

## CONGRATULATIONS

on the purchase of your new professional switch mode battery charger. This charger is included in a series of professional chargers from CTEK SWEDEN AB and represents the latest technology in battery charging.

## INTRODUCTION

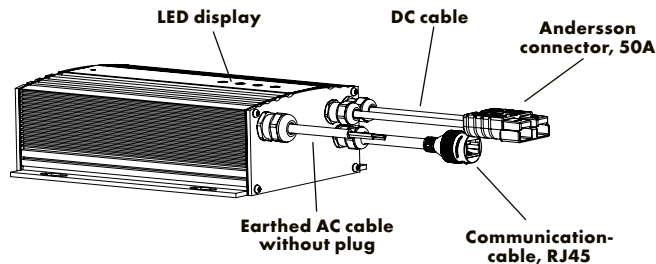


**Read safety instruction and this user instruction before use of the charger**

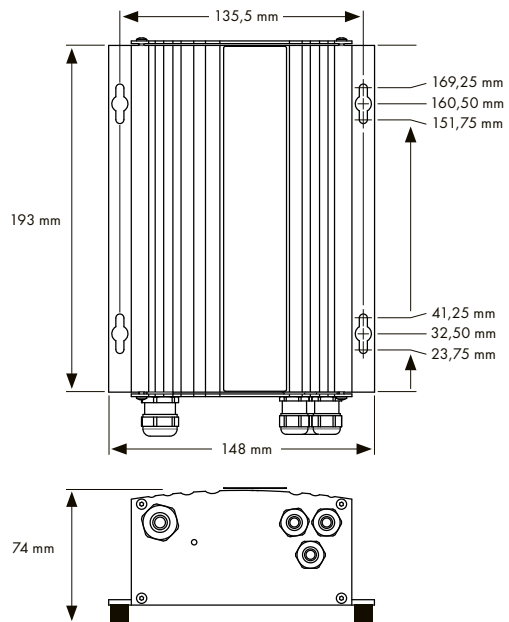
- Connect AC cable according to national regulations.
- Important: Fixed installation has to be carried out by certified installation and in accordance to local regulations.
- Mount the charger on a firm surface. Fix the charger with screws in the four holes. Use suitable screws or fixings. Allow space around the charger to not interfere with air cooling.
- The charger is manufactured and constructed for industrial use and is used for 230V only.
- I2420 and I2440 can be left connected for unlimited periods of time with no risk of damaging the battery.
- There is a built-in temperature sensor to ensure that the charger won't overheat.
- The charger is programmed with a generic lead acid charge algorithm. If special charging requirements, the algorithm can be changed using the service tool accessory (not included).

## FEATURES

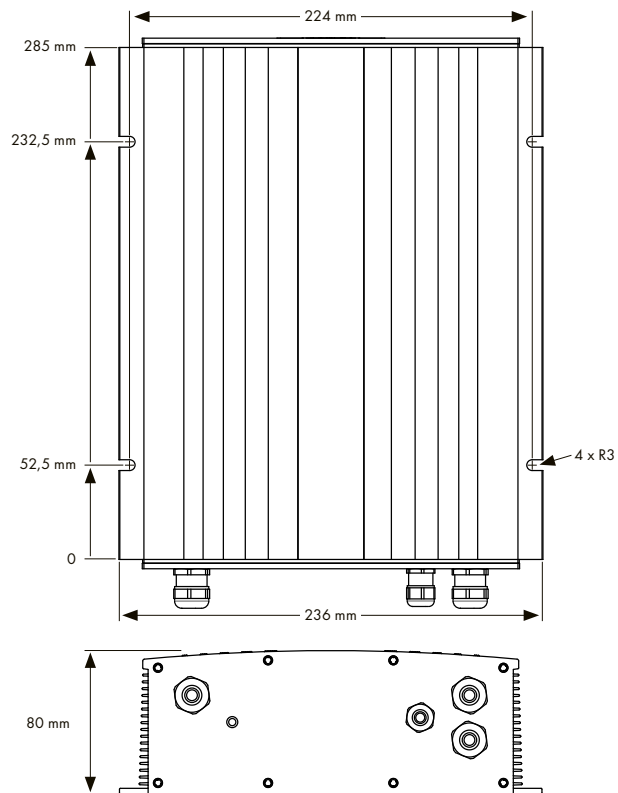
- 24 V, 20/40A
- Suitable for all Lead-Acid and Lithium-ion (LiFePO<sub>4</sub>, LFP)
- Programmable for different algorithms
- Records 200 charge cycles, accessible with the service tool accessory
- Easy to read LED and remote LED accessory
- Automatic reconditioning for deeply discharged batteries.
- Temperature compensated charge voltage
- Drive Off protection
- 94% efficiency
- IP64 rated



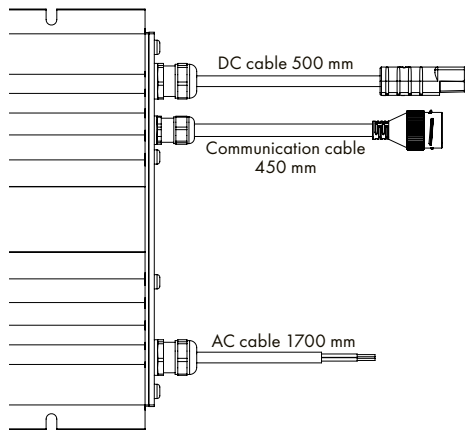
### DIMENSIONS I2420























### DIMENSIONS I2440



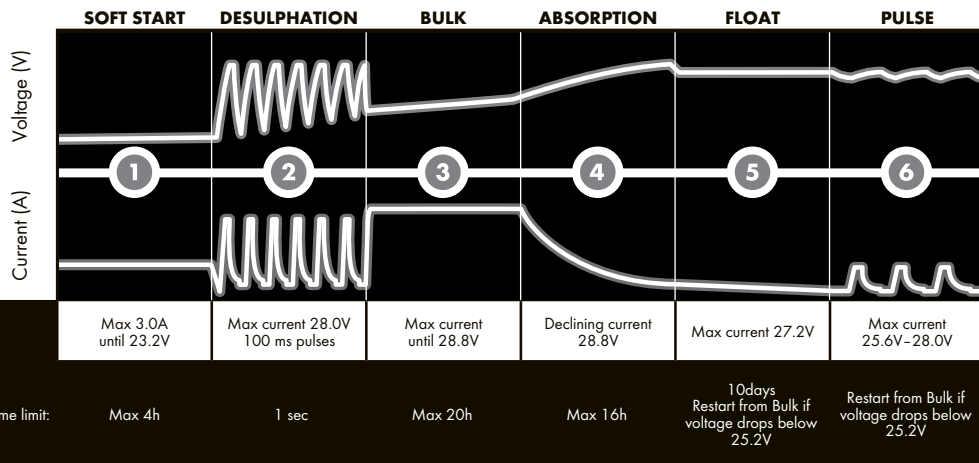
## CABLE LENGTHS



INDICATOR CHARGER	EXPLANATION	INDICATOR ACCESSORY
<b>Green light</b> 	Mains connected, no battery connected.	<b>Green light</b> 
<b>Green light</b> 	Battery fully charged, charger in battery maintenance mode (please see "CHARGING CURVE")	<b>Green light</b> 
<b>Yellow light</b> 	After charge. Constant voltage while current is reduced	<b>No light</b> 
<b>Yellow light</b> 	Absorption charging. Constant voltage while current is reduced	<b>Yellow light</b> 
<b>Yellow light</b> 	Bulk charging. Constant current charging. Voltage is rising.	<b>Yellow light</b> 
<b>Red light</b> 	Battery error!	<b>Red light</b> 

SYMBOLS	
Battery fully charged	
Absorption charging	
Bulk charging	
Error	
Quick flashing lamp	
Slow flashing lamp	
Steady green light	
No light	

## CHARGING CURVE



### STEP 1 SOFT START

Tests if the battery can accept charge. This step prevents that charging proceeds with a defect battery.

### STEP 2 DESULPHATION

Detects sulphated batteries. Pulsing current and voltage, removes sulphate from the lead plates of the battery restoring the battery capacity.

### STEP 3 BULK

Charging with maximum current until approximately 80% battery capacity.

### STEP 4 ABSORPTION

Charging with declining current to maximize up to 100% battery capacity.

### STEP 5 FLOAT

Maintaining the battery voltage at maximum level by providing a constant voltage charge.

### STEP 6 PULSE

Maintaining the battery at 95-100% capacity. The charger monitors the battery voltage and gives a pulse when necessary to keep the battery fully charged.

*The I2420/I2440 charger can be customized with other algorithms using the Service Tool accessory (not included).*

## TECHNICAL SPECIFICATION

	I2420	I2440
<b>Model number</b>	1320	1340
<b>Input</b>	220-240VAC, 50-60Hz, max 3A	220-240VAC, 50-60Hz, max 7A
<b>Output</b>	24V, 20A	24V, 40A
<b>Start voltage</b>	0.5V	0.5V
<b>Back current drain*</b>	Less than 1Ah/month	Less than 7Ah/month
<b>Ripple**</b>	Less than 4%	Less than 4%
<b>Ambient temperature</b>	-20°C to +50°C (-4°F to +122°F)	
<b>Battery types</b>	All types of 24V lead-acid batteries (WET, MF, Ca/Ca, AGM, GEL) and Lithium-ion (LiFePO <sub>4</sub> , LFP)	
<b>Battery capacity</b>	40-300Ah	100-1500Ah
<b>Dimensions</b>	See DIMENSIONS	
<b>Insulation class</b>	IP64	
<b>Weight</b>	1,4 kg	3,0 kg
<b>Warranty</b>	2 year	

\*) Back current drain is the current that drains the battery if the charger is not connected to the mains. CTEK chargers has a very low back current.

\*\*) The quality of the charging voltage and charging current is very important. A high current ripple heats up the battery which has an aging effect on the positive electrode. High voltage ripple could harm other equipment that is connected to the battery. CTEK battery chargers produce very clean voltage and current with low ripple.

## LIMITED WARRANTY

CTEK issues this limited warranty to the original purchaser of this product. This limited warranty is not transferable. The warranty applies to manufacturing faults and material defects. The customer must return the product together with the receipt of purchase to the point of purchase. This warranty is void if the product has been opened, handled carelessly or repaired by anyone other than CTEK or its authorised representatives. CTEK makes no warranty other than this limited warranty and is not liable for any other costs other than those mentioned above, i.e. no consequential damages. Moreover, CTEK is not obligated to any warranty other than this warranty.

## SUPPORT

For support, FAQ, latest revised manual and more information about CTEK products: [www.ctek.com](http://www.ctek.com).