

SPIDER W40 and SPIDER W40B – POWER SUPPLY FOR 4 CONTROLLERS WITH BATTERY SUPPORT

The Spider W40 is a 40 watt power supply for 4 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 version Spider W40B 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 W40B	
Input voltage	110 – 230 V AC 50–60 Hz
Output voltage	13.8 V DC
Output current	Max. 2A
Primary fuse	(F100) T1AL, 250 V (5x20mm)
Current consumption	Up to 2W
Humidity	10-80 %, non-condensing
Dimensions (mm)	222x222x80 (WxHxD)
Operating temperature	From -20°C to 70°C
Communication	RS485 or Ethernet (B)
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 40W, 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. If multi-strand/stranded flexible wires are used use cable terminal on the end of wires.

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, SYS, COM, RDR and DOOR.

LOCK contact on the DOOR connector is used for controlling the relay, which is next to the connector. When the ground (GND) is connected to LOCK the state of the relay (NO and NC) is switched. Other contacts of the DOOR connector are not connected anywhere in the power supply. They are designed for reconnection of wires between the controller and the magnet for door control, push button and el. lock.

On the power supply are two DOOR connectors. They are meant for easier connection of other devices with two controllers. In order to connect each additional controller to other devices it is necessary to use the terminal block.

CONNECTOR AC – power supply connection

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

CONNECTOR LAN – Ethernet connection

Contact	Description	Specification
1	LAN	Ethernet Connect communication converter to local network

CONNECTOR SYS – backup battery connection and 12V DC output

Contact	Description	Specification
1	BAT	12V DC battery Connect 12 V DC to battery
2	GND	Ground Connect ground to battery
3	12V	12V DC output Max. 0.3 A. Connect 12V DC to device
4	GND	Ground Connect ground to device

CONNECTOR COM – RS485 communication connection

Contact	Description	Specification
1	CA	RS485 A line Connect CA communication line to controller
2	CB	RS485 B line Connect CB communication line to controller
3	CA	RS485 A line Connect CA communication line to controller
4	CB	RS485 B line Connect CB communication line to controller

CONNECTOR RDR1, RDR2, RDR3, RDR4 – power and communication connection for controller

Contact	Description	Specification
1	12V	12V DC output Max. 0.3 A. Connect 12V DC to controller, el. strike, other device (siren...).
2	GND	Ground Ground – connect ground (-) to controller
3	XA*	RS485 A line Connect CA communication line to controller
4	XB*	RS485 B line Connect CB communication line to controller

*XA and XB are connected directly to CA and CB on COM connector



CONNECTOR DOOR1 – connection for el. strike or other controlled devices with first controller

Contact	Description	Specification
1 SWITCH	Door status switch	Connect magnet for door status and I0 (input 0) from controller.
2 GND	Ground	Use for activation of I0 and I1 inputs on controller.
3 BUTTON	Push button	Connect push button and I1 (input 1) from controller.
4 12V	12V DC output	Max. 0.3 A. Connect 12V DC to el. strike, other device (siren...).
5 LOCK	Relay and el. strike controll	Connect ground from el. strike and O0 (output 0) from controller. When controller activates output the relay is activated for the time of output activation.
6 NO	Relay – normally open contact	When controller activates output the NO contact connects to MIDDLE contact for the time of output activation.
7 MIDDLE	Relay – common contact	Connected to NC contact. When controller activates output the MIDDLE contact disconnects from NC and connects to NO for the time of output activation.
8 NC	Relay – normally closed contact	When controller activates output the NC contact disconnects from MIDDLE contact for the time of output activation.

CONNECTOR DOOR2 – connection for el. strike or other controlled devices with second controller

Contact	Description	Specification
1 SWITCH	Door status switch	Connect magnet for door status and I0 (input 0) from controller.
2 GND	Ground	Use for activation of I0 and I1 inputs on controller.
3 BUTTON	Push button	Connect push button and I1 (input 1) from controller.
4 12V	12V DC output	Max. 0.3 A. Connect 12V DC to el. strike, other device (siren...).
5 LOCK	Relay and el. strike controll	Connect ground from el. strike and O0 (output 0) from controller. When controller activates output the relay is activated for the time of output activation.
6 NO	Relay – normally open contact	When controller activates output the NO contact connects to MIDDLE contact for the time of output activation.
7 MIDDLE	Relay – common contact	Connected to NC contact. When controller activates output the MIDDLE contact disconnects from NC and connects to NO for the time of output activation.
8 NC	Relay – normally closed contact	When controller activates output the NC contact disconnects from MIDDLE contact for the time of output activation.

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.

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, Spider W5-B, Spider W40B-NET, Spider W40B+NET and through it to the computer. Up to 10 controllers can be lined up into one communication line.

ORDERING CODES

Spider W40

Communication: **B** – Ethernet connection

Code	Specification
Spider W40	40 W power supply for 4 controllers with battery support
Spider W40B	40 W power supply for 4 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>

CONTACT:

Jantar d.o.o.
Kranjska cesta 24
4202 Naklo
SLOVENIA

web: www.jantar.si
mail: sales@jantar.si

