



xunzel™

PRODUCT
NOTE

applied Solar and Wind Energy™

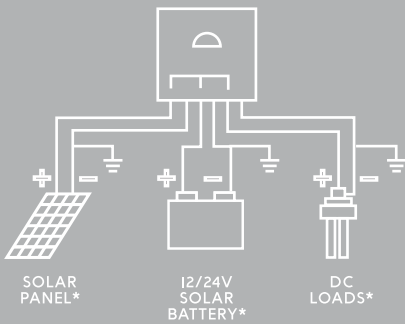
iSCC-XN™ Series – XUNZEL

Programmable Solar Charge
and Discharge Controller
12/24V Automatic Detection



Solar Charge and Discharge Controller
iSCC-XN™ Series of XUNZEL

SOLAR CHARGE AND DISCHARGE
CONTROLLER



iSCC-XN™ Series – XUNZEL Programmable Solar Charge and Discharge Controller 12/24V Automatic Detection

Product Overview

This solar charge and discharge controller protects the battery from being overcharged by the solar panels and from being over-discharged by the DC loads.

The iSCC-XN™ Series of XUNZEL are sophisticated solar charge and discharge controllers for small solar systems where charge and discharge control are required. They are equipped with a microprocessor and provide high efficiency displaying the normal operation, alarm messages, etc. in a simple way with acoustic signals and display.

The solar charge and discharge controllers iSCC-XN™ of XUNZEL are programmable and provided with negative grounding. In addition to a perfect PWM regulation with integrated temperature compensation, the controllers provide fully electronic safety functions.

Their multi-stage (4-stage) PWM charging method (Float – Main – Boost – Equalization) is adjustable for different types of batteries: GEL/AGM or Flooded (Factory setting).

These solar charge and discharge controllers also come with three deep discharge functions: Low Voltage Warning (LVW), Low Voltage Disconnect (LVD) adjustable by State of Charge (SOC) or battery voltage (up to 5 different modes), and automatic Low Voltage Reconnect (LVR).

The iSCC-XN™ Series of XUNZEL are equipped with multifunctional LCD in order to display clearly the charge status, the discharge status or the state of charge of the battery with a bar graph and the loads status. Furthermore, these controllers are one of few controllers in their class that have an acoustic alarm before low voltage disconnection.

Thanks to their DC load output there is no need of any inverter to power DC loads such as ultra-efficient low-voltage 12VDC or 24VDC LED NATURE Series lamps of XUNZEL. Consequently, savings and efficiency of the solar system are increased considerably.

These solar charge and discharge controllers are equipped with a wide range of programmable functions such as LVD function, Nightlight function and Lock-out function. Moreover, their programming menu can configure iSCC-XN™ Series: battery type, LVD, Nightlight function (type, evening setting and morning setting), Day/Night threshold, Buzzer on/off, Serial Interface Functions and Individual/Factory settings.

Remote Digital Display iSCC-DX™
of XUNZEL (OPTIONAL)



Available Models

iSCC-XN 20 20A/20A – 12/24V – 240W@12V & 480W@24V

iSCC-XN 40 40A/40A – 12/24V – 480W@12V & 960W@24V

OPTIONAL ACCESSORIES:

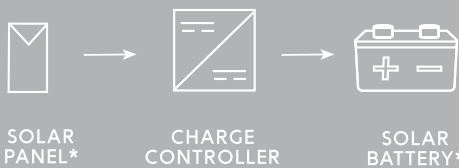
- DIN RAIL ADAPTER iSCC-DIN™ of XUNZEL
- REMOTE DIGITAL DISPLAY iSCC-DX™ of XUNZEL

iSCC-XN™ Features and Benefits

- **Built-in one-year data logger** for better system analysis.
- **Battery state-of-charge** indication by means of bar graph.
- Load disconnect warning by **acoustic signal**.
- **Four-stage** (Float, main, boost and equalization) **PWM charging method** for lead-acid batteries (GEL/AGM and Flooded).
- **12/24V Automatic Detection.**
- **Temperature compensation.**
- **SOC- and voltage-controlled LVD with five different selectable algorithms.**
- **Fully electronically protected.**
- **Large terminals: up to 16mm².**
- **Negative grounding.**
- **DIN Rail Adapter iSCC-DIN™ of XUNZEL available (optional).**
- **Remote Digital Display iSCC-DX™ of XUNZEL available (optional).**



DIN Rail Adapter iSCC-DIN™ of XUNZEL
(OPTIONAL)



SOLAR PANEL* CHARGE CONTROLLER SOLAR BATTERY*
*Not included

Industry Leading Technology for Off-Grid, Off-Shore and Backup Power Applications



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Programmable Solar Charge and Discharge Controller 12/24V Automatic Detection

iSCC-XN™ Series Specifications



Solar Charge and Discharge Controller iSCC-XN™ Series of XUNZEL

MODEL	iSCC-XN 20	iSCC-XN 40
Nominal System Voltage	12/24 V automatic detection	
Max. Charge Current / Power (Max. PV Array Power)	20A / 240W @ 12V 20A / 480W @ 24V	40A / 480W @ 12V 40A / 960W @ 24V
Max. Discharge Current / Power	20A / 240W @ 12V 20A / 480W @ 24V	40A / 480W @ 12V 40A / 960W @ 24V
Max. Panel Voltage	30V @ 12V / 50V @ 24V	
Float Charge	13.7V @ 12V / 27.4V @ 24V (25°C)	
Main Charge	14.4V @ 12V / 28.8V @ 24V (25°C), 30min (daily)	
Boost charge	14.4V @ 12V / 28.8V @ 24V (25°C), 2h Activation: 12.3V @ 12V / 24.6V @ 24V	
Equalization	14.8V @ 12V / 29.6V @ 24V (25°C), 2h Activation: 12.1V @ 12V / 24.2V @ 24V	
Battery Type	AGM/GEL and Flooded Lead-Acid	
Deep Discharge Protection (LVD):		
- SOC dependent	Mode 1: 11.4V – 11.9V @ 12V / 22.8V – 23.8V @ 24V Mode 2: 11.0V – 11.75V @ 12V / 22.0V – 23.5V @ 24V	
- Adaptive	Mode 3: 11.0V – 12.2V @ 12V / 22.0V – 24.4V @ 24V	
- Voltage dependent	Mode 4: 11.5V @ 12V / 23.0V @ 24V Mode 5: 11.0V @ 12V / 22.0V @ 24V	
Low Voltage Reconnection (LVR) Level	12.8V @ 12V / 25.6V @ 24V	
Overvoltage Protection	15.5V @ 12V / 31.0V @ 24V	
Undervoltage Protection	10.5V @ 12V / 21.0V @ 24V	
Temperature compensation	-25mV/K @ 12V / -50mV @ 24V / (-4.2mV/K per cell)	
Own consumption	<6mA	
Terminals - Max. Wire Size	16 mm ²	
Ambient Temperature	-20 to +50°C	
Max. Altitude	4000 m above sea level	
Weight	168g	179g
Dimensions	92 x 93 x 38 mm	
Type of protection	IP22	
Standards	Conforms to the relevant European CE standards	

OPTIONAL ACCESSORY

iSCC-DX™ – XUNZEL

Remote Digital Display iSCC-DX™ of XUNZEL (OPTIONAL)

Product Overview

Remote Digital Display iSCC-DX™ of XUNZEL can be used in combination with the solar charge and discharge controllers iSCC-XN™ Series of XUNZEL. It is designed to display panel current, charging current, load current and battery voltage in order to offer more detailed information of your photovoltaic system. SOC, overload and low battery shutdown are also displayed. In addition, iSCC-DX can display the values of the last 7 days of the datalogger of iSCC-XN™ controller: capacity Ah, SOC and battery voltage (in the morning and at night).

XUNZEL-iSCC-DX™ Features and Benefits

- **Displays** panel current, charging current, load current, battery voltage, Ah, SOC, etc.
- **Clear and accurate**, data shown by symbols and 3 digits.
- **2 keys** to switch the values we want to see.
- **Prepared for DIN rail mounting.**



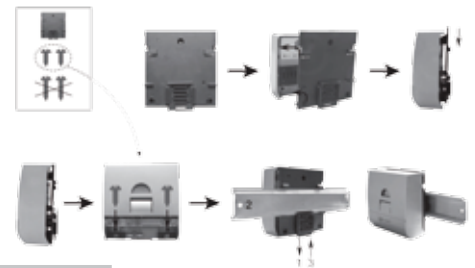
Remote Digital Display iSCC-DX™ of XUNZEL (OPTIONAL)

MODEL	iSCC-DX
Voltage Range	Displays the voltage range of iSCC-XN
Current Range	Displays the current range of iSCC-XN
Temperature Range	-25 to +50°C
Connection cable length	2 m
Dimensions	72 x 68 x 29 mm
Weight	94 g (cable included)
Type of protection	IP22

L-II06214-MA

iSCC-DIN™ – XUNZEL

DIN Rail Adapter iSCC-DIN™ of XUNZEL (OPTIONAL)



Industry Leading Technology for Off-Grid, Off-Shore and Backup Power Applications



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