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QUICKTRONIC[®] T8 Instant Start Universal Voltage Systems



Type CC Lamp Striation Control Normal Ballast Factor

High Efficiency Series Lamp / Ballast Guide 32W T8 - OCTRON® lamps

1-lamp QHE1x32T8/UNV-ISN-SC-1 2-lamp QHE2x32T8/UNV-ISN-SC-1 3-lamp QHE3x32T8/UNV-ISN-SC-1 4-lamp QHE4x32T8/UNV-ISN-SC-1

Also operates:

FB032, FB031, F025, FB024, F017, FB016, F030/SS (30W), FB030/SS (30W), FB029/SS (29W), F028/SS (28W) & F025/SS (25W) Display lamps: F013, F014, F021 & F028 Preheat lamps: F15T8, F25T8 & F30T8 F40T8 operation: 1 lamp on 2L ballast; 2 lamps on 3L ballast; 3 lamps on 4L ballast

Key System Features

- High Efficiency Systems over 90% efficient
- NEMA Premium Electronic Ballast
 Program compliant
- UL Type CC Rated (Commercial Cabinet)
- Lamp Striation Control (LSC)
- Min. Starting Temp:
- -20°F(-29°C) for T8 lamps
 60°F (16°C) for Energy Saving T8 lamps
- 0°F (-18°C) for F040T8 lamps
 Flexible De-Lamp Combinations —
- see wiring diagrams on next pageQHE ballasts meet the most
- demanding utility rebate standards30-50% energy savings
- RoHS compliant
- Lead-free solder and manufacturing process

Application Information

SYLVANIA QUICKTRONIC High Efficiency (QHE) ballasts are ideally suited for:

UL Type CC

- Refrigerated cases*
- Reingerated cases
 Walk-in coolers*
- Walk-In coolers"
 Commercial cabinets
- Display cases
- Applications that could expose lamp and sockets to vibration and potential movement
- *T8 energy saving lamps should not be used in applications below 60°F lamp ambient.

Lamp Striation Control (LSC)

 General lighting applications where energy saving T8 lamps may striate, particularly for the F25 energy saving T8 lamps.

ECS407 - 6-13

SYLVANIA QUICKTRONIC High Efficiency, (QHE) Type CC energy saving electronic T8 ballasts offer four major advantages:

- 1. Same Light, Less Power!
- Up to 6% in energy savings compared to standard T8 low power electronic ballasts without compromising light output
- Maximum energy savings when compared to F40T12 magnetically ballasted systems
- 2. UL Type CC compliant: ballasts utilize a micro-controller based circuit to reduce arcing caused by loose connections or improper lamp pin to socket connections.
- 3. Lamp Striation Control (LSC): T8 energy saving lamps should be operated above 60°F, but under certain conditions the lamps may striate. LSC circuitry may minimize or eliminate this condition; however there are limited applications where LSC circuitry may not entirely mitigate lamp striations. (Please consult lamp manufacturers for additional details.)



4. NEMA Premium Electronic Ballast Program compliant. The 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*

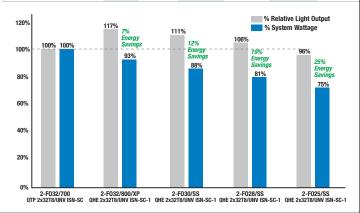
These ballasts are also RoHS compliant and feature lead-free solder and manufacturing process.

System Information

SYLVANIA QUICKTRONIC High Efficiency (QHE) System advantages:

- Operate from 120V through 277V
 Eliminates "wrong voltage" errors
- Reduces inventory by 50%
 Utilizes Instant Start operation for
 - Highest System EfficacyLow temperature starting capability
 - Parallel circuity keeps remaining lamps lit if one or more go out
- Very low harmonic distortion (<10%)THD
- Operate at >42 kHz to reduce potential interference with infrared control systems

Lamp & Ballast Type	System Watts	Initial LPW	Mean System Lumens @ 8000 Hours	Relative Light Output @ 8000 Hours	% Energy Savings	% Lamp Life @3hrs/ start
2-F032/700 QTP2x32T8/UNV ISN-SC	59	76	4205	Baseline	Baseline	Baseline
2-F032/800/XP® QHE2x32T8/UNV ISN-SC-1	55	95	4905	117%	7%	160%
2-F030/SS QHE2x32T8/UNV ISN-SC-1	52	95	4660	111%	12%	160%
2-F028/SS QHE2x32T8/UNV ISN-SC-1	48	99	4455	106%	19%	160%
2-F025/SS QHE2x32T8/UNV ISN-SC-1	44	98	4050	96%	25%	160%





SPECIFICATION DATA

Catalog #

Project

Comments

High Efficiency UNV (120-277V) Type CC & Lamp Striation Control

Date

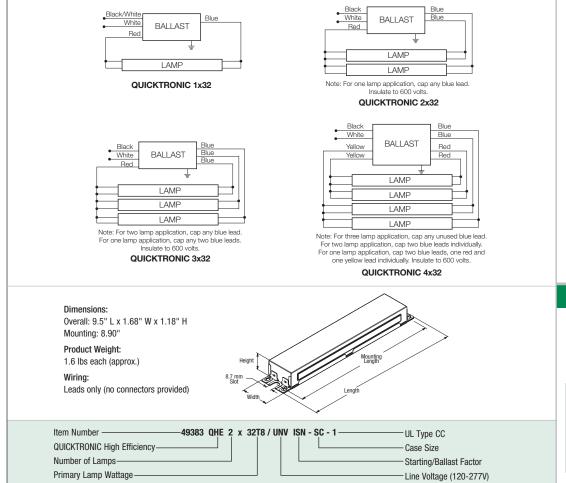
Prepared by

Туре

Description	Input Current (AMPS)	Lamp Type	Rated Lumens (Im)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Wattage (W)	System Efficacy (Im/W)	BEF ¹
QHE1x32T8/UNV-ISN-SC-1 Banded Pack	0.25/0.11 0.25/0.11 0.23/0.09 0.21/0.09 0.20/0.09	F032/700 F032/XP® F030/SS F028/SS F025/SS	2600 3000 2850 2725 2475	1 1 1 1 1	0.87 0.87 0.87 0.87 0.87	2260 2610 2480 2370 2155	2080 2455 2330 2230 2025	28 28 27/26 25/24 23/22	81 93 92/95 95/99 94/98	3.11 3.11 3.35 3.63 3.95
QHE2x32T8/UNV-ISN-SC-1 Banded Pack	0.47/0.20 0.47/0.20 0.44/0.19 0.40/0.18 0.37/0.16	F032/700 F032/XP F030/SS F028/SS F025/SS	2600 3000 2850 2725 2475	2 2 2 2 2 2	0.87 0.87 0.87 0.87 0.87	4525 5220 4960 4740 4305	4160 4905 4660 4455 4050	55 55 52 48/47 44/43	82 95 95 99/101 98/100	1.58 1.58 1.67 1.85 2.02
QHE3x32T8/UNV-ISN-SC-1 Banded Pack	0.68/0.30 0.68/0.30 0.65/0.28 0.61/0.26 0.55/0.23	F032/700 F032/XP F030/SS F028/SS F025/SS	2600 3000 2850 2725 2475	3 3 3 3 3	0.87 0.87 0.87 0.87 0.87	6785 7830 7440 7110 6460	6240 7360 6990 6685 6070	82/81 82/81 77/76 72/71 65/64	83/84 96/97 97/98 99/100 99/101	1.07 1.07 1.14 1.23 1.36
QHE4x32T8/UNV-ISN-SC-1 Banded Pack	0.92/0.39 0.92/0.39 0.86/0.37 0.80/0.35 0.74/0.31	F032/700 F032/XP F030/SS F028/SS F025/SS	2600 3000 2850 2725 2475	4 4 4 4 4	0.87 0.87 0.87 0.87 0.87	9050 10,440 9920 9485 8615	8315 9815 9325 8915 8095	109/107 109/107 102 95/94 87/86	83/85 96/98 97 100/101 99/100	0.81 0.81 0.85 0.93 1.01
	QHE1x32T8/UNV-ISN-SC-1 Banded Pack QHE2x32T8/UNV-ISN-SC-1 Banded Pack QHE3x32T8/UNV-ISN-SC-1 Banded Pack QHE4x32T8/UNV-ISN-SC-1	Description Current (AMPS) QHE1x32T8/UNV-ISN-SC-1 Banded Pack 0.25/0.11 0.25/0.11 0.23/0.09 0.20/0.09 0.25/0.11 0.25/0.11 0.25/0.11 0.25/0.11 0.23/0.09 QHE2x32T8/UNV-ISN-SC-1 Banded Pack 0.47/0.20 0.47/0	Description Current (AMPS) Lamp Type QHE1x32T8/UNV-ISN-SC-1 Banded Pack 0.25/0.11 0.25/0.11 0.23/0.09 F032/XP® F032/XP® 0.23/0.09 QHE2x32T8/UNV-ISN-SC-1 Banded Pack 0.47/0.20 0.47/0.20 F032/XP F032/SS 0.20/0.09 QHE2x32T8/UNV-ISN-SC-1 Banded Pack 0.47/0.20 0.44/0.18 F032/XP F032/SS 0.44/0.18 QHE3x32T8/UNV-ISN-SC-1 Banded Pack 0.68/0.30 0.68/0.32 F032/XP F032/SS 0.65/0.28 QHE4x32T8/UNV-ISN-SC-1 Banded Pack 0.92/0.39 0.92/0.33 F032/YP F032/SS F032/SS 0.86/0.37	Description Lump (AMPS) Lamp Type Lumens (m) QHE1x32T8/UNV-ISN-SC-1 Banded Pack 0.25/0.11 0.25/0.11 0.25/0.19 F032/XP® F032/XP 0.23/0.09 2600 F032/XP F032/SS 502/SS 2600 2850 2725 2475 QHE2x32T8/UNV-ISN-SC-1 Banded Pack 0.47/0.20 0.447/0.20 F032/YP F032/SS 502/SS 2600 F032/XP F032/SS 502/SS 2600 F032/XP F032/SS 502/SS QHE3x32T8/UNV-ISN-SC-1 Banded Pack 0.68/0.30 0.68/0.32 0.65/0.28 0.65/0.28 0.65/0.28 0.55/0.23 F032/YD F032/XP F032/SS 502/SS 2600 2850 2725 2475 QHE4x32T8/UNV-ISN-SC-1 Banded Pack 0.92/0.39 0.86/0.37 0.86/0.37 0.86/0.35 F032/YD F032/XP F032/SS 2475 2600 2850 2850 2725 2475	Lurrent (AMPS) Lamp Type Lumens (lm) No. of Lamps QHE1x32T8/UNV-ISN-SC-1 Banded Pack 0.25/0.11 0.25/0.11 F032/XP F030/SS 2600 2850 1 1 QHE1x32T8/UNV-ISN-SC-1 Banded Pack 0.25/0.11 0.23/0.09 F032/XP F030/SS 2600 2850 1 1 QHE2x32T8/UNV-ISN-SC-1 Banded Pack 0.47/0.20 0.44/0.19 F032/XP F030/SS 2600 2850 2 2 2 QHE3x32T8/UNV-ISN-SC-1 Banded Pack 0.68/0.30 0.65/0.28 F032/XP F030/SS 2600 2850 3 3 3 QHE4x32T8/UNV-ISN-SC-1 Banded Pack 0.68/0.30 0.65/0.28 F032/XP F032/XP 2600 3000 3 3 3 QHE4x32T8/UNV-ISN-SC-1 Banded Pack 0.92/0.39 0.65/0.28 F032/XP F030/SS 2600 2850 3 3 3 QHE4x32T8/UNV-ISN-SC-1 Banded Pack 0.92/0.39 0.92/0.39 F032/XP F030/SS 2600 2850 4 4	Description Lamp (AMPS) Lamp Type Lumens (m) No. of Lamps Factor (BF) QHE1x32T8/UNV-ISN-SC-1 Banded Pack 0.25/0.11 0.25/0.11 F032/XP F032/XP 2600 3000 1 0.87 0.87 QHE2x32T8/UNV-ISN-SC-1 Banded Pack 0.47/0.20 0.21/0.09 F032/XP F025/SS 2600 1 0.87 QHE2x32T8/UNV-ISN-SC-1 Banded Pack 0.47/0.20 0.47/0.20 F032/XP F025/SS 2600 2 0.87 QHE2x32T8/UNV-ISN-SC-1 Banded Pack 0.47/0.20 0.44/0.18 F032/XP F025/SS 2600 2 0.87 QHE3x32T8/UNV-ISN-SC-1 Banded Pack 0.68/0.30 0.68/0.33 F032/XP F025/SS 2600 3 0.87 QHE3x32T8/UNV-ISN-SC-1 Banded Pack 0.68/0.30 0.65/0.28 F032/XP F025/SS 2600 3 0.87 QHE4x32T8/UNV-ISN-SC-1 Banded Pack 0.92/0.38 F032/XP 0.55/0.28 2600 3 0.87 QHE4x32T8/UNV-ISN-SC-1 Banded Pack 0.92/0.38 F032/XP 0.55/0.28 3000 4 0.87 0.92/0.38 F032/XP 0.55/0.28 F032/XP 2475 3000 4 0.87 0.92/0.39 F032/	Description Lamp (AMPS) Lamp Type Lumens (Im) No. of Lamps Factor (BF) System Lumens QHE1x32T8/UNV-ISN-SC-1 Banded Pack 0.25/0.11 0.25/0.11 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0.37/0.16F032/XP F032/XP F032/XP 5025/SS2600 22 247520.87 0.87 2520 2.87 2.87 2.874455 4460QHE3x32T8/UNV-ISN-SC-1 Banded Pack0.68/0.30 0.65/0.28 0.65/0.28 0.55/0.23F032/XP F032/XP 502/SS2600 3.000 3.000 3.087 3.0003.0.87 0.87 3.0876785 7360 6990 6990 6990 6990 6990QHE4x32T8/UNV-ISN-SC-1 Banded Pack0.92/0.39 0.65/0.28 0.65/0.28 0.65/0.28 0.65/0.28 0.65/0.28 F02S/SS2600 2.800 3.000 3.0873.0.87 0.87 0.87 3.0876240 7360 6990 6990 6990 6990 6990 6990 6990 6991 6991 6991 6992 6992 6992 6932/SS 80004.0.87 8000 4.087 80109050 98315 9325 8935</td> <td>DescriptionLump (AMPS)Lump TypeLumens (Im)No. of LampsFactor (BF)System LumensMean LumensWatage (W)QHE1x32T8/UNV-ISN-SC-1 Banded Pack0.25/0.11 0.23/0.09 0.20/0.9F032/XP F032/XP 0.23/0.09 0.20/0.92600 F032/XP F032/XP 248010.87 0.87 26102260 2610 245028 2455 245528 245528 245528 245528 245528 245528 245528 245523/20 25/2429/20 25/2429/20 25/2429/20 25/2429/20 25/2429/20 25/2429/20 25/2423/20 25/2429/20 25/2423/20 25/2423/20 25/2423/20 20/2529/20 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Banded Pack contains 10 pieces, (add "-B" to Description).

1 Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).



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Normal Ballast Factor

18 Instant Start **High Efficiency**

Performance Guide

Data based upon SYLVANIA OCTRON® lamps shown. QUICKTRONIC® QHE Instant Start ballasts are also compatible with other manufacturers equivalent lamp types that meet ANSI specifications.

QHE Instant Start ballasts will also operate F17, F25, F32 and the U-Bend equivalent & energy saving T8 lamps. Complete performance data is available in the QUICKSYSTEMS section of the SYLVANIA Ballast Technology & Specification Guide.

Specifications

QHE T8 ISN CC

Starting Method: Instant Start Ballast Factor: 0.87 Circuit Type: Parallel Lamp Frequency: >42 kHz Lamp CCF: Less than 1.7 Starting Temp:² -20°F (-29°C) for OCTRON T8 lamps; 60°F (16°C) for SUPERSAVER® T8 lamps 0°F (-18°C) for F040T8 Input Frequency: 50/60 Hz Low THD: <10% Power Factor: >98% Voltage Range: ±10% of 120-277V rated line (108-305V) UL Listed Class P, Type 1 Outdoor UL Type CC Rated CSA Certified 70°C Max Case Temperature FCC 47 CFR Part 18 Non-Consumer Class A Sound Rating **BoHS** Compliant³ ANSI 62.41 Cat. A Transient Protection GECI compatible Emergency ballast compatible Remote Mounting (Max wire length from ballast case to lampholder): • 20 ft: full wattage T8s • 10 ft: energy saving T8s • 4 ft: 25W energy saving T8s 2 Operation below 50°F (10°C) may affect light output or lamp operation - see "Low Temp. Starting" definition. 3 Complies with European Union Restriction of Hazardous Substances Directive (Directive EC 2002/95)

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.