



Checklist of Installation instructions for converting an existing emergency luminaire with LED Tube

The aim of the checklist is to determine the technical condition of the luminaire or lighting system to be converted with regard to safety relevant aspects. The luminaires must be technically and photometrically suitable for continued use and for the expected service life and must be checked for this.

Below you will find a list of the assessment items. If all items are confirmed, i.e. the risk is reduced or remains unchanged, the luminaire will not be significantly impaired by the modification.

Signify recommends that you use this document for risk assessment and hand it over to the client, completed and signed.

Basic information record	
Project name:	Projec No:
Date:	Site Engr:
LED tube model:	*Application voltage:
Central Battery Unit model:	Output voltage:
*Emergency driver model: ☐ Philips ☐ Others	Output voltage:

Centralized emergency system				
Before the conversion				
S/N	Description	N/A	Yes/No	Remarks
1	The ambient temperature of the luminaire is in a temperature range of -20°C ~ +45°C.			
2	The ambient conditions on site (dirt, water, dust) correspond to the specification of the luminaire (IP protection).			
3	There is no influence of chemically active substances (including sulfur).			
4	The luminaire is mounted on a normal surface or the luminaire has a D or FF marking when mounted on easily flammable surfaces.			
5	The luminaire and mounting have no visible damage (no deformations, dents, openings and cracks or other damage e.g. of seals).			
6	Plastics that hold current-carrying parts in place or protect against electric shock must have sufficient mechanical strength.			
7	The LED tube matches the rated voltage of the centralized battery system.			
8	The luminous flux in emergency mode ensures compliance with the illuminance requirements for the intended application. The general method for calculating luminous flux is as follows: • For Centralized, the luminous flux is equal the declared value in product specifications.			
9	The conversion does not change the protection class. The following requirements must be met: • All conductive housing parts of protection class 1 luminaires are connected to the protective conductor system of the electrical installation. • Protection class 2 luminaires have reinforced or double insulation.			

10	All protective devices of the emergency luminaries remain fully functional.			
11	Emergency lighting fixtures, drivers, batteries or other components shall comply with IEC 60598, IEC 61347 and other applicable standards and local regulations.			
12	Lamp will remain 100% brightness in centralized emergency mode. Please make sure the capacity of the centrally supplied battery is sufficient to meet the minimum emergency operating duration required for the intended application.			
During the conversion				
S/N	Description	N/A	Yes/No	Remarks
13	Electric connection must be in accordance with the applicable standard and local regulations for electrical installations.			
14	The emergency power supply status light works normally.			
15	The emergency switching response perform correctly and meets application requirements under simulated power failure conditions.			
16	The test device of the emergency luminaire operates correctly and not influence the proper function of the safety illumination.			
17	The control and monitoring functions are normal.			
After the conversion				
S/N	Description	N/A	Yes/No	Remarks

18	Affix the enclosed warning sticker in a clearly visible position next to the luminaire type plate to warn that the converted luminaire is no longer operated with fluorescent lamps. Mark the model of the replaceable LED tube on the luminaire to ensure the minimum illuminance required for the application is always met.			
19	All luminaire labels and marking remain correct and clearly visible.			
20	The converted luminaires meet the application requirements and are in accordance with the applicable standard as well as local regulations.			
21	Arrange regular testing and maintenance to ensure the system continues to comply with applicable standards and local regulations.			
22	Operation and maintenance log for emergency lighting The maintained luminaires must be tested under AC and DC conditions (functional test). It is recommended to document the modification and the functional test result in the logbook of the emergency lighting installation.			
Signature of the inspector:				

De-centralized emergency system				
Before the conversion				
S/N	Description	N/A	Yes/No	Remarks
1	The ambient temperature of the luminaire is in a temperature range of -20°C ~ +45°C.			
2	The ambient conditions on site (dirt, water, dust) correspond to the specification of the luminaire (IP protection).			
3	There is no influence of chemically active substances (including sulfur).			
4	The luminaire is mounted on a normal surface or the luminaire has a D or FF marking when mounted on easily flammable surfaces.			
5	The luminaire and mounting have no visible damage (no deformations, dents, openings and cracks or other damage e.g. of seals).			
6	Plastics that hold current-carrying parts in place or protect against electric shock must have sufficient mechanical strength.			
7*	The luminous flux in emergency mode ensures compliance with the illuminance requirements for the intended application. The general method for calculating luminous flux is as follows: • For De-centralized, the luminous flux is calculated using the following formula: $\Phi = EL \text{ pack } Power_{out} * Lamps's \text{ efficacy} * 0.8$			
8	The conversion does not change the protection class. The following requirements must be met: • All conductive housing parts of protection class 1 luminaires are connected to the protective conductor system of the electrical installation. • Protection class 2 luminaires have reinforced or double insulation.			

9	Ensure replacement of the Emergency Driver concurrent with new light source to maintain system compatibility. • Compatibility is guaranteed when using the recommended Philips emergency lighting kit (12NC 912401483603; EAN 8718699799861 or 12NC 912401483668; EAN 8719514881136).			
10	Emergency lighting fixtures, drivers, batteries or other components shall comply with IEC 60598, IEC 61347 and other applicable standards and local regulations.			
11	All protective devices of the emergency luminaires remain fully functional.			
12	The luminaire can operate safely and maintain emergency functionality for at least 30 minutes in emergency mode at an ambient temperature of 70C. This item is guaranteed to be fulfilled when the following two conditions are met: • When using the recommended Philips emergency lighting kit (12NC 912401483603; EAN 8718699799861 or 12NC 912401483668; EAN 8719514881136). • The content of form 10 is confirmed.			
13	The luminaire's operating duration in De-centralized emergency mode meets the minimum specified requirement for the application.			
During the conversion				
S/N	Description	N/A	Yes/No	Remarks
14	Electric connection must be in accordance with the applicable standard and local regulations for electrical installations.			
15	LEDtube EL safeguard module as specified in the lamp's Quick installation Guide are installed. (12NC 929004435602; EAN 8721103152213)			

16	The emergency power supply status light works normally.			
17	The emergency switching response performs correctly and meets application requirements under simulated power failure conditions.			
18	The luminaire's test facility functions correctly and complies with the relevant safety and performance requirements.			
After the conversion				
S/N	Description	N/A	Yes/No	Remarks
19	Affix the enclosed warning sticker in a clearly visible position next to the luminaire type plate to warn that the converted luminaire is no longer operated with fluorescent lamps. Mark the model of the replaceable LED tube on the luminaire to ensure the minimum illuminance required for the application is always met.			
20	All luminaire labels and marking remain correct and clearly visible.			
21	The converted luminaires meet the application requirements and are in accordance with the applicable standard as well as local regulations.			
22	Arrange regular testing and maintenance to ensure the system continues to comply with applicable standards and local regulations.			
23	Deliver the Emergency kit user manual to the client and instruct them to use it as the primary reference for daily use and mandated functional checks.			
24	Operation and maintenance log for emergency lighting The maintained luminaires must be tested under AC and DC conditions (functional test). It is recommended to document the modification and the functional test result in the logbook of the emergency lighting installation.			

Signature of the inspector:

*Application voltage :

12nc	EAN1	Product description	Mains(AC)	Centralized emergency system(DC)	De-centralized emergency system(DC)
929004306102	8721103115102	MAS LEDtube Mains/EL 600mm 7.6W 840 T8	220-240V	176-276V	85-300V
929004306402	8721103115126	MAS LEDtube Mains/EL 1200mm 13.5W 840 T8	220-240V	176-276V	110-300V
929004306702	8721103115140	MAS LEDtube Mains/EL 1500mm 20W 840 T8	220-240V	176-276V	110-300V
929004307002	8721103115164	MAS LEDtube Mains/EL 600mm 10.5W 840 T5	220-240V	176-276V	90-300V
929004307302	8721103115188	MAS LEDtube Mains/EL 1200mm 26W 840 T5	220-240V	176-276V	90-300V
929004307602	8721103115201	MAS LEDtube Mains/EL 1500mm 26W 840 T5	220-240V	176-276V	90-300V

*Emergency driver Output voltage: if the customer uses the recommended Philips emergency lighting kit (12NC 912401483603; EAN 8718699799861 or 12nc 912401483668; EAN 8719514881136), the output voltage range is 30-300Vdc.

7* For the de-centralized emergency system, if the customer uses the recommended Philips emergency lighting kit (12NC 912401483603; EAN 8718699799861 or 12nc 912401483668; EAN 8719514881136), the Flux value for the Philips emergency tube is as shown in the following table:

12nc	Product description	EAN1	Flux
929004306102	MAS LEDtube Mains/EL 600mm 7.6W 840 T8	8721103115102	260lm
929004306402	MAS LEDtube Mains/EL 1200mm 13.5W 840 T8	8721103115126	300lm
929004306702	MAS LEDtube Mains/EL 1500mm 20W 840 T8	8721103115140	300lm
929004307002	MAS LEDtube Mains/EL 600mm 10.5W 840 T5	8721103115164	220lm
929004307302	MAS LEDtube Mains/EL 1200mm 26W 840 T5	8721103115188	220lm
929004307602	MAS LEDtube Mains/EL 1500mm 26W 840 T5	8721103115201	220lm