

## TECHNICAL DATA SHEET

DS0130 rev 28

# FLX-PS24



## DESCRIPTION

The **FLX-PS24** power supply module is designed to deliver reliable and consistent output power to the **Field Level eXpansion 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.

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**Provides power to Field Level eXpansion I/O modules using simple bus connectors**

24 V AC or DC input

20 Watts / 1 Amp

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**Extends distance for remote mounting of FLX I/O modules**

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

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

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**Compact form factor to maximize enclosure space**

DIN 43880 type-2 compatible

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**Diagnostic LED**

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

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**Built-in overload protection**

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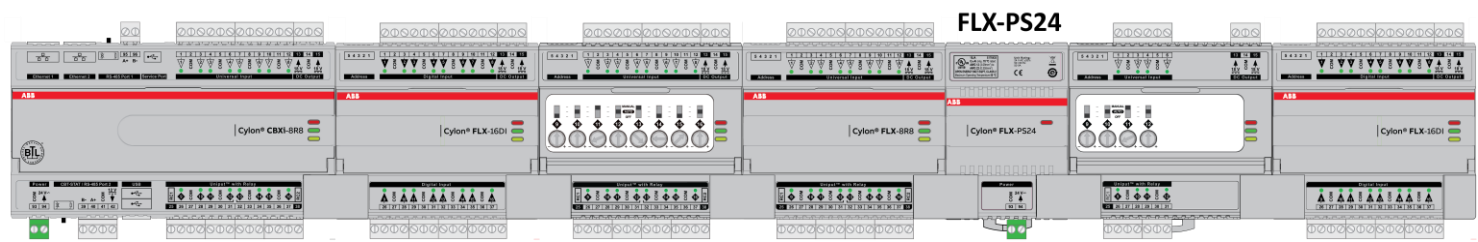
**Accessories**

**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

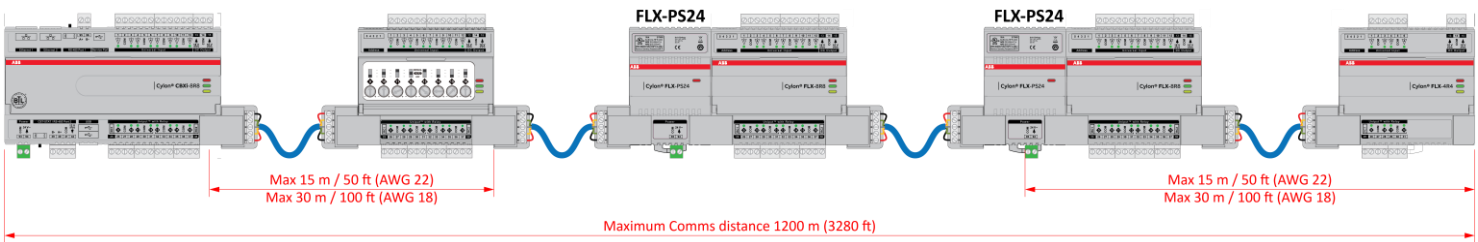
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APPLICATION

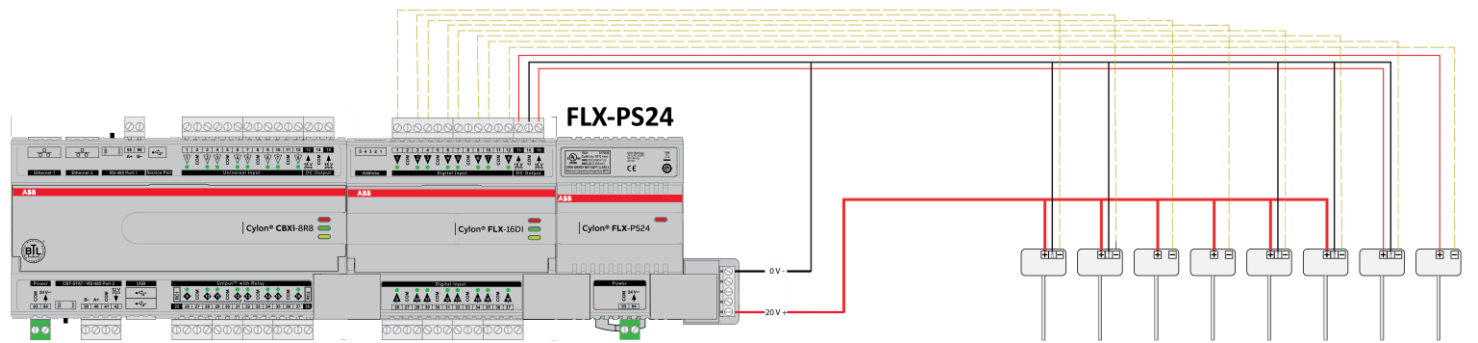
FLX-PS24 allows the CBXi trunk to be expanded beyond 3 FLX I/O modules to a maximum of 5:



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

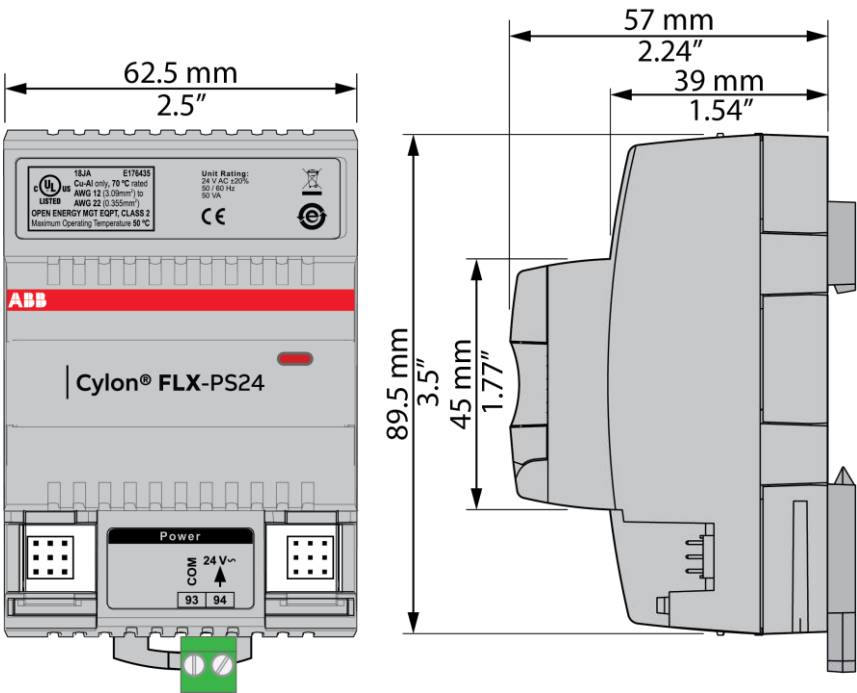
FLX bus	115.2K Baud (passed through FLX-PS24) Max bus length (including extension cables): 30 m / 100 ft. using 18 AWG conductors 15 m / 50 ft. using 22 AWG conductors
FLX bus Connection	FLX bus connector carries inter-module communications

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



## SYSTEM ARCHITECTURE

