

Instructions

Power supply AK-PS150, AK-PS250

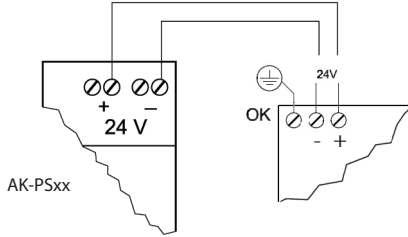


REFRIGERATION AND
AIR CONDITIONING

080R9257

080R9257

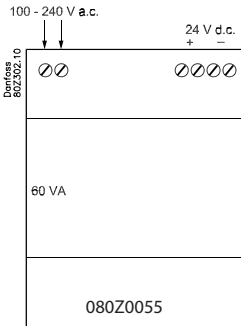
Principle



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 ²)	65 feet (20m)
18 AWG (1.0mm ²)	40 feet (12m)
20 AWG (0.75mm ²)	25 feet (7m)
22 AWG (0.5mm ²)	15 (4.5m)

Approvals & Specifications 080Z0055 AK-PS250



UL File # E312396

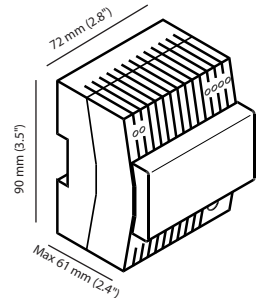
Nominal Input Voltage
AC: 100 - 240V
45-65 Hz
1.4A (120V a.c.) / 0.4A (230V a.c.)

Operational Voltage:
85-264V a.c.
95-250V d.c.

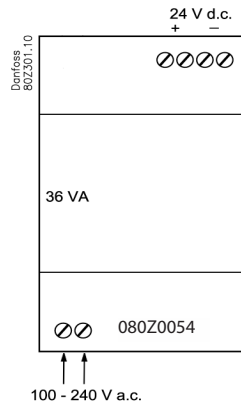
Output: 24V d.c.
2.5A
60 VA

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

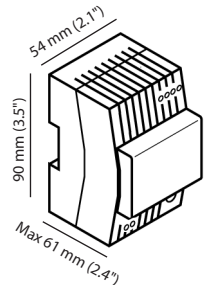
Nominal Input Voltage
AC: 100 - 240V
45-65 Hz
1.4A (120V a.c.) / 0.4A (230V a.c.)

Operational Voltage:
85-264V a.c.
95-250V d.c.

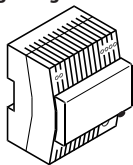
Output: 24V d.c.
1.5A
36 VA

Environmental Range:
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



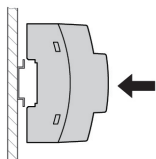
Signaling



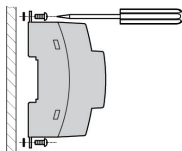
	State 1	State 2
DC OK LED	On	Off
Meaning	Normal operation of the power supply	1. The output voltage is less than 21.5 V. There is a secondary consumer short circuit or overload. 2. There is no input voltage or there is a device fault

Mounting

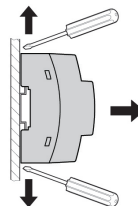
The power supply can be snapped onto all mounting rails in accordance with EN 50022-35. Ensure mounting rails are fixed horizontally (terminals facing downwards). In order to comply with the UL approval, use copper cables that are designed for operating temperatures of 75 °C (167 °F)



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 !

Tabelle 1
Table 1
Tableau 1
Tabla 1:

	Starr Solid Rigide	Flexibel Stranded Souple Flexible	AWG	Anzugsmoment Torque Couple de serrage Par de apriete	Abisolierlänge Stripping length Longueur à dénuder Longitud a desaislar
	[mm ²]	[mm ²]		[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	