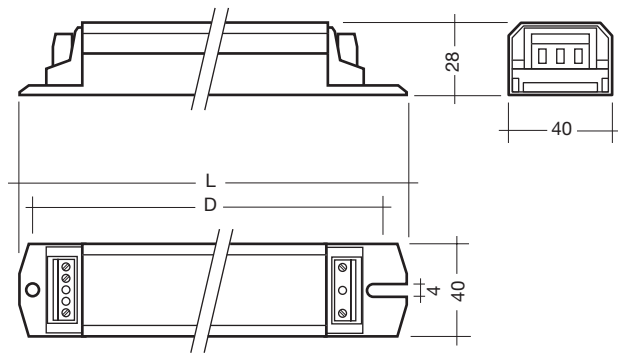


Digital electronic ballasts
H.I.D. lamps

powerCONTROL PCI A201/2, PCS A201



The digital components in powerCONTROL control the power circuit, ignition and an optional lamp re-ignition function. powerCONTROL is suitable for high pressure sodium lamps with ignition voltage of 1.8–2.5 kV and metal halide lamps with ignition voltage of 4–5 kV. The basic circuit elements are patented.

- 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

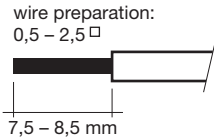
- switches off when the lamp is missing or faulty
- re-strike time reduced by up to **50 %**
- increased ignition energy thanks to pulse packages (**PulseControl** technology)
- electromagnetic interference during ignition reduced by up to **95 %**
- overtemperature cut off
- metal housing, IP 20
- screw terminals for 0.5–2.5 mm²
- can be used in movable lamps with plugs (discharge voltage < 34 V after 1 s)
- version A202: with lamp reignition monitor (max. 500 W)

Type		PCS 0070 A201	PCI 0070 A201	PCI 0070 A202	PCI 0150 A201	PCI 0150 A202
article number		86455792	86454810	86454801	86451257	86451260
lamp type		HS	HI	HI	HI	HI
lamp wattage	W	72	72	72	147	147
circuit wattage at ta = 25°C	W	80	80	80	162	162
mains voltage	V	220–240	220–240	220–240	220–240	220–240
AC voltage range	V	198–254	198–254	198–254	198–254	198–254
DC voltage range	V	153–320	153–320	–	153–320	–
current	A	0.35	0.35	0.35	0.70	0.70
mains frequency	Hz	0/50/60	0/50/60	50/60	0/50/60	50/60
power factor	λ	0.97	0.97	0.97	0.97	0.97
operation frequency	Hz	140	140	140	140	140
max. ignition voltage	kVp	2.3	5	5	5	5
max. distance from lamp	m/pF	2/160	2/160	2/160	1.5/120	1.5/120
max. ambient temperature ta	°C	45	45	45	45	45
min. ambient temperature ta	°C	-25	-25	-25	-25	-25
max. housing temperature tc	°C	80	80	80	80	80
lamp re-ignition monitor		no	no	yes	no	yes
max. incandescent lamp	W	–	–	500	–	500
fixing centres (D)	mm	220	220	220	346	346
dimensions length x width x height	mm	234 x 40 x 28	234 x 40 x 28	234 x 40 x 28	360 x 40 x 28	360 x 40 x 28
VDE EMV mark		no	yes	yes	yes	yes
ENEC mark		yes	yes	yes	yes	yes
circuit diagram		2	1	3	1	3
weight	g	335	335	335	560	570

Installation instructions

Wiring type and cross section

Stranded wire with end ferrule or solid wire with a cross section between 0.5 and 2.5 mm² may be used for wiring.

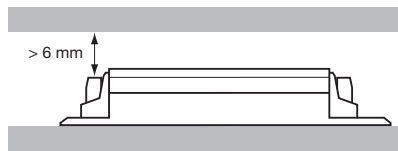


Important advise

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. 3 or 5 kV!

Not suitable for use with lamps with integral ignitors.



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

Harmonic distortion in the mains supply

Ballast Type	THD	3	5	7	9	11
PCS 0070	12	10	6	2	2	1
PCI 0070	12	10	6	2	2	0.5
PCI 0150	13	11	5	2	2.5	1

Loading of automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20
Installation Ø	1.5 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²	1.5 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²
PCS 0070	10	18	26	30	6	10	13	13
PCI 0070*	10	18	26	30	6	10	13	13
PCI 0150*	7	14	20	20	4	6	7	7

* In use with PCI A202 the nominal current of an additional lamp must be considered

Note on wiring

The length of the lamp wires is limited by the value of cable capacitance.

In class 1 luminaires it is necessary to earth the ballast and the luminaire via the earth terminal.

For an operation without causing interference in class 2 luminaires a connection of a functional earth to the ballast is necessary.

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.).

Lamp re-ignition / A202

The time required by a high pressure lamp to warm up or re-ignite is bridged by an additional lamp. A relay switches the mains phase internally and an additional lamp of up to max. 500 W (incandescent lamps) or 200 VA (inductive load) can be connected. The maximum output can be divided over several light points.

The additional lamp will also be switched on if there is no lamp on the ballast. DC-input is not suitable.

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.

Packing quantities

70 W:	150 W:
25 pieces / carton	10 pieces / carton
750 pieces / pallet	480 pieces / pallet

Safety switch off

End of life of the lamps

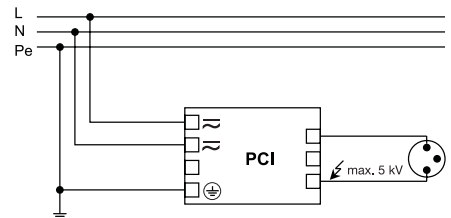
At the end of their useful life, lamps often cycle on/off. The PCI ballast recognises this condition and switches off the lamp, after three complete on/off cycles and whilst the supply has been unswitched. Complete lamp switch off enables easy identification of a defective lamp in the application. After 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 apr. 25 minutes (3.5 minutes of ignition time).

Overtemperature shutdown

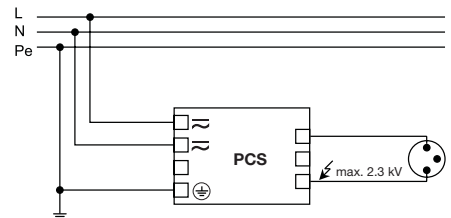
The units shut down at Δt approx. +10 °C compared with t_c/t_a . A mains reset must be carried out so that the units switch on again.

Overload strength

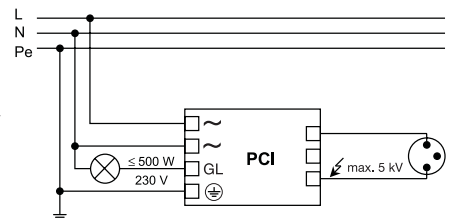
320 V_{AC} / 1 h



1) PCI without lamp re-ignition monitor



2) PCS PCI without lamp re-ignition monitor



3) PCI with lamp re-ignition monitor