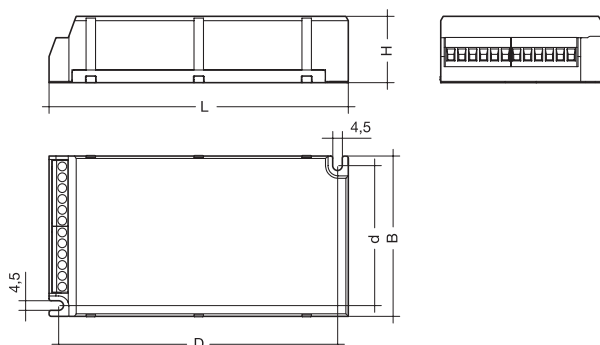




Digital electronic ballasts for inbuilding applications Metal halide lamps

powerCONTROL PCI twin



The digital components in powerCONTROL control the power circuit and ignition. powerCONTROL is suitable for metal halide lamps. The basic circuit elements are patented. The ballasts were especially designed for inbuilding in luminaires.

- operate quartz- and ceramic burner lamps
- flicker free light
- stable colour through constant light output
- lamp life increased up to **50 %**
- power consumption reduced by **10–20 %**
- lightweight
- no acoustic resonance
- two independent lamp output circuits

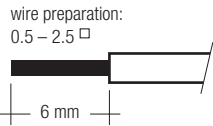
- The relevant lamp output circuit is disconnected if the lamp is missing or faulty (the other lamp output circuit will continue to operate)
- increased ignition energy thanks to pulse packages (**PulseControl** technology)
- re-strike time reduced by up to **50 %**
- electromagnetic interference during ignition reduced by up to **95 %**
- overtemperature cut off
- bottom of housing: steel
- cover of housing: Makrolon V0 material, black, IP 20
- screw terminals up to 1.5 mm² for flexible wire, up to 2.5 mm² for solid wire
- can be used in movable luminaires with plugs (discharge voltage < 34 V after 1 s)

Type		PCI 2/35 B011	PCI 2/70 B011
article number		86458207	86458209
wattage	W	2x39	2x72
total wattage at ta = 25 °C	W	87	158
mains voltage	V	220–240	220–240
AC voltage range	V	198–254	198–254
DC voltage range	V	153–320	153–320
current	A	0.38	0.70
mains frequency	Hz	0/50/60	0/50/60
power factor	λ	0.97	0.97
operating frequency	Hz	145	145
max. ignition voltage	kVp	5	5
max. cable length to lamp	m/pF	1.5 each / 120 each	1.5 each / 120 each
max. ambient temperature ta	°C	50	40
min. ambient temperature ta	°C	-25	-25
permissible housing temperature tc	°C	70	70
length between mounting holes (D)	mm	128.5–132.5	158.5–162.5
width between mounting holes (d)	mm	63.5–67.5	63.5–67.5
dimensions length x width x height	mm	140 x 75 x 31	170 x 75 x 31
weight	g	320	410

Installation instructions

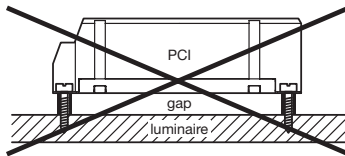
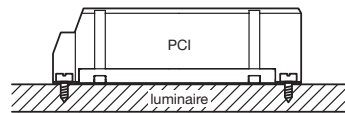
Wiring type and cross section

Stranded wire with end ferrule with a cross section of 1.5 mm² or solid wire up to 2.5 mm² may be used for wiring. Strip 6 mm of insulation from the cables to ensure perfect operation of the screw terminals.



Mounting recommendation

To ensure optimum heat removal the ECG should be mounted on a metal plate (luminaire body) No insulators between the ECG and the the cooling surface (air, adhesive tape, etc.). Finally important remains the temperature measurement.



If several ballasts are installed in masts, boxes, etc., measures must be taken to avoid overheating of individual components.

Standards

EN 55015 (radio interference)
EN 61000-3-2 (mains harmonics)
EN 61347-2-12
EN 61547 (interference immunity)
CE mark
EMV-VDE mark
ENEC mark

Packing quantities

box of 15
40 boxes/pallet
600 pieces/pallet

Harmonic distortion in the mains supply

Ballast Type	THD					
	3	5	7	9	11	
PCI 2/35	7.5	6.0	3.5	3.5	3.5	1.5
PCI 2/70	7.5	4.5	5.0	2.5	2.5	1.0

Loading of automatic circuit breakers

Automatic circuit breaker type	Installation Ø							
	C10	C13	C16	C20	B10	B13	B16	B20
PCI 2/35	14	25	36	42	8	14	18	18
PCI 2/70	7	14	20	20	4	6	7	7

Radio interference

- Do not cross mains and lamp cables.
- Do not lay mains cables together with lamp cables (ideally they should be 5–10 cm apart).
- Do not lead mains cables too closely along the electronic ballast.
- Twist lamp cables.
- Increase the distance between lamp cables and earthed metal surfaces.
- Keep the mains cable in the luminaire short.
- Parallel runs (x) of mains and lamp cables must be kept as short as possible.

Important advise

When a lamp is changed (at the end of its life), if a lamp is missing or after overtemperature shutdown the mains voltage of the ECG must be disconnected.

Warning – starting voltage up to max. 5 kV!

Not suitable for use with lamps with integral ignitors.

Note on wiring

The length of the lamp wires is limited by the value of cable capacitance. The maximum of 120 pF would enable connection of approximately 1.5 metres of lamp wire for each lamp.

In class 1 luminaires it is necessary to earth the ballast and the luminaire via the earth terminal, in class 2 luminaires not.

To avoid the damage of the control gear, the wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

Ballast lumen factor

EN 60929 8.1

Type	AC/DC-BLF
	U = 198–254 V, 25 °C
PCI 2/35	1.00
PCI 2/70	1.00

Safety switch off

End of life of the lamps

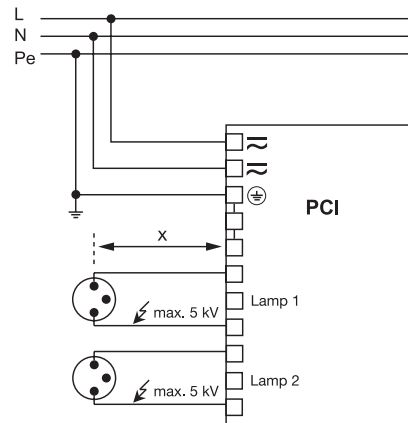
At the end of their useful life, lamps often cycle on/off. The PCI ballast recognises this condition and switches off the lamp, after three complete on/off cycles and whilst the supply has been unswitched. Complete lamp switch off enables easy identification of a defective lamp in the application. After a change of the faulty lamp and an interruption of the mains supply (mains reset) the ballast will strike the lamp. When there is no lamp in circuit or a defective lamp is connected to the ballast, the ballast will switch off after approx. 25 minutes (3.5 minutes of ignition time).

Overtemperature shutdown

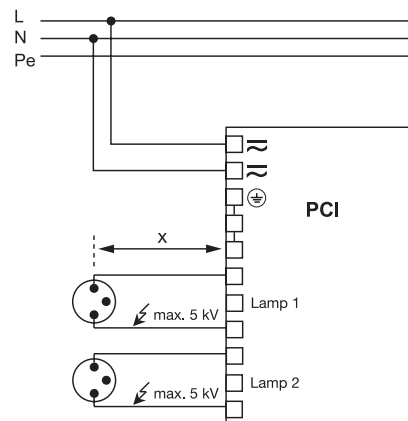
The units shut down at Δt approx. +10 °C compared with t_c/t_a . A mains reset must be carried out so that the units switch on again.

Overload strength

320 V_{AC} / 1 h



Circuit diagram PCI class 1 application



Circuit diagram PCI class 2 application