SPIDER W40 – POWER SUPPLY FOR 2 CONTROLLERS WITH BATTERY SUPPORT

The Spider W40 is a 30 watt power supply for 2 controllers and el. strikes or el. magnets. It is designed for residential and business buildings, offices, shops, etc.
It is intended to power controllers for time and attendance, access controllers and standalone controllers.

The special version of the Spider W40-NET has a built-in TCP/IP converter, which enables communication between the connected controllers (and additional controllers in the communication line) and the access control program via LAN/WAN.

TECHNICAL DATA

Spider W40 and Spider W40-NET	
Input voltage	110 – 230 V AC 50–60 Hz
Output voltage	13.8 V DC
Primary fuse	(F100) T1AL, 250 V (5x20mm)
Current consumption	Up to 1W
Humidity	10-80 %, non-condensing
Dimensions (mm)	180x180x80 (WxHxD)
Operating temperature	From -20°C to 70°C
Communication	RS485 or Ethernet
Relay	2x 5A 60V DC
Operation at an altitude of	<2000m
Appliance class	Class II - This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Power Supply

The device can operate within a 110-230V AC, 50–60Hz input range. The output power of the in-built power supply is 30W, 13.8V fulltime. The power supply has protection against both short circuits and current overload. In the case of protection activation, the power will be switched off for 5s. If this is repeated 20 times, the power supply will switch off until electrical resetting takes place (unplugging from mains voltage). This protection is activated if external consumption exceeds 2A.

An appropriate disconnect device should be provided external to the equipment. A multi-strand/stranded flexible wires connected to the unit mains input require ferrules.

2.3Ah battery support is included with a charging limit of 13.8 V DC and shut down at 10.5V. The charging time of an empty battery is approximately 4 hours. The charging voltage and current are 13.8 V DC and max. 0.625 A. 2.3Ah battery can be installed in the box. Larger external 12V batteries, such as 7Ah, may also be connected but recharging times will be longer. When operating from battery, the output voltage will drop from 13.8V to 10.5V according to consumption at which point Spider W40 will turn off. Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the manufacturer's instructions.

Voltage drops

When you connect devices to the power supply, use a cable of at least 0.2mm² diameter. Take into consideration the fact that this cable has a resistance of approximately 9ohm per 100m. You should have a minimum of 10V for power supply at device point (for our controllers). For total case scenario, consider also the supply voltage drop when operating on a battery.

CONNECTOR DESCRIPTION

Connectors are marked on the circuit board with AC, LAN, POE, PWR, TMP, DEV1 and DEV2.

CONNECTOR AC – power supply

Contact	Description	Specification
1	AC	Power supply 110 – 230 V AC 50–60 Hz

CONNECTOR LAN – Ethernet connection

Contact	Description	Specification
1	LAN	Ethernet

CONNECTOR POE – Ethernet connection + Power supply

Contact	Description	Specification
1	POE	Ethernet + Power supply 12 V DC

CONNECTOR PWR – backup battery connection, 12 V DC output, RS485 communication line (CA, CB)

Contact	Description	Specification
1	BAT	12 V DC from battery
2	GND	Ground
3	12V	Output Max. 0.5 A
4	GND	Ground
5	CA	RS485 A line
6	CB	RS485 B line
7	CA	RS485 A line
8	CB	RS485 B line

CONNECTOR DEV1 – connection for controller and el. strike or other controlled device

Contact	Description	Specification
1	12V	Max. 0.3 A. Connect 12V DC to controller, el. strike, other device (siren...).
2	GND	Ground. Connect ground to controller.
3	LOCK	Input for el. strike (also controls 1. relay). Connect ground to el. strike and O0 from controller.
4	TMP	Input for alarm. Connect ground from other device (siren...) and O1 from controller (with alarm output).
5	SWITCH	Input for door status switch. Connect magnet for door status and I0 from controller.
6	BUTTON	Input for push button. Connect push button and I1 from controller.
7	CA	Connect RS485 communication from controller.
8	CB	Connect RS485 communication from controller.
9	OPEN	Relay – open contact (NO)
10	MIDDLE	Relay – middle contact

CONNECTOR DEV2 – connection for controller and el. strike or other controlled device

Contact	Description	Specification
1	12V	Max. 0.3 A. Connect 12V DC to controller, el. strike, other device (siren...).
2	GND	Ground. Connect ground to controller.
3	LOCK	Input for el. strike (also controls 2. relay). Connect ground to el. strike and O0 from controller.
4	TMP	Input for alarm. Connect ground from other device (siren...) and O1 from controller (with alarm output).
5	SWITCH	Input for door status switch. Connect magnet for door status and I0 from controller.
6	BUTTON	Input for push button. Connect push button and I1 from controller.
7	CA	Connect RS485 communication from controller.
8	CB	Connect RS485 communication from controller.
9	OPEN	Relay – open contact (NO)
10	MIDDLE	Relay – middle contact

CONNECTOR TMP – tamper/alarm shut down connection

Contact	Description	Specification
1	ON	ON switch - when connected to ground power supply turns back on from "OFF" state
2	GND	Ground
3	OFF	OFF switch – when connected to ground power supply turns off – used in connection with alarm output on REX V9 or with external tamper switch

Environment

Do not install the power supply on/in a place, where it can come in contact with water. You must assure good cable joints, protected against moisture, otherwise corrosion may damage the power supply. Damage in such cases is not covered by the warranty. You have to install the power supply in an airy place.

Opening of the housing

There are two holes on each side of the housing. Use an appropriate size screwdriver and push it in all four holes. When the lid pops out, gently remove it. Two black screws are supplied for additional fastening of the lid.

Communication

Ethernet:
Connect the controllers to the computer through your LAN via Spider's Ethernet interface. Adjust network settings of the Spider using the Codeks Device Manager software so that it will function properly in your network. Please consult Codeks Device Manager's manual.

RS485:
If the power supply does not have a built-in Ethernet interface, it only serves to power devices. Connect RS485 communication from controllers to one of the communication converter, from the Spider family: Spider W5-USB, Spider W5-NET, Spider W40+NET and through it to the computer.

ORDERING CODES

Spider W40
Communication: **NET** – Ethernet connection

Code	Specification
Spider W40	30 W power supply for 2 controllers with battery support
Spider W40-NET	30 W power supply for 2 controllers with battery support, Integrated Ethernet

OTHER

Please read through our warranty and disclaimer statements.

Connection scheme and additional support for the use of this product can be found on:
http://www.jantar.si/forum/en

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