



Applications

For any installation that requires remote monitoring and low data refresh rates. Wireless monitoring of facilities, ensuring savings in the final cost.

 LoRa™ wireless communication

 Economical installation

 Long range (up to 20 km outdoors)

Photovoltaic installations



Farms



Pumping stations



Industrial units



Technical ratings

Power supply	Model	LR1RS+ PSAC	LR1RS+ PSDC
	Rated voltage	110...264 Vac	12 Vdc ±10%
	Frequency	47...63 Hz	-
	Maximum consumption	2.5...4.5 VA	1 W
	Installation category	CAT III 300 V	
Serial interface	Model	LR1RS+ PSAC	LR1RS+ PSDC
	Type	3-wire RS-485	2-wire RS-485
	Transmission rate	9600 - 19200 - 38400 - 57600 - 115200 bps	
	Data bits	8	
	Parity	none - even	
	Stop bit	1 - 2	
Wireless interface	Technology	LoRa™ <sup>(1)</sup>	
	Frequency (Europe)	868 MHz ISM band (9 channels)	
	Standard range	1 km indoors 20 km outdoors with direct line of vision	
User interface	LED	LED Power, Tx and Rx	
	Pushbutton	1	
Environmental ratings	Working temperature	-10...+60 °C	
	Relative humidity	5...95% without condensation	
	Maximum altitude	2000 m	
	IP rating	LR1RS+ PSAC IP 20 LR1RS+ PSDC IP 30	
Electrical safety	Class II Double insulated		
Standards	EN 61010-1, EN 61000-6-2, EN 61000-6-4		

<sup>(1)</sup> The device is equipped with LoRa™ technology for private networks and is unable to connect to LoRaWAN networks.

References

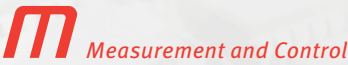
Type	Description	Code
LR1RS+ PSAC	LoRa™ to RS-485 converter with AC power supply	M6215A
LR1RS+ PSDC	LoRa™ to RS-485 converter with DC power supply	M6215C



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LR1RS+  
LoRa™ to RS-485 converter

Distance is no longer an issue



Technology for energy efficiency

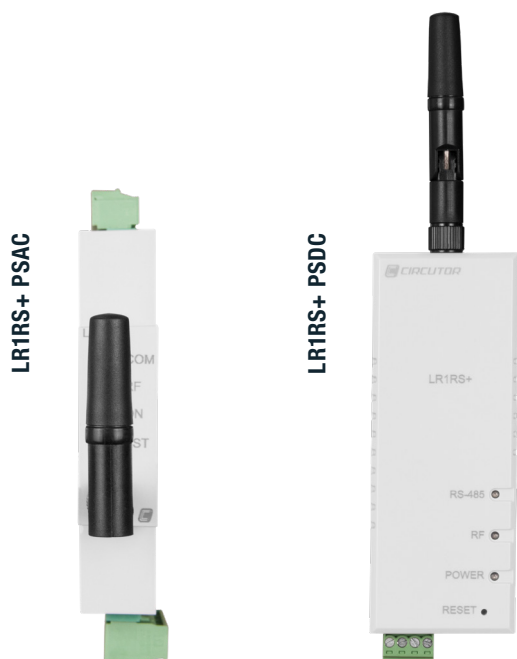


# LR1RS+

LoRa™ to RS-485 converter

## Communicates remotely without wiring.

The **LR1RS+** is a device for converting between the RS-485 physical environment and the LoRa™ long-range wireless network. The unit is fully programmable through its software settings. Up to 32 slave devices can be connected to each communication bus. Communication between the master device and the slaves is completely wireless, thus allowing a more straightforward wireless installation which is also more economical.



### The range

#### LR1RS+ PSAC:

DIN rail single module unit with alternating current.

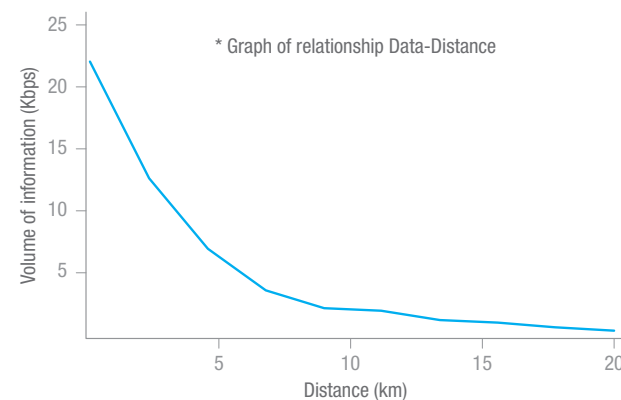
#### LR1RS+ PSDC:

Device with adhesive fastening for panel with direct current.

### Benefits of the LoRa™ protocol

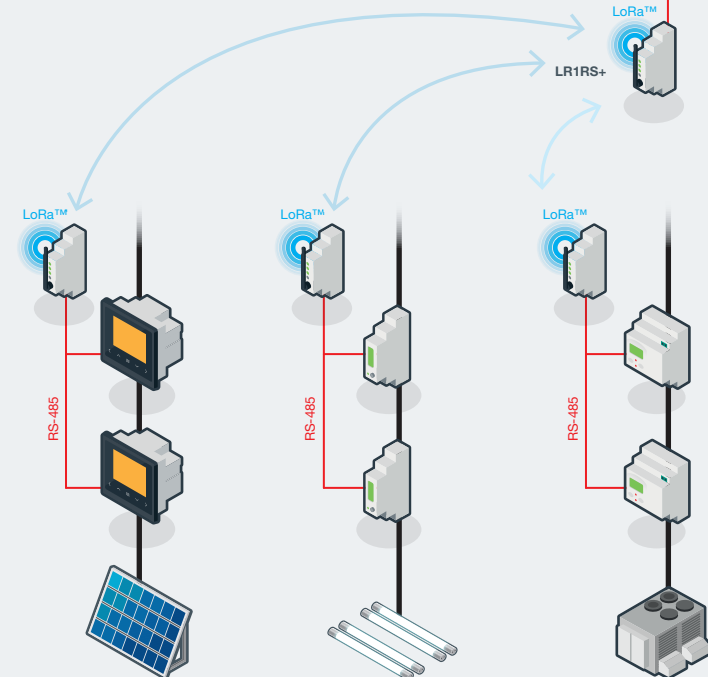
As it allows information to be transmitted wirelessly up to 20 km\*, the LoRa™ communication protocol is the best solution for facilities that must cover long distances within a series of wiring and cost restraints. Characterised by:

- › Secure bidirectional connections
- › Low power consumption
- › Extended communication range
- › Low data rate
- › Low transmission frequency
- › Flexibility of use for the end user.



### Typical installation

LoRa™ communications with the **LR1RS+** gateway are used in this installation. This allows the photovoltaic generation, lighting consumption and climate control consumption to be communicated wirelessly. LoRa™ communications can also be used to centralise all consumption using **PowerStudio SCADA** energy management software.



Characterised by low power consumption, it transmits at reduced speeds in accordance with the distance and amount of information to be sent.

