

QUICKTRONIC® PROStart® T5HO UNV High Ambient Temp. Systems

Professional Series

QTP T5HO
PSN HT

Lamp / Ballast Guide

54W T5HO - PENTRON® lamps
1 or 2 lamp
QTP2x54T5HO/UNV PSN HT
4 lamp Switchable:
QTP4x54T5HO/UNV PSN HT W
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

- 90°C maximum case temp.
- Universal voltage (120-277V)
- Low-profile (1.00" High)
- 100% ballast factor (see table)
- QUICKSENSE ballast technology (end-of-lamp-life sensing)
- PROStart programmed rapid start
- UL type CC rated
- -20°F (-29°C) Min. Starting Temp.
- Operates at >42 kHz to reduce potential interference with infrared control systems
- High power factor
- Low harmonic distortion
- Lightweight
- UL, CSA, FCC
- 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 PROStart T5HO High Ambient Temperature (HT) electronic ballasts operate PENTRON HO, PENTRON HO Circline, and DULUX® L T5 lamps with full lumen output and optimal system performance. The ballasts are available in two and four lamp models to cover a wide range of applications.

These QUICKTRONIC PROStart T5HO ballasts are specifically designed for applications where the ballast is subjected to higher ambient temperatures, as in high bay industrial installations. The four lamp UNV (120-277V) ballast system provides 18,600 mean lumens, which, when factoring in lumen maintenance and typical T5HO fixture efficiency, can be considered as a direct replacement for standard 400W MH. As such, the family is ideally suited to replace 250W to 400W metal halide installations.

Unique to the family is the 120-277V 4-lamp "switching" ballast, designed to switch from 4- to 2-, 3- to 2-, 3- to 1- or

System Information

QUICKTRONIC PROStart T5HO HT ballasts operate on 120V through 277V, 50/60 Hz current, eliminating "wrong voltage" wiring errors and reducing the number of ballast models in inventory by half.

PROStart programmed rapid starting provides optimum starting conditions to yield up to 100,000 switching cycles for use on occupancy sensors and building control systems.

Customers should always consider upgrading to our High Efficiency Systems to maximize energy savings.

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.



Type CC
Programmed Rapid Start Systems
Normal Ballast Factor HT



2- to 1-lamps. The switching feature can be accessed through a second input power terminal. This feature allows for a range of control interfaces, including an occupancy sensor, mounted inside a fixture.

These ballasts are also RoHS compliant and feature lead-free solder, printed

circuit boards and manufacturing process.

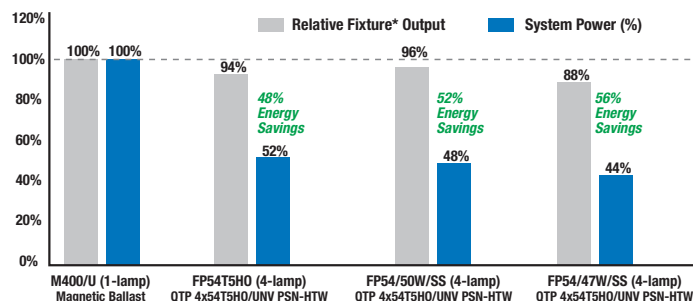
Setting the standard for quality, QUICKTRONIC PROStart T5HO HT systems are covered by the QUICK 60+® warranty, the first and most comprehensive system warranty in the industry.

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%
FP54/50W/SS (4-lamps) QTP4x54T5HO/UNV PSN-HTW	215	85	17,075	96%	52%
FP54/47W/SS (4-lamps) QTP4x54T5HO/UNV PSN-HTW	200	84	15,625	88%	56%

*Based on Fixture Efficiency: 76% for M400 and 90% for FP54T5HO

*277V input voltage

*Lumen Output for T5HO @ 35°C/95°F



SPECIFICATION DATA

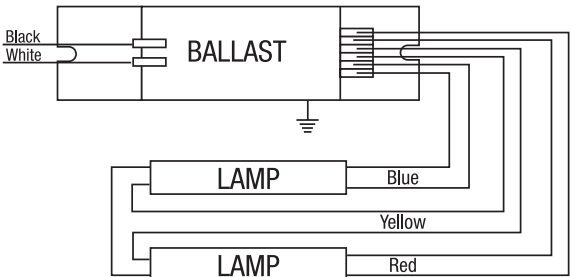
Catalog #	Date	Type
Project	Prepared by	
Comments		

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



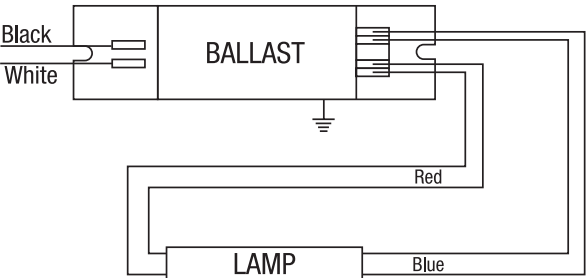
High ambient model (90°C case temp.)
49136 QTP 2x54T5H0/UNV PSN HT

Wiring diagram for 2-Lamp model



2 LAMP

2-Lamp model can be wired for one lamp operation.



1 LAMP

Item Number _____ 49136 QTP 2 x 54 T5H0 / UNV PSN HT _____ High Ambient Temperature (Case)
QUICKTRONIC PROFESSIONAL _____ Starting/Ballast Factor
Number of Lamps (1, 2) _____ Line Voltage (120-277V)
_____ Primary Lamp Wattage

2 LAMP T5H0 UNV HT
Fixed Output Ballast

Professional Series

Lamp / Ballast Guide



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

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Specifications subject to change without notice.

SPECIFICATION DATA

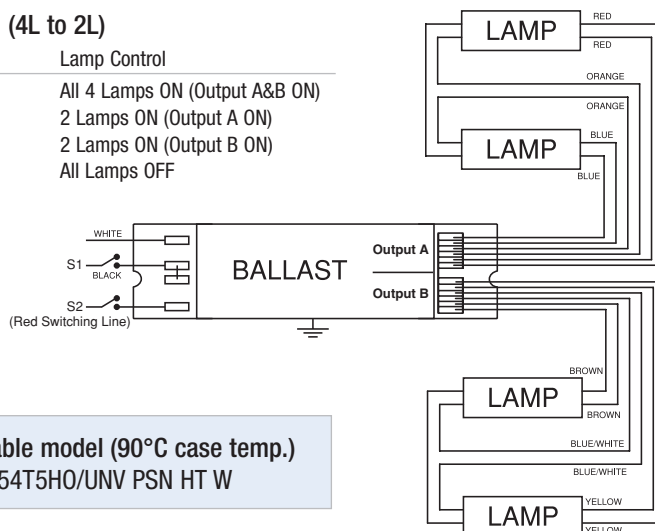
Catalog #	Date	Type
Project	Prepared by	
Comments		

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



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

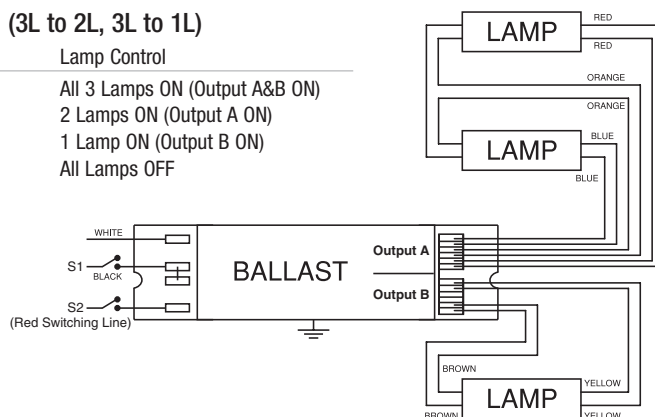
S1 (Output A)	S2 (Output B)	Lamp Control
Closed (ON)	Closed (ON)	All 4 Lamps ON (Output A&B ON)
Closed (ON)	Open (OFF)	2 Lamps ON (Output A ON)
Open (OFF)	Closed (ON)	2 Lamps ON (Output B ON)
Open (OFF)	Open (OFF)	All Lamps OFF



High ambient switchable model (90°C case temp.)
49161 QTP 4x54T5HO/UNV PSN HT W

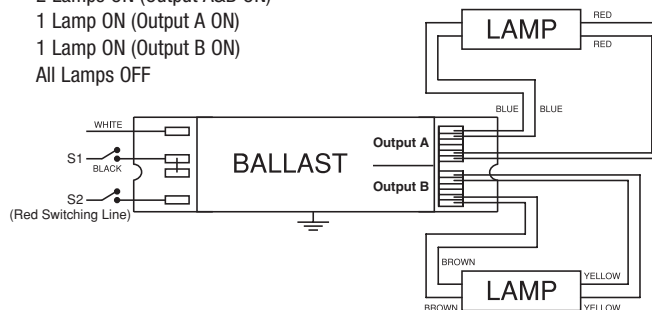
3-Lamp Switching Wiring Diagram (3L to 2L, 3L to 1L)

S1 (Output A)	S2 (Output B)	Lamp Control
Closed (ON)	Closed (ON)	All 3 Lamps ON (Output A&B ON)
Closed (ON)	Open (OFF)	2 Lamps ON (Output A ON)
Open (OFF)	Closed (ON)	1 Lamp ON (Output B ON)
Open (OFF)	Open (OFF)	All Lamps OFF



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

S1 (Output A)	S2 (Output B)	Lamp Control
Closed (ON)	Closed (ON)	2 Lamps ON (Output A&B ON)
Closed (ON)	Open (OFF)	1 Lamp ON (Output A ON)
Open (OFF)	Closed (ON)	1 Lamp ON (Output B ON)
Open (OFF)	Open (OFF)	All Lamps OFF



Item Number ————— **49161 QTP 4 x 54 T5HO / UNV PSN HTW** ————— High Ambient Temperature (Case)
QUICKTRONIC PROFESSIONAL ————— Starting/Ballast Factor
Number of Lamps ————— Line Voltage (120-277V)
Primary Lamp Wattage

4 LAMP T5HO UNV HT Switchable Ballast

Professional Series

Switching Schematics

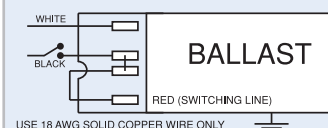


QTP T5HO
PSN HT

Installation Notes

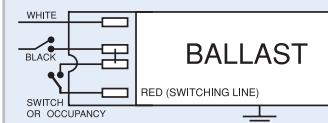
- Install in accordance with National & Local Electric Code
- Ground ballast case
- Switching: Simultaneously disconnect all ungrounded line conductors
- The AC line inputs must be connected to the same phase of the line voltage
- DO NOT CONNECT two separate phases of line voltage to the input of the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

Input wiring for non-switching operation
(Install jumper between black & red switching line terminals)



USE 18 AWG SOLID COPPER WIRE ONLY

Input wiring for occupancy sensors
(Install occupancy sensor/switch between black & red line terminals)



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SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

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



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 Efficacy (lm/W)	BEF ²
QTP 2x54 T5HO Fixed Output BF 1.0											
49136 (49135)*	QTP2x54T5HO/UNV PSN-HT	1.00/0.43	FP54T5HO	5000	2	1.00	10,000	9300	121 118	85	0.85
		0.96/0.41	FP54/50W/SS	5000	2	1.02	10,200	9485	115 112	91	0.91
		0.89/0.38	FP54/47W/SS	4575	2	1.02	9335	8680	106 103	91	0.99
		0.53/0.24	FP54T5HO	5000	1	1.05	5250	4885	62 61	86	1.72
		0.50/0.21	FP54/50W/SS	5000	1	1.05	5250	4885	59 58	91	1.81
		0.45/0.21	FP54/47W/SS	4575	1	1.03	4710	4380	54 53	89	1.94
QTP 4x54 T5HO Switchable Model											
49161	QTP4x54T5HO/UNV PSN-HTW	2.05/0.90	FP54T5HO	5000	4	1.00	20,000	18,600	241 236	85	0.42
		1.85/0.80	FP54/50W/SS	5000	4	1.02	20,400	18,970	221 215	95	0.47
		1.72/0.75	FP54/47W/SS	4575	4	1.02	18,665	17,360	205 200	93	0.51
		1.51/0.65	FP54T5HO	5000	3	1.00	15,000	13,950	183 181	83	0.55
		1.46/0.62	FP54/50W/SS	5000	3	1.04	15,600	14,510	175 170	92	0.61
		1.34/0.58	FP54/47W/SS	4575	3	1.04	14,275	13,275	161 158	90	0.66
		1.00/0.45	FP54T5HO	5000	2	1.00	10,000	9300	121 118	85	0.85
		0.95/0.42	FP54/50W/SS	5000	2	1.03	10,300	9580	114 111	93	0.93
		0.88/0.39	FP54/47W/SS	4575	2	1.03	9425	8765	105 104	91	0.99
		0.51/0.25	FP54T5HO	5000	1	1.00	5000	4650	61 61	82	1.64
		0.50/0.25	FP54/50W/SS	5000	1	1.06	5300	4930	60 58	91	1.83
		0.47/0.25	FP54/47W/SS	4575	1	1.06	4850	4510	55 54	90	1.96

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

* (Item Number) = Item Number/NAED in parentheses are models with leads/wires. Ballast with leads/wires contains 10 pieces each. Ballast without leads contain 20 pieces each.

Installation Notes

Switching: Simultaneously disconnect all ungrounded line conductors.
Install in accordance with National & Local Electrical Code. Ground ballast case.

Dimensions:

Model QTP2x54T5HO/UNV PSN-HT enclosure size:

Overall: 16.73"L x 1.18"W x 1.0"H (425mm L x 30mm W x 25.4mm H)

Mounting: 16.34" (415mm)

Wiring:

Push-in connectors

Use 18AWG solid copper wire only

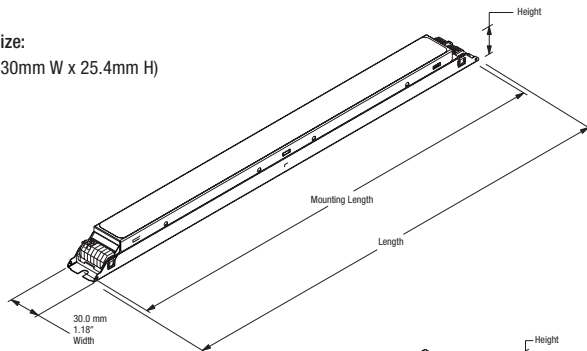
Quantity:

49136: 20 (no leads)

49135: 10 (with leads)

Product Weight:

0.88lbs (0.40kg) each (approx.)



Dimensions:

Model QTP4x54T5HO/UNV PSN-HT-W enclosure size:

Overall: 16.73"L x 2.32"W x 1.0"H (425mm L x 59mm W x 25.4mm H)

Mounting: 16.34" (415mm)

Wiring:

Push-in connectors

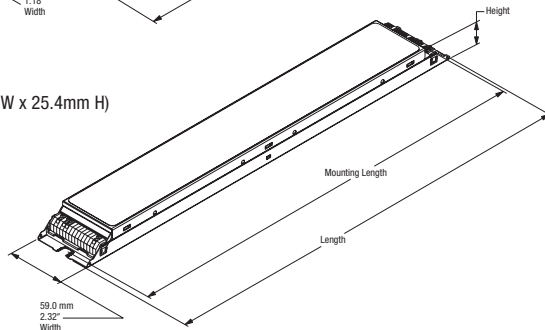
Use 18AWG solid copper wire only

Quantity:

10 (leaded and non-leaded)

Product Weight:

1.68lbs (0.40kg) each (approx.)



Item Number — **49161** QTP 4 x 54 T5HO / UNV PSN HTW — High Ambient Temperature (Case)
QUICKTRONIC PROFESSIONAL — Starting/Ballast Factor
Number of Lamps — Line Voltage (120-277V)
Primary Lamp Wattage

Normal Ballast Factor

T5HO PROStart®

Professional Series

Performance Guide

Data based upon SYLVANIA PENTRON® HO lamps shown. QUICKTRONIC® PHO 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.⁴

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

ANSI C62.41 Cat. A Transient Protection

Dynamic End-of-Lamp-Life Sensing

Remote Mounting (Max. wire length

from ballast case to lampholder):

up to 18 feet

RoHS Compliant⁵

⁴ Operation below 50°F (10°C) may affect light output or lamp operation — see "Low Temp. Starting" definition. Remote red and brown leads up to 18 feet. Keep blue and yellow (for 4-lamp model only) leads <10 ft

⁵ 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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