

CTO Configuration Guide



Powering Business Worldwide

FER15GDE
October 2018

Eaton[®] Ferrups[®]

Ferrups 60Hz RM Series

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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: RI000AA0A0A0A0A.

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	R_										
Input / Output Voltage											
Battery and Battery Charger											
Internal Maintenance Bypass Switch											
Input Connection											
Output Connection											
Internal Options											
Complete UPS CTO Number		R_									
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											
Note: Eaton offers a complete line of Power Distribution Units (PDUs) . Please contact your sales representative or visit our website, powerquality.eaton.com and www.epdu.com details.											
Sub Total											
								Freight			
								Insurance			
								Tax/Duty			
								Quote Total			

Ferrups 60Hz Rackmount 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.

RI 0 0 0 A A0A0A0A0 A

Base Unit (1-2)	
RC =	1.4kVA
RH =	2.1kVA
RI =	3.1kVA
RK =	7.0kVA

Input/Output Voltage (3)	
0 =	120V in; 120V out
1 =	208V in; 120/208V out
2 =	208V in; 120/240V out
3 =	240V in; 120/240V out
6 =	240V in; 240V out

Internal Bypass (5)	
0 =	None

Input (6)	
A =	Hardwired
B =	5-15P
C =	5-20P
D =	5-50P
J =	L5-30P
K =	L6-20P
L =	L6-30P

Output (7-14)		
Type	Qty	
A=	None- HW	0
B=	5-15R Duplex	1
C=	5-20R Duplex	2
E=	6-20R Duplex	3
G=	L5-15R Duplex	
H=	L5-20R	
I=	L5-30R	
K=	L6-20R	
L=	L6-30R	

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

Battery / Battery Charger (4)	
0 =	Standard Battery/ Standard Charger
3 =	Setup for Internal w/o Battery/ Std Charger
4 =	External Battery/ Standard Charger
5 =	External Battery/ 10A Charger

Internal Options (15)	
A =	None
B =	AVR/ DVR (recommended for PFC loads)
Q =	Neutral to ground bond removal (shipboard)
R =	Neutral to ground removed & AVR/DVR

FES1.4kVA CTO Configuration Guide

Ferrups 1.4kVA 60Hz Rackmount General Specifications

Capacity:	1.4kVA/ 1.0kW	Dimensions:	10.5" (6U) x 19" x 21.25"
Input Voltage:	120V	(HxWxD)	267mm x 483mm x 540mm
Output Voltage:	120V	Weight (with batteries ¹):	150 lb / 68 kg
		Weight (without batteries):	98 lb / 45 kg

See Eaton® Ferrups® Rackmount Series 60Hz Datasheet (LTP0224) 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
FER1.4kVA, 60 Hz Rackmount	RC	\$7,891

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
14 minute internal (36m half load)	standard	0	\$437
Set up for internal (less batteries)	standard	3	\$108

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

¹External maintenance bypass switch available for hardwired systems. Order desired maintenance bypass switch as a separate line item on your order. See page 1.4k-2.

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired ¹	A	\$0
	5-15P w/6' Line Cord	B	\$24

¹ Hardwired input requires hardwired output

FES1.4kVA 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 of receptacles.

Output Voltage Required	Output Connection	CTO Order Code	Option Price
120 volt	Hardwired ¹	A0A0A0A0	\$0
120 volt	5-15R Duplex	B2A0A0A0	\$100

¹ 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
Neutral to Ground bond removal (For Shipboard Use)	Q	\$25
Neutral to Ground bond removal and AVR (For Shipboard Use)	R	\$110

External Options

External 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 Maintenance Bypass Switches¹ (Recommended for hardwired units)

UPS Input Voltage	Switch Type	Order Number	List Price
120	MBB (Make Before Break)	BPE01MBB1A	\$663
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$690

¹ Bypass Switch must be mounted on the wall near the UPS.

FER2.1kVA CTO Configuration Guide

Ferrups 2.1kVA 60Hz Rackmount General Specifications

Capacity:	2.1kVA/ 1.5kW	Dimensions:	10.5" (6U) x 19" x 26.25"
Input Voltage:	120V	(HxWxD)	267mm x 483mm x 667mm
Output Voltage:	120V	Weight (with batteries ¹):	220 lb / 100 kg
		Weight (without batteries):	116 lb / 53 kg

See Eaton® Ferrups® Rackmount Series 60Hz Datasheet (LTP0224) 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
FER2.1kVA, 60 Hz Rackmount	RH	\$9,046

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
24 minute internal (58m half load)	standard	0	\$710
Set up for internal (less batteries)	standard	3	\$216
set up for external battery pack ¹	standard	4	\$0

¹ Includes External Battery Connector. Order desired external battery pack as a separate line. See page 2.1k-3.

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

¹ 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-2.

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
120 volt	Hardwired ¹	A	\$0
	5-20P w/6' Line Cord	C	\$39

¹ Hardwired input requires hardwired output

FER2.1kVA 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 of receptacles.

Output Voltage Required	Output Connection	CTO Order Code	Option Price
120 volt	Hardwired ¹	A0A0A0A0	\$0
	(3) 5-15R Duplex	B3A0A0A0	\$150
	(3) 5-20R Duplex (UL)	C3A0A0A0	\$150

¹ Hardwired output requires hardwired input with maximum of two output connections

Internal Options

Digit 15

Internal Options	CTO Order Code	Option Price
DVR	B	\$0
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 Packs¹

Runtime Full/Half	Battery Charger Required	Order Number	List Price
1h41m/3h54m	Standard Battery Charger	1re	\$5,466
2h50m/6h37m	Standard Battery Charger	2re	\$9,483

¹ UPS must be ordered set up for external battery pack. 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	\$131

External Maintenance Bypass Switches¹ (Recommended for hardwired units)

UPS Input Voltage	Switch Type	Order Number	List Price
120	MBB (Make Before Break)	BPE01MBB1A	\$663
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$690

¹ Bypass Switch must be mounted on the wall near the UPS.

FER3.1kVA CTO Configuration Guide

Ferrups 3.1kVA 60Hz Rackmount General Specifications

Capacity:	3.1kVA/ 2.2kW	Dimensions:	10.5" (6U) x 19" x 26.25"
Input Voltage:	120, 208, 240 V	(HxWxD)	267mm x 483mm x 667mm
Output Voltage:	120, 120/208, 120/240, 240, 127/240 V	Weight (with batteries ¹):	238 lb / 108 kg
		Weight (without batteries):	138 lb / 63 kg

See Eaton® Ferrups® Rackmount Series 60Hz Datasheet (LTP0224) 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
FER3.1kVA, 60 Hz Rackmount	RI	\$10,043

Input / Output Voltage			Digit 3
Input Voltage	Output Voltage	CTO Order Code	Base Price
120	120	0	\$0
208	120/208	1	\$150
208	120/240	2	\$150
240	120/240	3	\$150
240	240 (International Models)	6	\$150

Battery and Battery Charger			Digit 4
Battery Configuration	Battery Charger	CTO Order Code	Option Price
14 minute internal (35m half load)	standard	0	\$695
Set up for internal (less batteries)	standard	3	\$216
set up for external battery pack ¹	standard	4	\$0

¹ Includes External Battery Connector

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

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

¹ 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.

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired ¹	A	\$0
120 volt	5-50P w/6' Line Cord	D	\$90
	L5-30P w/6' Line Cord	J	\$77
208 or 240 volt	L6-20P w/6' Line Cord	K	\$77
	L6-30P w/6' Line Cord	L	\$77

¹ Hardwired input requires hardwired output

FER3.1kVA 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.

- Three output slots available with line cord input connection.
- 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 three 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 ¹	A	0	\$0	
120 volt Choose up to three panels	5-15R Duplex	B	___	\$50	
	5-20R Duplex (UL)	C	___	\$50	
208, or 240 volt Choose up to three panels	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, or 240 volt Choose up to three panels	L6-20R	K	___	\$75	
	L6-30R	L	___	\$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>

¹ Hardwired output requires hardwired input

Internal Options

Digit 15

Internal Options	CTO Order Code	Option Price
DVR	B	\$0
Neutral to Ground bond removal and DVR (For Shipboard Use)	R	\$25

FER3.1kVA 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 Packs¹

Runtime Full/Half	Battery Charger Required	Order Number	List Price
57m/2h27m	Standard Battery Charger	1re	\$5,466
1h41m/4h03m	Standard Battery Charger	2re	\$9,483

¹ UPS must be ordered set up for external battery pack. 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	\$131

External Maintenance Bypass Switches¹ (Recommended for hardwired units)

UPS Input Voltage	Switch Type	Order Number	List Price
120V	MBB (Make Before Break)	BPE01MBB1A	\$663
	MBB, with AS/400 (iSeries) Option	BPE01MBBAS1A	\$690
208V	BBM (Break Before Make)	BPE02BBM1A	\$909
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$950
240V	MBB (Make Before Break)	BPE02MBB1A	\$909
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$950

¹ Bypass Switch must be mounted on the wall near the UPS.

FER7kVA CTO Configuration Guide

Ferrups 7.0kVA 60Hz Rackmount General Specifications

Capacity:	7.0kVA/ 5.0kW	Dimensions:	19.25" (11U) x 19" x 26.25"
Input Voltage:	208, 240 V	(HxWxD)	489mm x 483mm x 540mm
Output Voltage:	120/208, 120/240, 240	Weight (with batteries ¹):	N/A
		Weight (without batteries):	330 lb / 150 kg

See Eaton® Ferrups® Rackmount Series 60Hz Datasheet (LTP0224) 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
FER7kVA, 60 Hz Rackmount	RK	\$20,920

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
set up for external battery pack ¹	standard	4	\$0
set up for external battery pack ¹	10 amp internal upgrade	5	\$270

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

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

¹ 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.

Input Connection			Digit 6
Input Voltage Selected	Input Connection	CTO Order Code	Option Price
Any	Hardwired	A	\$0

FER7kVA CTO Configuration Guide

Output Connection	Digits 7-14
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Designated by 8 digits within the unit CTO number. These eight digits allow selection of the type and quantity for up to three different types of receptacles.

- Up to three output slots available.
- 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 three 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 ¹	A	0	\$0	
120 volt	5-15R Duplex	B	___	\$50	
	5-20R Duplex (UL)	C	___	\$50	
208 or 240 volt	6-20R Duplex	E	___	\$75	
120 volt	L5-15R Duplex	G	___	\$75	
	L5-20R	H	___	\$75	
	L5-30R	I	___	\$75	
208 or 240 volt	L6-20R	K	___	\$75	
	L6-30R	L	___	\$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>

¹ Hardwired output requires hardwired input

Internal Options	Digit 15
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Internal Options	CTO Order Code	Option Price
DVR	B	\$0
Neutral to Ground bond removal and DVR (For shipboard use)	R	\$25

FER7kVA 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 ¹	Order Number	List Price
12m/33m	Standard Battery Charger ¹ 10 Amp Battery Charger Upgrade Optional	EBPS4.3R	\$5,370

¹Order battery charger as part of UPS. See page 7k-1.

External Maintenance Bypass Switches¹ (Recommended for hardwired units)

UPS Input Voltage	Switch Type	Order Number	List Price
208, 220 volt	BBM (Break Before Make)	BPE02BBM1A	\$909
	BBM with AS/400 (iSeries) Option	BPE02BBMAS1A	\$950
240 volt	MBB (Make Before Break)	BPE02MBB1A	\$909
	MBB with AS/400 (iSeries) Option	BPE02MBBAS1A	\$950

¹Bypass 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	RK (7kVA)	TRN-0239	\$2,219

Connectivity

Option	Order Number	List Price
Hand-held Remote Control Panel with Cable	RCK-0007	\$423
IBM AS/400 (iSeries) Interface Kit – UPS w/o maintenance bypass switch	IPK-0001	\$131
Serial RS-232 CheckUPS Cable DB25M to DB9F	INT-0035	\$67
BestLink SNMP/WEB Adapter	116750225-001	\$388

Software

Arriving bundled with every Ferrups UPS is the Eaton Intelligent Power Software Suite. The software suite includes links to LanSafe and NetWatch 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.

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.

Ferrups products are also compatible with the Eaton PowerXpert Software, geared toward end users with mostly Eaton power distribution products such as switchgear, UPSs, breakers, PDUs, RPPs, meters, and relays amongst others. PowerXpert has web based views including Trend Viewer, Layout Manager and Quality Manager Modules.

Additionally, the CheckUPS® Software Suite is available for download under legacy software at 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.

For more information on Eaton software products, visit powerquality.eaton.com/Support/Software-Drivers

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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

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Configuration Guide
October 2018