QUICKTRONIC® PROStart® T5HO

Universal High Ambient Temp. Systems
High Efficiency Series

RoHS compliant

Type CC
Programmed Rapid Start
Normal Ballast Factor HT

QHE T5HO PSN HT

Lamp / Ballast Guide

54W T5HO - PENTRON® lamps
1 or 2-lamp:
QHE2x54T5HO/UNV PSN-HT
4-lamp Switchable:
QHE4x54T5HO/UNV PSN-HT-SCL (leads)

Also operates:
FP54/SS, FT50DL, FT55DL, FPC55, L58T8

1 or 2 lamps on 2L ballast
1, 2, 3, or 4 lamps on 4L ballast

Key System Features

- High Efficiency Systems over 90% efficient
- 90°C maximum case temp.
- Universal voltage (120-277V)
- 1.0 ballast factor (see table)
- QUICKSENSE ballast technology (end-of-lamp-life sensing)
- PROStart programmed rapid start
- UL type CC rated
- -20°F (-29C) min. starting temp.
- Operates at >42 kHz to reduce potential interference with infrared control systems
- RoHS compliant
- Lead-free solder, printed circuit board and manufacturing process

Recommended for use with Occupancy Sensors

Application Information

QUICKTRONIC T5HO HT

ballasts are ideally suited for:
- Industrial high-bay
- Commercial
- Retail
- Hospitality
- Institutional
- New construction
- Direct lighting
- Indirect lighting
- Surface mount
- Cove lighting

ECS422 - 5-18

QUICKTRONIC High Efficiency (QHE) PROStart T5HO **High Ambient Temperature** electronic ballasts operate PENTRON HO, PENTRON HO Circline, and DULUX® L T5 lamps saving >2 watts as compared to standard T5HO ballasts and are available in 2-lamp and 4-lamp models.

These ballasts are specifically designed for applications where the ballast is subjected to higher ambient temperatures, as in high bay industrial installations.

PENTRON T5HO lamps are designed to provide peak performance at 35°C fixture ambient, allowing for smaller and more innovative fixtures.

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


QUICKTRONIC QHE PROStart T5HO HT ballasts are also covered by the QUICK 60+® warranty, the first and most comprehensive system warranty in the industry.

System Information

QUICKTRONIC High Efficiency PROStart T5HO **High Ambient** 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 Life
  - Over 100,000 switching cycles for occupancy sensor and building control systems applications

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.

The two lamp unit can be wired for two or one lamp operation. The four lamp "switching" ballast is designed to switch from 4 to 2-lamps, 3 to 2-lamps, 3 to 1-lamp or 2 to 1-lamp. The switching feature can be used with control interfaces, including occupancy sensors.

System Type	Input System Power (W)	Initial Fixture* LPW	Mean Fixture* Lumens	Relative Fixture* Output (%)	Energy Savings (%)
M400/U (1-lamp) Magnetic Ballast	452	61	17,784	Baseline	Baseline
FP54T5HO (4-lamps) QTP4x54T5HO/UNV PSN-HTW	236	76	16,740	94%	48%
FP54T5HO (4-lamps) QHE4x54T5HO/UNV PSN-HT-SCL	226	80	16,740	94%	50%
FP54/50W/SS (4-lamps) QHE4x54T5HO/UNV PSN-HT-SCL	209	88	17,075	96%	54%
FP54/47W/SS (4-lamps) QHE4x54T5HO/UNV PSN-HT-SCL	204	82	15,625	88%	55%

*Based on Fixture Efficiency: 76% for M400 and 90% for FP54T5HO lamps
*277V input voltage
*Lumen output for T5HO @ 35°C/95°F
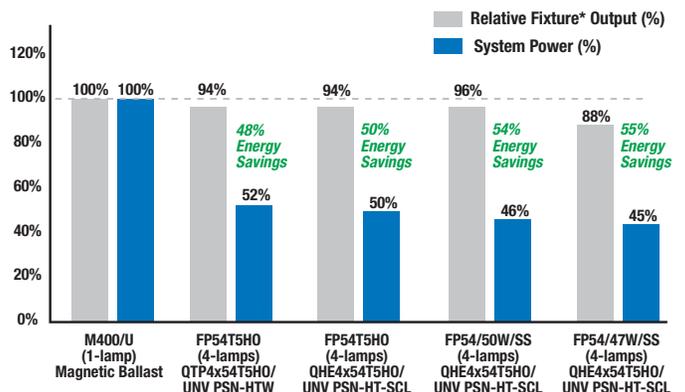
Relative Fixture* Output (%)
System Power (%)

Catalog #		Date	Type
Project		Prepared by	
Comments			

2 Lamp, High Efficiency, Type CC, High Ambient, Universal Voltage (120-277V)

RoHS compliant

Wiring Diagram

1 LAMP

2 LAMP
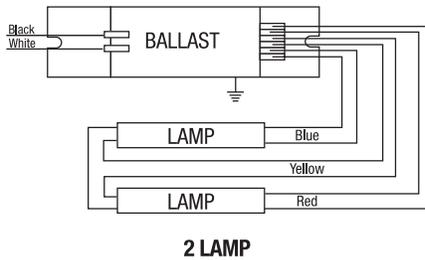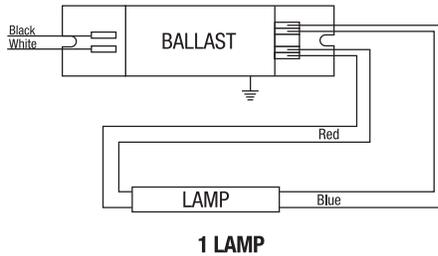
Installation Notes

- Install in accordance with National & Local Electric Code
- Ground ballast case
- Switching: Simultaneously disconnect all ungrounded line conductors
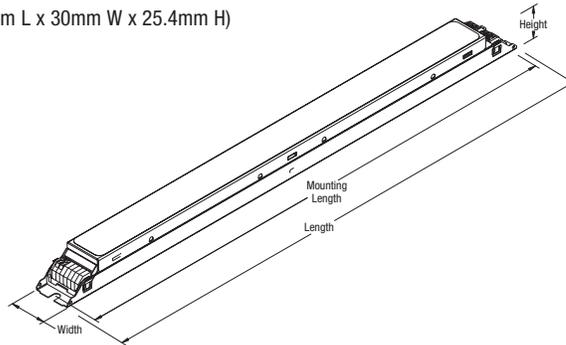- Insulate unused leads for 600V

Dimensions:

Model QHE2x54T5HO/UNV PSN-HT 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)

Wiring:

51476: Push-in connectors

51475: Push-in connectors with leads

(Use 18AWG solid copper wire only)

Product Weight:

51476: 0.88 lb (0.40kg) each (approx.)

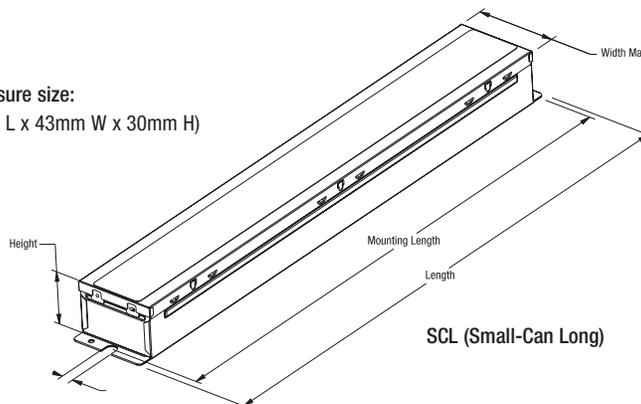51475: 1.0 lb (0.45kg) each (approx.)

Dimensions:

Model QHE4x54T5HO/UNV PSN-HT-SCL enclosure size:

Overall: 16.73" L x 1.68" W x 1.18" H (425mm L x 43mm W x 30mm H)

Mounting: 16.34" (415mm)

Wiring:

*52665: Leads only (no connectors provided)

Product Weight:

*52665: 2.4 lbs (1.08kg) each (approx.)

SCL (Small-Can Long)

Products distributed by
LEDVANCE **LLC**

For Customer Service contact
1-800 LIGHTBULB

Formally 51480
Specifications subject to change without notice.

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SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

4 Lamp, High Efficiency, Type CC, High Ambient, Universal Voltage (120-277V)
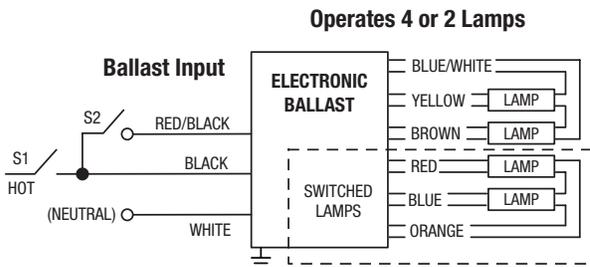
✔ RoHS compliant

Wiring Diagram

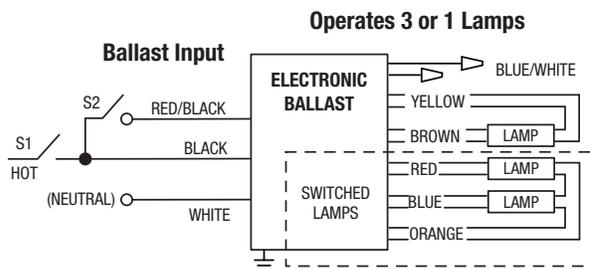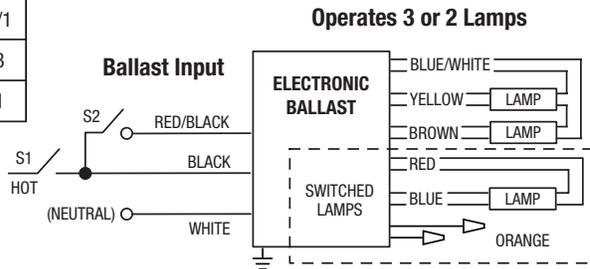High Ambient Switchable Model (90°C case temp.)
52665 QHE 4x54T5HO/UNV PSN-HT-SCL

4-Lamp Switching Wiring Diagram (4L to 2L)

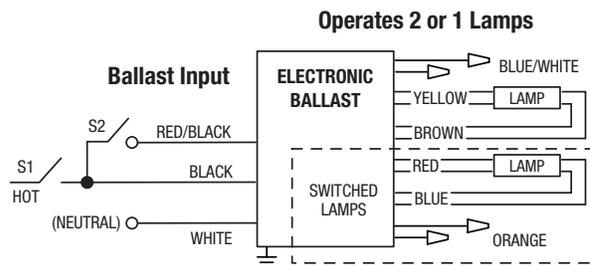| S1	S2	4/2
ON	ON	4
ON	OFF	2

Operates 4 or 2 Lamps

3-Lamp Switching Wiring Diagram (3L to 2L, 3L to 1L)

S1	S2	3/2	3/1
ON	ON	3	3
ON	OFF	2	1

Operates 3 or 2 Lamps

Operates 3 or 1 Lamps

2-Lamp Switching Wiring Diagram (2L to 1L)

S1	S2	2/1
ON	ON	2
ON	OFF	1

Operates 2 or 1 Lamps

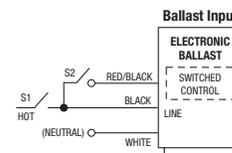### Installation Notes

- Install in accordance with National & Local Electric Code
- Ground ballast case
- Switching: Simultaneously disconnect all ungrounded line conductors
- The AC line inputs must be connected to the same phase of the line voltage
- DO NOT CONNECT two separate phases of line voltage to the input of the ballast

Input wiring for non-switching operation
Connect Red/Black to Black Line for All Lamps ON (no S2)
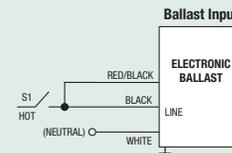
Input wiring for occupancy sensors
(Install occupancy sensor/switch between *Red/Black lead "S2" is the* occupancy sensor)

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1-800 LIGHTBULB

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SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

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

RoHS compliant

Item Number	Description	Input Current (AMPS)	Lamp[1] Type	Rated[1] Lumens (lm)	No. of Lamps	Ballast[1] Factor (BF)	System[1] Lumens	Mean[1] Lumens	Input[1] Power (W) 120V	277V	System[3] Efficacy (lm/W)	BEF[2]
QHE 2x54T5HO Fixed Output												
51476 *(51475)*	QHE2x54T5HO/UNV PSN-HT 20-pack (without leads) 10-pack (with leads)	1.00/0.43	FP54T5HO	5000	2	1.00	10,000	9300	119	116	86	0.86
		0.94/0.40	FP54/50W/SS	5000	2	1.02	10,200	9485	112	109	94	0.94
		0.89/0.38	**FP54/47W/SS**	**4575**	**2**	**1.02**	**9375**	**8720**	**105**	**103**	**91**	**0.99**
		0.88/0.37	FT55DL	4800	2	0.86	8255	7680	106	105	79	0.82
		0.99/0.42	FT50DL	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
		0.82/0.35	FPC55	4000	2	0.80	6400	5950	96	94	68	0.85
		0.53/0.23	FP54T5HO	5000	1	1.05	5250	4885	62	61	86	1.72
		0.49/0.21	FP54/50W/SS	5000	1	1.05	5250	4885	58	58	91	1.81
		0.45/0.20	**FP54/47W/SS**	**4575**	**1**	**1.03**	**4690**	**4365**	**53**	**53**	**88**	**1.94**
		0.49/0.21	FT55DL	4800	1	0.92	4415	4105	56	55	80	1.67
		0.51/0.22	FT50DL	4300	1	1.09	4685	4360	57	57	82	1.91
		0.48/0.21	L58	5200	1	0.87	4525	4205	57	57	79	1.53
		0.45/0.20	FPC55	4000	1	0.81	3240	3015	49	49	66	1.65
QHE 4x54T5HO Switchable Model									**277V**			
52665[4]	QHE4x54T5HO/UNV PSN-HT-SCL DOE	0.85	FP54T5HO	5000	4	1.02	20400	18972		233	88	0.4
		0.79	FP54/50W/SS	5000	4	1.01	20200	18786		216	94	0.51
		0.73	FP54/47W/SS	4575	4	1.02	18666	17360		197	95	0.55
		0.8	FT55DL	4800	4	0.91	17472	15081		222	79	0.41
		0.77	FPC55	4000	4	1.02	16320	14362		215	76	0.52
		0.66	FP54T5HO	5000	3	1.01	15150	14090		178	85	0.58
		0.62	FP54/50W/SS	5000	3	1.01	15150	14090		166	91	0.7
		0.56	FP54/47W/SS	4575	3	1.02	14000	13020		149	94	0.75
		0.6	FT55DL	4800	3	0.93	13392	11559		166	81	0.57
		0.6	FPC55	4000	3	1.02	12240	10771		162	76	0.68
		0.45	FP54T5HO	5000	2	1.02	10200	9486		119	86	0.83
		0.43	FP54/50W/SS	5000	2	1.01	10100	9393		112	90	1.04
		0.39	FP54/47W/SS	4575	2	1.02	9333	8680		100	93	1.13
		0.41	FT55DL	4800	2	0.91	8736	7540		111	79	0.83
		0.41	FPC55	4000	2	1.02	8160	7181		108	76	1.06
		0.27	FP54T5HO	5000	1	1.03	5150	4790		64	80	1.66
		0.26	FP54/50W/SS	5000	1	1.02	5100	4743		60	85	1.95
		0.24	FP54/47W/SS	4575	1	1.02	4667	4340		54	86	2.13
		0.25	FT55DL	4800	1	0.93	4464	3853		62	72	1.61
		0.25	FPC55	4000	1	1.02	4080	3590		60	68	1.76

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 System Efficacy calculation based on lowest input power value
4 Formerly: 51480 QHE 4x54T5HO/UNV PSN-HT-SCL

Item Number — **52665** QHE **4** x **54** T5HO / **UNV** **PSN** **HT** **SCL** — Case Size
QUICKTRONIC High Efficiency — High Ambient Temperature (Case)
Number of Lamps — Starting/Ballast Factor
Primary Lamp Wattage — Line Voltage (120-277V)

Performance Guide

Data based upon SYLVANIA PENTRON® HO lamps shown. QUICKTRONIC® T5HO HT ballasts are also compatible with other lamp manufacturers equivalent lamp types that meet ANSI specifications.

Specifications[4]

Starting Method: Programmed Rapid Start
Ballast Factor: see table
Circuit Type: Series
Lamp Frequency: >42kHz
Lamp CCF: Less than 1.6
Starting Temp: -20°F (-29°C) min.[5]
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
CSA Certified
High Ambient Applications:
90°C Max. Case Temp. **(3 yr. warranty)**
Standard Ambient Applications:
70°C Max. Case Temp. **(5 yr. warranty)**
FCC 47CFR Part 18 Non-Consumer
Class A Sound Rating
RoHS Compliant [5]
ANSI C62.41 Cat. A Transient Protection
QUICKSENSE® Dynamic End-of-Lamp-Life Sensing
Remote Mounting (Max. wire length from ballast case to lampholder): up to 18 feet. (Red leads to 18', keep Blue lead <10 feet.)

4 Data based on PENTRON 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).
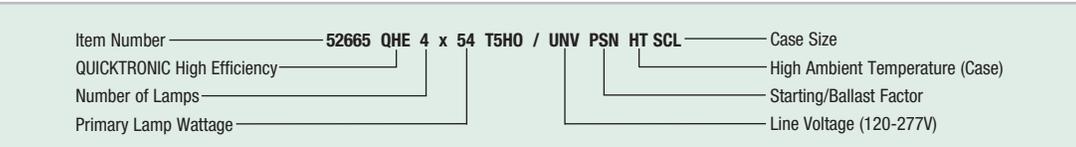
System Life / Warranty

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.

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Specifications subject to change without notice.

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