# coolcept<sup>3</sup> fleX

StecaGrid 3213, StecaGrid 4013, StecaGrid 5013, StecaGrid 6013

#### inverter topology

The coolcept inverter topology was implemented in the single-phase StecaGrid inverters for the first time and achieved maximum efficiency thanks to the innovative circuit. The three-phase coolcept<sup>3</sup>-fleX inverters also enjoy the advantages of this circuit. The three-phase topology is fully reactive-current capable and thus also prepared for future requirements.

#### **Always symmetrical**

The advantage of three-phase feed-in is that the solar power produced is always distributed symmetrically over all three grid conductors and fed into the public grid. This is the case with these inverters over the entire power range. The symmetrical feed-in is entirely in the interest of the energy supply companies and also corresponds to the three-phase consumption in the household.

# Highest efficiency with long service life

The very high efficiency results in a peak efficiency of 98.6%, which means that less power loss has to be generated and dissipated to the environment. These are your yield advantages. Since a three-phase feed-in feeds energy into the grid on at least two phases at any time, intermediate energy storage in the device - as is the case with single-phase feed-in - is not necessary. Thus the coolcept<sup>3</sup>-fleX inverters completely dispense with the electrolytic capacitors required for intermediate storage, which can influence the service life of an electronic device through possible drying out. When using coolcept<sup>3</sup>-fleX inverters, the plant operator therefore has the prospect of a long service life. In addition, a new, unique cooling concept inside the inverters guarantees an even distribution of heat and thus a long service life of the devices.

#### Product design and visualization

The StecaGrid has a graphic LCD display with which energy yield values, current performance and operating parameters of the system can be visualised. The innovative menu offers the possibility of an individual selection of the different measured values. A guided, preprogrammed menu ensures smooth, final commissioning of the device.

## assembly

The lightweights with only 12 kg can be easily and safely mounted on the wall. The supplied wall bracket enables simple and very convenient installation. It is also not necessary to open the device for installation. All connections and the DC circuit breaker are accessible from the outside. For the DC connection, the Sunclix mating connectors are included in the scope of delivery.

## **Product features**

- Highest efficiency
- Three-phase, symmetrical grid feeding
- Simple installation
- Integrated data logger
- Low housing temperature at full load
- Robust metal casing
- Suitable for outdoor installation
- Integrated DC circuit breaker
- Very long service life
- Droop Mode for integration in hybrid systems
- Fixed voltage mode for other energy sources
- Optimised shadow management using global MPP tracking

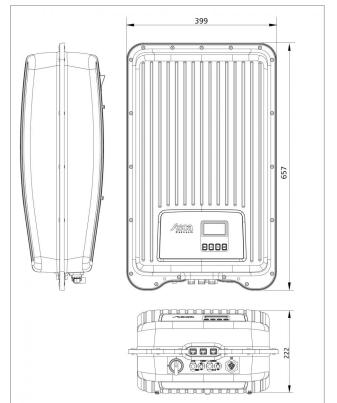
### Displays

- Multifunction graphical LC display with backlighting
- Animated representation of yield

#### Operation

- Simple menu-driven operation
- Multilingual menu navigation







# COOLCEPT / COOLCEPT-X / COOLCEPT<sup>3</sup> / COOLCEPT<sup>3</sup>-X / COOLCEPT FLEX / COOLCEPT FLEX XL



	StecaGrid 3213	StecaGrid 4013	StecaGrid 5013	StecaGrid 6013
DC input side (PV generator)				
Maximum input voltage		100	00 V	
APP voltage range	250 V 800 V			
Jumber of MPP tracker	250 V 560 V			
Aaximum input current			.0 A	
Aaximum input power at maximum active	3300 W	4100 W	5110 W	6130 W
output power	5500 11	-100 11	5110 **	0150 11
C output side (Grid connection)				1
irid voltage		320 V 480 V (depend	ding on regional settings)	
ated grid voltage	400 V			
faximum output current	7.0 A	7.0 A	10.0 A	10.0 A
Aaximum active power (cos phi = 1)	3200 W	4000 W	5000 W	6000 W
faximum apparent power	3200 VA	4000 VA	5000 VA	6000 VA
ated power	3200 W	4000 W	5000 W	6000 W
ated frequency	50 Hz and 60 Hz			
requency	45 Hz 65 Hz (depending on regional settings)			
light-time power loss	< 3 W			
eeding phases	< 3 W three-phase			
otal harmonic distortion (cos phi = 1)	< 1 %			
over factor cos phi	<1 % 0.8 capacitive 0.8 inductive			
		0.8 capacitive	0.8 Inductive	
haracterisation of the operating performation	ance	09	0 %	
1ax. efficiency	07.0.%			00.0.0/
uropean efficiency	97.0 %	98.0 %	98.0 %	98.0 %
IPP efficiency	> 99.7 % (static), > 99 % (dynamic)			
wn consumption	< 8 W			
ower derating at full power from	50 °C (T <sub>amb</sub> )			
afety				
solation principle	no galvanic isolation, transformerless			
irid monitoring	yes, integrated			
esidual current monitoring	yes, in	tegrated (The design of the inverter p	prevents it from causing DC leakage c	urrent)
perating conditions				
rea of application	outdoors & indoors			
limate protection class as per IEC 0721-3-4		3	K3	
mbient temperature	-15 °C +60 °C			
torage temperature	-30 °C +70 °C			
elative humidity	0 % 100 %, non-condensating			
loise emission (typical)	29 dBA			
itting and construction				
egree of protection		IP	65	
Overvoltage category	(AC),    (DC)			
C Input side connection	Phoenix Contact SUNCLIX (1 pair), mating connector included			
C output side connection	Wieland RST25i5 plug, mating connector included			
imensions (X x Y x Z)	399 x 657 x 222 mm			
/eight	12.0 kg			
communication interface	RS-485 (1 x RJ45 sockets; connectable to Meteocontrol WEB'log or Solar-Log™, Ethernet interface (1 x RJ45), Modbus RTU (1 x RJ45 socket: connectable to energy counter)			
ntegrated DC circuit breaker	ves, compliant with VDE 0100-712			
Cooling principle	temperature controlled fan, variable speed, internal (dustproof)			
ooning principle	see certificate download on the product page			