

ABB

CP-PX 24/1.5
CP-PX 24/2.2
CP-PX 24/3.2



(EN) Operating and installation instructions

Primary switch mode power supplies CP-PX range

Note: These operating and installation instructions cannot claim to contain all detailed information of all types of this product range and can even not consider every possible application of the products. All statements serve exclusively to describe the product and have not to be understood as contractually agreed characteristics. Further information and data is obtainable from the catalogues and data sheets of this product, from the local ABB sales organisations as well as on the ABB homepage www.abb.com. Subject to change without prior notice. The English text applies in cases of doubt.

Warning! Hazardous voltage! Installation by person with electrotechnical expertise only and in accordance with the specific national regulations (e.g., VDE, etc). Before installing this unit, read these operating and installation instructions carefully and completely. The devices are maintenance-free chassis-mounted units.

(ZH) 操作与安装指南

初级开关电源CP-PX

注意：本操作指南不包含技术数据和全部应用说明，所有数据只是具有对产品特性进行说明的作用，因此不具备法律效应。详细说明请参阅技术样本或联络ABB当地办事处或浏览ABB网站（www.abb.com）。如有更改恕不通知，并以英文为标准。

警告！危险电压！ 仅可由电气专业人员安装且需符合特定的国家规定（如VDE等）。安装前，请仔细读全部阅读该安装说明。此产品为免维护底板安装器件。

	1.2 Nm (10.5 lb.in)
4.0 x 0.8 mm (0.157 x 0.031) or PH2	
1 X 10 mm (0.394")	0.3...4.0 mm² (22...10 AWG)
1 X 10 mm (0.394")	0.3...4.0 mm² (22...10 AWG)
1 X 10 mm (0.394")	0.3...4.0 mm² (22...10 AWG)

For all terminals.

LED

Output voltage U _{out}	OUTPUT OK: LED green
U _{out}	

(EN) Safety instructions and warnings

Disconnect system from supply network!

Before any installation, maintenance or modification work: Disconnect the system from the supply network and protect against switching on.

Before start of operation:

Attention! Improper installation/operation may impair safety and cause operational difficulties or destruction of the unit. Before operation the following must be ensured:

- Connect to main according to the specific national regulations for class of protection I.
- Cables and unit must be sufficiently fused. A disconnecting device has to be provided for the end product to disengage unit and supply cables from supply mains if required.
- The protective earth conductor must be connected to the terminal.
- Rate the output lines for the output current of the device and connect them with the correct polarity.
- In order to ensure sufficient air-cooling the distance to other devices has to be considered (min. 20 mm).

In operation:

- Do not modify the installation (primary and secondary side)! High current! Risk of electric arcs and electric shock (danger to life)!
- Risk of burns: Depending on the operation conditions the enclosure can become very hot.
- If the internal fuse blows, most probably the device is defective. In this case, an examination of the device by the manufacturer is necessary.

Warning: High voltage! Stored energy! Energy hazard at output!

The device contains components with high stored energy and circuits with high voltage! Do not introduce any objects into the device, and do not open the unit. With some devices of this range the output is capable of providing hazardous energy. Ensure that the service personnel is protected against inadvertent contact with parts carrying energy.

(ZH) 安全指示和警告

将系统与电源断开

在安装、维护和修改系统之前，先将系统与电源断开。

开始运行前：

注意！不正确的安装/操作可能会带来不安全或运行故障，甚至损坏电源。开始运行前必须保证：

- 按国家标准（一级保护）将电源连接到主回路。
- 电源电缆和系统元件必须有熔断器保护。在主回路和电源之间必须安装断开设备（用作电源从主回路断开）。
- 保护地导线必须接。
- 注意电源输出电流的极性，正确连接输出导线。
- 安装电源时必须考虑有效的通风散热间隙（最小20 mm）。

运行中：

- 不要更改安装（初级和次级）！高电流！电弧和电击危险（生命危险）！
- 灼热危险：运行环境可能会使外壳非常热。
- 如果内部熔断器熔断，电源很可能被损坏。必须由生产商检测。

警告：高电压！存储能量！输出端危险！

电源包含有高能存储元件，回路带高电压！严禁在电源中放入其它物体，严禁开盖！因为电源带危险能量，请确保维护人员可以防护由于疏忽碰到高能器件。

I

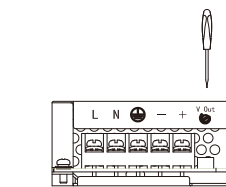
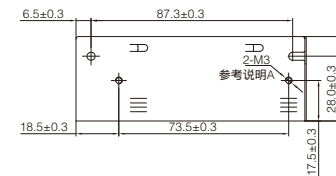
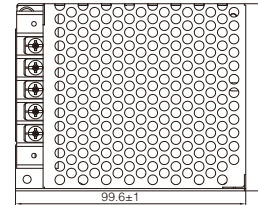
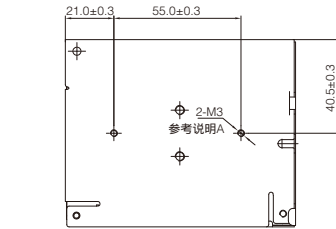
(EN) Illustrations of the products
(ZH) 产品外形说明

(EN) A: the screw hole for mounting. The screw depth in module <= 4 mm.
B: Screw torque: M3.0 screw < 0.75 N.m, M4.0 screw < 0.8 N.m.
C: The min. distance between other module is 20 mm.

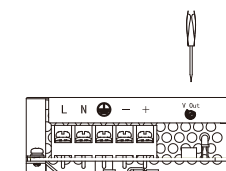
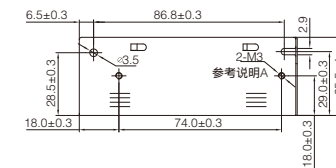
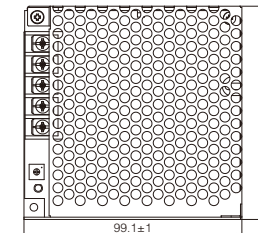
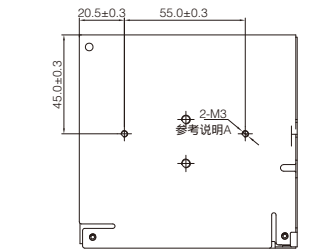
(ZH) 说明：

A: 客户安装孔，其中螺纹孔处安装螺钉在电源内不应超过4mm；
B: 建议扭矩：M3.0螺钉 < 0.75 N.m, M4.0螺钉 < 0.8 N.m；
C: 安装时与其它器件的最小间距为20mm。

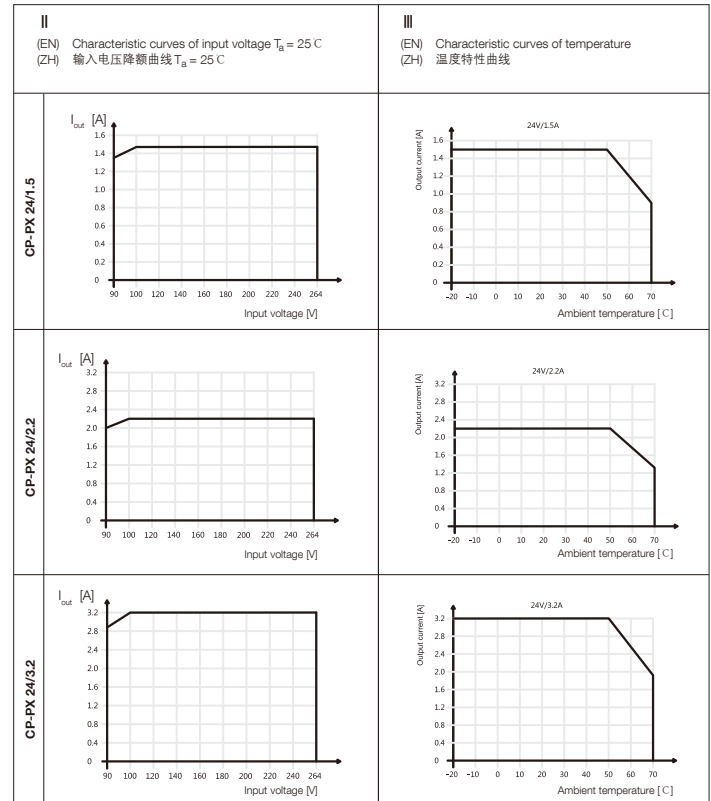
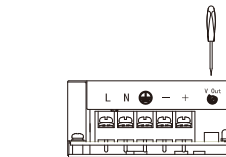
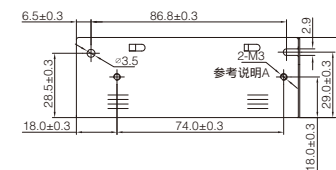
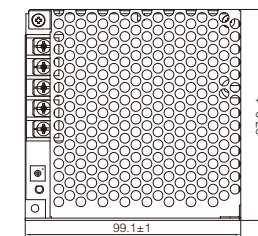
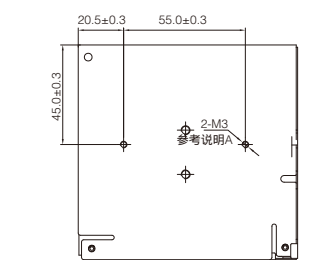
CP-PX 24/1.5



CP-PX 24/2.2



CP-PX 24/3.2



Technical data

Data at T_a = 25 °C, U_{in} = 230 V AC and rated values, unless otherwise indicated

Type	CP-PX 24/1.5	CP-PX 24/2.2	CP-PX 24/3.2
Input circuit - Supply circuit	L, N		
Rated input voltage U _{in}	100-240 V AC		
Input voltage range	90-264 V AC		
Frequency range AC	47-63 Hz		
Typ. input current	at 115 V AC	0.8 A	1.7 A
	at 230 V AC	0.55 A	1 A
Typical power consumption	at 115 V AC	43 W	91 W
	at 230 V AC	43 W	91 W
Hold-up time	at 115 V AC	14 ms	
	at 230 V AC	20 ms	
Recommended backup fuse for wire protection at 1.5 mm ²	1 pole miniature circuit breaker ABB type S 200, with B or C characteristic, max. rating 16 A		
Output circuit - Power output	+, -		
Rated output power	35 W	50 W	75 W
Rated output voltage	24 V DC		
Adjustment range of the output voltage	21.6 - 26.4 V DC		
Rated output current I _r	-20 °C ≤ T _a ≤ 50 °C	1.5 A	2.2 A
Current limiting at short circuit	Hiccup mode, recovers automatically after fault condition is removed ¹⁾		
Derating of the output current	50 °C ≤ T _a ≤ 70 °C	2%/°C	
Residual ripple and switching peaks acc. to IEC/EN 61204, class A	≤ 120 mVp-p		
General data			
Efficiency	Typ.83%	Typ.84%	Typ.84%
Degree of protection (IEC/EN 60529)	housing : IP 20		
Protection class (IEC/EN 61140)	I		
Environmental data			
Ambient temperature ranges	operation	-20...+70 °C (-4...+158 °F)	
	rated load	-20...+50 °C (-4...+122 °F)	
	storage	-40...+85 °C (-40...+185 °F)	
Isolation data			
Pollution degree 2			
Overvoltage category (EN 62368-1)	< 2000 m		

1) Hiccup mode: If there is a short circuit or overload, power supply automatically switches off. After a period of time, power supply tries to restart. If the fault still exists, power supply switches off again. This procedure repeats until the fault is cleared.

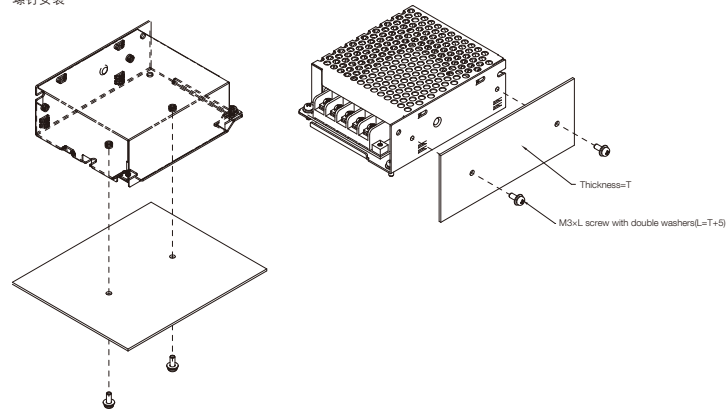
IV

- (EN) Mounting:
1. Screw installation
2. DIN-rail installation

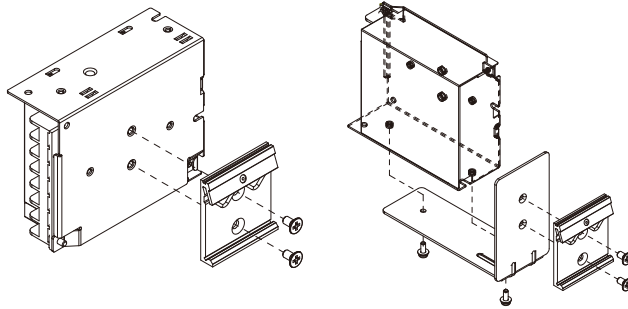
(ZH) 安装:

CP-PX 24/1.5

螺钉安装

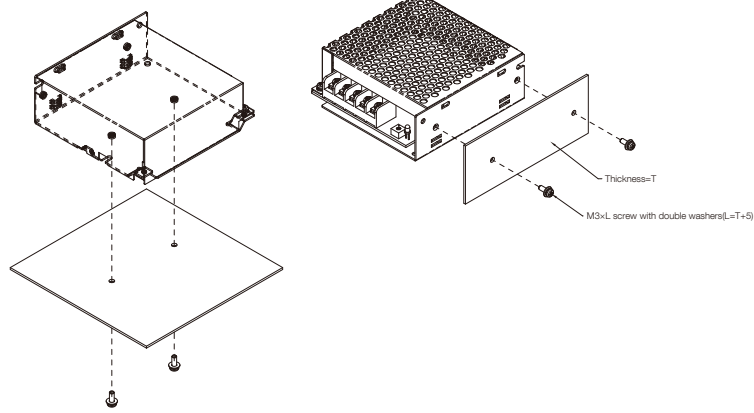


DIN导轨安装

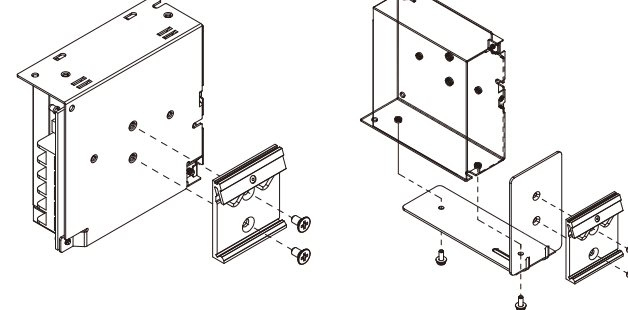


CP-PX 24/2.2

螺钉安装

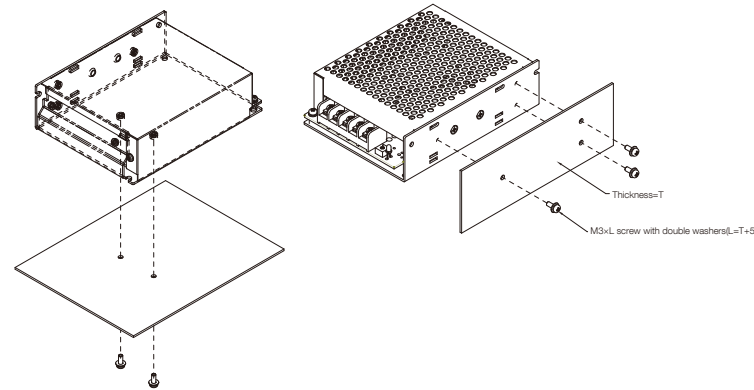


DIN导轨安装

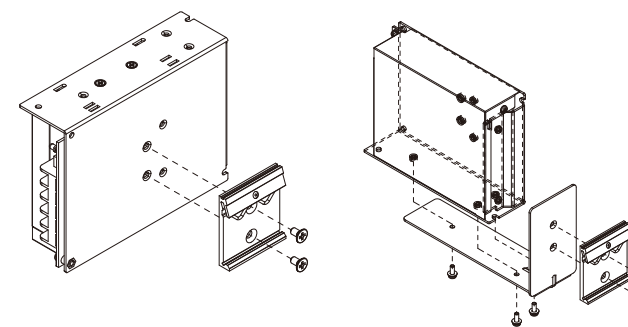


CP-PX 24/3.2

螺钉安装



DIN导轨安装



(EN) Electrical connection:

Input side [L, N, ⊕]

Connect the input terminals L, N, ⊕ (Fig. 1).
Cable cross sections, stripping length of the cable, tightening torque etc. - see technical data.
The protective earth conductor must be connected (class of protection I).
The installation must be executed acc. EN 62368-1, provide a suitable disconnecting device (e.g., line protection switch) in the supply line.
Fuse protection of the input side - see technical data.

Output side [+, -]

Rate the lines for the maximum output current or provide a separate fuse protection.
Fuse protection of the output side - see technical data.
We recommend choosing the cable cross section as large as possible in order to minimize voltage drops.
Observe the polarity.
The power supplies are overvoltage, overload and short-circuit proof (see technical data).

Operating/Function:

Adjustment of the output voltage:

The output voltage can be adjusted in the range of 21.6 - 26.4 V DC by means of the potentiometer "V Out".

(ZH) 电气连接:

输入侧 [L, N, ⊕]

输入端子的连接L, N, ⊕ (图1)
导线截面积、剥线长度和锁紧力矩等 — 请参见技术参数
保护接地必须连接 (保护等级I)
安装必须遵守EN 62368-1, 在供电回路中提供合适的断开设备 (如线路保护开关) 输入侧的熔断器保护 — 请参见技术参数

输出侧 [+, -]

根据最大输出电流来选择导线, 或提供单独的熔断器保护
输出侧的熔断器保护 — 请参见技术参数
我们建议导线的截面积尽可能大, 以减小压降
注意极性
电源带过压、过载和短路保护 (参见技术参数)

运行/功能:

输出电压的调节:

输出电压可通过电位计"V Out"在21.6 - 26.4 V DC之间进行调节。

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