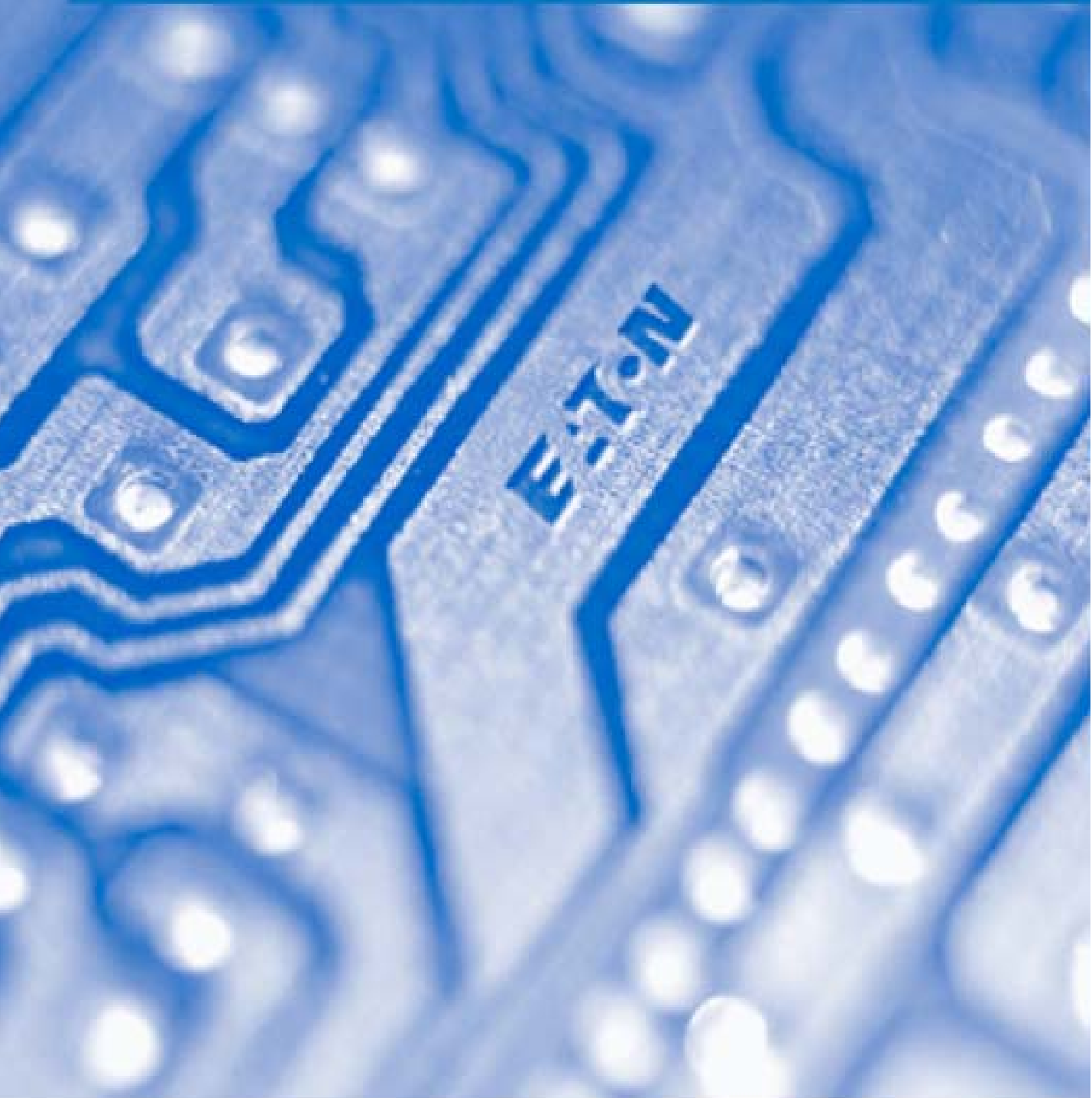


# CTO Configuration Guide



## Eaton<sup>®</sup> Ferrups<sup>®</sup> FE 60Hz Tower Series



*Powering Business Worldwide*

FER01GDE  
March 1, 2010

# Table of Contents

Ferrups CTO Worksheet.....2

Ferrups 60Hz Tower Series Quick Reference Sheet.....3

**Ferrups CTO Details**

FE500VA..... 500-1  
FE700VA..... 700-1  
FE850VA..... 850-1  
FE1.15kVA..... 1.15k-1  
FE1.4kVA..... 1.4k-1  
FE1.8kVA..... 1.8k-1  
FE2.1kVA..... 2.1k-1  
FE3.1kVA..... 3.1k-1  
FE4.3kVA..... 4.3k-1  
FE5.3kVA..... 5.3k-1  
FE7kVA..... 7k-1  
FE10kVA..... 10k-1  
FE12.5kVA..... 12.5k-1  
FE18kVA..... 18k-1

**Additional Ferrups External Options.....50**

- Voltage Matching Transformers
- Caster Kits
- Connectivity Options
- Software

## Configuring Your FERRUPS UPS

FERRUPS must be ordered using a Configure To Order (CTO) Number that reflects the cabinet style, VA rating, voltages, runtime, and other options pertaining to the FERRUPS configuration. As you select the options needed, they will become part of the CTO number.

Sample CTO Number: FA000BB2A0A0A0A.

External battery packs, bypass switches and other external options should be ordered as separate items.

The UPS CTO Worksheet										
	UPS CTO Order Code						List Price	Discount	Net Price	
Base Unit	F_									
Input / Output Voltage										
Battery and Battery Charger										
Internal Maintenance Bypass Switch										
Input Connection										
Output Connection										
Internal Options										
Complete UPS CTO Number	F_									
UPS Subtotal										
External Battery Pack										
Battery Pack Selected:										
Other External Battery Options Selected:										
External Maintenance Bypass Switch										
External Maintenance Bypass Switch Selected:										
Other External Options										
<b>Note:</b> Eaton offers a complete line of <b>Power Distribution Units (PDUs)</b> . Please contact your sales representative or visit our websites, <a href="http://powerquality.eaton.com">powerquality.eaton.com</a> and <a href="http://www.epdu.com">www.epdu.com</a> , for details.										
Sub Total										
								Freight		
								Insurance		
								Tax/Duty		
								Quote Total		

# Ferrups 60Hz Tower Series Quick Reference

Note: **Not all options are available on each base unit.** Options restrictions exist. Please consult information in this guide for further detail.

## FG 0 0 0 C C3A0A0A0 A

Base Unit (1-2)	
FA =	500VA
FB =	700VA
FC =	850VA
FD =	1.15kVA
FE =	1.4kVA
FF =	1.8kVA
FG =	2.1kVA
FH =	3.1kVA
FI =	4.3kVA
<b>FJ =</b>	<b>5.3kVA</b>
FK =	7kVA
FL =	10kVA
FM =	12.5kVA
FN =	18kVA

Input/Output Voltage (3)	
0 =	120V in; 120V out
1 =	208V in; 120/208V out
<b>2 =</b>	<b>208V in; 120/240V out</b>
3 =	240V in; 120/240V out
4 =	220V in; 220V out
5 =	230V in; 230V out
6 =	240V in; 240V out
7 =	220V in; 127/220V out

Internal Bypass (5)	
0 =	None
<b>1 =</b>	<b>Make Before Break</b>
2 =	Break Before Make
<i>AS400 (I Series) contacts included with options 1 &amp; 2</i>	

Input (6)	
A =	Hardwired
B =	5-15P
C =	5-20P
D =	5-50P
E =	6-15P
F =	6-50P
G =	14-50P*
H =	L5-15P*
I =	L5-20P
<b>J =</b>	<b>L5-30P</b>
K =	L6-20P
L =	L6-30P
M =	L14-30P
O =	IEC320
S =	IEC309 16A

Output (7-14)		
Type	Qty	
A=	None- HW	0
B=	5-15R Duplex	1
C=	5-20R Duplex	2
D=	6-15R Duplex	3
E=	6-20R Duplex	4
G=	L5-15R Duplex	6
H=	L5-20R	7
I=	L5-30R	8
J=	L6-15R Duplex	
K=	L6-20R	
<b>L=</b>	<b>L6-30R</b>	
M=	L14-20R	
N=	L14-30R	
V=	15A/ 1P CB	
W=	15A/ 2P CB	
X=	20A/ 1P CB	
Y=	20A/ 2P CB	
Z=	30A/ 1P CB	
2=	30A/ 2P CB	

*Enter receptacle types alphabetically, followed by the qty desired, and complete necessary digits with "A0"*

Battery / Battery Charger (4)	
<b>0 =</b>	<b>Standard Battery/ Standard Charger</b>
1 =	ERT Internal Battery/ Standard Charger
2 =	ERT Internal Battery/ Standard Charger
3 =	Setup for Internal w/o Battery/ Std Charger
4 =	External Battery/ Standard Charger
5 =	External Battery/ 10A Charger
6 =	External Battery/ 15A Charger
7 =	External Battery/ 20A Charger

Internal Options (15)	
A =	None
B =	AVR/ DVR (recommended for PFC loads)
D =	Anchor Kit for structural slab floor
E =	Anchor Kit for raised of access floor
I =	AVR/DVR with Anchor kit for slab
J =	AVR/DVR with Anchor kit for access floor
Q =	Neutral to ground bond removal (shipboard)
R =	Neutral to ground removed & AVR/DVR

\* Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

# FE500VA CTO Configuration Guide

## Ferrups 500VA 60Hz Tower General Specifications

Capacity:	500VA/ 350W	Dimensions:	12" x 10" x 21.25"
Input Voltage:	120V	(HxWxD)	305mm x 255mm x 540mm
Output Voltage:	120V	Weight (with batteries <sup>1</sup> ):	54lb / 24.5kg
		Weight (without batteries):	44lb / 20kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE500VA, 60 Hz Tower	FA	\$984

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$0

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
9 minute internal (25m half load)	standard	0	\$134
20 minute internal (56m half load)	standard	1	\$204
75 min internal (212m half load)	standard	2	\$353
Set up for internal (less batteries)	standard	3	\$42
set up for external battery pack <sup>1</sup>	standard	4	\$41
set up for external battery pack <sup>1</sup>	15 amp internal upgrade <sup>2</sup>	6	\$456

<sup>1</sup> Includes External Battery Connector. Order desired external battery pack as a separate line. See page 500-2.

<sup>2</sup> Required for external battery packs 24me and 25me

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option available <sup>1</sup>	0	\$0

<sup>1</sup> External maintenance bypass switch available for hardwired systems. Order desired maintenance bypass switch as a separate line item on your order. See page 500-2.

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
120 volt	Hardwired <sup>1</sup>	A	\$41
	5-15P <sup>2</sup>	B	\$ 0
	L5-15P <sup>2,3</sup>	H	\$15

<sup>1</sup> Hardwired input requires hardwired output

<sup>2</sup> NEMA line cord requires NEMA receptacles

<sup>3</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

# FE500VA CTO Configuration Guide

Output Connection			Digits 7-14
Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.			
Output Voltage Required	Output Connection	CTO Order Code	Option Price
120 volt	Hardwired <sup>1</sup>	A0A0A0A0	\$0
	(2) 5-15R Duplex	B2A0A0A0	\$0
	(1) 5-15R Duplex (1) L5-15R Duplex	B1G1A0A0	\$75
	(2) L5-15R Duplex	G2A0A0A0	\$150

<sup>1</sup> Hardwired output requires hardwired input

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
No other option	A	\$0
AVR (recommended when loads contain PFC power supplies)	B	\$85
Anchor Kit for structural slab floor <sup>1</sup>	D	\$170
Anchor Kit for raised or access floor <sup>1</sup>	E	\$170
AVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$255
AVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$255
Neutral to Ground bond removal (For Shipboard Use)	Q	\$25
Neutral to Ground bond removal and AVR (For Shipboard Use)	R	\$110

<sup>1</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
3h40m/10h22m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	21me	\$1,067
7h50m/22h09m	15 Amp Battery Charger Upgrade <sup>1</sup>	24me	\$2,228
8h45m/24h44m	15 Amp Battery Charger Upgrade <sup>1</sup>	25me	\$2,470

<sup>1</sup>Order battery charger as part of UPS. See page 500-1.

External Battery Accessories		
Option	Order Number	List Price
External Battery Connector Extension (72") Also recommended for third-party external battery configurations.	BCS-0108	\$50

External Maintenance Bypass Switches <sup>1</sup> (Recommended for hardwired units)			
UPS Input Voltage	Switch Type	Order Number	List Price
120	MBB (Make Before Break)	BPE01MBB1A	\$441
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$441

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.

# FE700VA CTO Configuration Guide

## Ferrups 700VA 60Hz Tower General Specifications

Capacity:	700VA/ 500W	Dimensions:	12" x 10" x 21.25"
Input Voltage:	120V	(HxWxD)	305mm x 255mm x 540mm
Output Voltage:	120V	Weight (with batteries <sup>1</sup> ):	62lb / 28kg
		Weight (without batteries):	46lb / 21kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE700VA, 60 Hz Tower	FB	\$1108

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$0

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
11 minute internal (31m half load)	standard	0	\$145
16 minute internal (44m half load)	standard	1	\$283
45 min internal (100m half load)	standard	2	\$351
Set up for internal (less batteries)	standard	3	\$37
set up for external battery pack <sup>1</sup>	standard	4	\$38
set up for external battery pack <sup>1</sup>	15 amp internal upgrade <sup>2</sup>	6	\$456

<sup>1</sup> Includes External Battery Connector. Order desired external battery pack as a separate line. See page 700-2.

<sup>2</sup> Required for external battery packs 24me and 25me

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option available <sup>1</sup>	0	\$0

<sup>1</sup> External maintenance bypass switch available for hardwired systems. Order desired maintenance bypass switch as a separate line item on your order. See page 700-2.

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
120 volt	Hardwired <sup>1</sup>	A	\$41
	5-15P <sup>2</sup>	B	\$ 0
	L5-15P <sup>2,3</sup>	H	\$15

<sup>1</sup> Hardwired input requires hardwired output

<sup>2</sup> NEMA line cord requires NEMA receptacles

<sup>3</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

# FE700VA CTO Configuration Guide

Output Connection			Digits 7-14
Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.			
Output Voltage Required	Output Connection	CTO Order Code	Option Price
120 volt	Hardwired <sup>1</sup>	A0A0A0A0	\$0
	(2) 5-15R Duplex	B2A0A0A0	\$0
	(1) 5-15R Duplex (1) L5-15R Duplex	B1G1A0A0	\$75
	(2) L5-15R Duplex	G2A0A0A0	\$150

<sup>1</sup> Hardwired output requires hardwired input

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
No other option	A	\$0
AVR (recommended when loads contain PFC power supplies)	B	\$85
Anchor Kit for structural slab floor <sup>1</sup>	D	\$170
Anchor Kit for raised or access floor <sup>1</sup>	E	\$170
AVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$255
AVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$255
Neutral to Ground bond removal (For Shipboard Use)	Q	\$25
Neutral to Ground bond removal and AVR (For Shipboard Use)	R	\$110

<sup>1</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
2h10m/6h07m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	21me	\$1,067
5h40m/16h	15 Amp Battery Charger Upgrade <sup>1</sup>	24me	\$2,228
6h30m/18h23m	15 Amp Battery Charger Upgrade <sup>1</sup>	25me	\$2,470

<sup>1</sup>Order battery charger as part of UPS. See page 700-1.

External Battery Accessories		
Option	Order Number	List Price
External Battery Connector Extension (72") Also recommended for third-party external battery configurations.	BCS-0108	\$50

External Maintenance Bypass Switches <sup>1</sup> (Recommended for hardwired units)			
UPS Input Voltage	Switch Type	Order Number	List Price
120	MBB (Make Before Break)	BPE01MBB1A	\$441
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$441

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.



# FE850VA CTO Configuration Guide

## Ferrups 850VA 60Hz Tower General Specifications

Capacity:	850VA/ 600W	Dimensions:	12" x 10" x 21.25"
Input Voltage:	120, 208, 220, 240 V	(HxWxD)	305mm x 255mm x 540mm
Output Voltage:	120, 120/208, 120/240, 240V	Weight (with batteries <sup>1</sup> ):	67lb / 30kg
		Weight (without batteries):	51lb / 23kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE850VA, 60 Hz Tower	FC	\$1,236

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$0
208	120/208	1	\$130
208	120/240	2	\$130
240	120/240	3	\$130
240	240	6	\$130

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
9 minute internal (25m half load)	standard	0	\$172
38 min internal (107m half load)	standard	1	\$286
Set up for internal (less batteries)	standard	3	\$37
set up for external battery pack <sup>1</sup>	standard	4	\$31
set up for external battery pack <sup>1</sup>	15 amp internal upgrade <sup>2</sup>	6	\$456

<sup>1</sup> Includes External Battery Connector. Order desired external battery pack as a separate line.  
See page 850-3.

<sup>2</sup> Required for external battery packs 24me and 25me

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option available <sup>1</sup>	0	\$0

<sup>1</sup> External maintenance bypass switch available for hardwired systems.  
Order desired maintenance bypass switch as a separate line item on your order. See page 850-3.

# FE850VA CTO Configuration Guide

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired <sup>1</sup>	A	\$41
120 volt	5-15P <sup>2</sup>	B	\$ 0
	L5-15P <sup>2,3</sup>	H	\$15
208, 220, 240	6-15P <sup>2</sup>	E	\$ 0

<sup>1</sup> Hardwired input requires hardwired output

<sup>2</sup> NEMA line cord requires NEMA receptacles

<sup>3</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

Output Connection			Digits 7-14
Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.			
Output Voltage Required	Output Connection	CTO Order Code	Option Price
Any	Hardwired <sup>1</sup>	A0A0A0A0	\$0
120 volt only	(2) 5-15R Duplex	B2A0A0A0	\$0
	(2) L5-15R Duplex	G2A0A0A0	\$150
208, 220, 240 only	(2) 6-15R Duplex	D2A0A0A0	\$150
Mixed Voltages 120/208 or 120/240	(1) 5-15R Duplex (1) 6-15R Duplex	B1D1A0A0	\$75

<sup>1</sup> Hardwired output requires hardwired input

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
No other option	A	\$0
AVR (recommended when loads contain PFC power supplies)	B	\$85
Anchor Kit for structural slab floor <sup>1</sup>	D	\$170
Anchor Kit for raised or access floor <sup>1</sup>	E	\$170
AVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$255
AVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$255
Neutral to Ground bond removal (For Shipboard Use)	Q	\$25
Neutral to Ground bond removal and AVR (For Shipboard Use)	R	\$110

<sup>1</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

# FE850VA CTO Configuration Guide

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

### External Battery Packs

Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
1h40m/4h42m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	21me	\$1,067
3h50m/10h50m	15 Amp Battery Charger Upgrade <sup>1</sup>	24me	\$2,228
4h10m/11h47m	15 Amp Battery Charger Upgrade <sup>1</sup>	25me	\$2,470

<sup>1</sup>Order battery charger as part of UPS. See page 850-1.

### External Battery Accessories

Option	Order Number	List Price
External Battery Connector Extension (72") Also recommended for third-party external battery configurations.	BCS-0108	\$50

### External Maintenance Bypass Switches<sup>1</sup> (Recommended for hardwired units)

UPS Input Voltage	Switch Type	Order Number	List Price
120	MBB (Make Before Break)	BPE01MBB1A	\$441
	MBB with AS/400 (iSeries) Option	BPE01MBBAS1A	\$441
208	BBM (Break Before Make)	BPE02BBM1A	\$604
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$604
240	MBB (Make Before Break)	BPE02MBB1A	\$604
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$604

<sup>1</sup>Bypass Switch must be mounted on the wall near the UPS.

# FE1.15kVA CTO Configuration Guide

## Ferrups 1.15kVA 60Hz Tower General Specifications

Capacity:	1.15kVA/ 800W	Dimensions:	15.1" x 15.2" x 20.2"
Input Voltage:	120, 208, 220, 240 V	(HxWxD)	385mm x 390mm x 515mm
Output Voltage:	120, 120/208, 120/240, 240, 127/240 V	Weight (with batteries <sup>1</sup> ):	102lb / 46kg
		Weight (without batteries):	92lb / 42kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE1.15kVA, 60 Hz Tower	FD	\$1,659

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$0
208	120/208	1	\$130
208	120/240	2	\$130
240	120/240	3	\$130
240	240 (International Models)	6	\$130
220	127/220	7	\$130

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
8 minute internal (22m half load)	standard	0	\$267
30 minute internal (85m half load)	standard	1	\$562
70 min internal (197m half load)	standard	2	\$660
Set up for internal (less batteries)	standard	3	\$83
set up for external battery pack <sup>1</sup>	standard	4	\$39
set up for external battery pack <sup>1</sup>	15 amp internal upgrade <sup>2</sup>	6	\$587

<sup>1</sup> Includes External Battery Connector. Order desired external battery pack as a separate line.

See page 1.15k-3.

<sup>2</sup> Required for external battery pack 10me

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option available <sup>1</sup>	0	\$0

<sup>1</sup> External maintenance bypass switch available for hardwired systems. Order desired maintenance bypass switch as a separate line item on your order. See page 1.15k-3.

# FE1.15kVA CTO Configuration Guide

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired <sup>1</sup>	A	\$41
120 volt	5-15P <sup>2</sup>	B	\$ 0
	5-20P <sup>3</sup>	C	\$25 <sup>3</sup>
208, 220, 240	6-15P	E	\$ 0
	L6-20P	K	\$60
	L6-30P	L	\$60

<sup>1</sup> Hardwired input requires hardwired output

<sup>2</sup> Cannot be used with 15 Amp battery charger

<sup>3</sup> 5-20P option price is \$0 if 15 Amp battery charger is selected

Output Connection	Digits 7-14
-------------------	-------------

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Three output slots available when a NEMA line cord is selected
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all four receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection	CTO Order Code		Option Price per Panel	
		Type	Qty		
Any	Hardwired <sup>1</sup>	A	___	\$0	
120 volt Choose up to three panels	5-15R Duplex	B	___	\$0	
	5-20R Duplex (UL)	C	___	\$50	
208, 220, or 240 volt Choose up to three panels	6-15R Duplex	D	___	\$75	
	6-20R Duplex	E	___	\$75	
120 volt Choose up to three panels	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208, 220, or 240 volt Choose up to three panels	L6-15R Duplex	J	___	\$75	
	L6-20R	K	___	\$75	
	L6-30R	L	___	\$75	
120/240 volt Choose up to three panels	L14-20R	M	___	\$75	
	L14-30R	N	___	\$75	
Receptacle Output Connection CTO Order Code		__	__	__	A 0
Hardwire Output Connection CTO Order Code		A 0	A 0	A 0	A 0

<sup>1</sup> Hardwired output requires hardwired input

# FE1.15kVA CTO Configuration Guide

Internal Options		Digit 15
Option	CTO Order Code	Option Price
No other option	A	\$0
AVR (recommended when loads contain PFC power supplies)	B	\$85
Anchor Kit for structural slab floor <sup>1</sup>	D	\$170
Anchor Kit for raised or access floor <sup>1</sup>	E	\$170
AVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$255
AVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$255
Neutral to Ground bond removal (For Shipboard Use)	Q	\$25
Neutral to Ground bond removal and AVR (For Shipboard Use)	R	\$110

<sup>1</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

## External Battery Packs

Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
3h15m/9h11m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	8me	\$2,206
3h50m/10h50m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	9me	\$2,409
6h30m/18h23m	15 Amp Battery Charger Upgrade <sup>1</sup>	10me	\$4,140

<sup>1</sup>Order battery charger as part of UPS. See page 1.15k-1.

## External Battery Accessories

Option	Order Number	List Price
External Battery Connector Extension (72") Also recommended for third-party external battery configurations.	BCS-0108	\$50

## External Maintenance Bypass Switches<sup>1</sup> (Recommended for hardwired units)

UPS Input Voltage	Switch Type	Order Number	List Price
120	MBB (Make Before Break)	BPE01MBB1A	\$441
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$441
208, 220	BBM (Break Before Make)	BPE02BBM1A	\$604
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$604
240	MBB (Make Before Break)	BPE02MBB1A	\$604
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$604

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.

# FE1.4kVA CTO Configuration Guide

## Ferrups 1.4kVA 60Hz Tower General Specifications

Capacity:	1.4kVA/ 1.0kW	Dimensions:	15.1" x 15.2" x 20.2"
Input Voltage:	120, 208, 220, 240 V	(HxWxD)	385mm x 390mm x 515mm
Output Voltage:	120, 120/208, 120/240, 240, 127/240 V	Weight (with batteries <sup>1</sup> ):	122lb / 55kg
		Weight (without batteries):	106lb / 48kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE1.4kVA, 60 Hz Tower	FE	\$1832

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$0
208	120/208	1	\$130
208	120/240	2	\$130
240	120/240	3	\$130
240	240 (International Models)	6	\$130
220	127/220	7	\$130

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
11 minute internal (31m half load)	standard	0	\$249
22 minute internal (62m half load)	standard	1	\$516
45 min internal (127m half load)	standard	2	\$630
Set up for internal (less batteries)	standard	3	\$75
set up for external battery pack <sup>1</sup>	standard	4	\$17
set up for external battery pack <sup>1</sup>	15 amp internal upgrade <sup>2</sup>	6	\$565

<sup>1</sup> Includes External Battery Connector. Order desired external battery pack as a separate line. See page 1.4k-3.

<sup>2</sup> Required for external battery pack 10me

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option available <sup>1</sup>	0	\$0

<sup>1</sup> External maintenance bypass switch available for hardwired systems. Order desired maintenance bypass switch as a separate line item on your order. See page 1.4k-3.

# FE1.4kVA CTO Configuration Guide

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired <sup>1</sup>	A	\$41
120 volt	5-15P <sup>2</sup>	B	\$ 0
	5-20P <sup>3</sup>	C	\$25 <sup>3</sup>
208, 220, 240	6-15P	E	\$ 0
	L6-20P	K	\$60
	L6-30P	L	\$60

<sup>1</sup> Hardwired input requires hardwired output

<sup>2</sup> Cannot be used with 15 Amp battery charger

<sup>3</sup> 5-20P option price is \$0 if 15 Amp battery charger is selected

Output Connection	Digits 7-14
-------------------	-------------

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Three output slots available when a NEMA line cord is selected
- Two output slots available when an international line cord is selected.
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all four receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection	CTO Order Code		Option Price per Panel	
		Type	Qty		
Any	Hardwired <sup>1</sup>	A	0	\$0	
120 volt Choose up to three panels	5-15R Duplex	B	___	\$0	
	5-20R Duplex (UL)	C	___	\$50	
208, 220, or 240 volt Choose up to three panels	6-15R Duplex	D	___	\$75	
	6-20R Duplex	E	___	\$75	
120 volt Choose up to three panels	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208, 220, or 240 volt Choose up to three panels	L6-15R Duplex	J	___	\$75	
	L6-20R	K	___	\$75	
	L6-30R	L	___	\$75	
120/240 volt Choose up to three panels	L14-20R	M	___	\$75	
	L14-30R	N	___	\$75	
Receptacle Output Connection CTO Order Code		__	__	__	<u>A</u> <u>0</u>
Hardwire Output Connection CTO Order Code		<u>A</u> <u>0</u>	<u>A</u> <u>0</u>	<u>A</u> <u>0</u>	<u>A</u> <u>0</u>

<sup>1</sup> Hardwired output requires hardwired input



# FE1.4kVA CTO Configuration Guide

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
No other option	A	\$0
AVR (recommended when loads contain PFC power supplies)	B	\$85
Anchor Kit for structural slab floor <sup>1</sup>	D	\$170
Anchor Kit for raised or access floor <sup>1</sup>	E	\$170
AVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$255
AVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$255
Neutral to Ground bond removal (For Shipboard Use)	Q	\$25
Neutral to Ground bond removal and AVR (For Shipboard Use)	R	\$110

<sup>1</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
2h20m/6h35m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	8me	\$2,206
3h10m/8h57m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	9me	\$2,409
5h20m/15h5m	15 Amp Battery Charger Upgrade <sup>1</sup>	10me	\$4,142

<sup>1</sup>Order battery charger as part of UPS. See page 1.4k-1.

External Battery Accessories		
Option	Order Number	List Price
External Battery Connector Extension (72") Also recommended for third-party external battery configurations.	BCS-0108	\$50

External Maintenance Bypass Switches <sup>1</sup> (Recommended for hardwired units)			
UPS Input Voltage	Switch Type	Order Number	List Price
120	MBB (Make Before Break)	BPE01MBB1A	\$441
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$441
208, 220	BBM (Break Before Make)	BPE02BBM1A	\$604
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$604
240	MBB (Make Before Break)	BPE02MBB1A	\$604
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$604

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.

# FE1.8kVA CTO Configuration Guide

## Ferrups 1.8kVA 60Hz Tower General Specifications

Capacity:	1.8kVA/ 1.25kW	Dimensions:	21.2" x 15.25" x 22.9"
Input Voltage:	120, 208, 220, 240 V	(HxWxD)	540mm x 390mm x 585mm
Output Voltage:	120, 120/208, 120/240, 240, 127/240 V	Weight (with batteries <sup>1</sup> ):	176lb / 80kg
		Weight (without batteries):	120lb / 54kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE1.8kVA, 60 Hz Tower	FF	\$2,481

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$0
208	120/208	1	\$145
208	120/240	2	\$145
240	120/240	3	\$145
240	240 (International Models)	6	\$145
220	127/220	7	\$145

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
11 minute internal (30m half load)	standard	0	\$615
86 min internal (206m half load)	standard	1	\$1,136
Set up for internal (less batteries)	standard	3	\$210
set up for external battery pack <sup>1</sup>	standard	4	\$88
set up for external battery pack <sup>1</sup>	15 amp internal upgrade <sup>2</sup>	6	\$669

<sup>1</sup> Includes External Battery Connector. Order desired external battery pack as a separate line.

See page 1.8k-4.

<sup>2</sup> Required for external battery packs 12me – 15me

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option available <sup>1</sup>	0	\$0

<sup>1</sup> External maintenance bypass switch available for hardwired systems.

Order desired maintenance bypass switch as a separate line item on your order. See page 1.8k-4.

# FE1.8kVA CTO Configuration Guide

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired <sup>1</sup>	A	\$41
120 volt	5-20P <sup>2</sup>	C	\$ 0
	5-50P <sup>3</sup>	D	\$90 <sup>3</sup>
	L5-20P <sup>2</sup>	I	\$25
	L5-30P <sup>2</sup>	J	\$60
208, 220, 240	6-15P <sup>2</sup>	E	\$ 0
	L6-20P <sup>4</sup>	K	\$60
	L6-30P	L	\$60

<sup>1</sup> Hardwired input requires hardwired output

<sup>2</sup> Cannot be used with 15 Amp battery charger

<sup>3</sup> 5-50P option price is \$0 if 15 Amp battery charger is selected. Cannot be used with 86 minute internal runtime.

<sup>4</sup> L6-20P option price is \$0 if 15 Amp battery charger is selected.

Output Connection	Digits 7-14
-------------------	-------------

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Three output slots available when a NEMA line cord is selected
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all four receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection	CTO Order Code		Option Price per Panel	
		Type	Qty		
Any	Hardwired <sup>1</sup>	A	___	\$0	
120 volt Choose up to three panels	5-15R Duplex	B	___	\$50	
	5-20R Duplex (UL) <sup>2</sup>	C	___	\$50 <sup>2</sup>	
208, 220, or 240 volt Choose up to three panels	6-15R Duplex	D	___	\$75	
	6-20R Duplex	E	___	\$75	
120 volt Choose up to three panels	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208, 220, or 240 volt Choose up to three panels	L6-15R Duplex	J	___	\$75	
	L6-20R	K	___	\$75	
	L6-30R	L	___	\$75	
120/240 volt Choose up to three panels	L14-20R	M	___	\$75	
	L14-30R	N	___	\$75	
Receptacle Output Connection CTO Order Code		__	__	__	A 0
Hardwire Output Connection CTO Order Code		A 0	A 0	A 0	A 0

<sup>1</sup> Hardwired output requires hardwired input

<sup>2</sup> If three 5-20R (UL), CTO Order Code C3A0A0A0, are selected option price is \$0.

# FE1.8kVA CTO Configuration Guide

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
DVR (recommended when loads contain PFC power supplies)	B	\$0
DVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$195
DVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$195
Neutral to Ground bond removal and DVR (For Shipboard Use)	R	\$25

<sup>1</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
2h12m/4h53m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	9me	\$2,409
3h38m/8h22m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	10me	\$4,142
5h09m/11h30m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	11me	\$4,588
6h07m/14h06m	15 Amp Battery Charger Upgrade <sup>1</sup>	12me	\$6,105
8h30m/18h53m	15 Amp Battery Charger Upgrade <sup>1</sup>	13me	\$7,453
12h08m/27h06m	15 Amp Battery Charger Upgrade <sup>1</sup>	14me	\$9,147
18h52m/44h45m	15 Amp Battery Charger Upgrade <sup>1</sup>	15me	\$12,370

<sup>1</sup>Order battery charger as part of UPS. See page 1.8k-1.

External Battery Accessories		
Option	Order Number	List Price
External Battery Connector Extension (72") Also recommended for third-party external battery configurations.	BCS-0108	\$50

# FE1.8kVA CTO Configuration Guide

<b>External Maintenance Bypass Switches<sup>1</sup> (Recommended for hardwired units)</b>			
<b>UPS Input Voltage</b>	<b>Switch Type</b>	<b>Order Number</b>	<b>List Price</b>
120	MBB (Make Before Break)	BPE01MBB1A	\$441
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$441
208, 220	BBM (Break Before Make)	BPE02BBM1A	\$604
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$604
240	MBB (Make Before Break)	BPE02MBB1A	\$604
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$604

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.

# FE2.1kVA CTO Configuration Guide

## Ferrups 2.1kVA 60Hz Tower General Specifications

Capacity:	2.1kVA/ 1.5kW	Dimensions:	21.2" x 15.25" x 22.9"
Input Voltage:	120, 208, 220, 240 V	(HxWxD)	540mm x 390mm x 585mm
Output Voltage:	120, 120/208, 120/240, 240, 127/240 V	Weight (with batteries <sup>1</sup> ):	188lb / 85kg
		Weight (without batteries):	132lb / 60kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE2.1kVA, 60 Hz Tower	FG	\$2,786

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$0
208	120/208	1	\$145
208	120/240	2	\$145
240	120/240	3	\$145
240	240 (International Models)	6	\$145
220	127/220	7	\$145

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
9 minute internal (25m half load)	standard	0	\$626
66 min internal (163m half load)	standard	1	\$1,137
Set up for internal (less batteries)	standard	3	\$210
set up for external battery pack <sup>1</sup>	standard	4	\$88
set up for external battery pack <sup>1</sup>	15 amp internal upgrade <sup>2</sup>	6	\$669

<sup>1</sup> Includes External Battery Connector

Order desired external battery pack as a separate line. See page 2.1k-4.

<sup>2</sup> Required for external battery packs 12me – 15me

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option available <sup>1</sup>	0	\$0

<sup>1</sup> External maintenance bypass switch available for hardwired systems.

Order desired maintenance bypass switch as a separate line item on your order. See page 2.1k-4.

# FE2.1kVA CTO Configuration Guide

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired <sup>1</sup>	A	\$41
120 volt	5-20P <sup>2</sup>	C	\$ 0
	5-50P <sup>3</sup>	D	\$90 <sup>3</sup>
	L5-20P <sup>2</sup>	I	\$25
	L5-30P <sup>2</sup>	J	\$60
208, 220, 240	6-15P <sup>2</sup>	E	\$ 0
	L6-20P <sup>4</sup>	K	\$60
	L6-30P <sup>5</sup>	L	\$60

<sup>1</sup> Hardwired input requires hardwired output

<sup>2</sup> Cannot be used with 15 Amp battery charger

<sup>3</sup> 5-50P option price is \$0 if 15 Amp battery charger is selected. Cannot be used with 66 minute internal runtime.

<sup>4</sup> L6-20P option price is \$0 if 15 Amp battery charger and 220 or 240 volt input is selected. Cannot be used with 15 Amp battery charger and 208 volt input.

<sup>5</sup> L6-30P option price is \$0 if 15 Amp battery charger and 208 volt input is selected.

## Output Connection Digits 7-14

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Three output slots available when a NEMA line cord is selected.
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all four receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0.

Output Voltage Required	Output Connection	CTO Order Code		Option Price per Panel	
		Type	Qty		
Any	Hardwired <sup>1</sup>	A	___	\$0	
120 volt Choose up to three panels	5-15R Duplex	B	___	\$50	
	5-20R Duplex (UL) <sup>2</sup>	C	___	\$50 <sup>2</sup>	
208, 220, or 240 volt Choose up to three panels	6-15R Duplex	D	___	\$75	
	6-20R Duplex	E	___	\$75	
120 volt Choose up to three panels	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208, 220, or 240 volt Choose up to three panels	L6-15R Duplex	J	___	\$75	
	L6-20R	K	___	\$75	
	L6-30R	L	___	\$75	
120/240 volt Choose up to three panels	L14-20R	M	___	\$75	
	L14-30R	N	___	\$75	
Receptacle Output Connection CTO Order Code		__	__	__	<u>A</u> <u>0</u>
Hardwire Output Connection CTO Order Code		<u>A</u> <u>0</u>	<u>A</u> <u>0</u>	<u>A</u> <u>0</u>	<u>A</u> <u>0</u>

<sup>1</sup> Hardwired output requires hardwired input

<sup>2</sup> If three 5-20R (UL), CTO Order Code C3A0A0A0, are selected option price is \$0.

# FE2.1kVA CTO Configuration Guide

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
DVR (recommended when loads contain PFC power supplies)	B	\$0
DVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$195
DVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$195
Neutral to Ground bond removal and DVR (For Shipboard Use)	R	\$25

<sup>1</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
1h41m/3h54m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	9me	\$2,409
2h50m/6h37m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	10me	\$4,142
4h03m/9h10m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	11me	\$4,588
4h46m/11h08m	15 Amp Battery Charger Upgrade <sup>1</sup>	12me	\$6,105
6h42m/15h04m	15 Amp Battery Charger Upgrade <sup>1</sup>	13me	\$7,453
9h33m/21h36m	15 Amp Battery Charger Upgrade <sup>1</sup>	14me	\$9,147
15h12m/36h28m	15 Amp Battery Charger Upgrade <sup>1</sup>	15me	\$12,370

<sup>1</sup>Order battery charger as part of UPS. See page 2.1k-1.

## External Battery Accessories

Option	Order Number	List Price
External Battery Connector Extension (72") Also recommended for third-party external battery configurations.	BCS-0108	\$50



# FE2.1kVA CTO Configuration Guide

<b>External Maintenance Bypass Switches<sup>1</sup> (Recommended for hardwired units)</b>			
<b>UPS Input Voltage</b>	<b>Switch Type</b>	<b>Order Number</b>	<b>List Price</b>
120	MBB (Make Before Break)	BPE01MBB1A	\$441
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$441
208, 220	BBM (Break Before Make)	BPE02BBM1A	\$604
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$604
240	MBB (Make Before Break)	BPE02MBB1A	\$604
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$604

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.

# FE3.1kVA CTO Configuration Guide

## Ferrups 3.1kVA 60Hz Tower General Specifications

Capacity:	3.1kVA/ 2.2kW	Dimensions:	21.2" x 15.25" x 22.9"
Input Voltage:	120, 208, 220, 240 V	(HxWxD)	540mm x 390mm x 585mm
Output Voltage:	120, 120/208, 120/240, 240, 127/240 V	Weight (with batteries <sup>1</sup> ):	248lb / 112kg
		Weight (without batteries):	144lb / 65kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE3.1kVA, 60 Hz Tower	FH	\$3,560

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$0
208	120/208	1	\$145
208	120/240	2	\$145
240	120/240	3	\$145
240	240 (International Models)	6	\$145
220	127/220	7	\$145

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
14 minute internal (35m half load)	standard	0	\$680
37 minute internal (98m half load)	standard	1	\$1,140
Set up for internal (less batteries)	standard	3	\$210
set up for external battery pack <sup>1</sup>	standard	4	\$88
set up for external battery pack <sup>1</sup>	15 amp internal upgrade <sup>2</sup>	6	\$669

<sup>1</sup> Includes External Battery Connector

Order desired external battery pack as a separate line. See page 3.1k-3.

<sup>2</sup> Required for external battery packs 12me – 15me

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option available <sup>1</sup>	0	\$0

<sup>1</sup> External maintenance bypass switch available for hardwired systems.

Order desired maintenance bypass switch as a separate line item on your order. See page 3.1k-4.

# FE3.1kVA CTO Configuration Guide

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired <sup>1</sup>	A	\$41
120 volt	5-50P <sup>3</sup>	D	\$90 <sup>3</sup>
	L5-30P <sup>2</sup>	J	\$ 0
208, 220, 240	6-15P <sup>2,6</sup>	E	\$ 0
	L6-20P <sup>2</sup>	K	\$60
	L6-30P <sup>4</sup>	L	\$60 <sup>4</sup>

<sup>1</sup> Hardwired input requires hardwired output

<sup>2</sup> Cannot be used with 15 Amp battery charger

<sup>3</sup> 5-50P option price is \$0 if 15 Amp battery charger is selected. Cannot be used with 37 minute internal runtime.

<sup>4</sup> L6-30P option price is \$0 if 15 Amp battery charger is selected.

<sup>6</sup> Cannot be used with 208 volt input

## Output Connection Digits 7-14

### Output Connection Configuration

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Three output slots available when a NEMA line cord is selected
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all four receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection	CTO Order Code		Option Price per Panel	
		Type	Qty		
Any	Hardwired <sup>1</sup>	A	0	\$0	
120 volt Choose up to three panels	5-15R Duplex	B	___	\$50	
	5-20R Duplex (UL) <sup>2</sup>	C	___	\$50 <sup>2</sup>	
208, 220, or 240 volt Choose up to three panels	6-15R Duplex	D	___	\$75	
	6-20R Duplex	E	___	\$75	
120 volt Choose up to three panels	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208, 220, or 240 volt Choose up to three panels	L6-15R Duplex	J	___	\$75	
	L6-20R	K	___	\$75	
	L6-30R	L	___	\$75	
120/240 volt Choose up to three panels	L14-20R	M	___	\$75	
	L14-30R	N	___	\$75	
Receptacle Output Connection CTO Order Code		__	__	__	<u>A</u> <u>0</u>
Hardwire Output Connection CTO Order Code		<u>A</u> <u>0</u>	<u>A</u> <u>0</u>	<u>A</u> <u>0</u>	<u>A</u> <u>0</u>

<sup>1</sup> Hardwired output requires hardwired input

<sup>2</sup> If three 5-20R (UL), CTO Order Code C3A0A0A0, are selected, option price is \$0.

# FE3.1kVA CTO Configuration Guide

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
DVR (recommended when loads contain PFC power supplies)	B	\$0
DVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$195
DVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$195
Neutral to Ground bond removal and DVR (For Shipboard Use)	R	\$25

<sup>1</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
57m/2h27m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	9me	\$2,409
1h41m/4h03m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	10me	\$4,142
2h29m/5h44m	Standard Battery Charger <sup>1</sup> 15 Amp Battery Charger Upgrade Optional	11me	\$4,588
2h52m/6h50m	15 Amp Battery Charger Upgrade <sup>1</sup>	12me	\$6,105
4h07m/9h27m	15 Amp Battery Charger Upgrade <sup>1</sup>	13me	\$7,453
5h52m/13h30m	15 Amp Battery Charger Upgrade <sup>1</sup>	14me	\$9,147
9h41m/22h18m	15 Amp Battery Charger Upgrade <sup>1</sup>	15me	\$12,370

<sup>1</sup>Order battery charger as part of UPS. See page 3.1k-1.

External Battery Accessories		
Option	Order Number	List Price
External Battery Connector Extension (72") Also recommended for third-party external battery configurations.	BCS-0108	\$50

Bpe04mbb1a

# FE3.1kVA CTO Configuration Guide

<b>External Maintenance Bypass Switches<sup>1</sup> (Recommended for hardwired units)</b>			
<b>UPS Input Voltage</b>	<b>Switch Type</b>	<b>Order Number</b>	<b>List Price</b>
120 <sup>2</sup>	MBB (Make Before Break)	BPE01MBB1A	\$441
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$441
208, 220	BBM (Break Before Make)	BPE02BBM1A	\$604
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$604
240	MBB (Make Before Break)	BPE02MBB1A	\$604
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$604

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.

<sup>2</sup> Use 240 volt maintenance bypass switch if 15 Amp battery charger is selected. See page 3.1k-1.

# FE4.3kVA CTO Configuration Guide

## Ferrups 4.3kVA 60Hz Tower General Specifications

Capacity:	4.3kVA/ 3.0kW	Dimensions:	29.5" x 15.5" x 25"
Input Voltage:	120, 208, 220, 240 V	(HxWxD)	750mm x 395mm x 635mm
Output Voltage:	120, 120/208, 120/240, 240	Weight (with batteries <sup>1</sup> ):	348lb / 158kg
		Weight (without batteries):	243lb / 110kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE4.3kVA, 60 Hz Tower	FI	\$5,338

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$279
208	120/208	1	\$0
208	120/240	2	\$0
240	120/240	3	\$0
220	220	4	\$279
240	240 (International Models)	6	\$0

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
8 minute internal (20 m half load)	standard	0	\$673
27 minute internal (66 m half load)	standard	1	\$1,209
Set up for internal (less batteries)	standard	3	\$216
set up for external battery pack	standard	4	\$0
set up for external battery pack <sup>1</sup>	10 amp internal upgrade <sup>2</sup>	5	\$270
set up for external battery pack <sup>1</sup>	20 amp internal upgrade <sup>3</sup>	7	\$624

<sup>1</sup> Order desired external battery pack as a separate line. See page 4.3k-4.

<sup>2</sup> Required for external battery packs 4fe – 5fe

<sup>3</sup> Required for external battery packs 6fe – 7fe

Internal Maintenance Bypass Switch			Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price	
No internal maintenance bypass switch option <sup>1</sup>	0	\$0	
Internal maintenance bypass switch option – MBB <sup>2</sup>	1	\$725	
Internal maintenance bypass switch option - BBM	2	\$625	

AS/400 (iSeries) contacts included with Options 1 and 2.

<sup>1</sup> External maintenance bypass switch also available for hardwired systems.

Order desired maintenance bypass switch as a separate line item on your order. See page 4.3k-4.

<sup>2</sup> Cannot be used with 208 or 220 input voltage.

# FE4.3kVA CTO Configuration Guide

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired	A	\$0
120 volt	5-50P	D	\$120
208, 220, 240 volt	6-50P <sup>1</sup>	F	\$120
	14-50P <sup>2,3</sup>	G	\$155
	L6-30P <sup>1</sup>	L	\$100
	L14-30 <sup>2</sup>	M	\$125

<sup>1</sup> Cannot be used with internal maintenance bypass switch.

<sup>2</sup> UPS must have internal maintenance bypass switch.

<sup>3</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

# FE4.3kVA CTO Configuration Guide

## Output Connection

Digits 7-14

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Up to four output slots available without internal maintenance bypass switch option.
- Up to four output slots available when internal maintenance bypass switch option is selected.
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection	CTO Order Code		Option Price per Panel	
		Type	Qty		
Any	Hardwired <sup>1</sup>	A	0	\$0	
120 volt	5-15R Duplex	B	___	\$50	
	5-20R Duplex (UL)	C	___	\$50	
208, 220, or 240 volt	6-15R Duplex	D	___	\$75	
	6-20R Duplex	E	___	\$75	
120 volt	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208, 220, or 240 volt	L6-15R Duplex	J	___	\$75	
	L6-20R	K	___	\$75	
	L6-30R	L	___	\$75	
120/240 volt	L14-20R	M	___	\$75	
	L14-30R	N	___	\$75	
120 volt	15 Amp / 1 pole Circuit Breaker <sup>2</sup>	V	___	\$60	
All voltages except 120 volt	15 Amp / 2 pole Circuit Breaker <sup>2</sup>	W	___	\$60	
120 volt	20 Amp / 1 pole Circuit Breaker <sup>2</sup>	X	___	\$60	
All voltages except 120 volt	20 Amp / 2 pole Circuit Breaker <sup>2</sup>	Y	___	\$60	
120 volt	30 Amp / 1 pole Circuit Breaker <sup>2</sup>	Z	___	\$60	
All voltages except 120 volt	30 Amp / 2 pole Circuit Breaker <sup>2</sup>	2	___	\$60	
Receptacle Output Connection CTO Order Code		__	__	__	__
Hardwire Output Connection CTO Order Code		<u>A</u> 0	<u>A</u> 0	<u>A</u> 0	<u>A</u> 0

<sup>1</sup> Hardwired output requires hardwired input

<sup>2</sup> Internal maintenance bypass switch option required for circuit breaker output connections



# FE4.3kVA CTO Configuration Guide

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
DVR (recommended when loads contain PFC power supplies)	B	\$0
DVR and Anchor Kit for structural slab floor	I	\$323
DVR and Anchor Kit for raised or access floor	J	\$323
Neutral to Ground bond removal and DVR (For shipboard use)	R	\$25

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
40m/1h42m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	1fe	\$2,976
1h11m/2h51m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	2fe	\$4,169
1h49m/4h5m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	3fe	\$4,620
2h6m/4h49m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	4fe	\$6,160
3h4m/6h46m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	5fe	\$7,530
4h27m/9h39m	20 Amp Battery Charger Upgrade <sup>1</sup>	6fe	\$9,064
7h12m/15h56m	20 Amp Battery Charger Upgrade <sup>1</sup>	7fe	\$12,518

<sup>1</sup>Order battery charger as part of UPS. See page 4.3k-1.

External Maintenance Bypass Switches <sup>1</sup> (Recommended for hardwired units)			
UPS Input Voltage	Switch Type	Order Number	List Price
208, 220 volt	BBM (Break Before Make)	BPE02BBM1A	\$604
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$604
120, 240 volt	MBB (Make Before Break)	BPE02MBB1A	\$604
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$604

<sup>1</sup>Bypass Switch must be mounted on the wall near the UPS.

# FE5.3kVA CTO Configuration Guide

## Ferrups 5.3kVA 60Hz Tower General Specifications

Capacity:	5.3kVA/ 3.7kW	Dimensions:	29.5" x 15.5" x 25"
Input Voltage:	120, 208, 220, 240 V	(HxWxD)	750mm x 395mm x 635mm
Output Voltage:	120, 120/208, 120/240, 240	Weight (with batteries <sup>1</sup> ):	484lb / 220kg
		Weight (without batteries):	268lb / 122kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE5.3kVA, 60 Hz Tower	FJ	\$5,879

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$279
208	120/208	1	\$0
208	120/240	2	\$0
240	120/240	3	\$0
220	220	4	\$279
240	240 (International Models)	6	\$0

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
20 minute internal (50 m half load)	standard	0	\$1,166
Set up for internal (less batteries)	standard	3	\$388
set up for external battery pack	standard	4	\$0
set up for external battery pack <sup>1</sup>	10 amp internal upgrade <sup>2</sup>	5	\$270
set up for external battery pack <sup>1</sup>	20 amp internal upgrade <sup>3</sup>	7	\$624

<sup>1</sup> Order desired external battery pack as a separate line. See page 5.3k-4.

<sup>2</sup> Required for external battery packs 4fe – 5fe

<sup>3</sup> Required for external battery packs 6fe – 7fe

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option <sup>1</sup>	0	\$0
Internal maintenance bypass switch option – MBB <sup>2</sup>	1	\$825
Internal maintenance bypass switch option - BBM	2	\$725

AS/400 (iSeries) contacts included with Options 1 and 2.

<sup>1</sup> External maintenance bypass switch also available for hardwired systems.

Order desired maintenance bypass switch as a separate line item on your order. See page 5.3k-4.

<sup>2</sup> Cannot be used with 208 or 220 input voltage.

# FE5.3kVA CTO Configuration Guide

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired	A	\$0
120 volt	5-50P <sup>1</sup>	D	\$120
208, 220, 240 volt	6-50P <sup>4</sup>	F	\$120
	14-50P <sup>5,6</sup>	G	\$155
	L6-30P <sup>2,3,4</sup>	L	\$100
	L14-30 <sup>2,3,5</sup>	M	\$125

<sup>1</sup> Cannot be used with 10 or 20 Amp battery charger.

<sup>2</sup> Cannot be used with 208 volt and 20 Amp battery charger.

<sup>3</sup> Cannot be used with 220 volt and 20 Amp battery charger.

<sup>4</sup> Cannot be used with internal maintenance bypass switch.

<sup>5</sup> UPS must have internal maintenance bypass switch.

<sup>6</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

# FE5.3kVA CTO Configuration Guide

## Output Connection

Digits 7-14

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Up to four output slots available without internal maintenance bypass switch option.
- Up to four output slots available when internal maintenance bypass switch option is selected.
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection	CTO Order Code		Option Price per Panel	
		Type	Qty		
Any	Hardwired <sup>1</sup>	A	0	\$0	
120 volt	5-15R Duplex	B	___	\$50	
	5-20R Duplex (UL)	C	___	\$50	
208, 220, or 240 volt	6-15R Duplex	D	___	\$75	
	6-20R Duplex	E	___	\$75	
120 volt	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208, 220, or 240 volt	L6-15R Duplex	J	___	\$75	
	L6-20R	K	___	\$75	
	L6-30R	L	___	\$75	
120/240 volt	L14-20R	M	___	\$75	
	L14-30R	N	___	\$75	
120 volt	15 Amp / 1 pole Circuit Breaker <sup>2</sup>	V	___	\$60	
All voltages except 120 volt	15 Amp / 2 pole Circuit Breaker <sup>2</sup>	W	___	\$60	
120 volt	20 Amp / 1 pole Circuit Breaker <sup>2</sup>	X	___	\$60	
All voltages except 120 volt	20 Amp / 2 pole Circuit Breaker <sup>2</sup>	Y	___	\$60	
120 volt	30 Amp / 1 pole Circuit Breaker <sup>2</sup>	Z	___	\$60	
All voltages except 120 volt	30 Amp / 2 pole Circuit Breaker <sup>2</sup>	2	___	\$60	
Receptacle Output Connection CTO Order Code		__	__	__	__
Hardwire Output Connection CTO Order Code		<u>A</u> 0	<u>A</u> 0	<u>A</u> 0	<u>A</u> 0

<sup>1</sup> Hardwired output requires hardwired input

<sup>2</sup> Internal maintenance bypass switch option required for circuit breaker output connections

# FE5.3kVA CTO Configuration Guide

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
DVR (recommended when loads contain PFC power supplies)	B	\$0
DVR and Anchor Kit for structural slab floor	I	\$323
DVR and Anchor Kit for raised or access floor	J	\$323
Neutral to Ground bond removal and DVR (For shipboard use)	R	\$25

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
27m/1h14m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	1fe	\$2,976
49m/2h10m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	2fe	\$4,169
1h12m/3h8m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	3fe	\$4,620
1h27m/3h39m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	4fe	\$6,160
2h13m/5h11m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	5fe	\$7,530
3h8m/7h22m	20 Amp Battery Charger Upgrade <sup>1</sup>	6fe	\$9,064
5h10m/12h10m	20 Amp Battery Charger Upgrade <sup>1</sup>	7fe	\$12,518

<sup>1</sup>Order battery charger as part of UPS. See page 5.3k-1.

External Maintenance Bypass Switches <sup>1</sup> (Recommended for hardwired units)			
UPS Input Voltage	Switch Type	Order Number	List Price
120 volt	MBB (Make Before Break) <sup>2</sup>	BPE04MBB1A	\$735
	MBB with AS/400 (iSeries) Option	BPE04MBBAS1A	\$735
208, 220 volt	BBM (Break Before Make)	BPE02BBM1A	\$604
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$604
240 volt	MBB (Make Before Break)	BPE02MBB1A	\$604
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$604

<sup>1</sup>Bypass Switch must be mounted on the wall near the UPS.

# FE7kVA CTO Configuration Guide

## Ferrups 7.0kVA 60Hz Tower General Specifications

Capacity:	7.0kVA/ 5.0kW	Dimensions:	36.5" x 19.0" x 32.0"
Input Voltage:	120, 208, 220, 240 V	(HxWxD)	930mm x 485mm x 815mm
Output Voltage:	120, 220, 120/208, 120/240, 240	Weight (with batteries <sup>1</sup> ):	578lb / 262kg
		Weight (without batteries):	362lb / 164kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

1. Weights are approximate for standard batteries, option 0 for digit 4.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE7kVA, 60 Hz Tower	FK	\$7,653

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$279
208	120/208	1	\$0
208	120/240	2	\$0
240	120/240	3	\$0
220	220	4	\$279
240	240 (International Models)	6	\$0

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
12 minute internal (33 m half load)	standard	0	\$1,126
18 minute internal (50 m half load)	standard	1	\$1,690
Set up for internal (less batteries)	standard	3	\$388
set up for external battery pack	standard	4	\$0
set up for external battery pack <sup>1</sup>	10 amp internal upgrade <sup>2</sup>	5	\$270
set up for external battery pack <sup>1</sup>	20 amp internal upgrade <sup>3</sup>	7	\$624

<sup>1</sup> Order desired external battery pack as a separate line. See page 7k-3.

<sup>2</sup> Required for external battery packs 4fe – 5fe

<sup>3</sup> Required for external battery packs 6fe – 7fe

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option <sup>1</sup>	0	\$0
Internal maintenance bypass switch option – MBB <sup>2</sup>	1	\$900
Internal maintenance bypass switch option - BBM	2	\$800

AS/400 (iSeries) contacts included with Options 1 and 2.

<sup>1</sup> External maintenance bypass switch also available for hardwired systems.

Order desired maintenance bypass switch as a separate line item on your order. See page 7k-3.

<sup>2</sup> Cannot be used with 208 or 220 volt input

# FE7kVA CTO Configuration Guide

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired	A	\$0
208, 220, 240 volt	6-50P <sup>1</sup>	F	\$120
	14-50P <sup>2,3</sup>	G	\$155

<sup>1</sup> Cannot be used with internal maintenance bypass switch.

<sup>2</sup> UPS must have internal maintenance bypass switch.

<sup>3</sup>Eaton will announce the End of Life of these Ferrups options. Products should be available through April 2007, while supplies last.

Output Connection	Digits 7-14
-------------------	-------------

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Up to four output slots available without internal maintenance bypass switch option.
- Up to eight output slots available when internal maintenance bypass switch option is selected.
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection	CTO Order Code		Option Price per Panel
		Type	Qty	
Any	Hardwired <sup>1</sup>	A	0	\$0
120 volt	5-15R Duplex	B	___	\$50
	5-20R Duplex (UL)	C	___	\$50
208, 220, or 240 volt	6-15R Duplex	D	___	\$75
	6-20R Duplex	E	___	\$75
120 volt	L5-15R Duplex	G	___	\$75
	L5-20R	H	___	\$75
	L5-30R	I	___	\$75
208, 220, or 240 volt	L6-15R Duplex	J	___	\$75
	L6-20R	K	___	\$75
	L6-30R	L	___	\$75
120/240 volt	L14-20R	M	___	\$75
	L14-30R	N	___	\$75
120 volt	15 Amp / 1 pole Circuit Breaker <sup>2</sup>	V	___	\$60
All voltages except 120 volt	15 Amp / 2 pole Circuit Breaker <sup>2</sup>	W	___	\$60
120 volt	20 Amp / 1 pole Circuit Breaker <sup>2</sup>	X	___	\$60
All voltages except 120 volt	20 Amp / 2 pole Circuit Breaker <sup>2</sup>	Y	___	\$60
120 volt	30 Amp / 1 pole Circuit Breaker <sup>2</sup>	Z	___	\$60
All voltages except 120 volt	30 Amp / 2 pole Circuit Breaker <sup>2</sup>	2	___	\$60
Receptacle Output Connection CTO Order Code		__	__	__
Hardwire Output Connection CTO Order Code		<u>A</u> <u>0</u>	<u>A</u> <u>0</u>	<u>A</u> <u>0</u>

<sup>1</sup> Hardwired output requires hardwired input

<sup>2</sup> Internal maintenance bypass switch option required for circuit breaker output connections

# FE7kVA CTO Configuration Guide

Internal Options		Digit 15
Internal Options	CTO Order Code	Option Price
DVR (recommended when loads contain PFC power supplies)	B	\$0
DVR and Anchor Kit for structural slab floor	I	\$323
DVR and Anchor Kit for raised or access floor	J	\$323
Neutral to Ground bond removal and DVR (For shipboard use)	R	\$25

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
34m/1h28m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	2fe	\$4,169
48m/2h13m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	3fe	\$4,620
60m/2h33m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	4fe	\$6,160
1h32m/3h41m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	5fe	\$7,530
2h16m/5h14m	20 Amp Battery Charger Upgrade <sup>1</sup>	6fe	\$9,064
3h45m/8h39m	20 Amp Battery Charger Upgrade <sup>1</sup>	7fe	\$12,518

<sup>1</sup>Order battery charger as part of UPS. See page 7k-1.

External Maintenance Bypass Switches <sup>1</sup> (Recommended for hardwired units)			
UPS Input Voltage	Switch Type	Order Number	List Price
120 volt	MBB (Make Before Break) <sup>2</sup>	BPE04MBB1A	\$735
208, 220 volt	BBM (Break Before Make)	BPE02BBM1A	\$604
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$604
240 volt	MBB (Make Before Break)	BPE02MBB1A	\$604
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$604

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.



# FE10kVA CTO Configuration Guide

## Ferrups 10.0kVA 60Hz Tower General Specifications

Capacity:	10.0kVA/ 7.5kW	Dimensions:	36.5" x 19.0" x 32.0"
Input Voltage:	208, 240 V	(HxWxD)	930mm x 485mm x 815mm
Output Voltage:	120/208, 120/240, 240	Weight (with batteries):	N/A
		Weight (without batteries):	442lb / 200kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE10kVA, 60 Hz Tower	FL	\$9,025

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
208	120/208	1	\$0
208	120/240	2	\$0
240	120/240	3	\$0
240	240 (International Models)	6	\$0

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
12 minute internal (30 m half load) Floor Saver Cabinet	standard	0	\$3,760
set up for external battery pack <sup>1</sup>	standard	4	\$0
set up for external battery pack <sup>1</sup>	10 amp internal upgrade <sup>2</sup>	5	\$435
set up for external battery pack <sup>1</sup>	20 amp internal upgrade <sup>3</sup>	7	\$775

<sup>1</sup> Order desired external battery pack as a separate line. If UPS is to be used with other than a Ferrups battery pack, also order DC Disconnect DCU-0001. See page 10k-3.

<sup>2</sup> Required for external battery packs 12fe – 13fe

<sup>3</sup> Required for external battery packs 14fe – 15fe

Internal Maintenance Bypass Switch			Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price	
No internal maintenance bypass switch option <sup>1,2</sup>	0	\$0	
Internal maintenance bypass switch option – MBB <sup>3</sup>	1	\$900	
Internal maintenance bypass switch option - BBM	2	\$800	

AS/400 (iSeries) contacts included with Options 1 and 2.

<sup>1</sup> Internal maintenance bypass switch required for receptacle or circuit breaker output connections.

<sup>2</sup> External maintenance bypass switch also available. Order desired maintenance bypass switch as a separate line item on your order. See page 10k-3.

<sup>3</sup> Cannot be used with 208 or 220 volt input

Input Connection <sup>1</sup>			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired	A	\$0

<sup>1</sup> Line Cord input connection not available for 10kVA models

# FE10kVA CTO Configuration Guide

## Output Connection

Digits 7-14

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Internal maintenance bypass switch required for receptacle or circuit breaker output connections.
- Up to eight output slots available when internal maintenance bypass switch option is selected.
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection <sup>1</sup>	CTO Order Code		Option Price per Panel	
		Type	Qty		
Any	Hardwired	A	0	\$0	
120 volt	5-15R Duplex	B	___	\$50	
	5-20R Duplex (UL)	C	___	\$50	
208, 220, or 240 volt	6-15R Duplex	D	___	\$75	
	6-20R Duplex	E	___	\$75	
120 volt	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208, 220, or 240 volt	L6-15R Duplex	J	___	\$75	
	L6-20R	K	___	\$75	
	L6-30R	L	___	\$75	
120/240 volt	L14-20R	M	___	\$75	
	L14-30R	N	___	\$75	
120 volt	15 Amp / 1 pole Circuit Breaker	V	___	\$60	
All voltages except 120 volt	15 Amp / 2 pole Circuit Breaker	W	___	\$60	
120 volt	20 Amp / 1 pole Circuit Breaker	X	___	\$60	
All voltages except 120 volt	20 Amp / 2 pole Circuit Breaker	Y	___	\$60	
120 volt	30 Amp / 1 pole Circuit Breaker	Z	___	\$60	
All voltages except 120 volt	30 Amp / 2 pole Circuit Breaker	2	___	\$60	
Receptacle Output Connection CTO Order Code		__	__	__	__
Hardwire Output Connection CTO Order Code		A0	A0	A0	A0

<sup>1</sup> Internal maintenance bypass switch required for receptacle or circuit breaker output connections

# FE10kVA CTO Configuration Guide

## Internal Options

Internal Options	CTO Order Code	Option Price
DVR (recommended when loads contain PFC power supplies)	B	\$0
DVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$300
DVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$300
Neutral to Ground bond removal and DVR (For shipboard use)	R	\$25

1. Anchor Kits cannot be used with Floor Saver Battery Option

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

## External Battery Packs

Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
11m/26m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	EBPS10F	\$3,300
27m/1h10m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	8fe	\$4,582
41m/1h48m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	9fe	\$6,039
1h13m/2h59m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	10fe	\$9,196
1h51m/4h16m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	11fe	\$10,197
2h09m/5h02m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	12fe	\$13,695
3h07m/7h04m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	13fe	\$17,463
4h26m/10h04m	20 Amp Battery Charger Upgrade <sup>1</sup>	14fe	\$20,279
7h20m/16h38m	20 Amp Battery Charger Upgrade <sup>1,2</sup>	15fe	\$29,458

<sup>1</sup>Order battery charger as part of UPS. See page 10k-1.

<sup>2</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

# FE10kVA CTO Configuration Guide

External Battery Accessories		
Option	Order Number	List Price
External DC Disconnect Required for all non-Ferrups battery packs.	DCU-0001	\$451

External Maintenance Bypass Switches <sup>1</sup> (Recommended for hardwired units)			
UPS Input Voltage	Switch Type	Order Number	List Price
208, 220, 240 volt	BBM (Break Before Make) <sup>2</sup>	BPE04BBM1A	\$662
	BBM with AS/400 (iSeries) Option	BPE04BBMAS1A	\$662
240 volt	MBB (Make Before Break) <sup>2</sup>	BPE04MBB1A	\$735
	MBB with AS/400 (iSeries) Option	BPE04MBBAS1A	\$735

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.

# FE12.5kVA CTO Configuration Guide

## Ferrups 12.5kVA 60Hz Tower General Specifications

Capacity:	12.5kVA/ 10.0kW	Dimensions:	36.5" x 19.0" x 32.0"
Input Voltage:	208, 240 V	(HxWxD)	930mm x 485mm x 815mm
Output Voltage:	120/208, 120/240, 240	Weight (with batteries):	N/A
		Weight (without batteries):	505lb / 229kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE12.5kVA, 60 Hz Tower	FM	\$9,638

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
208	120/208	1	\$0
208	120/240	2	\$0
240	120/240	3	\$0
240	240 (International Models)	6	\$0

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
8 minute internal (20 m half load) Floor Saver Cabinet	standard	0	\$3,723
set up for external battery pack <sup>1</sup>	standard	4	\$0
set up for external battery pack <sup>1</sup>	10 amp internal upgrade <sup>2</sup>	5	\$435
set up for external battery pack <sup>1</sup>	20 amp internal upgrade <sup>3</sup>	7	\$775

<sup>1</sup> Order desired external battery pack as a separate line. If UPS is to be used with other than a Ferrups battery pack, also order DC Disconnect DCU-0001. See page 12.5k-3.

<sup>2</sup> Required for external battery packs 12fe – 13fe

<sup>3</sup> Required for external battery packs 14fe – 15fe

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option <sup>1,2</sup>	0	\$0
Internal maintenance bypass switch option – MBB <sup>3</sup>	1	\$900
Internal maintenance bypass switch option - BBM	2	\$800

AS/400 (iSeries) contacts included with Options 1 and 2.

<sup>1</sup> Internal maintenance bypass switch required for receptacle or circuit breaker output connections.

<sup>2</sup> External maintenance bypass switch also available. Order desired maintenance bypass switch as a separate line item on your order. See page 12.5k-3.

<sup>3</sup> Cannot be used with 208 or 220 volt input

Input Connection <sup>1</sup>		Digit 6	
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired	A	\$0

<sup>1</sup> Line Cord input connection not available for 12.5kVA models

# FE12.5kVA CTO Configuration Guide

## Output Connection

Digits 7-14

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Internal maintenance bypass switch required for receptacle or circuit breaker output connections.
- Up to eight output slots available when internal maintenance bypass switch option is selected.
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection <sup>1</sup>	CTO Order Code		Option Price per Panel	
		Type	Qty		
Any	Hardwired	A	0	\$0	
120 volt	5-15R Duplex	B	___	\$50	
	5-20R Duplex (UL)	C	___	\$50	
208, 220, or 240 volt	6-15R Duplex	D	___	\$75	
	6-20R Duplex	E	___	\$75	
120 volt	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208, 220, or 240 volt	L6-15R Duplex	J	___	\$75	
	L6-20R	K	___	\$75	
	L6-30R	L	___	\$75	
120/240 volt	L14-20R	M	___	\$75	
	L14-30R	N	___	\$75	
120 volt	15 Amp / 1 pole Circuit Breaker	V	___	\$60	
All voltages except 120 volt	15 Amp / 2 pole Circuit Breaker	W	___	\$60	
120 volt	20 Amp / 1 pole Circuit Breaker	X	___	\$60	
All voltages except 120 volt	20 Amp / 2 pole Circuit Breaker	Y	___	\$60	
120 volt	30 Amp / 1 pole Circuit Breaker	Z	___	\$60	
All voltages except 120 volt	30 Amp / 2 pole Circuit Breaker	2	___	\$60	
Receptacle Output Connection CTO Order Code		__	__	__	__
Hardwire Output Connection CTO Order Code		A0	A0	A0	A0

<sup>1</sup> Internal maintenance bypass switch required for receptacle or circuit breaker output connections

# FE12.5kVA CTO Configuration Guide

Internal Options		Digit 15
Option	CTO Order Code	Option Price
DVR (recommended when loads contain PFC power supplies)	B	\$0
DVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$300
DVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$300
Neutral to Ground bond removal and DVR (For shipboard use)	R	\$25

1. Anchor Kits cannot be used with Floor Saver Battery Option

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
18m/48m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	EBPS12F	\$4,554
27m/1h13m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	9fe	\$6,039
49m/2h07m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	10fe	\$9,196
1h12m/3h04m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	11fe	\$10,197
1h38m/4h05m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	12fe	\$13,695
2h12m/5h05m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	13fe	\$17,463
3h08m/7h14m	20 Amp Battery Charger Upgrade <sup>1</sup>	14fe	\$20,279
5h10m/11h57m	20 Amp Battery Charger Upgrade <sup>1,2</sup>	15fe	\$29,458

<sup>1</sup>Order battery charger as part of UPS. See page 12.5k-1.

<sup>2</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

## External Battery Accessories

Option	Order Number	List Price
External DC Disconnect Required for all non-Ferrups battery packs.	DCU-0001	\$451

# FE12.5kVA CTO Configuration Guide

<b>External Maintenance Bypass Switches<sup>1</sup> (Recommended for hardwired units)</b>			
<b>UPS Input Voltage</b>	<b>Switch Type</b>	<b>Order Number</b>	<b>List Price</b>
208, 220, 240 volt	BBM (Break Before Make) <sup>2</sup>	BPE04BBM1A	\$662
	BBM with AS/400 (iSeries) Option	BPE04BBMAS1A	\$662
240 volt	MBB (Make Before Break) <sup>2</sup>	BPE04MBB1A	\$735
	MBB with AS/400 (iSeries) Option	BPE04MBBAS1A	\$735

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.

---



# FE18kVA CTO Configuration Guide

## Ferrups 18kVA 60Hz Tower General Specifications

Capacity:	18.0kVA/ 15.0kW	Dimensions:	36.5" x 19.0" x 32.0"
Input Voltage:	208, 240 V	(HxWxD)	930mm x 485mm x 815mm
Output Voltage:	120/208, 120/240, 240	Weight (with batteries):	N/A
		Weight (without batteries):	625lb / 283kg

See Eaton® Ferrups® FE Series 60Hz Datasheet (LTP0368) for additional product specification.

Base Unit		Digits 1-2
Base Model, Frequency, Cabinet Style	CTO Order Code	Base Price
FE18kVA, 60 Hz Tower	FN	\$12,392

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
208	120/208	1	\$0
208	120/240	2	\$0
240	120/240	3	\$0
240	240 (International Models)	6	\$0

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
4 minute internal (10m half load) Floor Saver Cabinet	standard	0	\$3,758
set up for external battery pack <sup>1</sup>	standard	4	\$0
set up for external battery pack <sup>1</sup>	10 amp internal upgrade <sup>2</sup>	5	\$435
set up for external battery pack <sup>1</sup>	20 amp internal upgrade <sup>3</sup>	7	\$775

<sup>1</sup> Order desired external battery pack as a separate line. If UPS is to be used with other than a Ferrups battery pack, also order DC Disconnect DCU-0001. See page 18k-3.

<sup>2</sup> Required for external battery packs 19fe – 20fe

<sup>3</sup> Required for external battery packs 21fe – 22fe

Internal Maintenance Bypass Switch		Digit 5
Internal Maintenance Bypass Switch	CTO Order Code	Option Price
No internal maintenance bypass switch option <sup>1,2</sup>	0	\$0
Internal maintenance bypass switch option – MBB <sup>3</sup>	1	\$1,075
Internal maintenance bypass switch option - BBM	2	\$975

AS/400 (iSeries) contacts included with Options 1 and 2.

<sup>1</sup> Internal maintenance bypass switch required for receptacle or circuit breaker output connections.

<sup>2</sup> External maintenance bypass switch also available. Order desired maintenance bypass switch as a separate line item on your order. See page 18k-3.

<sup>3</sup> Cannot be used with 208 or 220 volt input

# FE18kVA CTO Configuration Guide

Input Connection <sup>1</sup>			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired	A	\$0

<sup>1</sup> Line Cord input connection not available for 18kVA models

## Output Connection Digits 7-14

### Output Connection Configuration

Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to four different types of receptacles.

- Internal maintenance bypass switch required for receptacle or circuit breaker output connections.
- Up to eight output slots available when internal maintenance bypass switch option is selected.
- For multiple quantities of one receptacle type, enter the type once with the total quantity (ex: B2 not B1B1).
- Always enter the receptacle types alphabetically (ex: B1C1 not C1B1).
- If hardwire output is desired, select type "A", quantity "0" for all receptacle types (ex: A0A0A0A0).
- If fewer than four types of receptacle are selected, complete the remaining receptacle digits with A0 (ex: B1C1A0A0).

Output Voltage Required	Output Connection <sup>1</sup>	CTO Order Code		Option Price per Panel
		Type	Qty	
Any	Hardwired	A	0	\$0
120 volt	5-15R Duplex	B	___	\$50
	5-20R Duplex (UL)	C	___	\$50
208, 220, or 240 volt	6-15R Duplex	D	___	\$75
	6-20R Duplex	E	___	\$75
120 volt	L5-15R Duplex	G	___	\$75
	L5-20R	H	___	\$75
	L5-30R	I	___	\$75
208, 220, or 240 volt	L6-15R Duplex	J	___	\$75
	L6-20R	K	___	\$75
	L6-30R	L	___	\$75
120/240 volt	L14-20R	M	___	\$75
	L14-30R	N	___	\$75
120 volt	15 Amp / 1 pole Circuit Breaker	V	___	\$60
All voltages except 120 volt	15 Amp / 2 pole Circuit Breaker	W	___	\$60
120 volt	20 Amp / 1 pole Circuit Breaker	X	___	\$60
All voltages except 120 volt	20 Amp / 2 pole Circuit Breaker	Y	___	\$60
120 volt	30 Amp / 1 pole Circuit Breaker	Z	___	\$60
All voltages except 120 volt	30 Amp / 2 pole Circuit Breaker	2	___	\$60
Receptacle Output Connection CTO Order Code		___	___	___
Hardwire Output Connection CTO Order Code		A0	A0	A0

<sup>1</sup> Internal maintenance bypass switch required for receptacle or circuit breaker output connections

# FE18kVA CTO Configuration Guide

Internal Options		Digit 15
Option	CTO Order Code	Option Price
DVR (recommended when loads contain PFC power supplies)	B	\$0
DVR and Anchor Kit for structural slab floor <sup>1</sup>	I	\$300
DVR and Anchor Kit for raised or access floor <sup>1</sup>	J	\$300
Neutral to Ground bond removal and DVR (For shipboard use)	R	\$25

1. Anchor Kits cannot be used with Floor Saver Battery Option

## External Options

External battery packs, bypass switches and other external options are not a part of the CTO number and will need to be ordered as separate line items. Some external options require that the UPS be configured for use with the option. More options are listed in the Additional External Options section of this guide.

External Battery Packs			
Runtime Full/Half	Battery Charger Required <sup>1</sup>	Order Number	List Price
10m/26m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	EBPS18F	\$4,554
14m/39m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	16fe	\$5,968
27m/1h10m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	17fe	\$9,163
37m/1h46m	Standard Battery Charger <sup>1</sup> 10 or 20 Amp Battery Charger Upgrade Optional	18fe	\$9,856
48m/2h04m	10 Amp Battery Charger Upgrade <sup>1,2</sup> 20 Amp Battery Charger Upgrade Optional	19fe	\$13,816
1h13m/3h01m	10 Amp Battery Charger Upgrade <sup>1</sup> 20 Amp Battery Charger Upgrade Optional	20fe	\$17,292
1h49m/4h17m	20 Amp Battery Charger Upgrade <sup>1</sup>	21fe	\$19,712
3h04m/7h05m	20 Amp Battery Charger Upgrade <sup>1</sup>	22fe	\$29,475

<sup>1</sup>Order battery charger as part of UPS. See page 18k-1.

<sup>2</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

External Battery Accessories		
Option	Order Number	List Price
External DC Disconnect Required for all non-Ferrups battery packs.	DCU-0001	\$451

# FE18kVA CTO Configuration Guide

<b>External Maintenance Bypass Switches<sup>1</sup> (Recommended for hardwired units)</b>			
<b>UPS Input Voltage</b>	<b>Switch Type</b>	<b>Order Number</b>	<b>List Price</b>
208, 220, 240 volt	BBM (Break Before Make)	BPE05BBM1A	\$819
	BBM with AS/400 (iSeries) Option	BPE05BBMAS1A	\$819
240 volt	MBB (Make Before Break)	BPE05MBB1A	\$919
	MBB with AS/400 (iSeries) Option	BPE05MBBAS1A	\$919

<sup>1</sup> Bypass Switch must be mounted on the wall near the UPS.

## Additional Ferrups External Options

### Voltage Matching Transformers

208V in – 120/240V out. Required for applications using MBB bypass with source voltage of 208V.

Transformer Description	For use with Ferrups models:	Order Number	List Price
7.5kVA Transformer	FC - FK (.850kVA - 7kVA)	TRN-0239	\$1013
10kVA Transformer	FL <sup>1</sup> (10kVA)	TRN-0240	\$1260
15kVA Transformer	FL <sup>2</sup> , FM (10kVA – 12kVA)	TRN-0245	\$1754
25kVA Transformer	FN (18kVA)	TRN-0599	\$2300

<sup>1</sup> Use with 10kVA UPS models having a 5 Amp battery charger.

<sup>2</sup> Use with 10kVA UPS models having a 10 or 20 Amp battery charger.

### Caster Kits

For use with Ferrups models:	Order Number	List Price
FF, FG, FH (1.8kVA – 3.1kVA)	CAA-0006	\$145

<sup>1</sup> Eaton has announced the End of Life of this Ferrups option. Product will be available while supplies last.

### Connectivity

Option	Order Number	List Price
Hand-held Remote Control Panel with Cable	RCK-0007	\$265
IBM AS/400 (iSeries) Interface Kit – UPS w/o maintenance bypass switch	IPK-0001	\$95
Serial RS-232 CheckUPS Cable DB25M to DB9F	INT-0035	\$ 48
BestLink SNMP/WEB Adapter	116750225-001	\$349

### Software

Arriving bundled with every Ferrups UPS is the Eaton Software Suite. The Software Suite includes LanSafe software, Netwatch software and a 30-day trial of PowerVision® Management Software.



Eaton's latest release of our free LanSafe® software is fully supportive of the Ferrups product line. Ferrups customers can use LanSafe to deliver comprehensive UPS support including graceful, remote shutdown of UPS systems and network monitoring tools via a serial connection. The most recent release of LanSafe software is available for download on our website [powerquality.eaton.com](http://powerquality.eaton.com).

With PowerVision, you can proactively monitor the health and performance of UPS, power distribution, and environmental systems across the enterprise- and enhance the reliability of the entire power protection infrastructure.

NetWatch Clients UPS software enables users to shutdown a server or workstation and acts as a network-monitoring tool through the BestLink SNMP/WEB Adapter that monitors and controls it. During an extended power outage, the SNMP/WEB adapter informs all registered NetWatch Clients that it is time to shut down their respective operating systems, thus preparing them for the removal of AC power.

Additionally, the CheckUPS® Software Suite is available for download at [powerquality.eaton.com](http://powerquality.eaton.com). This product remains in Eaton's portfolio and is still used in a number of applications but is not under further development. CheckUPS provides enhanced UPS monitoring and unattended system shutdown features for most popular operating systems, including Windows 9x and Windows NT/2000, Novell NetWare, and many versions of UNIX.

For more information on Eaton software products, visit [powerquality.eaton.com/Support/Software-Drivers](http://powerquality.eaton.com/Support/Software-Drivers).

UNITED STATES  
8609 Six Forks Road  
Raleigh, NC 27615 U.S.A.  
Toll Free: 1.800.356.5794  
Or 919.872.3020

[www.powerquality.com](http://www.powerquality.com)  
[www.eaton.com](http://www.eaton.com)

CANADA  
Ontario: 416.798.0112

LATIN AMERICA  
Argentina: 54.11.4343.6363  
Brazil: 55.11.3616.8500  
Mexico: 52.55.5488.5252

EUROPE/MIDDLE EAST/AFRICA  
Denmark: 45.3686.7910  
Finland: 358.94.52.661  
France: 33.1.6012.7400  
Germany: 49.7841.666.0  
Italy: 39.02.66.04.05.40  
Norway: 47.23.03.65.50  
Sweden: 46.8.598.940.00  
United Kingdom: 44.1753.608.700

ASIA PACIFIC  
Australia/NZ: 61.2.9878.5000  
China: 86.21.6361.5599  
HK/Korea/Taiwan: 852.2745.6682  
India: 91.11.2649.9414 to 18  
Singapore/SEA: 65.6829.8888

Powerware and ABM are trade names, trademarks and/or service marks of Eaton Power Quality Corporation or its subsidiaries and affiliates. All other trademarks are property of their respective owners.



© 2010 Eaton Corporation  
All Rights Reserved  
PDF Only  
Configuration Guide  
January 2010