Mira A2110F

Wireless 0..10V Lighting Control Module

Product Description

The Mira A2110F Lighting Control Module is part of the Sustainder Lighting Control System.

The image below shows the system approach.

The Mira module will be installed inside the luminaire of the streetlight. The Mira A2110F module controls the light via the analog 1..10V interface. All Miras are wirelessly connected with each other and form a wireless network that connects to a BackOffice by means of a Gateway. Via the BackOffice the system can be controlled and monitored.

See the datasheet of the Antares Gateway and the BackOffice for more information about these items.

Features

- New projects and retrofit
- Internal Antenna
- 868MHz RF Mesh Network
- Energy meter functionality
- Wired sensor interface (incl. power)
- Easy to install & configure

Applications

- Public Lighting (E.g. Streetlight)
- Industry
- Petrol Stations
- Train/Bus Stations

Technical data

Parameter		Min.	Typ.	Max.	Unit
Mains In					
	Rated Supply Voltage	220	230	240	Vac
	Input Voltage	198		264	Vac
	Frequency		50		Hz
	Current			1.3	A
Mains Out					
	Load power *			250	W
	Load inrush energy			1	J
	Load inrush current			100	A
	Load inrush time			1	ms
Energy meter					
	Measurement range	1		250	W
	Resolution		0.1		W
	Accuracy 1..10W		±0.5		W
	Accuracy 10..250W		±5.0		%
1..10V Interface					
	Control range	1.0		10.0	Vdc
	Voltage accuracy	-50		50	mV
	Maximum current			2.4	mA
Sensor Input Interface					
	Logic high voltage	5.0		12.5	Vdc
	Logic low voltage	0.0		1.0	Vdc
	Voltage free high	100k			Ohm
	Voltage free low			100	Ohm
12V Output					
	Output voltage	10.5	12.0	12.5	Vdc
	Maximum current			25	mA
RF					
	Operating frequency	-30ppm	869,525	+30ppm	MHz
	Output power		16		dBm
	Sensitivity		-110		dBm
	RF range		126		dB
Power consumption					
	Module, Mains out on **		0.90	1.00	W
	Module, Mains out off **		1.50	1.70	W
	12V Output efficiency		45		%
Environmental					
	Operating temperature	-25		+50	°C
	Storage temperature	-40		+85	°C
	IP rating		IP20		
Mechanical stress					
	Impact rating		IK06		
	Impact energy IEC 62262		1		J
Enclosure					
	Material		PC/ABS		
Weight			148		gram
Complies with standards					
	ERM SRD		EN 300220-2		
	EMC		EN 301489-1/3		
	Safety		EN 61010-1		

*) The system will report a lamp defect below 2W.

**) If the 12V Output is used, add the contribution of it using the “12V Output efficiency”-percentage (E.g. 12V Output @10mA = +0.27W).

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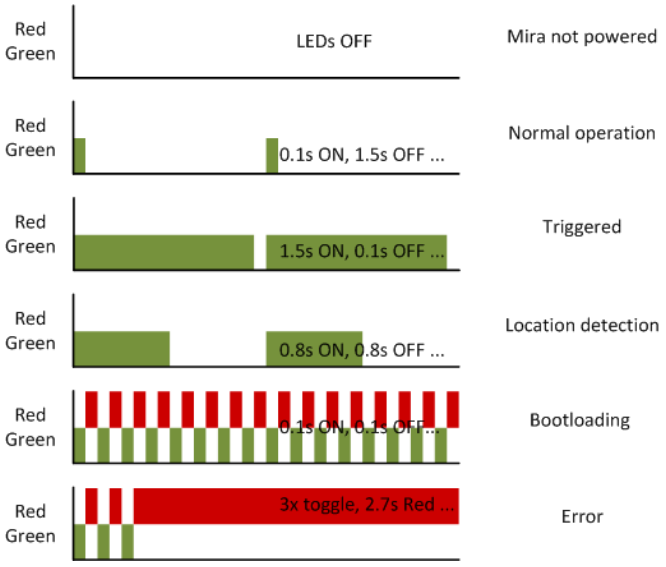
Sensor input

The module supports a wired sensor input. Voltage and voltage free sensor outputs can be connected to this interface. E.g. movement sensors (PIR or radar) can be included within the Sustainder Lighting Control System by using this input.

12V output

The 12V output interface from the Mira module can act as power supply for sensors. This means that no separate power supply module is necessary to power the sensor. The output is current protected and will be automatically recovered when the fault condition is removed.

Indicator functions

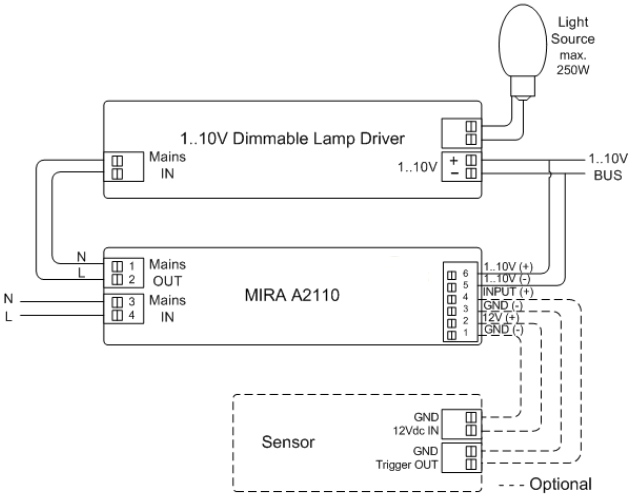


The LEDs are positioned next to pin 6 of the interface connector.

Wiring specifications

	Min.	Typ.	Max.	Unit
Mains In, Mains Out				
Cable type		Tri-rated		
Cable wire cross section	0.75		2.50	mm^2
	18		12	AWG
Cable strip length	10		11	mm
Recommended uninsulated JST ferrules:				
$0.75mm^2$/18AWG		WE0.75-10		
$1.00mm^2$/17AWG		WE1.0-10		
$1.50mm^2$/16AWG		WE1.5-10		
Cable length			1.0	m
1..10V Interface, Sensor Input, 12V Output				
Cable type		Solid/ Stranded		
Cable wire cross section	0.2		1.5	mm^2
	24		16	AWG
Cable strip length	9		10	mm
Recommended uninsulated JST ferrules:				
$0.50mm^2$/20AWG		WE0.5-10		
$0.75mm^2$/18AWG		WE0.75-10		
Cable length				
1..10V , 12V Output			1.0	m
Input			30.0	m

Wiring diagram



Installation instructions

Disconnect all power before installation and during servicing.

Do not open the MIRA enclosure; no user-serviceable parts inside.

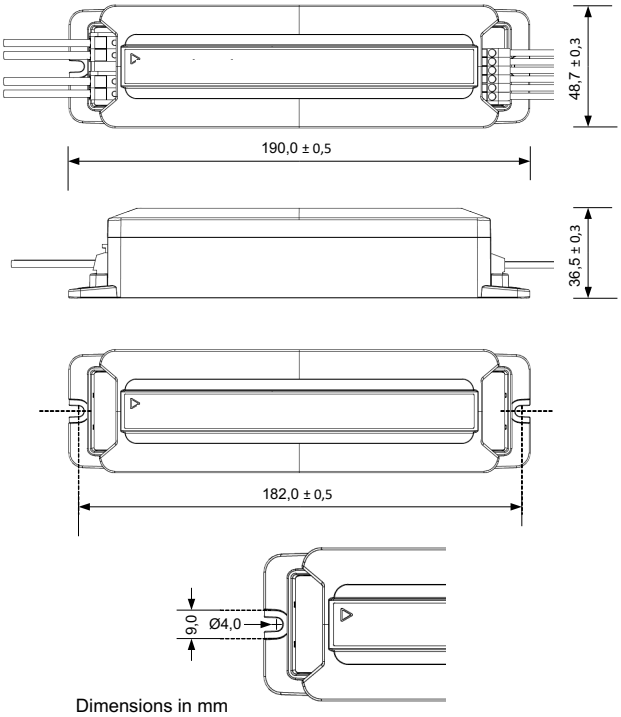
All installation and maintenance of line voltage equipment must be performed by a qualified electrician.

The MIRA must be installed in accordance with all local, state, and national electrical codes and requirements.

A switch or circuit-breaker must be included in the installation and has to be suitably located and easily accessible. It has to be marked as the disconnecting device for the Mira module(s). The recommended location for the switch or circuit-breaker is near the Mira module(s).

If the MIRA module is used in a manner not specified by Sustainder, the protection provided by the equipment may be impaired.

Dimensions



Dimensions in mm

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