



## Solar charge regulator serie FOX-X20

FOX-220 and FOX-320 are adjustable charge controllers, which can be extended at any time with the remote display FOX-MD1. In addition to the over-discharge protection of the FOX-220, the FOX-320 can charge 2 separate battery banks. In combination with the remote display FOX-MD1, various parameters of the controller can be adjusted. Made in Germany.

### Product characteristics

- Overcharge protection 20A is equal to solar modules of 340 Watt 12V (680W @ 24V)
- Discharge protection or night light function adjustable (max. 20A), shut-off threshold adjustable via FOX-MD1
- **FOX-320 for 2 battery banks**
- System voltage 12V or 24V (automatically)
- Battery type can be individually set for AGM, GEL and Lead-acid batteries
- Loads are supplied always of battery 1
- Charge ratio from B1 to B2 adjustable
- Extendable with remote display FOX-MD1

FOX-220 and FOX-320 are adjustable charge controllers, which can be optionally extended at any time with the remote display FOX-MD1.

Both controllers are designed for module currents up to 20A. In addition to the over-discharge protection of the FOX-220, the FOX-320 can also load 2 separate battery banks.

The solar charge regulator serie FOX-X20 is suitable for AGM, GEL and Lead-acid batteries. Consumers can be connected up to a current consumption of 20A maximum.

The optimised charge characteristic curve in combination with the hardware PWM control achieves a distinctly faster and gentler charging of the battery. Hazardous gassing or overcharging are safely prevented. The size of the heat sink is also dimensioned for high environmental temperatures.

	FOX-220	FOX-320
Charge of	1 battery bank	up to 2 battery banks
Battery switchover	none	Relay bistable, galvanic isolated
Charge ratio	none	standard 90%/10% (B1/B2), adjustable with FOX-MD1
Fuses to B1, B2	1x25A, soldered internally	2x25A, soldered internally
System voltage	12V/24V, automatic detection, both battery banks similar	
- Detection 12V	$U_{\text{battery 1}}: 6V \dots 17V \Rightarrow 12V \text{ system}$	
- Detection 24V	$U_{\text{battery 1}}: \text{larger } 17V \Rightarrow 24V \text{ system}$	
System operating voltage	8,5V ... 35V	
Temp. compensation	-20mV/°K @12V, -40mV/°K @24V	
PWM frequency	244Hz	
max terminal voltage	50V (open circuit voltage of the modules, $U_{oc}$ )	
Discharge protection	max. 20A at 25°C	
- Shut-off threshold	standard 10,5V, adjustable with FOX-MD1	
- Switch-on/switch-off delay	60 seconds	
Nightlight function	max. 20A at 25°C	
- Switch on/switch off	no charge current of the module/ charge current present	
- Shut-off threshold	standard 11,25V, adjustable with FOX-MD1	
- Time delay	10 minutes	
Displays		
- Battery status display	LED (red, yellow, green)	
- Charge current display	LED (yellow)	
- Output status display	LED (red, yellow, green)	
Terminals	6 VA screws, max. 16mm <sup>2</sup>	8 VA screws, max. 16mm <sup>2</sup>
Power requirement	12,0mA (with FOX-MD1 15,0mA, 30sec.)	
Voltage drop	0,0 ... 0,27V (between 0 ... 20A)	
Environmental conditions	-25°C ... +50°C, non-thawing, IP 22	
Storing conditions	-25°C ... +80°	
Weight	300g	
Dimensions	125,9 x 107 x 54,6mm (LxWxH)	

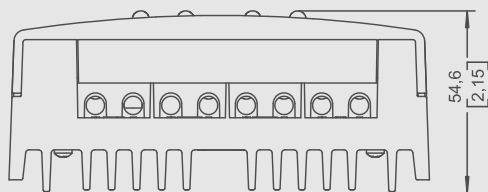
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## RANGE OF APPLICATIONS



## DIMENSIONS



mm [inches]

