

QUICKTRONIC® POWERSENSE® T8 Universal Voltage Dimming Systems



Fluorescent Controllable
Lighting Systems

High Efficiency Series

Lamp / Ballast Guide

- 32W T8 - SYLVANIA OCTRON® lamps
- 1-lamp QTP1x32T8/UNV DIM
- 2-lamp QTP2x32T8/UNV DIM
- 3-lamp QTP3x32T8/UNV DIM
- 4-lamp QTP4x32T8/UNV DIM

Primary Lamp Types
F032, FB032 & FB031

Also operates:
F030/SS, F028/SS, F025/SS, F025,
F017, FB024 & FB016

Key System Features

- Industry's first ballast that combines dimming inputs from 0-10V and/or two-wire AC dimming providing maximum flexibility
- Compatible with low voltage and power line fluorescent dimmers
- High Efficiency**
- NEMA Premium Electronic Ballast Program compliant
- Lamp Detection Technology
- Universal voltage (120-277V)
- 100 - 5% Dimming Range
- PROStart® Programmed Rapid Start
- Anti-flash circuitry - turns on in dimmed mode
- Operates at >42kHz
- QUICK 60+ ballast and lamp warranty
- RoHS compliant
- Lead-free solder, printed circuit board and manufacturing process



Application Information

SYLVANIA QUICKTRONIC POWERSENSE ballasts

- are ideally suited for:
- Occupancy sensors
 - Daylight harvesting
 - Energy management
 - Load shedding
 - New construction
 - Retrofit

SYLVANIA QUICKTRONIC High Efficiency, POWERSENSE T8 electronic ballasts offer several advantages:

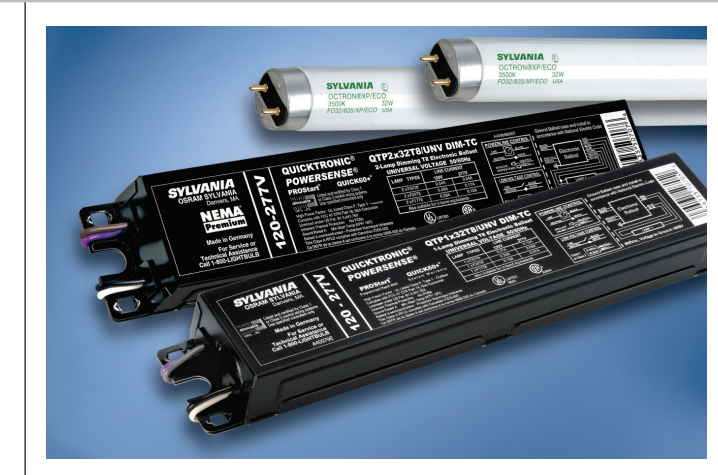
- Wide Dimming Range:** operate linear fluorescent T8 lamps over a 100-5% dimming range and provide true versatility in controls selection.
- Industry's Most Adaptable Dimming Ballast:** ballasts feature micro-controller technology for compatibility with:
 - low voltage controls
 - power line fluorescent dimmers
 - any line voltage from 120V to 277V
- Unmatched Performance:** patented lamp detection technology that virtually eliminates variations in brightness from lamp-to-lamp and provides uniform lighting throughout the dimming range. At light levels of >75% unnecessary lamp-coil power is turned off, delivering energy efficiencies comparable to non-dimming Instant start electronic ballast. This technology also eases installation and troubleshooting by recognizing failed lamps, faulty wiring or loose connections, and shutting down.

System Information

QUICKTRONIC POWERSENSE ballasts operate from standard low voltage (0-10VDC) fluorescent controllers or compatible 2-wire power line fluorescent dimmers, making them ideal for individual office lighting or automated building applications, both in new construction and retrofit projects.

For the individual office or conference room, installation can be streamlined by using a 2-wire power line fluorescent dimmer; eliminating the need for additional control wires.

For more advanced systems, such as daylight harvesting or building automation applications, standard low voltage devices (0-10VDC, Class 1 or 2) are used to control the lighting system. In this daylight harvesting example, each lighting fixture (or fixture row) is controlled by its own photosensor; regulating the light output



POWERSENSE
T8 DIM

When the problem is corrected, the system restarts automatically.

- NEMA Premium Electronic Ballast Program compliant.** This program promotes the use of high efficiency T8 electronic ballasts by meeting or exceeding the Ballast Efficiency Factors, (BEF) established by the CEE, (Consortium for Energy Efficiency). For additional information on this program

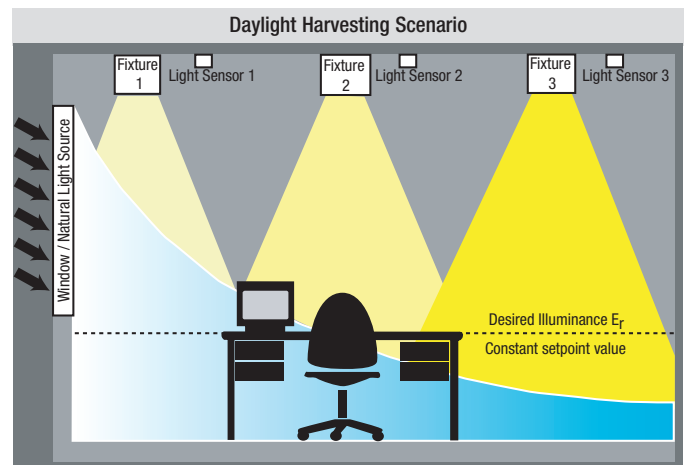
go to: www.cee1.org or www.nema.org

These ballasts are RoHS compliant and feature lead-free solder, printed circuit boards and manufacturing process.

Setting the standard for quality, QUICKTRONIC POWERSENSE ballasts are covered by the QUICK 60+® warranty, the first and most comprehensive lamp & ballast system warranty in the industry.

to compensate for changes in natural daylight. Depending upon the specific application, energy savings of up to 60% compared to fixed output T8 electronic systems can be realized.

All QUICKTRONIC POWERSENSE ballasts include a line voltage protection circuit, which protects the ballast in the event that line voltage is inadvertently applied to the low voltage control inputs.



SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

QUICKTRONIC® POWERSENSE® Controls Information

Controls Manufacturer	Fluorescent Powerline Controllers	0-10 VDC Controllers	Photo Cells	Occupancy Sensors	Building Management Systems
SYLVANIA ELOGIC™ Controls 1-800-LIGHTBULB www.sylvania.com	X	X	X	X	
Encelium www.encelium.com					X
Hunt Dimming www.huntdimming.com	X	X	X	X	X
Lehigh Electronic Products www.lehighdim.com	X	X	X	X	X
Leviton Lighting Controls www.leviton.com	X	X	X	X	
Lightolier Controls www.lolcontrols.com	X	X	X	X	X
Lithonia Controls www.lithonia.com	X	X	X	X	X
Lumisys www.lumisys1.com	X	X			X
PCI www.pcilightingcontrols.com		X	X		
Sensorswitch www.sensorswitch.com			X	X	
Siemens Energy & Automation www.sea.siemens.com					X
Starfield Controls www.starfieldcontrols.com		X	X	X	X
The Watt Stopper, Inc www.wattstopper.com			X	X	

Please contact controls manufacturers to order/specify controls. For the latest controls list go to www.sylvania.com
Also for more information, check out the LCA (Lighting Controls Association) site: www.aboutlightingcontrols.org

Dimensions:

1 & 2 lamp enclosure

Overall: 9.5" L x 1.68" W x 1.0" H (241 x 43 x 25 mm)

Mounting: 8.90" (226 mm)

Weight: 1.1 lbs each (500 g)

3 & 4 lamp enclosure

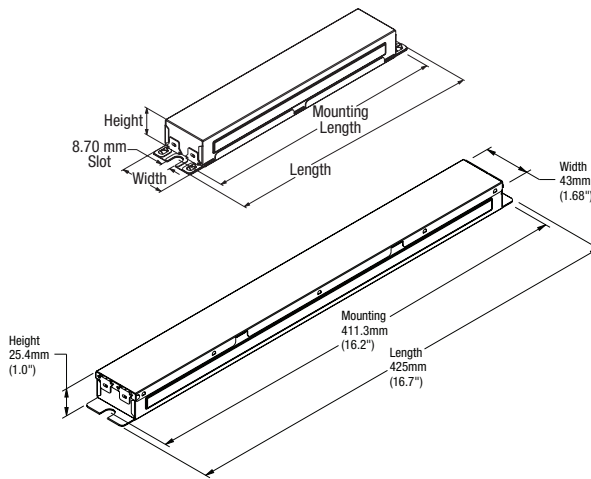
Overall: 16.7" L x 1.68" W x 1.0" H (425 x 43 x 25 mm)

Mounting: 16.2" (411 mm)

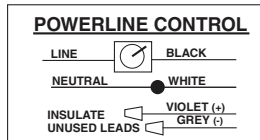
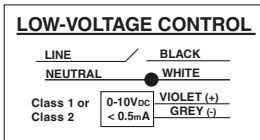
Weight: 2.1 lbs each (950 g)

Wiring:

Leads Only



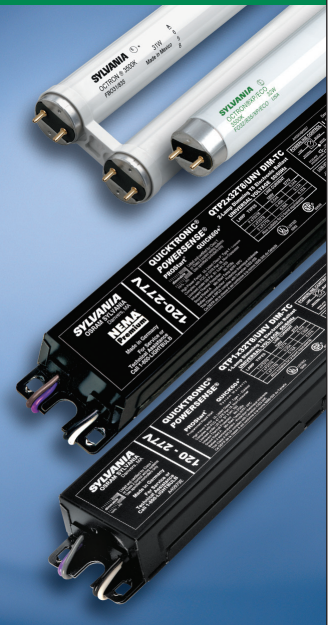
Input & Control Wiring Options:



Control Specifications/model numbers may change.
Please consult manufacturers listed for their latest control models and to order their controls.

T8 POWERSENSE
High Efficiency

Controls Guide



Warning

Install and wire these ballast and controls in accordance with the National Electrical Code (NEC), all applicable Federal, State and local electrical codes, as well as the specific instructions provided with the compatible control that you purchased. Installation should be performed by qualified personnel only.

These instructions are guidelines only. Installation may vary for different controls/fixtures/applications. Be sure to follow the control instructions and all applicable codes and standards when installing dimming systems.

Please contact controls manufacturer listed in the OSRAM SYLVANIA Inc. controls cross reference for compatible controls and instruction wiring.

NOTES:

1. Dimming ballasts source < 0.5mA (0-10VDC control input).
2. Powerline controls must be rated for the type (e.g. Fluorescent Phase-control) and size (e.g. 600W, 1000W, 1500W & 2000W etc.) of the connected load. Do NOT use incandescent powerline controls; incandescent dimmers are not rated for fluorescent loads and are NOT compatible with POWERSENSE ballasts.

OSRAM SYLVANIA
National Customer
Service and Sales Center
1-800-LIGHTBULB
(1-800-544-4828)
www.sylvania.com

Specifications subject to change without notice.

SPECIFICATION DATA

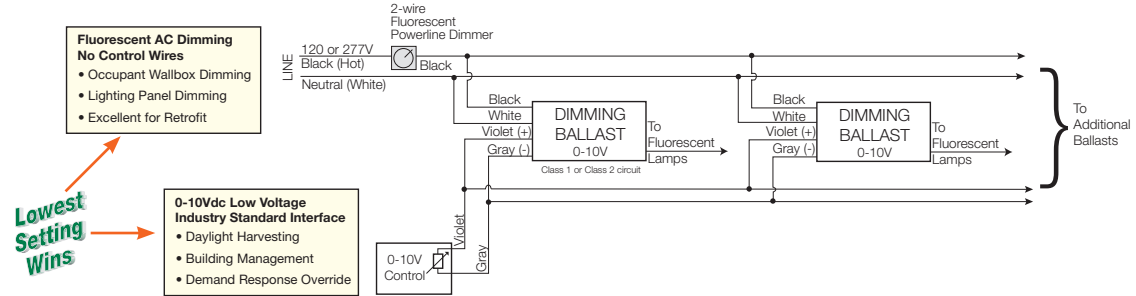
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Comments		

T8 POWERSENSE
High Efficiency

QUICKTRONIC® POWERSENSE® T8 Dimming UNV - Dimming Control Wiring Examples

Industry's 1st Ballast That Allows POWERLINE Fluorescent Control AND 0-10Vdc Control Input Simultaneously

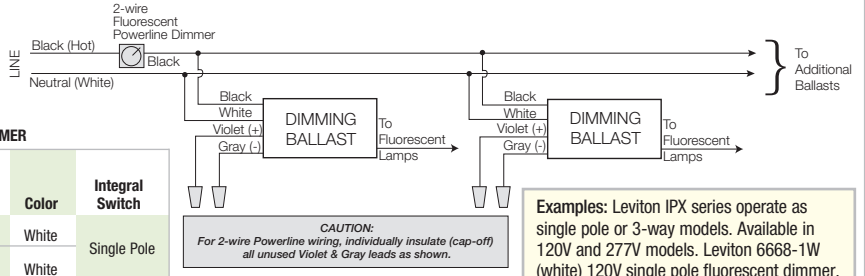
2-wire Powerline AND 0-10Vdc Control with POWERSENSE Ballasts



Wallbox Style 2-wire Powerline Control Wiring Example

Powerline Control Specs:
Specification-grade controls are available for 120V or 277V operation of controllable analog electronic fluorescent ballasts. Controls must be suitably rated for both the type (e.g. Fluorescent Phase-control) and size (e.g. 600W) of the connected load.

2-wire Powerline Control with POWERSENSE Ballasts



ELOGIC™ MANUAL CONTROL SLIDE FLUORESCENT PHASE CUT DIMMER

Item Number	OSRAM SYLVANIA Description	Maximum Input Current (A)			Input Voltage (V)	Color	Integral Switch
		Single	Double	Triple			
45045	ELMC-SL-FLPCWALL/120-WH	5.0A	4.5A	4.0A	120	White	Single Pole
45046	ELMC-SL-FLPCWALL/277-WH	2.2A	2.0A	1.7A	277	White	

Wallbox Style 0-10V Control with Power Switch Wiring Example

0-10V DC Control with POWERSENSE Ballasts

Examples: Lithonia model ISD BC or Leviton IP 710 Series (These 0-10V dc, 120/277V models can be wired for single pole application (shown); these models can also be wired for 3-way applications.)

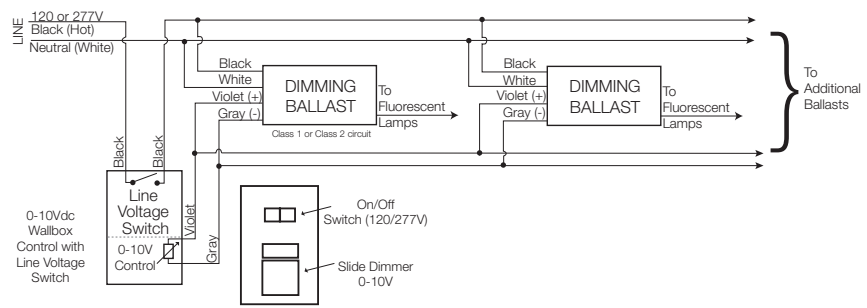
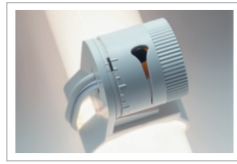
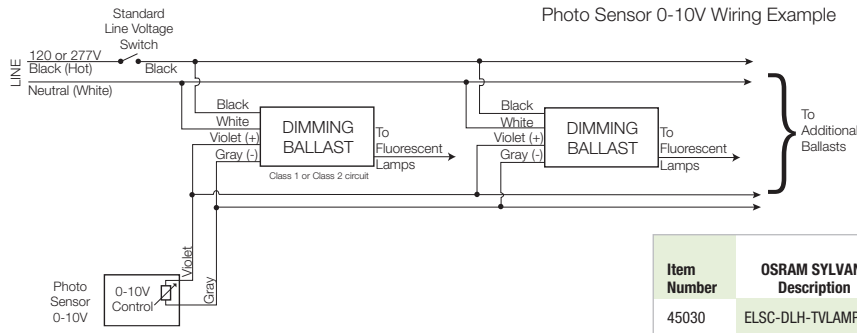


Photo Sensor 0-10V Wiring Example

0-10V DC Control with POWERSENSE Ballasts

Photo Sensor 0-10V Wiring Example



ELOGIC DAYLIGHT SENSOR ORDERING INFORMATION

Item Number	OSRAM SYLVANIA Description	Type	Ballast Control Method	Output Voltage (VDC)	Max. Input Current (mA)	Lamp Type
45030	ELSC-DLH-TVLAMP/BUS	Sensor & Control for Daylight Harvesting	Analog	0-10V	6	T8 or T5 or T5HO

POWERSENSE WIRING & CONTROLS

SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

High Efficiency, T8 Controllable Lighting Systems, UNV (120-277V)



T8 POWERSENSE®
High Efficiency
Performance Guide

Data based on SYLVANIA OCTRON® lamps shown. QUICKTRONIC® POWERSENSE ballasts are also compatible with other manufacturers equivalent lamp types that meet ANSI specifications, including F17, F25, F32, U-Bend equivalent lamps and SUPERSAVER lamps.

Specifications
Data based on F32T8

Starting Method: Programmed Rapid Start
Circuit Type: Series
Lamp Frequency: >40 kHz
Lamp CCF: Less than 1.7
Starting Temp: 50°F/10°C minimum for OCTRON T8 lamps
Input Voltage: 120-277V, ±10%
Input Frequency: 50/60 Hz
THD: <10% @ Full Output
Power Factor: >98% @ Full Output
 UL Listed Class P, Type 1 Outdoor
 CSA or C/UL Certified
 70°C Max Case Temperature
 FCC 47CFR Part 18 Non-Consumer
 Class A Sound Rating
 RoHS compliant*
 ANSI C62.41 Cat. A Transient Protection
 Remote mounting (Max. wire length from ballast case to lampholder)

- up to 8ft for full wattage T8s
- no remote mounting for SUPERSAVER

3 Complies with European Union Restriction of Hazardous Substances Directive (Directive EC 2002/95)

Control Information

QUICKTRONIC POWERSENSE ballasts are compatible with a wide range of low voltage (0-10VDC) and power line fluorescent controllers available from various manufacturers.
 Low Voltage Control Specs: Ballast will source up to 0.5mA for 0-10VDC control purposes. May be wired as a Class 1 or Class 2 circuit-consult Local and National Electrical Codes.
 Power Line Control Specs: Specification-grade fluorescent controls are available for 120V or 277V operation of controllable analog electronic fluorescent ballasts. Controls must be suitably rated for both the type (e.g. Fluorescent Phasecontrol) and size (e.g. 600W) of the connected load.

System Life / Warranty

QUICKTRONIC products are covered by the QUICK 60+® warranty, a comprehensive lamp and ballast system warranty. For additional details, refer to the QUICK 60+ warranty bulletin.

OSRAM SYLVANIA
National Customer Service and Sales Center
1-800-LIGHTBULB
(1-800-544-4828)
www.sylvania.com

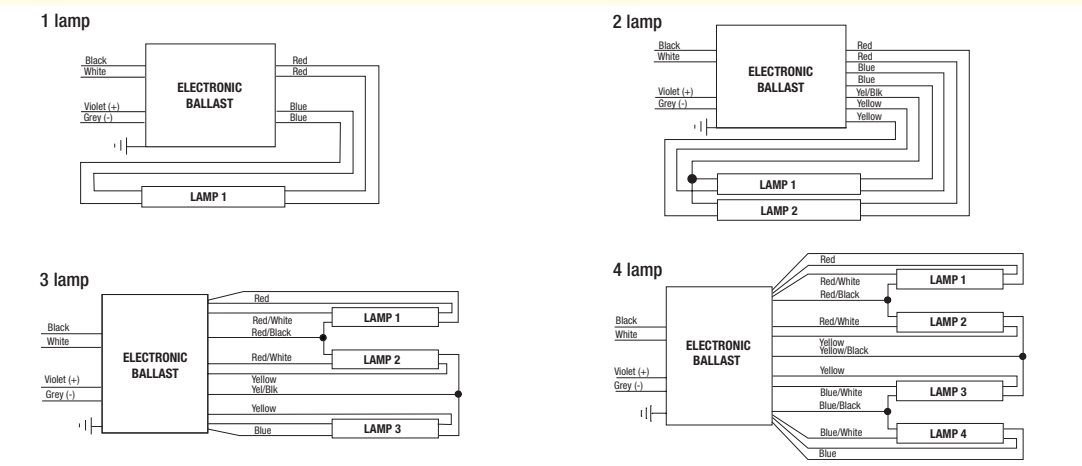
Specifications subject to change without notice.

Item Number	OSRAM SYLVANIA Description	Input		Rated Lumens (lm)	No. of Lamps	Ballast		System Lumens	Mean Lumens	Input Power (W)		System ¹ Efficacy (lm/W)	
		Current (AMPS)	Lamp Type			Factor (BF)	System			120V	277V	lm/W	BEF ²
50705	QTP 1x32T8/UNV DIM-TC	0.27/0.12	F032XP	3000	1	0.88 0.05	2640 150	2480 140	30 8	30 8	88	2.93	
		0.24/0.11	F030/SS	2850	1	0.88 0.05	2510 145	2360 135	28 8	28 8	90	3.14	
		0.22/0.10	F028/SS	2725	1	0.88 0.05	2400 135	2255 130	25 8	25 8	96	3.52	
		0.20/0.09	F025/SS	2475	1	0.88 0.05	2180 125	2045 115	23 7	23 7	95	3.83	
50707	QTP 2x32T8/UNV DIM-TC	0.51/0.24	F032XP	3000	2	0.88 0.05	5280 300	4965 280	59 14	57 14	93	1.54	
		0.48/0.20	F030/SS	2850	2	0.88 0.05	5015 285	4715 270	55 14	53 14	95	1.66	
		0.43/0.18	F028/SS	2725	2	0.88 0.05	4795 275	4510 255	51 13	49 13	98	1.80	
		0.39/0.16	F025/SS	2475	2	0.88 0.05	4355 250	4095 235	45 13	44 13	99	2.00	
50714	QTP 3x32T8/UNV DIM-TCL	0.73/0.30	F032XP	3000	3	0.88 0.05	7920 450	7445 425	87 20	84 20	94	1.05	
		0.68/0.30	F030/SS	2850	3	0.88 0.05	7525 430	7075 400	81 20	78 20	96	1.13	
		0.62/0.26	F028/SS	2725	3	0.88 0.05	7195 410	6760 385	73 19	72 19	100	1.22	
		0.56/0.24	F025/SS	2475	3	0.88 0.05	6535 370	6140 350	67 19	66 19	99	1.33	
50716	QTP 4x32T8/UNV DIM-TCL	0.96/0.40	F032XP	3000	4	0.88 0.05	10,560 600	9925 565	114 27	110 27	96	0.80	
		0.92/0.39	F030/SS	2850	4	0.88 0.05	10,030 570	9430 535	107 26	104 26	96	0.85	
		0.82/0.35	F028/SS	2725	4	0.88 0.05	9590 545	9015 510	98 25	95 25	101	0.93	
		0.74/0.32	F025/SS	2475	4	0.88 0.05	8710 495	8190 465	91 24	89 24	98	0.99	

Products are all 10-pack. *Striation might occur with SUPERSAVER lamps.
 1: System Efficacy calculation based on lowest input power value.
 2: Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

Wiring Diagrams

Output Wiring: Lamp wiring for dimming ballasts can differ significantly from non-dimming ballasts and from other manufacturers dimming ballasts. Take care to connect lamp lead wires as shown on the applicable ballast diagram. **Lamp Seasoning:** For optimal performance, fluorescent lamps may require seasoning for up to 12 hours prior to low temperature starting & low level dimming. Refer to NEMA LSD 23-2002 Lighting Systems Division: Recommended Practice — Lamp Seasoning for Fluorescent Dimming Systems



Item Number	50707	QTP 2	x 32T8 / UNV DIM-TC	System Type - DIMMING/Case Size
QUICKTRONIC				Line Voltage (120-277V)
Number of Lamps (1, 2, 3, 4)				Primary Lamp Wattage

