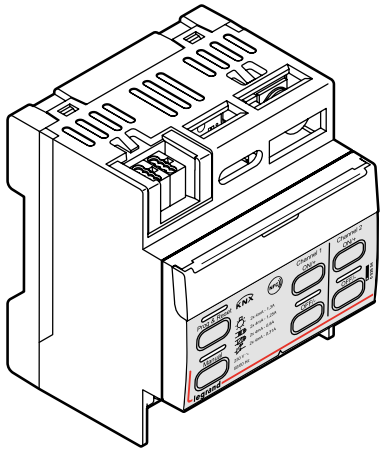
KNX modular dimmer 2 x 300 W

Cat. No(s): 0 026 54



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1. USE

The KNX modular dimmer Cat No. 0 026 54 is used for controlling dimming on two circuits up to 300 W per channel.
It is compatible with incandescent bulbs, high and low voltage halogen lamps and dimmable LEDs.
The associated load (R, L or C type) is identified automatically, or manually by the user.
To check that the wiring is correct, each channel can be controlled locally on the controller by means of push-buttons and LEDs on the front panel.
The device operating parameters can be configured with ETS and modified using NFC technology via the Legrand Close Up app.

The main application program functions are as follows:
- Configuration of dimming speed
- Definition of min./max. dimming thresholds to ensure consistent dimming
- Configuration of the scene control function (8 scenes max. per channel)
- Definition of a hold threshold and a time delay
- Selection of the load state after a power failure
- Configuration of error message objects
- Configuration of time delay indicator objects

2. TECHNICAL CHARACTERISTICS

2.1 Electrical characteristics

- Voltage: 240V~
- Frequency: 50/60 Hz
- Terminal type: screw
- Terminal capacity: 1 x 2.5 mm² or 2 x 1.5 mm²
- BUS consumption: 3 mA
- Table of loads which can be controlled (per channel)

		R (trailing or leading mode)	L (leading mode)			
		①	②		③ Dimmable	④ Dimmable
			12 VAC			
240 V~	Max.	300 W	200 VA or 30 ☼	200 VA or 15 ☼	300 VA	100 W or 8 ☼
	Min.	1 W	1 VA	1 VA	1 VA	1 W

		T (trailing mode)	/	L (leading mode)
		⑤ Dimmable + Dimmable LED		⑥ Dimmable (**)
		12 VAC		
240 V~	Max.	200 VA or 30 ☼	200 VA or 10 ☼	75 W or 8 ☼
	Min.	1 VA	1 VA	1 W

1 - Halogen lamp
2 - ELV halogen lamp and LED lamp with separate electronic or ferromagnetic ballast
3 - Fluorescent tubes with dimmable separate electronic ballast
4 - Compact fluorescent bulbs with dimmable built-in electronic ballast
5 - ELV halogen lamp and LED lamp with dimmable separate electronic ballast
6 - LED bulb with dimmable built-in electronic ballast

(*) Only use transformers designed to operate with electronic switches.
(**) Only use dimmable LEDs with this logo on the packaging.

2. TECHNICAL CHARACTERISTICS (continued)

2.2 Mechanical characteristics

- IP 20
- Number of modules: 4
- Weight: 170 g

2.3 Climate characteristics

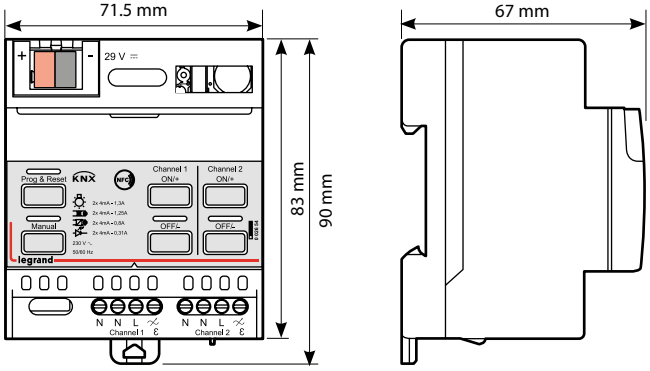
- Operating temperature: -5°C to +45°C

2.4 NFC characteristics

- 13.56 MHz - ≤ 20 dBµA

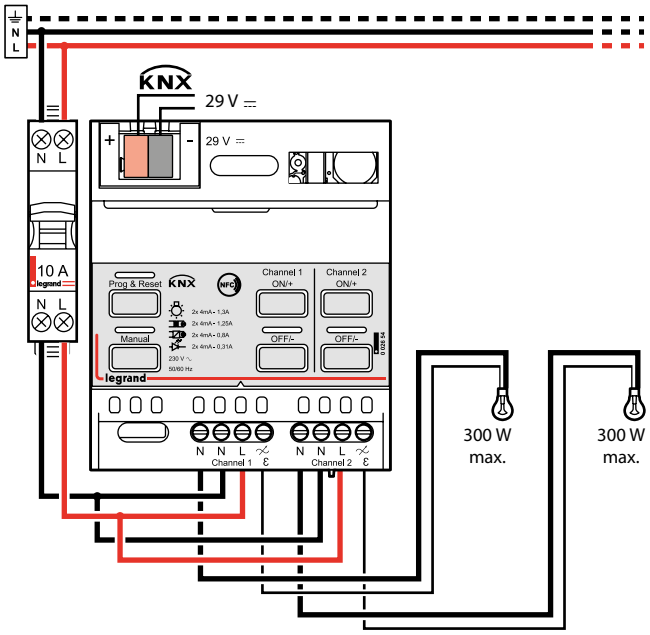
Important:
Take the transformer losses into account when calculating the power. The transformers must be loaded at more than 60% of their power.

3. DIMENSIONS



4. CONNECTION

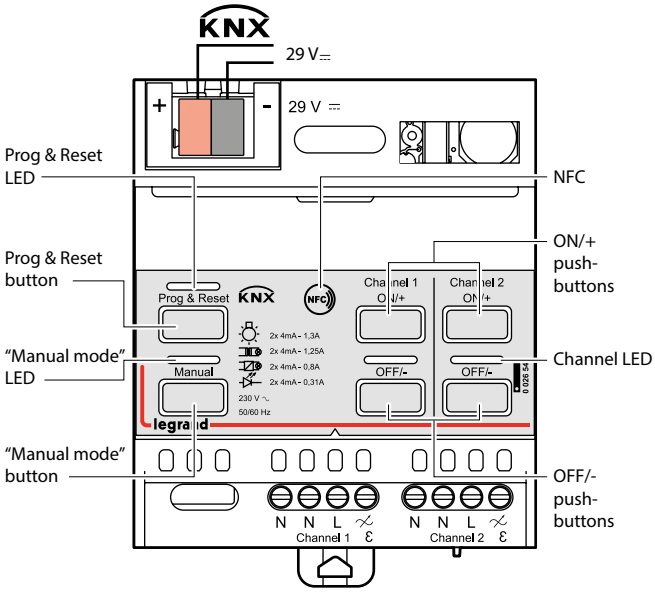
4.1 Single-phase wiring



Important:
Install a common circuit breaker for both channels since the neutrals are interconnected in the device.

5. OPERATION

■ 5.1 Description of the device



5.1.1 Description of push-buttons

The push-buttons on the front are used to change the settings. Depending on how long they are pressed for (short < 2 s or long 10 s), the device behaves differently.

ACTION	CONDITION	Push-button	Push-button time
Enables or disables physical addressing teach mode	No global error on channel 1/channel 2	Prog & Reset	Short
Factory reset	Physical addressing teach mode active	Prog & Reset	Long (10 s)
Enables or disables manual mode	Physical addressing teach mode disabled	Manual	Short
Acknowledges an error (global; C1 and C2)	Error (global; C1 and C2)	Manual	Long (10 s)
Switches on the load	Manual mode enabled	ON/+ Channel 1	Short
Increases the load to maximum	Manual mode enabled	ON/+ Channel 1	Long (> 2 s)
Switches off the load	Manual mode enabled	OFF/- Channel 1	Short
Decreases the load to minimum	Manual mode enabled	OFF/- Channel 1	Long (> 2 s)
Switches on the load	Manual mode enabled	ON/+ Channel 2	Short
Increases the load to maximum	Manual mode enabled	ON/+ Channel 2	Long (> 2 s)
Switches off the load	Manual mode enabled	OFF/- Channel 2	Short
Decreases the load to minimum	Manual mode enabled	OFF/- Channel 2	Long (> 2 s)

5. OPERATION (continued)

■ 5.1 Description of the device (continued)

5.1.2 Description of LED flashing

Each push-button press is associated with a flash and an LED colour. The various flashing types and LEDs are detailed in the table below.

LED	Colour	Behaviour	Indication
Prog & Reset	Red	Steady	Physical address teaching
Prog & Reset	Red	Flashing quickly	Reset in progress
Manual	Red	Flashing quickly	BUS not connected (only on starting)
Manual	Orange	Steady	Manual mode enabled
Manual	Orange	Flashing slowly	Not addressed
Manual	Orange	Flashing quickly	Not programmed
Channel 1	Green	Steady	Load switched on
Channel 1	Green	Flashing slowly	Channel not connected
Channel 1	Green	Flashing quickly	Channel initialisation
Channel 1	Magenta	Flashing	Teaching in progress
Channel 1	Red	Steady	Load short-circuited
Channel 1	Red	Flashing slowly	Overheating
Channel 1	Red	Burst flashing	Overload
Channel 2	Green	Steady	Load switched on
Channel 2	Green	Flashing slowly	Channel not connected
Channel 2	Green	Flashing quickly	Channel initialisation
Channel 2	Magenta	Flashing	Teaching in progress
Channel 2	Red	Steady	Load short-circuited
Channel 2	Red	Flashing slowly	Overheating
Channel 2	Red	Burst flashing	Overload

■ 5.2 Load teach phase

At the first switch-on, the load teach phase is launched. During this phase, the load will switch on, switch off, dim and sometimes flash.

The LED (Channel 1 and Channel 2 push-buttons) associated with the channel flashes alternately in magenta during the teach phase.

The teach phase lasts approximately 30 seconds. It is complete when the push-button LED lights up.

Caution:

Following a power failure, the teach phase will be launched after pressing a switch-on command (if automatic mode has been selected).

5. OPERATION (continued)

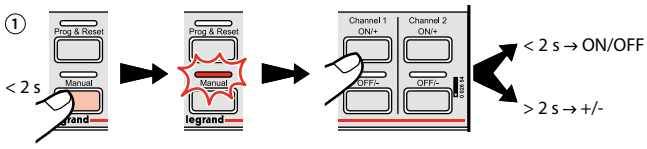
■ 5.3 Manual mode

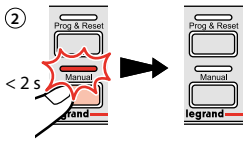
Manual mode is used to switch on and off or dim on each channel.

For dimming, the dimming level is independent of the KNX programming.

After a short press on the manual button, the corresponding LED comes on with a steady red light, and channels 1 and 2 can then be switched ON/OFF with a short press on the up and down buttons of each channel.

A long press on these buttons will brighten or dim the light.





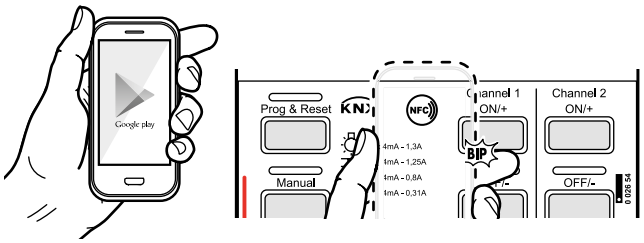
To exit manual mode, press the "Manual" button briefly, and when the corresponding LED goes off, the product has switched to automatic mode.

5. OPERATION (continued)

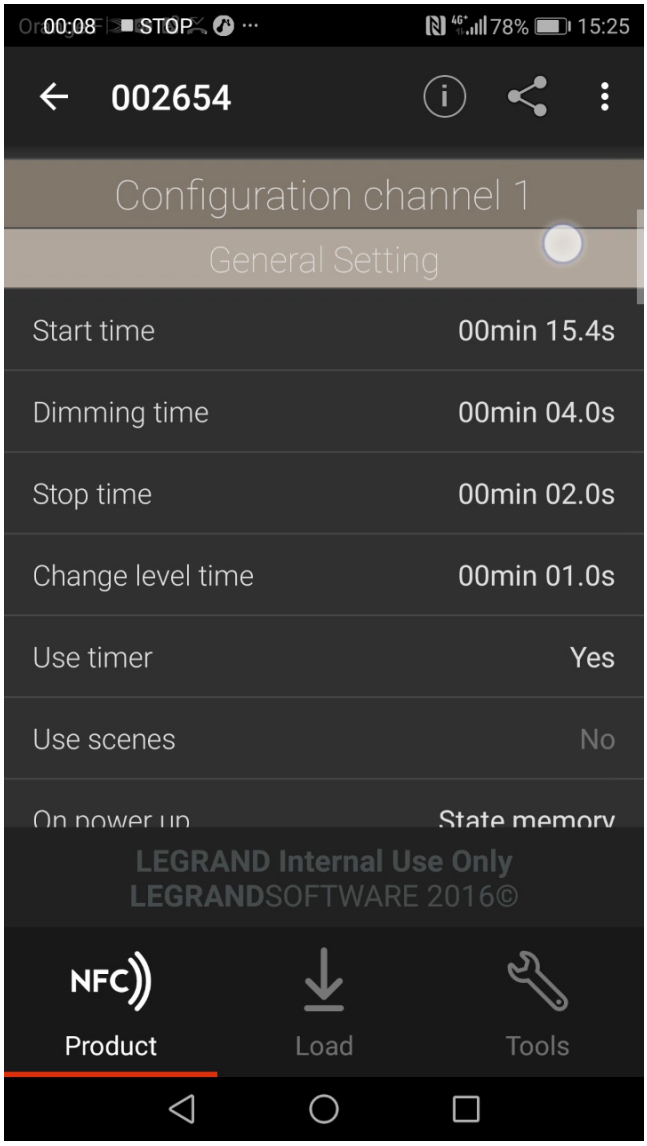
■ 5.4 NFC settings

The parameters can be set using NFC after downloading the "Close Up" app from Google Play or www.legrandoc.com with an NFC-compatible Android mobile phone.

The device must not be connected to the mains during parameter setting.



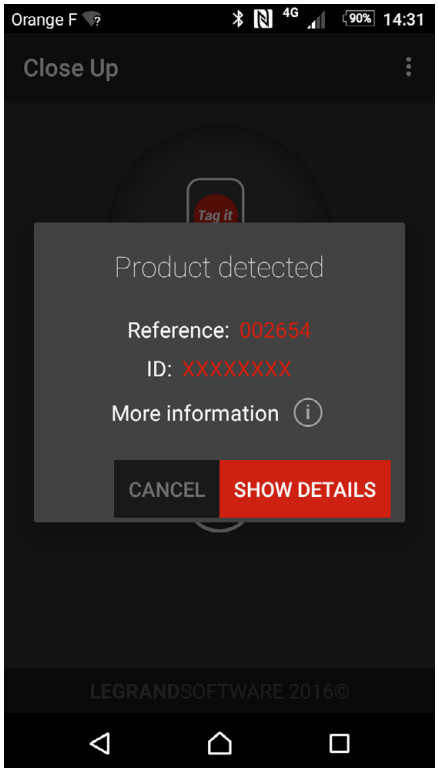
See video below



5. OPERATION (continued)

5.4.1 Channel configuration

After scanning the device: select "**see details**" to access the settings.



Both channels have the same settings:
- Switch-on time
- Dimming time
- Switch-off time
- Change of level time
- Use timer (yes/no)
- Use scenes (yes/no)
- On energisation (Status memory/Always on/Always off)

5.4.2 Load settings

This function is used to modify the following parameters:
- Load detection (Forced or Automatic)
- Type of switching (Trailing or Leading)
- Load type: - Incandescent (300 W max.)
  - Transformer (300 VA max.)
  - Compact fluorescent (100 W max.)
  - LED (75 W max.)
  - LED with noise reduction (40 W max.)
- Maximum level (20% to 100%)
- Minimum level (2% to 85%)

5.4.3 Scene settings

This is used to configure the different scenes from A to H (Scene number, level, etc):
- Use scene A…H (yes/no)
- Use backup (yes/no)
- Scene number (select number)
- Scene level (20% to 85%)
- Time to reach the level

6. STANDARDS

EN 301 489-1 V1.9.1 (09/2011)
EN 301 489-3 V1.9.2 (08/2013)

IEC 60669-2-5 (10/2013)
NF/EN 50428(09/2005)+ A1 (10/2007)+A2 (09/2009)
NF/EN 62369-1 (08/2009)

EN 300 330-1 V1.8.1 (03/2015)
EN 300 330-2 V1.6.1 (03/2015)

SIMPLIFIED DECLARATION OF CONFORMITY

The undersigned,

Legrand

declares that radio equipment Cat. No. 0 026 54
conforms to Directive 2014/53/EU.
The full text of the EU declaration of conformity
can be found at the following web address:

www.legrand.com

Marking: CE, KNX, NFC

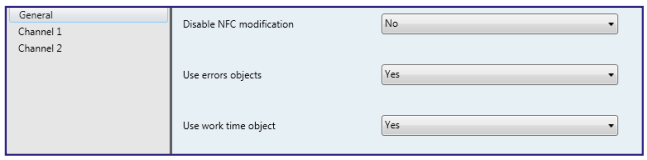
7. COMMUNICATION OBJECTS

■ 7.1 List of objects

The following communication objects are available for each channel.

1	Channel 1 Switch	1 bit	C	-	W	-	-
2	Channel 1 Switch Status	1 bit	C	-	-	T	-
3	Channel 1 Level	1 Byte	C	-	W	-	-
4	Channel 1 Level Status	1 Byte	C	-	-	T	-
5	Channel 1 Dimming	4 bit	C	-	W	-	-
6	General Scenes	1 Byte	C	-	W	-	-
7	Channel 1 Lock Device	1 bit	C	-	W	-	-
8	Channel 1 Forced	2 bit	C	-	W	-	-
9	Channel 1 Maximum Set Value	1 Byte	C	-	W	-	-
10	Channel 1 Minimum Set Value	1 Byte	C	-	W	-	-
11	Channel 1 Timer delay	1 Byte	C	-	W	-	-
12	Channel 1 Timer level	1 Byte	C	-	W	-	-
13	Channel 1 Standby delay	1 Byte	C	-	W	-	-
14	Channel 1 Standby level	1 Byte	C	-	W	-	-
15	Channel 1 Reset timers	1 bit	C	-	W	-	-
16	Channel 1 Work Time	4 Byte	C	R	-	T	-
17	Channel 1 Reset Work Time	1 bit	C	-	W	-	-
18	Channel 1 Global Error	1 bit	C	R	-	T	-
19	Channel 1 Overload Error	1 bit	C	R	-	T	-
20	Channel 1 Temperature Error	1 bit	C	R	-	T	-
22	Channel 1 Shortcut Error	1 bit	C	R	-	T	-

■ 7.2 "General" parameter



"Disable NFC modification"

No: Parameter modification using NFC is active
Yes: Parameters modified with NFC will not be saved

"Use error objects"

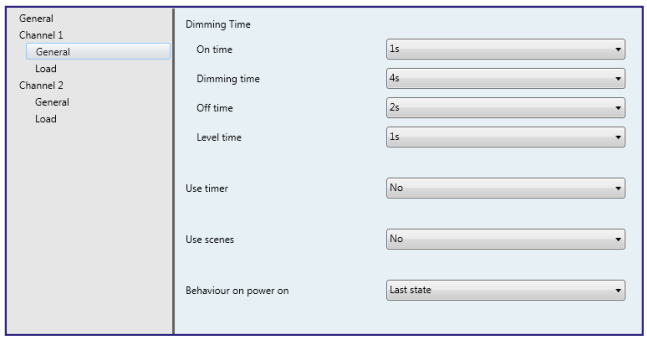
No: Errors are not identified
Yes: Errors relating to objects are listed

"Use work time object"

No: Objects relating to duration do not appear
Yes: Objects relating to work time are listed

■ 7.3 Channel 1 and 2 parameters

7.3.1 "General" parameters



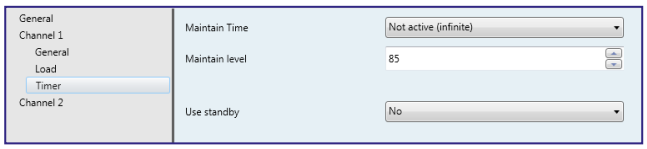
Parameter	Default values	Possible values	Description
On time	1 s	1 s - 1 H	Time taken to go from 0 to 100% when the control unit receives an ON command
Dimming time	4 s	1 s - 1 H	Time taken to go from 0 to 100% when the control unit receives a dimming command
OFF time	2 s	1 s - 1 H	Time taken to go from 100% to 0 when the control unit receives an OFF command
Level time	1 s	1 s - 1 H	Time taken to go from 0 to 100% when the control unit receives a level command

7. COMMUNICATION OBJECTS (continued)

■ 7.3 Channel 1 and 2 parameters (continued)

7.3.2 "Use timer" parameter

No: The function is not accessible
Yes: The timer function is available



"Maintain time"

Not active (infinite) (default value)
1s…24h

"Maintain level"

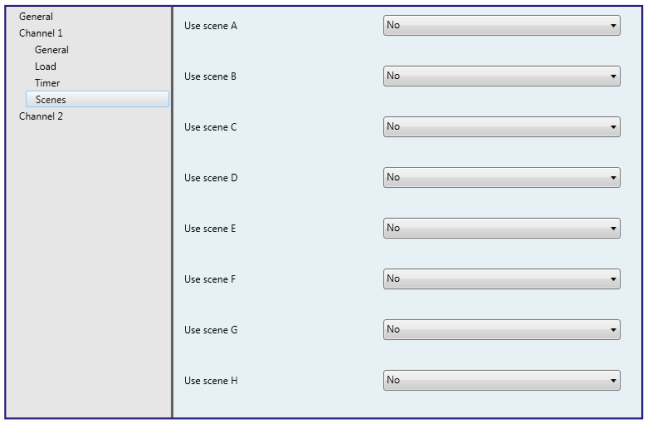
85…

"Use standby"

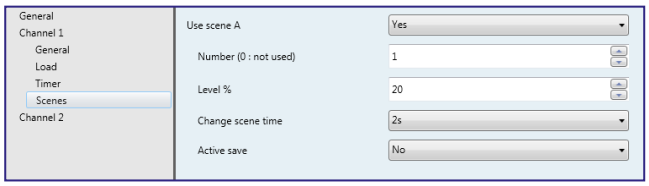
No/Yes

7.3.3 "Use scenes" parameter

No: The function is not accessible
Yes: The scenes function is available



For each scene, the following parameters are accessible



"Number (0: not used)"

1 (default value), the scene number can be between 1 and 64

"Level %"

20 (default value), the value of the level varies between 1 and 100

"Change scene time"

2s (default value), this value can vary from 1 s to 1 H

"Active save"

No (by default)
Yes: saves the scene level

7.3.4 "Behaviour on power on" parameter

Behaviour on power on

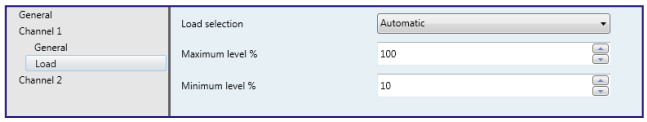
Last state (default value): state before the failure
Always On
Always Off

7. COMMUNICATION OBJECTS (continued)

■ 7.3 Channel 1 and 2 parameters (continued)

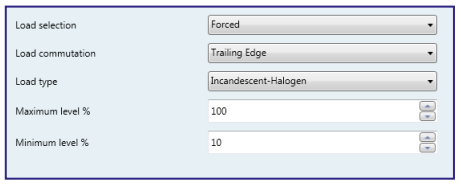
7.3.5 "Load" parameter

This parameter is used to select loads.



"Load selection"

Automatic (by default): automatic load recognition.
Forced: if forced mode is chosen, it opens the possibility of choosing other options:



"Load commutation" (Load switching)

Trailing Edge (by default)
Leading Edge

"Load type"

Parameter which is used to select the load type:
- **Incandescent-Halogen** (by default)
- Transformer
- Compact fluorescent
- LED < 40 W
- LED < 75 W

"Maximum level %"

100 (default value), this value can vary from 1 to 100

"Minimum level %"

10 (default value), this value can vary from 1 to 100

8. TROUBLESHOOTING

■ 8.1 On the dimmer in the panel

PROBLEM	CAUSES	SOLUTIONS
The dimmer does not react when the push-buttons on the front are pressed	Device jammed	1- Check mains power and KNX BUS are present. 2- Disconnect the mains power.
Flashing red ON/OFF LED	Thermal overload	1- Check and adjust the load total power (overload). 2- Temperature in the enclosure too high: leave 1 module empty on each side of the dimmer. Leave the device to cool (15 min) and press the Prog & Reset button briefly to acknowledge the fault.
Steady red Prog and Reset LED	Overload protection activated	1- Check and adjust the load total power (overload). 2- Check the loads are working properly (supply the loads directly from the mains). 3- Acknowledge the fault by pressing the Prog & Reset button briefly.
Steady red ON/OFF LED	Short-circuit on the load circuit	1- Check that one of the loads has not been destroyed. 2- Check the wiring. 3- Acknowledge the fault by pressing the Prog & Reset button briefly.
Other fault	General fault	1- Disconnect the mains power. 2- If this does not work, revert to factory settings. 3- Contact customer service.
The load flickers when on dimming minimum level	The minimum dimming level is too low for the load	1- Check whether the load is dimmable. 2- Check that there is not a mixture of load types. 3- Set the dimming minimum level.
The load flickers all the time	Load type/dimmer setting compatibility problem (CFL mode, leading or trailing mode, etc)	1- Check whether the load is dimmable. 2- Check that there is not a mixture of load types.
The load does not react correctly to the dimming request	Inappropriate setting	1- Check whether the load is dimmable. 2- Check that there is not a mixture of load types. 3- Configure the dimmer in level memory mode.
At switch-on, the load varies for 30 sec.	Load teach phase	1- Set the dimming minimum level.
The load does not switch on at minimum level	Inappropriate setting	1- Disable the level memory. 2- From the load type mode menu, choose "CFL". 3- If this does not work, please contact customer service.
The load does not switch on	General fault	1- Check mains power is present. 2- Check the load. 3- Check the dimmer status (see dimmer diagnostics table). 4- Check the wiring.

■ 8.2 On the NFC function

PROBLEM	CAUSES	SOLUTIONS
Communication problem with NFC device	NFC device (phone or tablet) radio communication not being detected	1- Check whether the "Close Up" app has been installed on the device. 2- Identify the location of the mobile device's NFC antenna (Logo or see manual), and place it on the dimmer NFC logo. 3- Hold the device in contact with the dimmer. 4- The mobile device must not be charging. 5- Remove the mobile device's protective shell. 6- Approach the dimmer quickly, and if communication does not work, go backward and forward to the dimmer several times. **Caution:** Some NFC devices do not have enough power to work with our product. **Caution:** After replacing any of the phone components, check that the NFC function is still present (antenna on the battery, protective shell, etc).

If your problem is still not resolved, please contact customer service.

Note:
All technical information is available online at
www.legrandoc.com

9. APPENDIX

Result of the various load tests with Cat. No. 0 026 54

Lamp type	Brand	Photo	Lamp reference/Year	Number of lamps	Dimmer automatic recognition reading	Conformity of automatic recognition/ Load	Setting(s) to enter for correct temperature rise and dimming	Observations and comments
BULBS	PHILIPS		Master LEDbulb MV 18W 1521lm 2015	1 to 2	Leading mode LED with noise reduction (< 40 W)	OK	Check the type of load detected. Set the minimum light level.	The "Dimmer without memory" function is not recommended due to the lamp technology. Dimming range can be set between 15% and 100%.
				3 to 4	Leading mode LED (< 75 W)			
			Master LEDbulb MV 17W 1055 lm 2012	1 to 2	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Dimming range can be set between 15% and 100%.
				3	Leading mode LED (< 75 W)			Dimming range can be set between 20% and 100%.
			Master LEDbulb MV 13W 1055lm 2015	1 to 3	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	The "Dimmer without memory" function is not recommended due to the lamp technology. Dimming range can be set between 15% and 100%.
				4 to 5	Leading mode LED (< 75 W)			
			Master LEDbulb MV 10W 806lm 2015	1 to 4	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	The "Dimmer without memory" function is not recommended due to the lamp technology. Dimming range can be set between 15% and 100%.
				5 to 7	Leading mode LED (< 75 W)			
			Master LEDluster 4W 250lm 2012	1 to 8	Leading mode LED with noise reduction (< 40 W)	OK	Check the type of load detected. Set the minimum light level if necessary.	Dimming range can be set between 20% and 100%.
			Master LEDbulb MV DimTone 8W 470lm 2012	1 to 4	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Dimming range can be set between 35% and 100%.
				5 to 8	Leading mode LED (< 75 W)			
			MASTER Glow LEDbulb MV 8W 470lm 2012	1	Leading mode Compact fluorescent	Not OK	Leading mode + LED with noise reduction (< 40 W) Set the minimum light level if necessary.	Dimming range can be set between 20% and 100%.
			Master LED Designer Bulb 7W	2	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Dimming range can be set between 20% and 100%.
	TOSHIBA		LDAEU004C2710D 13W 1060 lm 2015	1 to 3	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Dimming range can be set between 10% and 100%.
				4 to 5	Leading mode LED (< 75 W)			
			LDAEU003C2710D 10.5W 806 lm 2015	1 to 3	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Dimming range can be set between 10% and 100%.
				4 to 7	Leading mode LED (< 75 W)			

9. APPENDIX (continued)

Result of the various load tests with Cat. No. 0 026 54 0 026 54 (continued)

Lamp type	Brand	Photo	Lamp reference/Year	Number of lamps	Dimmer automatic recognition reading	Conformity of automatic recognition/ Load	Setting(s) to enter for correct temperature rise and dimming	Observations and comments
BULBS	OSRAM		PARATHOM LED Classic A80 Advanced 12W 2011	1 to 3	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Adjust the minimum light level if necessary. If the bulbs make a buzzing noise, switch to trailing mode. Dimming range can be set between 18% and 100%.
				4 to 6	Leading mode LED (< 75 W)			
			Classic A75 Advanced 10W 1055 lm 2015	1 to 4	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Adjust the minimum light level if necessary. If the bulbs make a buzzing noise, switch to trailing mode. Dimming range can be set between 15% and 100%.
				5 to 7	Leading mode LED (< 75 W)			
			Classic A60 Advanced 10W 806 lm 2015	1 to 7	Leading mode Transformer + LED	Not OK	1 to 4 bulbs: Leading mode + LED with noise reduction (< 40 W) Set the minimum light level if necessary. 5 to 7 bulbs: Leading mode + LED < 75 W Set the minimum light level if necessary.	Adjust the minimum light level if necessary. If the bulbs make a buzzing noise, switch to trailing mode. Dimming range can be set between 25% and 100%.
			Classic A40 Advanced 6W 470 lm 2015	1 to 8	Leading or trailing mode Transformer + LED	Not OK	1 to 6 bulbs: Leading mode + LED with noise reduction (< 40 W) Set the minimum light level if necessary. 7 to 8 bulbs: Leading mode + LED < 75 W Set the minimum light level if necessary.	Adjust the minimum light level if necessary. If the bulbs make a buzzing noise, switch to trailing mode. Dimming range can be set between 25% and 100%.
			PARATHOM LED RETROFIT Classic A60 Advanced 8W 806 lm 2015	1 to 8	Leading or trailing mode Transformer + LED	Not OK	1 to 5 bulbs: Leading mode + LED with noise reduction (< 40 W) Set the minimum light level if necessary. 6 to 8 bulbs: Leading mode + LED < 75 W Set the minimum light level if necessary.	Adjust the minimum light level if necessary. If the bulbs make a buzzing noise, switch to trailing mode. Dimming range can be set between 25% and 100%.
CANDLE BULBS	PHILIPS		Novallure 3W 136 lm 2011	1 to 2	Leading mode Compact fluorescent	Not OK	Leading mode + LED with noise reduction (< 40 W) Set the minimum light level if necessary.	Dimming range can be set between 20% and 100%.
	TOSHIBA		LDC004D2760DEU 4.5W 270 lm 2015	1 to 8	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Dimming range can be set between 15% and 100%.
SPOTLIGHTS	PHILIPS		MASTER LEDspot GU10 7W 2012	1 to 6	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Bulb(s) flicker between 30 and 40% dimming. Dimming range can be set between 20% and 100%.
				7 to 8	Leading mode LED (< 75 W)		Check the type of load detected. Set the minimum light level if necessary.	
			MASTER LEDspot GU10 8W DimTone 2012	1 to 5	Leading mode LED with noise reduction (< 40 W)	OK	Check the type of load detected. Set the minimum light level if necessary.	Bulb(s) flicker at 20% dimming. Dimming range can be set between 20% and 100%.
			Master LEDSPOT 25D PAR38 13W 1000lm 2015	1 to 3	Leading mode LED with noise reduction (< 40 W)	OK	Set the minimum light level if necessary.	Dimming range can be set between 20% and 100%. If the bulbs make a buzzing noise, switch to trailing mode.
				4 to 5	Leading mode Compact fluorescent or LED (< 75 W)	Not OK	Leading mode + LED < 75 W Set the minimum light level if necessary.	
	OSRAM		PARATHOM PRO LED 8W GU10 600 cd /2012	1 to 2	Leading mode LED with noise reduction (< 40 W)	OK	Check the type of load detected. Set the minimum light level if necessary.	Bulb(s) flicker slightly at 20% dimming. Dimming range can be set between 20% and 100%.

9. APPENDIX (continued)

Result of the various load tests with Cat. No. 0 026 54 0 026 54 (continued)

Lamp type	Brand	Photo	Lamp reference/Year	Number of lamps	Transformer reference	Dimmer automatic recognition reading	Conformity of automatic recognition/ Load	Setting(s) required for correct temperature rise and dimming	Observations and comments
LOW VOLTAGE	PHILIPS		MASTER LEDspot MR16 6.5W 390 lm 2015	1 to 4 max	OSRAM HALOTRONIC HTM70 (20-70 W)	Leading mode or trailing mode Compact fluorescent or Transformer	Not OK	Leading mode + Transformer Set the minimum light level if necessary.	Dimming range can be set between 15% and 100%.
				2 min to 8 max	OSRAM HALOTRONIC HTM105 (35-105 W)	Leading mode LED with noise reduction (< 40 W) or LED (< 75 W)			Dimming range can be set between 20% and 100%.
				2 min to 6	OSRAM HALOTRONIC HTM150 (50-150 W)	Leading mode LED with noise reduction (< 40 W)			Dimming range can be set between 20% and 100%. If the transformer makes a buzzing noise, switch to trailing mode.
				7 to 18 max		Trailing mode Transformer	OK	Set the minimum light level if necessary.	Dimming range can be set between 20% and 100%.
				1 to 6 max	PHILIPS ET-E60 (20-60 W)	Leading mode Compact fluorescent or LED with noise reduction (< 40 W)	Not OK	Leading mode + Transformer Set the minimum light level if necessary.	Dimming range can be set between 15% and 100%.
					PHILIPS CERTALINE 60W (20-60 W)	Leading mode or Trailing mode LED with noise reduction (< 40 W) or transformer			Dimming range can be set between 15% and 100%. If the transformer makes a buzzing noise, switch to trailing mode.
				1 to 4 max	LEGRAND TMDO 50 45 W FERRO	Leading mode Transformer	OK	Set the minimum light level if necessary.	Dimming range can be set between 15% and 100%.
				1 to 6 max	NELSON MTECOUGAR60 (20-60 W)	Leading mode or Trailing mode LED with noise reduction (< 40 W)	Not OK	Leading mode + Transformer Set the minimum light level if necessary.	
					JCC JC4018 (20-60 W)	Leading mode LED with noise reduction (< 40 W) or transformer			
	OSRAM		PARATHOM MR16 35 5.9W 350lm 2015	1 to 5 max	OSRAM HALOTRONIC HTM70 (20-70 W)	Leading mode or Trailing mode Compact fluorescent/LED with noise reduction (< 40 W) or Transformer	Not OK	Leading mode + Transformer Set the minimum light level if necessary.	Dimming range can be set between 20% and 100%.
				2 min to 8 max	OSRAM HALOTRONIC HTM105 (35-105 W)	Leading mode LED with noise reduction (< 40 W) or LED (< 75 W)			
				4 min to 8	OSRAM HALOTRONIC HTM150 (50-150 W)	Leading mode LED with noise reduction (< 40 W)			
				9 to 12 max		Leading mode LED (< 75 W) or transformer			
				1 to 6 max	PHILIPS ET-E60 (20-60 W)	Leading mode Compact fluorescent or Transformer			Dimming range can be set between 15% and 100%.
					PHILIPS CERTALINE 60W (20-60 W)	Leading mode LED with noise reduction (< 40 W)			Dimming range can be set between 15% and 100%. If the transformer makes a buzzing noise, switch to trailing mode.
				1 to 5 max	LEGRAND TMDO 50 45 W FERRO	Leading mode Transformer	OK	Set the minimum light level if necessary.	Dimming range can be set between 15% and 100%.
				1 to 6 max	NELSON MTECOUGAR60 (20-60 W)	Leading mode or Trailing mode LED with noise reduction (< 40 W)	Not OK	Leading mode + Transformer Set the minimum light level if necessary.	Dimming range can be set between 20% and 100%.
					JCC JC4018 (20-60 W)	Trailing mode Transformer	OK	Set the minimum light level if necessary.	