

QUICKTRONIC® POWERSENSE® T8 Universal Voltage Dimming Systems



**Fluorescent Controllable
Lighting Systems**

High Efficiency Series

Lamp / Ballast Guide

- 32W T8 - SYLVANIA OCTRON® lamps
 1-lamp QHE1x32T8/UNV DIM
 2-lamp QHE2x32T8/UNV DIM
 3-lamp QHE3x32T8/UNV DIM
 4-lamp QHE4x32T8/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**
- 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 >42 kHz
- QUICK 60+ ballast and lamp warranty
- RoHS compliant
- Lead-free solder 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.



When the problem is corrected, the system restarts automatically.

These ballasts are RoHS compliant and feature lead-free solder 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.

System Information

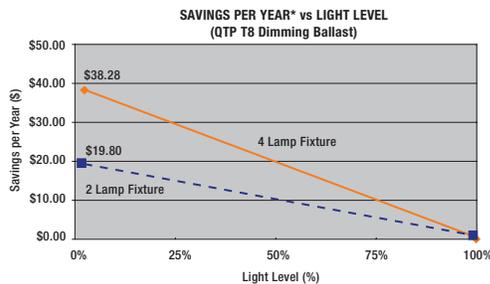
QUICKTRONIC POWERSENSE ballasts operate from standard low voltage (0-10VDC) fluorescent controllers or compatible 2-wire power line fluorescent dimmers, making them ideal for individual office lighting or automated building applications, both in new construction and retrofit projects.

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.

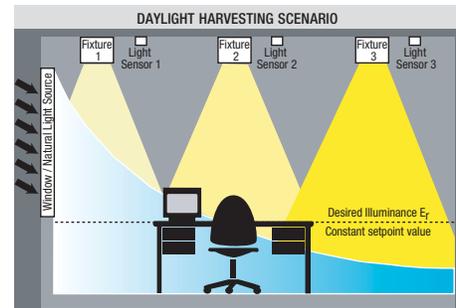
For more advanced systems, such as daylight harvesting or building automation applications, standard low voltage devices

(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 it's own photosensor; regulating the light output 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.



* F032/XP lamps with QUICKTRONIC T8 POWERSENSE ballast
 * Based on 4000 hrs/yr, \$0.11/kWh, and 120W operation
 * Savings per Year (@Light Level) = Cost of operation (100% Light Level) - Cost of operation (@Light Level)



SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

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

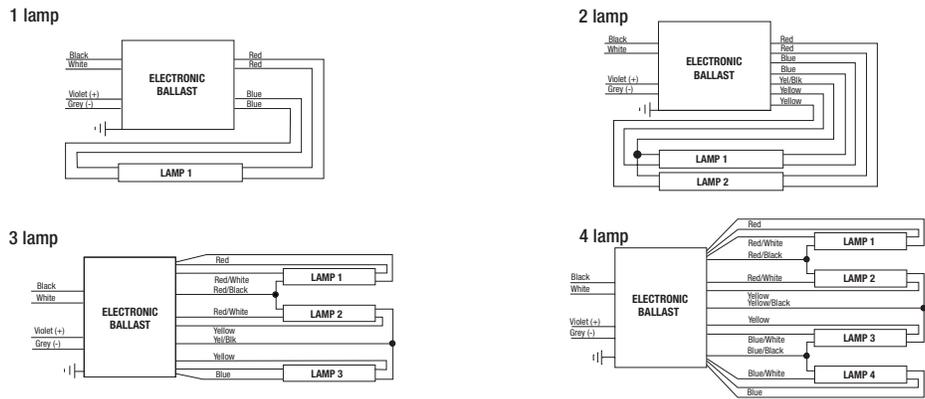


Item Number	OSRAM SYLVANIA Description*	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast		Mean Lumens	Input Power (W)		System' Efficacy (lm/W)	BEF ²
						Factor (BF)	System Lumens		120V	277V		
50735 <i>Replaces 50705</i>	QHE1x32T8/UNV DIM-TC	0.27/0.12	F032XP	3000	1	0.88 0.05	2640 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
50736 <i>Replaces 50707</i>	QHE2x32T8/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
50737 <i>Replaces 50714</i>	QHE3x32T8/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
50738 <i>Replaces 50716</i>	QHE4x32T8/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

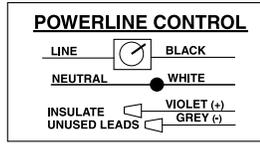
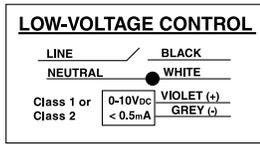
Products are all 10-pack. Note: Striation might occur with SUPERSAVER lamps.
 1 System Efficacy calculation based on lowest input power value.
 2 Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
 *QHE models above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

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



Input & Control Wiring Options:



Refer to pages 118-119 for controls & wiring information

Item Number	50736	QHE	2	x	32T8	/	UNV	DIM-TC	System Type - DIMMING/Case Size
QUICKTRONIC High Efficiency									Line Voltage (120-277V)
Number of Lamps (1, 2, 3, 4)									Primary Lamp Wattage

Specifications subject to change without notice.

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: >42 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 Phase control) 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

POWERSENSE T8 DIM