

# Commissioning instructions

## corridorFUNCTION

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# 1 Introduction

corridorFUNCTION is an additional function of the dimmable series of PCA ECO and PCA EXCEL one4all ballasts and TE one4all transformers.

If the ballasts are connected to conventional relay motion sensors (or even automatic stairwell switches) the light value is raised for example to 100 % when a 230 V mains voltage signal is applied to control input D1 and D2, and automatically reduced to the set dimmer value when the motion sensor switches off.

This arrangement provides efficient energy savings. It is intended for 24-hour applications in which light is needed round the clock for safety reasons, for example in stairwells and corridors in public buildings, and in large apartment complexes, car parks, pedestrian underpasses and underground railway stations. Accurate energy savings can be calculated using the corridorFUNCTION payback calculator at <http://www.corridorfunction.com> (Payback tab)

The corridorFUNCTION also offers added value in standard motion sensor applications. The corridorFUNCTION does not abruptly switch off the lighting but dims it to a preset level. Depending on the profile selected the device remains at this light level ("never off" profile) or switches off completely after the appropriate delay. ("Switch off" profile). This provides much greater security in stairwells, corridors, car parks, warehouses and industrial environments.

Switching is power-less so there is virtually no limit on the number of luminaires that can be switched.

# 2 Installation

Four-pole wiring (phase (L), neutral (N), earth (PE), control line (L)) or five-pole wiring (phase (L), neutral (N), earth (PE), two-pole control line (L/N)) may be used for the luminaires.

Conventional relay motion sensors are recommended.  
Electronic motion sensors (Triac) are not suitable because of their basic load requirements.

Glow switches are not approved for this application. Even though the current through the glow lamp is only in the  $\mu\text{A}$  range there may be interference with the control.



## **Important:**

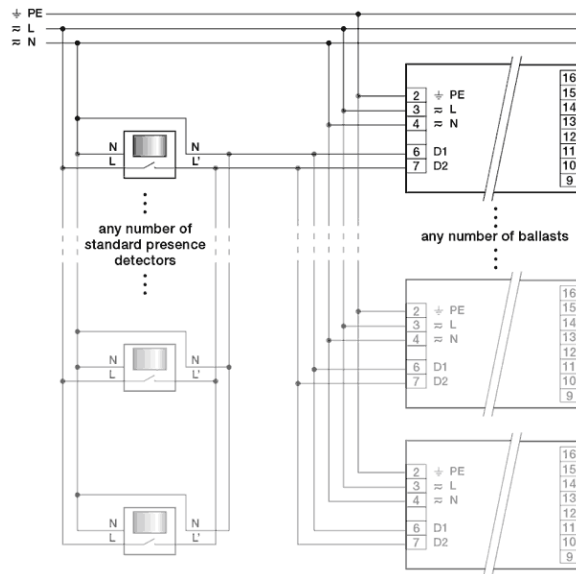
For large installations, supply to the ECGs may be split among several phases (L1, L2, L3). Of course, only one phase is permitted per device.

It is also important to make sure that the control line (L') from the motion sensor is connected to D2 and the neutral conductor to D1.

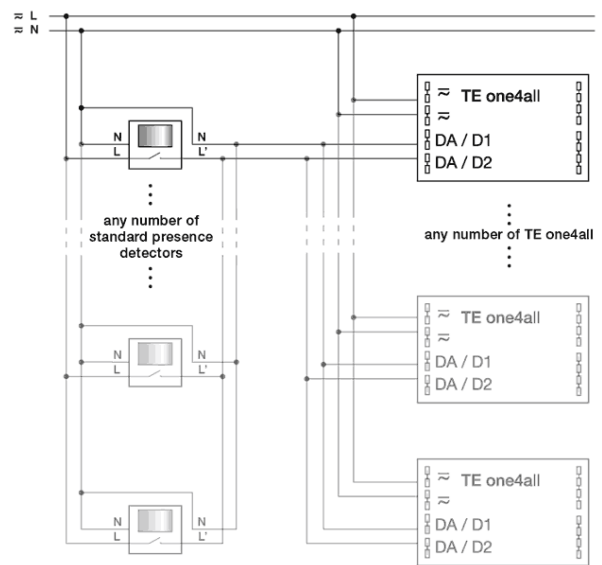
Any number of motion sensors can be connected in parallel.

## 2.1 corridorFUNCTION wiring diagram

PCA ECO/PCA EXCEL one4all/PCA 3x4x EXCEL



TE one4all



## 3 Commissioning in general

A ballast with integrated corridorFUNCTION activates the application automatically if the mains signal is applied at the digital interface for longer than five minutes.

This greatly simplifies installation. You simply need to connect the application in accordance with the installation instructions and stay in the room for more than five minutes or set the delay time of the motion sensor to more than five minutes.

This activation is needed only once per device during commissioning.

Our PCA multilamp devices are innovative products. They offer instant activation of the profiles via PLUG. Additional activation of the corridorFUNCTION by means of a 230V voltage at control inputs D1 and D2 for 5 minutes can be enabled on these devices as an option.

[For details see 4.2.1](#)



### Important:

If a switchDIM application has been put in corridor mode by mistake (for example because of a short-circuited pushbutton or because a switch has been installed instead of a pushbutton) the corridor mode can be deactivated by pressing the pushbutton five times within three seconds once the fault has been corrected.

Glow switches are not approved for this application. Even though the current through the glow lamp is only in the  $\mu\text{A}$  range there may be interference with the control.

If a corridor application has been set up with the "automatic detection procedure" all the ballasts will operate with the standard corridorFUNCTION profile. (Fig. 1)

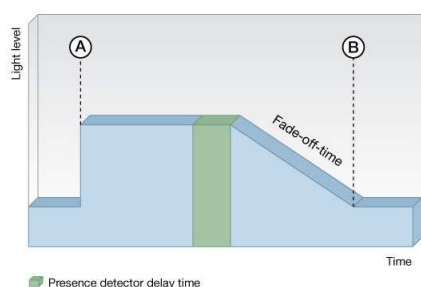


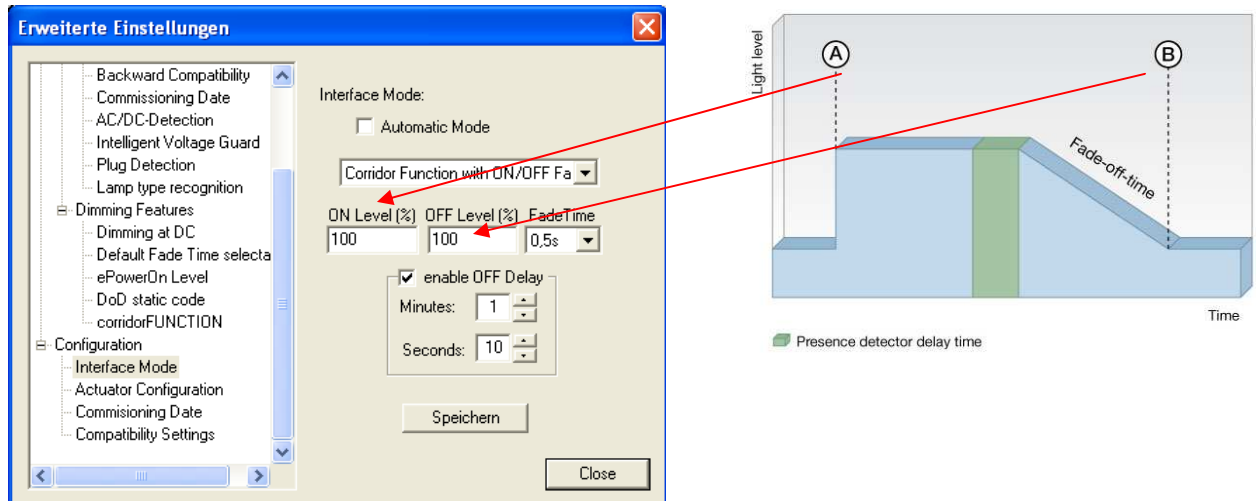
Fig 1: Standard profile 1  
"Never OFF" (A...100 %, B...10 %, Fade time 30 s, never OFF)  
This corresponds to the as-delivered state of the PCA ballasts and TE one4all transformers.

## 4 Adjustment of the profiles

### 4.1 Individual software programming of the corridorFUNCTION

Individual programming of the corridorFUNCTION with PCA EXCEL ballasts can be set with the corridorFUNCTION-CONFIGURATOR, the pcaCONFIGURATOR or the configTOOL.

Download: [www.tridonicatco.com](http://www.tridonicatco.com)

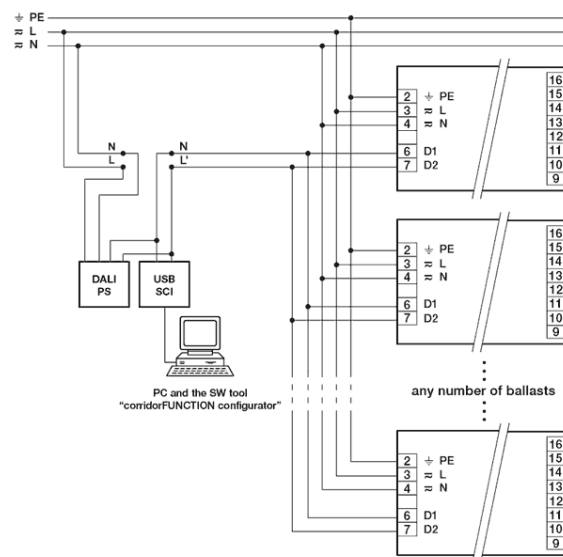


#### Settable values:

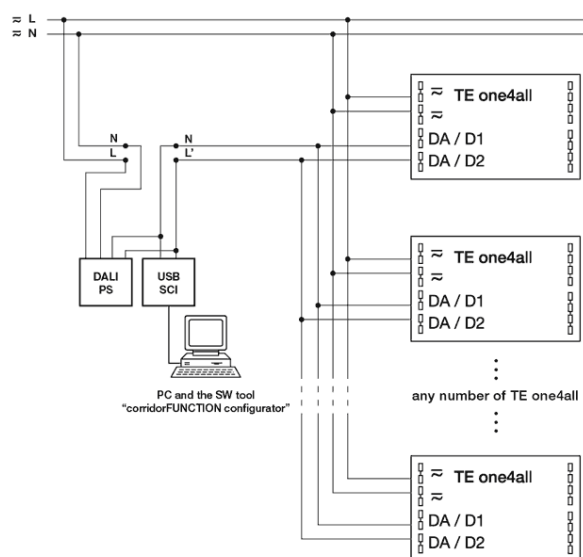
- Presence light value (A): default setting 100 %, range min./max.
- Presence light value (B): default setting 10 %, range min./max.
- Fade time between presence and absence light values: default setting 32 s, range 0.05–90 s.
- Switch off delay time (C): default setting "Never off", range 0–42 min.
- On the PCA multilamp devices the interface mode is set to automatic by a DALI command sequence (5 DALI commands within 3 seconds).

To activate the corridor mode or to change the individual settings using a software tool a DALI USB and a DALI PS (or DALI PS1) must be temporarily connected. They can be removed once programming has been completed.

#### PCA EXCEL one4all/PCA 3x4x



#### TE one4all



corridorFUNCTION wiring for programming via a PC and the corridorFUNCTION-CONFIGURATOR

## 4.2 Activating the corridorFUNCTION by means of a preset PLUG

A highlight of the multilamp devices are the preprogrammed profiles. The individual profiles can be quickly and easily activated by means of a redefined PLUG.

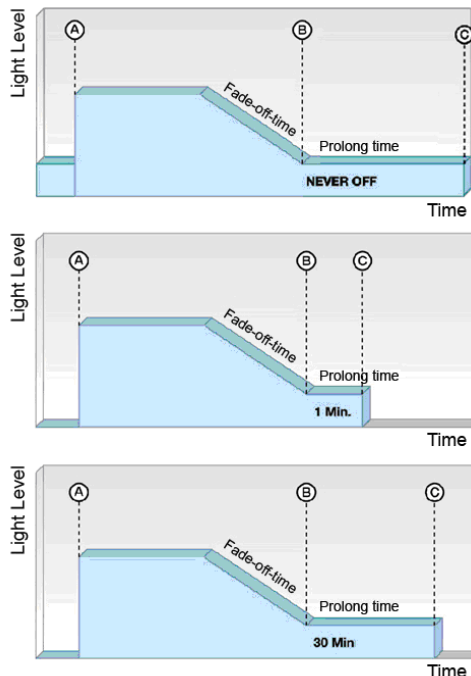
### 4.2.1 Activating the profiles on T5 multilamp Ip xitec devices

The profiles can be instantly activated by simply inserting the corridorFUNCTION PLUG in the SMART interface. Contrary to the previous use of the PLUG with subsequent activation of the corridorFUNCTION (230V voltage at control inputs D1 and D2 for 5 minutes), the new devices immediately switch to the relevant corridorMODE when a PLUG is inserted, a mains reset has been performed (100% start) and a delay time of 3 seconds was bided.

For devices with production dates between August.08 and the end of January 2009 additional activation of the corridorFUNCTION was necessary by means of a 230V voltage at control inputs D1 and D2 for 5 minutes.

On new devices (from February 2010) instant activation via PLUG is standard

### 4.2.2 Overview of PLUG profiles for T5 multilamp Ip xitec device



Profile 1 (standard)  
Purple PLUG  
"Never OFF" (A...100 %, B...10 %, Fade time 32 s, never OFF)  
\* Article Nr.: 24166233



Profile 2  
Yellow PLUG  
"Switch off" (A...100 %, B...10 %, Fade time 32 s, switch off after 1 minute).  
\* Article Nr.: 24166117

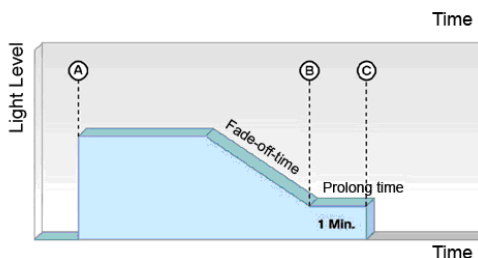


Profile 3  
Orange PLUG  
"Switch off" (A...100 %, B...10 %, Fade time 32 s, switch off after 30 minutes).  
\* Article Nr.: 24166118

### 4.2.3 Activation for T5 Ip devices

The devices are switched to the corridorMODE by the simple insertion of the corridorFUNCTION PLUG in voltage at control inputs D1 and D2 for 5 minutes). (switch-off after 1 minute)

### 4.2.4 Overview of PLUG profiles for T5 Ip devices



Profile 2  
Yellow PLUG  
"Switch off" (A...100 %, B...10 %, Fade time 32 s, switch off after 1 minute).  
\* Article Nr.: 24166117



The old (black) plug (Article Nr. 86458381) has been replaced by this yellow plug of the multilamp Ip devices. The function remains the same.

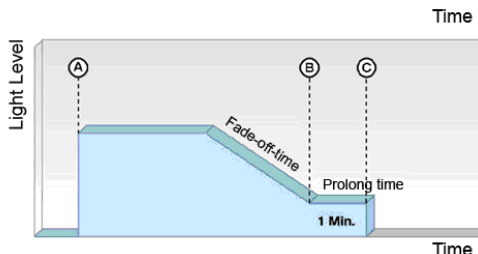


**Note:** The device must always be disconnected from the power supply before you use a PLUG.

#### 4.2.5 Activating T8, TC-L, compact devices

The profile is activated by the simple insertion of the corridorFUNCTION PLUG in the SMART interface, a mains reset (100% start) and subsequent activation of the corridorFUNCTION by means of a 230V voltage at control inputs D1 and D2 for 5 minutes.

#### 4.2.6 Overview of T8, TC-L, compact devices



Profile 2  
White PLUG with black connector  
"Switch off" (A...100 %, B...10 %, Fade time 32 s, switch off after 1 minute).

\* Article Nr.: 86458380

#### 4.2.7 Activating the profiles other than in the as-delivered state

If the ballast is not in the as-delivered state, please note the following before inserting the PLUG in the SMART interface to ensure detection.

- The device is in switchDIM mode

The device must have reached a dimmer setting of 100% when it was last switched off.

ePOL (Enhanced Power On Level) must not be activated. This might mean the device would not go to 100%. A maximum limit for the dimming value must not be set because this might impair a 100% start.

The device must perform a 100% start.

- **The device is in DALI/DSI mode**

ePOL (Enhanced Power On Level) must not be activated. This might mean the device would not go to 100%. A maximum limit for the dimming value must not be set because this might impair a 100% start.

DALI memory must not be active This might also affect the start.

Place the device in automatic mode either by a DALI command or by a switch sequence (five switching operations within 3 seconds).

The device must perform a 100% start.

- **The device is in corridorFUNCTION mode**

For detection to take place, voltage must be applied to D1/D2 during the switch-on process and the active/presence value must be at 100 %. This ensures that the device goes to the 100% dimming level when it is switched on and when the motion sensor is activated.

Then disconnect the device from the power supply. Insert the PLUG in the SMART interface.

The motion sensor must already be activated.

Now restore power to the device. The device must perform a 100% start.

#### 4.2.8 Priorities

In the case of the PCA T5 EXCEL one4all Ip xitec / PCA T5 ECO Ip xitec devices the use of the corridorFUNCTION PLUG has absolute priority.

#### 4.2.9 Deactivating the corridorFUNCTION profiles

The corridorFUNCTION profiles are deactivated by simply removing the PLUG with the power switched off and then performing a 100% start. The interface mode is then reset to automatic.



**Note:** The device must always be disconnected from the power supply before you use a PLUG.

## 5 corridorFUNCTION combined with daylight control (smart LS II)

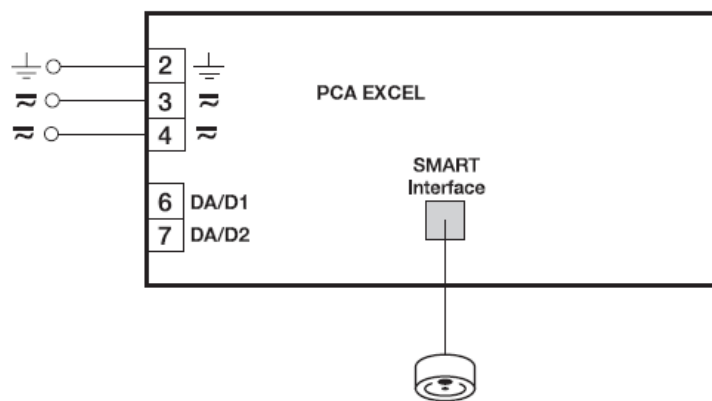
### 5.1 Function:

In combination with the new PCA T5 EXCEL one4all Ip xitec ballasts, SMART LS II Ip enables easy-to-use cost-effective constant lighting systems with activated corridorFUNCTION to be created. The sensors detect the available ambient light and use this as the basis for controlling the lighting system to achieve a definable constant light value.

By making use of natural daylight to achieve the required lighting level it is possible to make additional energy savings.

As the amount of natural daylight changes the illuminance from the artificial lighting system is adjusted accordingly.

### 5.2 Connection

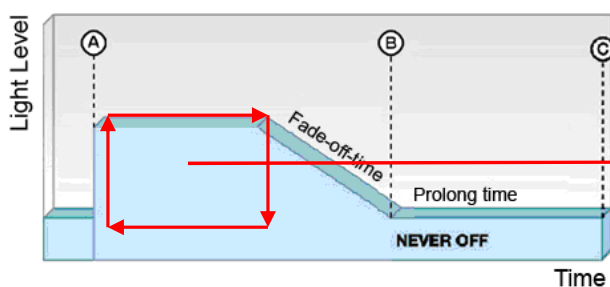


If there is an installed sensor and 100 % start<sup>1</sup>, PCA T5 EXCEL one4all Ip xitec goes into constant lighting control mode.

Type	Article number	Cable length	Suitable for
SMART LS II Ip	86458258	50 cm	EXCEL one4all Ip xitec, EXCEL 3x4x one4all Ip xitec

### 5.3 Operating mode of corridorFUNCTION V2 with SMART LS II Ip

The dimming level for presence is regulated by the daylight sensor. The device automatically dims to the required dimming level depending on the amount of natural daylight.



This is the range in which daylight control operates with SMART LS II Ip in the corridorFUNCTION on multilamp devices PCA T5 Excel Ip xitec




## 6 Versions of corridorFUNCTION and PLUG profiles

### 6.1 Overview of versions, profiles and production data

Type	corridorFUNCTION	corridorFUNCTION (1 min Profil)	corridorFUNCTION V2 (1 min / 30 min / n.o. Profile)	corridorFUNCTION from production date
TE one4all				
TE 0105 one4all cc	86456435	Yes		
TE 0105 one4all sc	86457873	Yes		
TE 0150 one4all sc	86457874	Yes		
TE 0105 one4all 80%	86457968	Yes		
PCA T5 EXCEL one4all lp xitec			Yes	50/2008 *)
PCA 3x4x T5 EXCEL one4all lp xitec			Yes	10/10
PCA T5 EXCEL one4all lp		Yes		01/2007
PCA T5 ECO lp xitec			Yes	49/09
PCA 3x4x T5 ECO lp xitec			Yes	10/10
PCA T5 ECO lp		Yes		01/2007
PCA T8 EXCEL one4all		Yes		25/2007
PCA TCD/TCT EXCEL one4all		Yes		05/2007
PCA TCL EXCEL one4all		Yes		25/2007
PCA T5c EXCEL one4all		Yes		on request

\*) Instant activation of PLUG profiles ex production date Februar 2010

### 6.2 Overview of PLUG profiles used

Vorhandene Plugs				
	86458380	24166117	24166118	24166233
	1 min off delay	1 min off delay	30 min off delay	never off
TE 0105 one4all cc/sc, 0150 one4all sc	no	no	no	no
PCA T5 EXCEL one4all lp xitec	no	Yes	Yes	Yes
PCA 3x4x T5 EXCEL one4all lp xitec	no	Yes	Yes	Yes
PCA T5 EXCEL one4all lp	no	Yes	no	no
PCA T5 ECO lp xitec	no	Yes	Yes	Yes
PCA 3x4x T5 ECO lp xitec	no	Yes	Yes	Yes
PCA T5 ECO lp	no	Yes	no	no
PCA T8 EXCEL one4all	Yes	no	no	no
PCA TCD/TCT EXCEL one4all	Yes	no	no	no
PCA TCL EXCEL one4all	Yes	no	no	no
PCA T5c EXCEL one4all	Yes	no	no	no

## 7 Accessories

Order number	Accessory	Description
86458380	corridorFUNCTION plug	„Plug“ for the second profile mode (switch off after a 1 min. delay on the absence value) For applications see 6.2 Overview of PLUG profiles
not longer available	corridorFUNCTION plug (weiß)	PLUG for the second profile mode (switch off after a 1 min. delay on the absence value) For applications see 6.2 Overview of PLUG profiles Replaced by 24166117 (yellow PLUG).
24166233	corridorFUNCTION n.a. (purple)	PLUG for the first profile mode (never off) For applications see 6.2 Overview of PLUG profiles
24166117	corridorFUNCTION plug Ip 1min (yellow)	„Plug“ for the second profile mode (switch off after a 1 min. delay on the absence value) For applications see 6.2 Overview of PLUG profiles
24166118	corridorFUNCTION plug Ip 30min (orange)	„Plug“ for the third profile mode (switch off after a 30 min. delay on the absence value) For applications see 6.2 Overview of PLUG profiles
24138923	DALI USB	Computer interface (USB on DALI). This is needed in conjunction with the DALI PS (DALI power supply) for programming PCA EXCEL ballasts.
Free download	corridorFUNCTION CONFIGURATOR	Simple software for application-specific programming of corridorFUNCTION applications. No special knowledge is needed to use the software tool.
Free download	pcaCONFIGURATOR	Simple software for programming all PCA EXCEL ballasts. In addition to the corridorFUNCTION functions other useful functions can be set, such as DALI MEMORY, DC-LEVEL, BACKWARDS COMPATIBILITY, etc.
Free download	configTOOL	Provisional free download version: Comprehensive software for starting up and documenting DALI systems. Application-specific programming of the corridorFUNCTION, all PCA EXCEL functions and some controllers such as the DALI Touchpanel, LED converters, etc.

### 7.1 Detection of corridorFUNCTION ballasts

Ballasts equipped with the corridorFUNCTION display the wiring guide for the corridorFUNCTION on the label next to the wiring guide for switchDIM.

