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Product Selection Guide: T5 Series- 250, 400 & 800 Amps







INTRODUCTION & SPECS

Specs

This specification covers the electrical characteristics and general requirements for a track busway system, hereafter referred to as (Track Busway). The system shall be designed primarily for overhead distribution of electrical power; supporting designated work areas and equipment. Once installed the Busway will provide a simple, versatile, fast and economic means of distributing power. Loads fed from a variety of plug-in units can be easily added or removed without shutting power down to the busway.

The Track Busway shall be designed and manufactured to the following standards:

1. Underwriters Laboratories Standard, UL 857 – The common UL, CSA, and ANCE Standard for Busways that is derived from the fifth edition of CSA Standard C22.2 No. 27, the twelfth edition of UL 857, and the second edition of NMX-J-148-1998-ANCE. 2. Low Voltage Switchgear and Controlgear Assemblies, Part 1: Type Tested and partially type tested Assemblies, IEC 61439-1 & IEC 61439-6.

*All standards and certifications available upon request

Introduction

Universal Electric Corporation (UEC) is the leader in electrical power distribution in the mission critical, commercial and light industrial industries with STARLINE Track Busway. This system was designed to meet the rugged specification of the UL857, Busway and Associated Fittings, with the flexible features of track lighting - and is available in systems with 250, 400 & 800 amps with isolated ground.

Track Busway is the simple, versatile, fast and economical solution for supplying power to electrical loads and is unique because the busway can be instantly tapped at any location, with a variety of plug-in units.

The Product Selection Guide was developed to help the design engineer understand and consider all of the options available with STARLINE Track Busway when designing a system.

This guide is all-inclusive; however, UEC excels at collaborating with design engineers to provide solutions for any application. If you have a need that is not found in this guide, please contact us at **1-800-245-6378** or email us at **info@uecorp.com**. We will be happy to answer your questions over the telephone or schedule a visit with one of our local representatives.

Also, if viewing this guide in print, please keep in mind that this is a working document. UEC reseves the right to change information and descriptions of listed services and products. The latest version of this guide is available for download at downloads.uecorp.com/starline/busway/.





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GROUND OPTIONS

Case Ground/Chassis Earth

Uses aluminum housing and no extra copper bar.





Dedicated Ground/Earth

Extra bar in busway for ground. Everything tied together inside plugs. Bar and housing at same potential.





Isolated Ground/Earth

Orange receptacles in plugs. Case ground isolated from copper ground bar. Isolated ground carried back to panel by others.





*<u>U.S.</u>: For further details about Dedicated Ground vs. Isolated Ground, please reference our "Isolated Ground vs. Dedicated Ground" tech brief on http://downloads.uecorp.com/starline/

*International: For further details about Dedicated Earth vs. Isolated Earth, please reference our "Metric: Isolated Earth (IG) vs. Dedicated Earth (DG)" tech brief on http://downloads.uecorp.com/starline/





POLARITY TIPS

STARLINE utilizes a unique polarizing method to prevent mismatched components from being inadvertently connected to each other. The system is designed to prevent cross phasing during installation.

It is particularly important to understand this design concept prior to ordering and/or installing some components.

For example, if the face direction of a STARLINE plug-in unit is important in your installation consider that they will always face the conductor side. Certain plug-in units are 'reversible', designated by 'R', to face devices away from the conductor side.







SYSTEM LAYOUT TIPS

Power Feeds

Determine location of power feeds based on relation to power source, existing feeders and voltage drop concerns for longer runs.

Support Hardware

Support hardware is spaced no more than 10 ft. (3m) apart. Refer to page 4.43 for support hardware details. Contact your local Starline applications engineer for any questions.

Installation

Printed installation drawings are supplied with each system shipment and they are also available for download online at http://downloads.uecorp.com/ starline/busway/. CAD and BIM files of these drawings are also available by contacting your local Starline applications engineer.

Busway Housing Sections

Standard Busway lengths are available in 5 ft (1.5m) 10 ft (3m) and 20 foot (6m) increments (except for 800T5 where the max length is 10 ft. or 3m). Although the factory can cut individual STARLINE Track Busway sections to any length under 20 feet (6m), it is highly recommended to keep all layout runs in increments of 5 feet (1.5m) to simplify layout and installation. Custom lengths can be made but can increase lead time and make layout and installation a bit more complex.

Busway Tees and Elbows Sections

Try to keep all runs as straight as possible as tees and elbows are added cost. Pay close attention to polarity on the elbows. The polarity will need to match the adjacent busway section(s) to be compatible.

Length of Busway for a One Volt Drop in Line to Line Voltage:

SYSTEM	DISTRIBUTED	VOLTAGE	VOLTAGE
DESIGNATION	LOAD	DROP @ 0.8 PF	DROP @ 0.8 PF
		Single Phase	Three Phase
250T5 (standard)	250 amps	28 Ft. (8.5m)	48 Ft. (14.6m)
400T5 (standard)	400 amps	37 Ft. (11.3m)	65 Ft. (19.8m)
800T5 (standard)	800 amps	15 Ft. (4.6m)	25 Ft. (7.6m)



COMPONENT RELATIONSHIP TIPS

When ordering material, it is important to understand the relationship between various components.

Examples:

- The T5 series of plug-in units are compatible with all T5 Busway systems
- Each piece of housing (straights and elbows) requires a joint kit (containing two housing couplers and one bus connector). Determine the total number of housing sections (regardless of length) as this becomes the number of joint kits that will be needed.

-Add one extra joint kit for each tee section

- If this is your first installation for T5 systems, you will need to order an Installation Tool (ST5IT).
- General support hardware rule to follow:

10 ft./3m maximum spacing between supports and we recommend 10% more than the required quantity to cover potential layout changes.

- Total Power Feeds and End Caps can be determined by counting the total number of unconnected runs.
- Before specifying or ordering elbow or tee connectors, it is important to understand polarity and the relationship to direction of outlets. Please refer to pg. 4.5 Polarity Tips for more detail.





SYSTEM LAYOUT DRAWING



Plug-In Units:

For further information on plug-in unit options, please visit the Plug-In Units section



STRAIGHT SECTIONS

Product Description

Track Busway straight section consists of an extruded aluminum shell with "springpressure" type copper channel busbars contained in a full length insulator mounted on the interior walls. The aluminum extrusion acts as a 100% ground path. Each housing has a continuous access slot over its entire length for the insertion of turn-n-lock plug-in units. Housing configurations include 4-pole varieties, optional isolated ground, optional oversize (200%) neutral. The housing sections join together using Bus connectors which fit into the channels of the adjoining section. An Installation tool is used to force the blades into the busbar channels for a solid "spring-pressure" electrical connection.

MATERIAL:	Extruded Aluminum
RATINGS:	100% Ground Path
	250 Amps
	250T5C4/250T5CG: 600 Volt
	250T5CN/250T5CF: 600 Volt

- LENGTH: 10 Ft. (3m), 20 Ft. (6m); or custom lengths between 2 - 20 Ft. (.6 - 6m)
- VOLTAGE DROP: distributed load Single Phase 1V per 28ft (8.5m) (.8PF) Three Phase 1V per 48ft (14.6m) (.8PF)





5.050" (128mm)





System

М

250T5 Systems

STRAIGHT SECTIONS: PRODUCT NUMBERS 250 5 0200 Product Product Compat-Material Neutral/ Polarization Straight Busway Type Frame ibility Ground Length Access husbar BLK *Optional **RAL (please see page 4.42) 10. Paint color Tape Marking *10. Paint Color (allows painting of the busway housing) Metric 000 None RED Paint UEC Red BLK Paint UEC Black Paint UEC Blue BLU WHT Paint UEC White 2. Product Type (section component)

**RAL system can also be used; reference page 4.42

- *11. Tape Marking (allows colored tape on the polarizing strip side of busway housing) 6
- 0 None
- 3 Tape UEC Black 4
- 7 Tape UEC Blue

Tape UEC Red

Tape UEC White

С Copper

T5

6.	Neutral/Ground Busbar	(size oi	f neutral busbar and/or ground,
4	3 Phase plus Neutral	G	3 Phase plus Neutral plus

K5

T5 systems (with limiting strip)

Ν 3 Phase plus 200% Internal Ground Conductor Neutral F 3 Phase plus 200% Neutral plus Internal Ground Conductor

1. System (standard of measure)

3. Product Frame (maximum amperage)

4. Compatibility (frame compatibility)

Straight section

U.S.

250 250 amps

T5 systems

5. Material (busbar material)

υ

S

- 7. Polarization (orientation of section for mating purposes) s Standard
- 8. Straight Length (length of section) XX = feet, YY = inches (for U.S.) XXYY MXYY X = meters, YY = centimeters (for Metric)
- 9. Busway Access (how plugs access the busway) С Continuous S Short shutters
- L Long shutters Е
- в
- "Extended" (short+4")
- "Beginning" only long

Examples:

US250T5C4S-0500C = US, Straight section, 250 amps, T5, Copper conductor, 3 phase plus neutral, Standard polarization- 5ft., Continuous access MS250T5CNS-M275C-BLU0 = Metric, Straight section, 250 amps, T5, Copper conductor, 3 phase plus 200% Neutral, Standard polarization- 2.75m, Continuous accesspainted blue, no tape marking



ELBOW SECTIONS

Product Description

An Elbow is used for making a horizontal 90 degree change of direction in a Busway run. Specify right or left elbow, according to the orientation of the polarizing strip in the Busway sections to be connected.

CONNECTION ACCESSORIES: (Ordered Separately)

A Joint Kit (*pg. 4.46*) is used to make mechanical and electrical connections to adjacent Busway sections.

WEIGHT: 14.5 lbs (6.6 kg)





= Polarizing Strip

Internal Elbow



External Elbow





	ELBOW SE	CTIONS: PRO)DUC	TNUMBERS
L 1. System E 2. Product Type	250 3. Product Frame	al Neutral/ Ground busbar	B. Turning Direction	*Optional **RAL (please see page 4.42)
1. System (standard of measure) U U.S. M Metric 2. Product Type (section component) E Elbow section		*10. Paint Color (allows 000 None BLK Paint UEC Black WHT Paint UEC White **RAL system can also be use	painting of th RED BLU	ne busway housing) Paint UEC Red Paint UEC Blue page 4.42
 3. Product Frame (maximum amperage) 250 250 amps 4. Compatibility (frame compatibility) T5 T5 systems K5 T5 systems 	s (with limiting strip)	*11. Tape Marking (allow side of busway hous 0 None 3 Tape UEC Black 4 Tape UEC White	vs colored ta sing) 6 T 7 T	ape on the polarizing strip Tape UEC Red Tape UEC Blue
 5. Material (busbar material) C Copper 6. Neutral/Ground Busbar (size of neutral bush 4 3 Phase plus Neutral G 3 Phase plus 	<i>bar and/or ground)</i> us Neutral plus			
N 3 Phase plus 200% Internal Gro Neutral F 3 Phase plus plus plus internal 7. Polarization (orientation of section for mating plus internal)	ound Conductor us 200% Neutral I Ground Conductor purposes)			

Examples:

S

IN

Standard

Internal

8. Turning Direction (direction of section polarizing strip)

EX

External

UE250T5C4S-IN-BLU4 = US, Elbow section, 250 amps, T5, Copper conductor, 3 phase plus neutral, Standard polarization- Internal- painted black, white tape ME250T5CGS-EX = Metric, Elbow section, 250 amps, T5, Copper conductor, 3 phase plus neutral plus isolated/dedicated ground, Standard polarization-External



TEE SECTIONS

Product Description

Tee sections are used for creating a 90 degree branch leg in a Busway run. When laying out a system, specify the correct busbar orientation of the tee. Indicate right or left, external or internal busbars. External tees are preferred. Tee sections are connected to adjacent Busway sections using an installation tool and joint kit that includes a housing coupler and bus connector (ordered separately). This handles both the mechanical and electrical connection between a housing section and tee section of busway.

WEIGHT: 19.5 lbs (8.8 kg)





TEE	SECTIONS: PRODUCT NUMBERS
L 1. System 2. Product Type 2. Product Frame 2. Product Frame 1. D 3. Product Frame 1. D 3. Product Frame 1. D	5 C 4 S - IR bat- Material A. B 7. Polarization BIK 0 *Optional
- F c	9. *10. Paint Tape Marking
1. System (standard of measure) U U.S. M Metric	*9. Paint Color <i>(allows painting of the busway housing)</i> 000 None RED Paint UEC Red BLK Paint UEC Black BLU Paint UEC Blue
2. Product Type (section component) T Tee section	WHT Paint UEC White **RAL system can also be used; reference page 4.42
3. Product Frame (maximum amperage)250 250 amps	*10. Tape Marking (allows colored tape on the polarizing strip side of busway housing)
4. Compatibility (frame compatibility)T5T5 systemsK5T5 systems (with limiting strip)	0None6Tape UEC Red3Tape UEC Black7Tape UEC Blue4Tape UEC White
5. Material <i>(busbar material)</i> C Copper	
 6. Neutral/Ground Busbar (size of neutral busbar and/or ground) 4 3 Phase plus Neutral G 3 Phase plus Neutral plus Internal Ground Conductor F 3 Phase plus 200% Neutral plus Internal Ground Conductor 	
7. Polarization (orientation of section for mating purposes) S Standard	

Examples:

IL

IR

Internal-Left

Internal-Right

8. Turning Direction (direction of section polarizing strip)

EL

ER

External-Left

External-Right

UT250T5C4S-IR-RED0 = US, Tee section, 250 amps, T5, Copper conductor, 3 phase plus neutral, Standard polarization- Internal-Right- painted red, no tape marking MT250T5CFS-EL = Metric, Tee section, 250 amps, T5, Copper conductor, 3 phase plus 200% neutral plus isolated/dedicated ground, Standard polarization- External-Left



END FEED UNITS

Product Description

End power feed units connect to the end of the Busway. A standard size, factory assembled unit consists of a $12 \times 16 \times 6.6$ in. (305 x 406 x 168mm) steel junction box, with removable sides, connected to a 12 in. (305mm) section of Busway. The assembly includes connection lugs and a ground lug for wires up to 300MCM (150mm²) for standard size boxes, and (2) 250MCM (120mm²) or up to (1) 600MCM (300mm²) for large size boxes.

End power feed units are connected to adjacent Busway sections using a housing coupler and bus connector (ordered separately).

Special need power feed units for confined spaces, as found in mission critical data centers, can also be designed and fabricated

*Standard busway stub size is 1 ft. (.3m)

WEIGHT:

Standard Box: 19.5 lbs (8.8 kg) Fused Box: 82 - 90 lbs (37.2 - 40.8 kg)

BoxesLugsStandardLargeFusedStandardSLFDoubleIIIBoltRII

Box size and Lug options:

Refer to option 8. Lug/Box Options on pg. 4.17 End Feed Units: Product Numbers

*Isolated or dedicated ground is determined at the feed during installation. For further details about Dedicated Ground vs. Isolated Ground, please reference our tech brief on http://downloads.uecorp. com/starline/





END FEED UNITS: METERING

Product Description

End power feed units connect to the end of the Busway. A large size, factory assembled unit consists of a 18 x 16 x 6.6 inch (457 x 406 x 168mm) steel junction box, with removable sides, connected to a 12 in. (305mm) section of busway. The assembly includes connection lugs, a ground lug, and shrink tubing for wires up to up to 300MCM (150mm²) for standard size boxes, and (2) 250MCM (120mm²) or up to (1) 600MCM (300mm²) for large size boxes.

Integral CPM installed in the end feed provides power monitoring and alarm capabilities. Nuisance tripping may be avoided using the current information to protect against overloading phases. The monitors also assist in the continuous challenge to balance the three phase loads. An automated email will be sent at 80% of full load as a warning to the user. This level may be changed in the field using the integrated webpage.



 $Y = wye, \Delta = delta$

*For additional information on metering options, and for metering accessory options such as IR Windows & Angled Display please visit the separate Metering document found at downloads.uecorp.com/starline.

250T5 Systems END FEED UNITS: PRODUCT NUMBERS 0100 11. Lid Accessories Accessories Straight Busway Package orientation Location Length Access *Optional **M4** **RAL (please see page 4.42) 18 System configuration M40 and CT type Options 11. Accessories Location (viewed from the terminal, the side with accessory) None (N/A) Т Тор Left в Bottom Right F Front

LLD - SC, 5A

LLY - SC, 5A

LNY - SC, 5A

κ

L

м

12. Straight Length (length of section) 0100 1 foot (for U.S.) M030 .3 meters (for Metric)

For other lengths, consult the factory

LLD - Standard, milivolt

LLY - Standard, milivolt

LNY - Standard, milivolt

C L E	Continuous Long shutters "Extended" (Short + 4")	S B	Short shutters "Beginning" only	long
*14.	Paint Color (allows pa	ainting c	the busway hou	ısing)
000	None	RED	Paint UEC Re	ed
BLK WHT	Paint UEC Black Paint UEC White	BLU	Paint UEC B	lue
**RAI	system can also be used	; referenc	e page 4.42	
*15.	Tape Marking (allows	colored	tape on the pola	rizing strip
	side of busway housin	ıg)		
0	None	6	Tape UEC Red	
3	Tape UEC Black	7	Tape UEC Blue	
4	Tape UEC White			
*16.	Meter Release (M40	Series	leters)	
M41	WiFi, ≤415V Y, ≤240V	Δ	145 WiFi, 480V	Y, 400V Δ
M43	No WiFi, ≤415V Y, ≤24	40V Δ	147 No WiFi, 48	ον Υ, 400ν Δ
*17.	M40 Options (choose	e from a	4.1" display, mea	asured neut
	and/or an audible alarr	n)		
S	Standard	F	Featured (D+A)	
D	Display	Е	Enhanced (N+A)
N	(Measured) Neutral	Р	Professional (D-	+N)
				• >

UF250T5C4R-LRLL-0100C-BLK0-M47S1 = US, end Feed, 250 amps, T5, Copper conductor, 3 phase plus neutral, Reversed polarization- Std lugs, Large box, Right lid orientation, Circular IR window + angled meter lid, left accessory location- 1 ft., Continuous access-painted Black, no tape marking- M47 meter, Standard options, LLD- standard, milivolt

1. System (standard of measure) υ U.S. м Metric Ν L 2. Product Type (section component) R F End Feed 3. Product Frame (maximum amperage) 250 250 amps 4. Compatibility (frame compatibility) T5 T5 systems K5 T5 systems (with limiting strip) 5. Material (busbar material) С Copper 6. Neutral/Ground Busbar (size of neutral busbar and/or ground) 4 3 Phase plus Neutral G 3 Phase plus Neutral plus Ν 3 Phase plus 200% Internal Ground Conductor Neutral F 3 Phase plus 200% Neutral plus Internal Ground Conductor 7. Polarization (orientation of section for mating purposes) S Standard R Reversed 8. Lug/Box Options (choice of standard/double/bolt lugs and box size) F Standard lugs, fused box S Standard lugs, standard box Standard lugs, large box R Bolt lugs, large box L 9. Lid Orientation (viewed from the terminal, the side with meter) Ν None (N/A) Т Тор L Left в Bottom F R Front Right 10. Accessories Package (optional accessories for feed units) S Standard R IR window - Rectangular С IR window - circular Α Angled meter lid Т IR (rect.) + angled lid L IR (circ.) + angled lid 1 2 3 Examples:



System

Product

Type

250

Product

Frame

Τ5

Compat

ibility

S

Polarization

O

15.

Tape Marking

Lug/box

options

16

Meter Release

Neutral/

Ground

husbar

BLK

Material

14.

Paint

color



ABOVE FEED UNITS

Product Description

The above feed power unit supplies power from the topside of the Busway. Factory assembled unit consists of a $25 \times 12 \times 8$ inch (635 x 305 x 203mm) steel junction box that is mounted on top of a 36 inch (914mm) section of Busway.

*36 inches (914mm) is the minimum and standard length of busway that an above feed is provided with.

Above feed units can be placed at the end or anywhere along a Busway run. Connections to adjoining Busway sections are made by the standard means, requiring couplers and bus connectors which are sold separately.

WEIGHT: 45.5 lbs (20.6 kg)

*Isolated or dedicated ground is determined at the feed during installation. For further details about Dedicated Ground vs. Isolated Ground, please reference our tech brief on http://downloads.uecorp. com/starline/







ABOVE F	EED UNITS: PRODUCT NUMBERS
U 1. System 2. Product Type 2. Product Type 3. Product Type 3. Product Frame 3.	D 8. Lug/box options9. Lid orientation10. 10. AccessoriesN 11. Accessories Location-03000 12. Straight LengthC 13. Busway Access01814. Feed Location
- BLK 0 ^{*15.} Paint color Tape Marking	- M41 S 19. *17. Meter Release *18. M40 System configuration and CT type *Optional **RAL (please see page 4.42)
1. System (standard of measure) U U.S. M Metric	12. Straight Length (length of section)03003 feet (for U.S.)M1001 meter (for Metric)
 2. Product Type (section component) A Above Feed 3. Product Frame (maximum amperage) 	For other lengths, consult the factory 13. Busway Access (how plugs access the busway) C Continuous S Short shutters L Long shutters B "Beginning" only long
 250 250 amps 4. Compatibility (frame compatibility) T5 T5 systems K5 T5 systems (with limiting strip) 5. Material (busbar material) 	 E "Extended" (Short + 4") 14. Feed Location (location of the center of the top feed) 018 18 inches (for U.S.) 045 45 centimeters (for Metric) For other lengths, consult the factory
 C Copper 6. Neutral/Ground Busbar (size of neutral busbar and/or ground) 4 3 Phase plus Neutral G 3 Phase plus Neutral plus Internal Ground Conductor F 3 Phase plus 200% Neutral plus Internal Ground Conductor 	*15. Paint Color (allows painting of the busway housing) 000 None RED Paint UEC Red BLK Paint UEC Black BLU Paint UEC Blue WHT Paint UEC White **RAL system can also be used; reference page 4.42
7. Polarization (orientation of section for mating purposes) S Standard R Reversed	 *16. Tape Marking (allows colored tape on the polarizing strip side of busway housing) 0 None 6 Tape UEC Red 3 Tape UEC Black 7 Tape UEC Blue 4 Tape UEC White
 b. Lug Options (other than standard lugs, there is also the option for double lugs and bolt lugs) D Double lugs, standard box 	*17. Meter Release (M40 Series Meters) M41 WiFi, \leq 415V Y, \leq 240V Δ M45 WiFi, 480V Y, 400V Δ M43 No WiFi, \leq 415V Y, \leq 240V Δ M47 No WiFi, 480V Y, 400V Δ
9. Lid Orientation (viewed from the terminal, the side with meter) N None (N/A) T Top L Left R Right A Rear	 *18. M40 Options (choose from a 4.1" display, measured neutral, and/or an audible alarm) S Standard F Featured (D+A)
10. Accessories Package (optional accessories for feed units) S Standard	DDisplayEEnhanced (N+A)N(Measured) NeutralPProfessional (D+N)AAudible alarmUUltimate (D+N+A)
11. Accessories Location (viewed from the terminal, the side with accessory) N None (N/A) R Right F Front L Left T Top A Rear	 *19. System Configuration and CT Type (line-line or line-neutral and wye or delta systems) 1 LLD - Standard, milivolt K LLD - SC, 5A 2 LLY - Standard, milivolt L LLY - SC, 5A 3 LNY - Standard, milivolt M LNY - SC, 5A

Examples:

Ν L

UA250T5CFS-DLSN-0300C018-M41D2 = US, Above feed, 250 amps, T5, Copper conductor, 3 phase plus 200% neutral plus internal ground conductor, Standard polarization- Double lugs, standard box, Left lid orientation, Standard accessory package, No accessory location- 3 ft., Continuous access, 18 inches- M41 meter, Display, LLY- Standard, milivolt





SYSTEM LAYOUT DRAWING



Plug-In Unit example:

For further information on plug-in unit options, please visit the Plug-In Units section





Product Description

BACK

Track Busway straight section consists of an extruded aluminum shell with "springpressure" type copper channel busbars contained in a full length insulator mounted on the interior walls. The aluminum extrusion acts as a 100% ground path. Each housing has a continuous access slot over its entire length for the insertion of turn-n-lock plugin units. Housing configurations include 4-pole varieties, optional isolated ground, optional oversize (200%) neutral. The straight sections join together using bus connectors which fit into the channels of the adjoining section. An Installation tool is used to force the blades into the busbar channels for a solid "spring-pressure" electrical connection.

BUSWAY

MATERIAL:	Extruded Aluminum
RATINGS:	100% Ground Path
	400 Amps
	400T5C4/400T5CG: 600 Vol
	400T5CN/400T5CF: 600 Volt

LENGTH: 10 Ft. (3m), 20 Ft. (6m); or custom lengths between 2 - 20 Ft. (.6 - 6m)

VOLTAGE DROP: distributed load Single Phase 1V per 37ft (11m) (.8PF) Three Phase 1V per 65ft (19.8m) (.8PF)

WEIGHT:

- 10 ft. (3m) 4 pole: 95 lbs/43 kg
- 10 ft. (3m) 4 pole w/ ground: 100 lbs/45.4 kg
- 10 ft. (3m) 4 pole w/ 200% N: 110 lbs/49.9 kg
- 10 ft. (3m) 4 pole w/ ground & 200% N: 120 lbs/54.4 kg







Bus Connector

Installation Tool



System

М

F

S

в

Short shutters

"Beginning" only long

7. Polarization (orientation of section for mating purposes)

3 Phase plus 200% Neutral plus Internal Ground Conductor

400T5 Systems

STRAIGHT SECTIONS: PRODUCT NUMBERS 5 0200 400 Product Product Compat-Material Neutral/ Polarization Straight Busway Type Frame ibility Ground Length Access husbar BLK *Optional **RAL (please see page 4.42) 10. 11 Paint color Tape Marking *10. Paint Color (allows painting of the busway housing) 1. System (standard of measure) Metric 000 None RED Paint UEC Red BLK Paint UEC Black Paint UEC Blue BLU WHT Paint UEC White 2. Product Type (section component) **RAL system can also be used; reference page 4.42 3. Product Frame (maximum amperage) *11. Tape Marking (allows colored tape on the polarizing strip side of busway housing) 0 4. Compatibility (frame compatibility) None 6 Tape UEC Red Tape UEC Black Tape UEC Blue 3 7 K5 T5 systems (with limiting strip) 4 Tape UEC White 6. Neutral/Ground Busbar (size of neutral busbar and/or ground) G 3 Phase plus Neutral plus Internal Ground Conductor

Examples:

υ

S

400

T5

С

4 Ν

s

С

L

Е

XXYY

MXYY

U.S.

Straight section

400 amps

T5 systems

Copper

Neutral

Standard

Continuous

Long shutters

"Extended" (short+4")

5. Material (busbar material)

3 Phase plus Neutral

3 Phase plus 200%

8. Straight Length (length of section)

XX = feet, YY = inches (for U.S.)

X = meters, YY = centimeters (for Metric)

9. Busway Access (how plugs access the busway)

US400T5C4S-0500C = US, Straight section, 400 amps, T5, Copper conductor, 3 phase plus neutral, Standard polarization- 5ft., Continuous access MS400K5CNS-M450C-P013 = Metric, Straight section, 400 amps, K5, Copper conductor, 3 phase plus 200% Neutral, Standard polarization- 4.5m, Continuous access-RAL 1001, black tape



ELBOW SECTIONS

Product Description

An Elbow is used for making a horizontal 90 degree change of direction in a Busway run. Specify external or internal elbow, according to the orientation of the polarizing strip in the Busway sections to be connected.

CONNECTION ACCESSORIES: (Ordered Separately)

Joint Kits (*pg. 4.46*) are used to make mechanical and electrical connections to adjacent Busway sections.

WEIGHT: 28 lbs (12.7 kg)



External Elbow





Internal Elbow



External Elbow





ELBO	SECTIONS: PI	RODUCT NUMBERS
L 1. System 2. Product Type 4000 3. Product Frame 4. Co ibil	5 C 4 S - t- Material 6. Neutral/ Ground busbar BLK 0 - int Tape Marking	8. Turning Direction *Optional **RAL (please see page 4.42)
1. System (standard of measure) U U.S. M Metric 2. Product Type (section component) E Elbow section	*9. Paint Color (allow 000 None BLK Paint UEC Blac WHT Paint UEC Whi **RAL system can also be	vs painting of the busway housing) RED Paint UEC Red k BLU Paint UEC Blue te e used; reference page 4.42
 3. Product Frame (maximum amperage) 400 400 amps 4. Compatibility (frame compatibility) T5 T5 systems K5 T5 systems (with limiting strip) 	 *10. Tape Marking (a side of busway) 0 None 3 Tape UEC Black 4 Tape UEC White 	allows colored tape on the polarizing strip housing) 6 Tape UEC Red 7 Tape UEC Blue
 5. Material (busbar material) C Copper 6. Neutral/Ground Busbar (size of neutral busbar and/or groun 4 3 Phase plus Neutral G 3 Phase plus Neutral plus Internal Ground Conductor Neutral F 3 Phase plus 200% Neutral plus Internal Ground Conductor 		
7. Polarization (orientation of section for mating purposes)		

Examples:

S

IN

Standard

Internal

8. Turning Direction (direction of section polarizing strip)

EX

External

<u>UE400K5C4S-IN-PJ70</u> = US, Elbow section, 400 amps, K5 (limiting strip), Copper conductor, 3 phase plus neutral, Standard polarization- Internal- RAL 5027 ME400T5CGS-EX = Metric, Elbow section, 400 amps, T5, Copper conductor, 3 phase plus neutral plus internal ground conductor, Standard polarization- External



TEE SECTIONS

18"

(457mm)

18"

(457mm)

Internal-Right

(IR)





Internal-Left (IL)



TEE	SECTIONS: PRODUCT NUMBERS
L 1. System 1. 2. Product Type 1. 2. Product Frame 1. 2. Product Frame 1. 2. Product Frame 1. 2. Product Frame 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	5 C 4 S - IR at- Material 6. Neutral/ Ground busbar Polarization BLK 0 a. taint olor Tape Marking *Optional *Optional *RAL (please see page 4.42)
1. System (standard of measure) U U.S. M Metric	*9. Paint Color (allows painting of the busway housing) 000 None RED Paint UEC Red BLK Paint UEC Black BLU Paint UEC Blue
2. Product Type (section component) T Tee section	WHT Paint UEC White **RAL system can also be used; reference page 4.42
3. Product Frame (maximum amperage)400 400 amps	*10. Tape Marking (allows colored tape on the polarizing strip side of busway housing)
4. Compatibility (frame compatibility)T5T5 systemsK5T5 systems (with limiting strip)	0None6Tape UEC Red3Tape UEC Black7Tape UEC Blue4Tape UEC White7
5. Material <i>(busbar material)</i> C Copper	
 6. Neutral/Ground Busbar (size of neutral busbar and/or ground) 4 3 Phase plus Neutral G 3 Phase plus Neutral plus Internal Ground Conductor Neutral F 3 Phase plus 200% Neutral plus Internal Ground Conductor 	
7. Polarization (orientation of section for mating purposes) S Standard	

Examples:

IL

IR

Internal-Left

Internal-Right

8. Turning Direction (direction of section polarizing strip)

EL

ER

External-Left

External-Right

UT400T5C4S-IR-RED0 = US, Tee section, 400 amps, T5, Copper conductor, 3 phase plus neutral, Standard polarization- Internal-Right- painted red, no tape marking MT400K5CFS-EL = Metric, Tee section, 400 amps, K5, Copper conductor, 3 phase plus 200% neutral plus internal ground conductor, Standard polarization- External-Left



END FEED UNITS

Product Description

End power feed units connect to the end of the Busway. A standard size, factory assembled unit consists of a $12 \times 17 \times 10$ in. $(305 \times 432 \times 254$ mm) steel junction box, with removable sides, connected to a 1 ft (.3m) section of Busway. The assembly includes connection lugs and a ground lug for wires (2) 250MCM (120mm²) or up to 600MCM (300mm²).

End power feed units are connected to adjacent Busway sections using a housing coupler and bus connector (ordered separately).

Special need power feed units for confined spaces, as found in mission critical data centers, can also be designed and fabricated but may require minimum quantities.

WEIGHT:

Standard Box: 33.5 lbs (15.2 kg) Large Box: 37.5 lbs (17 kg) Fused Box: 82 - 90 lbs (37.2 - 40.8 kg)

	Boxes			
Lugs	Standard	Large	Fused	
Standard	S	L	F	
Double				
Bolt	В	R		

Box size and Lug options: Refer to option 8. Lug/Box Options on pg. 4.29 End Feed Units: Product Numbers

*Isolated or dedicated ground is determined at the feed during installation. For further details about Dedicated Ground vs. Isolated Ground, please reference our tech brief on http://downloads.uecorp. com/starline/





END FEED UNITS: METERING

Product Description

End power feed units connect to the end of the Busway. A large size, factory assembled unit consists of a $24 \times 24 \times 10$ in. (610 x 610 x 254mm) steel junction box, with removable side, connected to a 1 ft (.3m) section of Busway. The assembly includes connection lugs and a ground lug for wires (2) 250MCM (120mm²) or up to 600MCM (300mm²).

Integral CPM installed in the end feed provides power monitoring and alarm capabilities. Nuisance tripping may be avoided using the current information to protect against overloading phases. The monitors also assist in the continuous challenge to balance the three phase loads. An automated email will be sent at 80% of full load as a warning to the user. This level may be changed in the field using the integrated webpage.

 End Feed Meter Options:

 M41
 WiFi, \leq 415V Y, \leq 240V Δ

 M43
 No WiFi, \leq 415V Y, \leq 240V Δ

 M45
 WiFi, 480V Y, 400V Δ

 M47
 No WiFi, 480V Y, 400V Δ

 $Y = wye, \Delta = delta$

*For additional information on metering options, and for metering accessory options such as IR Windows & Angled Display please visit the separate Metering document found at downloads.uecorp.com/starline.



*The above arrows show how to determine your meter location on an end feed (*Refer to option* 9. Lid Orientation on pg. 4.29 End Feed Units: Product Numbers)

400T5 Systems 0100 11. Lug/box Lid Straight Busway Accessories Accessories Polarization Package options orientation Location Length Access *Optional M41 **RAL (please see page 4.42) 16 18 Meter Release System configuration M40 and CT type Options 11. Accessories Location (viewed from the terminal, the side with accessory) None (N/A) Ν Т Тор L Left в Bottom R Right F Front 12. Straight Length (length of section) 0100 1 foot (for U.S.) M030 .3 meters (for Metric) For other lengths, consult the factory 13. Busway Access (how plugs access the busway) С Continuous S Short shutters Long shutters L R "Beginning" only long Е "Extended" (Short + 4") *14. Paint Color (allows painting of the busway housing) 6. Neutral/Ground Busbar (size of neutral busbar and/or ground) 000 None RFD Paint UEC Red BLK Paint UEC Black Paint UEC Blue BLU WHT Paint UEC White **RAL system can also be used; reference page 4.42 *15. Tape Marking (allows colored tape on the polarizing strip side of busway housing) 0 Tape UEC Red None 6 Tape UEC Black 3 7 Tape UEC Blue Tape UEC White 4 8. Lug/Box Options (choice of standard/double/bolt lugs and box *16. Meter Release (M40 Series Meters) WiFi, ≤415V Y, ≤240V ∆ M41 **M45** WiFi, 480V Y, 400V Δ M43 No WiFi, ≤415V Y, ≤240V Δ M47 No WiFi, 480V Y, 400V Δ *17. M40 Options (choose from a 4.1" display, measured neutral, and/or an audible alarm)

F

Е

Р

U

*18. System Configuration and CT Type (line-line or line-neutral

κ

L

м

Featured (D+A)

Enhanced (N+A)

Professional (D+N)

Ultimate (D+N+A)

LLD - SC. 5A

LLY - SC, 5A

LNY - SC, 5A

Examples:

UF400T5C4R-LRLL-0100C-BLK0-M47S1 = US, end Feed, 400 amps, T5, Copper conductor, 3 phase plus neutral, Reversed polarization- Std lugs, Large box, Right lid orientation, Circular IR window + angled meter lid, left accessory location- 1 ft., Continuous access-painted Black, no tape marking- M47 meter, Standard options, LLD- standard, milivolt

S

D

Ν

Δ

1

2

3

Standard

(Measured) Neutral

and wye or delta systems)

LLD - Standard, milivolt

LLY - Standard, milivolt

LNY - Standard, milivolt

Audible alarm

Display



Standard

IR window - circular

IR (rect.) + angled lid

None (N/A)

Left

Right

RACK BUSWA

Product

1. System (standard of measure)

2. Product Type (section component)

3. Product Frame (maximum amperage)

4. Compatibility (frame compatibility)

Type

System

U.S.

End Feed

400 amps

T5 systems

Copper

Neutral

Standard

5. Material (busbar material)

3 Phase plus Neutral

3 Phase plus 200%

Standard lugs, standard box

Standard lugs, large box

Standard lugs, fused box

U

F

400

T5

С

4

Ν

S

S

L

F

Ν

L

R

S

С

Т

size)

400

м

Product

Frame

Τ5

Compat

ibility

Metric

K5

G

F

Reversed

в

R

9. Lid Orientation (viewed from the terminal, the side with meter)

Т

в

F

10. Accessories Package (optional accessories for feed units) R

Α

L

Тор

Bottom

IR window - Rectangular

IR (circ.) + angled lid

Front

Angled meter lid

7. Polarization (orientation of section for mating purposes)

R

S

O

15

Tape Marking

Neutral/

Ground

husbar

BLK

Material

Paint

color

T5 systems (with limiting strip)

3 Phase plus Neutral plus

Internal Ground Conductor

3 Phase plus 200% Neutral

Bolt lugs, standard box

Bolt lugs, large box

plus Internal Ground Conductor

END FEED UNITS: PRODUCT NUMBERS



ABOVE FEED UNITS

Product Description

The above feed power unit supplies power from the topside of the Busway. Factory assembled unit consists of a $25 \times 12 \times 8$ inch (635 x 305 x 203mm) steel junction box mounted on top of a 36 inch (914mm) section of Busway.

*36 inches (914mm) is the minimum and standard length of busway that an above feed is provided with.

Above feed units can be placed at the end or anywhere along a Busway run. Connections to adjoining Busway sections are made by the standard means, requiring couplers and bus connectors which are sold separately.

*Isolated or dedicated ground is determined at the feed during installation. For further details about Dedicated Ground vs. Isolated Ground, please reference our tech brief on http://downloads.uecorp. com/starline/







400T5 Systems

ABOVE FEE	D UNITS: PRODUCT NUMBERS
U ^{1.} ^{2.} ^{2.} ^{2.} ^{2.} ^{2.} ^{3.} ^{3.} ^{3.} ^{3.} ^{3.} ^{3.} ^{4.} ^{5.} ^{6.} ^{5.} ^{6.} ^{6.} ^{8.} ^{8.} ^{8.} ^{9.} ^{9.} ^{1.}	Image: Normal systemImage: Normal system
- BLK 0 -	M41 S 1 *17. *18. *19. Meter M40 System configuration and CT type
1. System (standard of measure) U U.S. M Metric	12. Straight Length (length of section)03003 feet (for U.S.)M1001 meter (for Metric)
2. Product Type (section component) A Above Feed	For other lengths, consult the factory
3. Product Frame (maximum amperage)400 400 amps	C Continuous S Short shutters L Long shutters B "Beginning" only long E "Extended" (Short + 4")
4. Compatibility (frame compatibility) T5 T5 systems K5 T5 systems (with limiting strip)	14. Feed Location (location of the center of the top feed)01818 inches (for U.S.)04545 centimeters (for Metric)
5. Material (busbar material) C Copper	For other lengths, consult the factory *15 Paint Color (allows painting of the busway housing)
 6. Neutral/Ground Busbar (size of neutral busbar and/or ground) 4 3 Phase plus Neutral 8 3 Phase plus 200% Neutral 6 3 Phase plus Neutral plus Internal Ground Conductor 7 3 Phase plus 200% Neutral plus Internal Ground Conductor 	000 None RED Paint UEC Red BLK Paint UEC Black BLU Paint UEC Blue WHT Paint UEC White **RAL system can also be used; reference page 4.42
7. Polarization (orientation of section for mating purposes) S Standard R Reversed 8 Lug Options (other than standard lugs, there is also the option	 *16. Tape Marking (allows colored tape on the polarizing strip side of busway housing) 0 None 6 Tape UEC Red 3 Tape UEC Black 7 Tape UEC Blue 4 Tape UEC White
for double lugs and bolt lugs) S Standard lugs, standard box	*17. Meter Release (M40 Series Meters) M41 WiFi, \leq 415V Y, \leq 240V Δ M45 WiFi, 480V Y, 400V Δ M43 No WiFi \leq 415V Y \leq 240V Δ M47 No WiFi, 480V Y, 400V Δ
9. Lid Orientation (viewed from the terminal, the side with meter) N None (N/A) T Top L Left R Right A Rear	 *18. M40 Options (choose from a 4.1" display, measured neutral, and/or an audible alarm) S Standard F Featured (D+A)
10. Accessories Package (optional accessories for feed units) S Standard	DDisplayEEnhanced (N+A)N(Measured) NeutralPProfessional (D+N)AAudible alarmUUltimate (D+N+A)
11. Accessories Location (viewed from the terminal, the side with accessory) N None (N/A) R Right F Front L Left T Top A Rear	 *19. System Configuration and CT Type (line-line or line-neutral and wye or delta systems) 1 LLD - Standard, milivolt K LLD - SC, 5A 2 LLY - Standard, milivolt L LLY - SC, 5A 3 LNY - Standard, milivolt M LNY - SC, 5A

Examples:

UA400K5CFS-SRSN-0300C018-M41DM = US, Above feed, 400 amps, K5, Copper conductor, 3 phase plus 200% neutral plus internal ground conductor, Standard polarization- Standard lugs, standard box, Right lid orientation, Standard accessory package, No accessory location- 3 ft., Continuous access, 18 inches- M41 meter, Display, LNY-SC, 5A





SYSTEM LAYOUT DRAWING



Plug-In Units:

For further information on plug-in unit options, please visit the Plug-In Units section



STRAIGHT SECTIONS

6.4"

(163mm)

(L3)

US

L1 or Phase A

L2 or Phase B

L3 or Phase C

Neutral

Ground

(L2)

(L1)

(G

5.050" (128mm)

Metric

L1 or Phase A

L2 or Phase B

L3 or Phase C

Neutral

Ground

Product Description

Track Busway straight section consists of an extruded aluminum shell with you choice of copper or copper-aluminum channel busbars contained in a full length insulator mounted on the interior walls. The aluminum extrusion acts as a 100% ground path. Each housing has a continuous access slot over its entire length for the insertion of plug-in units. Housing configurations include 4-pole varieties, with optional isolated ground. The housing sections join together using Bus connectors which fit into the channels of the adjoining section. An Installation tool is used to force the blades into the busbar channels for a solid "spring-pressure" electrical connection.

MATERIAL:	Extruded Aluminum
RATINGS:	100% Ground Path 800 Amps 600 Volt

LENGTH:	5 ft.(1.5m), Max 10 ft.(3m)
	or custom lengths betweer
	2 - 10 ft. (.6 - 3m)

VOLTAGE DROP: distributed load Single Phase 1V per 15ft (4.5m) (.8PF) Three Phase 1V per 25ft (7.6m) (.8PF)

WEIGHT:







STRAIGHT SECTIONS: PRODUCT NUMBERS Τ5 0200 800 Product Product Compat-Material Neutral/ Polarization Straight Busway System Type Frame ibility Ground Length Access husbar BLK *Optional **RAL (please see page 4.42) 10. 11 Paint color Tape Marking *10. Paint Color (allows painting of the busway housing) 1. System (standard of measure) М Metric 000 None RED Paint UEC Red BLK Paint UEC Black Paint UEC Blue BLU WHT Paint UEC White 2. Product Type (section component) **RAL system can also be used; reference page 4.42 3. Product Frame (maximum amperage) *11. Tape Marking (allows colored tape on the polarizing strip side of busway housing) Tape UEC Red 6 0 4. Compatibility (frame compatibility) None Tape UEC Black 7 Tape UEC Blue 3 K5 T5 systems (with limiting strip) 4 Tape UEC White 5. Material (busbar material) н Hybrid (Cu/Al) 6. Neutral/Ground Busbar (size of neutral busbar and/or ground) G 3 Phase plus Neutral plus Internal Ground Conductor 7. Polarization (orientation of section for mating purposes)

Examples:

υ

S

T5

С

4

S

L

Е

Ρ

XXYY

MXYY

U.S.

800 800 amps

T5 systems

Copper

Standard

Long shutters

Access Panels

"Extended" (short+4")

3 Phase plus Neutral

8. Straight Length (length of section)

XX = feet, YY = inches (for U.S.)

X = meters, YY = centimeters (for Metric)

9. Busway Access (how plugs access the busway)

S

В

Short shutters

"Beginning" only long

Straight section

US800T5C4S-0500P = US, Straight section, 800 amps, T5, Copper conductor, 3 phase plus neutral, Standard polarization- 5ft., access Panels MS800K5CGS-M225P-P013 = Metric, Straight section, 800 amps, K5, Copper conductor, 3 phase plus netural plus internal ground connector, Standard polarization-2.25m, access Panels- RAL 1001, black tape



ELBOW SECTIONS

= Polarizing Strip

Product Description

An Elbow is used for making a horizontal 90 degree change of direction in a Busway run. Specify external or internal elbow, according to the orientation of the polarizing strip in the Busway sections to be connected.

CONNECTION ACCESSORIES: (Ordered Separately)

A Joint Kit (*pg. 4.46*) is used to make mechanical and electrical connections to adjacent Busway sections.

WEIGHT: 51 lbs (23.1 kg)







External Elbow





	ELBOW	SECTIO	NS: PRO	DUC	T NUMBERS
L 1. System 1. System 2. Product Type	BOO 3. Product Frame T5 4. Compat- ibility - B *9. Paint color	5. Material LK C 6. Neutral/ Ground busbar LK 0 ^{*10.} Tape Marking	7. Polarization Turni Direc	N ng etion	*Optional **RAL (please see page 4.42)
1. System (standard of measure) U U.S. M Metric 2. Product Type (section component)		*9. Paint 000 BLK WHT	t Color <i>(allows pain</i> None Paint UEC Black Paint UEC White	ting of the RED BLU	e busway housing) Paint UEC Red Paint UEC Blue
 E Elbow section 3. Product Frame (maximum amperage) 800 800 amps 		**RAL sys *10. Tap	tem can also be used; be Marking (allows) le of busway bousing	reference p colored ta	page 4.42 ape on the polarizing strip
 4. Compatibility (frame compatibility) T5 T5 systems K5 T5 system 	ns (with limiting strip)	0 No 3 Tap 4 Tap	ne De UEC Black De UEC White	6 1 7 1	Tape UEC Red Tape UEC Blue
5. Material <i>(busbar material)</i> C Copper					
6. Neutral/Ground Busbar (size of neutral bus 4 3 Phase plus Neutral G 3 Phase p Internal G	<i>sbar and/or ground)</i> lus Neutral plus round Conductor				
7. Polarization (orientation of section for mating S Standard	ן purposes)				

8. Turning Direction (direction of section polarizing strip) IN Internal EΧ External

Examples:

<u>UE800K5C4S-IN-0007</u> = US, Elbow section, 800 amps, K5 (limiting strip), Copper conductor, 3 phase plus neutral, Standard polarization- Internal- no paint, blue stripe <u>**ME800T5CGS-EX**</u> = Metric, Elbow section, 800 amps, T5, Copper conductor, 3 phase plus neutral plus internal ground conductor, Standard polarization- External



TEE SECTIONS

Product Description







Examples:

υ

Т

T5

С

4

S

IL

IR

UT800T5C4S-IR-PE90 = US, Tee section, 800 amps, T5, Copper conductor, 3 phase plus neutral, Standard polarization- Internal-Right- RAL 4009, no tape marking MT800K5CGS-EL = Metric, Tee section, 800 amps, K5, Copper conductor, 3 phase plus neutral plus internal ground conductor, Standard polarization- External-Left



END FEED UNITS

Product Description

Standard end power feed units connect to the end of the Busway. Factory assembled unit consists of a $18.5 \times 24 \times 12$ in. (470 $\times 610 \times 305$ mm) steel junction box, with removable side, connected to an 14 inch (.3m) section of Busway. The assembly includes ground lugs for wires up to 350MCM and connection lugs that can handle up to (2) 600MCM (300mm²) wires (CU) or (2) 600MCM (300mm²) wires (AL). Reverse end feed units are for connection to the opposite end of the busway section (polarizing strip faces to right as viewed from end of unit).

Junction box is sized such that one or two 4" (101.6mm) conduits can be installed in the end of the box.

End power feed units are connected to adjacent Busway sections using a housing coupler and bus connector (ordered separately).

Special need power feed units for confined spaces, as found in mission critical data centers, can also be designed and fabricated but may require minimum quantities.

WEIGHT: 84.5 lbs (38.3 kg)



Box size and Lug options: Refer to option 8. Lug/Box Options on pg. 4.41 End Feed Units: Product Numbers





Double lugs

*Isolated or dedicated ground is determined at the feed during installation. For further details about Dedicated Ground vs. Isolated Ground, please reference our tech brief on http://downloads.uecorp. com/starline/



END FEED UNITS: METERING

Product Description

Standard end power feed units connect to the end of the Busway. Factory assembled unit consists of a $18.5 \times 24 \times 12$ in. (470 $\times 610 \times 305$ mm) steel junction box, with removable sides, connected to a 14 inch (356mm) section of Busway. The assembly includes ground lugs for wires up to 350MCM and connection lugs that can handle up to (2) 600MCM wires (CU) or (2) 600MCM wires (AL). Reverse end feed units are for connection to the opposite end of the busway section (polarizing strip faces to right as viewed from end of unit).

Integral CPM installed in the end feed provides power monitoring and alarm capabilities. Nuisance tripping may be avoided using the current information to protect against overloading phases. The monitors also assist in the continuous challenge to balance the three phase loads. An automated email will be sent at 80% of full load as a warning to the user. This level may be changed in the field using the integrated webpage.

 End Feed Meter Options:

 M41
 WiFi, \leq 415V Y, \leq 240V Δ

 M43
 No WiFi, \leq 415V Y, \leq 240V Δ

 M45
 WiFi, 480V Y, 400V Δ

 M47
 No WiFi, 480V Y, 400V Δ

 $Y = wye, \Delta = delta$

*For additional information on metering options, and for metering accessory options such as IR Windows & Angled Display please visit the separate Metering document found at downloads.uecorp.com/starline.



* The above arrows show how to determine your meter location on an end feed (*Refer to option* 9. Lid Orientation on pg. 4.41 End Feed Units: Product Numbers)

Examples:

S С Т

UF800T5C4R-SRLL-0102P-BLK0-M47S1 = US, end Feed, 800 amps, T5, Copper conductor, 3 phase plus neutral, Reversed polarization- Std lugs, standard box, Right lid orientation, Circular IR window + angled meter lid, left accessory location- 1 ft. 2 in., access Panels- painted Black, no tape marking- M47 meter, Standard options, LLD- standard, milivolt

800T5 Systems

END FEED UNITS: PRODUCT NUMBERS

U 1. System Product Type Reduct Trame Reduct Trame Reduct Frame Reduct Subset Reduct Sub	S N S N - O1002 P 10. 11. Accessories - 0.102 P 13. 11. Accessories Cocessories - 12. Straight Busway 11. Accessories Cocessories - 12. Straight Busway M41 S 1 1 - - Optional * *16. *17. *18. System configuration *<
1. System (standard of measure) U U.S. M Metric 2. Product Type (section component) F End Feed	11. Accessories Location (viewed from the terminal, the side with accessory) N None (N/A) T Top L Left R Right F Front
3. Product Frame (maximum amperage) 800 800 amps	12. Straight Length (length of section)010214 in (for U.S.)M035.35 meters (for Metric)For other lengths, consult the factory
4. Compatibility (trame compatibility) T5 T5 systems (with limiting strip) 5. Material (busbar material)	13. Busway Access (how plugs access the busway)SShort shuttersLLong shuttersB"Beginning" only longE"Extended" (Short + 4")PAccess Panels
 Copper 6. Neutral/Ground Busbar (size of neutral busbar and/or ground) 4 3 Phase plus Neutral G 3 Phase plus Neutral plus Internal Ground Conductor 	*14. Paint Color (allows painting of the busway housing) 000 None RED Paint UEC Red BLK Paint UEC Black BLU Paint UEC Blue WHT Paint UEC White
7. Polarization (orientation of section for mating purposes) S Standard R Reversed	**RAL system can also be used; reference page 4.42 *15. Tape Marking (allows colored tape on the polarizing strip side of busway bousing)
8. Lug/Box Options (choice of standard/double/bolt lugs and box size)	0None6Tape UEC Red3Tape UEC Black7Tape UEC Blue4Tape UEC White
9. Lid Orientation (viewed from the terminal, the side with meter) N None (N/A) T Top	*16. Meter Release <i>(M40 Series Meters)</i> M41 WiFi, ≤415V Y, ≤240V Δ M45 WiFi, 480V Y, 400V Δ M43 No WiFi, ≤415V Y, ≤240V Δ M47 No WiFi, 480V Y, 400V Δ
R Right F Front 10. Accessories Package (optional accessories for feed units) S Standard R IR window - Rectangular C IR window - circular A Angled meter lid T IR (rect.) + angled lid L IR (circ.) + angled lid	 *17. M40 Options (choose from a 4.1" display, measured neutral, and/or an audible alarm) S Standard F Featured (D+A) D Display E Enhanced (N+A) N (Measured) Neutral P Professional (D+N) A Audible alarm U Ultimate (D+N+A)
	 18. System Configuration and C1 Type (line-line or line-neutral and wye or delta systems) 1 LLD - Standard, milivolt K LLD - SC, 5A 2 LLY - Standard, milivolt L LLY - SC, 5A 3 LNY - Standard, milivolt M LNY - SC, 5A

R BUSWAY TRACK



RAL Colors

1st Character



2nd Character		
0	100	
1	101	
2	102	
3	103	
4	200	
5	201	
А	300	
В	301	
С	302	
D	303	
E	400	
F	401	
G	500	
Н	501	
J	502	
К	600	
L	601	
М	602	
Ν	603	
Р	700	
Q	701	
R	702	
S	703	
Т	704	
U	800	
V	801	
W	802	
Х	900	
Y	901	
Z	902	

3rd Character

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Example:				
P B 2	=	Paint RAL 3012		



ACCESSORIES: SUPPORT HARDWARE

Threaded Rod

For mounting to 1/2 - 13 threaded rod. Twistin design. Can be inserted anywhere along the top full-access slot of busway. Maximum hanger support spacing is every 10 ft (3m). Part Number U.S: UBRHT5-1 Metric: MBRHT5-M12

Available in plain zinc or black (-BLK)

> *Weight* .3 lb (.14 kg)



Standard

For mounting to strut or other flat surfaces. Twist-in design allows inserting anywhere along the top full-access slot on the busway. Hanger support is required every 10 ft (3m) maximum.

Part Number U.S: UBHT5-1 Metric: MBHT5-M12

Available in plain zinc or black (-BLK)

> *Weight* .2 lb (.09 kg)



Raised Mounting Bracket

For mounting the busway horizontally (with access slot facing to the side) for under floor applications.

Part Number U.S: URFBT5-2 Metric: MRFBT5-2

Available in plain zinc or black (-BLK)

> *Weight* .2 lb (.09 kg)



Side Mount Brackets

Mounted to vertical supports.

Part Number U.S: UBSST5-1 Metric: MBSST5-12

Available in plain zinc or black (-BLK)

> *Weight* .2 lb (.09 kg)





ACCESSORIES: SUPPORT HARDWARE

Seismic Brackets

For mounting to 1/2 - 13 threaded rod with extra cross horizontal support.

Part Number U.S: USBT5-4

Available in plain zinc or black (-BLK)



Recessed Suspended Ceilings

For hanging busway into a recessed ceiling.

*Hanger bolt must be ordered separately

Part Numbers

(for 250 amp systems): SRM250T5-1

(for 400 amp systems): SRM400T5-1

(for 800 amp systems): SRM800T5-1

Available in plain zinc or black (-BLK)





SRM800T5-1



ACCESSORIES: SUPPORT HARDWARE

Universal Server Cabinet Mounting Brackets

The Universal Server Cabinet Mounting Brackets are designed with generous 3/8" (9.5mm) wide through slots to mount directly onto virtually any server cabinet.

These accessories quickly and easily provide a flexible busway mounting solution on top of server cabinets, eliminating the need for threaded rod and strut support from the ceiling.

The brackets are adjustable in height, can be ordered in virtually any color, and can be positioned at any depth on the server cabinet. Moreover, they can accommodate up to (2) runs of busway.

Hanger Bolt Included – UBHT5-1 (or MBHT5-1)

MATERIAL:	Galvanneal Steel
HEIGHT:	17.68" (449mm) Min
	23.75" (603mm) Max

Maximum Spacing: Every 10' (3m) per run





Part Number U.S: UUSCMB-(X)-(D)-(C) Metric: MUSCMB-(X)-(D)-(C)

- X = System (T5)
- D = Depth (30"[762mm], 36"[914mm], 42"[1067mm], 48"[1219mm] or custom length)
- C = Color (1, 3, 4, 6, 7)

Examples:

<u>UUSCMB-T5-36-4</u> = US, Universal Server Cabinet Mounting Bracket-T5 system-36 inch depth-white <u>MUSCMB-T5-1219-7</u> = Metric, Universal Server Cabinet Mounting Bracket-T5 system-1219mm depth-blue

C: Color (1, 3, 4, 6, 7)

- 1- Anodized Silver
- 3- Black
- 4- White
- 6- Red
- 7- Blue

*consult factory for custom colors



ACCESSORIES: CONNECTION HARDWARE

Joint Kit

For the connection of adjacent busway sections. One kit is required at each joint. Each kit is comprised of a housing coupler pair and bus connector set.

Bus Connector: copper blades secured to an insulating mounting plate. This makes the electrical connection between sections.

Housing Couplers: consists of two 12-screw couplers-one for the top and one for the bottom. These make the mechanical connection between busway sections.

*Installation tool is required (see below)

Part Numbers

(for 250 amp systems): SJK250T5-1 SJK250T5G-1 SJK250T5N-1 SJK250T5F-1

(for 400 amp systems) SJK400T5-1 SJK400T5G-1 SJK400T5N-1 SJK400T5F-1

(for 800 amp systems) SJK800T5-1 SJK800GT5-1

Available in all standard and RAL colors



Installation Tool

An installation tool is used to install the bus connector between two adjacent sections of busway. A joint kit, which is comprised of two housing couplers and a bus connector set, is required at every joint.

Busway sections are butted together and the top housing coupler is installed. The bus connector is inserted, centered and seated in the slot of the busway. The installation tool is inserted into the jointed intersection and rotated 90 degrees to form a spring-loaded, secure electrical connection. The housing coupler is then positioned over the bottom joint and tightened.

Part Number ST5IT

No available colors

Weight 3.1 lb (1.4 kg)





ACCESSORIES: CONNECTION HARDWARE



Optional Closure Strip

The Closure Strip snaps into the bottom access slot of T5 housing to close off access to power around the installed plug-in units. It is normally shipped in 10 ft (3m) sections.

The Closure Strip is offered in both PVC material and aluminum.

The aluminum Closure Strip affixes with an adhesive backing to the access slot of T5 housing.

Part Number SCST5-1

Aluminum closure strip: SCST5-1-AL

Available in all standard colors





ADD-ON ACCESSORIES: DATA CHANNEL

Data Channel Cover

The Data Channel Cover is used to hold cables into position and hide them from view. It can also be used for a variety of busway identification applications, and it is available in many different colors.

The Data Channel Cover is available in lengths of 10 ft. (3m).

Please contact sales to order the quantity needed.

Part Number U.S: UDCCT5-10-SIL (silver) UDCCT5-10-BLK (black) UDCCT5-10-GRN (green) UDCCT5-10-YEL (yellow) UDCCT5-10-W (white) UDCCT5-10-RED (red) UDCCT5-10-BLU (blue)

Metric: MDCCT5-3-SIL (silver) MDCCT5-3-BLK (black) MDCCT5-3-GRN (green) MDCCT5-3-YEL (yellow) MDCCT5-3-W (white) MDCCT5-3-RED (red) MDCCT5-3-BLU (blue)



Hinged Wire Way

The Hinged Wire Way provides a seamless, integrated cable management solution that allows users to easily route cabling while leaving it easily accessible and identifiable. Discreet slots located every 6 inches (150mm) provide built-in accessibility for cable drops.

The Hinged Wire Way is available in lengths up to 10 ft. (3m).

Please contact sales to order the quantity and length needed.

Part Number U.S: UHWWT5-10 Metric: MHWWT5-3

Available in gray only





ADD-ON ACCESSORIES: DATA CHANNEL

Data Cable Strap

The Data Cable Strap provides a seamless, integrated cable management solution that allows users to easily route cabling while leaving it easily accessible and identifiable. The 12 inch (305mm) adjustable velcro strap can accommodate a wide variety and quantity of cables, and can be easily positioned along the busway to accommodate various cable management needs. Part Number SVCST5-12

No available colors



Multi Use Mounting Bracket

The Multi Use Mounting Bracket is an all-purpose bracket that easily attaches to any position on the busway. The bracket comes with 1/4 inch (6.5mm) slotted holes throughout to allow for the attachment of a wide variety of accessories. Each bracket is capable of supporting a load of 25 lbs (12 kg).

The Multi Use Mounting Bracket is commonly used for suspending compressed air lines, tap box cable management and suspending accessory lighting.

Part Number SMMBT5-1

Available in plain zinc or black (-BLK)





SERVICES

Our trained and authorized factory representatives will provide unmatched on-site services whenever you need them. Our complete line of services include:

- 24/7 Emergency Service and Phone Support
- On-site Training
- Installation Inspection, Commissioning and Certification
- Load Bank Testing
- IR Scanning and other Ongoing Support
- Extended Warranty Programs
- Meter Programming, Commissioning and Maintenance

With over 25 years of experience in the busway market, Starline has the knowledge and expertise to ensure that your Track Busway system is functioning at a best-inclass level.

We are currently offering the following services:

On-Site Support & System Startup

Training

Plan to have a Starline service technician on-site prior to installation to train the contractor on installation best practices as well as proper operation and safety techniques while using the product. The factory representative will conduct an indepth training program which is sure to save you time and money throughout the

installation process and operational lifetime of the busway system.

Commissioning & Certification

A Starline service technician will perform a comprehensive visual inspection of all joint connections, lug connections, plug-in units and supports. Any and all issues will be immediately addressed with the installation company. Once the results are satisfactory, a certification report will be generated and distributed, increasing the standard factory warranty from 12 months to 18 months.

Load Bank Testing

Starline Services also offers load bank testing for the entire power chain at the industry's most competitive rates. Once testing is successfully completed, a results and certification report will be submitted, extending the factory warranty on the tested busway system from one to two years.

Ongoing Support Plans

Service	Silver	Gold
1 trip per year	Х	
2 trips per year		Х
Thermal imaging of all plug-in units		Х
Thermal imaging of all Busway joints		Х
Thermal imaging of all end feed units		Х
Fully executed thermography report		Х
Extended warranty throughout life of contract	Х	Х
Parts and freight covered on all warranty claims		Х
Update firmware and verify all Starline CPM products		Х
Online portal to view test reports and documentation		Х
24/7 emergency support hotline		Х



SERVICES (cont'd)

Metering Services

A trained Starline service technician is always available to help you with the start-up, programming, integration and verification of your Starline CPM metering devices. End-users are provided a full meter report and guide to ensure ease of use once our technician has completed the job. The Starline service technician will provide training while on-site pertaining to meter operation and care, programming and use of the CPM Mobile App.

Meter Upgrade

Thinking about upgrading your unmetered components? Is it time to replace older metering products with something new and improved? Starline offers a full-service meter retrofit program for any type of plug-in or end feed unit. You no longer have to replace an entire module just to add a meter. Save money and downtime with the Starline CPM upgrade program.

Warranty Programs

Standard Warranty

Starline Track Busway is proud to stand behind its American made, best-in-class busway products. Every Starline product is backed by a one year factory warranty that covers replacement parts and freight on components that are found to have defects related to shipping, workmanship or material.

Extended Warranty

To ensure less downtime and unmatched field service support, be sure to purchase one of Starline's customizable extended warranty programs. You can choose the length of your warranty and whether to add a yearly Ongoing Support visit as a standard. Replacement parts are guaranteed for all parts covered under warranty and will be quickly delivered to the site.

*All warranties are subject to the proper commissioning and certification of the Track Busway system performed by a Starline service technician or factory representative. Systems that had previously been in operation and have surpassed the factory warranty term are subject to a visual inspection and certification before an extended warranty can be applied. Please contact the factory for further details. Universal Electric Corporation, manufacturer of Starline Track Busway, has been a global leader in power distribution since 1924. The company's focus on innovation continues to pave the way for safer, more flexible and reliable electrical power distribution systems. Other Starline products include the Critical Power Monitor (CPM), which works in conjunction with Starline Track Busway to improve energy efficiency; Plug-In Raceway, the flexible, wall-mounted power distribution system; and DC Solutions, the revolutionary 380V direct current alternative for data centers.



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While every effort has been made to ensure the accuracy of all information, Universal Electric Corporation does not accept liability for any errors or omissions and reserves the right to change information and descriptions of listed services and products.

Most STARLINE systems and most standard components are UL, CE or ETL listed.

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