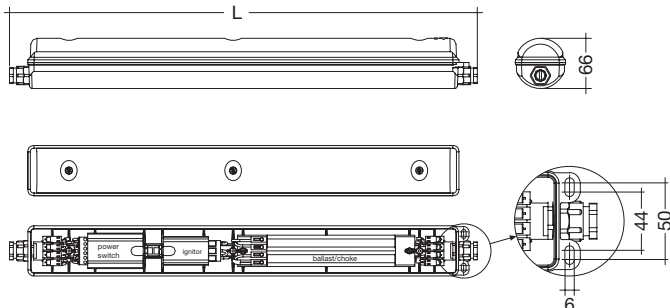


Slim remote gear boxes for high pressure mercury lamps, high pressure sodium lamps and metal halide lamps

EC PAK 35–70 W 230 V 50 Hz
PCI PAK 70 W 230–250 V 50/60 Hz



- switches off when the lamp is missing or faulty
- increased ignition energy thanks to PulseControl technology
- single packing with mounting instructions
- $\cos \varphi > 0.95$

Magnetic chokes

- EC-line chokes with thermal cut-out
- digital safety ignitor PulseControl
- power switch for 230V control wires (ZRM U6L) or with fully automatic light-level reduction during night time without control wires (ZRM U6M)

Electronic ballasts

- PCI-line electronic ballasts with over temperature cut-off
- lamp life increased up to 50 %
- lightweight
- flicker free light

Packaging:

single packing with mounting instructions

Magnetic chokes without power switch

lamp	type	type	article number	ignitor	switch	capacitor	length	weight	ta	losses	nominal lamp current	line current
W						μF	L mm	kg	K	W	A	A
80	HM	EC PAK 80 QB001	22149008	–	–	8	530	2.1	45	16.2	0.8	0.42
125	HM	EC PAK 125 QB001	22149010	–	–	10	530	2.2	35	20.0	1.15	0.63
35	HI	EC PAK 35 MC021	22149000	ZRM 2.5 ES/D	–	6	610	1.7	55	11.9	0.53	0.22
70	HS	EC PAK 70 SC031	22149005	ZRM 2 ES/D	–	12	610	2.3	25	23.5	1.0	0.40
70	HI	EC PAK 70 MC021	22149004	ZRM 2.5 ES/D	–	12	610	2.3	25	23.5	1.0	0.40

Magnetic chokes with power switch to 50% light-level

lamp	type	type	article number	ignitor	switch	capacitor	length	weight	ta	losses	nominal lamp current	line current ②
W						μF	L mm	kg	K	W	A	A
80/50	HM	EC PAK 80/50 QC101	22149023	–	ZRM U6L	8	610	2.3	40	16.1	0.8/0.62	0.41
80/50	HM	EC PAK 80/50 QC301	22149021	–	ZRM U6M	8	610	2.3	40	16.1	0.8/0.62	0.41
70/50	HS	EC PAK 70/50 SC131 ①	22149020	ZRM 2 ES/D	ZRM U6L	–	610	2.4	25	23.9	1.0/0.76	0.96
70/50	HS	EC PAK 70/50 SC331 ①	22149018	ZRM 2 ES/D	ZRM U6M	–	610	2.4	25	23.9	1.0/0.76	0.96
125/80	HM	EC PAK 125/80 QD101	22149026	–	ZRM U6L	10	610	2.4	25	23.6	1.15/0.8	0.65
125/80	HM	EC PAK 125/80 QD301	22149024	–	ZRM U6M	10	610	2.4	25	23.6	1.15/0.8	0.65

① capacitor external

② at 100 %

Electronic ballasts

lamp	type	type	article number	ignitor	switch	capacitor	length	weight	ta	losses	nominal lamp current	line current
W						μF	L mm	kg	K	W	A	A
70	HI	PCI PAK 70 MA003	22149030	–	–	–	400	1.0	25	8	1.0	0.35

Standards

EC PAK complies with:

- EN 55 015 (radio interference)
- EN 61 000-3-2 (mains harmonics)
- EN 60 922 (safety)
- EN 60 598 (luminaire)
- EN 60 923 (performance)
- CE
- ENEC marked

PCI PAK complies with:

- EN 55 015 (radio interference)
- EN 61 000-3-2 (mains harmonics)
- EN 61 547 (interference immunity)
- ENEC marked

Technical data

- M20x1.5 screw fitting with strain-relief
- degree of protection IP 55
- protection class 2
- temperature range: -25 °C to max. ambient temperature (ta)

Application tips

Due to its slim housing and its high degree of protection the devices are exceptionally well equipped for exterior lighting.

- Introduction in the upper end of the lighting pole
- Use in bollard luminaires and similar lightings for sidewalks and paths
- Use as an independent gear box in application with high humidity (exterior of train stations, airports, stadiums,...)

Power reduction

Gear boxes with tapped chokes are available for Mercury and Sodium High Pressure lamps. Through nocturnal light reduction to about 50% light level up to 40% of energy can be saved.

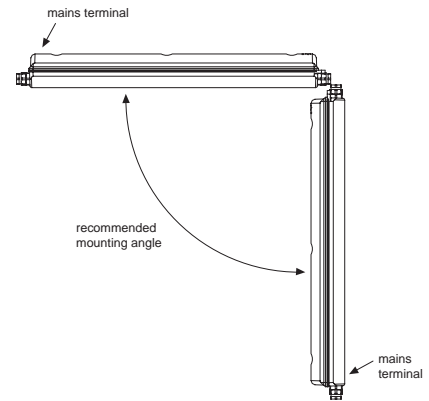
In general, the reduction of the light level is managed through a 230V control wire. For these

applications gear boxes with integrated power switch are available.

For installations without any additional control wire devices with an automatic power switch ZRM U6M can be used. This power switch reduces independently the light level during the night – in relation to the operation cycles during the year.

Mounting instructions

- max. line length EC PAK and PCI PAK to the lamp: 1500 mm
- allowed cable diameter for M20x1.5 screw fitting: 6–12 mm
- mounting direction vertical while mains terminal is horizontal or downwards (see drawing).
- For earthing of the luminaire head an earth is looped. The device nevertheless maintains its protection class 2 status.
- In order to facilitate the wiring, the terminal can be pulled out of the mounting without the use of tools.



If the PCI PAK is installed in a class 2 luminaire, the ballast must be connected to a functional earthing. The functional earthing must not be connected to touchable live parts and needs to be double isolated (cable). If there is no functional earthing, an external RFI filter can be installed optionally.

Mains harmonics

Limits	3	5	7	9	THD
	≤ 30	≤ 10	≤ 7	≤ 5	
EC PAK 80 QB001	16.9	3.7	2.4	1.0	18.4
EC PAK 125 QB001	17.7	3.3	1.7	0.6	18.7
EC PAK 35 MC021	16.8	3.3	3.1	1.2	18.4
EC PAK 70 SC031	17.1	4.0	3.1	1.3	18.5
EC PAK 70 MC021	17.1	4.0	3.1	1.3	18.5
EC PAK 80/50 QC101	17.2	3.4	2.1	0.8	18.2
EC PAK 70/50 SC131	7.3	1.8	1.5	0.6	8.1
EC PAK 125/80 QD101	17.3	3.6	2.0	0.8	18.4
PCI PAK 70 MA003	9.7	3.7	2.0	1.5	9.2