KOSTAL

KOSTALize

your mobility

CHARGING ELECTRONICS FOR WALLBOXES

Basic board 7.4 / 11 / 22 kW
Communication board

KOSTAL charging electronics – the heart for your wallbox production

KOSTAL Charging Solutions offers customised charging electronics for everything from the simple wallbox through to the intelligent charging solution for your projects.

Configuration By combining different basic and communication electronics variants, a total of 18 different electronics variants can be configured.

Flexibility Various charging power classes are available for wallboxes with charging cable and with charging socket (including plug interlock).

Communication The most important communication protocols, such as ISO 15118, EE Bus, OCPP, MOD Bus and interfaces such as LAN, WLAN, LTE, NFC and RFID, are already integrated.

Intelligent wallbox functions

- **Authentication**
  The KOSTAL charging electronics start the charging process both without authentication (autostart) and with the most common authentication methods
- **Charging and load management**
  Using various pre-installed charging modes, the charging electronics allow photovoltaic systems to be taken into consideration to optimise self-consumption. The potential charging modes include normal charging, solar or PV surplus charging and solar-assisted charging.
- **Energy management**
  External (home) energy management systems (HEMS) from third-party suppliers can be connected using EEBus or a MOD Bus TCP Server interface. EEBus use cases "Visualisation and Configuration", "Energy Management", "E-Mobility" and "Grid Interaction" are supported.
- **Billing and backend connection**
  External (home) energy management systems (HEMS) from third-party suppliers can be connected using EEBus or a MOD Bus TCP Server interface.
- **HMI (human machine interface)**
  There are two LEDs on the basic charging electronics to indicate the status. A prepared interface allows a (touch) display to be connected.

  The communication charging electronics can be extended by the addition of two different HMI boards (simple or intelligent version).

Custom-fit charging electronics – Basic board and communication board

Technical information

		Basic charging electronics			Communication charging electronics	
		B1	B2	B3	K1	K2
Variants	Max. charging power/interface	7.4 kW, 1-ph, 32 A	11 kW, 3-ph, 16 A	22 kW, 3-ph, 32 A	1x LAN interface	2x LAN interface
		each with and without plug interlock			with and without LTE modem	
Dimensions	Basic board (without cover)	130x235x52 mm (WxHxD)			130x92x30 mm (WxHxD)	
	Cover	165x244x56 mm (WxHxD)				
	Minimum installation space dimensions (with cover)	165x244x96 mm (WxHxD)				
	Fastening	Snap-in points for boards in the cover with 2 or 4 screws				
Charging technology	Charging/charge operating mode	AC Mode 3				
	Number of charging points	1				
	Charging power	Configurable				
	Charging connector	Charging cable or charging socket, type 2				
Protection class	DC fault current detection	6 mA (in accordance with IEC 62955, IEC 61851)				
	Electromagnetic compatibility	In accordance with EMC Directive 2014/30/EU				
Operating & environmental conditions	Lifetime	Designed for 10 years of operation *				
	Altitude	2000 m				
	Ambient temperature during operation	-25 °C to +40 °C (with direct sunlight) -25 °C to +50 °C (without direct sunlight)				
	Transport and storage temperature range	-40 °C to +85 °C The electronics may only be stored and transported within the range of the maximum temperature limits for a short period of a few days.				
	Rel. air humidity	Up to 95 % (non-condensing)				
	Permissible storage time	Max. 2 years				

Communication interfaces
1 x Ethernet (K1a,b) or 2 x Ethernet (K2a,b)
1 x WLAN – 2.4 GHz, IEEE 802.11b/g/n **
1 x PLC modem for ISO 15118 communication
1 x LTE modem (K1a, K2a) ⊕ Mini PCI Express module, CAT1 ⊕ LTE, HSPA+, GSM/EDGE, GPRS ⊕ Mini SIM card slot on communication board
1 x RS485 (internal) for charging network management (MOD Bus RTU)
NFC interface to the RFID/NFC board
Interface to the HMI board
Interface for (touch) display connection
2 x LED status lamps

Communication protocols
MOD Bus RTU/TCP for charging network management
OCPP 1.6 and 2.0.1 ⊕ Billing via backend ⊕ Connection via mobile radio, LAN or WLAN ⊕ SW updates possible
ISO 15118 for PnC and smart charging
EE Bus for energy management

Subject to technical change.

* 10 years or 100,000 hours at an air temperature of 40°C in the vicinity of the charging electronics

** To operate the WLAN module, two external antennas must be connected to an antenna connection.

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Build your own charging system with KOSTAL Charging Solutions. Learn more about us at www.kostal-charging-solutions.com

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