Commissioning instructions

corridorFUNCTION

Contents

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 corrdiroFUNCTION amortisation 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

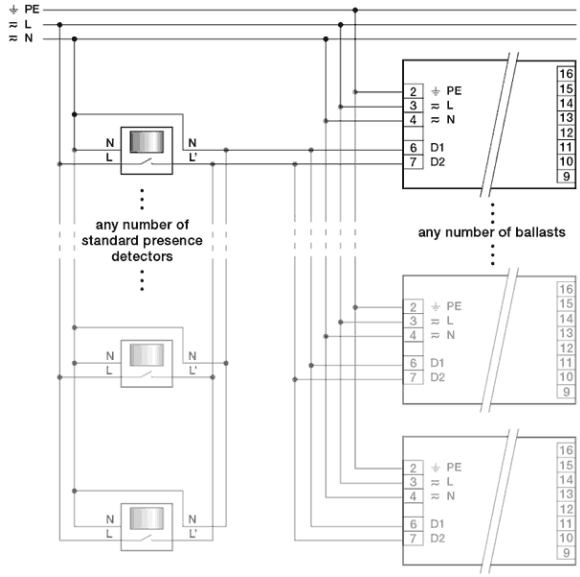
Five-pole luminaire wiring is used, as in dimming (phase, neutral, earth, two-pole control line).

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

Important:

For large installations several phases can be used for ECG supply (L1, L2, L3). In this case, it is 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.

PCA ECO/PCA EXCEL one4all



TE one4all

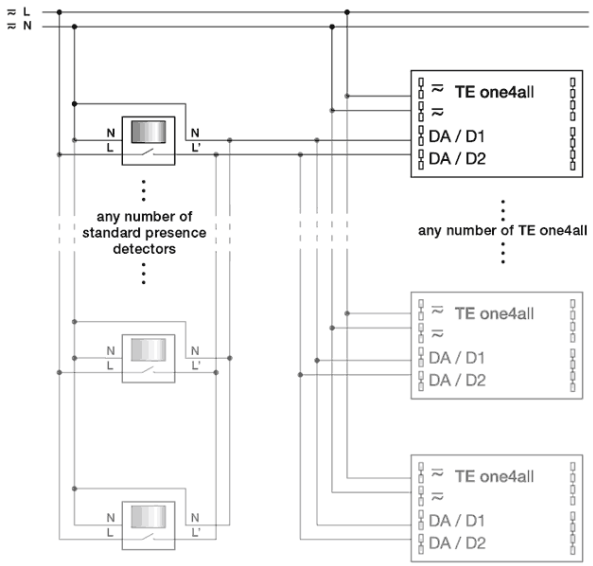


Fig. 1: corridorFUNCTION wiring diagram

3 Start-up

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.
You only need to do this once during set-up.

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.

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)

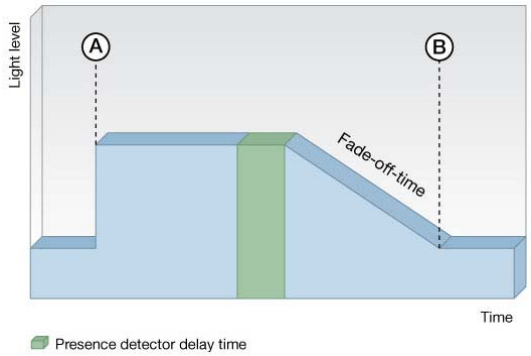


Fig 1: Standard profile 1 “Never OFF” (A...100 %, B...10 %, Fade time 30 s, never OFF)
This corresponds to the as-delivered state of the PCA ballasts and TE one4all transformers.

4 corridorFUNCTION product overview

TE one4all Niedervolt-Halogenlampen	
TE 0105 one4all cc	86456435
TE 0105 one4all sc	86457873
TE 0150 one4all sc	86457874
TE 0105 one4all 80%	86457968

PCA T5 EXCEL one4all lp xitec T5 hight output		T5 high efficiency	
PCA 1x14/24 T5 EXCEL one4all lp xitec	22176178	PCA 1x14/24 T5 EXCEL one4all lp xitec	22176178
PCA 2x14/24 T5 EXCEL one4all lp xitec	22176179	PCA 2x14/24 T5 EXCEL one4all lp xitec	22176179
PCA 1x21/39 T5 EXCEL one4all lp xitec	22176176	PCA 1x21/39 T5 EXCEL one4all lp xitec	22176176
PCA 2x21/39 T5 EXCEL one4all lp xitec	22176177	PCA 2x21/39 T5 EXCEL one4all lp xitec	22176177
PCA 1x28/54 T5 EXCEL one4all lp xitec	22176174	PCA 1x28/54 T5 EXCEL one4all lp xitec	22176174
PCA 2x28/54 T5 EXCEL one4all lp xitec	22176175	PCA 2x28/54 T5 EXCEL one4all lp xitec	22176175
PCA 1x35/49/80 T5 EXCEL one4all lp xitec	22176172	PCA 1x35/49/80 T5 EXCEL one4all lp xitec	22176172
PCA 2x35/49 T5 EXCEL one4all lp xitec	22176173	PCA 2x35/49 T5 EXCEL one4all lp xitec	22176173
PCA 1x35/49/80 T5 EXCEL one4all lp xitec	22176172		

PCA T5 EXCEL one4all lp T5 hight output		T5 high efficiency	
PCA 1x24 T5 Excel one4all lp	22088607	PCA 1x14 T5 Excel one4all lp	22088511
PCA 2x24 T5 Excel one4all lp	22088616	PCA 2x14 T5 Excel one4all lp	22088527
PCA 1x39 T5 Excel one4all lp	22088580	PCA 1x21 T5 Excel one4all lp	22088495
PCA 2x39 T5 Excel one4all lp	22088596	PCA 2x21 T5 Excel one4all lp	22088502
PCA 1x54 T5 Excel one4all lp	22088549	PCA 1x28 T5 Excel one4all lp	22088473
PCA 2x54 T5 Excel one4all lp	22088555	PCA 2x28 T5 Excel one4all lp	22088489
PCA 1x49 T5 Excel one4all lp	22088568	PCA 1x35 T5 Excel one4all lp	22088454
PCA 2x49 T5 Excel one4all lp	22088574	PCA 2x35 T5 Excel one4all lp	22088467
PCA 1x80 T5 Excel one4all lp	22088533		
PCA 2x80 T5 Excel one4all lp	22176053		

PCA T5 ECO lp xitec T5 hight output		T5 high efficiency	
PCA 1x14/24 T5 ECO lp xitec	22176247	PCA 1x14/24 T5 ECO lp xitec	22176247
PCA 2x14/24 T5 ECO lp xitec	22176248	PCA 2x14/24 T5 ECO lp xitec	22176248
PCA 1x21/39 T5 ECO lp xitec	22176245	PCA 1x21/39 T5 ECO lp xitec	22176245
PCA 2x21/39 T5 ECO lp xitec	22176246	PCA 2x21/39 T5 ECO lp xitec	22176246
PCA 1x28/54 T5 ECO lp xitec	22176243	PCA 1x28/54 T5 ECO lp xitec	22176243
PCA 2x28/54 T5 ECO lp xitec	22176244	PCA 2x28/54 T5 ECO lp xitec	22176244
PCA 1x35/49/80 T5 ECO lp xitec	22176241	PCA 1x35/49/80 T5 ECO lp xitec	22176241
PCA 2x35/49 T5 ECO lp xitec	22176242	PCA 2x35/49 T5 ECO lp xitec	22176242

PCA T5 ECO lp T5 hight output		T5 high efficiency	
PCA 1/24 T5 ECO lp	22089521	PCA 1/14 T5 ECO lp	22089436
PCA 2/24 T5 ECO lp	22089537	PCA 2/14 T5 ECO lp	22089442
PCA 1/39 T5 ECO lp	22089506	PCA 1/21 T5 ECO lp	22089414
PCA 2/39 T5 ECO lp	22089515	PCA 2/21 T5 ECO lp	22089420
PCA 1/49 T5 ECO lp	22089483	PCA 1/28 T5 ECO lp	22089392
PCA 2/49 T5 ECO lp	22089499	PCA 2/28 T5 ECO lp	22089405
PCA 1/54 T5 ECO lp	22089461	PCA 1/35 T5 ECO lp	22089370
PCA 2/54 T5 ECO lp	22089477	PCA 2/35 T5 ECO lp	22089386
PCA 1/80 T5 ECO lp	22089458		
PCA 2/80 T5 ECO lp	22176054		

T8 PCA T8 EXCEL one4all	
PCA 1/18 EXCEL one4all	22085245
PCA 2/18 EXCEL one4all	22085251
PCA 2/30 EXCEL one4all	22086107
PCA 1/36 EXCEL one4all	22085264
PCA 2/36 EXCEL one4all	22085270
PCA 1/38 EXCEL one4all	22087027
PCA 2/38 EXCEL one4all	22087033
PCA 1/58 EXCEL one4all	22085286
PCA 2/58 EXCEL one4all	22084608

TCD/TCT PCA TCD/TCT EXCEL one4all	
PCA 1/11/13 TCD EXCEL	22084724
PCA 2/11/13 TCD EXCEL	22084718
PCA 1/11/13 TCD EXCEL	22084724
PCA 2/11/13 TCD EXCEL	22084718
PCA 1/18 TCD EXCEL	22084709
PCA 2/18 TCD EXCEL	22084692
PCA 1/26 TCD EXCEL	22084686
PCA 2/26 TCD EXCEL	22084670
PCA 1/32 TCT EXCEL	22088622
PCA 2/32 TCT EXCEL	22088638
PCA 1/42 TCT EXCEL	22088663
PCA 2/42 TCT EXCEL	22088679
PCA 1/57 TCT EXCEL	22086941

TCL PCA TCL EXCEL one4all	
PCA 2/18 TCL EXCEL	22086840
PCA 2/24 TCL EXCEL	22086869
PCA 1/36 TCL EXCEL	22085346
PCA 2/36 TCL EXCEL	22085352
PCA 1/40 TCL EXCEL	22085365
PCA 2/40 TCL EXCEL	22085371
PCA 1/55 TCL EXCEL	22085387
PCA 2/55 TCL EXCEL	22085393
PCA 1/80 TCL EXCEL	22089004

T5c / TC-DD PCA T5c EXCEL one4all	
PCA 1/22 T5c Excel	22086881
PCA 1/40 T5c Excel	22086904
PCA 1/55 T5c Excel	22086929
PCA 1/55 TC-DD EXCEL one4all	
PCA 1/55 TC-DD ECO	22086636

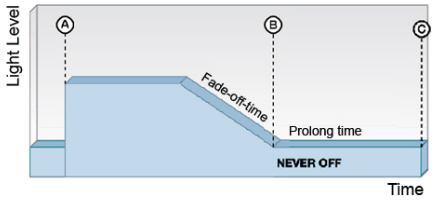
5 corridorFUNCTION with preprogrammed profiles

5.1 Activating the corridorFUNCTION profile with „Plugs“

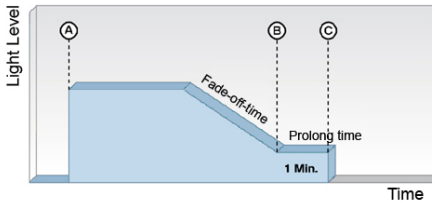
By simply inserting the corridorFUNCTION “Plugs” in the SMART interface it is possible to select profile 2 “Switch off after 1 minute delay”.
After the corridorFUNCTION was activated successfully the ballast dims until the absence light value is reached and if presence is not detected in the next minute the ballast switches off completely.

Our PCA T5 EXCEL one4all lp xitec / PCA T5 ECO lp xitec is a new product that offers a new preprogrammed profile.
Profile 3 “Switch off after 30 minutes” can be selected with the orange plug.
After the corridorFUNCTION was activated successfully the ballast dims until the absence light value is reached and if presence is not detected in the next 30 minutes the ballast switches off completely.

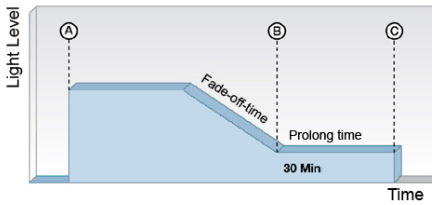
* 86458380 corridorFUNCTION plug for T8, TCL and for ballasts for compact lamps.
* 24166117 corridorFUNCTION plug lp 1min, yellow, 1 min, for EXCEL one4all lp xitec & ECO lp & EXCEL one4all lp
* 24166118 corridorFUNCTION plug lp 30min, orange, 30 min, for EXCEL one4all lp xitec / ECO lp xitec ballasts



Standard profile 1 “Never OFF” (A...100 %, B...10 %, Fade time 32 s, never OFF)
This corresponds to the default parameters.



Yellow „Plug“
Profile 2 “Switch off” (A...100 %, B...10 %, Fade time 32 s, switch off after 1 minute).



Orange „Plug“
Profile 3 “Switch off” (A...100 %, B...10 %, Fade time 32 s, switch off after 30 minutes).

5.2 Activating the profile via „Plugs“

a. Activation
- Disconnect ballast from the power supply
- Connect “Plug” to SMART interface
- Switch on power supply to ballast (the device performs a 100 % start)
- Voltage of 230 V for 5 min on DA/D1 DA/D2 to activate the corridorFUNCTION

b. Explanation
Detection of the plugs is started by the ballast as soon as it is switched on.
A 100 % start[1] for the ballast is needed for this detection process.
This function is always enabled in the as-delivered state (one4all mode).

[1] *100% start – the device fades to 100 % level during the start process*

c. Operating modes
If the ballast is not in the as-delivered state, please note the following before setting the plugs in the SMART interface to ensure detection of the „Plugs“.

- **switchDIM mode**
  - **–** 100 % dimming level on last Switch off
  - **–** ePOL not active (ePowerOnLevel)
  - **–** max limitation not active
  - Disconnect ballast from the power supply
  - Connect “Plug” to SMART interface
  - Switch on power supply to ballast (the device performs a 100 % start)
  - Voltage of 230 V for 5 min on DA/D1 DA/D2 to activate the corridorFUNCTION

- **DALI/DSI**
  - **–** ePOL (ePowerOnLevel) not active
  - **–** POL (PowerOnLevel) not active
  - **–** max limitation not active
  - **–** DALI memory not active
  - Disconnect ballast from the power supply
  - Connect “Plug” to SMART interface
  - Switch on power supply to ballast (the device performs a 100 % start)
  - Voltage of 230 V for 5 min on DA/D1 DA/D2 to activate the corridorFUNCTION

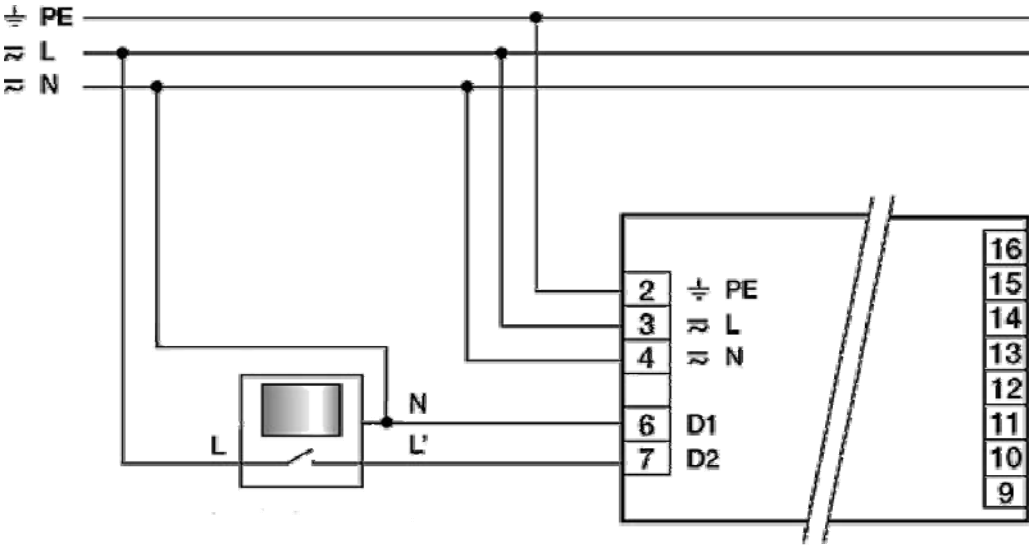
- **corridorFUNCTION**
  - **-** For detection to take place, voltage must be applied to D1/D2 during the switch-on process and the active/presence value must be at 100 %.
  - Disconnect ballast from the power supply
  - Connect “Plug” to SMART interface
  - relay motion sensors must be active
  - Switch on power supply to ballast (the device performs a 100 % start)

5.3 xitec – corridorFUNCTION with ambient light control by SMART LS II lp

Function:
In combination with the new PCA T5 EXCEL one4all lp xitec ballasts, SMART LS II lp 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.

Connection:



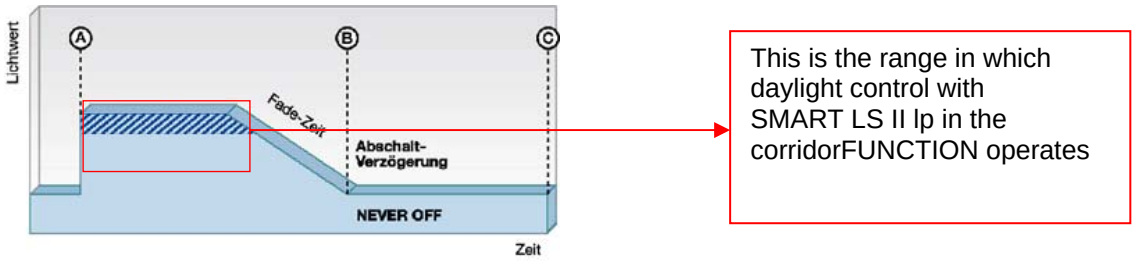
If there is an installed sensor and 100 % start[1], PCA T5 EXCEL one4all lp xitec goes into constant lighting control mode.

[1] *100 % start – the device fades to 100 % level during the start process*

Type	Article number	Cable length	Suitable for
SMART LS II lp	86458258	50 cm	EXCEL one4all lp, ECO lp, EXCEL one4all lp xitec

Mode of operating of the corridorFUNCTION V2 with SMART LS II lp

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.



6 Annexes

6.1 Differences in the corridorFUNCTION in PCA T5 EXCEL one4all lp (xitec) and PCA T5 ECO lp

The corridorFUNCTION is implemented in slightly different ways in the PCA T5 EXCEL one4all lp (xitec) and in the PCA T5 ECO lp (xitec).
PCA T5 EXCEL one4all lp (xitec) and the PCA T5 ECO lp (xitec) offers additional functionality and flexibility.

Same behaviour by PCA T5 EXCEL one4all lp (xitec) & PCA T5 ECO lp (xitec)
PCA T5 EXCEL one4all lp (xitec) and PCA T5 ECO lp start the corridorFUNCTION mode automatically by simply detecting the control signal (in this case mains voltage) at the control input. This means that a mains signal that exists for more than five minutes at the interface automatically activates the corridor mode.
In this case, standard profile 1 (never OFF) is used.
Profiles can be selected with the aid of the corridorFUNCTION “Plugs”. See 5.1

Additional individual settings on PCA T5 EXCEL one4all lp xitec & PCA T5 ECO lp (xitec)
PCA EXCEL/ECO one4all lp xitec offers the added benefit of a second and third preprogrammed profile.
Profile 2 “Switch off” (A...100 %, B...10 %, Fade time 32 s, switch off after 1 minutes)
Profile 3 “Switch off” (A...100 %, B...10 %, Fade time 32 s, switch off after 30 minutes)
This profiles can be selected via the yellow or orange “plugs”. See 5.1

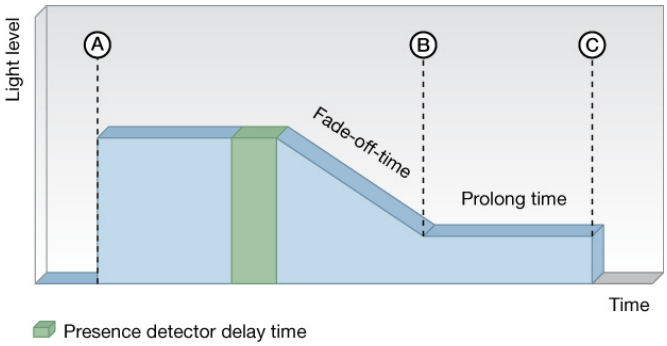
Additional individual settings on all PCA EXCEL with corridorFUNCTION
On all PCA EXCEL ballasts the corridorFUNCTION can be individually configured with free software (corridorFUNCTION-CONFIGURATOR, pcaCONFIGURATOR or the configTOOL).

6.2 Individual programming of the corridorFUNCTION with PCA EXCEL

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
For a type overview of the devices used see 4.

Settable values:

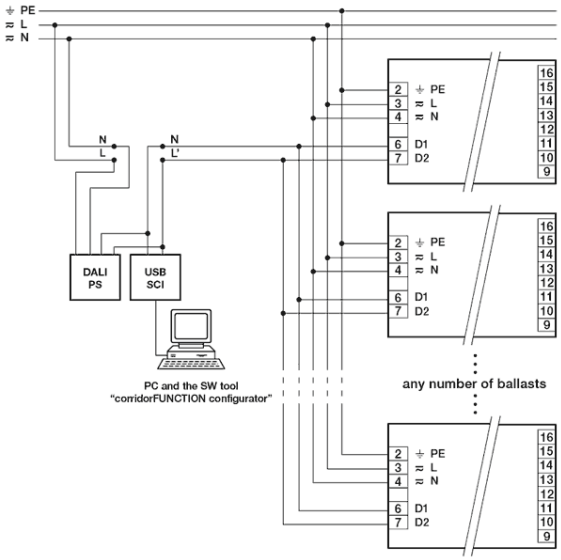
- Presence light value (A): default setting 100 %, range min./max.
- Presence light value (B): default setting 10 %, range min./max.
- Fade time between presence and absence light values: default setting 32 s, range 0.05–90 s.
- Switch off delay time (C): default setting “Never off”, range 0–42 min.



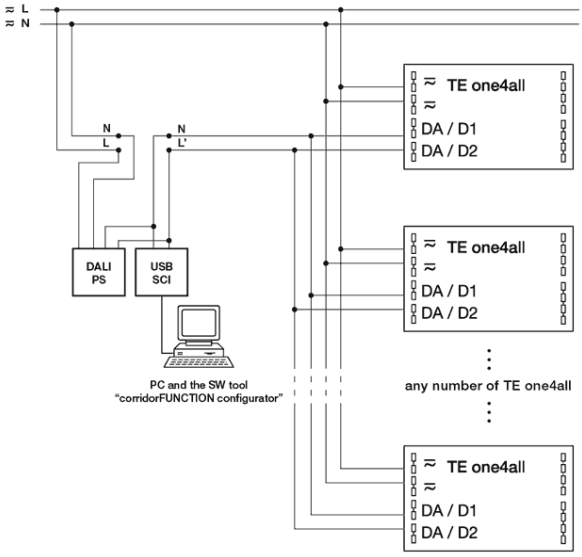
To activate the corridor mode or to change the individual settings using a software tool a DALI USB and a DALI PS (or DALI PS1) must be temporarily connected.
They can be removed once programming has been completed.

Wiring for programming:

PCA ECO/PCA EXCEL one4all



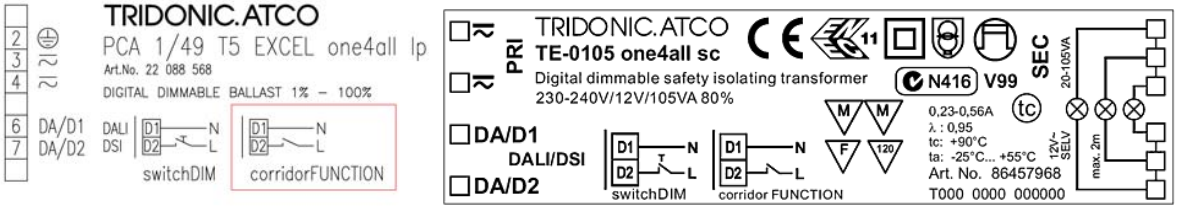
TE one4all



corridorFUNCTION wiring for programming via a PC and the corridorFUNCTION-CONFIGURATOR (download: www.tridonicatco.com)

6.3 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.



6.4 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 ballasts in 28 mm high or compact casings.
24166117	corridorFUNCTION plug lp 1min (yellow)	„Plug“ for the second profile mode (switch off after a 1 min. delay on the absence value) for PCA T5 EXCEL one4all lp xitec, PCA EXCEL one4all lp & ECO lp
24166118	corridorFUNCTION plug lp 30min (orange)	„Plug“ for the third profile mode (switch off after a 30 min. delay on the absence value) for xitec multilamp ballasts in 21mm high low-profile casings.
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 parametrisation of corridorFUNCTION applications. No special knowledge is needed to use the software tool.
Free download	pcaCONFIGURATOR	Simple software for parametrising 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.