

TECHNICAL DATA

ABB i-bus[®] KNX

SU/S 30.640.2

Uninterruptible KNX Power Supply,
640 mA

Device description

The KNX Power Supply SU/S 30.640.2 provides the system voltage (SELV) for KNX components.

ABB offers a range of matching KNX power supplies. In addition to the standard devices, devices with diagnostic or bus-monitoring functions are available for more complex applications.

All ABB KNX power supplies have an integrated choke.

The device is a modular installation device (MDRC) in pro M design. With a module width of 8 division units (DU), the device is designed for installation in distribution boards on a 35 mm mounting rail.

The connection to the ABB i-bus® KNX is established via a bus connecting terminal on the front.

After connecting the mains voltage, the unit is ready for operation.

Device functions

The uninterruptible KNX power supply generates and monitors the KNX system voltage. The integrated choke decouples the bus line from the power supply.

When the reset button is pressed, the overload indicator and the fault signal relay are reset. If the fault was not corrected before the reset button was pressed, the fault is still present, the floating changeover contact and the LED remain in the fault position. When the reset button is pressed, the bus line is not de-energized. To de-energize the bus line, the bus connecting terminal must be disconnected from the power supply.

Up to two 12 V lead gel accumulators can be connected to buffer the KNX system voltage in the event of mains voltage failures. The batteries are charged via the SU/S 30.640.2. A temperature sensor is used to control the charging voltage. In the event of a mains voltage failure, the SU/S 30.640.2 is powered by the batteries.

The fault of the device can be reported via a potential-free changeover contact. The potential-free changeover contact is closed between terminals 4 and 5 in the normal state, and between terminals 5 and 6 in the event of a fault.

The following faults will cause the changeover contact to switch:

- Mains voltage failure
- Battery fault
- Overvoltage and overload or short circuit of the bus line

Note

A detailed description can be found in the technical documentation of the device.

Connections

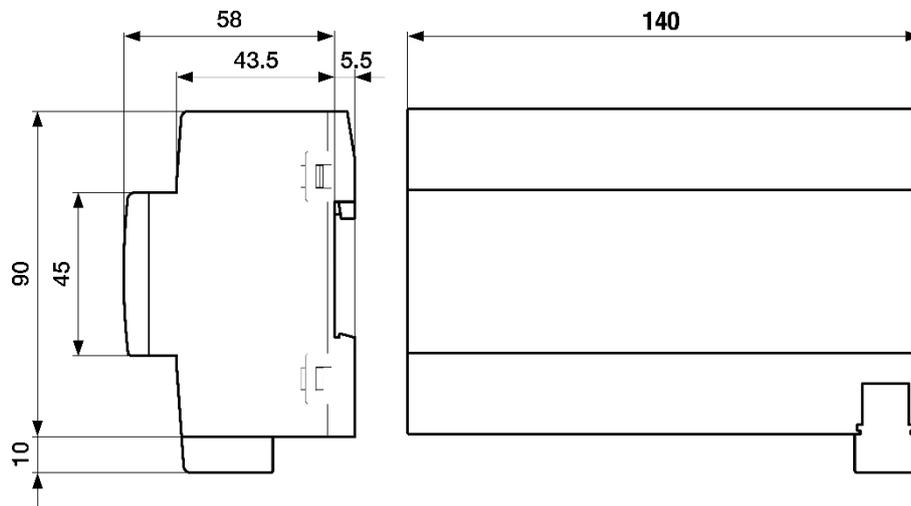
Inputs

- Mains connection
- Battery connection including temperature sensor

Outputs

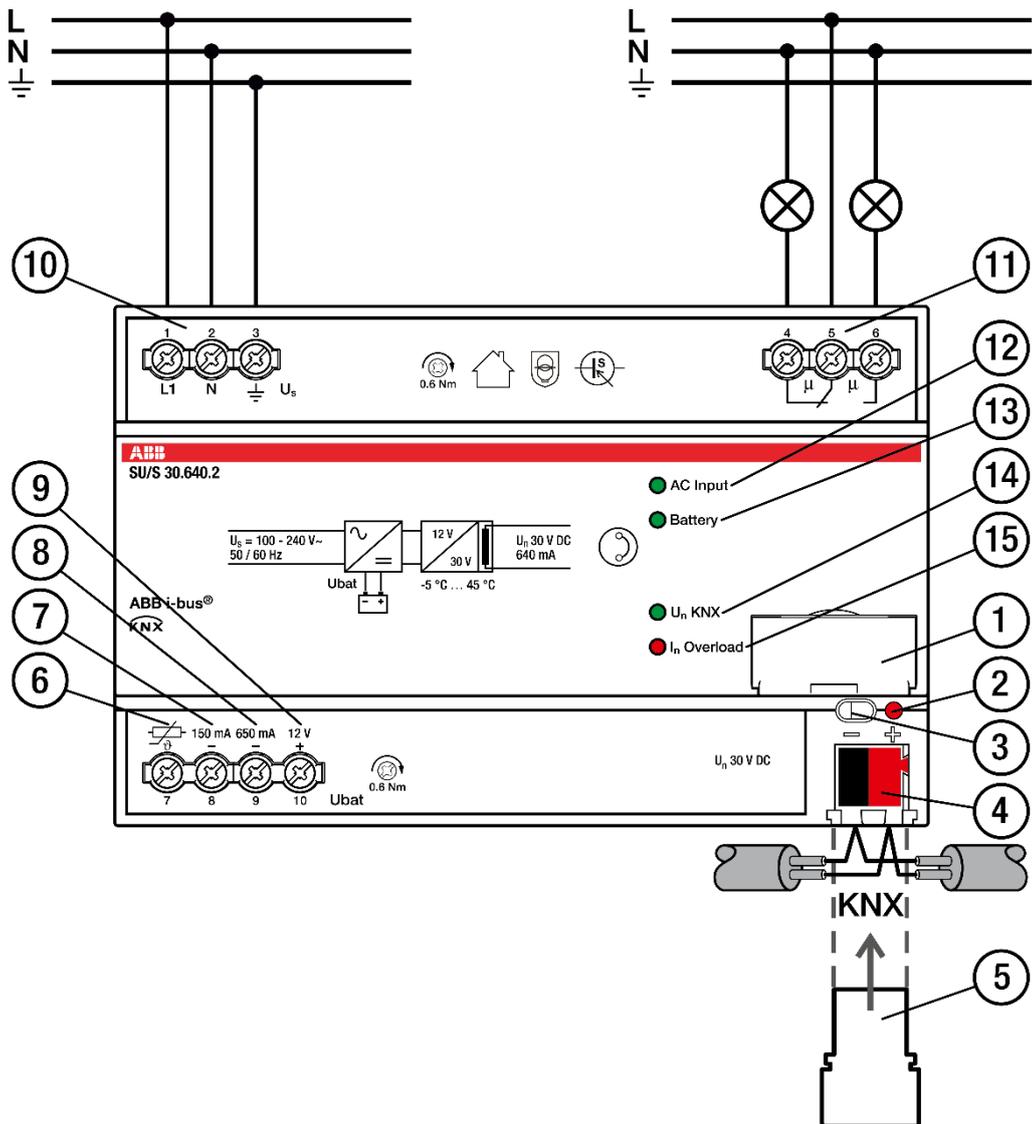
- Floating changeover contact
- Bus connection

Dimension drawing



2CDC072027F0017

Connection diagram



Legend

- | | | | |
|---|-----------------------------------|----|--|
| 1 | Label carriers | 8 | Code/650 mA and temperature sensor (-) |
| 2 | LED without function | 9 | Battery connection (+) |
| 3 | Reset button | 10 | Mains connection |
| 4 | KNX connection | 11 | Floating changeover contact |
| 5 | Cover cap | 12 | AC Input LED (green) |
| 6 | Temperature sensor connection (+) | 13 | Battery LED (green) |
| 7 | 150 mA and temperature sensor (-) | 14 | U _n KNX LED (green) |
| | | 15 | In Overload LED (red) |

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Operating and display elements

Button/LED	Description	LED indicator
	Reset	<p>With reset, the overload display and the fault signal relay are reset, there is no reset of the KNX bus.</p> <p>If the fault has not been rectified before pressing the reset button, the fault is still present, the potential-free changeover contact and the LED remain in the fault position.</p>
	AC Input	<p>Off: No mains voltage</p> <p>On: Mains voltage OK</p>
	Battery	<p>Off: No battery connected or battery fault</p> <p>On: Battery OK</p>
	U _N KNX	<p>Off: Overload/bus line short circuit</p> <p>On: Bus line OK</p>
	I _N Overload	<p>Off: Bus line OK</p> <p>On: Overload/bus line short circuit</p>

Technical data

Supply	Mains voltage U_s	100 – 240 V AC, 50/60 Hz (85...265 V AC)
	Power consumption	< 60 VA
	Power loss	< 10 W
	Battery backup U_{bat}	
	Battery type	Sealed Lead Acid Battery
	Quantity	Max. 2 in parallel (with the same capacity)
	Rated voltage	12 V DC
	Battery capacity	1 Ah – 2 x 17 Ah
	Mains voltage failure bridging time	depending on battery capacity
	Nominal battery charging current	600 mA, with battery connection via KS/K cable set 150 mA with battery module AMS12.
	Charging voltage control	Charging voltage controlled via temperature sensor
Connections	Connection type, bus	Plug-in terminal
	Cable diameter, bus	0.6 ... 0.8 mm, solid
	Connection type, mains voltage U_s	3 screw terminals
	Connection type, battery connection U_{bat} incl. temperature sensor	4 screw terminals
	Connection type, changeover contact	3 screw terminals
	Connection type, load circuit	Screw terminal with universal head (PZ 1)
	Pitch	6.35 mm
	Tightening torque, screw terminals	≤ 0.6 Nm
	Conductor cross section, fine stranded	All screw terminals: (0.75 – 2.5 mm ²)
	Conductor cross section, single core	All screw terminals: (0.2 – 4.0 mm ²)
Outputs	KNX Power Supply U_n	1 line with integrated choke
	Rated voltage	30 V DC
	Voltage range, bus	21 ... 31 V DC
	Rated bus current	640 mA, continuous short-circuit proof
	Bus overload current	900 mA
	Bus continuous short circuit current	1.3 A – 1.5 A
	Mains power failure backup time (without connected battery)	100 ms
	KNX safety extra low voltage	SELV
	Floating changeover contact μ	
	Rated voltage	100-240 V AC – 12/24 V DC
Max. switching current	6 A AC or 4 A DC	
Mains connection	3 screw terminals	
	Floating changeover contact μ	

Degree of protection and protection class	Degree of protection	IP 20 (according to EN 60529)
	Protection class	II (according to EN 61140)
Isolation category	Overvoltage category	III (according to EN 60664-1)
	Pollution degree	2 (according to EN 60664-1)
SELV	KNX safety extra low voltage	SELV 24 V DC
Temperature range	Operation	-5 ... +45 °C
	Transport	-25 ... +70 °C
	Storage	-25 ... +55 °C
Ambient conditions	Humidity	≤ 95 %
	Atmospheric pressure	Atmosphere up to 2,000 m
Design	Modular installation device (MDRC)	Modular installation device
	Design	pro <i>M</i>
	Housing/color	Polycarbonate, Makrolon FR6002, halogen free
Dimensions	Dimensions	90 × 140 × 63.5 mm (H x W x D)
	Mounting width in space units	8 modules, 17.5 mm each
	Mounting depth	68 mm
Mounting	35 mm mounting rail	According to EN 60715
	Mounting position	Any
	Weight	0.398 kg
Approvals	KNX certification	According to EN 50491
Declaration of conformity		CE

Ordering details

Description	MW	Type	Order no.	Packaging unit [pcs.]	Weight 1 pc. [kg]
Uninterruptible KNX Power Supply, 640 mA	8	SU/S 30.640.2	2CDG110275R0011	1	0.398



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