

PowerBalance PoE – Intelligent energy-saving luminaire enabled for connected lighting systems

PowerBalance PoE

With Power-over-Ethernet (PoE) technology, PowerBalance PoE receives power and data over a single standard Ethernet cable, eliminating the need for separate power cabling. With the simple click of a connector, PowerBalance PoE luminaires become part of a complete, integrated connected lighting system, delivering extraordinary illumination experiences and value beyond illumination. A built-in lighting and control system gives office users personal control over their preferred light settings via a specially designed smartphone app. With integrated sensors, PowerBalance PoE luminaires can track activity patterns, daylight levels, and in the near future humidity, CO₂, temperature, or other data. This data allows facility managers to gain deep insight into building operations, helping them optimize the delivery of resources, enhance the experience and performance of occupants, and support improved asset management.

Benefits

- LED lighting and control system with breakthrough Total Cost of Ownership, reducing installation costs by around 25% and commissioning costs by around 50%
- Software applications optimize working processes, comfort, and asset utilization and management
- Clear customer benefits in both the construction and usage phases of a building

PowerBalance PoE

Features

- Data gathering on building usage via luminaire sensors
- Personal control of lighting and temperature settings
- Simpler and cheaper installation and lighting commissioning

Application

- General lighting for office buildings

Specifications

Type	RC461B (module size 600x600 mm versions) RC463B (module size 625x625 mm versions)
Ceiling type	Exposed T-bar ceiling
Ceiling grid	RC461B: module size in length: 600 mm RC463B: module size in length: 625 mm
Light source	Non-replaceable LED module
Power	25 W
Beam angle	90°
Luminous flux	3100 lm (for PoE 25 W systems)
Correlated Color	4000 K
Temperature	
Color Rendering Index	> 80
Median useful life L70B50	70,000 hours
Median useful life L80B50	50,000 hours
Median useful life L90B50	25,000 hours
Driver failure rate	1% per 5000 hours
Average ambient temperature	+25 °C

Operating temperature range	+10 to +40 °C
Driver	Built-in
Power/Data supply	PoE (Power over Ethernet) driver
Mains voltage	54 V (PoE switch)
Dimming	Via PoE controller
Controls system input	PoE controller
Material	Housing: coated steel and plastic Rim: powder coated steel Optics: plastic
Color	White
Connection	PoE connector CAT cable
Maintenance	Optical module sealed for life; no internal cleaning required
Installation	In lay, no brackets needed Through-wiring not possible

Versions



PowerBalance PoE RC461B recessed LED luminaire, module size 600 mm (visible profile ceiling version)



PowerBalance PoE RC461B recessed LED luminaire, module size 300x1200 mm (visible profile ceiling version)

PowerBalance PoE

Versions

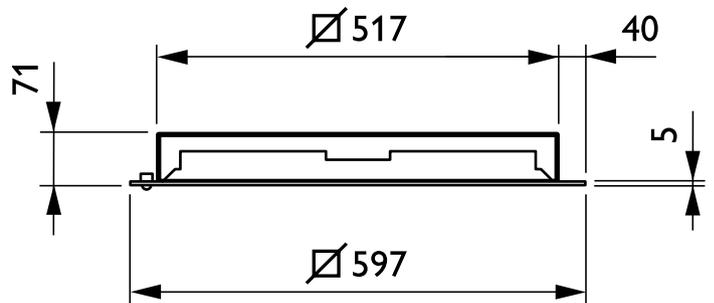
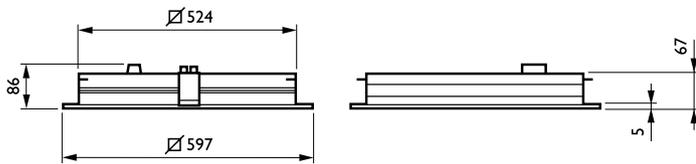


PowerBalance PoE RC461B recessed LED luminaire, module size 300x17220 mm (bandraaster version)



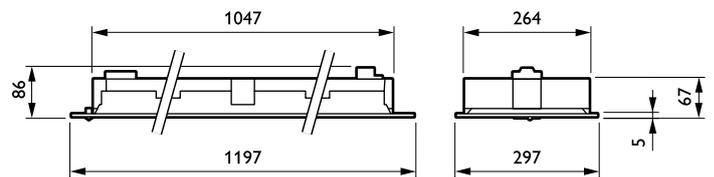
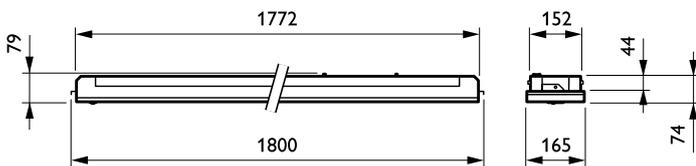
PowerBalance PoE RC461B recessed LED luminaire, module size 160x17220 mm (bandraaster version)

Dimensional drawing



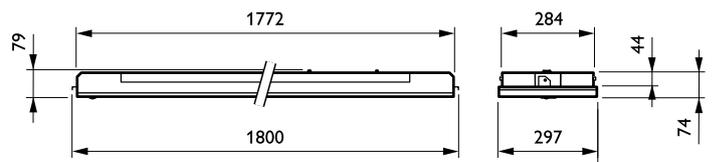
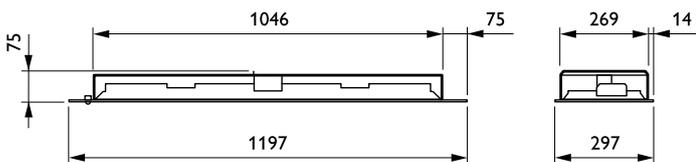
PowerBalance RC460B-RC468B

PowerBalance RC460B-RC468B



PowerBalance RC460B-RC468B

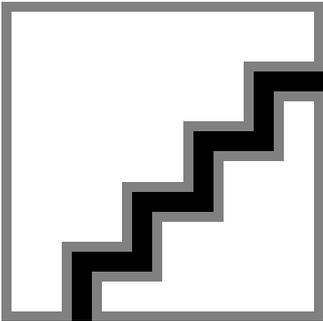
PowerBalance RC460B-RC468B



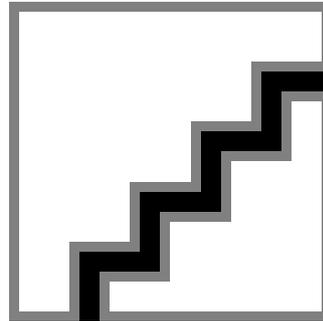
PowerBalance RC460B-RC468B

PowerBalance RC460B-RC468B

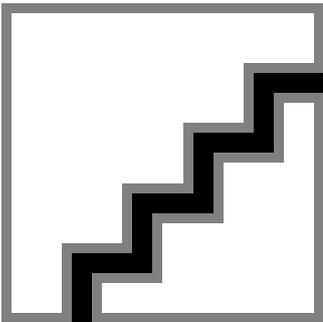
Product details



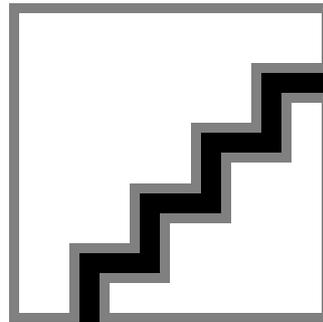
Slots for sensors of choice



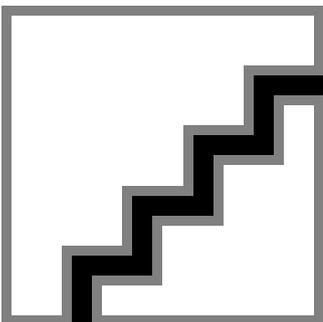
PowerBalance PoE RC461B recessed LED luminaire, module size 600 mm (visible profile ceiling version)



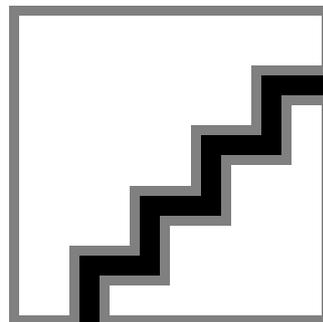
ActiLume sensor



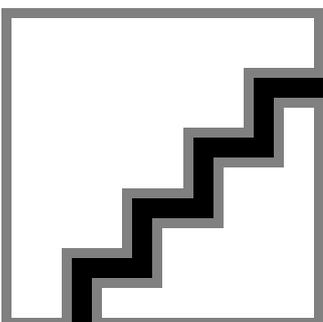
Modular backbone



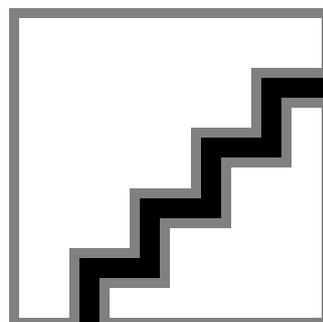
Special optics



PowerBalance gen2 RC460B/RC461B recessed LED luminaire with ActiLume (visible profile ceiling version)



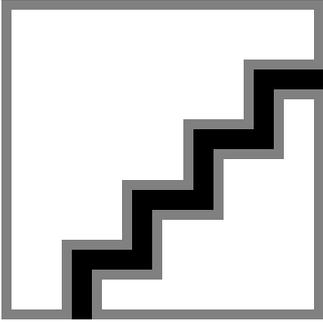
ActiLume sensor



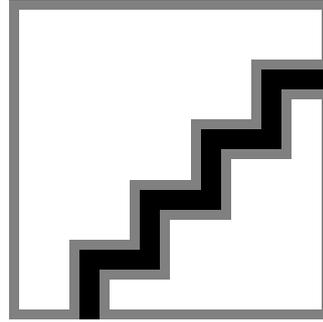
CAT connection

PowerBalance PoE

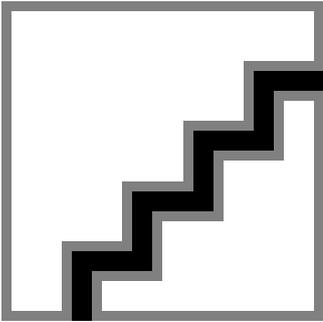
Product details



PowerBalance PoE RC461B recessed LED luminaire, module size 30x120 mm (visible profile ceiling version)



PowerBalance gen2 RC460B/RC461B recessed LED luminaire with ActiLume (visible profile ceiling version)



PowerBalance PoE RC461B recessed LED luminaire, module size 30x1722 mm (bandraaster version)

Application Conditions

Ambient temperature range	+10 to +40 °C
Average ambient temperature	25 °C
Maximum dim level	1%

Approval and Application

Mech. impact protection code	IK02
Ingress protection code	IP20

Controls and Dimming

Dimmable	Yes
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Operating and Electrical

Input Voltage	51 to 54
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General Information

Air-handling	No
Cap-Base	-
CE mark	CE mark
Optical cover/lens type	PC
Design Award Winner mark	Design Award Winner 2015
Driver included	Yes
Emergency lighting	No
ENEC mark	ENEC plus mark
Flammability mark	F
Gear	-
Glow-wire test	850/5
Lamp family code	LED32S
Light source replaceable	No
Safety bracket	-
UL mark	-

Initial Performance (IEC Compliant)

Initial chromaticity	(0.38, 0.38) SDCM ~LT~3.5
Init. Corr. Color Temperature	4000 K
Init. Color Rendering Index	≥80
Initial LED luminaire efficacy	128
Initial input power	25

Light Technical

Luminous flux tolerance	+/-10%
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Mechanical and Housing

Color	White
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Over Time Performance (IEC Compliant)

Driver failure rate at 5000 h	1
Median useful life L80B50	50000
Median useful life L90B50	25000

Application Conditions

order code	Suitable for random switching
10491800	Yes (relates to presence/ movement detection and daylight harvesting)
10493200	Yes (relates to presence/ movement detection and daylight harvesting)
10495600	Yes (relates to presence/ movement detection and daylight harvesting)
10496300	Yes (relates to presence/ movement detection and daylight harvesting)
10497000	No
10499400	No
10501400	No
10502100	No

General Information

PowerBalance PoE

order code	Protection class IEC	Embedded control	Number of light sources	Optic type	Product Family Code
10491800	Safety class I (I)	ACL	1	-	RC461B
10493200	Safety class III (III)	ACL	1	No	RC461B
10495600	Safety class I (I)	ACL	1	-	RC461B
10496300	Safety class III (III)	ACL	1	-	RC416B

order code	Protection class IEC	Embedded control	Number of light sources	Optic type	Product Family Code
10497000	Safety class I (I)	No	1	-	RC461B
10499400	Safety class III (III)	No	1	No	RC461B
10501400	Safety class I (I)	No	1	-	RC461B
10502100	Safety class III (III)	No	2	-	RC416B

Initial Performance (IEC Compliant)

order code	Initial luminous flux
10491800	3100
10493200	3100
10495600	3100
10496300	3000

order code	Initial luminous flux
10497000	3100
10499400	3100
10501400	3100
10502100	3100

Mechanical and Housing

order code	Geometry
10491800	W60L60
10493200	W30L120
10495600	W30L177
10496300	W16L177

order code	Geometry
10497000	W60L60
10499400	W30L120
10501400	W30L177
10502100	W16L177

