PROSWEDE EL AB
"Vår kunskap – Din styrka"

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RF Control®

02-001 Rev.6

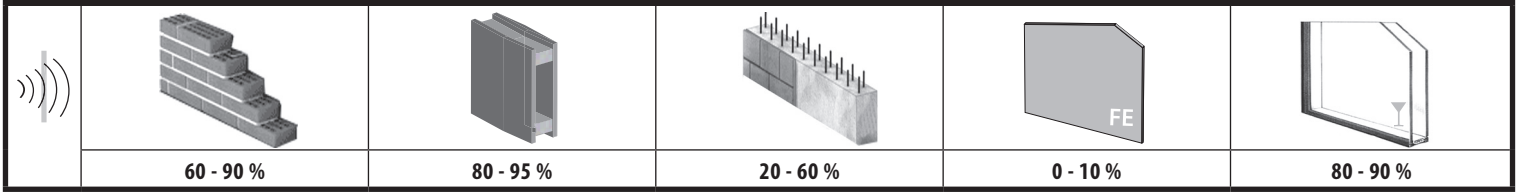
OASiS & Touch Compatible

RFDA-11B RFDA-71B	Dimming actuator	4170,4171
RFDEL-71B	Universal dimming actuator	
RFDAC-71B	Analogue actuator	4280

Warning!

Instruction manual is designated for mounting and also for user of the device. It is always a part of its packing. Installation and connection can be carried out only by a person with adequate professional qualification upon understanding this instruction manual and functions of the device, and while observing all valid regulations. Trouble-free function of the device also depends on transportation, storing and handling. In case you notice any sign of damage, deformation, malfunction or missing part, do not install this device and return it to its seller. It is necessary to treat this product and its parts as electronic waste after its lifetime is terminated. Before starting installation, make sure that all wires, connected parts or terminals are de-energized. While mounting and servicing observe safety regulations, norms, directives and professional, and export regulations for working with electrical devices. Do not touch parts of the device that are energized – life threat. Due to transmissivity of RF signal, observe correct location of RF components in a building where the installation is taking place. RF Control is designated only for mounting in interiors. Devices are not designated for installation into exteriors and humid spaces. The must not be installed into metal switchboards and into plastic switchboards with metal door – transmissivity of RF signal is then impossible, do not use in areas affected by high-frequency interference. RF Control is not recommended for pulleys etc. – radiofrequency signal can be shielded by an obstruction, interfered, battery of the transceiver can get flat etc. and thus disable remote control.

Transmission of radiofrequency signals in various materials



60 - 90 %	80 - 95 %	20 - 60 %	0 - 10 %	80 - 90 %

Characteristics

The Oasis & Touch compatible uses wireless communication between transmitters RF Touch and RF Pilot (wall-mounted controller, keyring, motion detectors, door openers, etc.) and receivers to control home appliances, lighting, electrical equipment, garage gates and roll-up shutters.

It enables you to switch various devices on and off depending on the time of start or your return. It allows controlling and setting various lighting scenes, sunrise or sunset simulations, as well as controlling roll-up shutters, screens and canopies. Using sensors, the RF Control system warns you of any motion of persons or fire in your home.

It is ideal for installation into existing buildings, new constructions as well as refurbished houses, without any need to chisel into the wall. Receivers (actuators) may be installed directly into a suitable mounting box or lighting covers.

- The RF Control system operates at 868 MHz.
- All transmitters are compatible with each other and can be combined with the previous version of the RF Control system.

Warning: Actuators without the OASIS & Touch Compatible designation are not compatible with RF Touch or RF Pilot units.

Transmitter designs:

Dimming actuator
- is used for creating lighting scenes, controlling light or a group of lights.

- RFDA-11B: basic - 1 light scene , OFF function .
- RFDA-71B: multifunction - 7 program functions: 6 different light functions, ON/OFF function
- RFDEL-71B: Multifunction unit- 7 programmable functions: 6 light function, ON / OFF function select the type of load, setting of min. brightness

Actuator with analogue output 0(1)-10V
- RFDAC-71B: for continuous regulation of devices controlled with continuous voltage 0(1) - 10V.
- 7 program functions: 6 different light functions, ON/OFF function.
- output voltage mode 0-10V or 1-10V selected by pressing the Prog button. Buttons > 2s. After releasing the button, the LED flashes, indicating the output mode:
  - the green LED -0-10V
  - the red LED - 1-10V

  All other signalling is indicated by the relevant colour LED.
- mounting box design (such as KU-68).

Power supply	symbol	description
R resistive		Classic or halogen bulb
L inductive		Coil transformer for low voltage halogen bulbs
C capacitive		Electronic transformer for low voltage halogen bulbs
LED		dimmable LED 230 V
ESL/ КЛЛ		Dimmable energy saving lamps

Technical parameters	RFDA-11B	RFDA-71B	RFDEL-71B	RFDAC-71B
Suply voltage:	230 V AC /50Hz			110 - 230V AC / 50-60Hz
Apparent input:	8.3 VA / cos φ = 0.1		1.1 VA	3 VA
Loss input:	0.83W		0.8 W	1.2 W
Supply voltage tolerance:	+10 % / -15 %		+10/ -15 %	+10% / -15%
Connection:	3-vodičové, s "NULOU" / 3-wired, with "NEUTRAL"		4-vodičové, s "NULOU"	5-vodičové, s "NULOU"/ 5-wired, with "NEUTRAL"
Output				
Contactless:	2 x MOSFET			x
Load capacity	250 W*		160 W*	x
Resistive load:	✓			x
Capacitive load:	✓			x
Inductive load:	✓			x
LED	x		✓	x
ESL	x		✓	x
Zero-potential analogous output, max. current:	x			0 (1) -10V DC/ 10mA
The choice of output voltage:	x			0-10V DC, 1-10V DC
Relay contact:	x			1x$AgSnO_2$, spíná fázový vodič/ switch. phase wire
Rated current:	x			16 A / AC1
Switching power:	x			4000 VA / AC1
Switching voltage:	x			250 V AC1
Mechanical life:	x			3 x 10^7
Electrical life (AC1):	x			0.7 x 10^5
Control				
By RF command by transmitter:	868 MHz			868 MHz
Range in open area:	až 160 m			až / up to 200m
Min. programming distance:	20 mm			20 mm
Minimum control distance:	20 mm			20 mm
Button:				
- Prog.:	tlačítko / button PROG (ON/OFF)			tlačítko/button PROG (ON/OFF)
- external:	x		Ano	x
Neon:	x		Ne	x
Other data				
Operation indication:	červená / red LED			červeno-zelená/red-green LED
Supply indication:	x			x
Operating temperature:	-15.. +50 °C		-20 až + 35 °C	-15 .. +50 °C
Storage temperature:	-30 až +70°C			-30 až +70°C
Operating position:	libovolná / any			libovolná / any
Mounting:	volné na přívodních vodičích / loose on connecting wires			volné na přívodních vodičích / loose on connecting wires
Protection degree:	IP 30			IP 30
Overvoltage category:	III.			III.
Pollution degree:	2			2
Output leads :	3 x ∅0.75 mm^2		4 x 0.75 mm^2	3x∅0.75mm^2, 2x ∅2.5 mm^2
Length of leads:	90 mm		90 mm	90 mm
Dimensions:	49 x 49 x 21 mm			49 x 49 x 21mm
Weight:	40 g			52 g
Applicable standards:	EN 60669, EN 300220 , EN 301489; směrnice/directive RTTE, NVč. 426/2000Sb (směrnice/directive 1999/ES)			

* loadability of power factor cos φ=1

Power factor of dimmable LED and ESL bulbs moves in following range: cos φ = 0.95 to 0.4.

Aproximate value of maximal load is achieved by multiplication of loadability of dimmer and power factor connected to a light source.

Type of load	mat. contacts / contact	AC1	AC2	AC3	AC5a uncompensated	AC5a compensated	AC5b	AC6a	AC7b	AC12
RFDAC-71B	$AgSnO_2$ 16A	250V / 16A	250V / 5A	250V / 3A	230V / 3A (690V)	230V / 3A (690VA) do max C=14uF	1000W	x	250V / 3A	250V / 1A
Type of load	mat. contacts / contact	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
RFDAC-71B	$AgSnO_2$ 16A	x	250V / 6A	250V / 6A	24V / 10A	24V / 3A	24V / 2A	24V / 6A	24V / 2A	x

Control RFDEL-71B

RFDEL-71B
Control with connected button:
- Short button push (<0.5s) turns on / off the light
- Long button push (> 0.5s) enables continuous control of light intensity.
- external button is superior to commands of the the RF units (RFTouch, RF Pilot RF Key), RF signal is blocked for 5 seconds after release of
  external buttons

Dimmer control:
- If the light is off, short push (<0.5s will switch on the light to the stored brightness level
- Long push continuously regulate the light intensity. The brightness level is stored after button release
- Minimal brightness setting is for setting of minimal brightness and suppression of spontaneous blinking or switching off
- For ESLbulbs, short button press increase increase brightness to a maximum level (to „spark" on the gas discharge in ESL) and then drops to the preset brightness level

Set the minimum brightness:
- Minimum brightness setting turned on when we perform load by turning the potentiometer min. brightness to the desired value.
- Min. brightness is automatically stored after cca. 3 seconds since the last potentiometer position change.

Setting the load type:
- Setting the type of load is performed with disconected load by turning the light source selector to the desired position

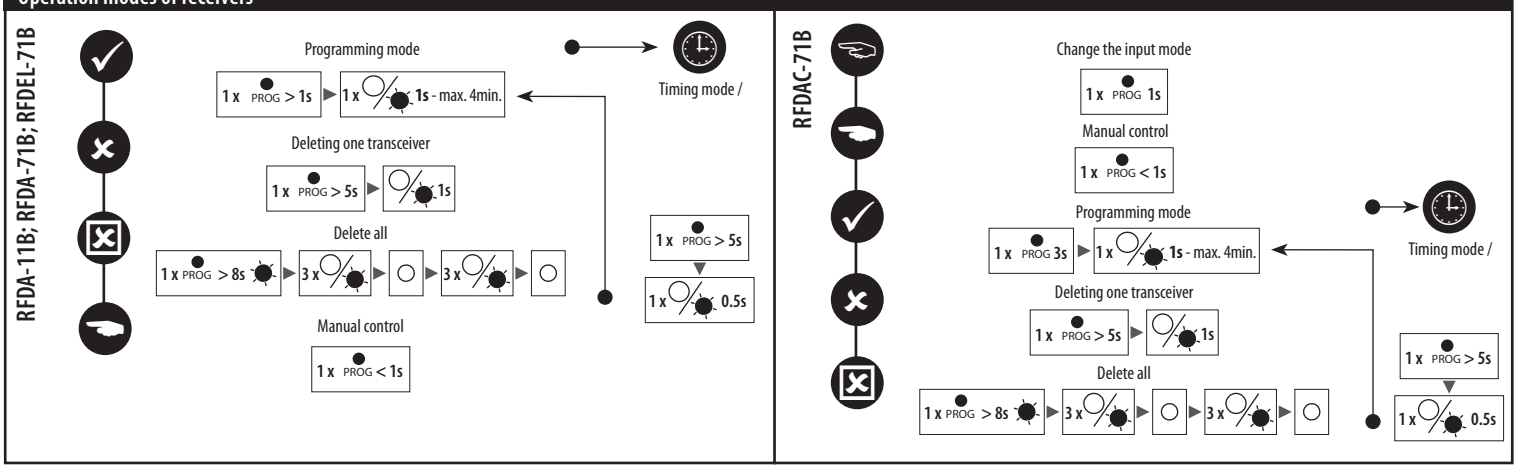
Description of device protection
RFDEL device is protected against overheating, short-term and long-term overload:
Errors are signaled by rapidly flashing STATUS LED on the front panel of RFDEL
- Thermal protection: activated at constant output overload or insufficient cooling of the device.
  Protection is active until the dimmer cool down to the working temperature. Then you can turn on the dimmer again. Remove the fault by providing a better cooling of the dimmer, reducing the input of the connected load, or switching to correct position of the light source
- Short-term overload: activates by a large short-term overload, such as short-term short-circuiting.
  The protection is signalised by a short flashing of the connected load. Remove the fault by reducing amount of connected load,
  or by switching to the correct position of the light source
- Long-term overload: activated by permanent short circuit, output overload or excessive amount of connected load.
  The protection device turns off after 5 minutes and dimmer tries to switch on again. Remove the fault by reducing amount of connected
  load and check of the wiring by qualified electrician

Additional Information:
Do not mix more types of light sources!
Do not try to use energy saving bulbs that are not labeled as dimmable!
Incorrect setting of the type of light source affects the extent and dimming (but no damage to the dimmer or load)
Incorrect setting of the type of load can cause overheating of dimmer
Maximum number of light sources depends on their internal structure
List of tested light sources see Table. on www.rfcontrol.cz in / data / svetelne_zdroje_RFDSC.pdf

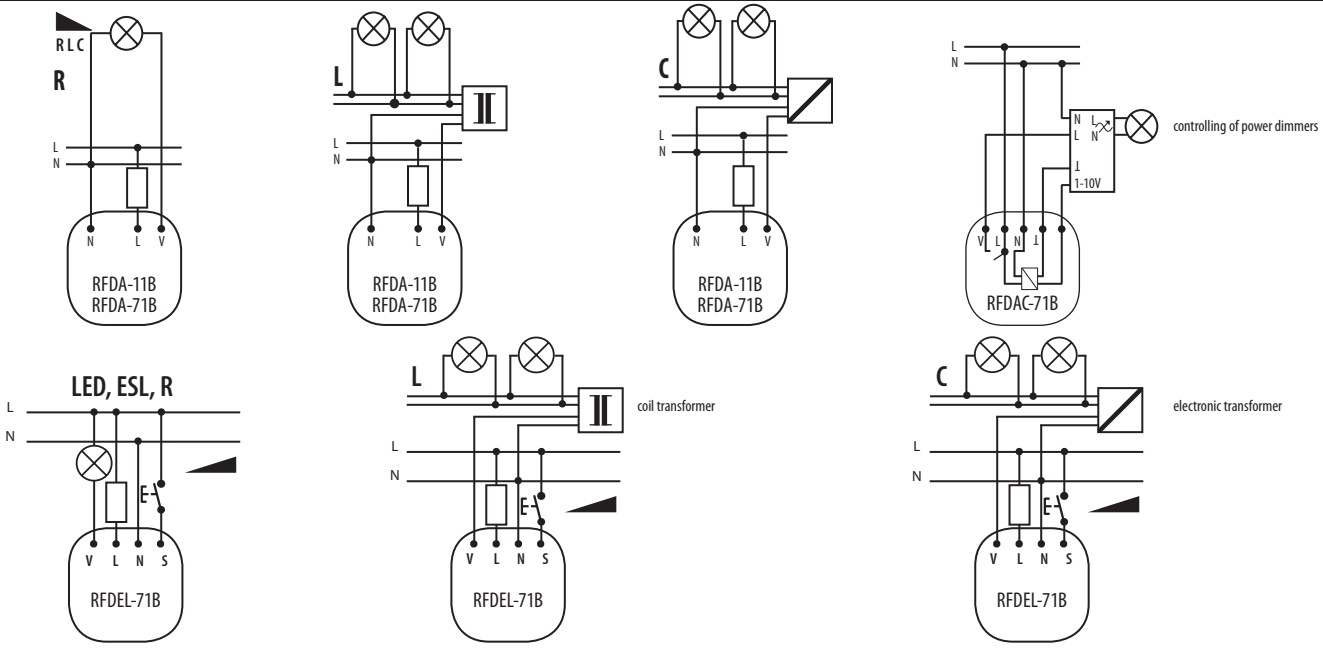
Legend

- by RF KEY and RFWB-40/G is first control position set just by one touch of control element, second control position is set automatically
- press any control element (first next press after 1s)
- press exact control element
- LED on receiver is flashing in 1s interval
- t setting
- press programmable button on receiver
- LED flashs 2x in each 1s interval

Operation modes of receivers

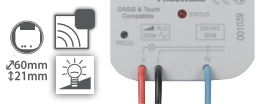


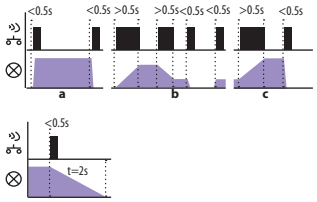
Connection

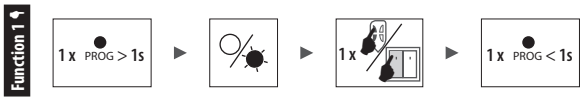


Single-function receivers

RFDA-11B







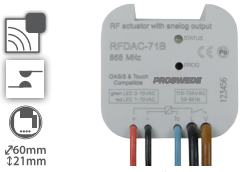
EN Example: Programming of receiver RFDA-11B with wireless switch RFWB-40/G or key-chain RF KEY

Press of programming button on receiver RFDA-11B for 1second will activate receiver RFDA-11B into programming mode. LED is flashing in 1s interval. Select and press one button on wireless switch or key-chain, to this button will be assigned Function 1 (regulation of intensity). Second control position –open, will be assigned automatically (on the same half of wireless switch/ key-chain).

Press of programming button on receiver RFDA-11B shorter then 1 second will finish programming mode (LED switches off).

Analogous receivers

RFDAC-71B



EN Press and hold the Prog button for 1s to select the output voltage mode 0-10V or 1-10V.

After releasing the button, the LED flashes, indicating the output mode: the green LED - 0-10V, the red LED - 1-10V. All other signalling is indicated by the relevant colour LED.

For both output modes, the RFDAC-71B analogous actuator offers 7 program functions, which are identical to RFDA-71B functions. For controlling thermostatic heads, it is recommended for easier operation to select Function 5 to open the valve and Function 6 to close the valve.

An example for programming the RFDAC-71B receiver with RFWB-40/G wireless switch for controlling the thermostatic head:

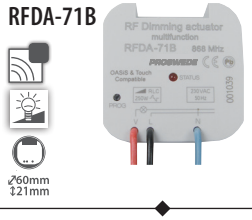
Press and hold the Prog button on the RFDAC-71B receiver for 1s to set the receiver to the output voltage 0-10V; the green LED flashes. Press and hold the Prog button for 3s to set the receiver into the programming mode. The green LED flashes at 1-second intervals. By pressing the selected button on the wireless switch 5 times assign Function 5 "Sunrise simulation" - open the valve. By pressing the selected button (other than in the previous case) on the wireless switch 6 times set Function 6 "Sunset simulation" - close the valve. Press the Prog button on the RFDAC-71B receiver for less than 1s to save the programme and finish the programming mode (the green LED goes off).

An example of programming the RFDAC-71B receiver for the "Sunrise simulation" for 5mins to control the dimmable lighting with the RF KEY keyring:

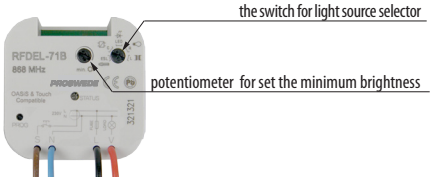
Press and hold the Prog button on the RFDAC-71B receiver for 1s to set the receiver to output voltage 1-10V; the red LED flashes. Press and hold the Prog button for 3s to set the receiver into the programming mode. The red LED flashes at 1-second intervals. The required assignment of the "Sunrise simulation" function is done by pressing the selected keyring button 5 times. Pressing and holding the Prog button for more than 5 seconds will set the receiver into the timer mode. The red LED flashes 2 times at 1-second intervals. The period of the "Sunrise simulation" will start (the time until the light lights up completely). After the required 5 minutes have elapsed, finish the timer mode by pressing the keyring button, to which the required "Sunrise simulation" function is assigned. The 5-minute interval is thus stored in the receiver memory. Press and hold the Prog button on the RFDAC-71B receiver for less than 1 second to save the programme and exit the programming mode (the red LED goes off).

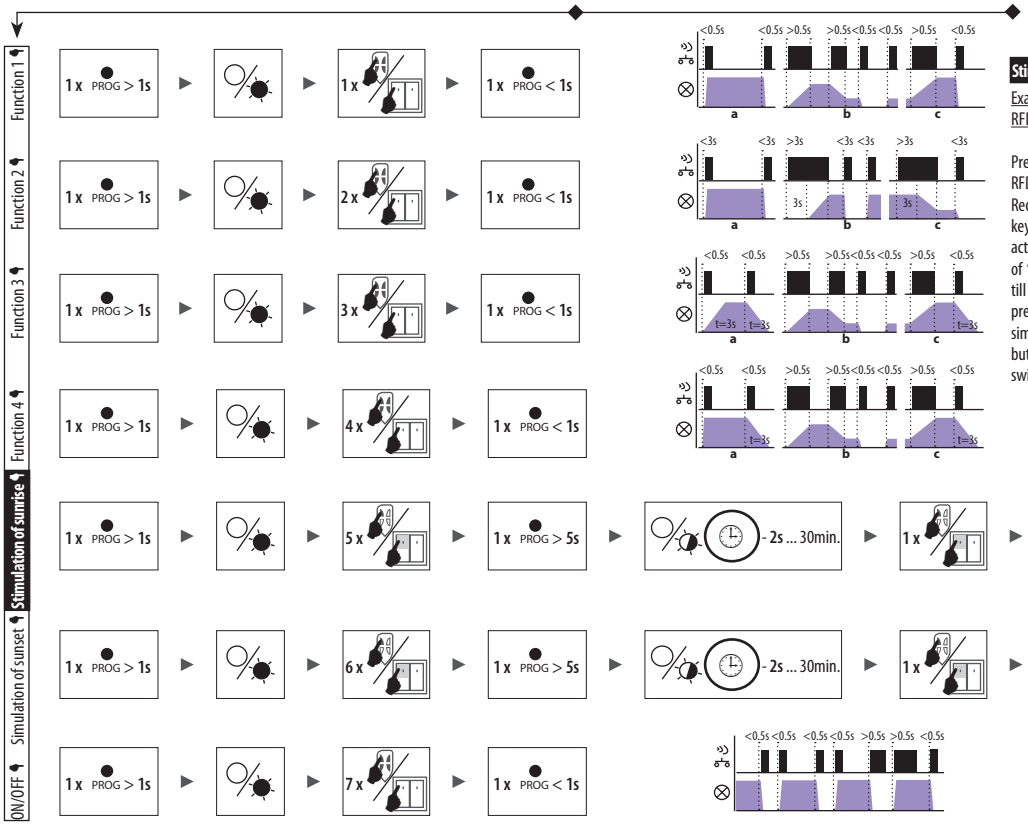
Multifunction dimming receivers

RFDA-71B



RFDEL-71B





Stimulation of sunrise

Example: Programming of function "Sunrise simulation" for 5 min on receiver RFDA-71B, RFDEL-71B

Press of programming button on receiver RFDA-71B for 1second will activate receiver RFDA-71B into programming mode. LED is flashing in 1s interval.

Required "Sunrise simulation" function is assigned to any button on wireless switch or key-chain, which is pressed 5x. Press of programming button longer then 5 seconds, will activate receiver into timing mode. LED flashs 2x in each 1s interval. Time for duration of "Sunrise simulation" starts to count out (time, for which will light comes from 0 up till full light luminance). After expiration of required 5 min is timing mode stopped by press of button (on wireless switch or key-chain), to which was assigned function "Sunrise simulation". 5 min interval is than saved into memory of receiver. Press of programming button on receiver RFDA-71B shorter then 1 second will finish programming mode (LED switches off).

Type of load	lamp,halogen light	low-voltage el.bulbs 12-24V wound trans.	low-voltage el.bulbs 12-24V el. transformers	LED bulbs	saving fluorescent lamps	switching management	
				230V AC dimmable	dimmable	incline edge	descending edge
RFDA-11B, RFDA-71B	max. 250 W	max. 250 W	max. 250 W	cannot be connected		automaticaly according to load	
RFDEL-71B	max. 160 W	max. 160 W	max. 160 W	max. 160 W		By switch for selection of light source	