Smart Latching Relay Control – 4 channel

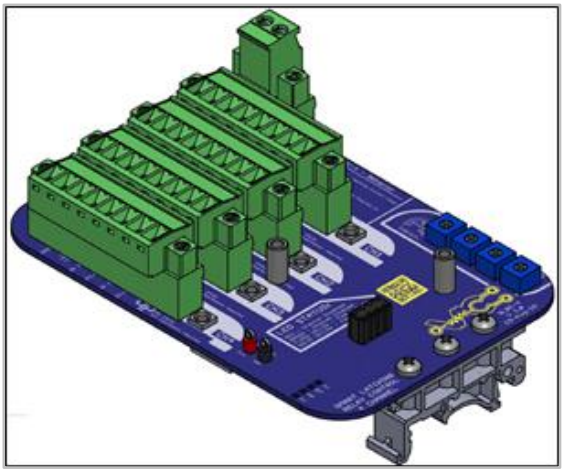
User's Guide

Literature Number: SLRC4-01A

Smart Latching Relay Control – 4 Channel

Features

- **Nominal supply voltage: 24V**
- **Supply-voltage range: 20V to 28V**
- **Power consumption:**
  - **20mA idle current**
  - **Up to 2A per channel PNP output**
- **Timer adjustment: 5 min to 60 min**
- **Screwable terminal connections**
- **Channel setup:**
  - **1 x Latching contact output – 2 amp**
  - **1 x PNP 24V output – 2 amp**
  - **2 x 24V input**
  - **1 x RGB Status LED**
- **DIN rail mounting**
- **Board dimensions:**
  - **4.6" x 3.25"**
  - **1.76" above din rail**
- **Optional screw mounting via standoff**
- **Optional communication board**



DESCTIPTION

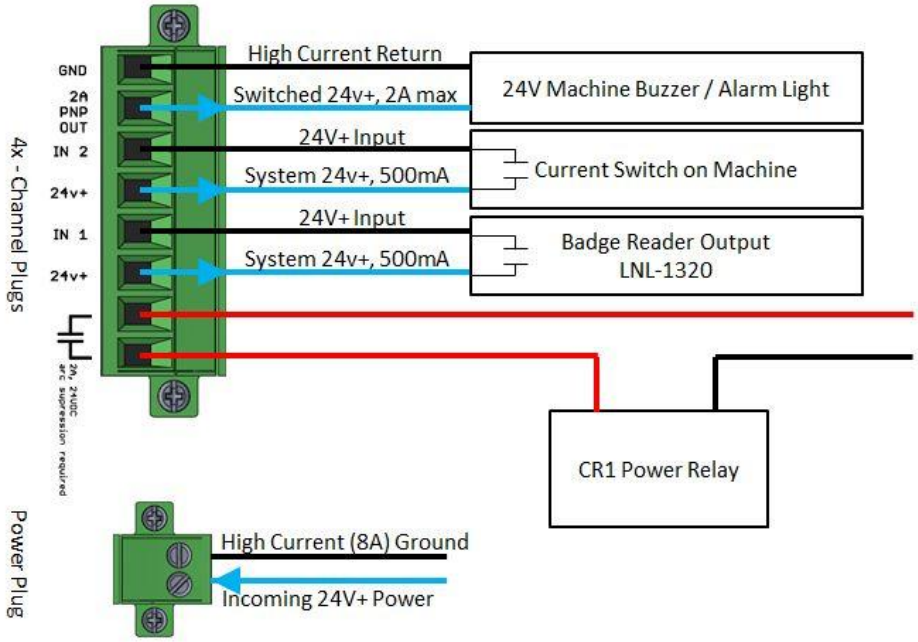
The WMC SLRC-4 is a programable IO module purpose built to interface an ID badge reader, specifically the LNL-1320 with machine shop equipment to allow employees to badge into equipment they are authorized to use. It is designed to support 4 pieces of equipment with ID Badge readers.

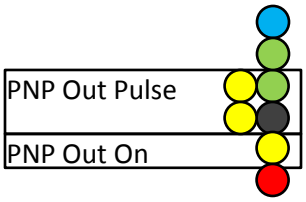
The dry contact on the badge reader or other triggering device is wired into the enable channel input to activate the channel. Activating the channel will allow the equipment to be powered on, and starting an internal timer. If the machine is running the current flowing to the equipment will close the current switch wired to the timer hold/reset input (In 2). Running the piece of equipment will reset and hold the timer allowing the equipment to continue running. Once the machine is no longer being used causing current to stop flowing and the current switch to open, the SLRC-4 will start timing down on that channel. Once the timer has elapsed it will open the latching relay disabling the equipment until a valid badge is scanned again. The PNP output is used to drive an alarm signal at the piece of equipment. If the channel timer has less than 3 minutes remaining it will pulse the PNP output once every 16 seconds. Once the channel has less than 1 minute remaining the PNP output is held on continuously. When the channel is disabled the PNP output is off.

Firmware can be custom programmed to support any customer requirement utilizing the full set of I/O available to the SLRC-4. This allows the device to be an 8 Input, 8 Output, 4 Latching Relay module, it is not limited to being "4 channels" this is just the default behavior.

The Expansion Interface Module provides 4 channels of bi-directional communication to smart remote modules. These remote modules provide Information feedback and operator input capabilities at the piece of equipment. For example a supervisor key to override the channel, a status light, or up to a full operator interface controlling all 4 channels. The system can be programmed to trigger or modify any channel or combination of channels from these remote modules.

Wiring Diagram





Status LED
Blue – Timer Reset and Held.
Green – Timer Counting Down.
Flash Yellow / Green – Timer Counting < 3 minutes.
Flash Yellow / Off – Timer Counting < 2 minutes.
Yellow – Timer Counting < 1 minute.
Red – Channel Disabled

		Absolute Maximum Ratings(1)			
		MIN	NOMINAL	MAX	UNIT
VCC	Input Voltage	20	24	28	V
T_A	Operating Temp	0		85	°C
I_{OUT}	PNP Output Current (polyfuse trip rating)	1 (85°C)	2 (50°C)	2.5 (20°C)	A
I_{LTCH}	Latched Contact Current		2		
I_{IN}	Input Current		50		mA

(1) Stresses beyond those listed under "absolute maximum ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "recommended operating conditions" is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.