

Ballastar®

Ballastar® Light Level Switching
Technical Product Information

Ballast® System Features and Components

FEATURES

- **Installation Flexibility:** Ballast® light level switching products make it easy to implement controllable lighting solutions with only one additional line-voltage conductor. Ballast® ballasts can be controlled using two standard toggle switches; no sophisticated control devices are needed.
- **Modern Level-Switching Technology:** Ballast® light level switching ballasts vary the light output of all the lamps, eliminating fixture dark spots associated with inboard/outboard switching schemes.
- **Control Options:** Application of the Ballast® family is not limited to manual control with toggle switches. Other control options, like occupancy sensors, building management technologies or any other device using a contact closure, can be implemented with Ballast®.
- **Easy System Setup:** Ballast® light level switching ballasts are shipped from the factory with predefined light levels; no programming is required.

BALLASTAR® FOR T5 LAMPS

T5 S50: Ballast® T5 products provide two predefined control levels: 50% & 100% of the rated input power. These ballasts are featured with universal input voltage (120V to 277V) for installation flexibility.

BALLASTAR® FOR T8 LAMPS

T8 S30: Ballast® S30 products for T8 lamps provide three predefined control levels: 30%, 60% & the standard 0.88. Dedicated voltage ballasts for 120V & 277V systems are available.

T8 S50: Ballast® S50 products for T8 lamps provide two predefined control levels: 50% and 100% of the rated input power. These ballasts are featured with universal input voltage (120V to 277V) for installation flexibility.

Universal Lighting Technologies offers light level switching for both T5 and T8 lamps.

Ballast® Wiring

Mounting

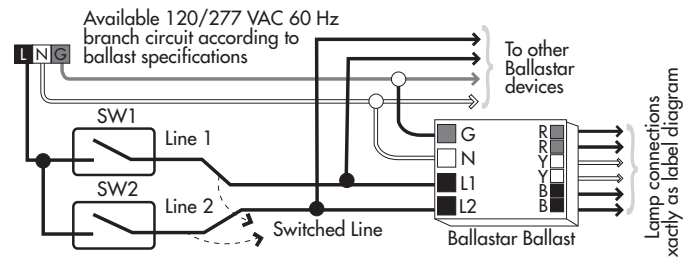
- Ballast® ballasts must be mounted properly against a flat metal surface. Proper operation depends on good connection between ballast and fixture chassis. A star washer or other paint penetrating device is strongly encouraged.
- Maximum lead lengths must be limited according to the individual ballast specification.
- Maintain ballast hot spot temperature below specification.
- Lamps must not touch any grounded metal.
- Lamp support brackets (if used) must not be metallic.
- Fluorescent fixtures should not be mounted in areas with drafts (causes dimming due to airflow).
- Lamp to starting aid (grounded fixture surface) spacing must be per ansi requirement.

Lamp Wiring

- Ballast® ballasts must be wired EXACTLY as stated on the ballast label. Incorrect wiring can result in malfunctions and/or reduced lamp life.
- Keep the lead length AS SHORT AS POSSIBLE (but do not bundle leads).
- Use consistent lead lengths and same lamp type for all fixtures in a room.
- Burn lamps at full bright for at least 12 hours before dimming.
- Never use shunted or instant start lamp sockets with Ballast® ballasts.
- Always use correctly rated lamp sockets.

Power Wiring

- SW1 & SW2 must be wired on same circuit.
- Ballasts and luminaries must be properly grounded.
- SW1 & SW2 can be toggle switches or other suitably rated contact-closure devices.
- The maximum number of ballasts on circuit is limited by the capacity of the switches, conductors, over current protection, etc.
- Do not connect other ballast types (or non-lighting loads) to the load side of the switches controlling the step-dimming ballast

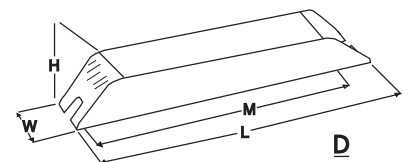
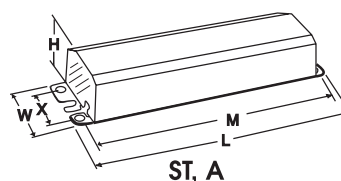


	Lamp Application	Line Volts	Item ID	Wattage		Ballast Factor		Line Current		Case Style
				(Full/Switched)	(Full/Switched)	(Full/Switched)	(Full/Switched)			
T8 S30	(2) F32T8	120	B232SR120S30	62 / 45 / 28	0.88 / 0.58 / 0.27	0.52 / 0.38 / 0.24	ST			
	(2) F32T8	277	B232SR277S30	62 / 45 / 28	0.88 / 0.58 / 0.27	0.23 / 0.17 / 0.11	ST			
	(3) F32T8	120	B332SR120S30	93 / 69 / 43	0.88 / 0.60 / 0.30	0.78 / 0.61 / 0.40	ST			
	(3) F32T8	277	B332SR277S30	94 / 69 / 43	0.88 / 0.60 / 0.30	0.34 / 0.26 / 0.16	ST			

	Lamp Application	Line Volts	Item ID	Wattage		Ballast Factor		Line Current		Case Style
				Full	Switched	Full	Switched	Full	Switched	
T8 S50	(2) F32T8	120	B232PUS50-A	57	28	0.88	0.30	0.48	0.24	A
	(2) F32T8	277	B232PUS50-A	56	28	0.88	0.30	0.21	0.11	A
	(2) F25T8	120	B232PUS50-A	46	24	0.84	0.28	0.39	0.20	A
	(2) F25T8	277	B232PUS50-A	46	24	0.84	0.28	0.18	0.09	A
	(2) F17T8	120	B232PUS50-A	30	16	0.87	0.30	0.25	0.14	A
	(2) F17T8	277	B232PUS50-A	30	16	0.87	0.30	0.12	0.07	A
	(1) F32T8	120	B232PUS50-A	29	14	0.88	0.29	0.25	0.12	A
	(1) F32T8	277	B232PUS50-A	29	14	0.88	0.29	0.12	0.06	A
	(1) F25T8	120	B232PUS50-A	24	12	0.85	0.28	0.21	0.10	A
	(1) F25T8	277	B232PUS50-A	24	12	0.85	0.28	0.11	0.06	A
	(1) F17T8	120	B232PUS50-A	16	9	0.88	0.29	0.14	0.08	A
	(1) F17T8	277	B232PUS50-A	16	9	0.88	0.29	0.08	0.05	A
	(1) F40T8	120	B232PUS50-A	38	17	0.95	0.28	0.32	0.15	A
	(1) F40T8	277	B232PUS50-A	38	17	0.95	0.28	0.15	0.07	A

	Lamp Application	Line Volts	Item ID	Wattage		Ballast Factor		Line Current		Case Style
				Full	Switched	Full	Switched	Full	Switched	
T5 S50	(2) F28T5	120	B228PU95S50D	60	28	0.95	0.34	0.51	0.24	D
	(2) F28T5	277	B228PU95S50D	59	28	0.95	0.34	0.22	0.11	D
	(2) F28T5	120	B228PU115S50D	71	34	1.15	0.45	0.59	0.28	D
	(2) F28T5	277	B228PU115S50D	69	34	1.15	0.45	0.26	0.13	D
	(2) F35T5	120	B228PU115S50D	86	43	1.15	0.45	0.71	0.35	D
	(2) F35T5	277	B228PU115S50D	84	42	1.15	0.45	0.31	0.16	D
	(2) F21T5	120	B228PU95S50D	48	21	0.99	0.36	0.40	0.18	D
	(2) F21T5	277	B228PU95S50D	47	22	0.99	0.36	0.17	0.08	D
	(2) F21T5	120	B228PU115S50D	53	26	1.15	0.45	0.43	0.21	D
	(2) F21T5	277	B228PU115S50D	53	26	1.15	0.45	0.21	0.11	D
	(2) F14T5	120	B228PU95S50D	35	16	1.00	0.37	0.29	0.13	D
	(2) F14T5	277	B228PU95S50D	35	16	1.00	0.37	0.13	0.06	D
	(2) F14T5	120	B228PU115S50D	38	19	1.15	0.45	0.31	0.15	D
	(2) F14T5	277	B228PU115S50D	38	19	1.15	0.45	0.15	0.08	D
	(2) F14T5	120	B214PU115S50A	38	18	1.15	0.40	0.33	0.15	A
	(2) F14T5	277	B214PU115S50A	37	19	1.15	0.40	0.15	0.08	A
	(1) F28T5	120	B214PU115S50A	38	19	1.15	0.45	0.32	0.16	A
	(1) F28T5	277	B214PU115S50A	38	19	1.15	0.43	0.15	0.08	A
	(1) F21T5	120	B214PU115S50A	29	14	1.18	0.39	0.24	0.12	A
	(1) F21T5	277	B214PU115S50A	29	14	1.18	0.40	0.12	0.06	A
(1) F14T5	120	B214PU115S50A	21	10	1.19	0.40	0.17	0.09	A	
(1) F14T5	277	B214PU115S50A	21	10	1.19	0.40	0.09	0.05	A	

Overall Dimensions			Mounting Dimensions		
Draw#	L	W	H	M	X
ST	9.50"	2.40"	1.55"	8.90"	1.70"
A	9.50"	1.70"	1.18"	8.89"	1.69"
D	16.8"	1.18"	1.00"	16.20"	—



Ballastar® Troubleshooting Guidelines

Note: All wiring must be completed in compliance with national and local electric codes.
 Caution!!! Disconnect power before servicing ballasts or lighting fixtures.

Symptom	Possible Reason	Step to Take
Ballasts and modules not responding to wall control	Ballasts may not be powered.	Check line, neutral and ground connections.
	Bad switches.	Check the switch operation.
All fixtures stuck at full bright	Incorrect ballast, or ballast not matched to lamp.	Check and replace with correct unit.
	Non-dimming ballast.	Check and replace with correct unit.
	Bad switches.	Check the switch operation.
Lamps flicker at low light levels	Lamp too close or far from ground fixture surface.	Spacing between the ground plane and linear lamp must be between 1/8" and 1/2" for linear fluorescent.
	Long lead lengths.	Limit lead lengths according to the ballast specifications.
	Leads bundled.	Limit lead lengths as short as possible.
	Lamps too cold (low room ambient).	Wait until lamps warm up.
	New lamps.	Burn lamps at full bright for at least 12 hours before dimming for the first time.
	Ballasts not properly grounded.	Check fixture wiring.
	Fixture not properly grounded.	Check grounding point for proper contact.
Lamps flash and turned OFF	Bad lamps.	Replace lamps.
	Shunted sockets (instant start sockets).	Check and replace lamp sockets.
	Incorrect ballast.	Check and replace with correct unit.
	Wrong lamps.	Check device specification and use correct lamps.
	Wrong fixture wiring.	Check and correct wiring.
Lamps never turned on	Ballasts not powered.	Check device power wiring, circuit breakers, etc.
	Bad lamps.	Replace lamps.
	Shunted sockets (instant start sockets).	Check and replace lamp sockets.
	Incorrect ballast.	Check and replace with correct unit.
	Wrong lamps.	Check device specification and use correct lamps.
	Wrong fixture wiring.	Check and correct wiring.
Intermittent operation of Ballastar® system	Loose connection	Check and fix the wiring.
	Wrong fixture wiring or shunted sockets.	Check and fix the problem.
Lamps ends turned black or frequent lamp failure	Incorrect ballast.	Check and replace with correct unit.

Additional specification information and application notes are available at www.unvlt.com

IT'S EASY TO REACH US...



Universal Lighting Technologies, Inc.
 26 Century Blvd., Suite 500
 Nashville, TN 37214-3683



General Info: (615) 316-5100
 For Technical Engineering Services (TES), application support and warranty information, call 1-800-BALLAST



Website: www.unvlt.com

Email: webmaster@unvlt.com

All specification information is subject to change without notification.
 Lit# BSTECH0214