

# QUICKTRONIC® PROStart® T5HO

Universal Voltage Systems  
High Efficiency Series

**Type CC**  
**Programmed Rapid Start**  
**Normal Ballast Factor**

**QHE T5HO PSN**

## Lamp / Ballast Guide

39W or 24W T5 – fluorescent lamps  
QHE 2x3924T5HO UNV PSN EB

Also operates:

F39/ES, F24/ES, FC22, FT24, FT36  
54W T5 – fluorescent HO lamps  
QHE 2x54T5HO UNV PSN HT EB

Also operates:

F54/ES, FT55, FT50, FC55 and L58T8  
Two lamp model can be wired for one lamp operation.

## QUICKTRONIC High Efficiency (QHE)

PROStart T5HO electronic ballasts operate HO T5 lamps with full lumen output and optimal system performance. These ballasts provides nearly twice the light output (188%) of T8 systems, with the same number of lamps, allowing many new design options. One lamp fixtures can now be used in place of two lamp models.

QUICKTRONIC High Efficiency T5HO ballasts offer a minimum starting temperature of -20°F (-29°C) for T5HO lamps.

QUICKTRONIC PROStart T5HO ballasts are RoHS compliant and feature lead-free solder and manufacturing process.

The two lamp unit can be wired for one lamp operation, allowing for an additional 50% reduction in inventory model numbers. The ballast has a 1.18"W x 1.00"H (30mm x 25.4mm) cross section which allows for smaller and unique fixture profiles.



## Key System Features

- High Efficiency Systems over 90% efficient
- Universal voltage (120-277V)
- Low-profile (1.00" High)
- 1.0 Ballast factor (see table)
- QUICKSENSE® ballast technology (end-of-lamp-life sensing)
- PROStart programmed rapid start
- UL type CC rated
- Min. Starting Temp:
  - -20°F (-29°C)
- Operates at >42 kHz to reduce potential interference with infrared control systems
- High power factor
- Low harmonic distortion
- Lightweight
- UL, FCC
- RoHS compliant
- Lead-free solder and manufacturing process



## System Information

### QUICKTRONIC T5HO High Efficiency (QHE)

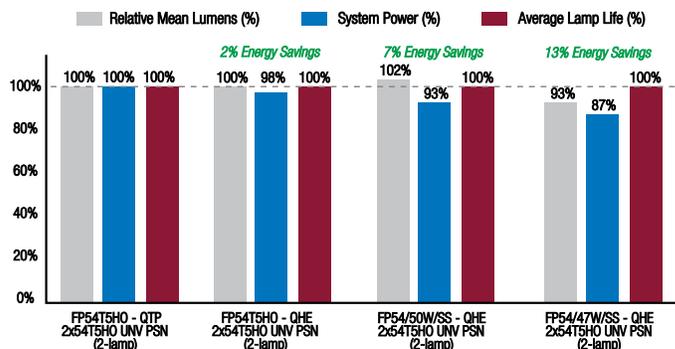
System advantages:

- Operate from 120V through 277V
  - Eliminates "wrong voltage" errors
  - Reduces inventory by 50%
- Utilizes Programmed Rapid Start operation for:
  - Highest System Efficacy
  - Longer lamp life
  - Over 100,000 switching cycles for occupancy sensor and building control systems

QUICKSENSE ballast technology helps to protect against overheated bases and sockets, as well as cracking of the lamp glass wall, and uses dynamic end-of-lamp-life sensing to avoid false shutdowns caused by some static sensing methods. QUICKSENSE ballast technology will auto reset when spent lamps are replaced with new ones.

Lamp & Ballast Type	Input System Power (W)	Initial System Lumens	Mean System Lumens	Initial System Efficac (lm/W)	Relative Mean Lumens (%)	Energy Savings (%)
FP54T5HO - QTP 2x54T5HO UNV PSN (2-lamp)	121	10,000	9300	83	Baseline	Baseline
FP54T5HO - QHE 2x54T5HO UNV PSN (2-lamp)	119	10,000	9300	84	100%	2%
FP54/50W/SS - QHE 2x54T5HO UNV PSN (2-lamp)	112	10,200	9485	91	102%	7%
FP54/47W/SS - QHE 2x54T5HO UNV PSN (2-lamp)	105	9335	8680	89	93%	13%

\*Fixture efficiency not considered \*Lumen Output for T5HO @ 35°C/95°F \* 120V input voltage



## Application Information

QUICKTRONIC High Efficiency T5HO ballasts are ideally suited for:

- Commercial & retail
- Hospitality & institutional
- New construction
- Industrial high bay lighting
- Indirect lighting
- Surface mount
- Cove lighting

**SPECIFICATION DATA**

Catalog #	Date	Type
Project	Prepared by	
Comments		

**High Efficiency Type CC & Universal Voltage (120-277V)**

Item Number (NAED)	Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	Initial System Lumens	Mean System Lumens	Input Power (W) 120V 277V	System Efficacy <sup>1</sup> (lm/W)	BEF <sup>2</sup>
*2828XU <sup>3</sup> (51475)	QHE 2X54T5HO UNV PSN-HT EB J10	1.00/0.43	F54T5HO	5000	2	1.00	10000	9300	119 116	86	0.86
		0.94/0.40	F54/50W/ES	5000	2	1.02	10200	9485	112 109	94	0.94
		0.89/0.38	F54/47W/ES	4575	2	1.02	9335	8680	105 103	91	0.99
		0.88/0.37	FT55	4800	2	0.86	8255	7680	106 105	79	0.82
		0.90/0.42	FT50	4300	2	1.04	8945	8320	110 108	83	0.96
		0.92/0.39	L58	5200	2	0.85	8840	8220	111 108	82	0.79
*2828XX (51478)	QHE 2X3924T5HO UNV PSN EB J10	0.82/0.35	FC55	4000	2	0.80	6400	5950	96 94	68	0.85
		0.70/0.30	F39T5HO	3500	2	1.00	7000	6510	83 81	86	1.23
		0.65/0.28	F39/35W/HO/ES	3500	2	1.01	7070	6575	77 76	93	1.33
		0.47/0.21	F24T5HO	2000	2	1.00	4000	3720	54 53	75	1.89
		0.43/0.19	F24/21W/HO/ES	2000	2	1.01	4040	3757	51 50	81	2.02
		0.37/0.16	F39T5HO	3500	1	1.01	3535	3288	42 42	84	2.4
		0.35/0.16	F39/35W/HO/ES	3500	1	1.02	3570	3320	41 40	89	2.55
		0.25/0.12	F24T5HO	2000	1	1.01	2020	1879	29 29	70	3.48
0.23/0.11	F24/21W/HO/ES	2000	1	1.02	2040	1897	27 27	76	3.78		

NAED in parentheses is provided as a cross reference for the new item number.  
 1 At 35°C lamp ambient temperature.  
 2 Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).  
 3 2x54 only available in HT model.

**Normal Ballast Factor**

**T5HO PROStart®**  
**High Efficiency**  
**Performance Guide**

QUICKTRONIC® T5HO ballasts are compatible with other lamp manufacturers equivalent lamp types that meet ANSI specifications.

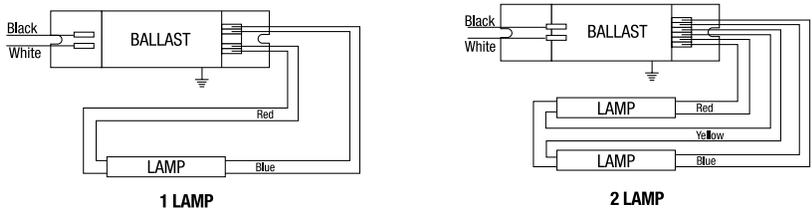
**Specification**

**Starting Method:** Programmed Rapid Start  
**Ballast Factor:** 1.00 (see table)  
**Circuit Type:** Series  
**Lamp Frequency:** >42kHz  
**Lamp CCF:** Less than 1.6  
**Starting Temp:** -20°F (-29°C)<sup>5</sup>  
**Input Frequency:** 50/60Hz  
**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  
 70°C Max Case Temperature  
 FCC 47CFR Part 18 Non-Consumer Class A Sound Rating  
 ANSI C62.41 Cat. A Transient Protection  
 QUICKSENSE®: End-of-Lamp- Life Sensing  
 Remote Mounting (Max.wire length from ballast case to lampholder): up to 18 feet. Remote red leads up to 18 feet. Keep blue leads <10 feet. RoHS Compliant<sup>6</sup>

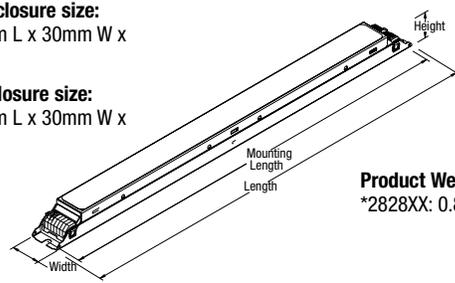
4 Data based on HO lamp types for primary ballast application.  
 5 Operation below 50°F (10°C) may affect light output or lamp operation – see "Low Temp. Starting" definition.  
 6 Complies with European Union Restriction of Hazardous Substances Directive. (Directive 2002/95/EC)

**Installation Notes**

- Ground ballast case
- Install in accordance with the National Electrical Code
- Insulate unused leads for 600V



**Dimensions:**  
**Model QHE 2x54T5HO UNV PSN HT EB enclosure size:**  
 Overall: 16.73"L x 1.18"W x 1.00"H (425mm L x 30mm W x 25.4mm H) Mounting: 16.34" (415mm)  
**Model QHE 2x3924T5HO UNV PSN EB enclosure size:**  
 Overall: 14.17"L x 1.18"W x 0.87"H (360mm L x 30mm W x 22mm H) Mounting: 13.74" (349mm)  
**Wiring:**  
 \*2828XX: Push-in connectors with leads  
 Use 18AWG solid copper wire only



**Product Weight:**  
 \*2828XX: 0.80 lb (0.36kg) each (approx.)

**Warranty**

QUICKTRONIC® Ballasts have a 5-year limited warranty. Complete warranty terms located at [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

Item Number	*2828XU QHE 2 x 54T5HO UNV PSN HT EB	Electronic Ballast
QUICKTRONIC High Efficiency		High Temp
Number of Lamps		Starting/Ballast Factor
Primary Lamp Wattage		Line Voltage (120-277V)

QHE T5HO PSN