

HID-PrimaVision electronic ballasts for MH/CDM 35, 70 and 150 W lamps

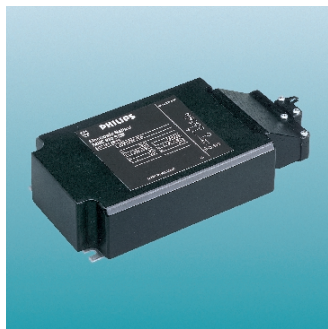


HID-PV 150/S MH/CDM

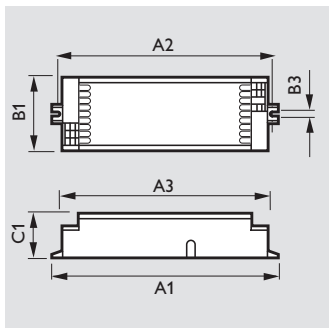
Dimensions in mm



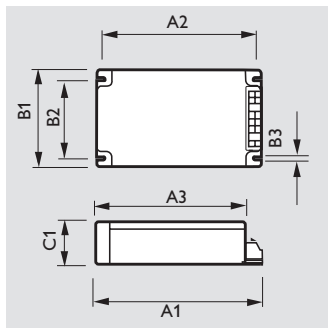
HID-PV 035/S MH/CDM



HID-PV 070/II MH/CDM



HID-PV 035/S MH/CDM



HID-PV 070/S MH/CDM

Ballast type	A1	A2	A3	B1	B2	B3	C1
HID-PV 035/S MH/CDM	187	178	143	60	-	4.5	36
HID/PV 035/I MH/CDM	224	210	178	60	-	4.5	36
HID-PV 070/S MH/CDM	150	134	136	90	70	4.5	38
HID/PV 070/I MH/CDM	185	134	136	90	70	4.5	38
HID-PV 150/S MH/CDM	150	134	136	90	70	4.5	40
HID/PV 150/I MH/CDM	185	134	136	90	70	4.5	40

Definition

Compact, one-piece, electronic ballasts for built-in (/S) or stand-alone (/I) applications with low-wattage metal halide lamps.

Description

Lamp

- Electronic, low-frequency operation (typically 130 Hz), eliminates all visible lamp flicker
- In practical installations HID-PV ballasts increase life of quartz metal halide lamps up to 50 % and life of CDM lamps up to 30 %, resulting from:
 - elimination of influence of mains voltage variations
 - faster and controlled lamp ignition
- More stable operation and faster run-up time
- Optimum end-of-lamp life protection (HID-PV is recommended for CDM-TC 35 W and mandatory for CDM-TC 70 W)

Ballast

- Fully polycarbonate/ABS housing for 150 W type, 35 and 70 W types with metal base, allow for optimum integration in class I and class II luminaires
- Simple strain relief ('cord grip') for Independent use (/I), class I.

Applications

HID-PV 35 W and 70 W

- Shops, retail premises, offices, public buildings, lobbies
- Suitable for indoor applications where relative humidity is limited
- Recommended luminaire classification > IP 54

HID-PV 150 W

- Identical to 35 and 70 W
- Also theatre/stage, outdoor architectural applications
- Suitable for outdoor applications, unit is completely potted, recommended luminaire classification > IP 23
- Also suitable for operating SON 150 W lamps.

Philips quality

This assures optimum quality regarding:

- System supplier
 - As manufacturers of lamps and electronic control gear, Philips ensures that, from the earliest development stage, optimum lamp/ballast performance is maintained
- European standards
 - Philips HID electronic ballast comply with all relevant European rules and regulations.

Compliances and approvals

- RFI < 30 MHz EN 55015
- RFI > 30 MHz EN 55022B (excl. 150 W)
- Harmonics EN 61000-3-2
- Immunity EN 61547
- Safety EN 60926/EN 60928 VDE 0712/14, 22
- Performance EN 60927/EN 60929
- Vibration & bump tests IEC 68-2-6-FC IEC 68-229-Eb
- Approval marks KEMA, VDE
- Quality standard ISO 9001
- Environmental standard ISO 14001
- CE marking.

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Technical data

Ballast type	For lamps	System power W	Efficacy lm/W	Lamp power W	Efficacy lm/W	Lumen* lm	T _{case} life °C	T _{case} max. °C	T _{ambient} range °C
HID-PV 035/S or I MH/CDM	MH/CDM 35 W	42.5	78	38	87	3300	70	70	-20...55
HID-PV 070/S or I MH/CDM	MH/CDM 70 W	80	83	73	90	6600	75	75	-20...45
HID-PV 150/S or I MH/CDM	MH/CDM 150 W	163	84	147	95	14000	90	100	-20...50

* Typical values for CDM/830 colour

Technical data for installation

Mains operation

Rated mains voltage	220 – 240 V
With tolerances for performance: +6 % -8 %	206 – 254 V
With tolerances for safety:	180 – 264 V
Mains frequency	50/60 Hz
Operation frequency (typical)	130 Hz
Power factor	> 0.95
Ignition voltage	3-5 kV

Air and creepage distance from any (metal) part that may become live, to earthed environment (class I) or test finger (class II) > 6 mm

Earth leakage current < 0.5 mA per ballast

Cable capacity	HID-PV 035/S or I, MH/CDM:	Max. 120 pF
	HID-PV 070/S or I, MH/CDM:	Max. 120 pF
	HID-PV 150/S or I, MH/CDM:	Max. 200 pF

Notes:

With three-phase mains supply, neutral should never be disconnected; otherwise circuitry could be damaged.

For proper EMC, wiring inside luminaire should be as straight and as short as possible; mains wires should not run parallel to lamp wires.

Thermo-protected circuit incorporates self-resetting facility; ignition attempts stop after 18 min.; mains supply must be switched off and on to reset ballast.

Overvoltage protection	48 hrs at 320 Vac
	2 hrs at 350 Vac
	5 min. at 380 Vac

Automatic restart after lamp replacement or voltage dip, lamp may take up to 18 min. to restart.

Insulation resistance test:	500 Vdc from Line/Neutral to Earth (not between Line and Neutral)
	Note: Ensure that the Neutral is reconnected again after abovementioned test is carried out and before the installation is put into operation.

Mains current at 230V*

Ballast	Nominal current
HID-PV 035/S or I MH/CDM	0.21
HID-PV 070/S or I MH/CDM	0.35
HID-PV 150/S or I MH/CDM	0.73

* For electronic HID gear run-up current < nominal current

Inrush current

Ballast	Max. quantity of ballast per Miniature Circuit Breaker Type B 16 A	Inrush current 1/2 value time at typical mains impedance
HID-PV035/S or I MH/CDM	9	30 A / 300 µs
HID-PV070/S or I MH/CDM	6	45 A / 450 µs
HID-PV150/S or I MH/CDM	6	50 A / 450 µs

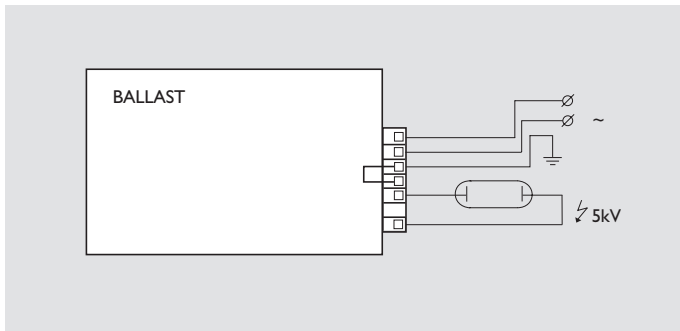
Conversion table for max. quantities of ballasts on other types of Miniature Circuit Breaker

MCB type	Relative number of ballasts	
B	16 A	
B	10 A	100% (see table above)
C	16 A	63%
C	10 A	170%
L, I	16 A	104%
L, I	10 A	108%
L, I	10 A	65%
G, U, II	16 A	212%
G, U, II	10 A	127%
K, III	16 A	254%
K, III	10 A	154%

Notes:

- Data is based on a mains supply with an impedance of 400 mΩ (equal to 15 m cable of 2.5 m² and other 20 m to the middle of the power distribution), under worst case conditions. With an impedance of 800 mΩ the number of ballasts can be increased by 10 %.
- Measurements will be verified in real installations; therefore data are subject to change.
- In some cases the maximum number of ballasts is not determined by the MCB but by the maximum electrical load of the installation.
- Note that the maximum number of ballasts is given when these are all switched on at the same moment, i.e. by a wall switch.
- Measurements were carried out on single-pole MCB's. For multi-pole MCB's it is advisable to reduce the number of ballasts by 20 %.
- The maximum number of ballasts which can be connected to one Residual Current Detector of 30 mA is 30.

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Wiring diagram

Connection wiring is greatly simplified by the use of cage-clamp contacts with push buttons.

Wire cross-section:

On the mains side: 0.75...2.5 mm²

On the lamp side: 0.75...2.5 mm²

Strip length: 6 mm

Ordering and packing data

Ballast	1 Piece		Bulk packing		Dimensions			Volume	Weight gross	EAN code
	EAN code	Weight	Qty.	pc.	L	W	H			
		kg			cm			m ³	kg	
HID-PV 035/S	8711500 538017	t.b.a.	10		31	27	11	0.009	3.5	8711500 538024
HID-PV 035/I	8711500 538031	t.b.a.	10		31	27	11	0.009	3.7	8711500 538048
HID-PV 070/S	8711500 742858	t.b.a.	10		33	20	12.5	0.008	3.8	8711500 742865
HID-PV 070/I	8711500 743312	t.b.a.	8		33	20	12.5	0.008	3.0	8711500 743329
HID-PV 150/S or I	8711500 538055	t.b.a.	8		33	20	12.5	0.008	6.0	8711500 538062