Manuals+ — User Manuals Simplified.

unitronics SM35-J-RA22 3.5 Inch Programmable Logic Controller User Guide

unitronics SM35-J-RA22 3.5 Inch Programmable Logic Controller User Guide

Contents

General Description

All of the controllers covered in this guide are micro-PLC+HMI, rugged programmable logic controllers that comprise built-in operating panels and on-board I/Os.

Item	SM35-J-RA22	SM43-J-RA22	SM70-J-RA22
On-board I/O	Model Dependent		
Screen	3.5″ Color Touch	4.3″ Color Touch	7″ Color Touch
Keypad or Function Keys	None		
Programming Com Port, Built-in			
RS232	Yes	None	None
USB device, mini-B	None	Yes	Yes
Com Ports, separate order, user-installed	The user may install a CANbus module (V100-17-CAN), and **one** of the following:· RS232/RS485 port (V100-17-RS4/V100-17-RS4X)· Ethernet (V100-17-ET2)		

Item	SM35-J-RA22	SM43-J-RA22	SM70-J-RA22
Controller	Yes		
Terminal Blocks	Yes		
Battery	Yes (installed)	Yes (installed)	Yes
Mounting Brackets	Yes (2 parts)	Yes (4 parts)	Yes (6 parts)
Rubber Seal	Yes		

Alert Symbols and General Restrictions

When any of the following symbols appear, read the associated information carefully.

Symbol		Meaning	Description
		Danger	The identified danger causes physical and property damage.
		Warning	The identified danger could cause physical and property damage.
Caution		Caution	Use caution.

§   Before using this product, the user must read and understand this document.§   All examples and diagrams are intended to aid understanding, and do not guarantee operation. Unitronics accepts no responsibility for actual use of this product based on these examples.§   Please dispose of this product according to local and national standards and regulations.§   Only qualified service personnel should open this device or carry out repairs.

	Failure to comply with appropriate safety guidelines can cause severe injury or property damage.
	§ Do not attempt to use this device with parameters that exceed permissible levels.§ To avoid damaging the system, do not connect/disconnect the device when power is on.

Environmental Considerations

	§ Do not install in areas with: excessive or conductive dust, corrosive or flammable gas, moisture or rain, excessive heat, regular impact shocks or excessive vibration, in accordance with the standards given in the product's technical specification sheet.§ Do not place in water or let water leak onto the unit.§ Do not allow debris to fall inside the unit during installation.
	§ Ventilation: 10mm space required between controller's top/bottom edges & enclosure walls.§ Install at maximum distance from high-voltage cables and power equipment.

UL Compliance

The following section is relevant to Unitronics' products that are listed with the UL. The following models: V130-33-R34, V130-J-R34, V130-T4-ZK1, V350-35-RA22, V350-J-RA22, V350-35-R34, V350-J-R34, V430-J-R34, SM35-J-T20, SM43-J-T20 are UL listed for Hazardous Locations. The following models: V130-33-B1, V130-J-B1, V130-33-TA24, V130-J-TA24, V130-33-T38,V130-JT38 V130-33-TR20, V130-J-TR20, V130-33-TR34, V130-J-TR34, V130-33-RA22, V130-J-RA22, V130-33-TRA22, V130-J-TRA22, V130-33-T2, V130-J-T2, V130-33-TR6, V130-J-TR6, V130-33-R34, V350-35-B1, V130-T4-ZK1, V350-J-B1, V350-35-TA24, V350-J-TA24, V350-35-T38, V350-J-T38, V350-35-TR20, V350-J-TR20, V350-35-TR34, V350-J-TR34, V350-35-TRA22, V350-J-TRA22, V350-35-T2, V350-J-T2, V350-35-TR6, V350-J-TR6, V350-S-TA24, V350-JS-TA24, V350-35-RA22, V350-J-RA22, V350-35-R34, V430-J-B1, V430-J-TA24, V430-J-T38, V430-J-R34, V430-J-RH2, V430-J-TR34, V430-J-RA22, V430-J-TRA22, V430-J-T2, V430-J-RH6, SM35-J-D4, SM35-J-R20 SM35-J-RA22, SM35-J-TA22, SM43-J-R20, SM43-J-RA22, SM43-J-TA22, SM35-J-T20, SM43-J-T20 SM70-J-R20, SM70-J-RA22, SM70-J-T20, SM70-J-T38, SM70-J-TA22, SM70-J-TRA22 are UL listed for Ordinary Location.

For models from series V130, V130-J, V430, that include "T4" or "J4" in the Model name, Suitable for mounting on the flat surface of Type 4X enclosure. For examples: V130-T4-R34, V130-J4-R34, V430-J4-T2, SM43-J4-R20

UL Ordinary Location
In order to meet the UL ordinary location standard, panel-mount this device on the flat surface of Type 1 or 4 X enclosures

UL Ratings, Programmable Controllers for Use in Hazardous Locations, Class I, Division 2, Groups A, B, C and D
These Release Notes relate to all Unitronics products that bear the UL symbols used to mark products that have been approved for use in hazardous locations, Class I, Division 2, Groups A, B, C and D.

Caution	This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D, or Non- hazardous locations only.	
⚡	§ Input and output wiring must be in accordance with Class I, Division 2 wiring methods and in accordance with the authority having jurisdiction.	
⚠	§ WARNING—Explosion Hazard—substitution of components may impair suitability for Class I, Division 2.§ WARNING – EXPLOSION HAZARD – Do not connect or disconnect equipment unless power has been switched off or the area is known to be non-hazardous.§ WARNING – Exposure to some chemicals may degrade the sealing properties of material used in Relays.§ This equipment must be installed using wiring methods as required for Class I, Division 2 as per the NEC and/or CEC.	

Panel-Mounting
For programmable controllers that can be mounted also on panel, in order to meet the UL Haz Loc standard, panel-mount this device on the flat surface of Type 1 or Type 4X enclosures. Relay Output Resistance Ratings The products listed below contain relay outputs: Programmable controllers, Models: V430-J-R34, V130-33-R34, V130-J-R34 and V350-35-R34, V350-J-R34

- When these specific products are used in hazardous locations, they are rated at 3A res.
- Except for models V430-J-R34, V130-33-R34, V130-J-R34,

  V130-T4-ZK1 and V350-35-R34, V350-J-R34, when these specific products are used in nonhazardous

  environmental conditions, they are rated at 5A res, as iven in the product's specifications.

Communication and Removable Memory Storage

When products comprise either USB communication port, SD card slot, or both, neither the SD card slot nor the USB port are intended to be permanently connected, while the USB port is intended for programming only.

Removing / Replacing the battery

When a product has been installed with a battery, do not remove or replace the battery unless the power has been switched off, or the area is known to be non-hazardous. Please note that it is recommended to back up all data retained in RAM, in order to avoid losing data when changing the battery while the power is switched off. Date and time information will also need to be reset after the procedure.

Dimensions
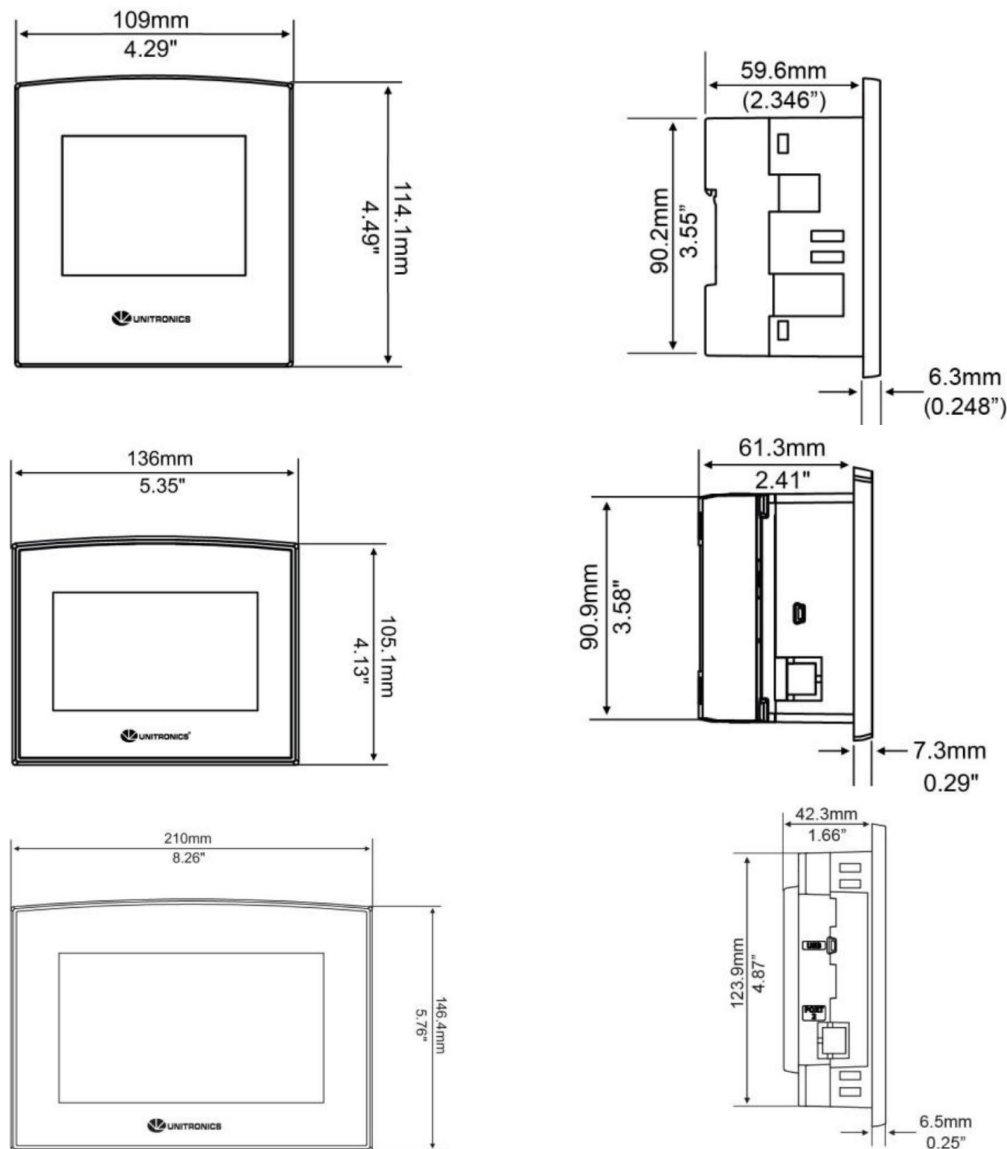
Panel Mounting

Before you begin, note that the mounting panel cannot be more than 5 mm thick. UL listed models: To meet the UL508 standard, panel-mount the device on the flat surface of a Type 1 enclosure.

1. Make a panel cut-out of the appropriate size:

   - SM35: 92x92mm (3.622"x3.622").

   - SM43: 122.5×91.5mm (4.82"x3.6").

   - SM70: 193x125mm (7.59"x4.92").

2. Slide the controller into the cut-out, ensuring that the rubber seal is in place.

3. Push the mounting brackets into their slots on the sides of the panel as shown in the figure below.

4. Tighten the bracket's screws against the panel. Hold the bracket securely against the unit while tightening the screw. The torque required is 0.35 N·m (3.1 in-lb).

5. When properly mounted, the controller is squarely situated in the panel cut out as shown in the accompanying figures.
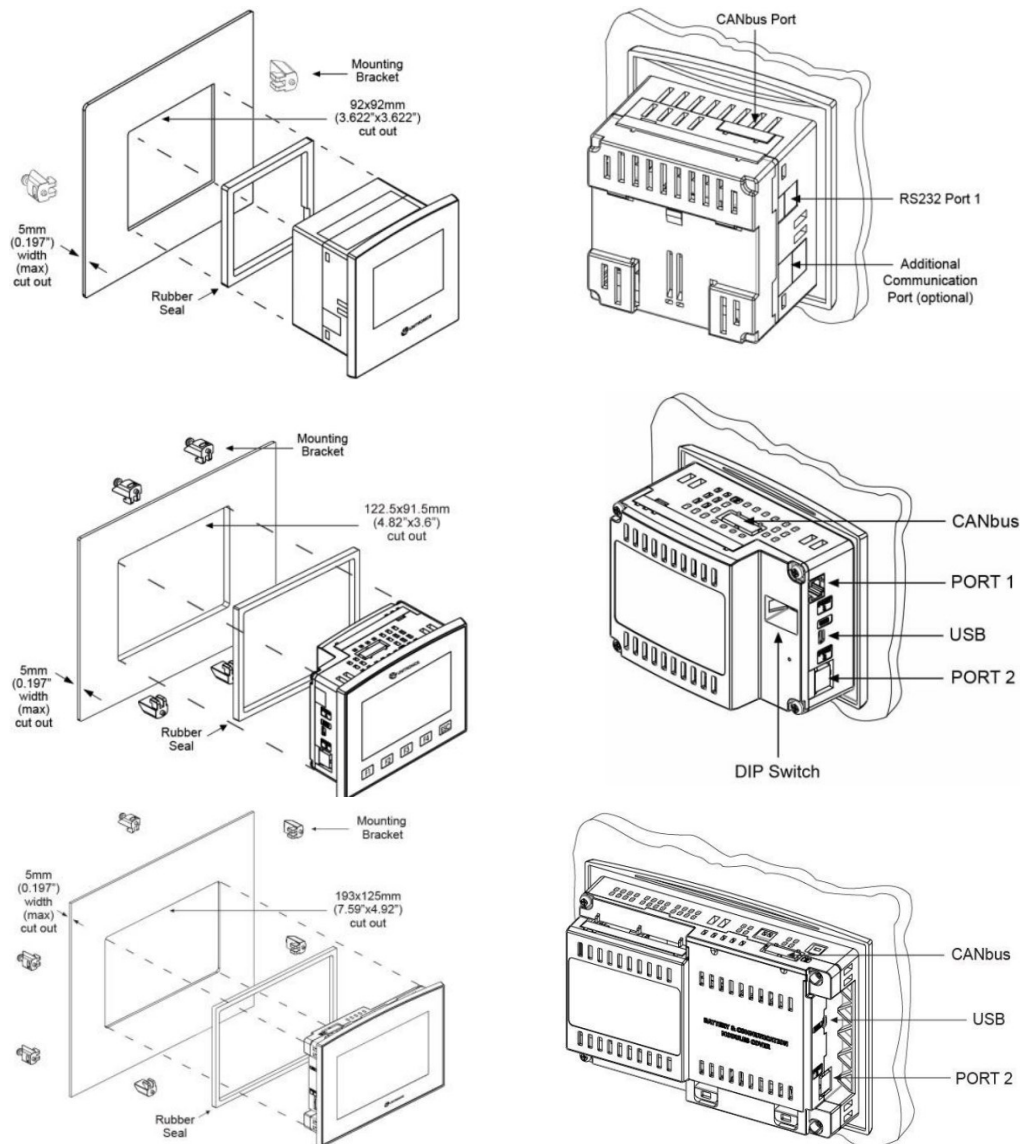
Wiring

- Do not touch live wires.
- Install an external circuit breaker. Guard against short-circuiting in external wiring.
- Use appropriate circuit protection devices.
- Unused pins should not be connected. Ignoring this directive may damage the device.
- Double-check all wiring before turning on the power supply.

Caution

1. To avoid damaging the wire, do not exceed a maximum torque of 0.5 N·m (5 kgf·cm).
2. Do not use tin, solder, or any substance on stripped wire that might cause the wire strand to break.
3. Install at maximum distance from high-voltage cables and power equipment.

Wiring Procedure

Use crimp terminals for wiring; use 3.31 mm² –0.13 mm² wire (12-26 AWG):

1. Strip the wire to a length of 7±0.5mm (0.270–0.300").
2. Unscrew the terminal to its widest position before inserting a wire.
3. Insert the wire completely into the terminal to ensure a proper connection.
4. Tighten enough to keep the wire from pulling free.
    - Input or output cables should not be run through the same multi-core cable or share the same wire.
    - Allow for voltage drop and noise interference with I/O lines used over an extended distance. Use wire that is properly sized for the load.
    - The controller and I/O signals must be connected to the same 0V signal.

I/Os

SM35/43/70-J-RA22 comprises a total of 12 inputs and 8 relays and 2 analog outputs. Input functionality can be adapted as follows: 12 inputs may be used as digital inputs. They may be wired, in a group, and set to either npn or pnp via a single jumper. In addition, according to jumper settings and appropriate wiring:

- Inputs 5 and 6 can function as either digital or analog inputs.
- Input 0 can function as high-speed counter, as part of a shaft-encoder, or as normal digital input.
- Input 1 can function as either counter reset, as part of a shaft-encoder, or as normal digital input.
- If input 0 is set as high-speed counters (without reset), input 1 can function as normal digital input.
- Inputs 7-8 and 9-10 can function as digital, thermocouple, or PT100 inputs; Input 11 can also serve as the CM signal for PT100.

Input Jumper Settings

The tables below show how to set a specific jumper to change input functionality. To access the I/O jumpers, you must open the controller according to the instructions on

- Incompatible jumper settings and wiring connections may seriously damage the controller.

Digital Inputs 0-11: Set Type

Set to	JP12 (all Inputs)
npn (sink)	A
pnp (source)*	B

Inputs 7/8: Set Type – Digital or RTD/TC #1

Set to	JP1	JP2	JP3
Digital*	A	A	A
Thermocouple	B	B	B
PT100	B	A	B

Inputs 9/10: Set Type – Digital or RTD/TC #0

Set to	JP5	JP6	JP7
Digital*	A	A	A
Thermocouple	B	B	B
PT100	B	A	B

Input 11: Set Type – Digital or CM for PT100

Set to	JP11
Digital*	A
CM for PT100	B

Input 5: Set Type – Digital or Analog #3

Set to	JP4	JP10
Digital*	A	A
Voltage	B	A
Current	B	B

Input 6: Set Type – Digital or Analog #2

Set to	JP8	JP9
Digital*	A	A
Voltage	B	A
Current	B	B
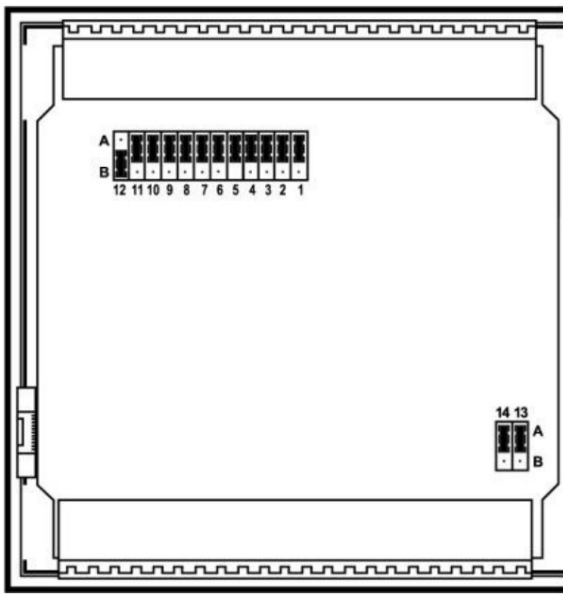
Analog Output 0: Set to Voltage/Current		
Set to	JP13	
Voltage*	A	
Current	B	

Analog Output 1: Set to Voltage/Current		
Set to	JP14	
Voltage*	A	
Current	B	

I/O Wiring

Input wiring

HSC input wiring
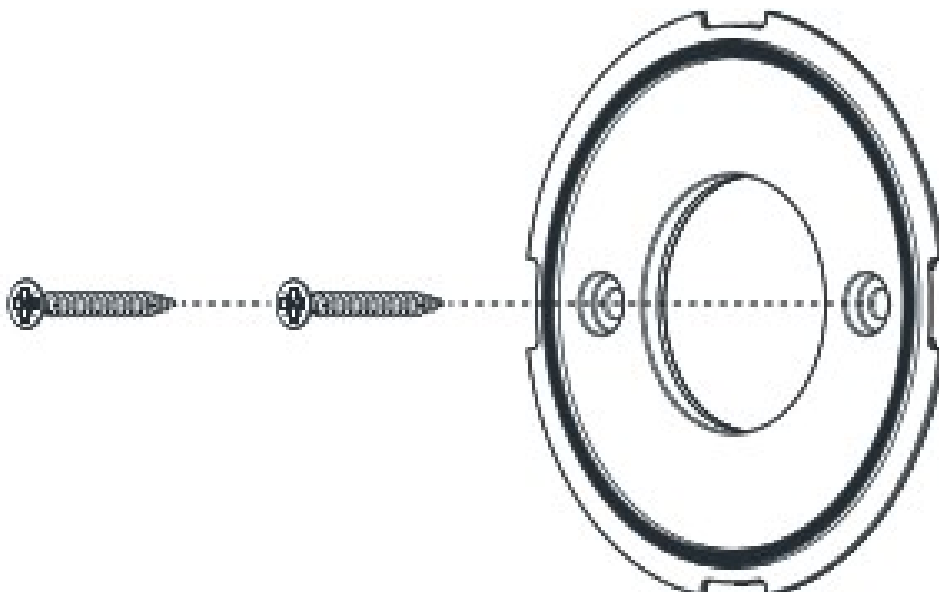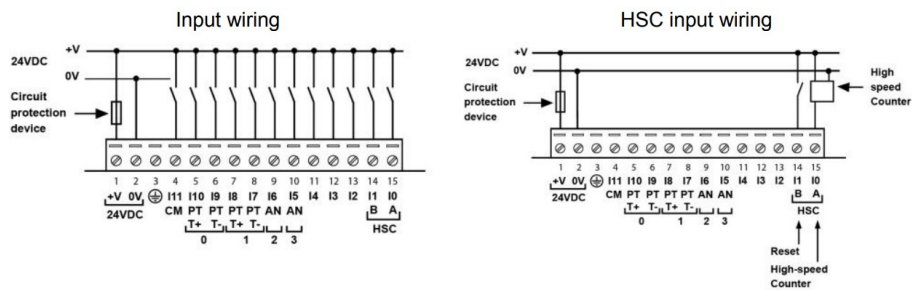
Shaft-encoder

Analog Input

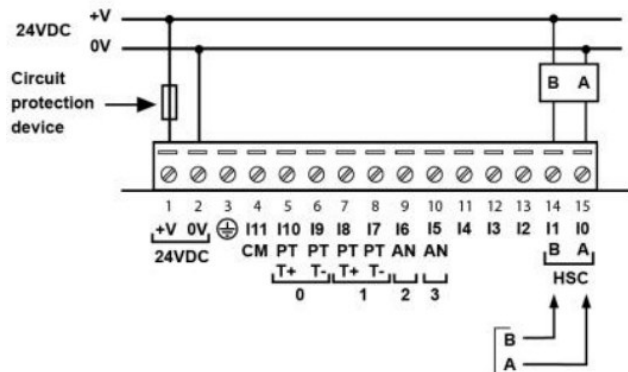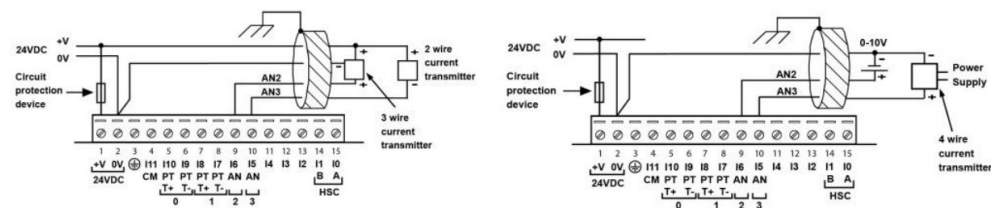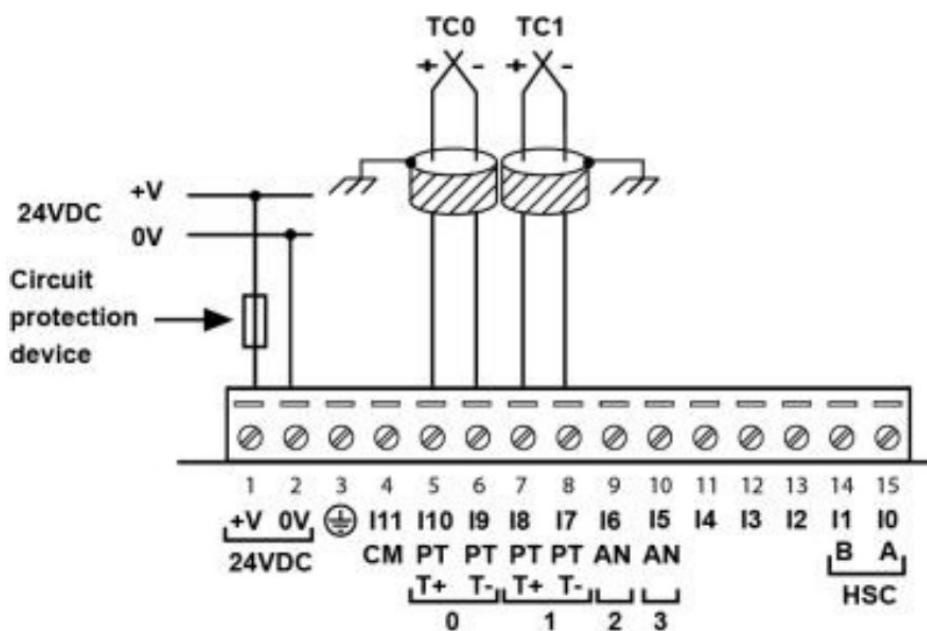- Shields should be connected at the signal's source.
- The 0V signal of the analog input must be connected to the controller's 0V.

Thermocouple

- Thermocouple 0: use Input 9 as negative input and 10 as positive.
- Thermocouple 1: use Input 7 as negative input and 8 as positive.

Type	Temp. Range	Wire Color	
		ANSI (USA)	BS1843 (UK)
mV	-5 to 56mV		
B	200 to 1820˚C(300 to 3276˚F)	+Grey-Red	+None-Blue
E	-200 to 750˚C(-328 to 1382˚F)	+Violet-Red	+Brown-Blue
J	-200 to 760˚C(-328 to 1400˚F)	+White-Red	+Yellow-Blue
K	-200 to 1250˚C(-328 to 2282˚F)	+Yellow-Red	+Brown-Blue
N	-200 to 1300˚C(-328 to 2372˚F)	+Orange-Red	+Orange-Blue
R	0 to 1768˚C(32 to 3214˚F)	+Black-Red	+White-Blue
S	0 to 1768˚C(32 to 3214˚F)	+Black-Red	+White-Blue
T	-200 to 400˚C(-328 to 752˚F)	+Blue-Red	+White-Blue

RTD

- PT100 (Sensor 0): use Input 9 and 10, related to CM signal.
- PT100 (Sensor 1): use Input 7 and 8, related to CM signal.
- 4 wire PT100 can be used by leaving one of the sensor leads unconnected.
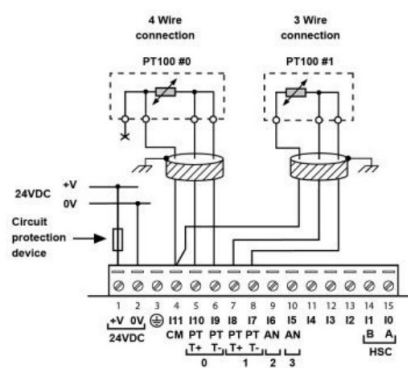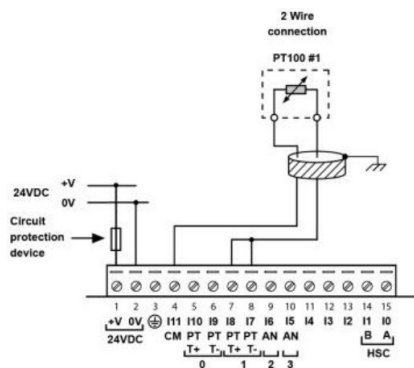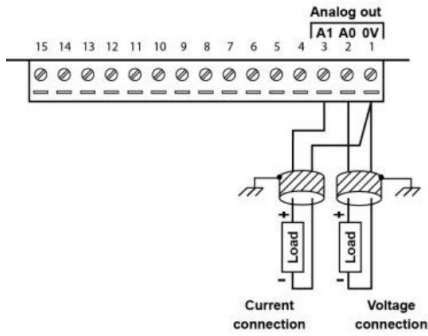
Analog Outputs   **Relay Outputs**

Increasing Contact Life Span To increase the life span of the relay output contacts and protect the device from potential damage by reverse EMF, connect:

- A clamping diode in parallel with each inductive DC load
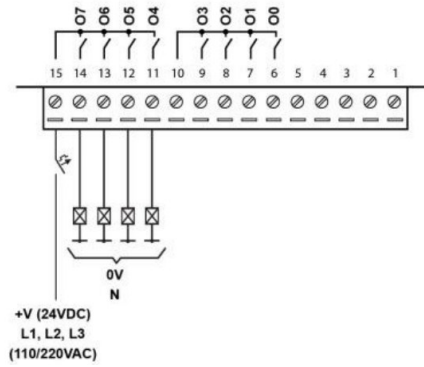- An RC snubber circuit in parallel with each inductive AC load
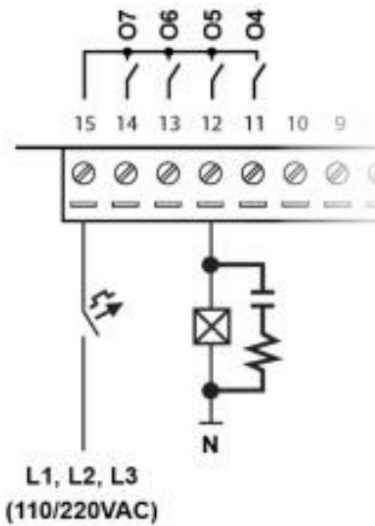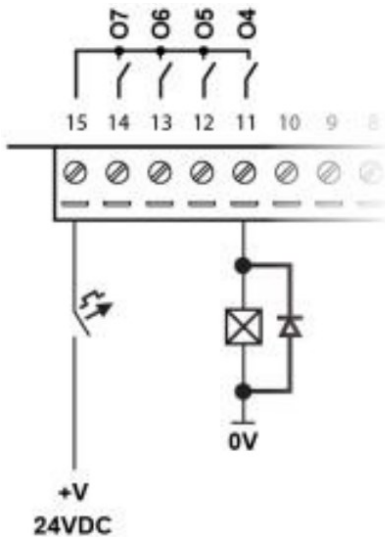
Power Supply

The controller requires an external 24VDC power supply.

- The power supply must include double insulation. Outputs must be rated as SELV/PELV/Class2/Limited Power.
- Use separate wires to connect the functional earth line (pin 3) and the 0V line (pin 2) to the system earth ground.
- Install an external circuit breaker. Guard against short-circuiting in external wiring.
- Double-check all wiring before turning on the power supply.
- Do not connect either the 'Neutral' or 'Line' signal of the 110/220VAC to device's 0V pin
- In the event of voltage fluctuations or nonconformity to voltage power supply specifications, connect the device to a regulated power supply
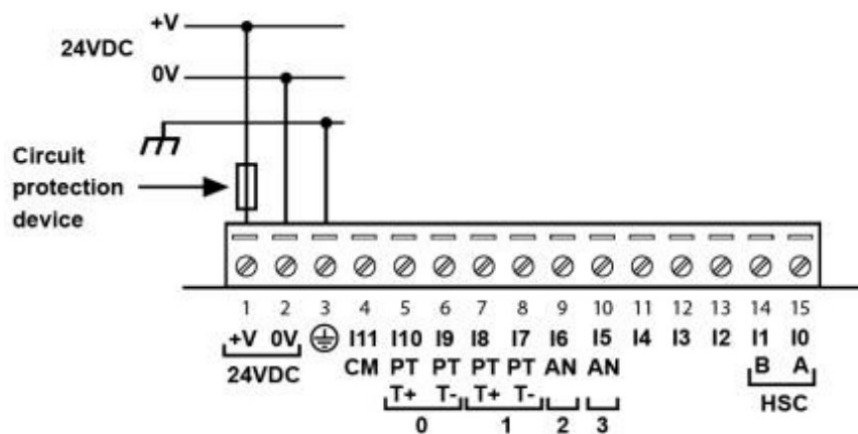
Earthing the PLC+HMI

To maximize system performance, avoid electromagnetic interference by:

- Mounting the controller on a metal panel.
- Connect each common and ground connection directly to the earth ground of your system.
- For ground wiring uses the shortest and thickest possible wire.

Communication Port

- Turn off power before making communications connections.

  Caution
- Always use the appropriate port adapters.

Pinouts

The pinouts below show the PLC port signals.

RS232	
Pin #	Description
1	Not connected
2	0V reference
3	TXD signal
4	RXD signal
5	0V reference
6	Not connected

Opening the Controller

- Before performing these actions, touch a grounded object to discharge any electrostatic charge.
- Avoid touching the PCB board directly. Hold the PCB board by its connectors.

1. Turn off the power supply, disconnects, and dismounts the controller.

2. The back cover of the controller comprises 4 screws, located in the corners. Remove the screws, and pull off the back cover.

Changing I/O Settings
The I/O board of the controller is now exposed, enabling you to change I/O settings (module dependent) according to the jumpers setting above.
Note: Photo is for illustration purposes only. (Using SM70)
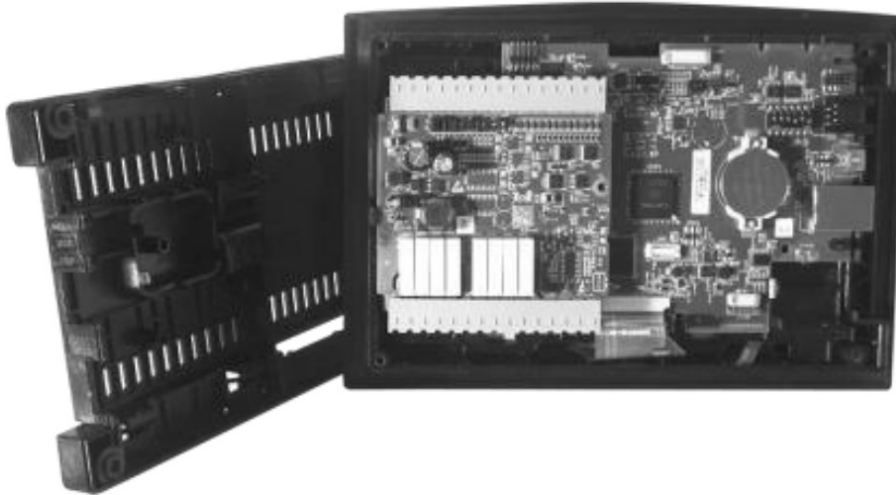
Closing the Controller
Replace the back cover of the controller and fasten the corner screws. Note that you must replace the back cover securely before powering up the controller.

Samba™PLC+HMI			SM35-J-RA22 SM43-J-RA22 SM70-J-RA22Technical Specifications	
Power Supply				
Item	**SM35-J-RA22**		**SM43-J-RA22**	**SM70-J-RA22**
Input voltage	24VDC			
Permissible range	20.4VDC to 28.8VDC with less than 10% ripple			
Max. current consumption	See Note 1			
npn inputs	275mA@24VDC		275mA@24VDC	330mA@24VDC
pnp inputs	235mA@24VDC		235mA@24VDC	295mA@24VDC
Notes:				
1. To calculate the actual power consumption, subtract the current for each unused element from the maximum current consumption value according to the values below:				

	Backlight	**Ethernet card**	**Relay Outputs (per output)**	**All Analog Outputs, voltage/current**
SM35/SM43	20mA	35mA	5mA	48mA/30mA*
SM70	80mA	35mA	5mA	48mA/30mA*
*If the analog outputs are not configured, then subtract the higher value.				

Digital Inputs

- Number of inputs 12. See Note 2
- Input type See Note 2
- Galvanic isolation None
- Nominal input voltage 24VDC
- Input voltage
- pnp (source) 0-5VDC for Logic '0' 17-28.8VDC for Logic '1'
- npn (sink) 17-28.8VDC for Logic '0' 0-5VDC for Logic '1'
- Input current 3.7mA@24VDC
- Input impedance 6.5KΩ
- Response time 10ms typical, when used as normal digital inputs
- Input cable length
- Normal digital input Up to 100 meters
- High Speed Input Up to 50 meters, shielded, see Frequency table below

Cable length (max.)	HSC	Shaft-encoder pnp	Shaft-encoder npn
10m	30kHz	20kHz	16kHz
25m	25kHz	12kHz	10kHz
50m	15kHz	7kHz	5kHz

Notes:				

2. This model comprises a total of 12 inputs.All 12 inputs may be used as digital inputs. They may be wired in a group via a single jumper as either npn or pnp.In addition, according to jumper settings and appropriate wiring:-   Inputs 5 and 6 can function as either digital or analog inputs.-   Input 0 can function as a high-speed counter, as part of a shaft-encoder, or as normal digital inputs.-   Input 1 can function as either counter reset, normal digital input, or as part of a shaft-encoder.-   If input 0 is set as a high-speed counter (without reset), input 1 can function as a normal digital input.-   Inputs 7-8 and 9-10 can function as digital, thermocouple, or PT100 inputs; input 11 can also serve as the CM signal for PT100.   3. pnp/npn maximum frequency is at 24VDC.

Analog Inputs			
Number of inputs	2, according to wiring as described above in Note 2		
Input type	Multi-range inputs: 0-10V, 0-20mA, 4-20mA		
Input range	0-20mA, 4-20mA		0-10VDC
Input impedance	37Ω		12.77kΩ
Maximum input rating	30mA, 1.1 V		±15V
Galvanic isolation	None		
Conversion method	Voltage to frequency		
Normal mode			
Resolution, except 4-20mA	14-bit (16384units)		
Resolution, at 4-20mA	3277 to 16383 (13107 units)		
Conversion time	100ms minimum per channel. See Note 4.		
Fast mode			

Resolution, except 4-20mA		12-bit (4096 units)	
Resolution, at 4-20mA		819 to 4095 (3277 units)	
Conversion time		30ms minimum per channel. See Note 4.	
Accuracy		±0.44%	
Status indication		Yes. See Note 5	
Notes:			

4. Conversion times are accumulative and depend on the total number of analog inputs configured.For example, if only one analog input (fast mode) is configured, the conversion time will be 30ms; however, if two analog (normal mode) and two RTD inputs are configured, the conversion time will be 100ms + 100ms + 300ms+ 300ms = 800ms.

5. The analog value can indicate faults as shown below:

Value: 12-bit	Value: 14-bit		Possible Cause
-1	-1		Deviates slightly below the input range
4096	163 84		Deviates slightly above the input range
32767	327 67		Deviates greatly above or below the input range

RTD Inputs			
RTD Type		PT100	
Temperature coefficient a		0.00385/0.00392	
Input range		-200 to 600°C/-328 to 1100°F. 1 to 320Ω.	
Isolation		None	
Conversion method		Voltage to frequency	

Resolution		0.1°C/0.1°F	
Conversion time		300ms minimum per channel. See Note 4 above	
Input impedance		>10MΩ	

	Value	Possible Cause	
	32767	Sensor is not connected to input, or value exceeds permissible range	
	-32767	Sensor is short-circuited	

Thermocouple Inputs
Input range See Note 7
Isolation None
Conversion method Voltage to frequency
Resolution 0.1 C/ 0.1 F maximum
Conversion time 100ms minimum per channel. See Note 7 above
Input impedance >10MΩ
Cold junction compensation Local, automatic
Cold junction compensation error ±1.5 C/±2.7 F maximum
Absolute maximum rating ±0.6VDC
Accuracy ±0.44%
Warm-up time ½ hour typically, ±1 C/±1.8 F repeatability
Status indication Yes. See Note 6 above

Notes:
The device can also measure voltage within the range of -5 to 56mV, at a resolution of 0.01mV. The device can also measure raw value frequency at a resolution of 14-bits (16384). Input ranges are shown in the following table:

Type	Temp. Range		Type	Temp. Range
mV	-5 to 56mV		N	-200 to 1300˚C (-328 to 2372˚F)
B	200 to 1820˚C (300 to 3276˚F)		R	0 to 1768˚C (32 to 3214˚F)
E	-200 to 750˚C (-328 to 1382˚F)		S	0 to 1768˚C (32 to 3214˚F)
J	-200 to 760˚C (-328 to 1400˚F)		T	-200 to 400˚C (-328 to 752˚F)
K	-200 to 1250˚C (-328 to 2282˚F)			

Digital Outputs
Number of outputs 8 relay (in 2 groups). See Note 8
Output type SPST-NO (Form A)
Isolation By relay
Type of relay Tyco PCN-124D3MHZ or compatible
Output current (resistive load) A maximum per output 8A maximum total per common
Rated voltage 250VAC / 30VDC

Minimum load 1mA, 5VDC
Life expectancy 100k operations at maximum load
Response time 10ms (typical)
Contact protection External precautions required (see Increasing Contact Life Span in the product's Installation Guide)

Analog Outputs	
Number of outputs	2
Output range	0-10V, 4-20mA. See Note 9
Resolution	12-bit (4096 units)
Conversion time	Both outputs are updated per scan
Load impedance	1kΩ minimum—voltage500Ω maximum—current
Galvanic isolation	None
Accuracy	±0.3%
Notes:	
9. Note that the range of each I/O is defined by wiring, jumper settings, and within the controller's software.	

Graphic Display Screen			
Item	**SM35-J-RA22**	**SM43-J-RA22**	**SM70-J-RA22**
LCD Type	TFT, LCD display	TFT, LCD display	TFT, LCD display
Illumination backlight	White LED	White LED	White LED
Display resolution	320×240 pixels	480×272 pixels	800×480 pixels
Viewing area	3.5″	4.3″	7″
Colors	65,536 (16-bit)	65,536 (16-bit)	65,536 (16-bit)
Touchscreen	Resistive, analog	Resistive, analog	Resistive, analog
Screen brightness control	Via software (Store value to SI 9, values range: 0 to 100%)		
Virtual Keypad	Displays virtual keyboard when the application requires data entry.		

Program			
Item	**SM35-J-RA22**		**SM43-J-RA22**	**SM70-J-RA22**

Program				
Item	**SM35-J-RA22**		**SM43-J-RA22**	**SM70-J-RA22**
Memory size				
Application Logic	80K		192K	192K
Images	1.5M		3M	8M
Fonts	320K		320K	512K
Operand type	Quantity	Symbol	Value	
Memory Bits	512	MB	Bit (coil)	
Memory Integers	256	MI	16-bit signed/unsigned	
Long Integers	32	ML	32-bit signed/unsigned	
Double Word	32	DW	32-bit unsigned	
Memory Floats	24	MF	32-bit signed/unsigned	
Fast Bits	64	XB	Fast Bits (coil) – not retained	
Fast Integers	32	XI	16 bit signed/unsigned (fast, not retained)	
Fast Long Integers	16	XL	32 bit signed/unsigned (fast, not retained)	
Fast Double Word	16	XDW	32 bit unsigned (fast, not retained)	
Timers	32	T	Res. 10 ms; max 99h, 59 min, 59.99s	
Counters	16	C	32-bit	
Data Tables	32K dynamic data (recipe parameters, datalogs, etc.) 16K fixed data (read-only data, ingredient names, etc)			
HMI displays	Up to 24			
Program scan time	15µs per 1kb of typical application			

Communication Ports	
Port 1	1 channel, RS232 (SM35) , USB device (SM43/SM70)
Galvanic isolation	SM35 and SM43 – No SM70 – Yes
Baud rate	300 to 115200 bps
RS232 **(SM35 only)**	
Input voltage	±20VDC absolute maximum
Cable length	15m maximum (50')
USB device **(SM43,SM70 only)**	
Port type	Mini-B
Specification	USB 2.0 complaint; full speed
Cable	USB 2.0 complaint; up to 3m
Port 2 (optional)	See Note 10
CANbus (optional)	See Note 10

Miscellaneous	
Clock (RTC)	Real-time clock functions (date and time)
Battery back-up	7 years typical at 25°C, battery back-up for RTC and system data, including variable data
Battery replacement	Yes. Coin-type 3V, lithium battery, CR2450

Dimensions			
Item	**SM35-J-RA22**	**SM43-J-RA22**	**SM70-J-RA22**
Size	109 x 114.1 x 68mm(4.29 x 4.49 x 2.67").See Note 11	136 x 105.1 x 61.3mm(5.35 x 4.13 x 2.41").See Note 11	210 x 146.4 x 42.3mm(8.26 x 5.76 x 1.66").See Note 11
Weight	226g (7.97 oz)	365g (12.87 oz)	654g (23.07 oz)

Environment	
Operational temperature	0 to 50ºC (32 to 122ºF)
Storage temperature	-20 to 60ºC (-4 to 140ºF)
Relative Humidity (RH)	10% to 95% (non-condensing)
Operating Altitude	2000m (6562 ft)
Shock	IEC 60068-2-27, 15G, 11ms duration
Vibration	IEC 60068-2-6, 5Hz to 8.4Hz, 3.5mm constant amplitude, 8.4Hz to 150Hz, 1G acceleration.

The information in this document reflects products at the date of printing. Unitronics reserves the right, subject to all applicable laws, at any time, at its sole discretion, and without notice, to discontinue or change the features, designs, materials and other specifications of its products, and to either permanently or temporarily withdraw any of the forgoing from the market.All information in this document is provided "as is" without warranty of any kind, either expressed or implied, including but not limited to any implied warranties of merchantability, fitness for a particular purpose, or non-infringement. Unitronics assumes no responsibility for errors or omissions in the information presented in this document. In no event shall Unitronics be liable for any special, incidental, indirect or consequential damages of any kind, or any damages whatsoever arising out of or in connection with the use or performance of this information.The tradenames, trademarks, logos and service marks presented in this document, including their design, are the property of Unitronics (1989) (R"G) Ltd. or other third parties and you are not permitted to use them without the prior written consent of Unitronics or such third party as may own them.

UG_SM35_43_70_RA22.pdf 10/22

Documents / Resources

[unitronics SM35-J-RA22 3.5 Inch Programmable Logic Controller](#) [pdf] User Guide
SM35-J-RA22 3.5 Inch Programmable Logic Controller, SM35-J-RA22, 3.5 Inch Programmable Logic Controller, Logic Controller, Controller

Manuals+,