CorDEX

USER MANUAL

INTRINSICALLY SAFE
FL4725 WORKLIGHT
FL4700 LANTERN

RUGGED AUTHORITY

www.cord-ex.com

Congratulations – You are the owner of the **CorDEX FL Series** designed and certified specifically for use in **hazardous (explosive) atmospheres.**

Your CorDEX intrinsically safe luminaire is ATEX and IECEx certified. For specific certification levels and Special Considerations for Safe Use, refer to the latest revisions of Manual: FL4700/4725SOM. If in doubt, contact your local CorDEX Instruments Representative.

Please ensure that the certification matches or exceeds the hazardous area characteristics that will be clearly displayed on site.

CONTENTS

Getting To Know Your FL Series	4
Getting To Know Your EXIS™ Battery	6
Getting Started with your FL Series	8
Getting Started with your EXIS Battery Pack	10
Using your EXIS Battery Pack with your FL Series	12
Using your EXIS Battery Pack with the Belt Clip	14
Understanding Charge/Status LEDs	16
Error Reporting	17
Bluetooth Diagnostic Station	18
Caring for your battery pack	23
Troubleshooting your FL Series lamp & EXIS battery	24
Certification	25

GETTING TO KNOW YOUR FL SERIES

1 On/Off Button

2 Vertical Angle Adjust

3 EXIS Battery Pack

4 Carrying Handle

5 Lens

6 Feet

1 On/Off Button

2 EXIS Battery Pack

3 Carrying Handle

4 Lens

GETTING TO KNOW YOUR EXIS BATTERY

1
Charge/Status LED Indicator

2
Thumb Release

3
I.S. Power & Communications

4
Battery Engage/Charge Selector - Unlock / Lock / Charge

5
Charging Pads (under orange/rating plate)

Charge Bar
Part # CDX4700-323 (Includes mains charger)

Bluetooth Diagnostic Station
Part # CDX1000-460

Transport Clip
Part # CDX1000-030

Access Key
Part # CDX2341-100

Mains Power Charger
Part # CDX4700-323 (Includes Charge Bar)

GETTING STARTED WITH YOUR FL SERIES

To get started with your FL Series products please ensure your EXIS Battery Pack is fully charged. Please refer to the 'Charging your battery' section for instructions on how to use your charger.

Once fully charged you can start using your product.

Please refer to the certification information and Instructions for Safe Use Manual for information about hazardous environments and safe operations within them.

Warning:
Please ensure that the certification matches or exceeds the hazardous area characteristics that will be clearly displayed on site.

REGISTER YOUR PRODUCT.

Register your product now at **www.cordexsupport.com** and receive a 12 month extended warranty.

Terms & Conditions apply.

GETTING STARTED WITH YOUR EXIS BATTERY PACK

CHARGING YOUR EXIS BATTERY

1.

Turn the selector (using access key) clockwise to the 'Charge' position.

2.

Remove the rating plate to expose charging pins.

3.

Engage EXIS battery pack onto charging bar.

4.

Listen for a 'click' to ensure battery has pack locked in place.

5.

Plug the Main Charger into the charger bar.

6.

Turn On the Mains Charger.

PLEASE NOTE:
Battery Pack Charge/Status Indicator LEDs will cascade to show charge in progress and status of charge.

ONCE CHARGE IS COMPLETE

1.

Pull up release button on charger bar and lift at the same time..

2.

Replace rating plate.

3.

Rotate selector to counter clockwise to the 'Unlock' position using access key.

Only charge your battery in a safe area.

USING YOUR EXIS BATTERY PACK WITH YOUR FL SERIES

ENGAGING YOUR BATTERY

1.

Ensure the selector is in 'Unlock' position.

2.

Slide battery pack into host until 'click'.

3.

Rotate selector to 'lock' position using access key.

DISENGAGING YOUR BATTERY

1.

Rotate selector counter clockwise to 'Unlock' position using access key.

2.

Press and hold Thumb Release.

3.

Slide out battery pack away from host.

USING YOUR EXIS BATTERY PACK WITH THE BELT CLIP

ENGAGING YOUR BATTERY WITH THE BELT CLIP

1.

Ensure the selector is in 'Unlock' position.

2.

Slide battery pack into belt clip until 'click'.

3.

Rotate selector to 'lock' position using access key.

DISENGAGING YOUR BATTERY

1.

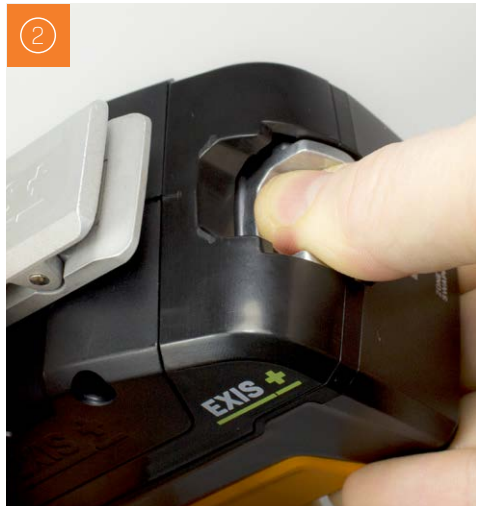
Rotate selector counter clockwise to 'Unlock' position using access key.

2.

Press and hold Thumb Release.

3.

Slide out battery pack away from belt clip



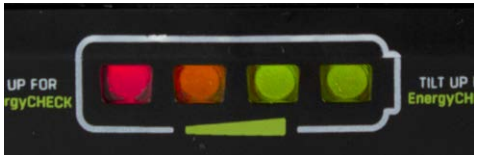
UNDERSTANDING CHARGE/STATUS LEDS

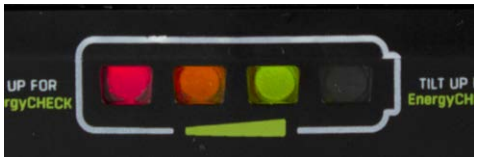
The Charge/Status LEDs provide you with 2 features.

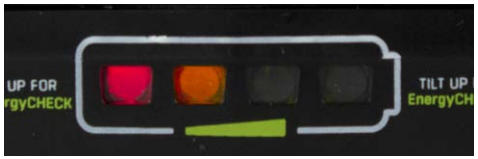
- Battery Charge Status
- Error reporting

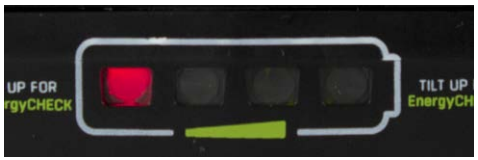
To perform the EnergyCHECK tilt the battery forward (towards the Thumb Release) and hold for 1 second.

The LEDs will illuminate to show charge status.









BATTERY CHARGE STATUS

A single red, flashing LED indicates that the battery pack is totally discharged and requires recharging.

Low Power Warning

When connected to the host, the battery will provide secondary notification of low battery status.

When the battery pack reaches 5% of charge, a low power warning is provided via the host control interface to indicate imminent power loss from complete discharge.

The low power warning operates as follows:

- At approximately 5% of full charge the initial warning is given
- Other follows every 60 seconds until the battery is discharged

The warning is three pulses in quick succession resulting in a noticeable triple blink on the FL4700 and FL4725.

NOTE. For smart hosts which include an on-screen battery indicator, this feature can be disabled.

PLEASE NOTE:
Error status overwrites battery charge status.

ERROR REPORTING

If error is shown one single red LED will flash. A series of additional flashing LEDs will define specific error. Please refer to the table below.

Status	Green LED1	Green LED2	Yellow LED	Red LED	Notes
Battery completely discharged (0%)	Off	Off	Off	Blink	Charge Pack • Battery Pack will not power host equipment • Only the LED display is operational.
Battery temperature (Host equipment)	Off	Off	On	Blink	Battery operates within -10°C to 60°C range • Bring the unit into operational temperature • Uses gauge to monitor battery temperature (operates for -10°C<Temp<60°C)*
Battery temperature (Charging)	Off	On	Off	Blink	Battery chargess within -0°C to 40°C range • Monitors operational temperature • Uses gauge to monitor battery temperature (operates over 0°C<Temp<15°C)* • Disables charging if charging is detected • Enables again within the temperature range • Maintain error code until temperature is within operational range.
Battery Error	Off	On	On	Blink	Battery Error • Battery overvoltage detected • Disables the BatteryPack for charging • Diables the BatteryPack for host equipment (If charging displays error instead of charging display otherwise displayed as error status
System Error	On	Off	Off	Blink	Hardware Problem Detected • Charger input switch

* Note: These are battery specified operational temperatures which may be higher than the ambient temperature

BLUETOOTH DIAGNOSTIC STATION

The EXIS Energy, Intrinsically Safe Battery Pack includes onboard status monitoring and memory which enables users to accurately understand the battery charge level along with general state of health.

Communications with the battery pack are via Bluetooth using a dedicated diagnostic station. The diagnostic station, is powered directly from the EXIS battery pack and as such, there is no facility to utilise mains power.

Engaging and disengaging the battery into the diagnostic station, follows the same process as the belt clip. Once engaged, the diagnostic station will power up, this is shown by the blue light located on the top edge. This light indicates power and also Bluetooth Pairing.

NOTE. The EXIS Bluetooth Diagnostic Station operates in the same manner as a handsfree headset. Depending on your security settings, Windows may ask if a number is being displayed on the device, in this instance simply click Yes.

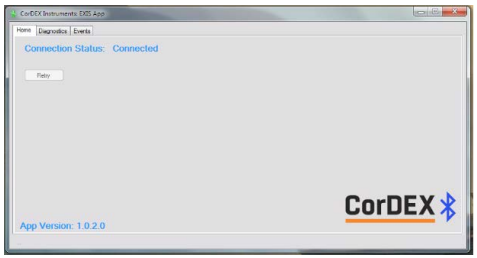
To communicate with the battery pack via the diagnostic station, the EXIS Diagnostic App is required along with a PC incorporating a compatible Bluetooth transceiver.

The diagnostic app can be downloaded from www.cord-ex.com/exisapp

Once downloaded, please install the App (NOTE. requires .NET Framework Version 4.5.1 minimum)

There are three tabs

Home



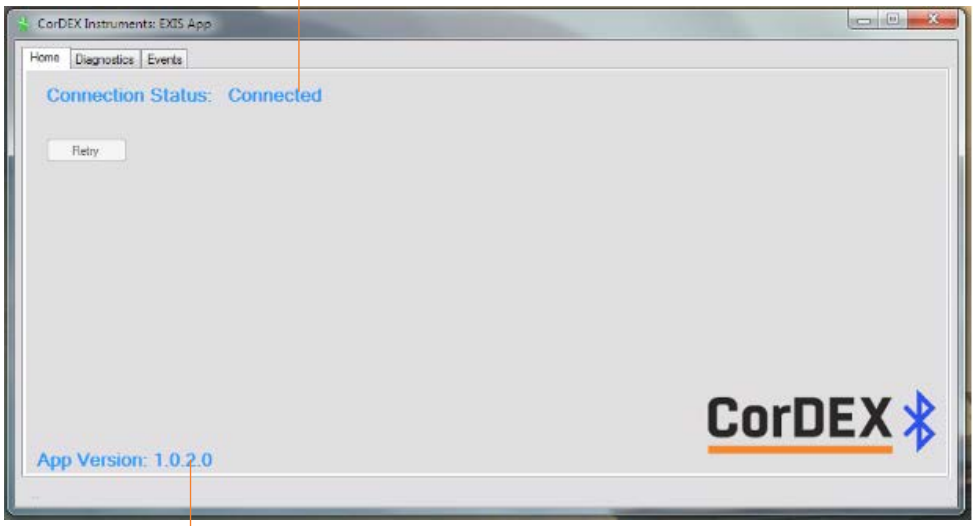
Diagnostics

Events

HOME

This basic Home Screen, shows Bluetooth Connectivity with the EXIS battery pack. The RETRY button is used to initiate a connection with a newly powered Bluetooth Diagnostic Station.

Connection Status:
Determines the status of the connection between the Bluetooth Diagnostic Station and the PC.



App Version:
Relates to the revision of the CorDEX Battery Pack App. The App will automatically update if necessary.

DIAGNOSTICS

The Diagnostics page provides useful information regarding the EXIS battery state of health.
Please see below a diagram detailing each block of information and its meaning.

Serial #:
This is the unique number used to trace and identify the battery pack for Intrinsically Safe purposes. This number matches the number appearing on the rating plate under the pack itself.

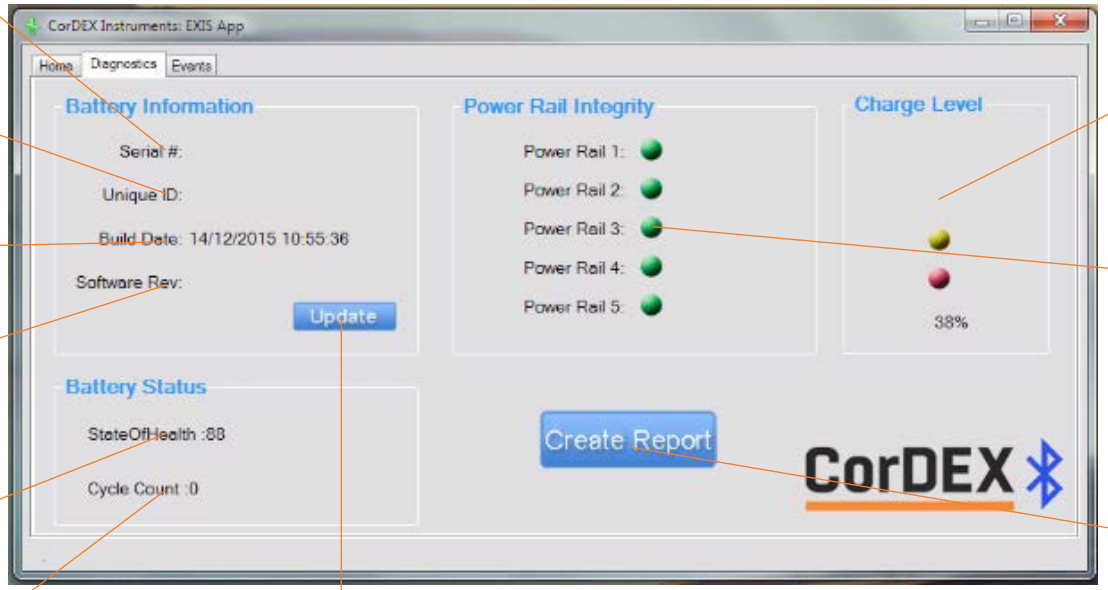
Unique ID:
This number is a digital identifier hardcoded into the battery pack electronics. During manufacture, this number is matched to the Serial # and logged.

Build Date:
This is the date and time the battery pack was manufactured.
Note: This is not to be used as a Warranty Start Date.

Software Rev:
The current revision of software within the battery pack.

State of health:
State of Health: Over time batteries degrade which in turn reduces performance. This field shows the health of the battery pack providing a visual means of establishing when to replace your battery pack.

Cycle Count:
This field refers to the number of times the battery has been through a charge cycle.



Update:
This button updates the Battery Pack software to the latest version from CorDEX.
NOTE: Internet access is required and battery pack charge level must be greater than 50%

Charge Level:
This field shows the current state of charge of the Battery Pack and corresponds to the LED indicators on the rear of the Battery Pack.

Power Rail Integrity:
Your battery pack provides five, independent, power supplies to the host device connected to it. For the host device to operate correctly, all five Power Rails must be operating. A correctly operating Power Rail is shown in Green, a malfunctioning Power Rail is shown in Red. For more information on Power Rails, see "Troubleshooting your Battery Pack"indicators on the rear of the Battery Pack.

Create report:
This button creates a Report which compiles all relevant Battery Pack data. This Report will be required by CorDEX Technical Support should you need assistance.

EVENTS

The Events section of the App records and displays meaningful data relating to how the battery pack is being used to ensure optimum performance.

A description of each event, along with the event value and time/date is displayed. Users can filter events using the Fliter drop down box on the right hand side.

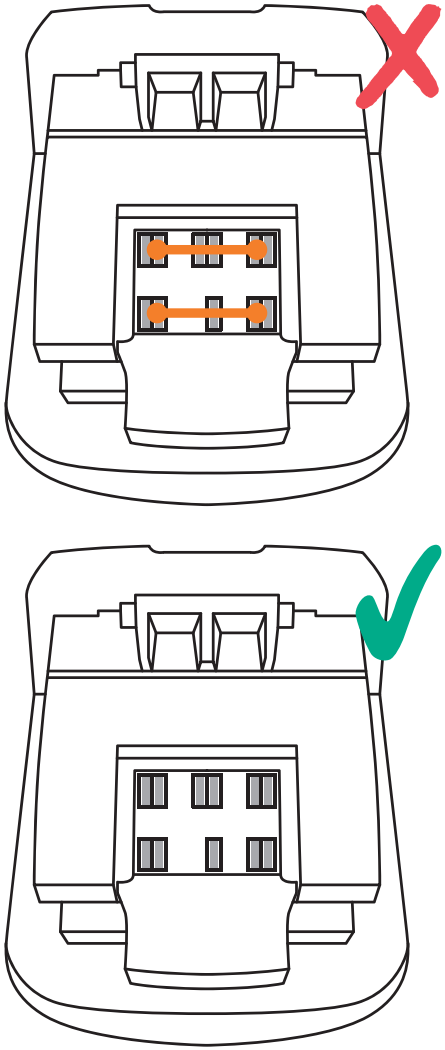
Event data cannot be deleted and is generally used for Manufacturer Troubleshooting.

CARING FOR YOUR BATTERY PACK

The EXIS 740, battery pack is an intrinsically safe, Zone 1 hot-swappable battery designed to provide trouble free portable power to compatible Intrinsically Safe devices.

Care must be taken not to create an electrical short across I.S. power terminals as permanent damage may occur.

Always carry the EXIS 740 battery pack connected to either the host equipment or the dedicated Transport Clip.



TROUBLESHOOTING YOUR FL SERIES LAMP & EXIS BATTERY

Problem	Cause	Suggested Resolution
My EXIS pack shows a full charge but not all LEDs on my lamp are operating.	A power rail maybe malfunctioning	Connect the EXIS pack to your Bluetooth Diagnostic Station, load the EXIS App and check the Diagnostic page. Are all Power Rails showing green? If a Power Rail is showing Red, the battery pack is damaged and must be replaced.
My EXIS pack has a flashing red LED and my light will not work.	The battery is fully discharged.	Recharge battery in a Safe Area.
My EXIS pack has a flashing red LED and another LED	The battery has reported an error	Check the battery error code table in this manual.

NOTES

NOTES

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Document Reference FL4700/4725UM Rev. A