OUTDOOR HID ELECTRONIC BALLASTS

DNA UK LTD, Unit 1 Dean Farm, Bighton Hill, Ropley, ALRESFORD, Hampshire, SO24 9SQ, UK
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CONTENTS

HID ELECTRONIC BALLASTS

Product Features

Options of dimmable ballasts via 1-10V or IPM (Intelligent Power Management) software
20% energy savings compared to magnetic ballasts
Controlling and monitoring of lamp power for optimal lumen maintenance
Low-frequency regulated device enhancing lamp efficiency
Flicker-free operation of lamp stability through constant power
Colour stability through constant power
Protection:

- Short circuit protection
- Open circuit safety
- Overheat auto switch-off
- Automatic cut-off in case of defective/missing lamp

Suited for high pressure sodium and metal halide (ask us for compatibility file)
Option of built-in or independent type
EMC compliance with EN55015:2006A1 +2007(RFI suppression), EN61000-3-2 (mains harmonics), EN61547 (immunity)
ENEC KEMA certified according to EN61347-1:2008, EN61347-2-12:2005
Environmentally friendly components complying with RoHS
The digital control increases lamp life up to 50%

Applications

Completely potted by silicon or varnish suitable for outdoor such as roads/tunnels, car parks and architectural applications.

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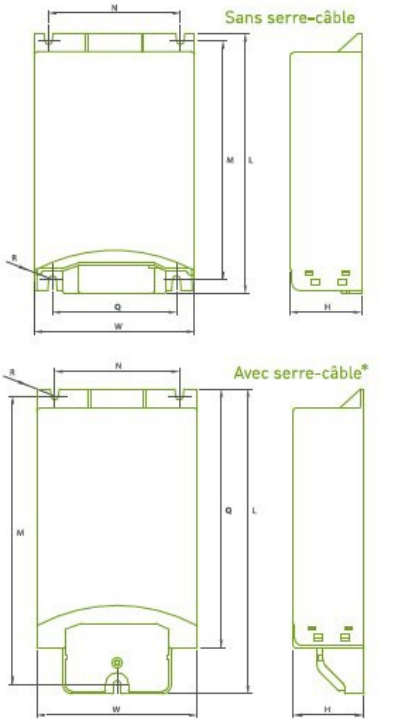
HID ELECTRONIC BALLASTS

EB EXT 70 CG
EB EXT 100 CG
EB EXT 150 CG



Reference	Code	Lamp power	Input power	Input current	Tc	Dimensions (mm) Without cable H x W x L (N x M)	Dimensions (mm) With cable clamp H x W x L (N x M)	Box qty
EB EXT 70 CG	1213010	70 W	78 W	350 mA	+70	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT 100 CG	1213020	100 W	108 W	490 mA	+75	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT 150 CG	1213030	150 W	163 W	720 mA	+80	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20

Rated input voltage: 220-240 V
AC input voltage: 198-264 V
Ignition voltage: <5 kV
Input frequency: 50-60 Hz
Power factor: 0.98
Operating frequency: 50-60Hz

End-Of-Life Protection
Automatic restart after lamp replacement
Controlling & monitoring of lamp power for a optimal lumen maintenance
Flicker-free operation
Operating ambient temperature -15°C - +50°C

Protection:
- Short & open circuit proof
- Auto shutdown in case of lamp failure

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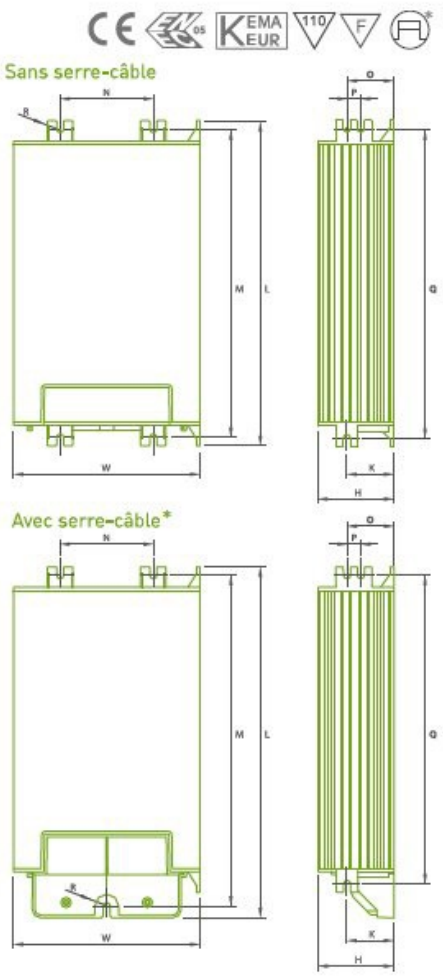
HID ELECTRONIC BALLASTS

EB EXT 250 CG



Reference	Code	Lamp power	Input power	Input current	Tc	Dimensions (mm) Without cable H x W x L (N x M)	Dimensions (mm) With cable clamp H x W x L (N x M)	Box qty
EB EXT 250 CG	1213035	250 W	270 - 273 W	1.2 A	+85	44.8 x 110 x 192 (55 x 182.2)	44.8 x 110 x 207 (55 x 195.2)	20

Rated input voltage: 220-240 V
AC input voltage: 198-264 V
Ignition voltage: <5 kV
Input frequency: 50-60 Hz
Power factor: 0.98
Operating frequency: 120Hz

End-Of-Life Protection
Automatic restart after lamp replacement

Controlling & monitoring of lamp power for a optimal lumen maintenance
Flicker-free operation
Operating ambient temperature -15°C - +50°C

Protection:
- Short & open circuit proof
- Auto shutdown in case of lamp failure

Cable clamp removable by sliding up

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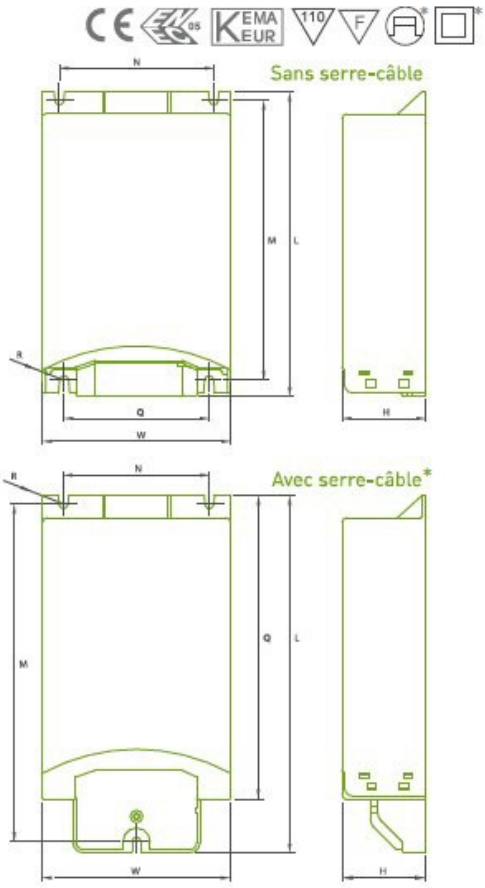
HID ELECTRONIC BALLASTS

EB EXT 50 SDWT CG
EB EXT 100 SDWT CG



Reference	Code	Lamp power	Input power	Input current	Tc	Dimensions (mm) Without cable H x W x L (N x M)	Dimensions (mm) With cable clamp H x W x L (N x M)	Box qty
EB EXT 50 SDWT CG	1213550	54 W	60 W	0.27 A	+65	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT 100 SDWT CG	121560	100 W	108 W	0.27 A	+75	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20

Lamp type: Mini White SON lamp
Rated input voltage: 220-240 V
AC input voltage: 198-264 V
Ignition voltage: <4 kV
Input frequency: 50-60 Hz
Power factor: 0.98
Operating frequency: 120Hz
Operating ambient temperature -15°C - +50°C

End-Of-Life Protection
Auto shutdown in case of lamp failure
Thermal protection

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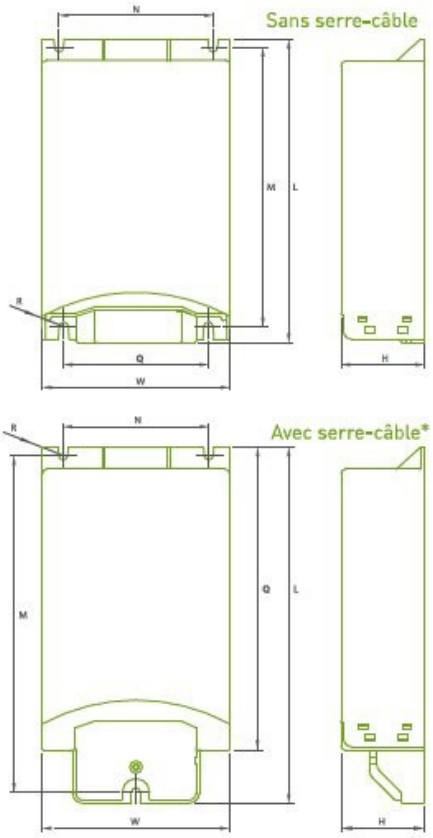
HID ELECTRONIC BALLASTS

EB EXT 45 CG
EB EXT 60 CG
EB EXT 90 CG
EB EXT 140 CG



Reference	Code	Lamp power	Input power	Input current	Tc	Dimensions (mm) Without cable H x W x L (N x M)	Dimensions (mm) With cable clamp H x W x L (N x M)	Box qty
EB EXT 45 CG	1213045	45 W	50.5 W	0.23 A	+65	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT 60 CG	1213060	60 W	66.5 W	0.3 A	+65	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT 90 CG	1213090	90 W	97.5 W	0.445 A	+70	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT 140 CG	1213140	140 W	153 W	0.675 A	75	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20

Lamp type: Mini White SON lamp
Rated input voltage: 220-240 V
AC input voltage: 198-264 V
Ignition voltage: <4 kV
Input frequency: 50-60 Hz
Power factor: 0.98

Operating frequency: 120Hz
Operating ambient temperature -15°C - +50°C

End-Of-Life Protection
Auto shutdown in case of lamp failure
Thermal protection

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HID DIMMABLE ELECTRONIC BALLASTS

SERIES

EB EXT DIM 70 CG / EB EXT DIM 100 CG / EB EXT DIM 150 CG / EB EXT 250 CG
EB EXT DIM 60 CG / EB EXT DIM 90 CG / EB EXT DIM 140 CG

Why a LCI Dimmable Electronic Control Gear?

Save energy & money:
Significantly cut energy consumptions more than 40% annually

Reduce installation expenses:
The simplest setup with the fewest wire connections

Lower maintenance costs:
All-in-one electronic ballast contributes longer lamp life up to 50% more

Quicker return on investment:
Intelligent dimming controls maximize energy savings to shorten investment return period

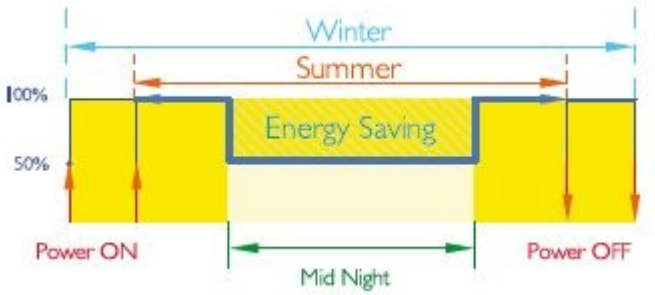
Versatile environment applications:
Multi-level dimming run at 100%, 75% 50% or 30% of lumen output on demand

Complete automatic operation:
Smart dimming time-interval management through digital control technology with no external device

Product Benefits

<u>Manage dimming schedule without external communication</u>
With IPM technology and no use of a timer or manual switch, the device smartly maintains the preset low-traffic dimming time at different lamp operation intervals in response to summer time or winter season.

<u>Reduce installation and maintenance costs</u>
All-in-one compact unit uses less wire, eliminates the capacitor, igniter and power switch associated with magnetic ballasts, extends lamp life time, and cuts component maintenance fees.



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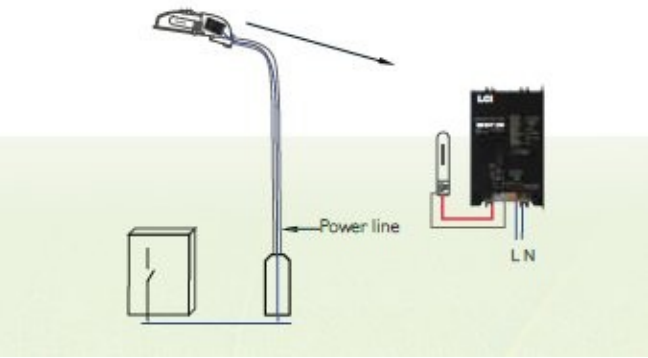
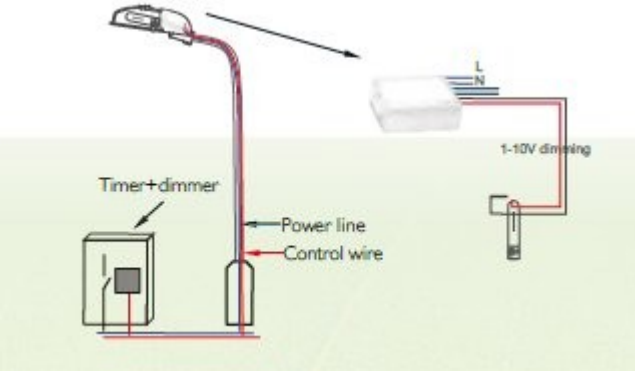
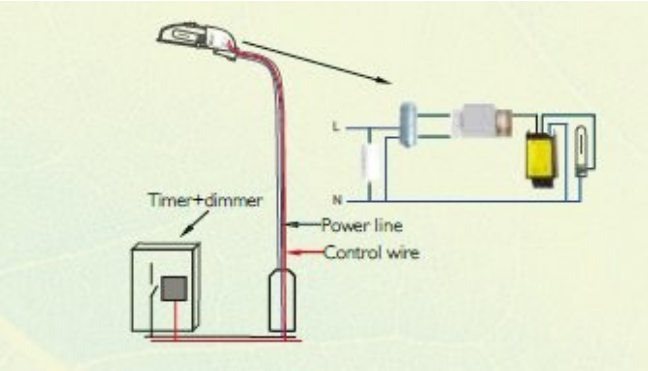
LCI IPM dimming ballasts
Simpler installation, lower installation and maintenance costs.



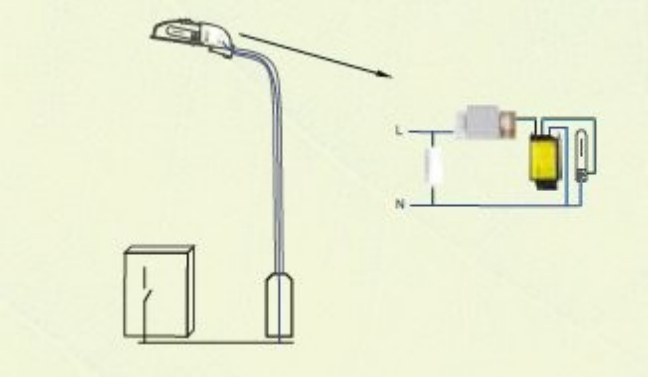
Low-voltage dimmable electronic ballasts
Extra control wire connection, more installation costs.



Bi-level dimming magnetic ballasts
Complicated component setup, more maintenance costs.



Conventional magnetic ballasts
More energy consumptions, more CO_2 emissions.



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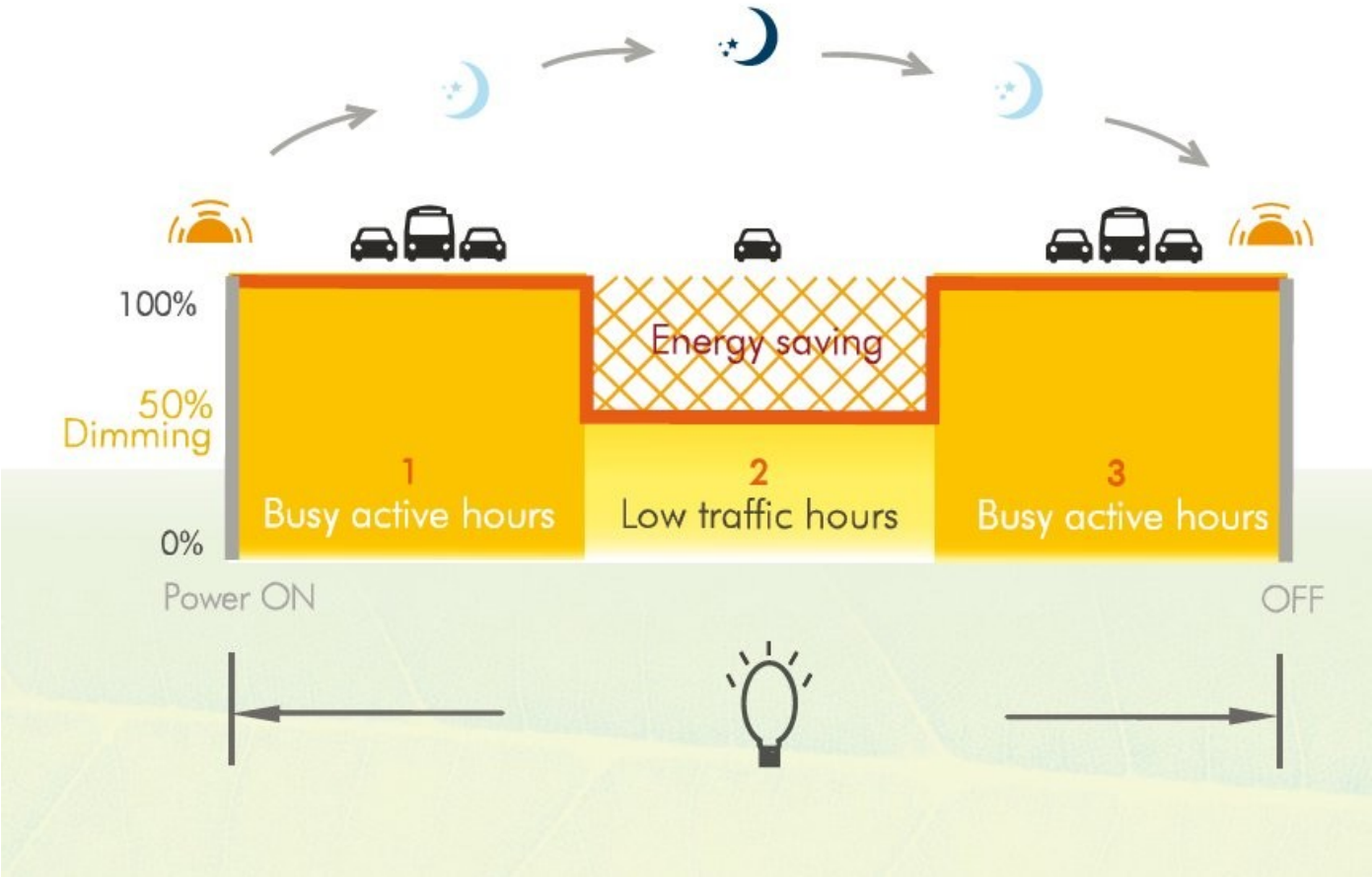
Significantly save electricity consumption expense
Step-level dimming control provide application flexibility, maximize energy saving, also make faster return on investment.



Lamp operation period 12 hrs	50W	70W	100W	150W	250W
	Power Consumption (kW/yr)				
Non-dim conventional ballast PF: 0.8 Efficiency: 0.8	342	479	684	1026	1710
Non-dim electronic ballast PF: 0.98 Efficiency: 0.9	248	347	496	744	1214
Bi-level dimming electronic ballast 100% power period: 6hrs 50% power period: 6hrs	186	260	372	558	910

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Product Features

- LCI electronic ballasts work to optimize lamp. It lengthens lamp life by approximately 50%, compared to using magnetic ballasts, thus reduces the cost of maintenance.
- With constant power control, the ballasts stabilize the output power under the power variation, thus maintaining stable luminous flux through out lamp life.
- Low-frequency output (f<500 Hz) eliminates the occurrence of acoustic resonances at high frequency operation that this phenomenon may result in decreased lamp life time and cracking of the discharge tubes.
- The built-in digital control technology of IPM, Intelligent Power Management, can automatically adjust dimming operation schedule according to different seasons.
- LCI ballast series consist of 3 customized options in accordance with various environmental applications.
    1. Standard system run only at 100% luminous flux
    2. Bi-level dim system run at 100% or 50% luminous flux, 22h -6h (for village)
    3. Bi-level dim system run at 100% or 50% luminous flux, 24h – 6h (for city)

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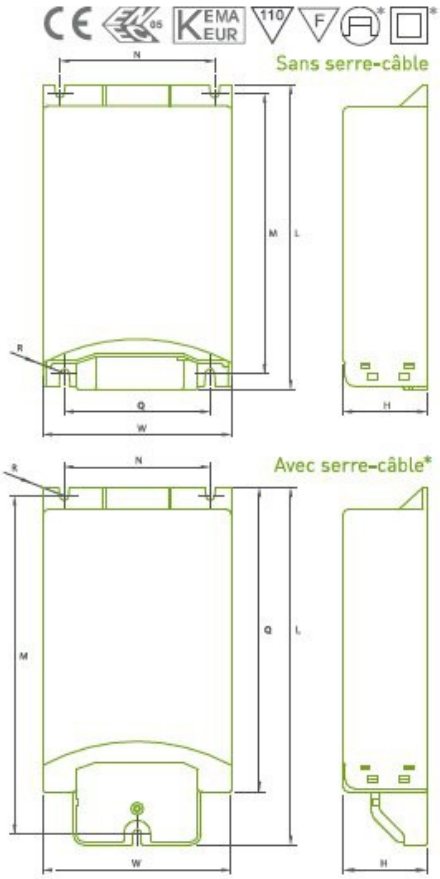
EB EXT DIM 70 CG / 22-6 ou 24-6
EB EXT DIM 100 CG / 22-6 ou 24-6
EB EXT DIM 150 CG / 22-6 ou 24-6



Reference	Code	Lamp power		Input current	Tc	Dimensions (mm) Without cable H x W x L (N x M)	Dimensions (mm) With cable clamp H x W x L (N x M)	Box qty
		100% lumen flux	50% lumen flux					
EB EXT DIM 70 CG 22-6	1212205	78 W	43 W	350 mA	70	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 100 CG 22-6	1212210	108 W	58 W	490 mA	75	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 150 CG 22-6	1212215	163 W	88 W	720 mA	80	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 70 CG 24-6	1212405	78 W	43 W	350 mA	70	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 100 CG 24-6	1212410	108 W	58 W	490 mA	75	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 150 CG 24-6	1212415	163 W	88 W	720 mA	80	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20

Please refer to page 11 for product features.

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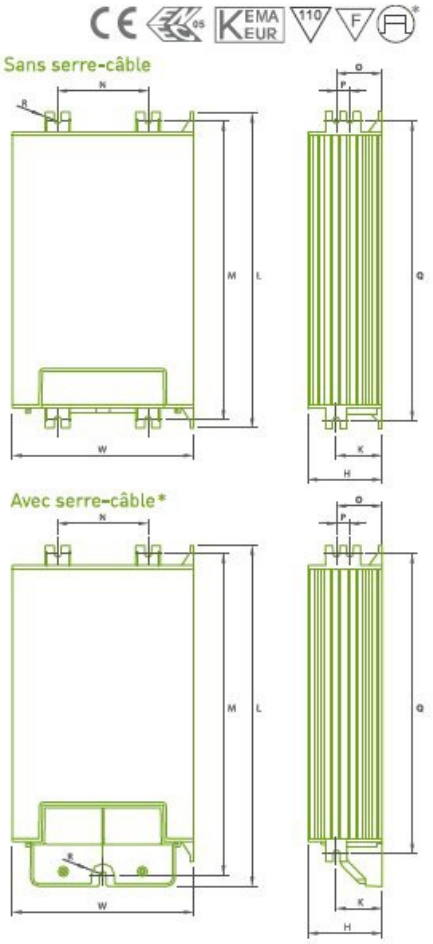
HID DIMMABLE ELECTRONIC BALLASTS

EB EXT DIM 250 CG / 22-6 ou 24-6



Reference	Code	Lamp power		Input current	Tc	Dimensions (mm) Without cable H x W x L (N x M)	Dimensions (mm) With cable clamp H x W x L (N x M)	Box qty
		100% lumen flux	50% lumen flux					
EB EXT DIM 250 CG 22-6	1212220	270 W	145 W	1.2A	85	44.8 x 110 x 192 (55 x 182.2)	44.8 x 110 x 207 (55 x 195.2)	20
EB EXT DIM 250 CG 24-6	1212420	270 W	145 W	1.2A	85	44.8 x 110 x 192 (55 x 182.2)	44.8 x 110 x 207 (55 x 195.2)	20

Rated input voltage: 220-240 V
AC input voltage: 198-264 V
Ignition voltage: <5 kV
Input frequency: 50-60 Hz
Power factor 0.98
Operating frequency: 120 Hz

Intelligent Power Management (IPM) adjusting automatically dimming operation schedule according to different seasons

Lengthens lamp life by approx. 50%
Cuts energy consumption by more than 40%
End-Of-Life Protection / Flicker-free operation
Automatic restart after lamp replacement

Protection:
- Short & open circuit proof
- Automatic shutdown in case of lamp failure

Operating ambient temperature -15°C - +50°C

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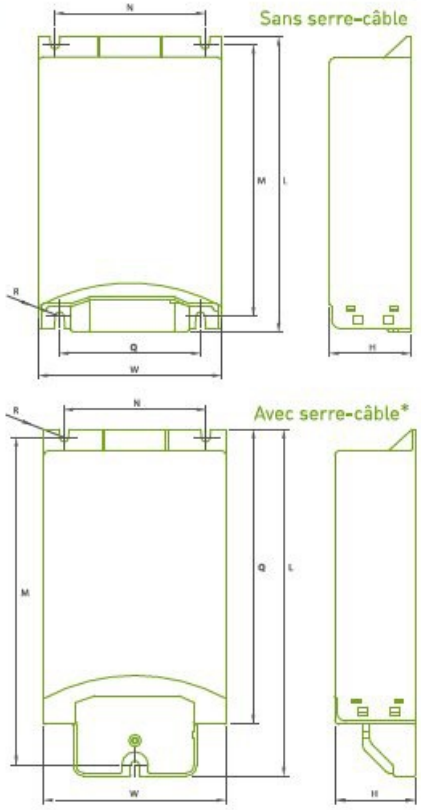
EB EXT DIM 60 CG / 22-6 ou 24-6
EB EXT DIM 90 CG / 22-6 ou 24-6
EB EXT DIM 140 CG / 22-6 ou 24-6



Reference	Code	Lamp power		Input current	Tc	Dimensions (mm) Without cable H x W x L (N x M)	Dimensions (mm) With cable clamp H x W x L (N x M)	Box qty
		100% lumen flux	50% lumen flux*					
EB EXT DIM 60 CG 22-6	1212235	66.5 W	75% 51.5 W	0.30 A	+65	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 90 CG 22-6	1212240	97.5 W	60% 61.5 W	0.445 A	+70	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 140 CG 22-6	1212245	153 W	60% 97 W	0.675 A	+75	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 60 CG 24-6	1212435	66.5 W	75% 51.5 W	0.30 A	+65	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 90 CG 24-6	1212440	97.5 W	60% 61.5 W	0.445 A	+70	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20
EB EXT DIM 140 CG 24-6	1212445	153 W	60% 97 W	0.675 A	+75	40 x 90 x 145.5 (70 x 133.8)	40 x 90 x 171 (70 x 161.6)	20

Intelligent Power Management (IPM) adjusting automatically dimming operation schedule according to different seasons
Lengthens lamp life by approx. 50%
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