

OFFICIAL DOCUMENT PACKAGE

Manufacturer's Manual

Amikon cover with selected official Siemens technical pages

SIEMENS LOGO! PURE

6ED1052-2FB08-0BA2

LOGO! 230RCEo BASIC MODULE WITHOUT DISPLAY

Selected official pages identify the exact article and cover dimensions, ambient conditions, supply and I/O ratings.

OFFICIAL SOURCE

Siemens Product Information for LOGO! System Manual, 05/2024

A5E53808149-AA | Original source pages 4 and 11-15

Use together with the complete LOGO! System Manual A5E33039675-AL and site-specific installation documentation.

Introduction

This product information describes revision and supplements to the LOGO! System Manual (A5E33039675-AL) in edition 06/2023:

- Revision of certification and approvals
- Supplement of LOGO! devices secure decommissioning
- Revision of LOGO! BM technical data
- Revision of LOGO! power modules order number

You can find LOGO! System Manual (A5E33039675-AL) in edition 06/2023 on Siemens Industry Online Support (<https://support.industry.siemens.com/cs/us/en/view/109826499>).

This product information applies to the following LOGO! devices:

Variant	Designation	Order number
LOGO! Basic (Base Module with display)	LOGO! 12/24RCE *	6ED1052-1MD08-0BA2
	LOGO! 24CE *	6ED1052-1CC08-0BA2
	LOGO! 24RCE (AC/DC)	6ED1052-1HB08-0BA2
	LOGO! 230RCE (AC/DC)	6ED1052-1FB08-0BA2
LOGO! Pure (Base Module without display)	LOGO! 12/24RCEo *	6ED1052-2MD08-0BA2
	LOGO! 24CEo *	6ED1052-2CC08-0BA2
	LOGO! 24RCEo (AC/DC)	6ED1052-2HB08-0BA2
	LOGO! 230RCEo (AC/DC)	6ED1052-2FB08-0BA2
Digital modules	LOGO! DM8 12/24R	6ED1055-1MB00-0BA2
	LOGO! DM8 24	6ED1055-1CB00-0BA2
	LOGO! DM8 24R	6ED1055-1HB00-0BA2
	LOGO! DM8 230R	6ED1055-1FB00-0BA2
	LOGO! DM16 24	6ED1055-1CB10-0BA2
	LOGO! DM16 24R	6ED1055-1NB10-0BA2
	LOGO! DM16 230R	6ED1055-1FB10-0BA2
Analog modules	LOGO! AM2	6ED1055-1MA00-0BA2
	LOGO! AM2 RTD	6ED1055-1MD00-0BA2
	LOGO! AM2 AQ (0...10V, 0/4...20mA)	6ED1055-1MM00-0BA2
Text Display module with Ethernet interfaces	LOGO! TDE	6ED1055-4MH08-0BA1

*: Also with analog inputs

Technical data

4.1 General technical data

Criterion	Tested in accordance with	Values
LOGO! Base Modules (0BA8) LOGO! Basic Dimensions (WxHxD) Weight - Modules with relay output - Modules with transistor output Installation		71.5 x 90 x 60 mm Approx. 240 g Approx. 195 g On a 35 mm profile rail four module widths or wall mounting
LOGO! Pure Dimensions (WxHxD) Weight - Modules with relay output - Modules with transistor output Installation		71.5 x 90 x 58 mm Approx. 200 g Approx. 160 g On a 35 mm profile rail four module widths or wall mounting
LOGO! expansion modules DM16... Dimensions (WxHxD) Weight - Modules with relay output - Modules with transistor output Installation		71.5 x 90 x 58 mm Approx. 225 g Approx. 165 g On a 35 mm profile rail four module widths or wall mounting
LOGO! expansion modules DM8... Dimensions (WxHxD) Weight - Modules with relay output - Modules with transistor output Installation		35.5 x 90 x 58 mm Approx. 130 g Approx. 95 g On a 35 mm profile rail two module widths or wall mounting
LOGO! expansion modules AM... Dimensions (WxHxD) Weight Installation		35.5 x 90 x 58 mm Approx. 95 g On a 35 mm profile rail two module widths or wall mounting
LOGO! TDE (Text Display with Ethernet interfaces) Dimensions (WxHxD) Weight Installation		128.2 x 86 x 38.7 mm Approx. 220 g Bracket mounting

4.1 General technical data

Criterion	Tested in accordance with	Values
Climatic conditions		
Ambient temperature for BM and EM - Horizontal installation - Vertical installation	Low temperature to IEC 60068-2-1 High temperature to IEC 60068-2-2	-20 °C to +55 °C ¹⁾ -20 °C to +55 °C
Ambient temperature for TDE - Horizontal installation - Vertical installation	Low temperature to IEC 60068-2-1 High temperature to IEC 60068-2-2	-20 °C to +55 °C ¹⁾ -20 °C to +55 °C
Storage and Transport		- 40 °C to +70 °C
Relative humidity	IEC 60068-2-30	From 10% to 95% no condensation
Atmospheric pressure, Altitude - Operation - Storage/transport		1080 to 795 hPa, corresponds to an elevation of -1000 m to 2000 m 1080 to 660 hPa, corresponds to an elevation of -1000 m to 3500 m
Altitude during operation		Up to 2000 m
Pollutants	IEC 60068-2-42 IEC 60068-2-43	SO ₂ 10 cm ³ /m ³ , 21 days H ₂ S 1 cm ³ /m ³ , 21 days
Pollution degree		2
Ambient mechanical conditions		
Degree of protection		- IP20 for LOGO! Base Modules, expansion modules, and the LOGO! TDE excluding the TDE front panel - IP65 for LOGO! TDE front panel
Enclosure type		- Type 1 for the front panel of LOGO! Base Modules and expansion modules - Type 4X/12 for LOGO! TDE front panel
Vibrations:	IEC 60068-2-6	5 Hz to 8.4 Hz (constant amplitude 3.5 mm) 8.4 Hz to 200 Hz (constant acceleration 1 g)
Shock	IEC 60068-2-27	half-sine wave 15 g/11 ms
Free fall (packaged)	IEC 60068-2-32	0.3 m
Electromagnetic compatibility (EMC)		
Radiated emission	EN 61000-6-3 EN 61000-6-4	Limit class B group 1 Limit class B
Electrostatic discharge	IEC 61000-4-2	±2 kV, ±4kV, ±8 kV air discharge ±6 kV contact discharge
Radiated electromagnetic field	IEC 61000-4-3	80 MHz-1000 MHz and 1.4 GHz-2.0 GHz 10V/m, 80% AM(1 kHz) 2.0 GHz-6.0 GHz 3V/m, 80% AM(1 kHz)

Criterion	Tested in accordance with	Values
Conducted disturbance	IEC 61000-4-6	150 KHz-80 MHz 10 V, 80%AM(1 kHz)
Fast transient bursts	IEC 61000-4-4	- For power port: 2 kV - For signal port: - Signal Lines<30 m: 1 kV/5 kHz and 100 kHz - Signal Lines>30 m: 2 kV/5 kHz and 100 kHz
Surge immunity (applies only to LOGO! 230 and DM8/16 230R)	IEC 61000-4-5	1 kV line-to-line 2 kV line-to-earth
Surge immunity (applies to low-voltage (12 V or 24 V) LOGO! modules)		With surge arrester (such as BVT AD 24): 1 kV line-to-line 2 kV line-to-earth Without surge arrester: 0.5 kV line-to-line 1 kV line-to-earth
Safety to IEC		
Clearance and creepage distance rating	IEC 60664, IEC 61131-2, cULus to UL 508, CSA C22.2 No. 142, IEC 60730	Fulfilled
Insulation strength	IEC 61131-2	Fulfilled
Cycle time		
Cycle time per function		< 0.1 ms
Startup		
Startup time at power-up		Typ. 1.6 s
Overvoltage		
Overvoltage category		- Category II: LOGO! 24CE, LOGO! DM8 24, LOGO! DM16 24, LOGO! AM2, LOGO! AM2 RTD, LOGO! AM2 AQ, LOGO! TDE - Category III: LOGO! 12/24RCE, LOGO! 24RCE (AC/DC), LOGO! 230RCE (AC/DC), LOGO! DM8 12/24R, LOGO! DM8 24R, LOGO! DM8 230R, LOGO! DM16 24R, LOGO! DM16 230R

¹⁾ The updating rate of LCD can be reduced at operating temperature less than 0°C.

Note

The maximum length for directly connecting two LOGO! Base Modules through CAT5e shielded network cable is 100 meters.

4.2 Technical data: LOGO! 230...

	LOGO! 230RCEo	LOGO! 230RCE
Power supply		
Input voltage	115 VAC/VDC to 240 VAC/VDC	115 VAC/VDC to 240 VAC/VDC
Permissible range	85 VAC to 265 VAC 100 VDC to 253 VDC	85 VAC to 265 VAC 100 VDC to 253 VDC
Input frequency	50/60 Hz	50/60 Hz
Permissible mains frequency	47 Hz to 63 Hz	47 Hz to 63 Hz
Power consumption		
• 115 VAC • 240 VAC • 115 VDC • 240 VDC	• 20 mA to 40 mA • 15 mA to 25 mA • 10 mA to 20 mA • 5 mA to 15 mA	• 20 mA to 40 mA • 15 mA to 25 mA • 10 mA to 20 mA • 5 mA to 15 mA
Voltage failure buffering		
• 115 VAC/VDC • 240 VAC/VDC	• Typ. 10 ms • Typ. 20 ms	• Typ. 10 ms • Typ. 20 ms
Power loss at		
• 115 VAC • 240 VAC • 115 VDC • 240 VDC	• 2.3 W to 4.6 W • 3.6 W to 6.0 W • 1.2 W to 2.3 W • 1.2 W to 3.6 W	• 2.3 W to 4.6 W • 3.6 W to 6.0 W • 1.2 W to 2.3 W • 1.2 W to 3.6 W
Backup of the real-time clock at 25 °C	Typ. 20 days	Typ. 20 days
Accuracy of the real-time clock	Typ. ± 2 s/day	Typ. ± 2 s/day
Digital inputs		
Number	8	8
Electrical isolation	No	No
Number of high speed inputs	0	0
Input frequency		
• Normal input • High speed input	• Max. 4 Hz • - -	• Max. 4 Hz • - -
Digital input	115 to 240 VAC/DC, 50/60 Hz	115 to 240 VAC/DC, 50/60 Hz
Max. continuous permissible voltage	265 VAC 253 VDC	265 VAC 253 VDC
Input voltage L1		
• Signal 0 • Signal 1 • Signal 0 • Signal 1	• < 40 VAC • > 79 VAC • < 30 VDC • > 79 VDC	• < 40 VAC • > 79 VAC • < 30 VDC • > 79 VDC

	LOGO! 230RCEo	LOGO! 230RCE
Input current at		
• Signal 0	• < 0.05 mA AC	• < 0.05 mA AC
• Signal 1	• > 0.08 mA AC	• > 0.08 mA AC
• Signal 0	• < 0.06 mA DC	• < 0.06 mA DC
• Signal 1	• > 0.13 mA DC	• > 0.13 mA DC
Delay time at 0 to 1:		
• 120 VAC	• Typ. 40 ms	• Typ. 40 ms
• 240 VAC	• Typ. 30 ms	• Typ. 30 ms
• 120 VDC	• Typ. 25 ms	• Typ. 25 ms
• 240 VDC	• Typ. 20 ms	• Typ. 20 ms
Delay time at 1 to 0:		
• 120 VAC	• Typ. 45 ms	• Typ. 45 ms
• 240 VAC	• Typ. 70 ms	• Typ. 70 ms
• 120 VDC	• Typ. 60 ms	• Typ. 60 ms
• 240 VDC	• Typ. 75 ms	• Typ. 75 ms
Line length (unshielded)	max. 100 m	max. 100 m
Digital outputs		
Number	4	4
Output type	Relay outputs	Relay outputs
Electrical isolation	Yes	Yes
In groups of	1	1
Control of a digital input	Yes	Yes
Continuous current I_{th}	Recommended range of application ≥ 100 mA at 12 VAC/VDC Max. 10 A per relay	Recommended range of application ≥ 100 mA at 12 VAC/VDC Max. 10 A per relay
Relay rated voltage	240 VAC/VDC	240 VAC/VDC
Surge current Incandescent lamp load (25000 switching cycles) at	Max. 30 A	Max. 30 A
• 230/240 VAC	• 1000 W	• 1000 W
• 115/120 VAC	• 500 W	• 500 W
Fluorescent tubes with ballast (25000 switching cycles)	10 x 58 W (at 230/240 VAC)	10 x 58 W (at 230/240 VAC)
Fluorescent tubes, conventionally compensated (25000 switching cycles)	1 x 58 W (at 230/240 VAC)	1 x 58 W (at 230/240 VAC)
Fluorescent tubes, uncompensated (25000 switching cycles)	10 x 58 W (at 230/240 VAC)	10 x 58 W (at 230/240 VAC)
Short circuit-proof cos 1	Power protection B16, 600 A	Power protection B16, 600 A
Short circuit-proof cos 0.5 to 0.7	Power protection B16, 900 A	Power protection B16, 900 A
Derating	None; across the entire temperature range	None; across the entire temperature range
Parallel output circuits for power increase	Not permitted	Not permitted