

OFFICIAL DOCUMENT PACKAGE

Manufacturer's Manual

Amikon cover with selected official Siemens technical pages

SIEMENS LOGO! PURE

6ED1052-2MD08-0BA2

LOGO! 12/24RCEo BASIC MODULE WITHOUT DISPLAY

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

OFFICIAL SOURCE

Siemens LOGO! System Manual and Product Information supplement

A5E53808149-AA pp. 4, 11-13 | A5E33039675-AL pp. 357-359

Use the LOGO! 12/24RCEo column for electrical ratings. Adjacent expansion-module columns are retained as part of the original source pages.

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 * LOGO! 24CE * LOGO! 24RCE (AC/DC) LOGO! 230RCE (AC/DC)	6ED1052-1MD08-0BA2 6ED1052-1CC08-0BA2 6ED1052-1HB08-0BA2 6ED1052-1FB08-0BA2
LOGO! Pure (Base Module without display)	LOGO! 12/24RCEo * LOGO! 24CEo * LOGO! 24RCEo (AC/DC) LOGO! 230RCEo (AC/DC)	6ED1052-2MD08-0BA2 6ED1052-2CC08-0BA2 6ED1052-2HB08-0BA2 6ED1052-2FB08-0BA2
Digital modules	LOGO! DM8 12/24R LOGO! DM8 24 LOGO! DM8 24R LOGO! DM8 230R LOGO! DM16 24 LOGO! DM16 24R LOGO! DM16 230R	6ED1055-1MB00-0BA2 6ED1055-1CB00-0BA2 6ED1055-1HB00-0BA2 6ED1055-1FB00-0BA2 6ED1055-1CB10-0BA2 6ED1055-1NB10-0BA2 6ED1055-1FB10-0BA2
Analog modules	LOGO! AM2 LOGO! AM2 RTD LOGO! AM2 AQ (0...10V, 0/4...20mA)	6ED1055-1MA00-0BA2 6ED1055-1MD00-0BA2 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.

	LOGO! DM8 24R	LOGO! DM16 24R
Incandescent lamp load (25000 switching cycles) at	1000 W	1000 W
Fluorescent tubes with ballast (25000 switching cycles)	10 x 58 W	10 x 58 W
Fluorescent tubes, conventionally compensated (25000 switching cycles)	1 x 58 W	1 x 58 W
Fluorescent tubes, uncompensated (25000 switching cycles)	10 x 58 W	10 x 58 W
Derating	None; across the entire temperature range	None; across the entire temperature range
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
Parallel output circuits for power increase	Not permitted	Not permitted
Protection of output relay (if desired)	Max. 16 A, characteristic B16	Max. 16 A, characteristic B16
Line length (unshielded)	Max. 100 m	Max. 100 m
Switching rate		
Mechanical	10 Hz	10 Hz
Ohmic load/lamp load	2 Hz	2 Hz
Inductive load	0.5 Hz	0.5 Hz

Notice: For fluorescent lamps with capacitors, you must consider the technical data of fluorescent lamp ballasts. If the current exceeds the maximum allowed surge current, appropriate contactor relays must switch the fluorescent lamps.

The data was determined with the following devices:

- Siemens fluorescent tubes 58 W VVG 5LZ 583 3-1 uncompensated.
- Siemens fluorescent tubes 58 W VVG 5LZ 583 3-1 parallel compensated with 7 µF.
- Siemens fluorescent tubes 58 W VVG 5LZ 501 1-1N with ballast.

A.8 Technical data: LOGO! 12/24... LOGO! DM8 12/24R

	LOGO! 12/24RCEo LOGO! 12/24RCE	LOGO! DM8 12/24R
Power supply		
Input voltage	12/24 VDC	12/24 VDC
Permissible range	10.8 VDC to 28.8 VDC	10.8 VDC to 28.8 VDC
Reverse polarity protection	Yes	Yes
Power consumption	• 12 VDC • 24 VDC	• 20 mA to 90 mA • 15 mA to 50 mA

	LOGO! 12/24RCEo LOGO! 12/24RCE	LOGO! DM8 12/24R
Voltage failure buffering		
12 VDC 24 VDC	- Typ. 2 ms - Typ. 5 ms	- Typ. 2 ms - Typ. 5 ms
Power loss		
12 VDC 24 VDC	0.6 W to 2.0 W 0.6 W to 2.2 W	0.2 W to 1.1 W 0.4 W to 1.2 W
Backup of the real-time clock at 25 °C	Typ. 20 days	--
Accuracy of the real-time clock	Typ. ± 2 s/day	--
Electrical isolation	No	No
Digital inputs		
Number	8	4
Electrical isolation	No	No
Number of high speed inputs	4 (I3, I4, I5, I6)	0
Input frequency		
- Normal input - High speed input	- Max. 4 Hz - Max. 5 kHz	- Max. 4 Hz --
Max. continuous permissible voltage	28.8 VDC	28.8 VDC
Input voltage L+		
- Signal 0 - Signal 1	< 5 VDC > 8.5 VDC	< 5 VDC > 8.5 VDC
Input current at		
- Signal 0 - Signal 1	< 0.88 mA (I3 to I6) < 0.07 mA (I1, I2, I7, I8) > 1.5 mA (I3 to I6) > 0.12 mA (I1, I2, I7, I8)	< 0.88 mA > 1.5 mA
Delay time at		
0 to 1 1 to 0	- Typ. 1.5 ms <1.0 ms (I3 to I6) - Typ. 1.5 ms <1.0 ms (I3 to I6)	- Typ. 1.5 ms - Typ. 1.5 ms
Line length (unshielded)	Max. 100 m	Max. 100 m
Analog inputs		
Number	4 (I1=AI3, I2=AI4, I7=AI1, I8=AI2)	--
Range	0 VDC to 10 VDC Input impedance 80 k Ω	--
Cycle time for analog value generation	300 ms	--
Line length (shielded and twisted)	Max. 10 m	--
Error limit	$\pm 1.5\%$ at FS	--
Digital outputs		
Number	4	4

	LOGO! 12/24RCEo LOGO! 12/24RCE	LOGO! DM8 12/24R
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} (per terminal)	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. 5 A per relay
Relay rated voltage	240 VAC/VDC	240 VAC/VDC
Surge current	Max. 30 A	Max. 30 A
Incandescent lamp load (25000 switching cycles) at	1000 W	1000 W
Fluorescent tubes with ballast (25000 switching cycles)	10 x 58 W	10 x 58 W
Fluorescent tubes, conventionally compensated (25000 switching cycles)	1 x 58 W	1 x 58 W
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