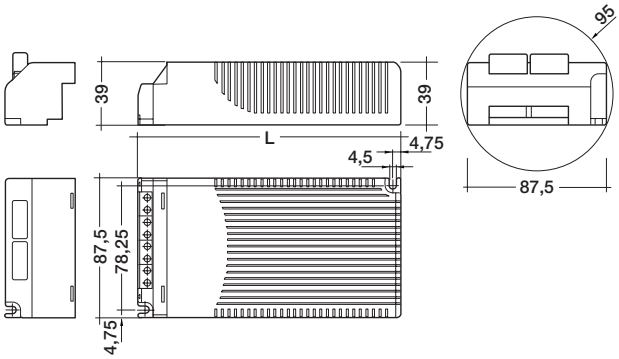
power**CONTROL** PCI A001/2, PCS A001



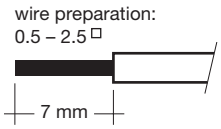
The digital components in power**CONTROL** control the power circuit, ignition and an optional lamp re-ignition function. power**CONTROL** is suitable for high pressure sodium lamps with ignition voltage of 1.8–2.5 kV and metal halide lamps with ignition voltage of 4–5 kV. The basic circuit elements 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
- one-piece housing in black polyamide, IP 20
- screw terminals for 2.5 mm^2 or 2x1.5 mm^2
- can be used in movable lamps with plugs (discharge voltage < 34 V after 1 s)
- accessories are terminal cover and strain relief: **ZE 002** article number 86448230
- version A002: with lamp reignition monitor (max. 500 W)

Type		**PCI 0020 A001**	**PCI 0035 A002**	**PCS 0070 A001**	**PCI 0070 A002**	**PCI 0100 A002**	**PCI 0150 A002**
article number		86457083	86448209	86455786	86448059	86453881	86448224
lamp type		HI	HI	HS	HI	HI/HS	HI
lamp wattage	W	20	39	72	72	99	147
circuit wattage at ta = 25 °C	W	24	44.5	79.5	79.5	110	162
mains voltage	V	220–240	220–240	220–240	220–240	220–240	220–240
AC voltage range	V	198–254	198–254	198–254	198–254	198–254	198–254
DC voltage range	V	153–320	–	153–320	–	–	–
current	A	0.10	0.20	0.36	0.36	0.60	0.70
mains frequency	Hz	0/50/60	50/60	0/50/60	50/60	50/60	50/60
power factor	λ	0.97	0.97	0.97	0.97	0.97	0.97
operation frequency	Hz	125	125	125	125	125	125
max. ignition voltage	kVp	5	5	2.3	5	5	5
max. distance from lamp	m/pF	5/400	5/400	3/240	5/400	3/240	5/400
max. ambient temperature ta	°C	60	60	50	50	50	50
min. ambient temperature ta	°C	-25	-25	-25	-25	-25	-25
max. housing temperature tc	°C	90	85	80	85	80	85
lamp re-ignition monitor		no	yes	no	yes	yes	yes
max. incandescent lamp	W	–	500	–	500	500	500
fixing centres – length	mm	120–123	120–123	120–123	120–123	150–153	150–153
fixing centres – width	mm	77–80	77–80	77–80	77–80	77–80	77–80
length incl. ZE 002	mm	156	156	156	156	186	186
dimensions length x width x height	mm	130 x 87.5 x 39	130 x 87.5 x 39	130 x 87.5 x 39	130 x 87.5 x 39	160 x 87.5 x 39	160 x 87.5 x 39
VDE EMV mark		no	yes	no	yes	no	yes
VDE mark		no	no	yes	no	no	no
ENEC mark		yes	yes	no	yes	yes	yes
circuit diagram		1	3	2	3	3	3
weight	g	260	340	330	340	480	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. Strip 7 mm of insulation from the cables to ensure perfect operation of the screw terminals.



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.

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 or VDE mark

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, 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.).

Lamp re-ignition / A002
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.

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 tc/ta. A mains reset must be carried out so that the units switch on again.

Overload strength
320 V AC / 1 h

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

Packing quantities
10 pieces/box
60 boxes/pallet
600 pieces/pallet

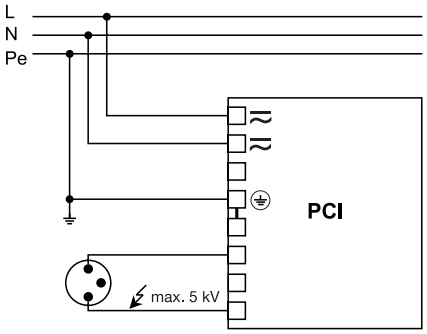
Harmonic distortion in the mains supply

Ballast Type	THD	3	5	7	9	11
PCI 0020	14.50	12.50	5.50	1.00	2.00	0.60
PCI 0035	17.30	16.05	6.55	1.05	2.04	0.80
PCI 0070/PCS 0070	9.20	9.67	3.71	2.02	1.50	0.88
PCI 0100	13.00	11.00	5.00	2.00	2.50	1.00
PCI 0150	9.50	7.45	3.30	1.80	2.00	0.80

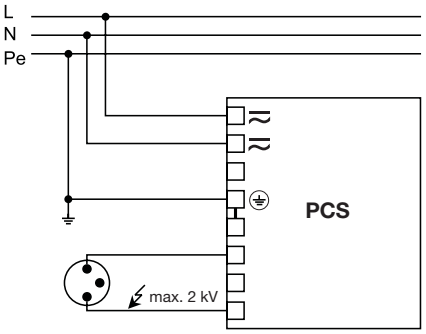
Loading of automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20
Installation ∅	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²
PCI 0020*	24	33	42	48	12	15	19	19
PCI 0035*	16	22	28	32	8	10	13	13
PCI 0070*/PCS 0070	10	18	26	30	6	10	13	13
PCI 0100*	9	17	23	26	5	8	11	11
PCI 0150*	7	14	20	20	4	6	7	7

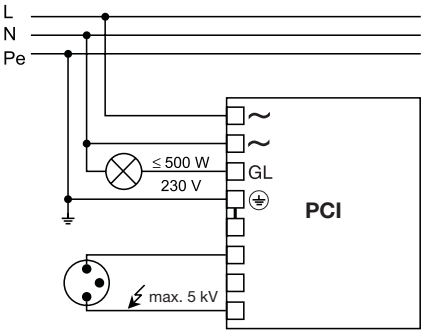
* In use with PCI A002 the nominal current of an additional lamp must be considered



1) PCI without lamp re-ignition monitor



2) PCS without lamp re-ignition monitor



3) PCI with lamp re-ignition monitor

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