

# Instructions

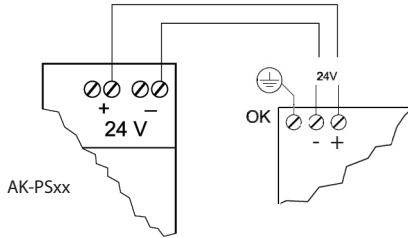
## Power supply AK-PS150, AK-PS250



REFRIGERATION AND  
AIR CONDITIONING

080R9257

### Principle



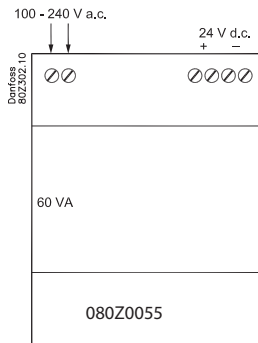
When wiring from the AK-PS250 to remote AK I/O devices, observe the Max supply lengths.

Wire Size	Max. Supply length
16 AWG (1.5mm <sup>2</sup> )	65 feet (20m)
18 AWG (1.0mm <sup>2</sup> )	40 feet (12m)
20 AWG (0.75mm <sup>2</sup> )	25 feet (7m)
22 AWG (0.5mm <sup>2</sup> )	15 (4.5m)

080R9257

### Approvals & Specifications

080Z0055 AK-PS250



UL File # E312396

#### Nominal Input Voltage

AC: 100 - 240V  
45-65 Hz  
1.4A (120V a.c.) / 0.4A (230V a.c.)

#### Operational Voltage:

85-264V a.c.  
95-250V d.c.

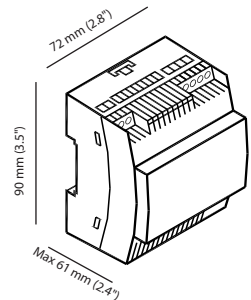
#### Output:

24V d.c.  
2.5A  
60 VA

#### Environmental Range:

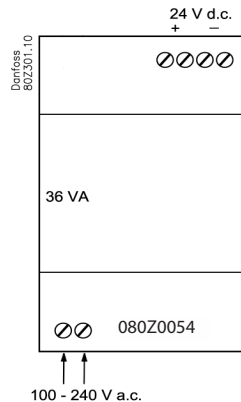
Operation -25°C  $t_{amb}$  +70°C (-13°F <  $t_{amb}$  < 158°F)  
Derating of output current 2.5 % /K > +55°C (131°F)  
Storage -40°C to +85°C (-40°F <  $t_{amb}$  < 185°F)  
Humidity 0 - 95% RH, non condensing

### Dimensions



### Approvals & Specifications

080Z0054 AK-PS150



UL File # E312396

#### Nominal Input Voltage

AC: 100 - 240V  
45-65 Hz  
1.4A (120V a.c.) / 0.4A (230V a.c.)

#### Operational Voltage:

85-264V a.c.  
95-250V d.c.

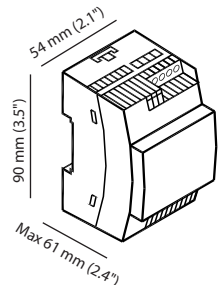
#### Output:

24V d.c.  
1.5A  
36 VA

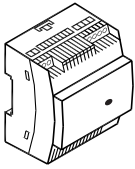
#### Environmental Range:

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### Dimensions



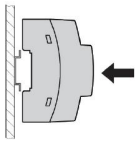
## Signaling



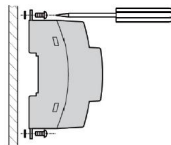
	State 1	State 2
DC OK LED	On	Off
Meaning	Normal operation of the power supply	1. The output voltage is less than 21.5 V. There is a secondary consumer short circuit or overload. 2. There is no input voltage or there is a device fault

## Mounting

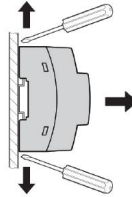
The power supply can be snapped onto all mounting rails in accordance with EN 50022-35. Ensure mounting rails are fixed horizontally (terminals facing downwards). In order to comply with the UL approval, use copper cables that are designed for operating temperatures of 75 °C (167 °F)



DIN rail mounting



Flat surface mounting



Remove from DIN rail

## Connection / Connecting cable

In order to comply with the UL certification, use copper cables that are designed for operating temperatures of >75 °C. In order to comply with EN 60950/UL 60950, flexible cables require ferrules. In order to fulfill GL requirements, unused terminal spaces must be closed. To achieve a reliable and shockproof connection, strip the connecting ends according to table 1!

Tabelle 1 Tableau 1 Tabla 1:	Starr Solid Rigide Rigido	Flexibel Stranded Souple Flexible	AWG	Anzugsmoment Torque Couple de serrage Par de apriete	Abisolierlänge Stripping length Longueur à dénuder Longitud a desaisiar
	[mm <sup>2</sup> ]	[mm <sup>2</sup> ]		[Nm]   [lb in]	L [mm]
① ②	0,2-2,5	0,2-2,5	24-12	0,6-0,8   5-7	6,5

For device protection, there is an internal fuse:  
3,15 AT (250V AC / 125 V d.c.)

Additional device protection is not necessary. Recommended backup fuses are power circuit-breakers 6 A, 10 A or 16 A, characteristic B (or identical function). In DC applications, a suitable backup fuse must be wired in!



If the internal fuse is triggered, there is most probably a malfunction in the device. In this case, the device must be inspected in the factory!

## Load Table (AK-PS250 & AK I/O Modules)

The AK-PS250 has an output rating of 60 VA to power I/O devices in any combination. Refer to table below for individual I/O device power requirements.

Module name	Description	Inputs & Outputs	Power
AK-CM 101 A	Communications module		
AK-XM 204 A	Digital output module	8 relay outputs	3.0W (3.7 VA)
AK-XM 205 A	Universal analog input & digital output module	8 relay outputs, 8 universal inputs	3.9W (4.8 VA)
AK-XM 101 A	Universal input module	8 universal inputs	1.3W (1.5 VA)
AK-XM 102 A	Digital input module (low voltage)	8 digital inputs, 9-80 Vac or V d.c.	1W (1.25 VA)
AK-XM 102 B	Digital input module (high voltage)	8 digital inputs, 80-260 V a.c.	0.8W (1.0 VA)
AK-XM 208 B	Bipolar stepper output module	4 bipolar stepper outputs	