

DALI RPT: DALI bus repeater

DALI RPT repeater allows to extend the maximum DALI bus length from 300m to 600m and provides additional 250mA of DALI current.

The powered DALI network, normally to which the application controller is connected, must be wired to the IN side, while the extension of the network must be connected to the OUT side.

The IN side is powered by the master bus, while the OUT side is supplied by the repeater, that is powered by 100...240V~ ac mains.

Several DALI RPT repeaters can be connected in parallel at the IN side, see figures in the following. On the contrary, connecting multiple DALI repeaters in series is not possible, due to the unavoidable propagation delay; in other words, it is not possible to cascade more RPT modules.

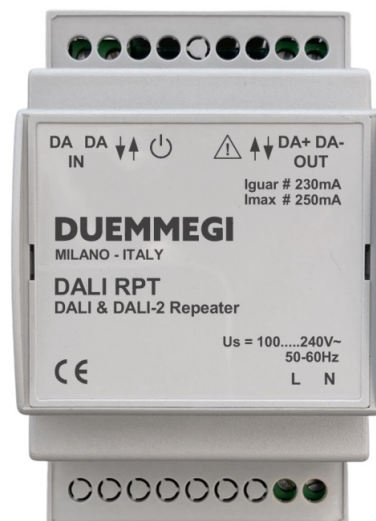
Note that DALI RPT module does not provide additional DALI addresses. The DALI limit of 64 addresses for control gears (LED drivers, relays, etc.) and 64 addresses for control devices (sensors, push-buttons, etc.) still applies.

Features:

- IN side powered by DALI bus master (no aux power supply is needed)
- OUT side powered by ac mains supply
- current consumption IN side < 2mA (1 DALI device)
- 230mA guaranteed DALI current at OUT side
- 3-unit modular housing for DIN rail
- 4 diagnostic LEDs

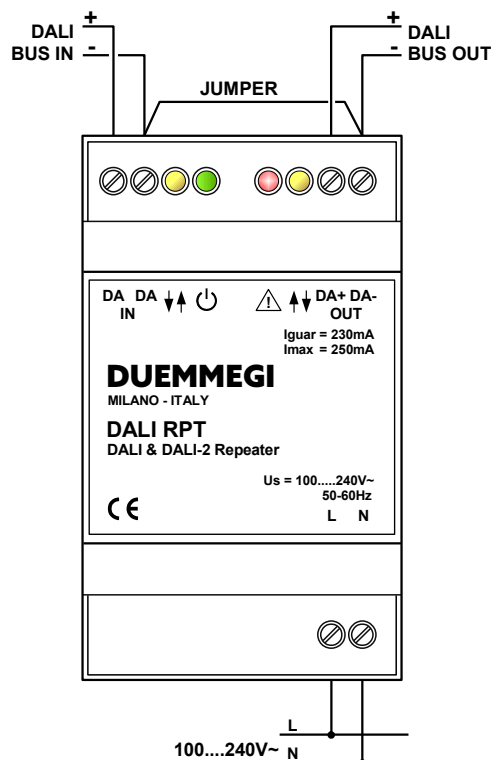
LEDs meaning

	Green: ac mains connected (OUT side powered)
	Yellow: activity on DALI bus (separate for IN & OUT side)
	Red: problems on BUS IN and/or BUS OUT (e.g. short circuit)



Connection diagram

Provide proper protection at L-N terminals of the module (e.g. thermal-magnetic circuit breaker 10A max).



Note: connect the negative terminal of DALI BUS IN to the negative terminal of the DALI BUS OUT (JUMPER in the schematic diagram).

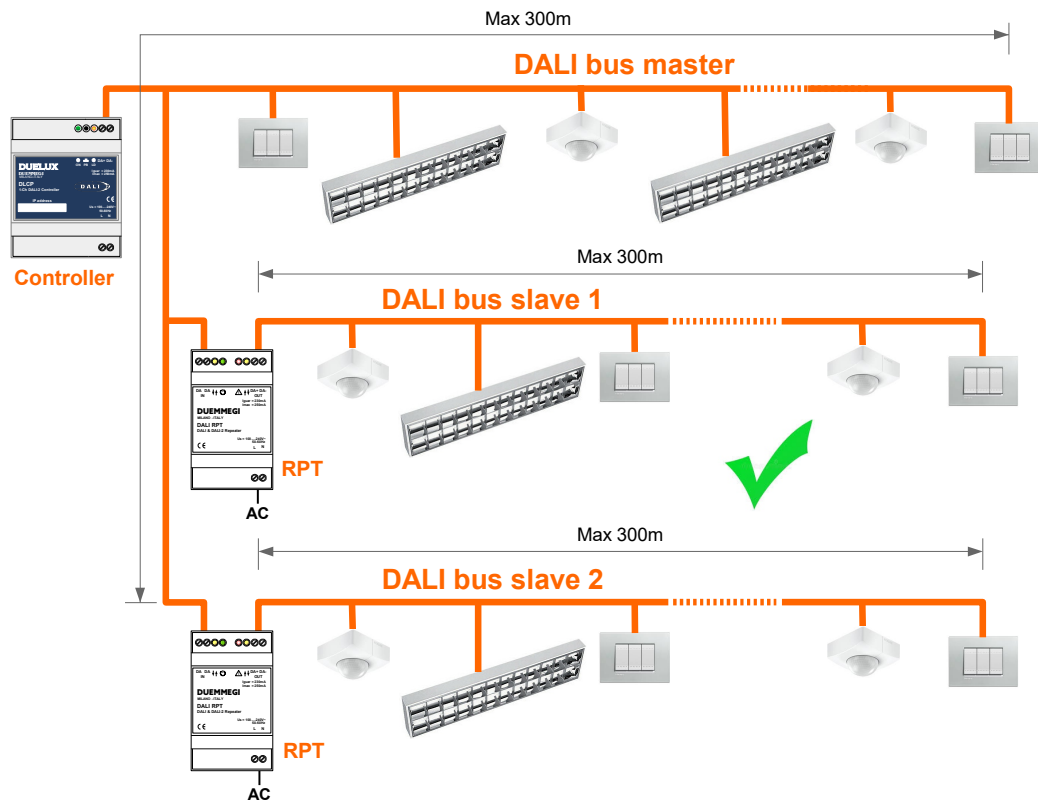


Figure 1a: allowed connections

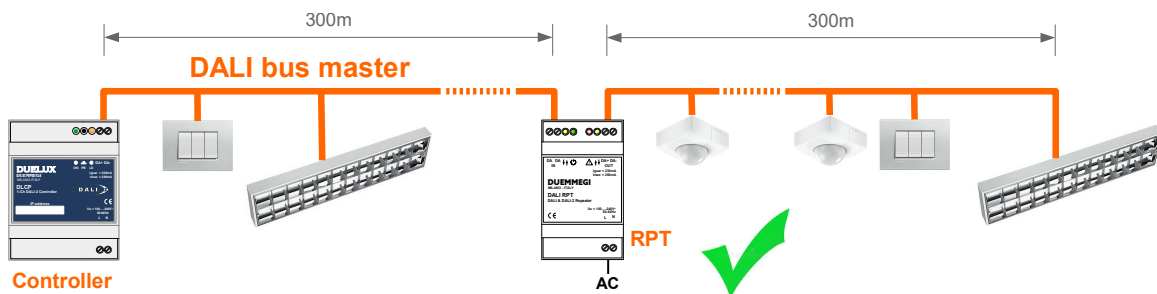


Figure 1b: allowed connections

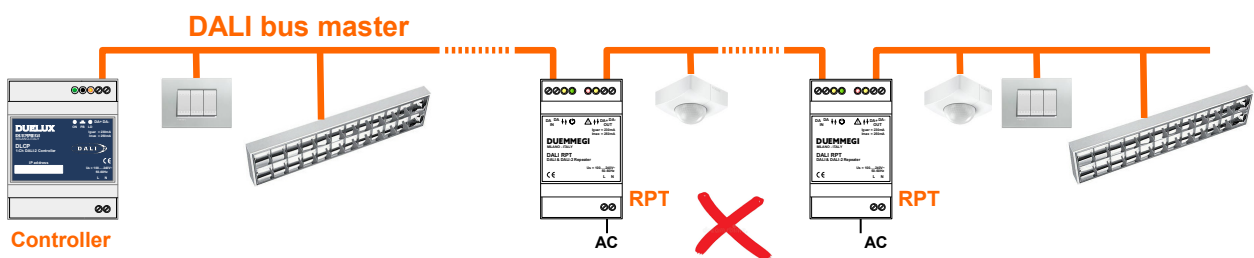


Figure 2: not allowed connections

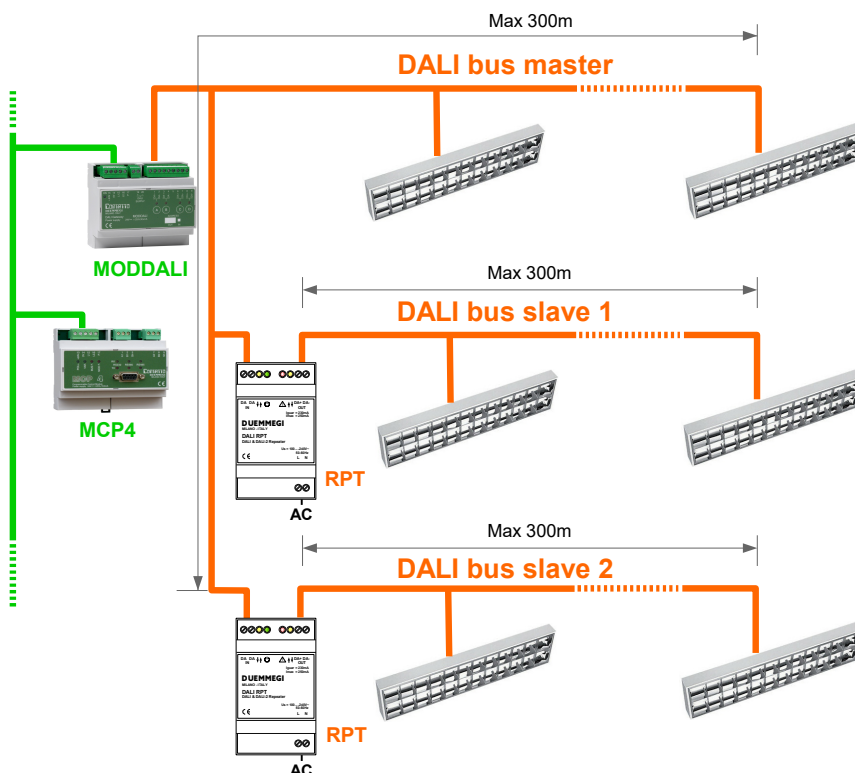


Figure 3: RPT and gateway DUEMMEGI MODDALI

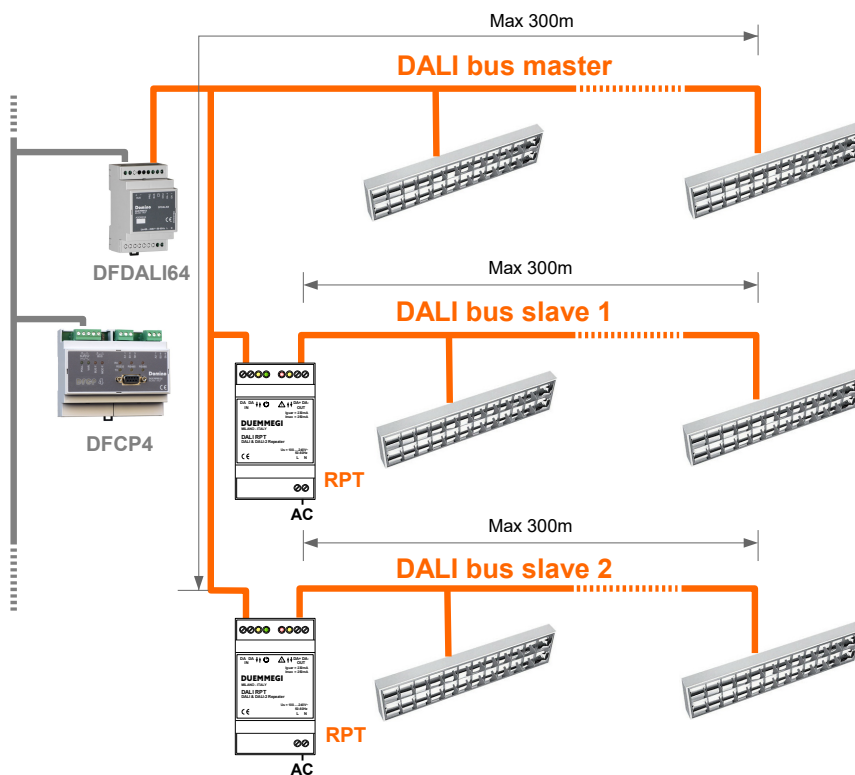


Figure 4: RPT and gateway DUEMMEGI DFDALI64

Allowed and not allowed connections

Figure 1a shows an example of allowed connection, with 2 DALI RPT modules installed in a star network; the master bus is the network where the DALI application controller has been connected, while the two slave buses are the networks at the OUT sides of the RPT modules. The total length of each single section must be less than 300m.

Figure 1b shows another example of allowed connection where there are 2 sections (master bus and slave bus) separated by a DALI RPT which thus allows the total length of the DALI bus to be extended to 600m.

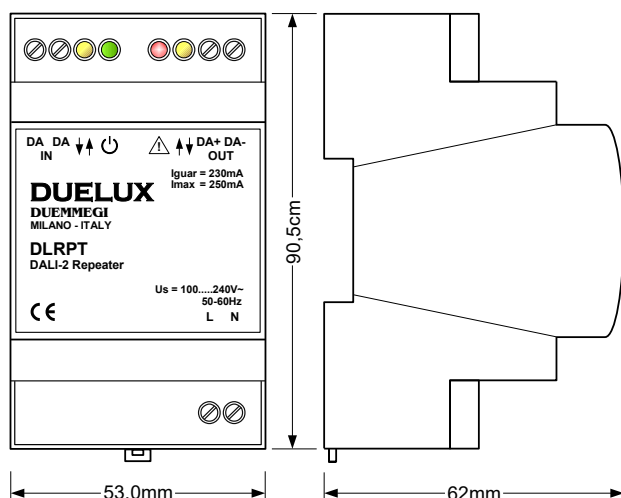
Figure 2 shows a not allowed connection because several RPT modules are connected in cascade.

The DALI RPT module can be used both in installations with **DUELUX** controllers and with gateways for the **DUEMMEGI CONTACTO** and **Domino** bus systems, as well as in combination with DALI devices from different manufacturers. Figures 3 and 4 show examples with **DUEMMEGI** MODDALI and DFDALI64 gateways.

Technical characteristics

Power supply	100...240 V~, 50-60Hz
Current consumption at IN side	2mA MAX (1 DALI device)
Mains power consumption	5W MAX
DALI bus OUT voltage	15V
Guaranteed DALI current	230 mA
MAX DALI current	250 mA
Number of DALI addresses	None
DALI-2 compliant according to	IEC 62386-101
Housing	DIN standard 3-unit
Operating temperature	-5 ÷ +50 °C
Storage temperature	-20 ÷ +70 °C
IP rating	IP20

Dimensions



Correct disposal of this product



(Waste Electrical & Electronic Equipment) (Applicable in the European Union and other European countries with separate collection systems). This marking on the product, accessories or literature indicates that the product should not be disposed of with other

household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable re-use of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Installation and use restrictions

Standards and regulations

The design and the setting up of electrical systems must be performed according to the relevant standards, guidelines, specifications and regulations of the relevant country. The installation, configuration and programming of the devices must be carried out by trained personnel.

The installation and the wiring of the bus line and the related devices must be performed according to the recommendations of the manufacturers (reported on the specific data sheet of the product) and according to the applicable standards.

All the relevant safety regulations, e.g. accident prevention regulations, law on technical work equipment, must also be observed.

Safety instructions

Protect the unit against moisture, dirt and any kind of damage during transport, storage and operation. Do not operate the unit outside the specified technical data.

Never open the housing. If not otherwise specified, install in closed housing (e.g. distribution cabinet). Earth the unit at the terminals provided, if existing, for this purpose. Do not obstruct cooling of the units. Keep out of the reach of children.

Setting up

The physical address assignment and the setting of parameters (if any) must be performed by the specific softwares provided together the device or by the specific programmer. For the first installation of the device proceed according to the following guidelines:

- Check that any voltage supplying the plant has been removed
- Assign the address to module (if any)
- Install and wire the device according to the schematic diagrams on the specific data sheet of the product
- Only then switch on the 230Vac supplying the bus power supply and the other related circuits

Applied standards

This device complies with the essential requirements of the following directives:

- IEC 62386-101
- 2014/30/UE (EMC)
- 2014/35/UE (Low Voltage)
- 2011/65/UE (RoHS)

Note

Technical characteristics and this data sheet are subject to change without notice.