For programming on the PC in LAD/FBD; executes on Windows 98 SE and higher, Linux, MAC OSX; on CD-ROM	
LOGO! manual		LOGO!Soft Comfort V6.0 upgrade	J 6ED1 058-0CA02-0YE0
German	6ED1 050-1AA00-0AE7	Upgrade from V1.0 to V6.0	
English	6ED1 050-1AA00-0BE7	LOGO! PC cable	6ED1 057-1AA00-0BA0
French	6ED1 050-1AA00-0CE7	For program transfer between LOGO! and the PC	
Spanish	6ED1 050-1AA00-0DE7	LOGO! USB PC cable	J 6ED1 057-1AA01-0BA0
Italian	6ED1 050-1AA00-0EE7	For transferring the program between LOGO! and PC, including driver on CD-ROM	
Chinese	6ED1 050-1AA00-0KE7	LOGO! modem cable	6ED1 057-1CA00-0BA0
LOGO! Memory Card	6ED1 056-1DA00-0BA0	Adapter cable for analog modem communication	
Program module for copying, with know-how protection			
LOGO! battery card	6ED1 056-6XA00-0BA0		
Battery module for backing up the integral real-time clock (not LOGO! 24)			

J: Subject to export regulations AL: N and ECCN: EAR99S

L: Subject to export regulations AL: 91999 and ECCN: N

Overview



- Basic versions optimized for costs
- Interface for the connection of expansion modules, up to 24 digital inputs, 16 digital outputs, 8 analog inputs and 2 analog outputs can be addressed
- With connection option for LOGO! text display TD (can be connected to all LOGO! 0BA6 basic versions)

Note:

SIPLUS extreme products are based on Siemens Industry standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

	SIPLUS LOGO! 24o	SIPLUS LOGO! 12/24RCo	SIPLUS LOGO! 24RCo	SIPLUS LOGO! 230RCo
Order number	6AG1 052-2CC01-2BA6	6AG1 052-2MD00-2BA6	6AG1 052-2HB00-2BA6	6AG1 052-2FB00-2BA6
Order No. based on	6ED1 052-2CC01-0BA6	6ED1 052-2MD00-0BA6	6ED1 052-2HB00-0BA6	6ED1 052-2FB00-0BA6
Ambient temperature range	-40 °C to +70 °C			
Conformal coating	Coating of the printed circuit boards and the electronic components			
Technical data	The technical data of the standard product applies except for the ambient conditions.			
Ambient conditions				
Relative humidity	5 ... 100 % Condensation permissible			
Biologically active substances	Conformity with EN 60721-3-3, Class 3B2 mold and fungal spores (except fauna)			
Chemically active substances	Conformity with EN 60721-3-3, Class 3C4 incl. salt mist and ISA–S71.04 severity level G1; G2; G3; GX ^{1) 2)}			
Mechanically active substances	Conformity with EN 60721-3-3, Class 3S4 including conductive sand, dust ²⁾			
Air pressure (depending on the highest positive temperature range specified)	1080 ... 795 hPa (-1000 ... +2000 m) see ambient temperature range 795 ... 658 hPa (+2000 ... +3500 m) derating 10 K 658 ... 540 hPa (+3500 ... +5000 m) derating 20 K			

¹⁾ ISA-S71.04 severity level GX: Long-term load:

SO₂ < 4.8 ppm; H₂S < 9.9 ppm; Cl < 0.2 ppm; HCl < 0.66 ppm; HF < 0.12 ppm; NH < 49 ppm; O₃ < 0.1 ppm; NOX < 5.2 ppm
Limit value (max. 30 min/d):

SO₂ < 17.8 ppm; H₂S < 49.7 ppm; Cl < 1.0 ppm; HCl < 3.3 ppm; HF < 2.4 ppm; NH < 247 ppm; O₃ < 1.0 ppm; NOX < 10.4 ppm

²⁾ The supplied plug covers must remain in place over the unused interface when operated in atmospheres containing corrosive gases!

The technical documentation on SIPLUS can be found here:

www.siemens.com/siplus-extreme

LOGO! logic module

LOGO! modular

SIPLUS LOGO! modular pure versions

2

Ordering data	Order No.	Order No.
SIPLUS LOGO! 24o (extended temperature range and medial exposure) 24 V DC power supply, 8 digital inputs 24 V DC, of which 4 can be used in analog mode (0 to 10 V), 4 digital outputs 24 V DC, 0.3 A, integrated time switch; without display and keyboard; 200 function blocks can be interlinked, modular expansion capability	6AG1 052-2CC01-2BA6	Accessories SIPLUS Upmiter upstream device L 6AG1 053-1AA00-2AA0 for reliable operation at the battery of combustion engines Additional accessories See LOGO! modular pure versions, page 2/10
SIPLUS LOGO! 12/24RCo (extended temperature range and medial exposure) 12/24 V DC power supply, 8 digital inputs 12/24 V DC, of which 4 can be used in analog mode (0 to 10 V), 4 relay outputs 10 A, integral time switch; without display and keyboard; 200 function blocks can be interlinked, modular expansion capability	6AG1 052-2MD00-2BA6	
SIPLUS LOGO! 24RCo (extended temperature range and medial exposure) 24 V AC/DC power supply, 8 digital inputs 24 V AC/DC, 4 relay outputs 10 A, integral time switch; without display and keyboard; 200 function blocks can be interlinked, modular expansion capability	6AG1 052-2HB00-2BA6	
SIPLUS LOGO! 230RCo (extended temperature range and medial exposure) 115/230 V AC/DC power supply, 8 digital inputs 115/230 V AC/DC, 4 relay outputs 10 A, integral time clock; without display and keyboard; 200 function blocks can be interlinked, modular expansion capability	6AG1 052-2FB00-2BA6	

I: Subject to export regulations AL: N and ECCN: EAR99H

L: Subject to export regulations AL: 91999 and ECCN: N

Overview



- Expansion modules for the connection to LOGO! Modular
- With digital inputs and outputs, analog inputs or analog outputs

2

Technical specifications

	6ED1 055-1CB00-0BA0	6ED1 055-1HB00-0BA0	6ED1 055-1MB00-0BA1	6ED1 055-1FB00-0BA1
Supply voltages				
Rated value			Yes	
• 12 V DC			Yes	
• 24 V DC	Yes	Yes		
• 115 V DC				Yes
• 230 V DC				Yes
• Permissible range, lower limit (DC)	20.4 V	20.4 V	10.8 V	100 V
• Permissible range, upper limit (DC)	28.8 V	28.8 V	28.8 V	253 V
• 24 V AC		Yes		
• 115 V AC				Yes
• 230 V AC				Yes
• Permissible range, lower limit (AC)		20.4 V		85 V
• Permissible range, upper limit (AC)		26.4 V		265 V
Digital inputs				
Number of digital inputs	4	4	4	4
Digital outputs				
Number of digital outputs	4	4; Relay	4; Relay	4; Relay
Short-circuit protection	Yes; electrical (1 A)	No; external fusing necessary	No; external fusing necessary	No; external fusing necessary
Relay outputs				
Switching capacity of contacts				
• with inductive load, max.		3 A	3 A	3 A
• with resistive load, max.		5 A	5 A	5 A
• thermal continuous current, max.	0.3 A			
EMC				
Emission of radio interference acc. to EN 55 011				
• Emission of radio interference acc. to EN 55 011 (limit value class B)	Yes	Yes	Yes	Yes

LOGO! logic module

LOGO! modular

LOGO! modular expansion modules

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Technical specifications (continued)

	6ED1 055-1CB00-0BA0	6ED1 055-1HB00-0BA0	6ED1 055-1MB00-0BA1	6ED1 055-1FB00-0BA1
Environmental requirements				
Operating temperature				
• Min.	0 °C	0 °C	0 °C	0 °C
• Max.	55 °C	55 °C	55 °C	55 °C
Degree of protection				
IP20	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CSA approval	Yes	Yes	Yes	Yes
Developed according to IEC1131	Yes	Yes	Yes	Yes
FM approval	Yes	Yes	Yes	Yes
According to VDE 0631	Yes	Yes	Yes	Yes
Marine approval	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
Dimensions and weight				
Dimensions				
• Mounting	on 35 mm DIN rail, 2 spacing units wide	on 35 mm DIN rail, 2 spacing units wide	on 35 mm DIN rail, 2 spacing units wide	on 35 mm DIN rail, 2 spacing units wide
• Width	36 mm; 2 DU	36 mm; 2 DU	36 mm; 2 DU	36 mm; 2 DU
• Height	90 mm	90 mm	90 mm	90 mm
• Depth	55 mm	55 mm	55 mm	55 mm

	6ED1 055-1CB10-0BA0	6ED1 055-1NB10-0BA0	6ED1 055-1FB10-0BA0
Supply voltages			
Rated value			
• 24 V DC	Yes	Yes	Yes
• 115 V DC			Yes
• 230 V DC			Yes
• Permissible range, lower limit (DC)	20.4 V	20.4 V	100 V
• Permissible range, upper limit (DC)	28.8 V	28.8 V	253 V
• 115 V AC			Yes
• 230 V AC			Yes
• Permissible range, lower limit (AC)			85 V
• Permissible range, upper limit (AC)			265 V
• Permissible frequency range, lower limit			47 Hz
• Permissible frequency range, upper limit			63 Hz
Digital inputs			
Number of digital inputs	8	8	8
Input voltage			
• for signal "0"	< 5 V DC	< 5 V DC	< 40 V AC; < 30 V DC
• for signal "1"	> 12 V DC	> 12 V DC	> 79 V AC; > 79 V DC
Input current			
• for signal "0", max. (permissible quiescent current)	1 mA	1 mA	0.03 mA
• for signal "1", typ.	2 mA	2 mA	0.08 mA
Input delay (for rated value of input voltage)			
• for standard inputs			
- at "0" to "1", max.	1.5 ms	1.5 ms	50 ms
- at "1" to "0", max.	1.5 ms	1.5 ms	50 ms

Technical specifications (continued)

	6ED1 055-1CB10-0BA0	6ED1 055-1NB10-0BA0	6ED1 055-1FB10-0BA0
Digital outputs			
Number of digital outputs	8	8; Relay	8; Relay
Short-circuit protection	Yes; electrical (1 A)	No; external fusing necessary	external fusing necessary
Lamp load, max.		1 000 W; 500 W at 115 V AC	1 000 W; 500 W at 115 V AC
Controlling a digital input	Yes	Yes	Yes
Parallel switching of 2 outputs • for increased power	No	No	No
Switching frequency • with resistive load, max. • with inductive load, max. • mechanical, max.	10 Hz 0.5 Hz	2 Hz 0.5 Hz 10 Hz	2 Hz 0.5 Hz 10 Hz
Relay outputs			
Switching capacity of contacts • with inductive load, max. • with resistive load, max. • thermal continuous current, max.	0.3 A	3 A 5 A	3 A 5 A
EMC			
Emission of radio interference acc. to EN 55 011 • Emission of radio interference acc. to EN 55 011 (limit value class B)	Yes	Yes	Yes
Environmental requirements			
Operating temperature • Min. • Max.	0 °C 55 °C	0 °C 55 °C	0 °C 55 °C
Degree of protection			
IP20	Yes	Yes	Yes
Standards, approvals, certificates			
CSA approval	Yes	Yes	Yes
Developed according to IEC1131	Yes	Yes	Yes
FM approval	Yes	Yes	Yes
According to VDE 0631	Yes	Yes	Yes
Marine approval	Yes	Yes	Yes
UL approval	Yes	Yes	Yes
Dimensions and weight			
Dimensions • Mounting • Width • Height • Depth	on 35 mm DIN rail, 4 spacing units wide 72 mm; 4 DU 90 mm 53 mm	on 35 mm DIN rail, 4 spacing units wide 72 mm; 4 DU 90 mm 53 mm	on DIN rail 25 mm, 4 module spaces wide 72 mm; 4 DU 90 mm 53 mm

	6ED1 055-1MA00-0BA0	6ED1 055-1MD00-0BA1
Product type designation		LOGO! AM2 RTD
Supply voltages		
Rated value		
• 12 V DC	Yes	Yes; 10.8 ... 28.8 V DC
• 24 V DC	Yes	Yes; 10.8 ... 28.8 V DC

LOGO! logic module

LOGO! modular

LOGO! modular expansion modules

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Technical specifications (continued)

	6ED1 055-1MA00-0BA0	6ED1 055-1MD00-0BA1
Analog inputs		
Number of analog inputs	2	2; 2 or 3 wire connection
Input ranges		
• Voltage	Yes	
• Current	Yes	
• Resistance thermometer		Yes; for PT100/PT1000 sensors
Input ranges (rated values), voltages		
• 0 to +10 V	Yes	
Input ranges (rated values), currents		
• 0 to 20 mA	Yes	
EMC		
Emission of radio interference acc. to EN 55 011		
• Emission of radio interference acc. to EN 55 011 (limit value class B)	Yes	Yes; Radio interference suppression according to EN55011, limit value class B
Environmental requirements		
Operating temperature		
• Min.	0 °C	0 °C
• Max.	55 °C	55 °C
Degree of protection		
IP20	Yes	Yes
Standards, approvals, certificates		
CSA approval	Yes	Yes; C22.2 Number 142
Developed according to IEC1131	Yes	Yes; EN 61131-2 (IEC 1131-2)
FM approval	Yes	Yes; FM-Standards No. 3611, 3600, 3810 Class I, Division 2, Group A, B, C, D
According to VDE 0631	Yes	
Marine approval	Yes	Yes; ABS, BV, DNV, GL, LRS, Class NK
UL approval	Yes	Yes; UL 508
Dimensions and weight		
Dimensions		
• Mounting	on 35 mm DIN rail, 2 spacing units wide	
• Width	36 mm	36 mm
• Height	90 mm	90 mm
• Depth	55 mm	53 mm

	6ED1 055-1MM00-0BA1
Supply voltages	
Rated value	
• 12 V DC	No
• 24 V DC	Yes
Analog outputs	
Number of analog outputs	2
Output ranges, voltage	
• 0 to 10 V	Yes
EMC	
Emission of radio interference acc. to EN 55 011	
• Emission of radio interference acc. to EN 55 011 (limit value class B)	Yes; Radio interference suppression according to EN55011, limit value class B
Environmental requirements	
Operating temperature	
• Min.	0 °C
• Max.	55 °C

	6ED1 055-1MM00-0BA1
Degree of protection	
IP20	Yes
Standards, approvals, certificates	
CSA approval	Yes
Developed according to IEC1131	Yes
FM approval	Yes
According to VDE 0631	Yes
Marine approval	Yes
UL approval	Yes
Dimensions and weight	
Dimensions	
• Mounting	on 35 mm DIN rail, 2 spacing units wide
• Width	36 mm
• Height	90 mm
• Depth	55 mm

Ordering data	Order No.	Accessories	Order No.
LOGO! DM8 24 Supply voltage 24 V DC, 4 digital inputs 24 V DC, 4 digital outputs 24 V DC, 0.3 A	6ED1 055-1CB00-0BA0	LOGO! Manual German English French Spanish Italian Chinese	6ED1 050-1AA00-0AE7 6ED1 050-1AA00-0BE7 6ED1 050-1AA00-0CE7 6ED1 050-1AA00-0DE7 6ED1 050-1AA00-0EE7 6ED1 050-1AA00-0KE7
LOGO! DM16 24 Supply voltage 24 V DC, 8 digital inputs 24 V DC, 8 digital outputs 24 V DC, 0.3 A	6ED1 055-1CB10-0BA0	LOGO! memory card for copying, with know-how protection	6ED1 056-1DA00-0BA0
LOGO! DM8 12/24R Supply voltage 12/24 V DC, 4 digital inputs 12/24 V DC, 4 relay outputs 5 A	6ED1 055-1MB00-0BA1	LOGO!Soft Comfort V6.0 J For programming on the PC in LAD/FBD; executes on Windows 98 SE and higher, Linux, MAC OSX; on CD-ROM	6ED1 058-0BA02-0YA0
LOGO! DM8 24R Supply voltage 24 V AC/DC, 4 digital inputs 24 V AC/DC, 4 relay outputs 5 A	6ED1 055-1HB00-0BA0	LOGO!Soft Comfort V6.0 J upgrade Upgrade from V1.0 to V6.0	6ED1 058-0CA02-0YE0
LOGO! DM16 24R Supply voltage 24 V DC, 8 digital inputs 24 V DC, 8 relay outputs 5 A	6ED1 055-1NB10-0BA0	LOGO! PC cable For program transfer between LOGO! and PC	6ED1 057-1AA00-0BA0
LOGO! DM8 230R Supply voltage 115/230 V AC/DC, 4 digital inputs 115/230 V AC/DC, 4 relay outputs 5 A	6ED1 055-1FB00-0BA1		
LOGO! DM16 230R Supply voltage 115/230 V AC/DC, 8 digital inputs 115/230 V AC/DC, 8 relay outputs 5 A	6ED1 055-1FB10-0BA0		
LOGO! AM2 Supply voltage 12/24 V DC, two analog inputs 0 ... 10 V or 0 ... 20 mA, 10-bit resolution	6ED1 055-1MA00-0BA0		
LOGO! AM2 PT 100 I Supply voltage 12/24 V DC, 2 analog inputs Pt100, temper- ature range -50 °C ... 200 °C	6ED1 055-1MD00-0BA1		
LOGO! AM2 AQ I Supply voltage 24 V DC, 2 analog outputs 0 to 10 V, 0/4 to 20 mA	6ED1 055-1MM00-0BA1		

I: Subject to export regulations AL: N and ECCN: EAR99H

J: Subject to export regulations AL: N and ECCN: EAR99S

LOGO! logic module

LOGO! modular

SIPLUS LOGO! modular expansion modules

Overview

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- Expansion modules for connection to LOGO! Modular
- With digital inputs and outputs, analog inputs, or analog outputs

Note:

SIPLUS extreme products are based on Siemens Industry standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

SIPLUS LOGO! DM8 24

Order No.	6AG1 055-1CB00-2BY0	6AG1 055-1CB00-2XB0
Order No. based on	6ED1 055-1CB00-0BA0	
Ambient temperature range	-40 ... +70 °C	-25 ... +70 °C
Conformal coating	Coating of the printed circuit boards and the electronic components	
Technical data	The technical data of the standard product applies except for the ambient conditions.	

SIPLUS LOGO! DM8 24

Order No.	6AG1 055-1PB00-2BY0	6AG1 055-1PB00-2XB0
Order No. based on	6ED1 055-1CB00-0BA0	
Ambient temperature range	-40 ... +70 °C	-25 ... +70 °C
Conformal coating	Coating of the printed circuit boards and the electronic components	
Technical data	The technical data of the standard product applies except for the ambient conditions.	

SIPLUS LOGO! DM8 24 R

Order No.	6AG1 055-1HB00-2BY0	6AG1 055-1HB00-2XB0
Order No. based on	6ED1 055-1HB00-0BA0	
Ambient temperature range	-40 ... +70 °C	-25 ... +70 °C
Conformal coating	Coating of the printed circuit boards and the electronic components	
Technical data	The technical data of the standard product applies except for the ambient conditions.	

SIPLUS LOGO! DM8 12/24R

Order No.	6AG1 055-1MB00-2BY1	6AG1 055-1MB00-2XB1
Order No. based on	6ED1 055-1MB00-0BA1	
Ambient temperature range	-40 ... +70 °C	-25 ... +70 °C
Conformal coating	Coating of the printed circuit boards and the electronic components	
Technical data	The technical data of the standard product applies except for the ambient conditions.	

Overview (continued)

SIPLUS LOGO! DM8 230R

Order No.	6AG1 055-1FB00-2BY1	6AG1 055-1FB00-2XB1
Order No. based on	6ED1 055-1FB00-0BA1	
Ambient temperature range	-40 ... +70 °C	-25 ... +70 °C
Conformal coating	Coating of the printed circuit boards and the electronic components	
Technical data	The technical data of the standard product applies except for the ambient conditions.	

SIPLUS LOGO! AM2

Order number	6AG1 055-1MA00-2BY0	6AG1055-1MA00-2XB0
Order No. based on	6ED1 055-1MA00-0BA0	
Ambient temperature range	-40 ... +70 °C	-25 ... +70 °C
Conformal coating	Coating of the printed circuit boards and the electronic components	
Technical data	The technical data of the standard product applies except for the ambient conditions.	

	SIPLUS LOGO! AM2 AQ	SIPLUS LOGO! DM16 24R
Order number	6AG1 055-1MM00-2BY1	6AG1 055-1NB10-2BA0
Order No. based on	6ED1 055-1MM00-0BA1	6ED1 055-1CB10-0BA0
Ambient temperature range	-40 ... +70 °C	-25 ... +70 °C
Conformal coating	Coating of the printed circuit boards and the electronic components	
Technical data	The technical data of the standard product applies except for the ambient conditions.	

Ambient conditions

Relative humidity	5 ... 100 % Condensation permissible
Biologically active substances	Conformity with EN 60721-3-3, Class 3B2 mold and fungal spores (except fauna)
Chemically active substances	Conformity with EN 60721-3-3, Class 3C4 incl. salt mist and ISA- S71.04 severity level G1; G2; G3; GX ¹⁾²⁾
Mechanically active substances	Conformity with EN 60721-3-3, Class 3S4 including conductive sand, dust ²⁾

Ambient conditions

Air pressure (depending on the highest positive temperature range specified)	1080 ... 795 hPa (-1000 ... +2000 m) see ambient temperature range 795 ... 658 hPa (+2000 ... +3500 m) derating 10 K 658 ... 540 hPa (+3500 ... +5000 m) derating 20 K
--	--

- ¹⁾ ISA-S71.04 severity level GX: Long-term load: SO₂ < 4.8 ppm;
H₂S < 9.9 ppm; Cl < 0.2 ppm; HCl < 0.66 ppm; HF < 0.12 ppm;
NH₃ < 49 ppm; O₃ < 0.1 ppm; NOX < 5.2 ppm
Limit value (max. 30 min/d): SO₂ < 17.8 ppm; H₂S < 49.7 ppm;
Cl < 1.0 ppm; HCl < 3.3 ppm; HF < 2.4 ppm; NH₃ < 247 ppm;
O₃ < 1.0 ppm; NOX < 10.4 ppm
- ²⁾ The supplied plug covers must remain in place over the unused
interface when operated in atmospheres containing corrosive gases!

The technical documentation on SIPLUS can be found here:
www.siemens.com/siplus-extreme

LOGO! logic module

LOGO! modular

SIPLUS LOGO! modular expansion modules

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Ordering data	Order No.		Order No.
SIPLUS LOGO! DM8 24 (extended temperature range and medial exposure) 24 V DC power supply, four 24 V DC digital inputs, four 24 V DC digital outputs, 0.3 A Temperature range -25 ... +70 °C H Temperature range -40 ... +70 °C L	6AG1 055-1CB00-2XB0 6AG1 055-1CB00-2BY0		
SIPLUS LOGO! DM8 12/24 (extended temperature range and medial exposure) 12/24 V DC power supply, four 12/24 V DC digital inputs, four 24 V DC digital outputs, 0.3 A Temperature range -25 ... +70 °C L Temperature range -40 ... +70 °C L	6AG1 055-1PB00-2XB0 6AG1 055-1PB00-2BY0		
SIPLUS LOGO! DM8 24R (extended temperature range and medial exposure) 24 V AC/DC power supply, four 24 V AC/DC digital inputs, four 5 A relay outputs Temperature range -25 ... +70 °C A Temperature range -40 ... +70 °C L	6AG1 055-1HB00-2XB0 6AG1 055-1HB00-2BY0		
SIPLUS LOGO! DM8 12/24R (extended temperature range and medial exposure) 12/24 V DC power supply, four 12/24 V DC digital inputs, four 5 A relay outputs Temperature range -25 ... +70 °C H Temperature range -40 ... +70 °C L	6AG1 055-1MB00-2XB1 6AG1 055-1MB00-2BY1		
SIPLUS LOGO! DM8 230R (extended temperature range and medial exposure) 115/230 V AC/DC power supply, four 115/230 V AC/DC digital inputs, four 5 A relay outputs Temperature range -25 ... +70 °C A Temperature range -40 ... +70 °C L	6AG1 055-1FB00-2XB1 6AG1 055-1FB00-2BY1		
SIPLUS LOGO! AM2 (extended temperature range and medial exposure) 12/24 V DC power supply, two analog inputs 0 ... 10 V or 0 ... 20 mA, 10 bit resolution Temperature range -25 ... +70 °C H Temperature range -40 ... +70 °C L	6AG1 055-1MA00-2XB0 6AG1 055-1MA00-2BY0		
SIPLUS LOGO! AM2 AQ (extended temperature range and medial exposure) 24 V DC power supply, 2x analog inputs 0 ... 10 V, 0/4 ... 20 mA, 10-bit resolution Temperature range -40 ... +70 °C L	6AG1 055-1MM00-2BY1		
SIPLUS LOGO! DM16 24R (extended temperature range and medial exposure) Supply voltage 24 V DC, 8x digital outputs 24 V DC, 8x relay outputs 5 A Temperature range -25 ... +70 °C L	6AG1 055-1NB10-2BA0		
Accessories			
SIPLUS Upmiter upstream device for reliable operation at the battery of combustion engines	6AG1 053-1AA00-2AA0		
Additional accessories			See LOGO! modular pure versions, page 2/17

A: Subject to export regulations AL: 9I999 and ECCN: 4A994X
 H: Subject to export regulations AL: 9I999 and ECCN: EAR99H
 L: Subject to export regulations AL: 9I999 and ECCN: N

LOGO! CM EIB/KNX communication module

Overview



- Expansion module for LOGO! basic versions
- For communication between the LOGO! master and external EIB components through EIB

Technical specifications

CM EIB/KNX	
Supply voltage	24 V AC/DC
Inputs, max.	16 DI/12 DO/8 AI/2 AO
Outputs, max.	16 digital
Continuous current	25 mA
Short-circuit protection	External fuse protection is required
Integrated time switches/power reserve	-
Ambient temperature	0 ... +55°C
RI specification	To EN 55 011 (limit value class B)
Degree of protection	IP20
Certification	to VDE 0631, IEC61131-2, cULus, FM
Mounting	On DIN rail 35 mm, 2 module widths wide
Dimensions (W x H x D) in mm	36 (2 MW) × 90 × 55

Ordering data

Order No.

LOGO! CM EIB KNX communication module for connection to <i>EIB</i> , supply voltage 24 V DC	6BK1 700-0BA00-0AA1
Accessories	
LOGO! manual	
German	6ED1 050-1AA00-0AE7
English	6ED1 050-1AA00-0BE7
French	6ED1 050-1AA00-0CE7
Spanish	6ED1 050-1AA00-0DE7
Italian	6ED1 050-1AA00-0EE7
Chinese	6ED1 050-1AA00-0KE7

I: Subject to export regulations AL: N and ECCN: EAR99H

LOGO! logic module

LOGO! modular

AS-Interface connection for LOGO!

Overview

Each LOGO! can now be connected to the AS-Interface system



An intelligent slave can be integrated into the AS-Interface system with the AS-Interface for LOGO!. The modular interface allows the different basic units to be integrated into the system depending on the required functionality. In addition, the functionality can be quickly and simply adapted to changed requirements by replacing the basic unit.

The interface provides four inputs and four outputs for the system. These I/Os, however, are not implemented in hardware, but are only virtually available via the interface.

Technical specifications

Supply voltage	24 V DC
Inputs/outputs	4 / 4 (virtual inputs / outputs)
Bus connection	AS-Interface according to specification
Ambient temperature	0 ... +55 °C
Degree of protection	IP20
Mounting	Onto standard mounting rail
Dimensions	36 x 90 x 58 mm
Indications of the LEDs	- Green: Status - Red: No data traffic - Flashes red/yellow: Zero address

Ordering data

Order No.

AS-Interface connection for LOGO!

3RK1 400-0CE10-0AA2

F: Subject to export regulations AL: N and ECCN: EAR99

Overview



The LOGO!Power miniature power supply units from Siemens are the perfect solution for many applications – their flat, step-shaped profile makes them perfectly suited for distribution boards, for example. Even more fields of application in the lower

performance range are made possible by: wide-range input, radio interference class B, the extensive temperature range as well as numerous certificates.

Main product features:

- 2 performance classes with 5 V, 12 V, and 15 V each
- 3 performance classes with 24 V
- Flat LOGO! design with an installation depth of only 55 mm
- High efficiency across the entire load range
- Low no-load loss
- Wide-range input from 85 V to 264 V AC
- Operation on DC voltage of 110 V to 300 V
- Constant current for connection of loads with high inrush current
- Adjustable output voltage
- Green LED for "Output voltage OK"
- Temperature range from -20 °C to +70 °C
- Numerous certificates, such as CE, cULus, FM, GL and ATEX

Technical specifications LOGO!Power 5 V

Power supply, type Order No.	5 V/3 A 6EP1 311-1SH03	5 V/6.3 A 6EP1 311-1SH13
Input		
Rated voltage $U_{in \text{ rated}}$	1-phase AC or DC 100-240 V AC Wide-range input	1-phase AC or DC 100-240 V AC Wide-range input
Voltage range	85 ... 264 V AC 110 ... 300 V DC	85 ... 264 V AC 110 ... 300 V DC
Overvoltage strength	$2.3 \times U_{in \text{ rated}}$, 1.3 ms	$2.3 \times U_{in \text{ rated}}$, 1.3 ms
Mains buffering at $I_{out \text{ rated}}$	> 40 ms at $U_{in} = 187 \text{ V}$	> 40 ms at $U_{in} = 187 \text{ V}$
Rated line frequency, rated line frequency range	50/60 Hz; 47 ... 63 Hz	50/60 Hz; 47 ... 63 Hz
Rated current $I_{in \text{ rated}}$	0.36-0.22 A	0.71-0.37 A
Switch-on current limitation (+25 °C) β_t	< 26 A < 0.8 A ² s	< 50 A < 3 A ² s
Built-in incoming fuse	Internal	Internal
Recommended miniature circuit breaker (IEC 898) in the mains power input	16 A or higher, Characteristic B or 10 A or higher, Characteristic C	16 A or higher, Characteristic B or 10 A or higher, Characteristic C
Output		
Rated voltage $U_{out \text{ rated}}$	Controlled, isolated DC voltage 5 V DC	Controlled, isolated DC voltage 5 V DC
Total tolerance, static	±3 % Approx. 0.2% Approx. 1.5%	±3 % Approx. 0.1% Approx. 2%
Residual ripple	< 100 mV _{pp} (typ. 10 mV _{pp})	< 100 mV _{pp} (typ. 15 mV _{pp})
Spikes (bandwidth approx. 20 MHz)	< 100 mV _{pp} (typ. 20 mV _{pp})	< 100 mV _{pp} (typ. 70 mV _{pp})
Adjustment range	4.6 ... 5.4 V	4.6 ... 5.4 V
Status indicator	5 V OK = green LED	5 V OK = green LED
On/Off behavior	No overshoot of U_{out} (soft start)	No overshoot of U_{out} (soft start)
Startup delay / voltage rise	< 0.5 s/typ. 15 ms	< 0.5 s/typ. 10 ms
Rated current $I_{out \text{ rated}}$	3 A	6.3 A
Current range up to +55 °C	0 ... 3 A 0 ... 2.1 A (up to +70 °C)	0 ... 6.3 A 0 ... 4.4 A (up to +70 °C)
Parallel switching for enhanced performance	Yes, 2 units	Yes, 2 units

LOGO! logic module

LOGO!Power

LOGO!Power

2

Technical specifications LOGO!Power 5 V (continued)

Power supply, type Order No.	5 V/3 A 6EP1 311-1SH03	5 V/6.3 A 6EP1 311-1SH13
Efficiency		
Efficiency at $U_{out rated}$, $I_{out rated}$	Approx. 77%	Approx. 83%
Power loss at $U_{out rated}$, $I_{out rated}$	Approx. 4 W	Approx. 6 W
Closed-loop control		
Dyn. line compensation ($U_{in rated} \pm 15\%$)	$< 0.2\% U_{out}$	$< 0.2\% U_{out}$
Dynamic load compensation (I_{out} : 10/90/10 %)	Typ. $\pm 3\% U_{out}$	Typ. $\pm 3\% U_{out}$
Load step settling time		
• 10 to 90%	Typ. 2 ms	Typ. 2 ms
• 90 to 10%	Typ. 2 ms	Typ. 2 ms
Protection and monitoring		
Current limitation	Typ. 3.8 A	Typ. 8.2 A
Short-circuit protection	Constant current characteristic	Constant current characteristic
Sustained short-circuit current rms value	< 5 A	< 10 A
Safety		
Primary/secondary isolation	Yes, safety extra low output voltage U_{out} according to EN 60950 and EN 50178	Yes, safety extra low output voltage U_{out} according to EN 60950 and EN 50178
Safety class	Class II (without protective conductor)	Class II (without protective conductor)
Safety test	Yes; CB scheme	Yes; CB scheme
CE marking	Yes	Yes
UL/cUL (CSA) approval	cULus-listed (UL 508, CSA C22.2 No. 107.1), cURus-recognized (UL 60950, CSA C22.2 No. 60950)	cULus-listed (UL 508, CSA C22.2 No. 107.1), cURus-recognized (UL 60950, CSA C22.2 No. 60950)
Protection against explosion	ATEX (available soon)	ATEX (available soon)
FM approval	Class I Div. 2, Group A, B, C, D T4	Class I Div. 2, Group A, B, C, D T4
Marine approval	GL (available soon)	GL (available soon)
Degree of protection (EN 60529)	IP20	IP20
EMC		
Emitted interference	EN 55022 Class B	EN 55022 Class B
Supply harmonics limitation	Not applicable	Not applicable
Noise immunity	EN 61000-6-2	EN 61000-6-2
Operating data		
Ambient temperature range	-20 ... +70 °C with natural convection	-20 ... +70 °C with natural convection
Transport and storage temperature range	-40 ... +85 °C	-40 ... +85 °C
Humidity class	Climate class 3K3 according to EN 60721, no condensation	Climate class 3K3 according to EN 60721, no condensation
Mechanics		
Supply-input connections L1, N	Solid/finely-stranded per screw-type terminal for 0.5 mm ... 2.5 mm ² 2 screw terminals each for 0.5 ... 2.5 mm ²	Solid/finely-stranded per screw-type terminal for 0.5 mm ... 2.5 mm ² 2 screw terminals each for 0.5 ... 2.5 mm ²
Connections		
• Output +		
• Output -		
Dimensions (W x H x D) in mm	54 x 90 x 55	72 x 90 x 55
Weight, approx.	0.17 kg	0.25 kg
Mounting	Can be snapped onto standard mounting rail EN 60715 35x7.5/15	Can be snapped onto standard mounting rail EN 60715 35x7.5/15

Technical specifications LOGO!Power 12 V

Power supply, type Order No.	12 V/1.9 A 6EP1 321-1SH03	12 V/4.5 A 6EP1 322-1SH03
Input	1-phase AC or DC	1-phase AC or DC
Rated voltage value $U_{in rated}$	100-240 V AC Wide-range input	100-240 V AC Wide-range input
Voltage range	85 ... 264 V AC 110 ... 300 V DC	85 ... 264 V AC 110 ... 300 V DC
Overvoltage resistance	$2.3 \times U_{in rated}$, 1.3 ms	$2.3 \times U_{in rated}$, 1.3 ms
Mains buffering at $I_{out rated}$	> 40 ms at $U_{in} = 187$ V	> 40 ms at $U_{in} = 187$ V
Rated line frequency, rated line-frequency range	50/60 Hz; 47 ... 63 Hz	50/60 Hz; 47 ... 63 Hz
Rated current value $I_{in rated}$	0.53-0.3 A	1.13-0.61 A
Switch-on current limitation (+25 °C)	< 26 A	< 54 A
ρ_t	< 0.8 A ² s	< 3 A ² s
Built-in incoming fuse	Internal	Internal
Recommended miniature circuit breaker (IEC 898) in the mains power input	16 A or higher, Characteristic B or 10 A or higher, Characteristic C	16 A or higher, Characteristic B or 10 A or higher, Characteristic C
Output	Controlled, isolated DC voltage	Controlled, isolated DC voltage
Rated voltage value $U_{out rated}$	12 V DC	12 V DC
Total tolerance, static	±3 %	±3 %
• Static mains compensation	Approx. 0.2 %	Approx. 0.1 %
• Static load smoothing	Approx. 1.5 %	Approx. 1.5 %
Residual ripple	< 200 mV _{pp} (typ. 10 mV _{pp})	< 200 mV _{pp} (typ. 10 mV _{pp})
Spikes (bandwidth approx. 20 MHz)	< 300 mV _{pp} (typ. 20 mV _{pp})	< 300 mV _{pp} (typ. 70 mV _{pp})
Adjustment range	10.5 ... 16.1 V	10.5 ... 16.1 V
Status indicator	Green LED for 12 V OK	Green LED for 12 V OK
On/Off behavior	No overshoot of U_{out} (soft start)	No overshoot of U_{out} (soft start)
Startup delay / voltage rise	< 0.5 s/typ. 15 ms	< 0.5 s/typ. 15 ms
Rated current value $I_{out rated}$	1.9 A	4.5 A
Current range up to +55 °C	0 ... 1.9 A	0 ... 4.5 A
• Derating	0 ... 1.3 A (up to +70 °C)	0 ... 3.1 A (up to +70 °C)
Parallel switching for enhanced performance	Yes, 2 units	Yes, 2 units
Efficiency		
Efficiency at $U_{out rated}$, $I_{out rated}$	Typ. 80 %	Typ. 85 %
Heat loss at $U_{out rated}$, $I_{out rated}$	Typ. 5 W	Typ. 10 W
Closed-loop control		
Dyn. mains compensation ($U_{in rated} \pm 15$ %)	< 0.2 % U_{out}	< 0.2 % U_{out}
Dynamic load smoothing (I_{out} : 10/90/10%)	Typ. ±3 % U_{out}	Typ. ±4 % U_{out}
Load step settling time		
• 10 to 90 %	Approx. 1 ms	Approx. 1 ms
• 90 to 10 %	Approx. 1 ms	Approx. 1 ms
Protection and monitoring		
Current limitation	Typ. 2.8 A	Typ. 5.8 A
Short-circuit protection	Constant current characteristic	Constant current characteristic
Sustained short-circuit current rms value	< 4 A	< 8 A
Safety		
Primary/secondary isolation	Yes, safety extra low output voltage U_{out} according to EN 60950 and EN 50178	Yes, safety extra low output voltage U_{out} according to EN 60950 and EN 50178
Protection class	Class II (without protective conductor)	Class II (without protective conductor)
German Technical Inspectorate approval	Yes; CB scheme	Yes; CB scheme
CE mark	Yes	Yes

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LOGO!Power

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Technical specifications LOGO!Power 12 V (continued)

Power supply, type Order No.	12 V/1.9 A 6EP1 321-1SH03	12 V/4.5 A 6EP1 322-1SH03
UL/cUL (CSA) approval	cULus-listed (UL 508, CSA C22.2 No. 107.1); cURus-recognized (UL 60950, CSA C22.2 No. 60950)	cULus-listed (UL 508, CSA C22.2 No. 107.1); cURus-recognized (UL 60950, CSA C22.2 No. 60950)
Explosion protection	ATEX (available soon)	ATEX (available soon)
FM approval	Class I Div. 2, Group A, B, C, D T4	Class I Div. 2, Group A, B, C, D T4
Marine approval	GL, ABS (available soon)	GL, ABS (available soon)
Degree of protection (EN 60529)	IP20	IP20
EMC		
Emitted interference	EN 55022 Class B	EN 55022 Class B
Supply harmonics limitation	Not applicable	Not applicable
Noise immunity	EN 61000-6-2	EN 61000-6-2
Operating data		
Ambient temperature range	-20 ... +70 °C with natural convection	-20 ... +70 °C with natural convection
Transport and storage temperature range	-40 ... +85 °C	-40 ... +85 °C
Humidity class	Climate class 3K3 according to EN 60721, no condensation	Climate class 3K3 according to EN 60721, no condensation
Mechanics		
Supply-input connections L1, N	1 screw terminal each for 0.5 mm ... 2.5 mm ² single-core/finely stranded	1 screw terminal each for 0.5 mm ... 2.5 mm ² single-core/finely stranded
Connections	2 screw terminals each for 0.5 ... 2.5 mm ²	2 screw terminals each for 0.5 ... 2.5 mm ²
• Output +		
• Output -		
Dimensions (W x H x D) in mm	54 x 90 x 55	72 x 90 x 55
Weight, approx.	Approx. 0.17 kg	Approx. 0.25 kg
Installation	Snaps onto standard mounting rail EN 60715 35x7.5/15	Snaps onto standard mounting rail EN 60715 35x7.5/15

Technical specifications LOGO!Power 15 V

Power supply, type Order No.	15 V/1.9 A 6EP1 351-1SH03	15 V/4 A 6EP1 352-1SH03
Input		
Rated voltage value $U_{in rated}$	1-phase AC or DC 100-240 V AC Wide-range input	1-phase AC or DC 100-240 V AC Wide-range input
Voltage range	85 ... 264 V AC 110 ... 300 V DC	85 ... 264 V AC 110 ... 300 V DC
Overvoltage resistance	$2.3 \times U_{in rated}$, 1.3 ms	$2.3 \times U_{in rated}$, 1.3 ms
Mains buffering at $I_{out rated}$	> 40 ms at $U_{in} = 187$ V	> 40 ms at $U_{in} = 187$ V
Rated line frequency, rated line-frequency range	50/60 Hz; 47 ... 63 Hz	50/60 Hz; 47 ... 63 Hz
Rated current value $I_{in rated}$	0.63-0.33 A	1.24-0.68 A
Switch-on current limit (+25 °C)	< 26 A	< 54 A
ρ_t	< 0.8 A ² s	< 3 A ² s
Built-in incoming fuse	Internal	Internal
Recommended miniature circuit breaker (IEC 898) in the mains power input	16 A or higher, Characteristic B or 10 A or higher, Characteristic C	16 A or higher, Characteristic B or 10 A or higher, Characteristic C
Output		
Rated voltage $U_{out rated}$	Controlled, isolated DC voltage 15 V DC	Controlled, isolated DC voltage 15 V DC
Total tolerance, static	±3 %	±3 %
• Static mains compensation	Approx. 0.1 %	Approx. 0.1 %
• Static load smoothing	Approx. 1.5 %	Approx. 1.5 %
Residual ripple	< 200 mV _{pp} (typ. 10 mV _{pp})	< 200 mV _{pp} (typ. 10 mV _{pp})

Technical specifications LOGO!Power 15 V (continued)

Power supply, type Order No.	15 V/1.9 A 6EP1 351-1SH03	15 V/4 A 6EP1 352-1SH03
Spikes (bandwidth approx. 20 MHz)	< 300 mV _{pp} (typ. 30 mV _{pp})	< 300 mV _{pp} (typ. 70 mV _{pp})
Adjustment range	10.5 ... 16.1 V	10.5 ... 16.1 V
Status indicator	Green LED for 15 V OK	Green LED for 15 V OK
On/Off behavior	No overshoot of U_{out} (soft start)	No overshoot of U_{out} (soft start)
Startup delay / voltage rise	< 0.5 s/typ. 15 ms	< 0.5 s/typ. 15 ms
Rated current value $I_{in rated}$	1.9 A	4 A
Current range up to +55 °C	0 ... 1.9 A	0 ... 4 A
• Derating	0 ... 1.3 A (up to +70 °C)	0 ... 2.8 A (up to +70 °C)
Parallel switching for enhanced performance	Yes, 2 units	Yes, 2 units
Efficiency		
Efficiency at $U_{out rated}$, $I_{out rated}$	Approx. 81 %	Approx. 85 %
Heat loss at $U_{out rated}$, $I_{out rated}$	Approx. 7 W	Approx. 11 W
Closed-loop control		
Dyn. mains compensation ($U_{in rated} \pm 15\%$)	< 0.2 % U_{out}	< 0.2 % U_{out}
Dynamic load smoothing (I_{out} : 10/90/10%)	Typ. ± 2.8 % U_{out}	Typ. ± 3 % U_{out}
Load step settling time		
• 10 to 90 %	Typ. 1 ms	Typ. 1 ms
• 90 to 10 %	Typ. 1 ms	Typ. 1 ms
Protection and monitoring		
Current limitation	Typ. 2.7 A	Typ. 5.7 A
Short-circuit protection	Constant current characteristic	Constant current characteristic
Sustained short-circuit current rms value	< 4 A	< 8 A
Safety		
Primary/secondary isolation	Yes, safety extra low output voltage U_{out} according to EN 60950 and EN 50178	Yes, safety extra low output voltage U_{out} according to EN 60950 and EN 50178
Protection class	Class II (without protective conductor)	Class II (without protective conductor)
Safety test	Yes; CB scheme	Yes; CB scheme
CE mark	Yes	Yes
UL/cUL (CSA) approval	cULus-listed (UL 508, CSA C22.2 No. 107.1); cURus-recognized (UL 60950, CSA C22.2 No. 60950)	cULus-listed (UL 508, CSA C22.2 No. 107.1); cURus-recognized (UL 60950, CSA C22.2 No. 60950)
Explosion protection	ATEX (available soon)	ATEX (available soon)
FM approval	Class I Div. 2, Group A, B, C, D T4	Class I Div. 2, Group A, B, C, D T4
Marine approval	GL (available soon)	GL (available soon)
Degree of protection (EN 60529)	IP20	IP20
EMC		
Emitted interference	EN 55022 Class B	EN 55022 Class B
Supply harmonics limitation	Not applicable	Not applicable
Noise immunity	EN 61000-6-2	EN 61000-6-2
Operating data		
Ambient temperature range	-20 ... +70 °C with natural convection	-20 ... +70 °C with natural convection
Transport and storage temperature range	-40 ... +85 °C	-40 ... +85 °C
Humidity class	Climate class 3K3 according to EN 60721, no condensation	Climate class 3K3 according to EN 60721, no condensation

LOGO! logic module

LOGO!Power

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Technical specifications LOGO!Power 15 V (continued)

Power supply, type Order No.	15 V/1.9 A 6EP1 351-1SH03	15 V/4 A 6EP1 352-1SH03
Mechanics		
Supply-input connections L1, N	1 screw terminal each for 0.5 mm ... 2.5 mm ² single-core/finely stranded 2 screw terminals each for 0.5 ... 2.5 mm ²	1 screw terminal each for 0.5 mm ... 2.5 mm ² single-core/finely stranded 2 screw terminals each for 0.5 ... 2.5 mm ²
Connections		
• Output +		
• Output -		
Dimensions (W x H x D) in mm	54 x 90 x 55	72 x 90 x 55
Weight, approx.	Approx. 0.17 kg	Approx. 0.25 kg
Installation	Snaps onto standard mounting rail EN 60715 35x7.5/15	Snaps onto standard mounting rail EN 60715 35x7.5/15

Technical specifications LOGO!Power 24 V/1.3 A

Power supply, type Order No.	24 V/1.3 A 6EP1 331-1SH03	Power supply, type Order No.	24 V/1.3 A 6EP1 331-1SH03
Input	1-phase AC or DC	Closed-loop control	
Rated voltage $U_{in rated}$	100-240 V AC Wide-range input	Dyn. mains compensation ($U_{in rated} \pm 15\%$)	$< 0,2\% U_{out}$
Voltage range	85 ... 264 V AC 110 ... 300 V DC	Dynamic load smoothing (I_{out} : 50/100/50 %)	Typ. $\pm 1\% U_{out}$ (I_{out} : 10/90/10 %)
Overvoltage strength	$2.3 \times U_{in rated}$, 1.3 ms	Load step settling time	
Mains buffering at $I_{out rated}$	> 40 ms at $U_{in} = 187$ V	• 50 to 100%	Typ. 1 ms (10 to 90%)
Rated line frequency, rated line-frequency range	50/60 Hz; 47 ... 63 Hz	• 100 to 50%	Typ. 1 ms (90 to 10%)
Rated current $I_{in rated}$	0.7-0.35 A	Protection and monitoring	
Switch-on current limitation (+25 °C)	< 30 A	Output overvoltage protection	Yes, according to EN 60950
ρ_t	< 0.8 A ² s	Current limitation	Typ. 1.7 A
Built-in incoming fuse	Internal	Short-circuit protection	Constant current character- istic
Recommended miniature circuit breaker (IEC 898) in the mains power input	16 A or higher, Character- istic B or 10 A or higher, Characteristic C	Sustained short-circuit current rms value	< 4 A
Output	Controlled, isolated DC voltage	Overload/short-circuit indicator	-
Rated voltage $U_{out rated}$	24 V DC	Safety	
Total tolerance	$\pm 3\%$	Primary/secondary isolation	Yes, safety extra low output voltage U_{out} according to EN 60950-1 and EN 50178
• Static mains compensation	Approx. 0.1%	Safety class	Class II (without protective conductor)
• Static load smoothing	Approx. 1.5%	Leakage current	-
Residual ripple	< 200 mV _{pp} (typ. 10 mV _{pp})	Safety test	Yes; CB scheme
Spikes (bandwidth approx. 20 MHz)	< 300 mV _{pp} (typ. 20 mV _{pp})	CE marking	Yes
Adjustment range	22.2 ... 26.4 V	UL/cUL (CSA) approval	cULus-listed (UL 508, CSA C22.2 No. 107.1), cURus- recognized (UL 60950, CSA C22.2 No. 60950)
Status indicator	24 V OK = green LED	Protection against explosion	ATEX EX II 3G Ex nA IIC T3
On/Off behavior	No overshoot of U_{out} (soft start)	FM approval	Class I Div. 2, Group A, B, C, D T4
Startup delay / voltage rise	< 0.5 s/typ. 15 ms	Marine approval	GL, ABS
Rated current $I_{out rated}$	1.3 A	Degree of protection (EN 60529)	IP20
Current range		EMC	
• Current range up to +60 °C	0 ... 1.3 A (up to +55°C)	Emitted interference	EN 55022 Class B
• Derating	0 ... 0.9 A (up to +70°C)	Supply harmonics limitation	Not applicable
Parallel switching for enhanced perfor- mance	Yes, 2 units	Noise immunity	EN 61000-6-2
Efficiency			
Efficiency at $U_{out rated}$, $I_{out rated}$	Approx. 83%		
Power loss at $U_{out rated}$, $I_{out rated}$	Approx. 6.3 W		

Technical specifications LOGO!Power 24 V/1.3 A (continued)

Power supply, type Order No.	24 V/1.3 A 6EP1 331-1SH03
Operating data	
Ambient temperature range	-20 ... +70 °C with natural convection
Transport and storage temperature range	-40 ... +85 °C
Humidity class	Climate class 3K3 according to EN 60721, no condensation
Mechanics	
Connections	
• Supply input L, N, PE DC input: L+1, M1, PE	Solid/finely-stranded per screw-type terminal (L, N) for 0.5 mm ... 2.5 mm ²
• Output +	2 screw-type terminals for 0.5 ... 2.5 mm ²
• Output -	2 screw-type terminals for 0.5 ... 2.5 mm ²

Power supply, type Order No.	24 V/1.3 A 6EP1 331-1SH03
Dimensions (W x H x D) in mm	54 x 90 x 55
Weight, approx.	Approx. 0.17 kg
Mounting	Can be snapped onto standard mounting rail EN 60715 35x7.5/15
Accessories	-

Technical specifications LOGO!Power 24 V/2.5 A

Power supply, type Order No	24 V/2.5 A 6EP1 332-1SH43
Input	
Rated voltage $U_{in rated}$	1-phase AC or DC 100-240 V AC Wide-range input
Voltage range	85 ... 264 V AC 110 ... 300 V DC
Overvoltage strength	2.3 x $U_{in rated}$, 1.3 ms
Mains buffering at $I_{out rated}$	> 40 ms at $U_{in} = 187$ V
Rated line frequency, rated line-frequency range	50/60 Hz; 47 ... 63 Hz
Rated current $I_{in rated}$	1.22-0.66 A
Switch-on current limitation (+25 °C)	< 46 A
ρ_t	< 3 A ² s
Built-in incoming fuse	Internal
Recommended miniature circuit breaker (IEC 898) in the mains power input	16 A or higher, Characteristic B or 10 A or higher, Characteristic C
Output	
Rated voltage $U_{out rated}$	Controlled, isolated DC voltage 24 V DC
Total tolerance	±3 %
• Static mains compensation	Approx. 0.1%
• Static load smoothing	Approx. 1.5%
Residual ripple	< 200 mV _{pp} (typ. 10 mV _{pp})
Spikes (bandwidth approx. 20 MHz)	< 300 mV _{pp} (typ. 50 mV _{pp})
Adjustment range	22.2 ... 26.4 V
Status indicator	
On/Off behavior	24 V OK = green LED No overshoot of U_{out} (soft start)
Startup delay / voltage rise	< 0.5 s/typ. 10 ms
Rated current $I_{out rated}$	2.5 A
Current range	
• Current range up to +60 °C	0 ... 2.5 A (up to +55°C)
• Derating	0 ... 1.75 A (up to +70°C)
Parallel switching for enhanced performance	Yes, 2 units

Power supply, type Order No	24 V/2.5 A 6EP1 332-1SH43
Efficiency	
Efficiency at $U_{out rated}$, $I_{out rated}$	Approx. 88%
Power loss at $U_{out rated}$, $I_{out rated}$	Approx. 8 W
Closed-loop control	
Dyn. mains compensation ($U_{in rated} \pm 15\%$)	< 0.2 % U_{out}
Dynamic load smoothing (I_{out} : 50/100/50 %)	Typ. ±2% U_{out} (I_{out} : 10/90/10 %)
Load step settling time	
• 50 to 100%	Typ. 1 ms (10 to 90%)
• 100 to 50%	Typ. 1 ms (90 to 10%)
Protection and monitoring	
Output overvoltage protection	Yes, according to EN 60950
Current limitation	Typ. 3.3 A
Short-circuit protection	Constant current characteristic
Sustained short-circuit current rms value	Approx. 3.5 A
Safety	
Primary/secondary isolation	Yes, safety extra low output voltage U_{out} according to EN 60950-1 and EN 50178
Safety class	Class II (without protective conductor)
Leakage current	-
Safety test	Yes; CB scheme
CE marking	Yes
UL/cUL (CSA) approval	cULus-listed (UL 508, CSA C22.2 No. 107.1), cURus-recognized (UL 60950, CSA C22.2 No. 60950)
Protection against explosion	ATEX EX II 3G Ex nA IIC T3
FM approval	Class I Div. 2, Group A, B, C, D T4
Marine approval	GL, ABS
Degree of protection (EN 60529)	IP20

LOGO! logic module

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LOGO!Power

Technical specifications LOGO!Power 24 V/2.5 A (continued)

Power supply, type Order No	24 V/2.5 A 6EP1 332-1SH43
EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	Not applicable
Noise immunity	EN 61000-6-2
Operating data	
Ambient temperature range	-20 ... +55 °C with natural convection
Transport and storage temperature range	-40 ... +70 °C
Humidity class	Climate class 3K3 according to EN 60721, no condensation

Power supply, type Order No	24 V/2.5 A 6EP1 332-1SH43
Mechanics	
Connections	- Supply input L, N, PE - DC input: L+1, M1, PE
• Output +	2 screw-type terminals for 0.5 ... 2.5 mm ²
• Output -	2 screw-type terminals for 0.5 ... 2.5 mm ²
Dimensions (W x H x D) in mm	72 x 90 x 55
Weight, approx.	Approx. 0.25 kg
Mounting	Can be snapped onto standard mounting rail EN 60715 35x7.5/15
Accessories	-

Technical specifications LOGO!Power 24 V/4 A

Power supply, type Order No.	24 V/4 A 6EP1 332-1SH52
Input	
Rated voltage $U_{in rated}$	1-phase AC or DC 100-240 V AC Wide-range input
Voltage range	85 ... 264 V AC 110 ... 300 V DC
Overvoltage strength	$2.3 \times U_{in rated}$, 1.3 ms
Mains buffering at $I_{out rated}$	> 40 ms at $U_{in} = 187$ V
Rated line frequency, rated line-frequency range	50/60 Hz; 47 ... 63 Hz
Rated current $I_{in rated}$	1.95 to 0.97 A
Switch-on current limitation (+25 °C)	< 30 A
ρ_t	< 2.5 A ² s
Built-in incoming fuse	Internal
Recommended miniature circuit breaker (IEC 898) in the mains power input	16 A or higher, Characteristic B or 10 A or higher, Characteristic C
Output	
Rated voltage $U_{out rated}$	Controlled, isolated DC voltage 24 V DC
Total tolerance	±3 %
• Static mains compensation	Approx. 0.1%
• Static load smoothing	Approx. 1.5%
Residual ripple	< 200 mV _{pp} (typ. 30 mV _{pp})
Spikes (bandwidth approx. 20 MHz)	< 300 mV _{pp} (typ. 60 mV _{pp})
Adjustment range	22.2 ... 26.4 V
Status indicator	
On/Off behavior	24 V OK = green LED No overshoot of U_{out} (soft start)
Startup delay / voltage rise	< 0.5 s/typ. 15 ms

Power supply, type Order No.	24 V/4 A 6EP1 332-1SH52
Rated current $I_{out rated}$	4 A
Current range	0 ... 4 A (up to +55°C) 0 ... 2.8 A (up to +70°C)
• Current range up to +60 °C	
• Derating	
Parallel switching for enhanced performance	Yes, 2 units
Efficiency	
Efficiency at $U_{out rated}$, $I_{out rated}$	Approx. 89%
Power loss at $U_{out rated}$, $I_{out rated}$	Approx. 12 W
Closed-loop control	
Dyn. mains compensation ($U_{in rated} \pm 15\%$)	< 0,2 % U_{out}
Dynamic load smoothing (I_{out} : 50/100/50 %)	Typ. ±1.5% U_{out} (I_{out} : 10/90/10 %)
Load step settling time	
• 50 to 100%	Typ. 1 ms (10 to 90%)
• 100 to 50%	Typ. 1 ms (90 to 10%)
Protection and monitoring	
Output overvoltage protection	Yes, according to EN 60950
Current limitation	Typ. 5.2 A
Short-circuit protection	Constant current characteristic
Sustained short-circuit current rms value	< 10 A
Overload/short-circuit indicator	-
Safety	
Primary/secondary isolation	Yes, safety extra low output voltage U_{out} according to EN 60950-1 and EN 50178
Safety class	Class II (without protective conductor)

Technical specifications LOGO!Power 24 V/4 A (continued)

Power supply, type Order No.	24 V/4 A 6EP1 332-1SH52
Leakage current	-
Safety test	Yes; CB scheme
CE marking	Yes
UL/cUL (CSA) approval	cULus-listed (UL 508, CSA C22.2 No. 107.1), cURus-recognized (UL 60950, CSA C22.2 No. 60950)
Protection against explosion	ATEX EX II 3G Ex nA IIC T3
FM approval	Class I Div. 2, Group A, B, C, D T4
Marine approval	GL, ABS
Degree of protection (EN 60529)	IP20
EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

Power supply, type Order No.	24 V/4 A 6EP1 332-1SH52
Operating data	
Ambient temperature range	-20 ... +70 °C with natural convection
Transport and storage temperature range	-40 ... +85 °C
Humidity class	Climate class 3K3 according to EN 60721, no condensation
Mechanics	
Connections	
• Supply input L, N, PE DC input: L+1, M1, PE	Solid/finely-stranded per screw-type terminal (L, N) for 0.5 mm ... 2.5 mm ²
• Output +	2 screw terminals each for 0.5 ... 2.5 mm ²
• Output -	2 screw terminals each for 0.5 ... 2.5 mm ²
Dimensions (W x H x D) in mm	90 x 90 x 55
Weight, approx.	Approx. 0.34 kg
Mounting	Can be snapped onto standard mounting rail EN 60715 35x7.5/15
Accessories	-

LOGO! logic module

LOGO!Power

LOGO!Power

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Ordering data	Order No.		Order No.
LOGO!Power 5 V Stabilized power supply; Output: 5 V DC/3 A • Input: 110 ... 300 V AC; extended operating temperature range: up to +70°C Stabilized power supply; Output: 5 V DC/6.3 A • Input: 110 ... 300 V AC; extended operating temperature range: up to +70°C	6EP1 311-1SH03 6EP1 311-1SH13	LOGO!Power 24 V/1.3 A Stabilized power supply; Output: 24 V DC/1.3 A • Input: 110 ... 300 V AC; extended operating temperature range: up to +70°C	6EP1 331-1SH03
LOGO!Power 12 V Stabilized power supply; Output: 12 V DC/1.9 A • Input: 110 ... 300 V AC; extended operating temperature range: up to +70°C Stabilized power supply; Output: 12 V DC/4.5 A • Input: 110 ... 300 V AC; extended operating temperature range: up to +70°C	6EP1 321-1SH03 6EP1 322-1SH03	LOGO!Power 24 V/2.5 A Stabilized power supply; Output: 24 V DC/2.5 A • Input: 110 ... 300 V AC; extended operating temperature range: up to +70°C	6EP1 332-1SH43
LOGO!Power 15 V Stabilized power supply; Output: 15 V DC/1.9 A • Input: 110 ... 300 V AC; extended operating temperature range: up to +70°C Stabilized power supply; Output: 15 V DC/4 A • Input: 110 ... 300 V AC; extended operating temperature range: up to +70°C	6EP1 351-1SH03 6EP1 352-1SH03	LOGO!Power 24 V/4 A Stabilized power supply; Output: 24 V DC/4 A • Input: 110 ... 300 V AC; extended operating temperature range: up to +70°C	6EP1 332-1SH52

More information

In addition to various power supply product lines, the perfectly coordinated complete SITOP range offers a unique range of add-on modules with which the 24 V power supply can be additionally protected against interference on the primary and secondary side – right up to all-round protection:

- Redundancy module for setting up a redundant power supply
- Uninterruptible 24 V power supplies with batteries or maintenance-free capacitors for continued operation in the event of a power failure
- Selectivity modules for electronic protection of 24 V branches from overload and short-circuit

You can find more information in Catalog KT 10.1 and in the Internet at

www.siemens.com/sitop

Overview

Note:

SIPLUS extreme products are based on Siemens Industry standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

SIPLUS LOGO!Power 1.3 A

Order number	6AG1 931-1SH02-2AA0
Order No. based on	6EP1 331-1SH02
Ambient temperature range	-25 °C to +70 °C
Conformal coating	Coating of the printed circuit boards and the electronic components
Technical data	The technical data of the standard product applies except for the ambient conditions.
Ambient conditions	
Relative humidity	5 ... 100 % Condensation permissible
Biologically active substances	Conformity with EN 60721-3-3, Class 3B2 mold and fungal spores (except fauna)
Chemically active substances	Conformity with EN 60721-3-3, Class 3C4 incl. salt mist and ISA-S71.04 severity level G1; G2; G3; GX ^{1) 2)}
Mechanically active substances	Conformity with EN 60721-3-3, Class 3S4 including conductive sand, dust ²⁾
Air pressure (depending on the highest positive temperature range specified)	1080 ... 795 hPa (-1000 ... +2000 m) see ambient temperature range 795 ... 658 hPa (+2000 ... +3500 m) derating 10 K 658 ... 540 hPa (+3500 ... +5000 m) derating 20 K

¹⁾ ISA-S71.04 severity level GX: Long-term load: SO₂ < 4.8 ppm; H₂S < 9.9 ppm; Cl < 0.2 ppm; HCl < 0.66 ppm; HF < 0.12 ppm; NH < 49 ppm; O₃ < 0.1 ppm; NOX < 5.2 ppm

Threshold / limit value (max. 30 min/d): SO₂ < 17.8 ppm; H₂S < 49.7 ppm; Cl < 1.0 ppm; HCl < 3.3 ppm; HF < 2.4 ppm; NH < 247 ppm; O₃ < 1.0 ppm; NOX < 10.4 ppm

²⁾ The supplied plug covers must remain in place over the unused interface when operated in atmospheres containing corrosive gases!

The technical documentation on SIPLUS can be found here:

www.siemens.com/siplus-extreme

Technical specifications

Power supply, type	24 V/1.3 A
Order number	6EP1 331-1SH02
Input	1-phase AC
Rated voltage $U_{in \text{ rated}}$	100 ... 240 V AC Wide-range input
Voltage range	85 ... 264 V AC
Overvoltage strength	$2.3 \times U_{in \text{ rated}}$, 1.3 ms
Mains buffering at $I_{out \text{ rated}}$	> 40 ms at $U_{in} = 187 \text{ V}$
Rated line frequency, rated line frequency range	50/60 Hz; 47 ... 63 Hz
Rated current $I_{in \text{ rated}}$	0.7-0.35 A
Switch-on current limitation (+25 °C)	< 35 A
P_t	< 0.8 A ² s
Built-in incoming fuse	Internal
Recommended miniature circuit breaker (IEC 898) in the mains power input	16 A or higher, Characteristic B or 10 A or higher, Characteristic C
Output	Controlled, isolated DC voltage
Rated voltage $U_{out \text{ rated}}$	24 V DC
Total tolerance	±3 %
• Static mains compensation	Approx. 0.1%
• Static load smoothing	Approx. 1.5%
Residual ripple	< 200 mV _{pp} (typ. 10 mV _{pp})
Spikes (bandwidth approx. 20 MHz)	< 300 mV _{pp} (typ. 20 mV _{pp})
Setting range	22.2 ... 26.4 V
Status indicator	24 V OK = green LED
On/Off behavior	No overshoot of U_{out} (soft start)
Startup delay / voltage rise	< 0.5 s/typ. 15 ms
Rated current $I_{out \text{ rated}}$	1.3 A
Current range	0 ... 1.3 A (up to 55 °C)
• Current range up to +60 °C	-
• Derating	Yes, 2 units
Parallel switching for enhanced performance	
Efficiency	
Efficiency at $U_{out \text{ rated}}$, $I_{out \text{ rated}}$	Approx. 82%
Heat loss at $U_{out \text{ rated}}$, $I_{out \text{ rated}}$	Approx. 7 W
Closed-loop control	
Dyn. mains compensation ($U_{in \text{ rated}} \pm 15\%$)	< 0.2 % U_{out}
Dynamic load smoothing (I_{out} : 50/100/50 %)	Typ. ±1.5 % U_{out} (I_{out} : 10/90/10 %)
Load step settling time	Typ. 20 ms (10 to 90%) Typ. 20 ms (90 to 10%)
• 50 to 100%	
• 100 to 50%	
Protection and monitoring	
Output overvoltage protection	Yes, according to EN 60950
Current limitation	Typ. 2 A
Short-circuit protection	Constant current characteristic
Sustained short-circuit current rms value	< 4 A
Overload/short-circuit indicator	-

LOGO! logic module

LOGO!Power

SIPLUS LOGO!Power

Technical specifications (continued)

Power supply, type	24 V/1.3 A
Safety	
Primary/secondary isolation	Yes, safety extra low output voltage U_{out} according to EN 60950 and EN 50178
Protection class	Class II (without protective conductor)
Leakage current	-
Safety test	Yes; CB scheme
CE marking	Yes
UL/cUL (CSA) approval	cULus-listed (UL 508, CSA C22.2 No. 107.1), File E197259; cURus-recognized (UL 60950, CSA C22.2 No. 60950), File E151273
Explosion protection	ATEX EX II 3G Ex nA IIC T3
FM approval	Class I Div. 2, Group A, B, C, D T4
Marine approval	GL, ABS
Degree of protection (EN 60529)	IP20
EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	Not applicable
Noise immunity	EN 61000-6-2
Operating data	
Range of ambient temperature	-20 ... +55 °C with natural convection
Transport and storage temperature range	-40 ... +70 °C
Humidity class	Climate class 3K3 according to EN 60721, no condensation
Mechanics	
Connections	
• Supply input L, N, PE DC input: L+1, M1, PE	One solid/finely-stranded screw-type terminal each (L, N) for 0.5 mm ... 2.5 mm ²
• Output +	2 screw-type terminals for 0.5 ... 2.5 mm ²
• Output -	2 screw-type terminals for 0.5 ... 2.5 mm ²
Dimensions (W x H x D) in mm	54 x 90 x 55
Weight, approx.	Approx. 0.17 kg
Installation	Can be snapped onto standard mounting rail EN 60715 35x7.5/15
Accessories	-

Ordering data

Order No.

SIPLUS LOGO!Power 24 V 1.3 A L 6AG1 931-1SH02-2AA0

(extended temperature range and medial exposure)

Input 100 ... 240 V AC
Output 24 V DC, 1.3 A

L: Subject to export regulations AL: 91999 and ECCN: N

Overview



- Switching module for the direct switching of resistive loads and motors

Technical specifications

	6ED1 057-4CA00-0AA0	6ED1 057-4EA00-0AA0
Dimensions and weight		
Weight		
• Weight, approx.	160 g	160 g

Ordering data

LOGO!Contact	Order No.
Switching module for direct switching of resistive loads up to 20 A and motors up to 4 kW	
Switching voltage 24 V	6ED1 057-4CA00-0AA0
Switching voltage 230 V	6ED1 057-4EA00-0AA0

LOGO! logic module

LOGO! software

LOGO! software

Overview



- The user-friendly software for creating control programs on a PC
- Creation of control programs in Function Block Diagram (FBD) or Ladder Diagram (LAD)
- Plus testing, simulation, online testing and archiving of control programs
- Professional documentation via numerous comment and print functions

The connection between LOGO! and the PC is made using the LOGO! PC cable (serial interface) or the LOGO! USB PC cable (USB interface).

Minimum system requirements

Windows 98 SE, NT 4.0, ME, 2000, XP or Vista (not 64 bit)

- PC Pentium.
- 90 MB free disk capacity.
- 64 MB RAM.
- SVGA graphics card with minimum resolution 800x600 (256 colors).

Mac OS X

- PowerMac G3, G4, G4 Cube, iMac, PowerBook G3, G4 or iBook.

Linux (tested with Caldera OpenLinux 2.4)

- Runs on all Linux distributions on which the Java 2 SDK Version 1.3.1 runs.
- Please refer to your relevant Linux distribution for the necessary hardware requirements.

Ordering data

Order No.

LOGO!Soft Comfort V6.0

For programming on the PC in LAD/FBD; executes under Windows 98 SE and higher, Linux, MAC OSX; on CD-ROM

J **6ED1 058-0BA02-0YA0**

LOGO!Soft Comfort V6.0 upgrade

Upgrade from V1.0 to V6.0

J **6ED1 058-0CA02-0YE0**

J: Subject to export regulations AL: N and ECCN: EAR99S