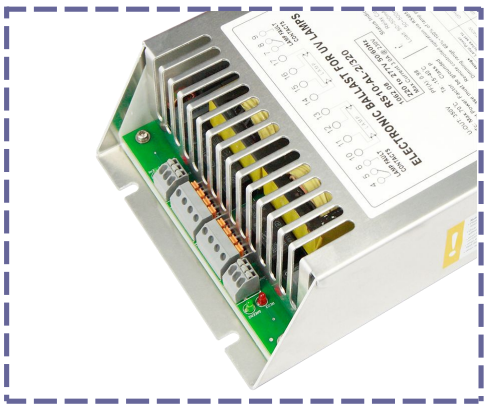
TYPE : RS10-AL-2/320 VER:A

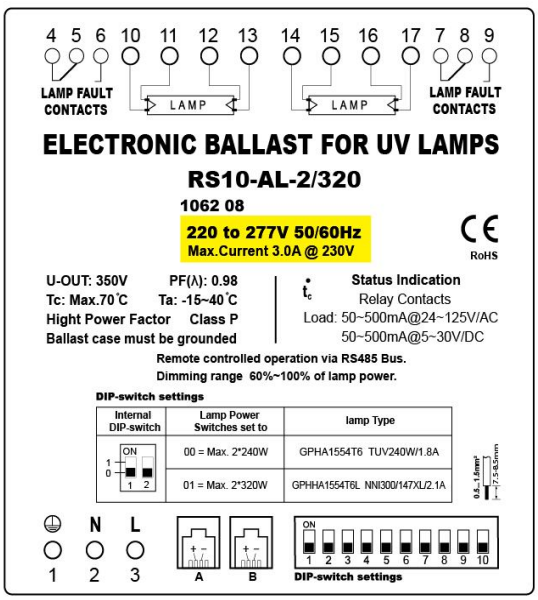
Preheat Start Ballast
AC Source : 198~305V 50/60Hz

Power : 2*240~320W

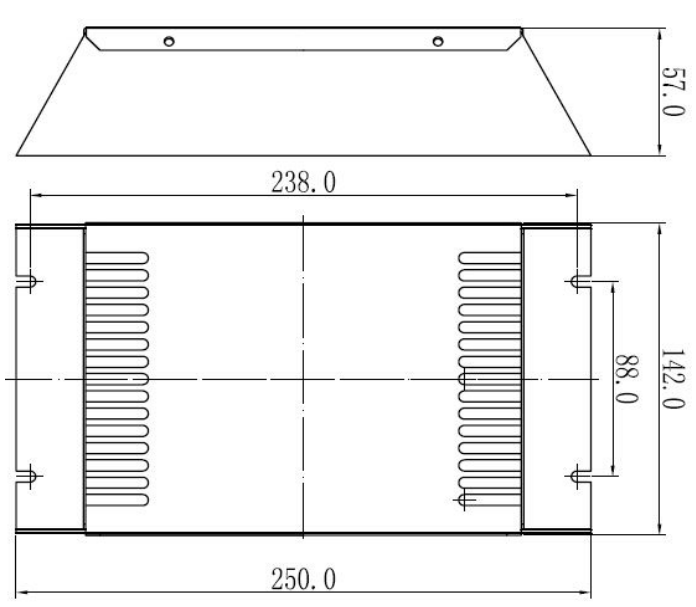
Product Picture



Product Label (Label Can be Customized)



Product Dimensions



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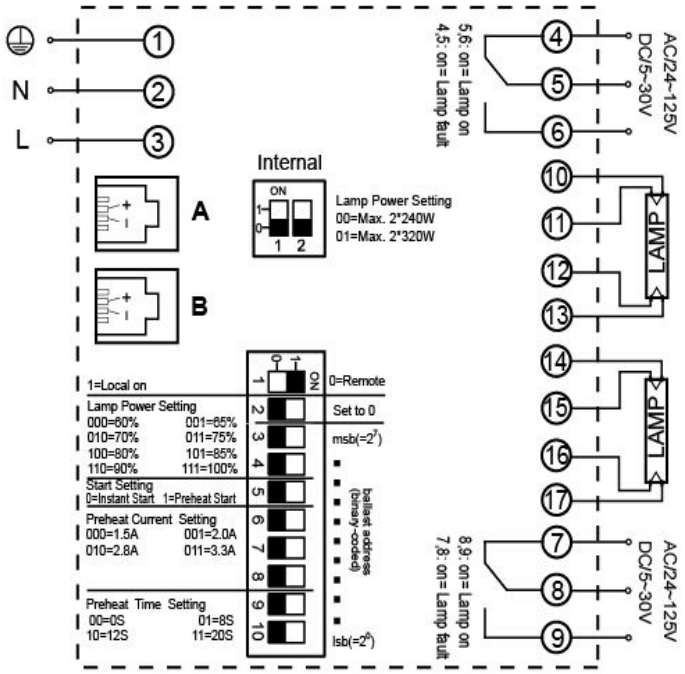
Preheat Start Ballast
AC Source : 198~305V 50/60Hz

Power : 2*240~320W

Wiring Diagram



Features & Functions

- ■Preheat Start
- ■Limiting Current and Power
- ■RS485 bus Dimming Interface:
- ►turn on/off ballast
- ►ballast status monitoring
- ►set lamp current level during operation
- ►preheat on/off
- ►set preheat current level
- ►select preheat time
- ►classical stand-alone 'local' operation
- ►Lamp status indication via LED indicators
- ►green LED = lamp on red LED = lamp fault
- ►potential free relay contacts for lamp on / lamp fault

Electrical Specification

Input Mains Voltage:	220~277V±10%
Input Line Frequency:	47~63Hz
Input Current:	Max.2.90A at 230Vrms
Input Power:	500~650W
Power Factor:	0.98 typ.
Output Frequency:	>30KHz
Crest Factor:	<1.7
Current THD:	<15% typ.
Preheat Time:	Optional 0S, 8S, 12S, 20S
Preheat Current:	Optional 1.5A, 2.0A, 2.8A, 3.3A
Output Current:	Optional 2.0A, 2.2A typ.
Lamp Power:	2*240~320W
Lamp Type:	2*240W/1.8A 2*320W/2.1A
Efficiency:	97% Max. load
Power Dimming Range:	60~100%
Dimming Interface:	RS485
Status Indication:	Green and red LED
Relay Contacts:	Load: 50~500mA@24~125V/AC 50~500mA@5~30V/DC
Protections:	Lamp Open / Fault
Tc-temperature:	Max. 70℃
Ta-temperature:	-15~40℃
Storage:	-40~85℃
Approvals:	CE (LVD EMC)
IP Code:	IP20
Dimensions:	250×142×57mm

Note

►Once the DIP is setted up, please do not make any change, otherwise the lamps may be damaged.

►When the Tc temperature is over 70℃, please add a heat-dissipation device.

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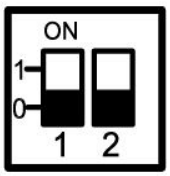
Operating Instructions



Internal

DIP-switch Settings

Lamp Power Switches set to	Lamp Type
00=Max.2*240W	GPHA1554T6L TUV240W/1.8A
01=Max.2*320W	GPHHA1554T6L NNI300/147XL/2.1A

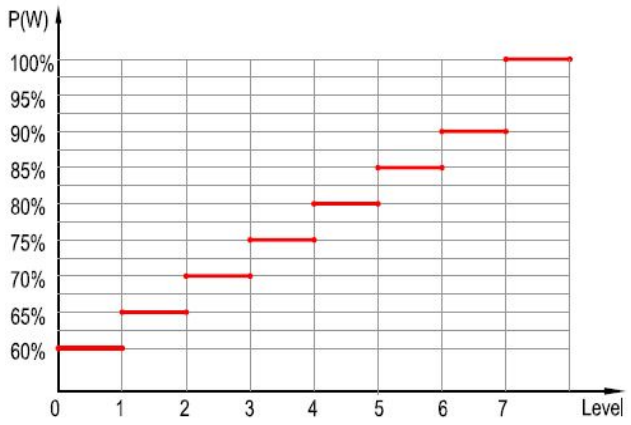
Product Packing Information

Article No.	Type	Inner Box		Carton			Pallet		
		Size [mm]	Weight [kg]	Quantity [pcs]	Size [m³]	Weight [kg]	Quantity [pcs]	Size [m³]	Weight [kg]
8200106208	RS10-AL-2/320	255*154*69	1.54	9	0.032	14.68	324	1.48	541

Similar Product Ordering Information

Article No.	Type	Lamp Power	Lamp Type
8000091102	RH10-AL-2/320	2*200~320W	2*200~240W/1.8A 2*200~ 320W/2.1A
8200105105	RS10-AL-600P	500~650W	500W/5.5A 550W/5.5A 600W/6.0A 650W/6.5A
8200106208	RS10-AL-2/320	2*200~330W	2*240W/1.8A 2*320W/2.1A

Dimming Instructions



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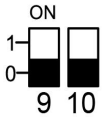
Preheat Start Ballast
AC Source : 198~305V 50/60Hz

Power : 2*240~320W

DIP-Switch Settings for Local Ballast Control

DIP-Switch	Remote / Local Switches set to							
	0=remote on		1=local on		set DIP-switch no. 1 to "1" for local control by DIP-switch			
	Lamp Power (%) Switches set to							
	000=60%	001=65%	010=70%	011=75%	100=80%	101=85%	110=90%	111=100%
	Instant Start / Preheat Start Switches set to							
	0=Instant Start		1=Preheat Start		set DIP-switch no. 5 to "1" (=ON) to enable preheat			
	Preheat Current Switches set to							
	000=1.5A		001=2.0A		010=2.8A		011=3.3A	
	Preheat Time Switches set to							
	00=0S		01=8S		10=12S		11=20S	

DIP-Switch Settings for Ballast Remote Control:

DIP-Switch number										
	1	control mode	0=remote on		set to "0" for remote control via RS485					
	2		set to "0"		reserved for future enhancements					
	address		0	1	2	....	127	128	...	255
	3	address setting	0	0	0		0	1		1
	4		0	0	0		1	0		1
	5		0	0	0		1	0		1
	6		0	0	0		1	0		1
	7		0	0	0		1	0		1
	8		0	0	0		1	0		1
	9		0	0	1		1	0		1
	10		0	1	0		1	0		1

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TYPE : RS10-AL-2/320 VER:A

Preheat Start Ballast
AC Source : 198~305V 50/60Hz

Power : 2*240~320W

Send Instruction to ballasts

byte #	byte 0	byte 1	byte 2	byte 3	byte 4	byte 5
bit name	1 0 0 BC 0 0 0 0	0 ADR6 ADR5 ADR4 ADR3 ADR2 ADR1 ADR0	0 0 0 ON/OFF LCL2 LCL1 LCL0 PH	0 PHL2 PHL1 PHL0 PHT3 PHT2 PHT1 PHT0	0 CHK6 CHK5 CHK4 CHK3 CHK2 CHK1 CHK0	1 1 1 1 1 1 1 1
description	start identifier command identifier broadcast identifier direction identifier not used not used not used	data identifier address bit 6 address bit 5 address bit 4 address bit 3 address bit 2 address bit 1 address bit 0	data identifier not used not used ballast state lamp current bit 2 lamp current bit 1 lamp current bit 0 preheat permission	data identifier not used preheat value bit 1 preheat value bit 0 not used not used preheat time bit 1 preheat time bit 0	data identifier checksum bit 6 checksum bit 5 checksum bit 4 checksum bit 3 checksum bit 2 checksum bit 1 checksum bit 0	end of transmission identifier
options	bit-string '10' marks start of transmission 0 = instruction 0=addressed device/ 1=all connected devices 0 =to ballast	0 =byte signed as data byte ballast address bits 0...6	0 =byte signed as data byte 0 =switch off / 1 =on/set lamp current lamp current level (0 =minimum level ...7= maximum level) 0 =preheat off / 1 =preheat on	0 =byte signed as data byte preheat current level (0 =minimum level ...7 =maximum level) preheat time (0001...1100=1s...12s, 1101=15s, 1110=18s, 1111=20s)	0 =byte signed as data byte ecksum =(sum of all '1-bits' in byte 0...3) -1 C-program code for example: int i,j; unsigned char sum=0; for (i=0;i<4;i++){for(j=0;j<8; j++){if(Byte[i]&(1<<j)) sum++;}} sum--;	all set to 1 for end of transmission identification
hexvalue	(0x??)	(0x??)	(0x??)	(0x??)	(0x??)	(0xFF)

TYPE : RS10-AL-2/320 VER:A

Preheat Start Ballast
AC Source : 198~305V 50/60Hz

Power : 2*240~320W

Ballasts Answer (Acknowledgement)

byte #	byte 0								byte 1								byte 2							
bit name	1	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1
description	start identifier		command identifier	broadcast identifier	direction identifier	not used	not used	acknowledge	data identifier	checksum bit 6	checksum bit 5	checksum bit 4	checksum bit 3	checksum bit 2	checksum bit 1	checksum bit 0	end of transmission identifier							
options	bit-string '10' marks start of transmission		0 =response	0 =addressed device only	1 =from ballast	0	0	1 =acknowledged	0 =byte signed as data byte	checksum = (sum of all '1-bits' in byte 0) -1 = 3 (byte 0) -1 =2							all set to 1 for end of transmission identification							
hexvalue	0x89								0x02								0xFF							

TYPE : RS10-AL-2/320 VER:A

Preheat Start Ballast
AC Source : 198~305V 50/60Hz

Power : 2*240~320W

Send Status Request

byte #	byte 0								byte 1								byte 2								byte 3							
bit name	1	0	1	0	0	0	0	0	0	ADR 6	ADR 5	ADR 4	ADR 3	ADR 2	ADR 1	ADR 0	0	CHK 6	CHK 5	CHK 4	CHK 3	CHK 2	CHK 1	CHK 0	1	1	1	1	1	1	1	1
description	start identifier		command identifier	broadcast identifier	direction identifier	not used	not used	not used	data identifier	address bit 6	address bit 5	address bit 4	address bit 3	address bit 2	address bit 1	address bit 0	data identifier	checksum bit 6	checksum bit 5	checksum bit 4	checksum bit 3	checksum bit 2	checksum bit 1	checksum bit 0	end of transmission identifier							
options	bit-string '10' marks start of transmission		1 =request	0 =addressed device	0 =to ballast				0 =byte signed as data byte	ballast address bits 0...6							0 =byte signed as data byte	checksum = (sum of all '1-bits' in byte 0...1) -1							all set to 1 for end of transmission identification							
hexvalue	(0x??)								(0x??)								(0x??)								0xFF							

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Receive Status

byte #	byte 0								byte 1								byte 2								byte 3							
bit name	1	0	1	0	1	0	0	0	0	0	0	0	TYPE	PHST	LAS	LBS	0	CHK 6	CHK 5	CHK 4	CHK 3	CHK 2	CHK 1	CHK 0	1	1	1	1	1	1	1	1
description	start identifier		command identifier	broadcast identifier	direction identifier	not used	not used	not used	data identifier	not used	not used	not used	ballast type	preheat state	channel A state	channel B state	data identifier	checksum bit 6	checksum bit 5	checksum bit 4	checksum bit 3	checksum bit 2	checksum bit 1	checksum bit 0	end of transmission identifier							
options	bit-string '10' marks start of transmission		1 =status	0 =addressed device	0 =t ballast / 1 =from ballast	set to '0'			0 =byte signed as data byte	set to '0'			0 =single (A) / 1 =dual (A+B) lamp ballast	0 =preheat not active / 1 =currently preheating	0 =lamp A off / 1 =lamp A on	0 =lamp B off / 1 =lamp B on	0 =byte signed as data byte	checksum = (sum of all '1-bits' in byte 0...1) -1							all set to 1 for end of transmission identification							
hexvalue	(0x??)								(0x??)								(0x??)								0xFF							

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