

Zelio-Logic™ Relays SR1

Catalog

03

File 8501



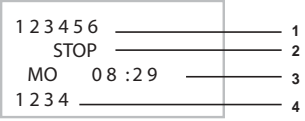
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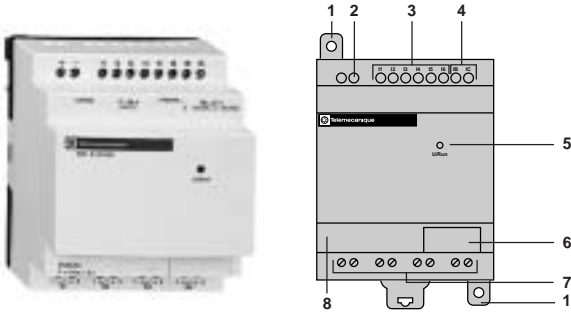
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The Zelio-Logic™ relay is more than a typical relay. It will accept inputs, and has relay outputs like a programmable controller, but can not be connected to a network. Because it has timers, counters and clocks that can be programmed, this product is ideal for applications where a typical relay, timer or time clock isn't enough, but a PLC is not justified.

- The Zelio-Logic™ relay is designed for use in small automated systems.
- It can be used in industrial and commercial applications.
- Its small size and ease of programming provides a competitive alternative to traditional relays, timers and counters.
- Zelio-Logic™ relays with four outputs will accept a 60 line program.
- Zelio-Logic™ relays with eight outputs will accept a 80 line program.
- Programming in Zelio-Soft™ can be done in ladder logic, electrical symbols or Zelio symbols.
- The ease of programming, ensured by the universality of the contact language, meets all automation requirements and also the needs of the electrician.
- The versions without display or buttons provide not only a competitively priced solution, but also the confidentiality of the program (blind version).
- Programming can be carried out:
 - independently, using the buttons on some smart relays,
 - on a PC, using "Zelio Soft™" software,
 - on a Pocket PC, using "Zelio Soft™ Pocket PC" software.

Description	Main Zelio-Logic™ Screen
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SR1A, SR1B	
<ol style="list-style-type: none"> 1. Retractable mounting feet 2. Power supply terminals 3. LCD display (4 lines, 12 characters) 4. Screw terminal input connection 5. Input terminals (0-10 V analog or 24 Vdc discrete) 6. Delete or Cancellation button 7. Insert a new line button 8. Navigational keys or Input keys in RUN mode 9. Selection or validation button 10. Escape button 11. Slot for memory back-up EEPROM cartridge or cable connection for down loading or uploading of programs. 12. Screw terminal relay output connections 13. Marking area 	<ol style="list-style-type: none"> 1. Status of inputs 2. RUN or STOP mode indication 3. Indication of a parameter (day and time is default for relays with a clock) 4. Status of outputs 











SR1D, SR1E	
<ol style="list-style-type: none"> 1. Retractable mounting feet 2. Power supply terminals 3. Screw terminal input connections 4. Input terminals (0-10 V analog or 0-10 V discrete) only applicable to SR1-E 5. U/RUN: operating LED Steady : power on, Stop mode, Flashing : Run mode Fast flashing : relay fault 6. Slot for memory back-up EEPROM cartridge or cable connection for down loading or uploading of programs 7. Screw terminal relay output connections 8. Marking area 	

Back-up memory

- Allows a program to be copied into another smart relay (examples: for building identical equipment, remote transmission of updates).
- The memory also allows a back-up copy of the program to be saved prior to exchanging the product.
- When used with a smart relay without display or buttons, the copy of the program contained in the cartridge is automatically transferred into the smart relay at power-up.

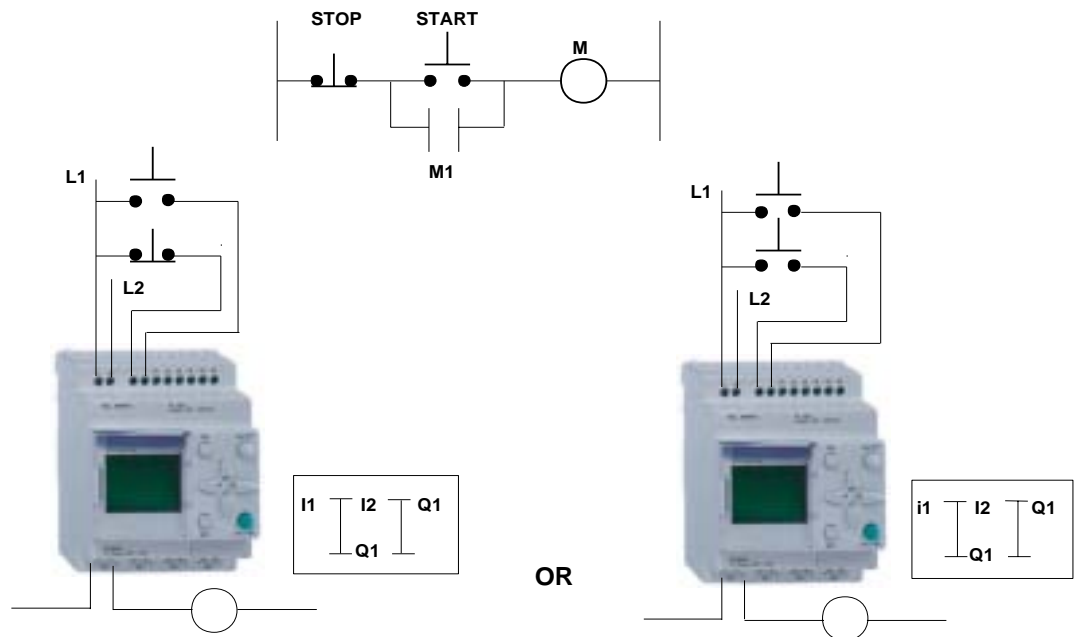
The dc relays have a fast input function "FILT". This function allows faster detection of changes in state of the inputs. This mode should only be used when necessary as it makes the relay inputs more sensitive to interference and contact bounce. A "Fast" or "Slow" choice is available.

Zelio-Logic™ Relay Overview

Function	Electrical Scheme	Ladder Language	Zelio Relay Symbol	Notes
Contact	N.O. SPSTNO 		Ix ▲	I corresponds to the real image of the contact connected to the input of the module.
	N.C. SPSTNC 		ix ▲	i corresponds to the reversed image of the contact connected to the input of the module.
Standard Coil			Qx	The coil is energized when the contacts to which it is connected are closed.
Latch Coil (Set)			SQ	The coil is energized when the contacts to which it is connected are closed. It remains energized when the contacts re-open.
Unlatch Coil (Reset)			RQ	The coil is de-energized when the contacts to which it is connected are closed. It remains inactive when the contacts re-open.

▲ ix will work the inverse of Ix.

Example:



Ten Timers (provided as standard in all relays)

Each timer function can be programmed to function in one of the following eight modes:

	On-Delay
	On-Delay (with momentary input)
	Off-Delay
	One Shot
	One Shot (when input is removed)
	Repeat Cycle (with maintained input)
	Repeat Cycle (with momentary input)
	Totalizing Timer with Reset

Each timer function has a preset time in one of four timing ranges:

00.00 s (1/100 of a second)	Maximum of 99.99 seconds
000.0 s (1/10 of a second)	Maximum of 999.9 seconds (16.665 minutes)
00:00 M:S (Minutes: Seconds)	Maximum of 99:59
00:00 H:M (Hours: Minutes)	Maximum of 99:59

The time setting on each timer can be locked. A password is required to unlock the timer.

Ten Counters (provided as standard in all relays)

Count up and/or count down.

Each counter function can have a preset value of 0000 to 9999.

The counter setting on each counter can be locked. A password is required to unlock the counter.

For more information on these timers and counters, refer to the User's Manual #SR1MAN01EN.

Zelio-Logic™ Relay

Overview of Functions

⊕1	TU	22	49
ABCD	M0→SA		
▲	ON	09:00	
■	OFF	13:00	

Some Versions Come With Four 24 Hour - 7 Day Clocks:

On each clock you can set:

Example:

- Start Day (Sunday or Monday)
- End Day (Friday or Saturday)
- Start Time Each Day (08:30 or 9:15)
- End Time Each Day (4:57 or 5:30)

The clock settings on each clock can be locked. A password is required to unlock the clock.

Fifteen Internal Relay Functions (provided as standard in all relays)

- Each internal relay can have multiple contacts that can be used elsewhere in the program.
- Each relay can be either a standard relay, a latching relay, or an unlatching relay.
- The internal relays do not have connection points that could be used to control external loads.
- These relays give much more freedom in programming.

Arrow Keys (4) on the Front of the Relay can be used as Inputs

- They can be used as push buttons in the program.

Some of the 12 Vdc or 24 Vdc Versions have Analog Inputs

- Analog inputs are only available on some 24 Vdc devices.
- They can accept input values 0 through 10 V.

The following seven functions can be performed on the analog inputs:



Can be Used as Inputs

Type of Function	Description
$I B \leq R e f$ A1 Analog 1 Ref = 4.9 V	Contact A1 is closed when the value of analog input IB does not exceed the reference voltage entered in the reference field, 4.9 V in this example.
$I B \geq R e f$ A1 Analog 2 Ref = 4.9 V	Contact A1 is closed when the value of analog input IB equals or exceeds the reference voltage entered in the reference field, 4.9 V in this example.
$I C \leq R e f$ A1 Analog 3 Ref = 4.9 V	Contact A1 is closed when the value of analog input IC does not exceed the reference voltage entered in the reference field, 4.9 V in this example.
$I C \geq R e f$ A1 Analog 4 Ref = 4.9 V	Contact A1 is closed when the value of analog input IC equals or exceeds the reference voltage entered in the reference field, 4.9 V in this example.
$I B \leq I C$ A1 Analog 5	Contact A1 is closed when the value of analog input IB does not exceed the value of analog input IC.
$I B \geq I C$ A1 Analog 6	Contact A1 is closed when the value of analog input IB equals or exceeds the value of analog input IC.
$I C - H \leq I B \leq I C + H$ A1 Analog 7 H = 4.9 V	Contact A1 is closed when the value of analog input IB is between IC-H and IC+H. H (the hysteresis) is entered in the H field, 4.9 V in this example.

Text messages can be entered using the Zelio-Soft™ software and then displayed on the relay.

“ZELIO-SOFT™”: SOFTWARE

“Zelio-Soft™” software enables:

- the entering of control wiring diagrams
- the monitoring of applications, using its test feature
- the programming of messages for display on the “Zelio-Logic™”
- simplification of setting-up

Input Modes for Control Wiring Diagrams

The “Zelio input” mode enables the user to program the Zelio Relay via software using the same key strokes as used on the face of the Zelio Relay.

The “free input” mode, which is more intuitive, is very user friendly and incorporates several additional features.

Using Zelio-Soft™ in “free mode” enables the user to select their preferred symbol language from the following 3 alternatives:

- Zelio symbols
- Ladder symbols
- Electrical symbols

The “free input” mode also enables the creation of notes associated to each line of the program.

Instant switching between one input mode and another is obtained by clicking the mouse.

Basic Programming Error Check and Applicable Language

The basic programming error check feature of Zelio-Soft™ monitors the applications and an input error will turn the tool bar eye red. A mouse click on the eye will locate the problem.

At any time, Zelio-Soft™ can be switched between 6 applicable languages (English, French, German, Italian, Portuguese and Spanish) including the editing of the application file. It also enables selection of the representation mode (Zelio, Ladder or electrical) for editing the file.

Inputting Messages for Display on Zelio-Logic™

Zelio-Soft™ allows 4 Text function blocks to be configured, corresponding to 4 screens of 4 lines x 12 characters, which can be displayed on all the relays. These screens are activated in the same manner as a coil in the control scheme. It is then possible to display messages as text only or to associate them with 1 or 2 variables, the latter being current values, and/or setting of function blocks used in the program.

Set-Up Simulation

The Zelio-Soft™ simulator enables testing of all the programs, i.e.:

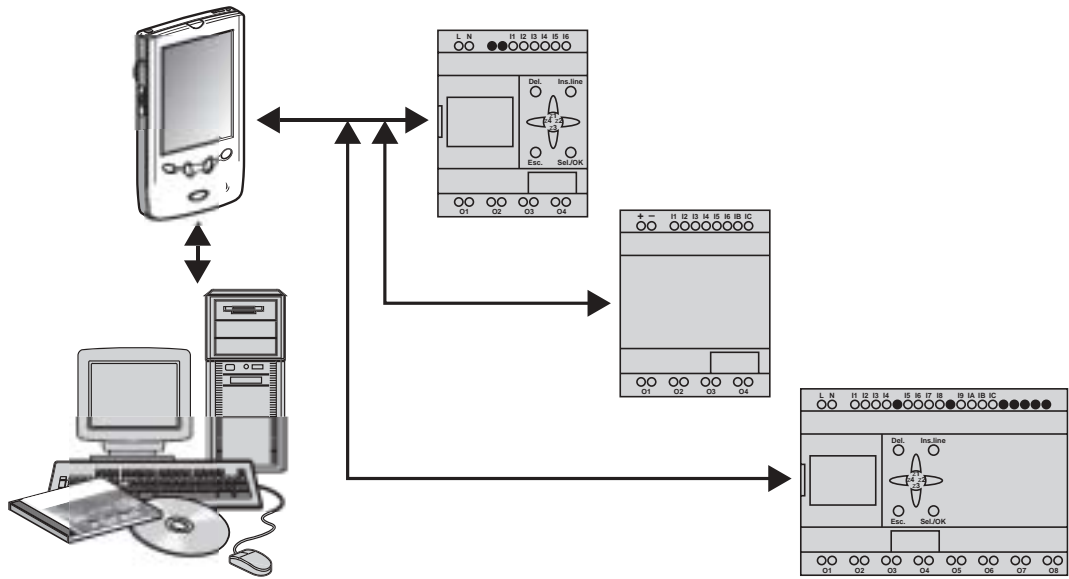
- activating the discrete inputs and their N.O. or N.C. contact modes (momentary or maintained)
- indicating the output states
- varying the voltage of the analog inputs IB and IC
- activating the pushbuttons
- simulating the application program in real time and accelerated time
- dynamically indicating in red the various active elements of the program



Zelio-Logic™ Relay

Overview of Functions

Zelio Soft™ Software for Pocket PC



The Pocket PC allows:

- full entry of control schemes, including the messages to be displayed on the smart relay screen (text blocks)
- transfer of programs created with Zelio Soft™ on a PC to the Pocket PC and vice versa
- transfer of programs created on a PC or on a Pocket PC to any smart module in the range and vice versa, as well as debugging of programs while connected or not connected to the smart relay

The Pocket PC therefore avoids having to move the PC or smart relays for transfer and debugging of applications. It is particularly useful for setting up smart relays which do not have a display or buttons.

Recommended Pocket PCs (1):

- Hewlett Packard "Jornada 525 or 545", available under Telemecanique reference VW3-A8103pp
- Hewlett Packard "Jornada 545 and 548", to be ordered directly from an HP dealer
- Compaq "Ipaq" 3630, to be ordered directly from a Compaq dealer
- Casio Casiopeia EM 505, to be ordered directly from a Casio dealer



Input of a Control Screen

Zelio Soft™ for Pocket PC

Includes virtually all the functions of Zelio Soft™ software for PC:

- inputting of control schemes in free input mode in a choice of 3 languages
- Zelio, Ladder or electrical symbols - with associated comments
- program coherence test
- inputting of text function blocks (text only or text + variables)
- supervision of programs (2) with:
 - "on line" display of the program and current values of function blocks
 - forcing of inputs, outputs, control relays and function block values
 - adjustment of parameters, date and time
 - switching from Stop to Run mode



Program Test with Smart Relay Connected Supervision Mode

The software can be quickly installed in the Pocket PC, via a PC, using a special installation CD (ref: SR1-SFT02).

Exchange of files between the Pocket PC and PC is achieved by means of the Active Sync software (version V3.1 or greater) supplied with the Pocket PC.

After the software has been installed, the Pocket PC can be used independently, as the only programming and adjustment tool for Zelio Logic smart.




Configuration of a Time Delay Function Block

(1) Likely to change as Pocket PC manufacturers develop their ranges. Please consult your usual supplier.

(2) Only with module versions greater than or equal to V1.7.

Environmental Characteristics

Product Certifications		 File E164866 File E164866 CSA File LR203359 CE	CCN NRAQ CNN NRAQ7 Guide 2252 01 C-Tick, GL
Degree of Protection		IP 20	
Temperature	Operation	32 °F to 131°F (0 °C to 55 °C) conforming to IEC 60068-2-1 and 60068-2-2	
	Storage	-13 °F to 158 °F (-25 °C to 70 °C) conforming to IEC 61131-2	
Maximum Relative Humidity		95% without condensation or dripping water	
Altitude		0 to 6500 ft (0 to 2000 m)	
Mechanical Resistance	Immunity to vibration	Conforming to standard IEC 60068-2-6, test Fc	
	Immunity to mechanical shock	Conforming to standard IEC 60068-2-27, test Ea	
Resistance to Electrostatic Discharges	Immunity to electrostatic discharges	Conforming to standard IEC 61000-4-2, level 3 ▼	
Resistance to HF Interference	Immunity to electromagnetic radiated fields	Conforming to standard IEC 61000-4-3, level 3 ▼	
	Immunity to rapid, pulsed, transients	Conforming to standard IEC 61000-4-4, level 3 ▼	
	Immunity to surges	Conforming to standard IEC 61000-4-5	
	Immunity to damped oscillatory waves	Conforming to standard IEC 61000-4-12	

Supply Characteristics Vdc

Smart Relay Type	SR1-		B121JD	A101BD B121BD	A201BD B201BD	B122BD
Primary	Nominal voltage	V	12	24		
Voltage limits	Including ripple	V	10.4...14.4	19.2...30		
Nominal input current		mA	105	83	130	45
Heat dissipation		W	1.3	1.6	2.9	1.1
Hold up time (loss of power)	Acceptable duration		≤ 1 ms, repeated 20 times			
Protection			Against polarity inversion			

Supply Characteristics Vac

Smart Relay Type	SR1-		B101B	B201B	A101FU B101FU	A201FU B201FU
Primary	Nominal voltage	V	24		100...240	
Voltage limits	Including ripple	V	20.4...26.4		85...264	
Nominal frequency		Hz	50-60 (47...63)			
Nominal input current		mA	80	130	100 Vac ≤ 50 240 Vac ≤ 27	100 Vac ≤ 80 240 Vac ≤ 40
Heat dissipation		W	3	5	3	5.3
Hold up time (loss of power)	Acceptable duration		≤ 10 ms, repeated 20 times			
Isolation	Primary / ground	V	2000 (50-60 Hz)			

Discrete 24 Vdc Input Characteristics

Smart Relay Type			SR1-ppppBD	SR1-ppppJD	SR1-pppBD	SR1-pppJD	
	Input		I1 to IA		IB and IC		
Connection			Screw terminals		Screw terminals		
Nominal value of inputs	Voltage	V	24	12	24	12	
	Current	mA	3	3	0.62	0.21	
Input switching limit values	State 1	Voltage	V	≥ 15	≥ 6.5	≥ 9.9	≥ 9.9
		Current	mA	> 1.8	> 1.6	0.16	0.16
	State 0	Voltage	V	< 5	< 6.2	< 5	< 5
		Current	mA	< 0.5	< 1.5	0.08	0.08
Input impedance at state 1		k Ω	8	4	38	57	
Configurable response time	State 0 to 1	ms	0.3 (fast)...3 (slow)		3 (not configurable)		
	State 1 to 0	ms	0.5 (fast)...5 (slow)		5 (not configurable)		
Conformity to IEC 1131-2			Yes, Type 1		No		
Sensor compatibility	3-wire		Yes PNP (only)		Yes		
	2-wire		No		No		
Type of input			Resistive				
Isolation	Between supply and inputs		None				
	Between inputs		None				
Maximum counting frequency		Hz	60				

▼ Minimum level under test conditions defined by the standards.

Zelio-Logic™ Relay

Application Data

AC Input Characteristics

Smart Relay Type			SR1-pp01FU	SR1-pp01B
Connection			Screw terminals	Screw terminals
Nominal value of inputs	Voltage	V	100...240	24
	Current	mA	0.65 (U = 115 V) 1.3 (U = 240 V)	3 (U = 24 V)
	Frequency	Hz	47...63	47...63
Input switching limit values	At state 1	Voltage	V	≥ 79
		Current	mA	≥ 0.4 (U = 240 V)
	At state 0	Voltage	V	< 40
		Current	mA	< 0.3
Response time	State 0 to 1	50/60 Hz	ms	45...50 (U = 110 V), 85...90 (U = 240 V)
	State 1 to 0	50/60 Hz	ms	45...50 (U = 110 V), 18...22 (U = 240 V)
Isolation	Between supply and inputs		None	None
	Between inputs		None	None
Maximum counting frequency			Hz	10

Integral Analog Input Characteristics

Smart Relay Type			SR1-BpppBD	SR1-B121JD	
Analog inputs	Number of channels		2		
	Voltage range of input		V		
	Input impedance		k Ω		
	Maximum non destructive voltage		V	± 30	
Conversion	Resolution		8 bits		
	Conversion time		Relay cycle time		
	Precision	@ 25 °C		± 1.6% of the full range	
		@ 60 °C		± 2.9% of the full range	
		@ 55 °C		< 0.1% of the full range	
Repeat accuracy					
Isolation	Between analog channel & supply		V	None	
Wiring distance			m	10 m maximum with shielded cable (sensor not isolated)	

Relay Output Characteristics (Screw Terminal Connections) (1)

Smart Relay Type			SR1-B121JD, SR1-p1p1BD, SR1-p101FU, SR1-p101B	SR1-p201BD, SR1-p201FU, SR1-p201B
Number of Outputs			Without common potential	4
Operating Limit Values			5-150 Vdc, 24-250 Vac	
Contact Type			N.O.	
Thermal Current			8 A	
Electrical Durability for 500,000 Operating Cycles	Utilization category	DC-12	24 Vdc	
			1.5 A	
		DC-13	24 Vdc L/R = 10 ms	
			0.6 A	
		AC-12	230 Vac	
			1.5 A	
AC-15	230 Vac			
	0.9 A			
Minimum Switching Capacity			At 5 V minimum voltage	
Low Power Switching Reliability of Contact			10 mA	
Maximum Operating Rate			17 V - 5 mA	
Mechanical Life			Failure rate for 100 million operating cycles: 1	
Rated Impulse Withstand Voltage			No-load	
Response Time			At le	
Incorporated Protection			10 Hz	
Connection to screw terminals (Tightened using Ø 3.5 screwdriver)			0.5 Hz	
Tightening torque			In millions of operating cycles	
Flex cable with cable end			10	
Semi-rigid cable			2.5 kV	
Rigid cable			Conforming to IEC 60947-1	
Tightening torque			2.5 kV	
Flex cable with cable end			mm²	
Semi-rigid cable			mm²	
Rigid cable			mm²	
Tightening torque			N•m	

Transistor Output Characteristics (screw terminal connections)

Smart Relay Type			SR1-B122BD
Number of outputs	With positive polarity common potential		4 (PNP)
Operating limit values		V	19.2...30
Loads	Nominal voltage	V	24 Vdc
	Nominal current	A	0.5
	Maximum current	A	0.625 at 30 V
Drop out voltage	At state 1	V	≤ 2 for I = 0.5 A
Response time	Trip	ms	≤ 1
	Reset	ms	≤ 1
Built-in protection			Against overload and short-circuits Against overvoltage (2) Against inversions of power supply

- (1) Characteristics at 55 °C for 60 % loading of inputs/outputs or at 45 °C for 100 % loading of inputs/outputs.
 (2) If there is no volt-free contact between the relay output and the load.

Processing Characteristics

Smart Relay Type	SR1		A1pppp, B1pppp	A2pppp, B2pppp
Number of control scheme lines			60	80
Maximum cycle time		ms	6	8
Response time (2)		ms	12 to 24 (SR1-B121JD and p1ppBD) 20 to 40 (SR1-p101FU and p101B)	14 to 26 (SR1-p201BD) 22 to 42 (SR1-p201FU and p201B)
Back-up time in case of power failure	Day/time	h	≥ 150 at 40 °C only applicable to SR1-B and SR1-E (4)	
	Program and adjustments		For life, internal EEPROM	
	Current values and states (3)		For life, internal EEPROM on smart relays SR1B/SR1E only (4)	
Program memory checking			At each power-up	
Clock drift		s	y 6 per month	
Time delay block accuracy			± 12 ms ± 0.5 % of the time displayed	

- (1) Minimum level under test conditions defined by the standards.
 (2) Time between change of state of an input and change of state of an output directly linked by the program in the same cycle
 (3) The values and states to be saved must be configured in the remanence menu (retains last known value of timers, counters, latching relays, and internal logic relays).
 (4) As from product version V1.7.

Zelio Soft™ Software for the PC

	SR1-	Apppp	Bp01B	Bpp1BD	Bp01FU	B122BD	B121JD	Dpppp	Epppp
Zelio Soft™	Version 1.2	Yes	No	Yes (3)	Yes (3)	No	No	No	No
	Version 1.3	Yes	No	Yes (5)	Yes (5)	Yes (5)	No	No	No
	Version 1.4	Yes	No	Yes (5)	Yes (5)	Yes (5)	No	Yes	Yes (5)
	≥ Version 1.5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

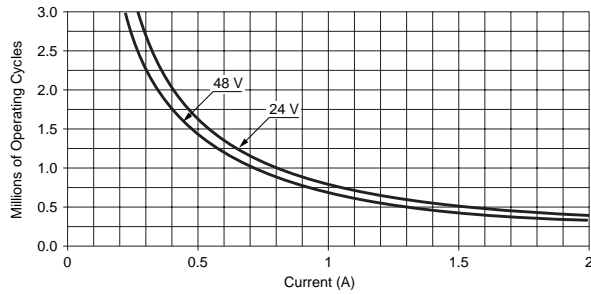
- (3) Only for earlier version smart relays V1.1 and V1.2.
 (5) Only for smart relay versions V1.1, V1.2, V1.5 and V1.6.

OPERATING CURVES

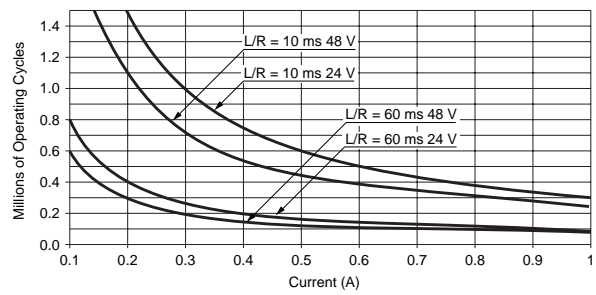
Electrical Durability (in millions of operating cycles) (conforming to IEC 60947-5-1) ♣

DC Loads

DC-12 (1) ♣

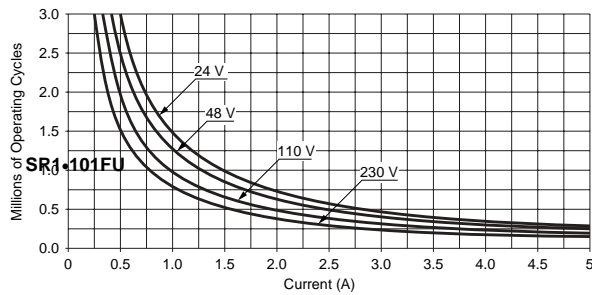


DC-13 (2) ♣

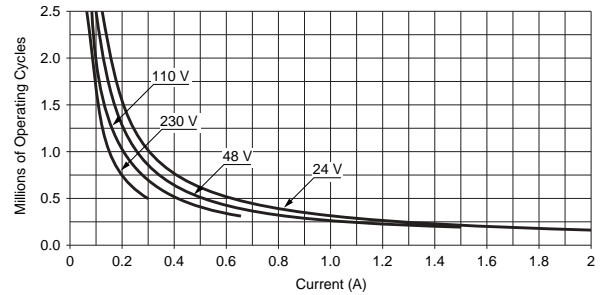


AC Loads

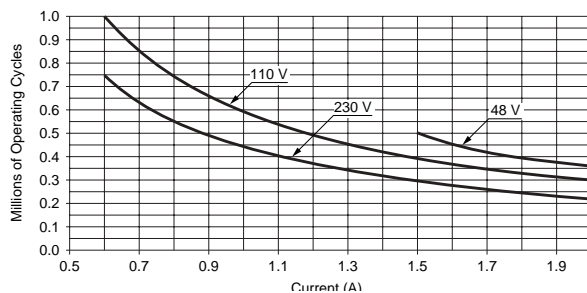
AC-13 (3) ♣



AC-14 (4) ♣



AC-15 (5) ♣



- (1) DC-12: switching resistive loads and photo-coupler isolated solid state loads, $L/R \leq 1$ ms.
- (2) DC-13: switching electromagnets, $L/R \leq 2 \times (U_e \times I_e)$ in ms, U_e : rated operational voltage, I_e : rated operational current (with protection diode on load, use the DC-12 curves and apply a coefficient of 0.9 to the million of operating cycles value).
- (3) AC-12: switching resistive loads and photo-coupler isolated solid state loads, $\cos \geq 0.9$.
- (4) AC-14: switching electromagnetic loads whose power drawn with the electromagnet closed is ≤ 72 VA, making: $\cos = 0.3$, breaking: $\cos = 0.3$.
- (5) AC-15: switching electromagnetic loads whose power drawn with the electromagnet closed is > 72 VA, making: $\cos = 0.7$, breaking: $\cos = 0.4$.

♣ The product life expressed above is based on average usage and normal operating conditions. Actual operating life will vary with conditions. The above statements are not intended to, nor shall they create any expressed or implied warranties as to product operation or life. For information on the listed warranty offered on this product, refer to the Square D terms and conditions of sale found in the Square D Digest.

Relays



SR1-121BD

Supply Voltage	Inputs	Outputs	Blind Version	With Clock	Catalog Number	Weight lb (kg)
12 Vdc	8 - 12 Vdc	4 Relay	No	Yes	SR1B121JD	0.64 lb (0.290 kg)
	6 - 24 Vdc	4 Relay	No	No	SR1A101BD	0.64 lb (0.290 kg)
	6 - 24 Vdc	4 Relay	Yes	No	SR1D101BD	0.64 lb (0.290 kg)
24 Vdc	8 - 24 Vdc ▲	4 Relay	No	Yes	SR1B121BD	0.64 lb (0.290 kg)
	8 - 24 Vdc ▲	4 Relay	Yes	Yes	SR1E121BD	0.64 lb (0.290 kg)
	8 - 24 Vdc ▲	4 Transistor	No	Yes	SR1B122BD	0.64 lb (0.290 kg)
	12 - 24 Vdc	8 Relay	No	No	SR1A201BD	0.77 lb (0.350 kg)
	12 - 24 Vdc ▲	8 Relay	No	Yes	SR1B201BD	0.77 lb (0.350 kg)
24 Vac	6 - 24 Vac	4 Relay	No	Yes	SR1B101B	0.64 lb (0.290 kg)
	12 - 24 Vac	8 Relay	No	Yes	SR1B201B	0.64 lb (0.290 kg)
100 - 240 Vac	6 - 100/240 Vac	4 Relay	No	No	SR1A101FU	0.64 lb (0.290 kg)
	6 - 100/240 Vac	4 Relay	No	Yes	SR1B101FU	0.64 lb (0.290 kg)
	6 - 100/240 Vac	4 Relay	Yes	No	SR1D101FU	0.64 lb (0.290 kg)
	6 - 100/240 Vac	4 Relay	Yes	Yes	SR1E101FU	0.64 lb (0.290 kg)
	12 - 100/240 Vac	8 Relay	No	No	SR1A201FU	0.77 lb (0.350 kg)
	12 - 100/240 Vac	8 Relay	No	Yes	SR1B201FU	0.77 lb (0.350 kg)



SR1-101FU

Separate Accessories

Description	Catalog Number	Weight lb (kg)
Relay to PC interconnecting cable - 1.8 m length	SR1CBL01	0.77 lb (0.350 kg)
EEPROM memory cartridge (1 k bytes)	SR1MEM01	0.002 lb (0.001 kg)
Zelio-Soft™ Software	SR1SFT01	0.33 lb (0.150 kg)

Zelio Soft™ Software for Pocket PC

Description	Catalog Number	Weight lb (kg)
Connecting cable between Sub-D-9 connector on the Pocket PC and the smart relay	SR1-CBL02	0.77 lb (0.350 kg)
Programming software for Pocket PC (also contains Zelio Soft™ multi-language software)	SR1-SFT02	0.33 lb (0.150 kg)

Promotional Kits

Description	Catalog Number	Weight lb (kg)
CD-ROM, and cable	SR1KIT01	1.1 lb (0.500 kg)
SR1B121BD and SR1KIT01	SR1PACKBD	1.74 lb (0.790 kg)
SR1B101FU and SR1KIT01	SR1PACKFU	1.74 lb (0.790 kg)

Documentation

Description	Language	Catalog Number	Weight lb (kg)
Users guide	English	SR1MAN01EN	0.0022 lb (0.001kg)
	French	SR1MAN01FR	0.0022 lb (0.001kg)
	German	SR1MAN01DE	0.0022 lb (0.001kg)
	Italian	SR1MAN01IT	0.0022 lb (0.001kg)
	Spanish	SR1MAN01ES	0.0022 lb (0.001kg)

▲ 2 configurable analog inputs.

Power Supply (1)

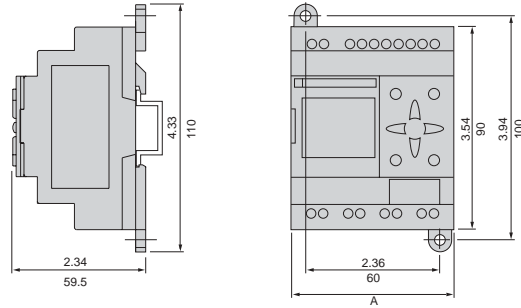
Input Voltage	Nominal Output Voltage	Nominal Output Current	Catalog Number	Weight lb (kg)
100...240 V	12 Vdc	1.9 A	ABL-7RM1202	0.39 (0.180 kg)
47...63 Hz	24 Vdc	1.4 A	ABL-7RM2401	0.40 (0.182 kg)



ABL-7RM2401

Zelio-Logic™ Relay Wiring Diagrams and Dimensions

DIMENSIONS

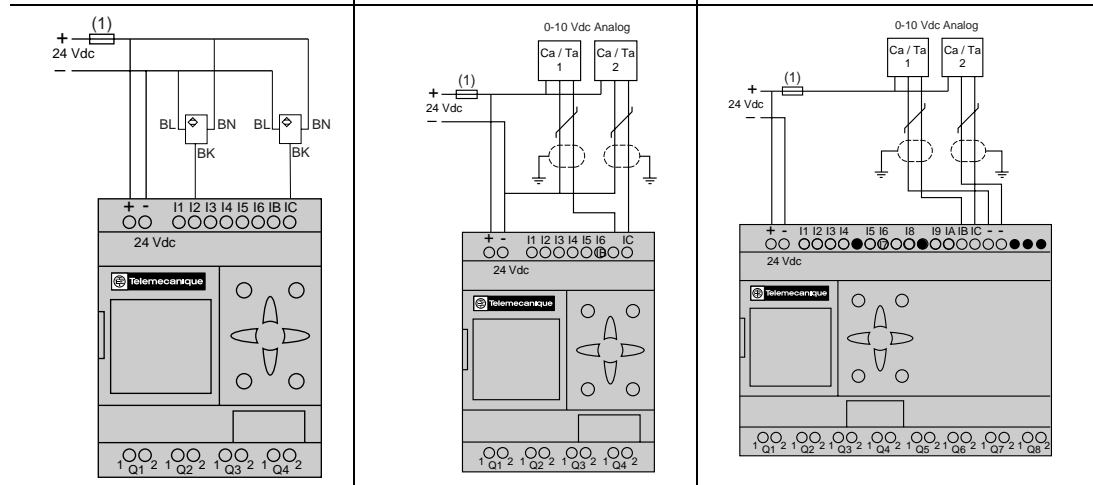


Catalog Number	A
SR1A101BD	2.83 " (72 mm)
SR1B101B	
SR1B121BD	
SR1B121JD	
SR1D101BD	
SR1E121BD	
SR1A101FU	
SR1B101FU	
SR1D101FU	
SR1E101FU	
SR1B122BD	
SR1A201BD	
SR1B201B	
SR1B201BD	
SR1A201FU	
SR1B201FU	

Dual Dimensions $\frac{\text{inches}}{\text{mm}}$

WIRING DIAGRAMS

3-wire Sensor on:	Analog Inputs on:	Analog Inputs on:
SR1A101BD	SR1B121BD	SR1B201BD
SR1B121BD	SR1E121BD	
SR1B122BD	SR1B122BD	
SR1D101BD	SR1B121JD	
SR1E121BD		
SR1A201BD		
SR1B201BD		
SR1B121JD		



(1) 1 A ultra fast fuse or supplementary protector

WIRING DIAGRAMS, CONTINUED

	SR1A101BD ♦ or SR1D101BD ♦ SR1B121BD or SR1E121BD SR1B121JD	SR1A201BD SR1B201BD
	♦ Terminals IB and IC are not available on this device.	
	SR1A101FU or SR1B101FU SR1B122BD SR1D101FU or SR1E101FU	SR1A201FU or SR1B201FU SR1A201B, SR1B201B

- (1) 1 A ultra fast fuse or circuit protector.
- (2) 16 A maximum fuse or supplementary protector.
- (3) Resistive load.
- (4) Inductive load.

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