

QUICKTRONIC® PROStart® T5HO Universal High Ambient Temp. Systems



Type CC
Programmed Rapid Start
Normal Ballast Factor HT

High Efficiency Series

Lamp / Ballast Guide

54W T5HO - PENTRON® lamps
1 or 2-lamp:
QHE2x54T5HO/UNV PSN-HT (no-leads)
QHE2x54T5HO/UNV PSN-HT-MCL (leads)
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)
- 100% 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



Application Information

SYLVANIA 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

SYLVANIA 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.

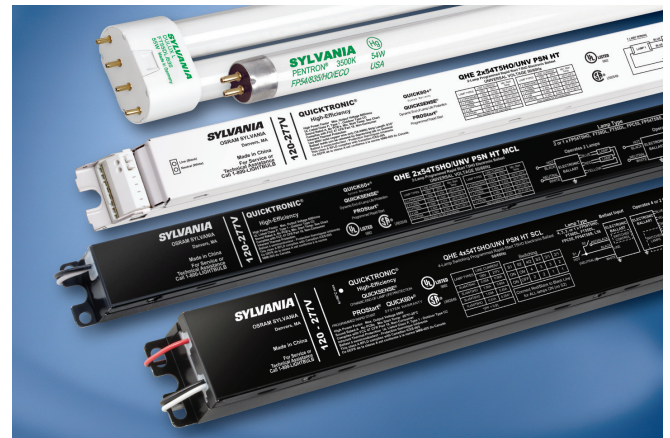
System Information

SYLVANIA 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.



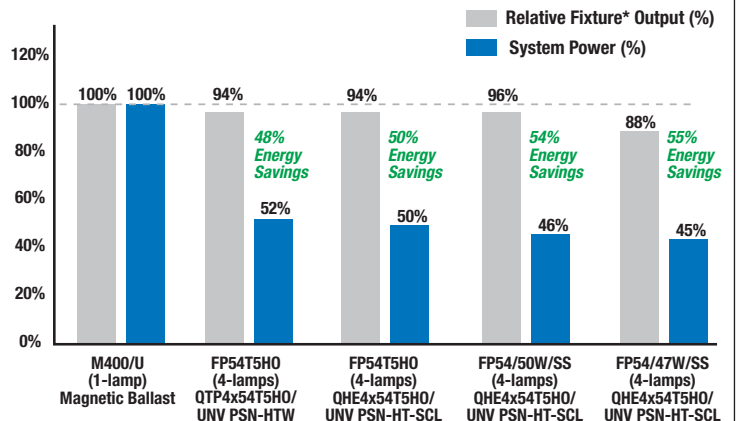
QUICKTRONIC QHE PROStart T5HO HT ballasts are also covered by the QUICK 60+® warranty, the first and most comprehensive system warranty in the industry.

System 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



SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

2 LAMP T5HO UNV HT
Fixed Output Ballast
High Efficiency

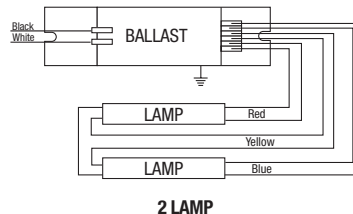
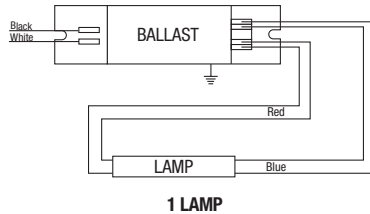
2 Lamp, High Efficiency, Type CC, High Ambient, Universal Voltage (120-277V)



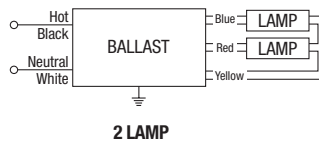
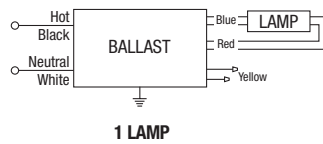
Lamp / Ballast Guide

Wiring Diagram

High Ambient Model (90°C case temp.)
51476 QHE2x54T5HO/UNV PSN-HT
No Leads



High Ambient Model (90°C case temp.)
51475 QHE2x54T5HO/UNV PSN-HT-MCL
With Leads



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 and QHE2x54T5HO/UNV PSN-HT-MCL 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

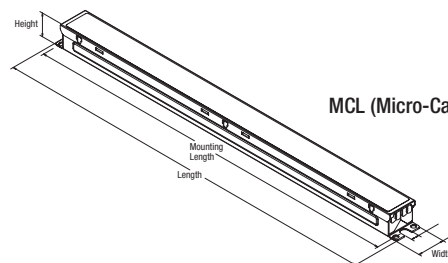
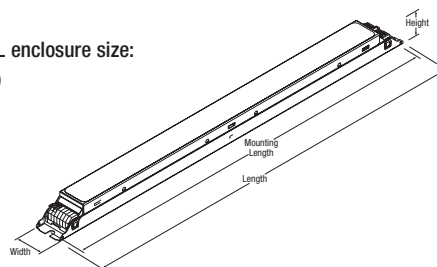
Use 18AWG solid copper wire only

51475: Leads only (no connectors provided)

Product Weight:

51476: 0.88 lbs (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)

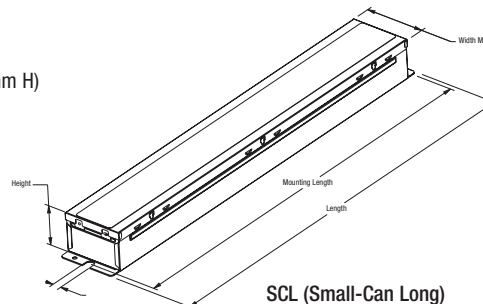
Mounting: 16.34" (415mm)

Wiring:

51480: Leads only (no connectors provided)

Product Weight:

51480: 2.4 lbs (1.08kg) each (approx)



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Specifications subject to change without notice.

QHE T5HO PSN HT

SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

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

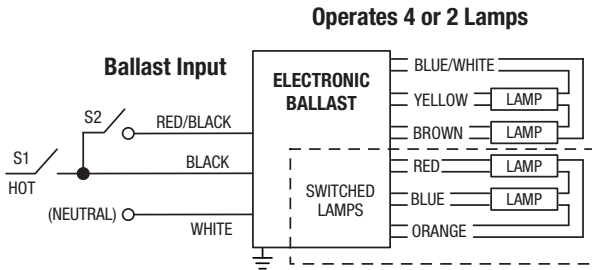


Wiring Diagram

High Ambient Switchable Model (90°C case temp.)
51480 QHE 4x54T5HO/UNV PSN-HT-SCL

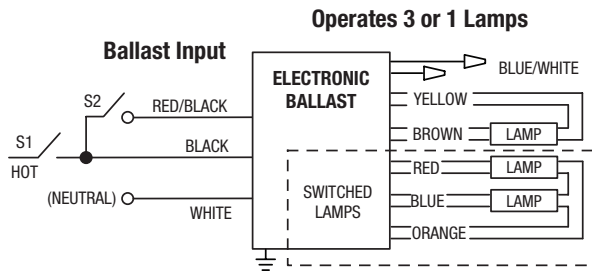
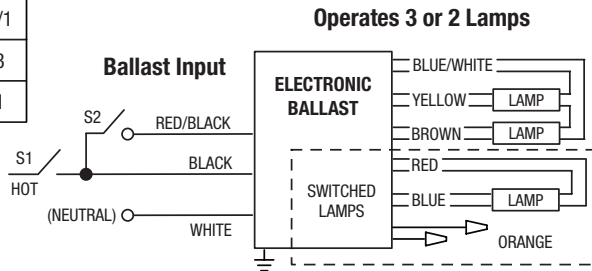
4-Lamp Switching Wiring Diagram (4L to 2L)

S1	S2	4/2
ON	ON	4
ON	OFF	2



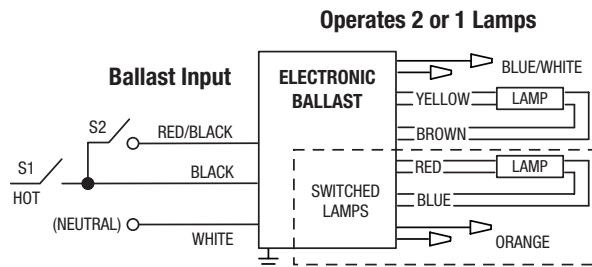
3-Lamp Switching Wiring Diagram (3L to 2L, 3L to 1L)

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



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

S1	S2	2/1
ON	ON	2
ON	OFF	1



4 LAMP T5HO UNV HT
Switchable Ballast
High Efficiency

Switching Schematics

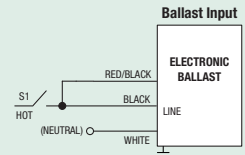


QHE T5HO PSN HT

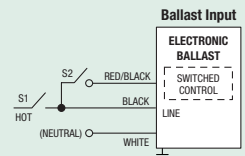
Installation Notes

- 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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SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

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



Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W) 120V 277V	System Efficacy (lm/W)	BEF ²
QHE 2x54T5HO Fixed Output											
51476	QHE2x54T5HO/UNV PSN-HT 20-pack (no 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
51475	QHE2x54T5HO/UNV PSN-HT-MCL 10-pack (with leads)	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

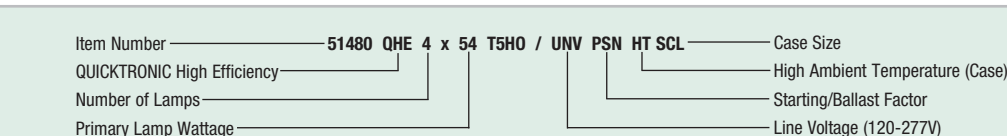
51480	QHE4x54T5HO/UNV PSN-HT-SCL 10-pack (with leads)	2.00/0.90	FP54T5HO	5000	4	1.00	20,000	18,600	233 226	88	0.44
		1.77/0.76	FP54/50W/SS	5000	4	1.02	20,400	18,970	213 209	98	0.49
		1.75/0.75	FP54/47W/SS	4575	4	1.02	18,665	17,360	210 204	91	0.50
		1.82/0.78	FT55DL	4800	4	0.91	17,470	16,250	218 213	82	0.43
		1.90/0.81	FT50DL	4300	4	1.02	17,545	16,315	227 222	79	0.46
		1.87/0.89	L58	5200	4	0.87	18,095	16,830	223 216	84	0.40
		1.77/0.77	FPC55	4000	4	0.88	14,080	13,095	212 210	67	0.42
		1.50/0.65	FP54T5HO	5000	3	1.03	15,450	14,370	182 179	86	0.58
		1.43/0.62	FP54/50W/SS	5000	3	1.04	15,600	14,510	171 167	93	0.62
		1.34/0.58	FP54/47W/SS	4575	3	1.04	14,275	13,275	160 156	92	0.67
		1.39/0.60	FT55DL	4800	3	0.92	13,250	12,320	166 163	81	0.56
		1.43/0.62	FT50DL	4300	3	1.03	13,285	12,355	170 167	80	0.62
		1.42/0.61	L58	5200	3	0.89	13,885	12,910	169 166	84	0.54
		1.38/0.60	FPC55	4000	3	0.92	11,040	10,265	164 162	68	0.57
		1.00/0.45	FP54T5HO	5000	2	1.02	10,200	9485	120 118	86	0.86
		0.95/0.42	FP54/50W/SS	5000	2	1.03	10,300	9580	110 107	96	0.96
		0.88/0.39	FP54/47W/SS	4575	2	1.03	9425	8765	104 102	92	1.01
		0.92/0.41	FT55DL	4800	2	0.93	8930	8305	110 107	83	0.87
		0.94/0.42	FT50DL	4300	2	1.04	8945	8320	112 109	82	0.95
		0.93/0.41	L58	5200	2	0.88	9150	8510	112 109	84	0.81
0.91/0.41	FPC55	4000	2	0.90	7200	6695	109 106	68	0.85		
0.51/0.25	FP54T5HO	5000	1	1.05	5250	4885	60 59	89	1.78		
0.49/0.24	FP54/50W/SS	5000	1	1.06	5300	4930	57 56	95	1.89		
0.45/0.23	FP54/47W/SS	4575	1	1.06	4850	4510	54 53	92	2.00		
0.47/0.23	FT55DL	4800	1	0.90	4320	4020	56 55	79	1.64		
0.48/0.24	FT50DL	4300	1	1.04	4470	4160	57 57	78	1.82		
0.49/0.24	L58	5200	1	0.90	4680	4350	58 57	82	1.58		
0.48/0.24	FPC55	4000	1	0.95	3800	3535	57 55	69	1.73		

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

⊛ New Product. Please note item number 51476 connector/white case model QHE2x54T5HO/UNV PSN-HT with leads inserted (for customer satisfaction) will be shipped as item number 51475 until the new black MCL (Micro-Can Long) case with leads QHE2x54T5HO/UNV PSN-HT-MCL is in production. Check with your SYLVANIA Sales Professional for new product availability.



High Ambient Temp.

T5HO PSN HT

High Efficiency

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.

Specifications⁴

- Starting Method: Programmed Rapid Start
- Ballast Factor: 1.00 (see table)
- Circuit Type: Series
- Lamp Frequency: >42 kHz
- Lamp CCF: Less than 1.6
- Starting Temp: -20°F (-29°C) min.⁵
- 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
- 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 Compliant⁶
- 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, the industry's first and most comprehensive system warranty. For additional details, refer to the QUICK 60+ warranty bulletin.

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