TECHNICAL DATA SHEET
DS0130 rev 31

FLX-PS24

DESCRIPTION

The **FLX-PS24** power supply module is designed to deliver reliable and consistent output power to the **F**ield **L**evel e***X***pansion I/O modules. Additionally, the **FLX-PS24** can be used to extend the distance between the remote mounting of **FLX** I/O modules and Cylon's **CBXi** or **CBX** BACnet® field controllers. The power supply module can also be used to power field devices that require DC power when connected to the **CBXi** and **CBX** controllers.

The **FLX-PS24** carries inter-module communications from the **CBXi** to enable connection of additional **FLX** I/O modules, increasing the capacity of the **CBXi** to 96 points. It can also be used to facilitate remote locating of **FLX** I/O modules in a **CBXi** or **CBX** system. Each power supply module can deliver power for loads up to 20 W. The consumption of downstream **FLX** I/O modules and field devices can vary. The Power Consumption table can be used to calculate the consumption of the **FLX** I/O modules.

The power supply module facilitates flexible mounting of the **CBXi** or **CBX** and its associated **FLX** I/O modules either in a single row or multiple rows using the **FLX-RMC** Remote Module Connector.

Provides power to Field Level e*X*pansion I/O modules using simple bus connectors

24 V AC or DC input

20 Watts / 1 Amp

Extends distance for remote mounting of FLX I/O modules

FLX-PS24 unit can be used to supply power to field devices

connected to the **CBXi** or **CBX** BACnet field controllers

Compact form factor to maximize enclosure space

DIN 43880 type-2 compatible

Diagnostic LED

indicates status of main power and if the power supply output and unit temperature is within proper range

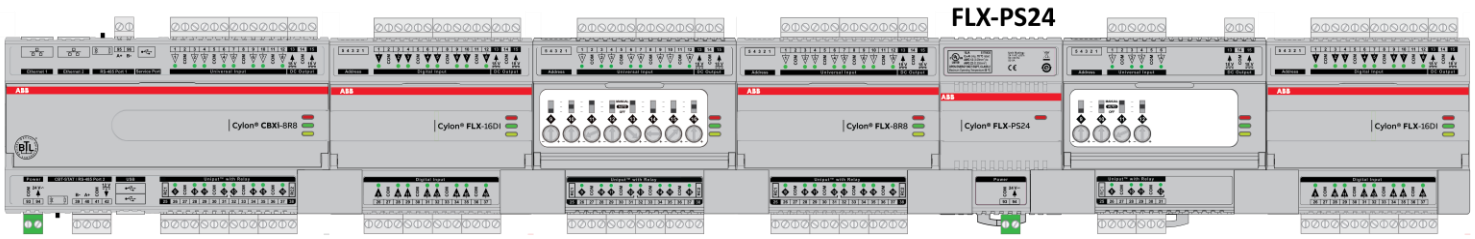
Built-in overload protection

Accessories

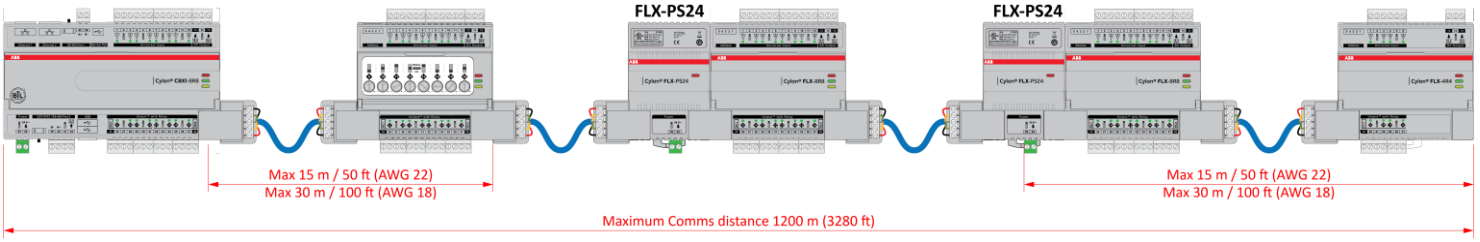
FLX-RMC Remote Module Connector includes two bus connectors with terminal strip to extend the **FLX** bus and for 20 V DC supply to power external field devices

APPLICATION

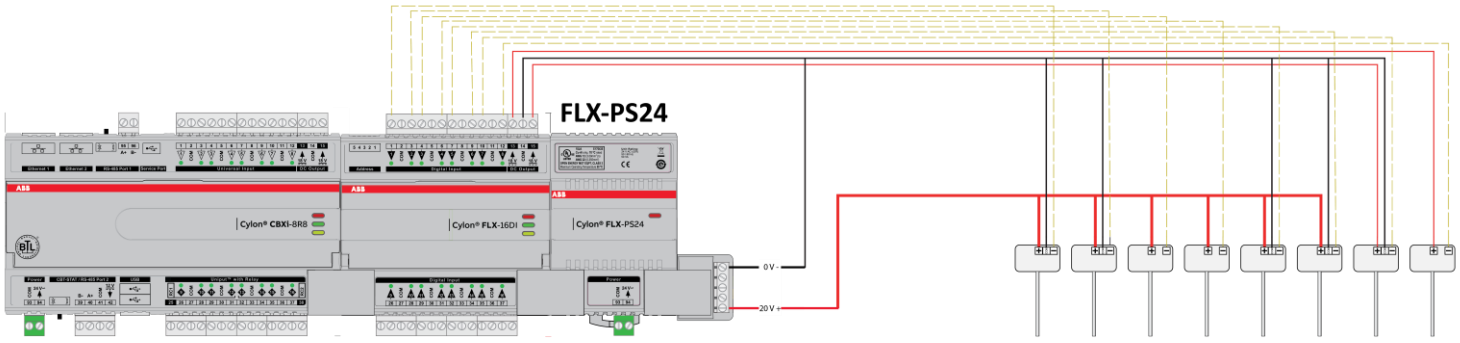
FLX-PS24 allows the **CBXi** trunk to be expanded beyond 3 **FLX** I/O modules to a maximum of 5:



FLX-PS24 facilitates remote connection of **FLX** I/O modules to **CBXi** or **CBX** to a maximum overall length of 1200 m (3280 ft). Each **FLX-PS24** can power a bus segment of up to 30 m (100 ft):



FLX-PS24 can provide 20 V DC DIN rail-mounted power supply for external field devices using the **FLX-RMC**:



The number of **FLX** I/O modules that can be powered by a **FLX-PS24** depends on the model and loading of the individual **FLX** I/O modules. Any combination where the total full-load power is less than 20 W can be used. The Power Consumption table below shows the power load of each **FLX** I/O module:

Part Number	Power consumption when fully loaded
FLX-4R4	3.8 W
FLX-4R4-H	3.9 W
FLX-8R8	4.9 W
FLX-8R8-H	5 W
FLX-16DI	3.2 W

Notes:

1. A maximum of 5 **FLX** I/O modules may be connected to a **CBXi** Series controller.
2. A maximum of 3 **FLX** I/O modules may be connected to a **CBX** Series controller.
3. If any **FLX** I/O module's Aux Power is not used, the budgeted 1.2 watts (20 V @ 60 mA) for that FLX will be available to allow additional field devices to be connected to the **FLX-PS24**.

SPECIFICATIONS

MECHANICAL

Size (excluding terminal plugs)	62.5 x 89.5 x 57 mm [2.5 x 3.5 x 2.24”]
Enclosure	Flame-Retardant ABS DIN 43880 type-2 compatible
Mounting	DIN rail

CONNECTION

Note: Use Copper or Copper Clad Aluminum 70 °C (158 °F) conductors only.

Terminals	PCB mounted plug terminal connections
Conductor Area	Max: AWG 12 (3.31 mm²) Min: AWG 22 (0.355 mm²)

ELECTRICAL

Supply Requirements	24 V AC/DC ±20 % 50/60 Hz
Supply Rating	50 VA
Output	20 V DC @ 1 A (20 W)
FLX Power Connection	FLX bus connector provides power to connected FLX i?o modules, while passing through FLX bus communications between left and right connectors.

COMMUNICATIONS

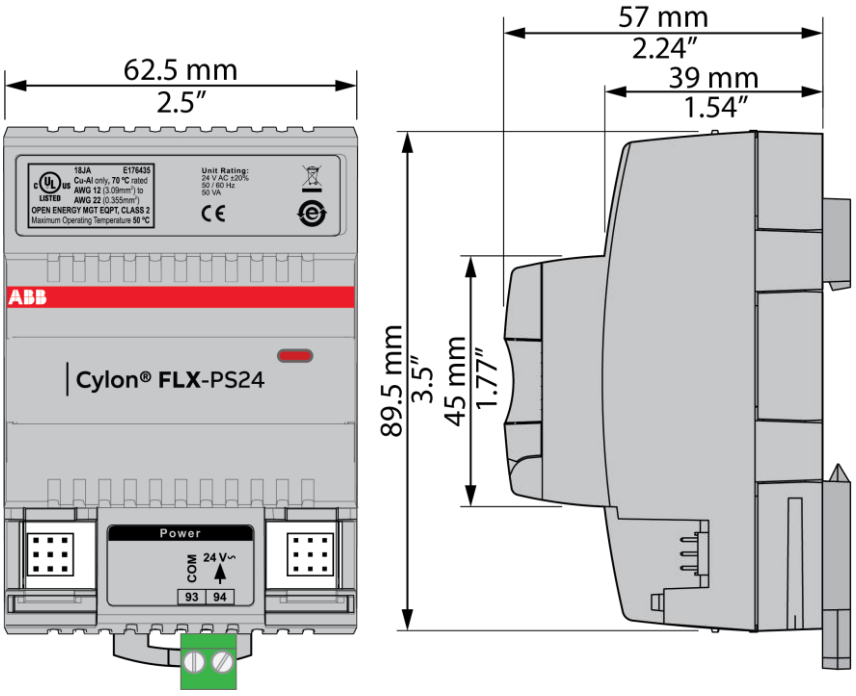
FLX bus	115.2K Baud (passed through FLX-PS24) Max bus length (including extension cables): 30 m / 100 ft. using 18 AWG conductors 15 m / 50 ft. using 22 AWG conductors
FLX bus Connection	FLX bus connector carries inter-module communications

ENVIRONMENT

Note: This equipment is intended for field installation within an enclosure.

Ambient Temperature	-25 °C … 50 °C (-13 °F … 122 °F)
Ambient Humidity	0% … 90% RH non-condensing
Storage Temperature	-30 °C … +70 °C (-22 °F … 158 °F)
EMC Immunity	EN 61326-1: 2013
EMC Emission	EN 61326-1: 2013 EN 61000-3-2: 2014 EN 61000-3-3: 2013
Approvals	UL Listed (CDN & US) UL916 Energy Management Equipment – File No. E176435
Safety	CE Approved

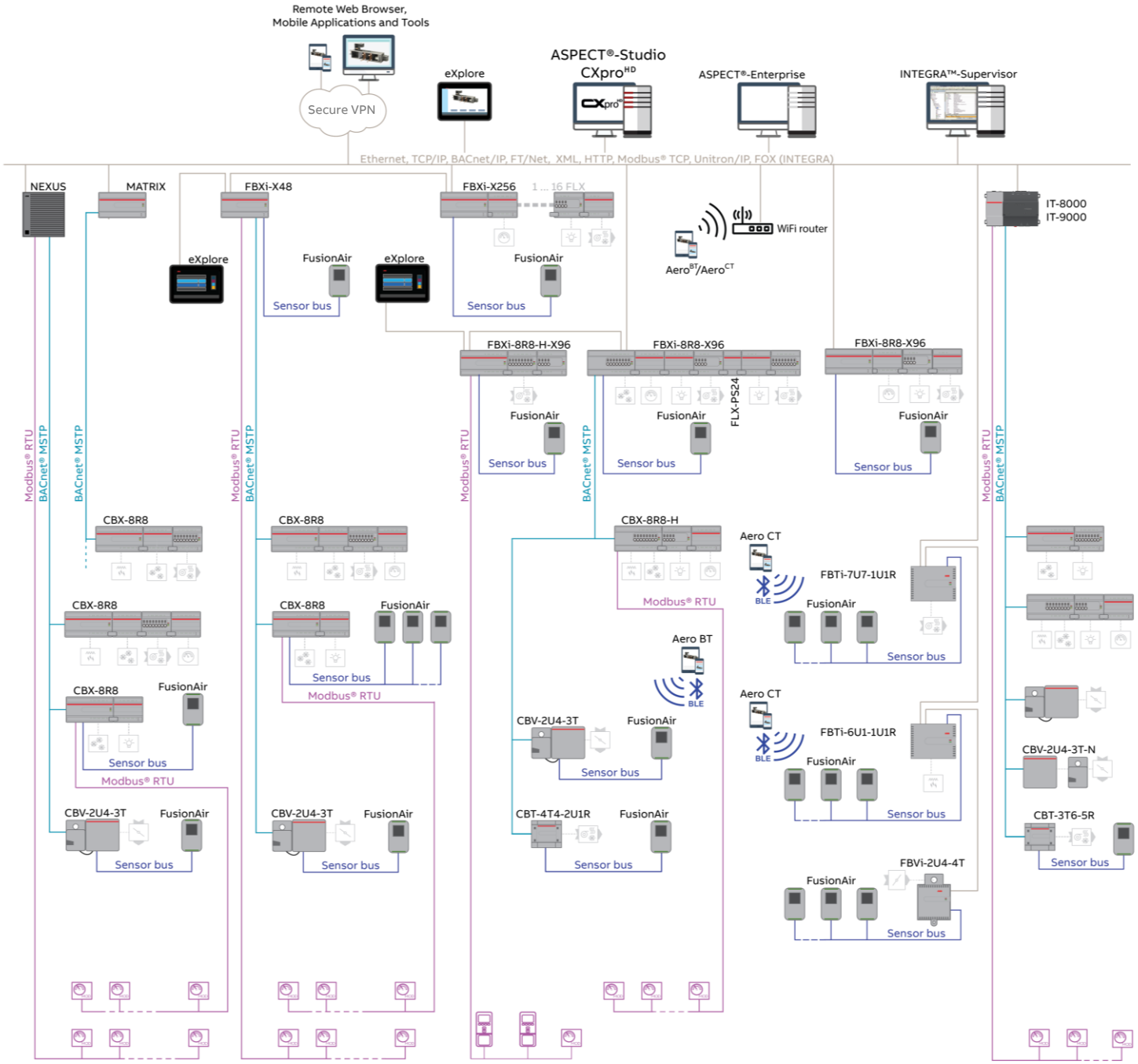
DIMENSIONS



ORDERING INFORMATION

Order Code	Product Name	Description
ABB2CQG205601R1021	FLX-PS24	20 V DC Power supply
ABB2CQG205602R1011	FLX-PS24-S	20 V DC Power supply (UUKL)
		Note: This variant complies with UL 864 UUKL and must be installed in accordance with Design Guide MAN0156

SYSTEM ARCHITECTURE



FBXi / CBXi-8R8 / CBX-8R8

CBXi-8R8-H / CBX-8R8-H

CBV-2U4-3T

FLX-8R8 / FLX-4R4 / FLX-16DI

FLX-8R8 -H

FLX-4R4-H

FLX-PS24

CBT-4T4-2U1R

FBVi-2U4-4T

NEXUS Series

MATRIX-2 Series

INTEGRA Series

eXplore

FusionAir Smart Sensor

CBT-STAT

UCU Room Display

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