

OFFICIAL DOCUMENT PACKAGE

Manufacturer's Manual

Amikon cover with selected official Siemens technical pages

SIEMENS LOGO! 230RCE STARTER KIT

6ED1057-3BA03-0AA8

LOGO! 230RCE V8.3 STARTER KIT

Selected official pages retain the original technical tables, ratings, notes and pagination.

OFFICIAL SOURCE

Siemens LOGO! A5E33039675-AK, 07/2022; official kit catalog

Included 230RCE: original pages 22 and 326-328

This technical extract does not replace the complete equipment and system manuals. Check the installed hardware and project before use.

Symbols

	Version with display unit is equipped with 8 inputs, 4 outputs and 1 Ethernet interface.
	Version without display unit is equipped with 8 inputs, 4 outputs and 1 Ethernet interface.
	The digital module is equipped with 4 digital inputs and 4 digital outputs.
	The digital module is equipped with 8 digital inputs and 8 digital outputs.
	The analog module is equipped with 2 analog inputs or 2 analog outputs, according to the device type.
	The LOGO! TDE module is equipped with 2 Ethernet interfaces.

Versions

The following LOGO! versions are available:

Symbol	Designation	Supply voltage	Inputs	Outputs	Properties
	LOGO! 12/24RCE	12/24VDC	8 digital ¹⁾	4 relays (10 A)	
	LOGO! 230RCE	115 VAC/VDC to 240 VAC/VDC	8 digital	4 relays (10 A)	
	LOGO! 24CE	24 VDC	8 digital ¹⁾	4 solid state 24 V/0.3 A	
	LOGO! 24RCE ³⁾	24 VAC/VDC	8 digital	4 relays (10 A)	
	LOGO! 12/24RCEo	12/24 VDC	8 digital ¹⁾	4 relays (10 A)	no display unit no keyboard
	LOGO! 24CEo	24 VDC	8 digital ¹⁾	4 solid state 24 V/0.3 A	no display unit no keyboard
	LOGO! 24RCEo ³⁾	24 VAC/VDC	8 digital	4 relays (10 A)	no display unit no keyboard
	LOGO! 230RCEo ²⁾	115 VAC/VDC to 240 VAC/VDC	8 digital	4 relays (10 A)	no display unit no keyboard

¹⁾ Of those can be used alternatively: 4 analog inputs (0 V to 10 V) and 4 fast digital inputs.

²⁾ 230 VAC versions: Two groups consisting of 4 inputs each. Each input within a group must be connected to the same phase. It is possible to interconnect groups with a different phase.

³⁾ The digital inputs can be operated with P or N action.

Criterion	Tested in accordance with	Values
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	Fulfilled
Insulation strength	IEC 61131-2	Fulfilled
Cycle time		
Cycle time per function		< 0.1 ms
Startup		
Startup time at power-up		Typ. 1.2 s

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.

A.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
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

	LOGO! 230RCEo	LOGO! 230RCE
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 --
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
Input current at		
- Signal 0 - Signal 1 - Signal 0 - Signal 1	< 0.05 mA AC > 0.08 mA AC < 0.06 mA DC > 0.13 mA DC	< 0.05 mA AC > 0.08 mA AC < 0.06 mA DC > 0.13 mA DC
Delay time at 0 to 1:		
120 VAC 240 VAC 120 VDC 240 VDC	- Typ. 40 ms - Typ. 30 ms - Typ. 25 ms - Typ. 20 ms	- Typ. 40 ms - Typ. 30 ms - Typ. 25 ms - Typ. 20 ms
Delay time at 1 to 0:		
120 VAC 240 VAC 120 VDC 240 VDC	- Typ. 45 ms - Typ. 70 ms - Typ. 60 ms - Typ. 75 ms	- Typ. 45 ms - Typ. 70 ms - Typ. 60 ms - Typ. 75 ms
Line length (unshielded)	max. 100 m	max. 100 m

	LOGO! 230RCEo	LOGO! 230RCE
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 115/120 VAC	1000 W 500 W	1000 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
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 μ F.
- Siemens fluorescent tubes 58 W VVG 5LZ 501 1-1N with ballast.