

# HISbox<sup>®</sup>

DC/AC string boxes  
part of HIS CONNECT™

## HISbox<sup>®</sup> Grid and Plant Protection

VDE-AR-N 4105:2018-11;  
HNA 44kVA; HNA 77kVA; HNA 134kVA

Overview



# HISbox®

## Grid and Plant Protection



HISbox® Grid and Plant Protection takes over all functions required by the power supply company for grid and plant protection in your PV plant. HISbox® Grid and Plant Protection contains the ABB CM-UFD.M31 grid monitoring device with a remotely controllable 4-pole switch as well as the associated components.

The fully pre-wired switchgear combination is used between the grid connection point and the inverter

### YOUR ADVANTAGES

- Designed in accordance with VDE-AR-N 4105:2018-11 and optimally VDE-AR-N 4110 (from 135kVA).
- Easy commissioning thanks to preset basic programs for country-specific directives.
- Ready for connection to TNS and TT networks. (IT-, TNC- networks on request)
- Fulfills all functions required by the power supply company for network and system protection.
- Contains, in addition to the control unit, 1 remotely controllable 4-pole disconnection point and the associated components.
- Current measured values are displayed and stored on the LC display.
- Retrievability of the last 300 mains faults with time stamp/real-time clock.
- Remote disconnection via ripple control signal receiver and monitoring of the connected coupling switches.
- Isolated network detection  $df/dt$  (ROCOF).



# HISbox<sup>®</sup> OVERVIEW



Technical specifications	HNA-044-0-B003	HNA-077-0-B003	HNA-0134-0-B002
AC power (max.)	44 kVA	77 kVA	135 kVA
Rated current (I <sub>N</sub> )	63A	110A	bis 200A
Rated voltage (U <sub>N</sub> )	230 / 400V AC		
Grid configuration	TNS and TT networks (IT, TNC networks on request)		
Protection class	II (according to IEC 61140)		
Low voltage directive	VDE-AR-N 4105:2018-11		
<b>Protection and switching devices</b>			
Isolation point / coupling switch	1x AC contactor, 4-pole	1x AC contactor, 4-pole	1 x switch disconnector with motor drive, 4-pole
Time delay relay	-	-	Yes with 1x MCB B 6A 1-pole 6kA (10kA IEC 60947-2)
Grid monitoring relay	ABB CM-UFD.M31, remotely triggered in accordance with the low voltage directive		
	Back-up fuse for grid monitoring relay: 1x MCB B 6A 1-pole 6kA (10kA IEC 60947-2), 1x MCB B 6A 3-pole 6kA (10kA IEC 60947-2) with a buffer module		
Shutdown times	Switching point: <100ms and total switch-off time: <200ms (including grid and plant protective relay)		
Overvoltage protection	No / optional on request		
<b>Connection</b>			
Cable glands, bk	2 x M50	2 x M63	2x M75 Cable grommet
Connection cross-section input and output	5 x 16-50mm <sup>2</sup> Cu (flexible and rigid)	5 x 35-95mm <sup>2</sup> Cu/Al (flexible and rigid)	5 x 35-150mm <sup>2</sup> Cu/Al (flexible and rigid)
<b>Enclosure</b>			
Material / color	Polyester, glass fiber reinforced (IEC 62208), gray		
Dimensions HxWxD (mm)	800x600x300		
Degree of protection (IEC 60529)	IP65		
Impact resistance (IEC62262)	IK10		
<b>Operating and environmental conditions</b>			
Environmental conditions	Indoor installation: - 5 ° C to max. + 40 ° C (+35 ° C 24 h mean value) Outdoor installation: - 15 ° C to max. + 40 ° C (+35 ° C 24 h mean value)		
Installation	Indoor and sheltered outdoor areas		
Relative humidity	Indoor installation: max. 50% at + 40 ° C / max. 90% at + 20 ° C (non-condensing) Outdoor installation: Temporarily up to 95% at + 25 ° C (non-condensing)		
Altitude	Max. 2000m above sea level		

