ABB i-bus® KNX

KNX Power Supply with diagnostics, 640/320 mA, MDRC

SV/S 30.320.2.1, 2CDG 110 145 R0011, SV/S 30.640.5.1, 2CDG 110 146 R0011

2CDC 071 017 S0013

KNX power supplies generate and monitor the KNX system voltage (SELV). The bus line is decoupled from the power supply by an integrated choke.

Bus current, bus voltage, overload and other messages can be sent via KNX for monitoring and diagnostic purposes.

The voltage output is short-circuit and overload protected.

The LEDs indicate the bus current consumption and the status of the line or device.

Device type SV/S 30.640.5.1 has an additional 30 V DC short-circuit and overload protected voltage output that can be used to power an additional bus line (in combination with a separate choke).

Technical data

Supply	Supply voltage U_s	85…265 V AC, 50/60 Hz
	Power consumption - SV/S 30.320.2.1 - SV/S 30.640.5.1	Normal operation Maximum 12.5 W 30 W 24 W 55 W
	Power loss - SV/S 30.320.2.1 - SV/S 30.640.5.1	Normal operation Maximum 2.5 W 6 W 4 W 9 W
Outputs	KNX voltage output I_1 Rated voltage U_N Minimum distance between 2 SV/S in one line	1 line with integrated choke 30 V DC +1/-2 V, SELV 200 m (KNX bus line)
	Voltage output I_2 (SV/S 30.640.5.1 only) Rated voltage U_N	without choke 30 V DC +1/-1 V, SELV The voltage output without choke may only be used to power an additional bus line in combination with a separate choke.
	Current - SV/S 30.320.2.1 - SV/S 30.640.5.1 (total current I_1 and I_2)	Rated curr. I_N Overload curr. I_{Ovl} Short-circuit curr. I_{Sc} 320 mA 0.5 A 0.8 A 640 mA 0.9 A 1.4 A
	Power failure buffering time	200 ms
Connections	KNX	Bus connection terminal
	Mains voltage input	Screw terminal 0.2…2.5 mm² fine-strand 0.2…4 mm² solid
	Tightening torque	Maximum 0.6 Nm
Operating and display elements	Programming button and LED (red)	For assignment of the physical address
	U_N OK LED (green)	ON: Bus voltage and mains voltage OK
	LED I > I_{max} (red)	ON: Short-circuit or overload
	Bus current LEDs (7 x yellow)	ON: Indicates present bus current
	Telegr. LED (yellow)	ON: Telegram traffic
	Comm. error LED (yellow)	ON: Communication error on bus
	Reset button and LED (red)	ON: Line reset. To reset the device, press the button until the LED comes on. The line is disconnected from the voltage supply for 20 seconds. The LED then goes off again. OFF: Reset is complete.
Degree of protection	IP 20	EN 60 529

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Protection class	II	EN 61 140
Isolation category	Overvoltage category	III under EN 60 664-1
	Pollution degree	2 under EN 60 664-1
Temperature range	Operation	– 5 °C...+ 45 °C
	Storage	– 25 °C...+ 55 °C
	Transport	– 25 °C...+ 70 °C
Ambient conditions	Maximum air humidity	93 %, no condensation allowed
Design	Modular installation device (MDRC)	Modular installation device, Pro *M*
	Main dimensions (H x W x D)	90 x 72 x 64.5 mm)
	Mounting width	4 x 18 mm modules
	Mounting depth	64.5 mm
Mounting	On 35 mm mounting rail	EN 60 715
Mounting position	As required	
Weight	Approx. 0.26 kg	
Housing, color	Plastic housing, gray	
Approvals	KNX under EN 50 090-1, -2	
CE mark	In accordance with the EMC guideline and low voltage guideline	

Device type	Application	Maximum number of communication objects	Maximum number of group addresses	Maximum number of associations
SV/S 30.320.2.1	Power Supply, Diagnosis, 320mA/...*	7	254	254
SV/S 30.640.5.1	Power Supply, Diagnosis, 640mA/...*	9	254	254

* … = current version number of the application program. **Please observe the software information on our homepage for this purpose.**

Note

For a detailed description of the application program see "*KNX SV/S Power Supplies*" product manual. It is available free-of-charge at *www.abb.com/knx*. The ETS and the current version of the device application program are required for programming.

The current application program can be found with the respective software information for download on the Internet at *www.abb.com/knx*. After import it is available in the ETS under *ABB/System devices/ Power Supplies*.

The device does not support the locking function of a KNX device in the ETS. If you inhibit access to all devices of the project with a *BCU code*, it has no effect on this device. Data can still be read and programmed.

Important

If the device overheats due to extended overload (> 100 °C in housing) it switches off automatically. All LEDs are OFF. The device can be switched on again only after it has been disconnected from the mains for 60 seconds and has cooled to operational temperature internally.

Eliminate the cause of the overload before switching back on.

When commissioning the device, ensure that the rated current is not continuously exceeded.

The voltage output without choke (I_2) is not electrically isolated from the KNX voltage output (I_1). It may only be used to power an additional bus line in combination with a separate choke. It may not, for example, be used to power IP devices.

Devices are designed for continuous operation. They are not approved for frequent switching on and off.

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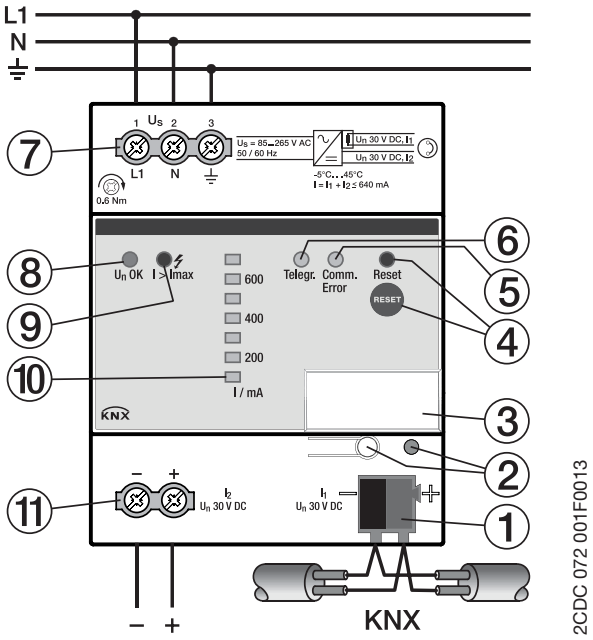
Connection schematic



1 Bus connection terminal
2 Programming button and LED (red)
3 Label carrier
4 Reset button and LED (red)
5 Comm. error LED (yellow)
6 Telegr. LED (yellow)
7 Power supply connection U_s
8 U_N OK LED (green)
9 $I > I_{max}$ LED (red)
10 Bus current LED (7 x yellow)
11 Voltage output without choke, I_2 (SV/S 30.640.5.1 only)

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Dimension drawing