



**ELECTROMAGNETIC BALLASTS AND CONTROL GEAR UNITS FOR
HIGH-PRESSURE SODIUM (HS), METAL- HALIDE (HI) AND HIGH-PRESSURE
MERCURY (HM) VAPOUR DISCHARGE LAMPS**

Standard ballasts for HS and HI lamps	29
Control gear units for HS lamps 400 and 600W	31
Control gear units for HI lamps 2000 W	32
Standard ballasts for HM lamps	33
Encapsulated ballasts for HS, HI and HM lamps	34



Table of HS lamps

High-pressure sodium lamps (HS) 35 to 1000 W

Lamp Power W	Current A	Manufac.	Designation	Base
35	0,48	Philips	SDW-T 35	PG12-1
	0,49	Sylvania	SHP 35	E27
	0,50	Radium	RNP-E 35	E27
50	0,75	Philips	SON-T Plus 50	E27
	0,76	GE	LU 50	E27
	0,76	Narva	NA 50	E27
	0,76	Philips	SON 50	E27
	0,76	Sylvania	SHP 50	E27
	0,77	Osram	NAV 50	E27
	0,77	Radium	RNP 50	E27
	0,76	Philips	SDW-T 50	PG12-1
70	0,97	Philips	SON-T Plus 70	E27
	0,98	GE	LU 70	E27
	0,98	Philips	SON 70	E27
	0,98	Sylvania	SHP 70	E27
	1,00	Narva	NA 70	E27
	1,00	Osram	NAV 70	E27, RX7s
	1,00	Radium	RNP 70	E27
100	1,20	GE	LU 100	E40
	1,20	Narva	NA 100	E40
	1,20	Osram	NAV 100	E40
	1,20	Philips	SON 100	E40
	1,20	Radium	RNP 100	E40
	1,20	Sylvania	SHP 100	E27, E40
	1,30	Philips	SDW-T 100	PG12-1
150	1,80	GE	LU 150	E40
	1,80	BLV	HST-DE 150	Fc2, RX7s
	1,80	Narva	NA 150	E40
	1,80	Osram	NAV 150	E40, RX7s
	1,80	Philips	SON 150	E40
	1,80	Radium	RNP 150	E40
	1,80	Sylvania	SHP 150	E40
	1,80	Sylvania	SHP-S, -TS 150	E40
	1,82	Philips	SON-Comfort 150	E40
250	2,85	Philips	SON-Plus 250	E40
	2,90	Sylvania	SHP,-S,-TS 250	E40
	2,95	GE	LU 250	E40, RX7s
	3,00	BLV	HST-DE 250	Fc2, RX7s
	3,00	Narva	NA 250	E40
	3,00	Osram	NAV 250	E40
	3,00	Osram	NAV T 250 de Luxe	E40
	3,00	Osram	NAV TS 250	Fc2
	3,00	Philips	SON 250	E40
	3,00	Radium	RNP 250	E40
	3,00	Sylvania	SHP 250	E40
	3,05	Philips	SON-T Comfort 250	E40

Lamp Power W	Current A	Manufac.	Designation	Base
400	4,13	Philips	SON-T Agro 400	E40
	4,30	Philips	SON-Plus 400	E40
	4,40	GE	LU HO 400/D	E40
	4,40	BLV	HST-DE 400	Fc2, RX7s
	4,40	Osram	NAV 400	E40, Fc2
	4,40	Osram	PLANTA 400	E40
	4,40	Radium	RNP 400	E40
	4,40	Sylvania	SHP-S 400	E40
	4,45	GE	LU 400/D	E40
	4,45	Narva	NA 400	E40
	4,45	Philips	SON 400	E40
	4,45	Sylvania	SHP 400	E40
	4,50	GE	LU HO 400/T	E40, RX7s
	4,50	Philips	SON-T Plus 400	E40
	4,50	Sylvania	SHP-TS 400	E40
	4,60	GE	LU 400/T	E40
4,60	Philips	SON-T 400	E40	
4,60	Sylvania	SHP,-S,-TS 400	E40	
600	5,80	Philips	SON-T 600 Plus	E40
	6,20	GE	LU 600 HO	E40
	6,20	Narva	NAT-S 600	E40
	6,20	Osram	NAV-T 600	E40
	6,20	Sylvania	SHP-TS 600	E40
	6,20	Radium	RNP-T 600	E40
	6,20	Radium	RNP-T 600	E40
1000	10,0	Sylvania	SHP-T 1000	E40
	10,3	GE	LU 1000/D	E40, RX7s
	10,3	Narva	NA 1000	E40
	10,3	Osram	NAV 1000	E40
	10,3	Philips	SON 1000	E40
	10,3	Radium	RNP 1000	E40
	10,6	GE	LU 1000/T	E40
	10,6	Philips	SON-T 1000	E40



Table of HI lamps

Metal-halide lamps (HI) 70 to 3500 W

Lamp Power W	Current A	Manufac.	Designation	Base
70	0,90	Venture	MH-DE 70	G12, RX7s
	0,90	BLV	HIT 70	G12, RX7s, E27
	0,95	GE	ARC 70	RX7s
	0,95	Osram	HQI E 70/WDL	E27
	0,95	Philips	MHW 70	RX7s
	0,98	Philips	MHN 70	RX7s
	0,99	Philips	MHN-T 70	PG12-2
	1,00	Osram	HQI 70	G12, RX7s, E27
	1,00	Radium	HRI 70	G12, RX7s, E27
	1,00	Sylvania	HSI 70	G12, RX7s
	1,00	Sylvania	HSI-MP 75	E27
	1,00	Iwasaki	MT 70 SW	E27
100	1,10	Osram	HQI 100	E27
	1,10	Radium	HRI 100	E27
	1,10	Sylvania	HSI 100	E27, RX7s
	1,10	Venture	HIE 100	E27
	1,15	Sylvania	HSI-MP 100	E27
150	1,80	Venture	MH-DE 150	G12, RX7s
	1,80	Venture	HIE 150	E27
	1,80	BLV	HIT 150	G12, RX7s
	1,80	GE	ARC 150	G12, RX7s
	1,80	Osram	HQI 150	G12, RX7s, E27
	1,80	Philips	MH 150	RX7s, PGX12-2
	1,80	Radium	HRI 150	G12, RX7s
	1,80	Sylvania	HSI-T 150	G12, RX7s
	1,80	Venture	HIT 150	G12
	2,00	Sylvania	HSI-M 150	E27, RX7s
	1,90	Venture	HIE 150	E40
	1,90	Iwasaki	MT 150 SW	E27
250	2,10	Sylvania	HSI-T 250	E40
	2,10	Venture	HIT 250/Euro	E40
	2,15	Narva	NC 250	E40
	2,15	Philips	HPI 250	E40
	2,75	GE	ARC 250/T	E40
	2,80	Osram	HQI 250/WDL UVS	Fc2
	2,90	GE	MBID 250/F	E40
	3,00	BLV	HIT 250	Fc2, E40
	3,00	GE	ARC 250 TD	Fc2
	3,00	GE	MBID 250/T	E40
	3,00	Iwasaki	MT 250 SW	E40
	3,00	Osram	HQI 250	Fc2, E40
	3,00	Philips	MHN 250	Fc2
	3,00	Radium	HRI 250	Fc2, E40
	3,00	Sylvania	HSI 250	Fc2, E40
	3,00	Sylvania	BRITELUX 250	E40

Lamp Power W	Current A	Manufac.	Designation	Base
250	3,00	Venture	MH-DE 250	Fc2
	3,10	Venture	HIE 250/XX/LU	E40
400	3,25	Venture	HIT 400/Euro	E40
	3,40	Sylvania	HSI-T 400	E40
	3,40	Philips	HPI 400	E40
	3,40	Philips	HPI-TD 400	Fc2
	3,40	Narva	HIT 400W/HBU/Euro	E40
	3,50	GE	ARC 400...	E40
	3,50	Osram	HQI E 400/N	E40
	3,50	Osram	HQI T 400/D	Fc2, E40
	3,60	Osram	HQI E 400/D	E40
	3,60	Osram	HQI T 400/N	E40
	3,60	Osram	HQI 400 Blue/Green	E40
	3,65	Narva	NC 400	E40
	4,00	BLV	HIT 400	E40
	4,00	Osram	HQI BT 400/D	Fc2, E40
4,00	Radium	HRI 400	E40	
4,10	Osram	HQI T 400/N	Fc2, E40	
4,10	Radium	HRI-TS 400	Fc2	
4,20	Osram	HQI E 400/N	E40	
4,20	Venture	HIE 400/XX/LU	E40	
4,35	GE	ARC 400/T	E40	
4,60	Sylvania	BRITELUX 400	E40	
1000	4,20	GE	ARC 1000	E40
	4,30	Sylvania	HSI 1000-T	E40
	4,80	Narva	NC 1000	E40
	8,25	Philips	HPI 1000	E40
	9,50	GE	SPL 1000	E40
	9,50	Osram	HQI 1000	E40
	9,50	Radium	HRI 1000	E40, Fc2
	9,60	Osram	HQI TS 1000	Kabel
	9,60	Radium	HRI-TS 1000	Kabel
2000	8,60	Philips	HPI 2000/400V	E40
	8,80	Osram	HQI 2000.. Super	E40
	8,80	Radium	HRI-T 2000 W/N	E40
	9,60	Philips	MHN-TD 2000	Kabel
	10,3	Osram	HQI-T 2000 D	E40
	10,3	Radium	HRI 2000	E40
	10,3	GE	S PL 2000/T	E40
	11,3	Osram	HQI TS 2000/D/S	Kabel
	11,3	Radium	HRI-TS 2000 W/D/S	Kabel
	16,5	Philips	HPI 2000/230V	E40
	16,5	Osram	HQI T 2000 N/230 V	E40
3500	18,0	Osram	HQI 3500/D	E40
	18,0	Radium	HRI-T 3500/D	E40



Table of C-HI and HM lamps

Metal-halide lamps with ceramic discharge tube (C-HI) 70 to 250 W

Lamp Power W	Current A	Manufac.	Designation	Base
20	0,23	GE	CMH20TC	G8.5
35	0,50	Osram	HCI-T	G12
70	0,96	GE	CHM70T	G12
	0,96	GE	CMH70TD	Rx7s
	0,97	Philips	CDM-R	E27
	0,98	Philips	CDM-T	G12
	0,98	GE	CMH70TC	G8.5
	0,98	GE	CMH70PAR30	E27
	0,98	GE	CMH70E	E27
	0,98	GE	CMH70TT	E27
	1,00	Philips	CDM-TD	Rx7s
	1,00	Philips	CDM-TP	PG12-2
	1,00	Philips	CDM-TT	E27
	1,00	Osram	HCI-T	G12
	1,00	Osram	HCI-TS	Rx7s
	1,00	Osram	HIC-TC	G8.5
	1,00	Radium	RCI-T	G12
	1,00	Radium	RCI-TS	Rx7s
	1,00	Radium	RCI-TC	G8.5
1,00	Sylvania	CMI-T	G12	
1,00	BLV	C-HIT-DE	Rx7s	
100	1,10	GE	CMH100E	E27
150	1,80	Philips	CDM-T	G12
	1,80	Philips	CDM-TD	Rx7s
	1,80	Philips	CDM-TP	PG12-2
	1,80	Philips	CDM-TT	E40
	1,80	Osram	HCI-T	G12
	1,80	Osram	HCI-TS	Rx7s
	1,80	Radium	RCI-T	G12
	1,80	Radium	RCI-TS	Rx7s
	1,80	GE	CMH150T	G12
	1,80	GE	CMH150TD	Rx7s
1,80	GE	CMH150TT	E27	
250	2,70	GE	CMH250P	E40
	2,70	GE	CMH250E	E40
	2,80	Osram	HCI-T 250	E40
	2,90	Osram	HCI-E 250	E40
	2,90	Osram	HCI-ZS 250	Fc2

Mercury vapour lamps (HM) 50 to 1000 W

Lamp Power W	Current A	Manufa.	Designation	Base
50	0,60	GE	H 50	E27, B22
	0,60	Osram	HQL 50	E27
	0,60	Radium	HRL 50	E27
	0,61	Narva	NF 50	E27
	0,61	Philips	HPL 50	E27
	0,61	Sylvania	HSL 50	E27
80	0,80	GE	H 80	E27, B22-3
	0,80	Narva	NF 80	E27
	0,80	Osram	HQL 80	E27
	0,80	Philips	HPL 80	E27
	0,80	Radium	HRL 80	E27
	0,80	Sylvania	HSL 80	E27
125	1,15	GE	H 125	E27, B22-3
	1,15	Narva	NF 125	E27
	1,15	Osram	HQL 125	E27, E40
	1,15	Philips	HPL 125	E27
	1,15	Radium	HRL 125	E27
	1,15	Sylvania	HSL 125	E27, B22-3
250	2,13	Narva	NF 250	E 40
	2,13	Philips	HPL 250	E 40
	2,13	Sylvania	HSL 250	E 40
	2,15	GE	H 250	E 40
	2,15	Osram	HQL 250	E 40
	2,15	Radium	HRL 250	E 40
400	3,25	GE	H 400	E 40
	3,25	Narva	NF 400	E 40
	3,25	Osram	HQL 400	E 40
	3,25	Philips	HPL 400	E 40
	3,25	Radium	HRL 400	E 40
	3,25	Sylvania	HSL 400	E 40
700	5,40	Narva	NF 700	E 40
	5,40	Osram	HQL 700	E 40
	5,40	Philips	HPL 700	E 40
	5,40	Radium	HRL 700	E 40
	5,40	Sylvania	HSL 700	E 40
	5,45	GE	H 700	E 40
1000	7,50	GE	H 1000	E 40
	7,50	Narva	NF 1000	E 40
	7,50	Osram	HQL 1000	E 40
	7,50	Philips	HPL 1000	E 40
	7,50	Radium	HRL 1000	E 40



Standard ballasts for HS and HI lamps

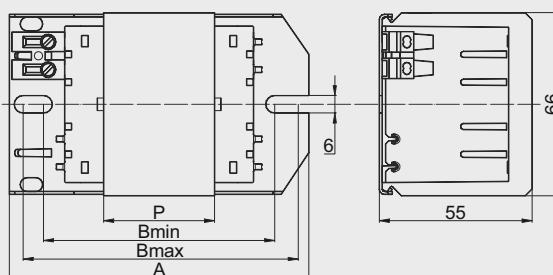


Figure 1

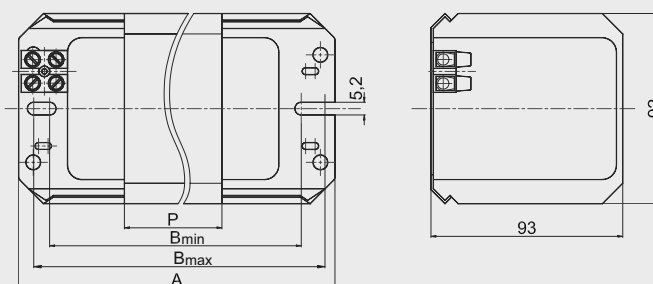


Figure 2

Core Cross-Section: 55 x 66 mm

93 x 92 mm

Vacuum impregnated with polyester resin

Screw terminals: 1,5 – 2,5 mm²

tw 130°C

Protection class 1

EN 60923

EN 61347

Ballast											Cap.	Lamp		
Type	Ord. No.	Fig.	A	B _{min}	B _{max}	P	Weight	Δt	TS ¹⁾	Approval ⁴⁾	Ck	Type	Power	Current
			mm	mm	mm	mm	kg	K			μF ±10%		W	A

230V, 50Hz⁵⁾

35W - 250W

SI 530-35	7703	1	108	83	100	28	1.00	60	-	ENEC	6	HS	35	0.50
	7709	1	108	83	100			60	yes					
S 530-50	7705	1	108	83	100	36	1.18	65	-	ENEC	10	HS	50	0.76
	7710	1	108	83	100			65	yes					
SI 530-70	7705	1	108	83	100	42	1.30	70	-	ENEC	12	HS	70	1.00
	7711	1	108	83	100			70	yes					
SI 530-100	7706	1	108	83	100	42	1.30	75	-	ENEC	16	HS	100	1.20
	7712	1	108	83	100			75	yes					
SI 530-150	7707	1	145	121	138	75	2.20	70	-	ENEC	20	HS	150	1.80
	7713	1	145	121	138			70	yes					
SI 530-250	7708	1	180	155	172	110	3.10	75	-	ENEC	32	HS	250	3.00
	7714	1	180	155	172			75	yes					
MI 530-250	7718	1	145	121	138	75	2.20	70	-	ENEC	18	HM	250	2.15
	7720	1						70	yes					



Standard ballasts for HS and HI lamps

Ballast											Cap.	Lamp		
Type	Ord. No.	Fig.	A	B _{min}	B _{max}	P	Weight	Δt	TS ¹⁾	Approval ⁴⁾	Ck	Type	Power	Current
			mm	mm	mm	mm	kg	K			μF ±10%		W	A
230V, 50Hz											400W - 600W			
HISK 530-400	5200	2	185	162	173	60	4.20	80	-	-	48	HS	400	4.45
											45	HI	400	4.20
HISK 530-400	5286 5288	2	185	162	173	70	4.82	75	-	-	48	HS	400	4.45
											45	HI	400	4.20
MI 530-400	7719 7721	1	180	155	172	110	3.10	75	-	ENEC	25	HM	400	3.25
											35	HI ³⁾	400	3.40
HSK 530-600	5201	2	200	174	188	95	6.24	75	-	-	65	HS	600	6.20

Notes:

- 1) Thermal protection
- 2) For metal halide lamps with rated current from 2,1 - 2,15 A
- 3) For metal halide lamps with rated current from 3,25 - 3,60 A
- 4) ENEC 11 in procedure
- 5) 220V/50Hz, 220V/60Hz and 240V/50Hz versions are available



Control gear units for HS lamps 400 and 600W

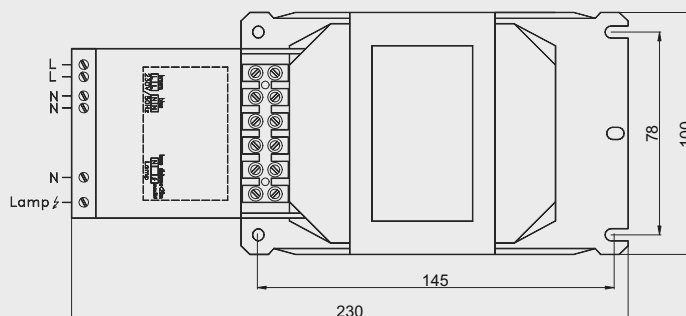


Figure 1

Shape: 92x100 mm

For high pressure sodium (HS) lamps

Built-in ballast, ignitor and compensation capacitor

As individual components no longer need

to be wired, there is a significant reduction in assembly time and costs

Easier replacing of spare parts (two units separately)

tw 130

Push-in terminals: 0.75–2.5 mm²

Two terminal version for connecting more FGNs parallel

Lamp distance <20m

EN 61347, EN 60923

Further outputs and voltages on request

Control gear						Lamp			System		
Type	Ord. No.	Δt	Weight	Thermal protection	Timed ignitor	Type	Output	Current	Mains current	Start current	Power factor
		K	kg		s		W	A	A	A	

230V, 50Hz

400W - 600W

FGN 530-400	5622	75	4.9	-	-	HS	400	4.45	2.4	max. 3.5	>0.90
FGN 530-400TP	5623	75	4.9	yes	-	HS	400	4.45	2.4	max. 3.5	>0.90
FGN 530-600	5619	75	5.5	-	-	HS	600	6,2	3.1	max. 4.5	>0.90
FGN 530-600TP	5620	75	5.5	yes	-	HS	600	6,2	3.1	max. 4.5	>0.90

240V, 50Hz

400W - 600W

FGN 540-400TP	5624	75	4.9	yes	-	HS	400	4.45	2.4	max. 3.5	>0.90
FGN 540-400TI	5700	75	4.9	-	1280	HS	400	4.45	2.4	max. 3.5	>0.90
FGN 540-600TP	5698	75	5.5	yes	-	HS	600	6,2	3.1	max. 4.5	>0.90
FGN 540-600TI	5621	75	5.5	-	1280	HS	600	6,2	3.1	max. 4.5	>0.90



Control gear unit for HI lamps 2000 W

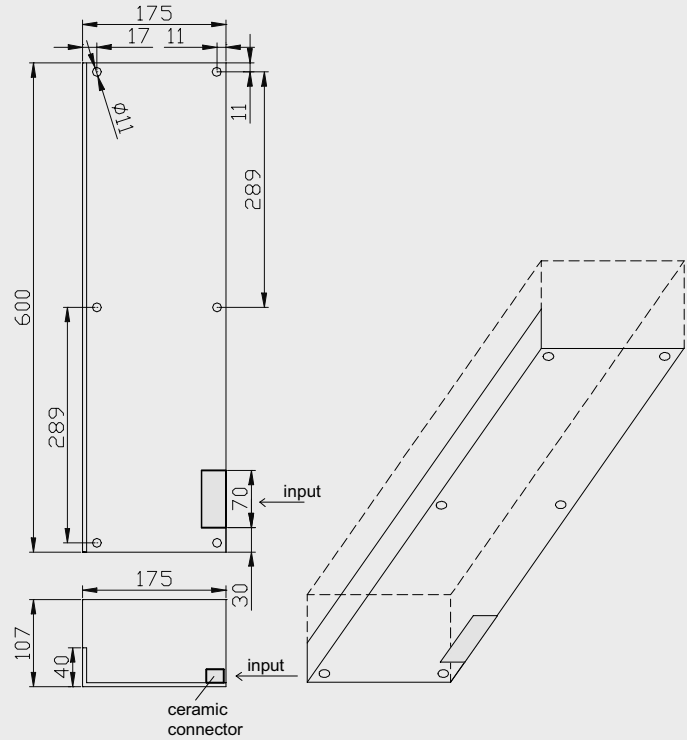


Figure 1

**Built in: electromagnetic ballasts
power factor correction capacitors
ceramic connectors and
circuit breakers**

EN 60922; 60923 (ballasts)

EN 61048, 61049 (capacitors)

Vacuum impregnated with polyester resin

Screw ceramic terminals 4mm²

Other powers available

Control gear				Ballast		Lamp			System	
Type	Ord. No.	Δt	Weight	Type	Losses	Type	Output	Current	Mains current	Power factor
		K	kg		W		W	A	A	

400V, 50Hz

2000 W

PANEL H 2000 / 2P	4942	85	20,8	H 540-2000/2 P x2	86	HI	2000	10,3 – 11,3	5,6	> 0.90
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Standard ballasts for HM lamps

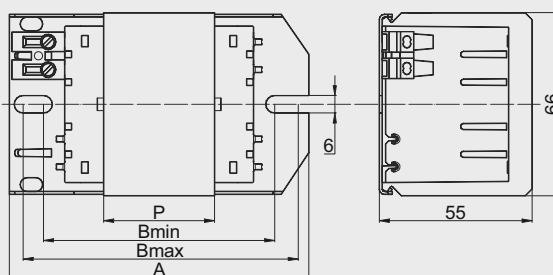


Figure 1

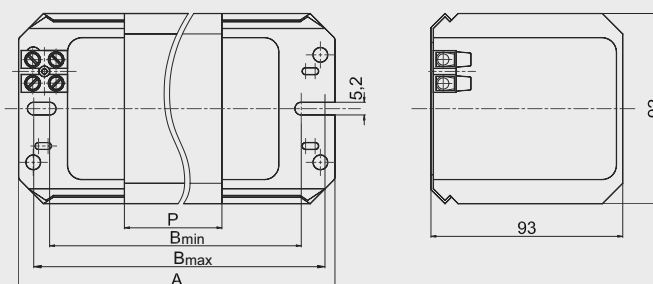


Figure 2

Core Cross-Section: 55 x 66 mm
93 x 92 mm

Vacuum impregnated with polyester resin

Screw terminals: 1,5 – 2,5 mm²

tw 130°C

Protection class 1

EN 60923, EN 61347

Ballast											Cap.	Lamp		
Type	Ord. No.	Fig.	A	B _{min}	B _{max}	P	Weight	Δt	TS ¹⁾	Approval ⁴⁾	Ck	Type	Power	Current
			mm	mm	mm	mm	kg	K			μF ±10%		W	A

230V, 50Hz⁵⁾

35W - 250W

M 530-50	7715	1	108	83	100	28	1.00	55	-	ENEC	6	HM	50	0.61
M 530-80	7705	1	108	83	100	28	1.00	70	-	ENEC	10	HM	80	0.80
M 530-125	7705	1	108	83	100	36	1.18	75	-	ENEC	12	HM	125	1.15
MI 530-250	7718	1	145	121	138	75	2.20	75	-	ENEC	18	HM	250	2.15
	7720	1	145	121	138								yes	HI ²⁾
MI 530-400	7719	1	180	155	172	110	3.10	70	-	ENEC	25	HM	400	3.25
	7721	1	180	155	172								yes	HI ³⁾
HM 530-700	5768	2	225	197	213	100	6.17	85		-	45	HM	700	5.40
HM 530-1000	5240	2	225	197	213	150	8.94	80		-				

Notes:

- 1) Thermal protection
- 2) For metal halide lamps with rated current from 2,1 - 2,15 A
- 3) For metal halide lamps with rated current from 3,25 - 3,60 A
- 4) ENEC 11 in procedure
- 5) 220V/50Hz, 220V/60Hz and 240V/50Hz versions are available



Encapsulated ballasts for HS, HI and HM lamps

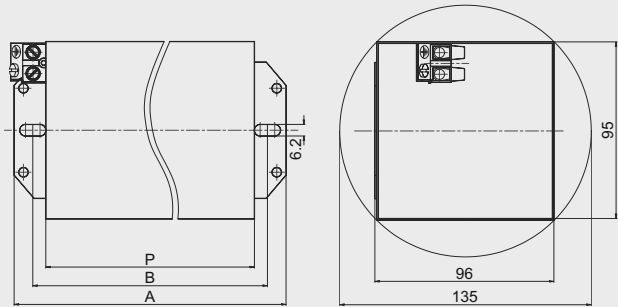
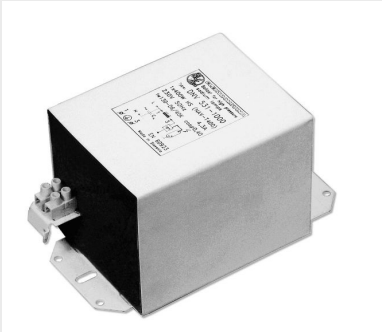


Figure 1

Core Cross-Section: 96 x 95 mm

In a sheet metal case, sealed with polyester resin

Screw terminals: 1,5 – 4 mm²

tw 130°C – D6

Protection class 1

EN 60923, EN 61347

Ballast								Capacitor	Lamp		
Type	Ord. No.	Figure	A	B	P	Weight	Δt -D6	Cp	Type	Power	Current
			mm	mm	mm	kg	K	$\mu F \pm 10\%$		W	A
230V, 50Hz										50W - 150W	
DHM 531-1000	3362	2	280	260	242	12.70	60	75	HI	1000	8.25
								85	HI ²⁾	1000	9.50
								60	HM	1000	7.50
DNVM 531-1000	3372	2	280	260	242	12.70	70	100	HS ⁴⁾	1000	10.30
								85	HI ²⁾	1000	9.50
220V, 50Hz										1000W	
DNVM 521-1000	4606	2	280	260	242	12.70	70	100	HS ⁴⁾	1000	10.30
HI 521-1000-8.5	4775	2	260	240	222	11.35	80	85	HI	1000	8.50
DHM 521-1000	4705	2	226	206	172	8.60	70	60	HM	1000	7.50
400V, 50Hz										2000W	
H 541-2000	2942	2	420	400	382	21.30	80	60	HI ³⁾	2000	10.30
H 541-2000/2 ¹⁾	2885	2	226	206	192	9.60	70	60	HI ³⁾	2000	10.30

Notes:

- 1) Connect two ballasts in series with the lamp
- 2) For metal halide lamps with rated current from 9,5 - 9,6 A
- 3) For metal-halide lamps with rated current from 8,6 - 11,3 A
- 4) For high-pressure sodium vapour lamps with current from 10,0 - 10,6 A