

HISbox[®]

DC/AC string boxes
part of HIS CONNECT™

HISbox[®] DC Combiner

HDC Residential 1000V DC
HDC Power Plant 1500V DC
HMP Monitoring 1500V DC

Overview



HIS
we connect solar energy

Table of contents

Introduction HISCONNECT	Page 3
HISBOX DC Combiner	Page 4
HISBOX Residential	Page 5
HISBOX Article Code Generator	Page 6
HISBOX Standard Solutions	Page 7
HISBOX Power Plant	Page 8
HISBOX DC Combiner 1000V 10-12-14 Strings	Page 9
HISBOX DC Combiner 1000V 16-20-24 Strings	Page 10
HISBOX DC Combiner 1500V 10-12-14 Strings	Page 11
HISBOX DC Combiner 1500V 16-20-24 Strings	Page 12
HISBOX Monitoring	Page 13
HISBOX Monitoring 1000V 10-12-14 Strings	Page 14
HISBOX Monitoring 1000V 16-20-24 Strings	Page 15
HISBOX Monitoring 1500V 10-12-14 Strings	Page 16
HISBOX Monitoring 1500V 16-20-24 Strings	Page 17
HISBOX Tracker Solution	Page 18
HISBOX TRACKER DC Combiner	Page 20






HISbox® DC COMBINER



HISbox® String boxes are synonymous with uncompromising product quality, the greatest possible cost-efficiency and longevity. We plan, develop and manufacture string boxes optimized and ready for connection from high quality industrial components of leading manufacturers to meet the exact requirements of your plant.

**DESIGNED WITH HIGH QUALITY COMPONENTS.
DESIGNED TO INDIVIDUAL REQUIREMENTS.
TESTED FOR HIGH PLANT AVAILABILITY.**

A large portfolio of standard string boxes. All manufactured from first class industrial components. Always perfectly tailored to your individual requirements. If necessary, specifically modified to your own concept. And always delivered ready to use.

	<p>HUGE WEALTH OF EXPERIENCE</p> <p>Benefit from our many years of experience in numerous projects in the world.</p>		<p>QUALITY & TESTING</p> <p>Engineering, manufacturing and testing under one roof. Additional testing for special requirements.</p>
	<p>EASY TO INSTALL</p> <p>Well thought out. Ready to use. Including necessary accessories to make installation safe, simple and quick.</p>		<p>MAINTENANCE-FREE</p> <p>Smart design to avoid extensive work during operations. Long-life components ensure the efficiency.</p>
	<p>INTERNATIONAL SUPPORT</p> <p>With a multilingual engineering and sales team. HIS is managing several country-specific standards.</p>		<p>REDUCE COST. RAISE PROFIT</p> <p>Tailored concepts by comprehensive expert knowledge. Cost effective and sustainable solution for PV projects.</p>

HISbox[®]

RESIDENTIAL



Bring the DC performance of your modules together. We will build a total concept for your PV roof-top installation tailored to your concrete requirements.

YOUR ADVANTAGES

- 1 brand, 1000 possibilities: modular design enables the simple implementation of bespoke solutions
- Effective protection of modules, inverters and energy meter against impact of surge and lightning strikes
- High-quality enclosures enable application outdoor
- Wide range of connection options are realizable
- Easy and quick installation due to a sophistic design and useful mounting options.

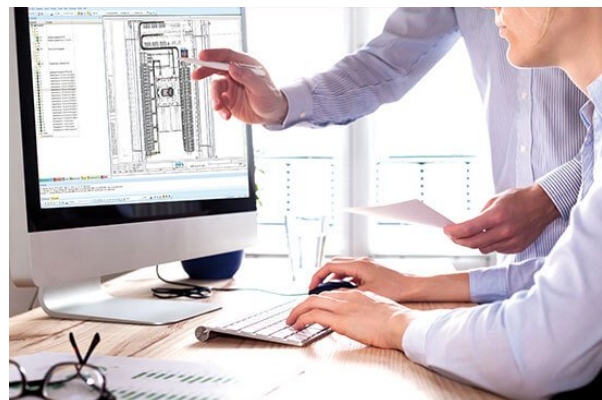
MODULAR PV COMBINER BOXES

Because of decreasing demand and cost pressures, the availability and reliability of PV installations is becoming more and more important.

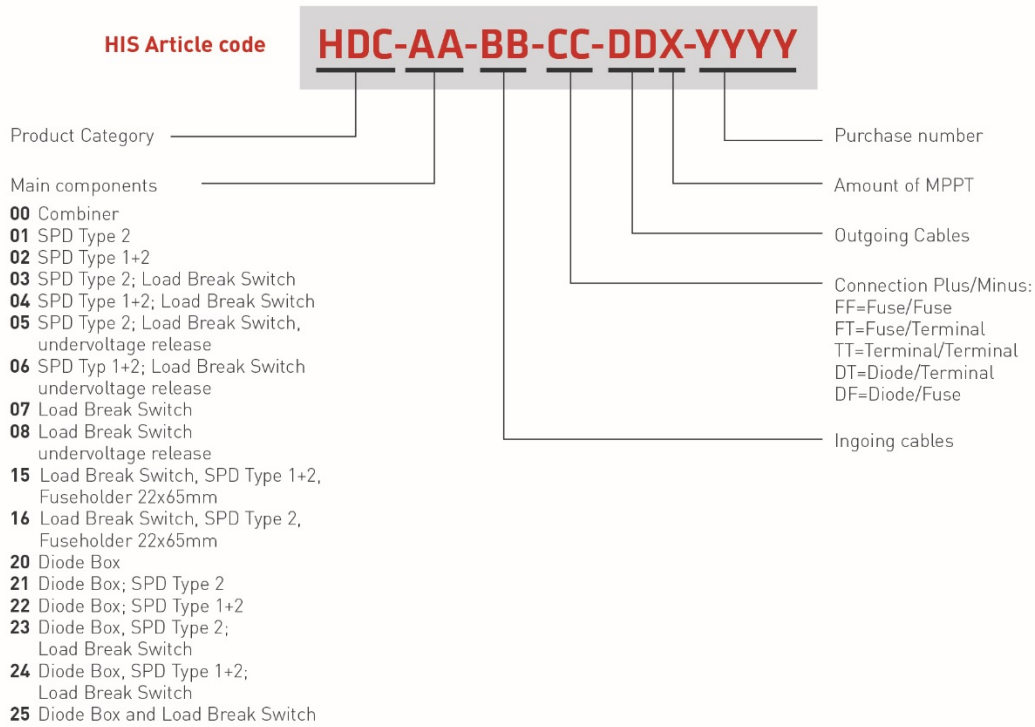


DESIGN, PRODUCTION & QUALITY

Surge voltage coupling from the effects of lightning or switching operations in the power supply can cause considerable damage to parts of a photovoltaic installations.



DC COMBINER RESIDENTIAL OVERVIEW



STANDARD SOLUTIONS

	Order no.	Amount MPPT	Amount Ingoing / MPPT	Amount Outgoing / MPPT	Fuse	SPD	Load Break Switch
SMA Sunny Boy 1.52.5	HDC-02-02-TT-011-A001	1	2	1	No / No	Type 1+2	No
	HDC-02-02-FF-011-A001	1	2	1	Yes / Yes	Type 1+2	No
SMA Sunny Boy 3000TL5000TL	HDC-02-02-TT-012-A001	2	2	1	No / No	Type 1+2	No
	HDC-02-02-FF-012-A001	2	2	1	Yes / Yes	Type 1+2	No
SMA STP Tripower 5000-12000TL	HDC-02-02-TT-012-A001	2	2	1	No / No	Type 1+2	No
	HDC-02-02-TT-022-A001	2	2	2	No / No	Type 1+2	No
	HDC-02-02-FF-012-A001	2	2	1	Yes / Yes	Type 1+2	No
	HDC-02-02-FF-022-A001	2	2	2	Yes / Yes	Type 1+2	No
SMA STP Tripower 15000-25000TL	HDC-02-03-FF-012-A001	2	3	1	Yes / Yes	Type 1+2	No
	HDC-02-03-FF-032-A001	2	3	3	Yes / Yes	Type 1+2	No
SMA Sunny Tripower 60	HDC-02-01-TT-011-A002	1	1	1	No / No	Type 1+2	No
	HDC-04-12-FF-011-A001	1	12	1	Yes / Yes	Type 1+2	Yes
Sunny Tripower Core I	HDC-02-02-TT-016-A001	6	2	1	No / No	Type 1+2	No
	HDC-02-02-TT-026-A001	6	2	2	No / No	Type 1+2	No
	HDC-02-02-FF-016-A001	6	2	1	Yes / Yes	Type 1+2	No
	HDC-02-02-FF-026-A001	6	2	2	Yes / Yes	Type 1+2	No
Solaredge SE5k / SE10K	HDC-02-02-TT-011-A001	1	2	1	No/No	Type 1+2	No
	HDC-02-02-FF-011-A001	1	2	1	Yes / Yes	Type 1+2	No
Solaredge SE25K / SE27.6K	HDC-02-02-TT-021-A001	1	2	2	No/No	Type 1+2	No
	HDC-02-02-FF-021-A001	1	2	2	Yes / Yes	Type 1+2	No
	HDC-02-03-FF-031-A001	1	3	3	Yes / Yes	Type 1+2	No
	HDC-04-03-FF-031-A001	1	3	3	Yes / Yes	Type 1+2	Yes
Huawei SUN2000-8KTL	HDC-02-02-TT-012-A001	2	2	1	No / No	Type 1+2	No
	HDC-02-02-TT-022-A001	2	2	2	No / No	Type 1+2	No
	HDC-02-02-FF-012-A001	2	2	1	Yes / Yes	Type 1+2	No
	HDC-02-02-FF-022-A001	2	2	2	Yes / Yes	Type 1+2	No
Huawei SUN2000-17KTL / 20 / 23	HDC-02-02-TT-013-A001	3	2	1	No / No	Type 1+2	No
	HDC-02-02-TT-023-A001	3	2	2	No / No	Type 1+2	No
	HDC-02-02-FF-013-A001	3	2	1	Yes / Yes	Type 1+2	No
	HDC-02-02-TT-023-A001	3	2	2	No / No	Type 1+2	No
Huawei SUN2000-33KTL / 36KTL	HDC-02-02-TT-014-A001	4	2	1	No / No	Type 1+2	No
	HDC-02-02-TT-024-A001	4	2	2	No / No	Type 1+2	No
	HDC-02-02-FF-014-A001	4	2	1	Yes / Yes	Type 1+2	No
	HDC-02-02-FF-024-A001	4	2	2	Yes / Yes	Type 1+2	No
Huawei SUN2000-60KTL-HV	HDC-02-02-TT-014-A001	4	2	1	No / No	Type 1+2	No
	HDC-02-02-TT-024-A001	4	2	2	No / No	Type 1+2	No
	HDC-02-02-FF-014-A001	4	2	1	Yes / Yes	Type 1+2	No
	HDC-02-02-FF-024-A001	4	2	2	Yes / Yes	Type 1+2	No
Huawei SUN2000-100KTL	HDC-02-02-TT-016-A001	6	2	1	No / No	Type 1+2	No
	HDC-02-02-TT-026-A001	6	2	2	No / No	Type 1+2	No
	HDC-02-02-FF-016-A001	6	2	1	Yes / Yes	Type 1+2	No
	HDC-02-02-FF-026-A001	6	2	2	Yes / Yes	Type 1+2	No
Sungrow SG10KTL-EC	HDC-02-03-FF-012-A001	2	3	1	Yes / Yes	Type 1+2	No
Sungrow SG36KTL-M	HDC-02-03-FF-013-A001	3	3	1	Yes / Yes	Type 1+2	No
	HDC-02-03-FF-033-A001	3	3	3	Yes / Yes	Type 1+2	No
Sungrow SG60KTL	HDC-04-16-FF-011-A001	1	16	1	Yes / Yes	Type 1+2	Yes
Sungrow SG125KTL	HDC-04-24-FF-011-A001	1	24	1	Yes / Yes	Type 1+2	Yes
Delta RPI M15/M20	HDC-02-02-TT-012-A001	2	2	1	No / No	Type 1+2	No
	HDC-02-02-TT-022-A001	2	2	2	No / No	Type 1+2	No
	HDC-02-02-FF-012-A001	2	2	1	Yes / Yes	Type 1+2	No
	HDC-02-02-FF-022-A001	2	2	2	Yes / Yes	Type 1+2	No
Delta RPI M30	HDC-02-03-FF-013-A001	3	3	1	Yes / Yes	Type 1+2	No
	HDC-02-03-FF-033-A001	3	3	3	Yes / Yes	Type 1+2	No
Delta RPI M50A	HDC-02-05-FF-052-A001	2	5	5	Yes / Yes	Type 1+2	No
Delta M88H-122	HDC-04-07-FF-012-A001	2	1	1	Yes / Yes	Type 1+2	Yes
Emergencyshutdown	HDC-06-02-TT-011-A001	1	2	1	No / No	Type 1+2	Yes, UVR
	HDC-06-02-FF-012-A001	2	2	1	Yes / Yes	Type 1+2	Yes, UVR
	HDC-06-02-FF-013-A001	3	2	1	Yes / Yes	Type 1+2	Yes, UVR
	HDC-06-02-FF-014-A001	4	2	1	Yes / Yes	Type 1+2	Yes, UVR

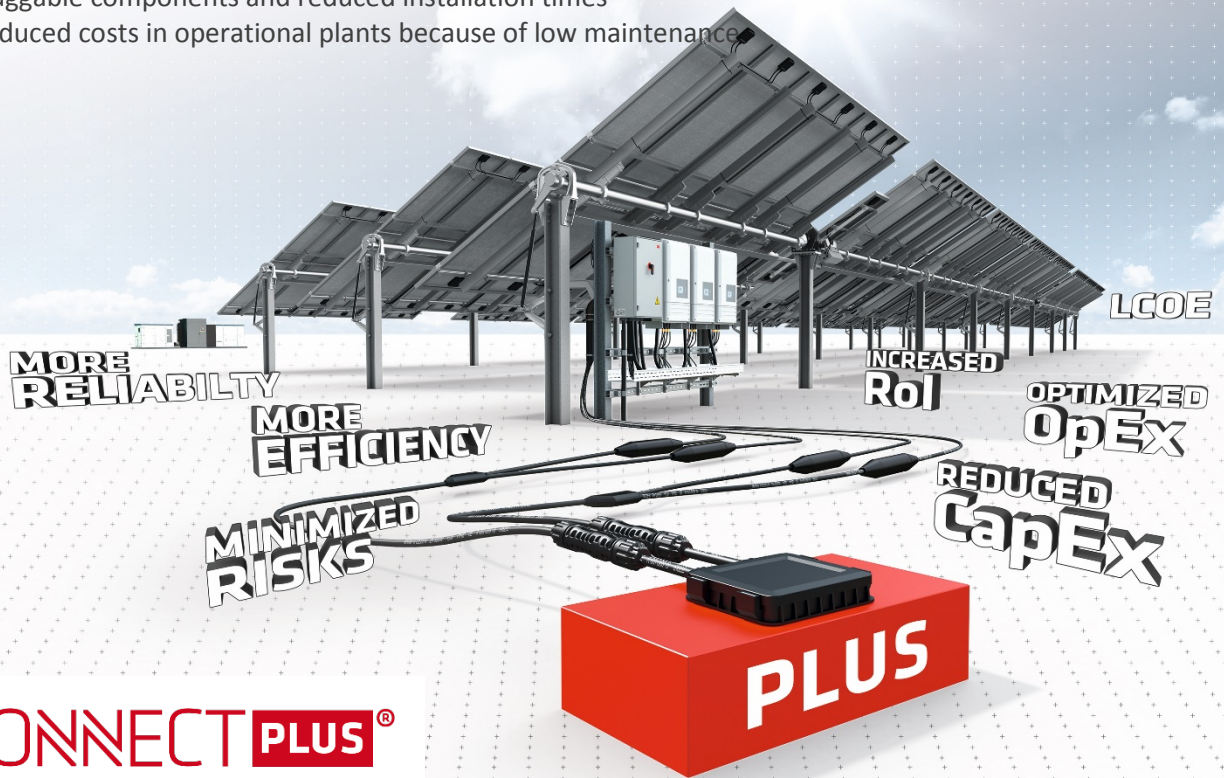
HISbox[®] POWER PLANT

XXXXXXXXXX

COST EFFECTIVE AND SUSTAINABLE COMPLETE SOLUTION FOR PV PROJECTS

At the development of a HIS CONNECT PLUS[®] solution, the requirements of all those involved in the project are taken into account. This results in individual benefits for all concerned.

- High bankability for simpler project financing
- Integrated system for all cabling and switching tasks
- Frictionless commissioning and compliance with project deadlines
- Greater plant availability due to long-life cabling and switching solutions
- Much reduced supply chain and access to HIS Logistic expertise
- Pluggable components and reduced installation times
- Reduced costs in operational plants because of low maintenance



HIS CONNECT PLUS[®]
wiring solution for solar business

HISbox[®] DC COMBINER 1000V

Strings 10-12-14



Technical Data	HDC-03-10-FF-011-A001	HDC-04-10-FF-011-A001	HDC-03-12-FF-011-A001	HDC-04-12-FF-011-A001	HDC-03-14-FF-011-A001	HDC-04-14-FF-011-A001
Max. String Input	10	10	12	12	14	14
DC Main cable	1 (2 on request)					
Nominal Voltage (Ue)	1000V DC					
Max. rated current (I _{na})	250A	250A	250A	250A	250A	250A
Max. input current per string	10A	10A	10A	10A	10A	10A
Protection Class (acc. IEC 61140)	II, insulated					
Conformity	IEC 61439-1;-2					
Connection						
Plus-Pole	Fuse-holder (Cross-section 4-10mm ²)					
Minus-Pole	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder
Cable feedthrough	Cable glands (Ø 6mm to 13mm); Optionally with PV-connectors					
PE- Cable Gland	M20 (Ø 6mm to 13mm)					
DC output	M8, directly on load break switch					
Protection devices						
Overvoltage device	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A
Fuse links (acc. IEC60269-6) (Plus/Minus)	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Load break switch (IEC 60947-3)	250A	250A	250A	250A	250A	250A
Enclosure						
Dimension height x width x depth	530x430x200	530x430x200	745x535x300	745x535x300	745x535x300	745x535x300
Material	Glass-fiber reinforced Polyester (GRP); UV- and ozone stable					
Description	Incl. venting valve; mounting brackets in stainless steel					
Protection Class / Impact resistance	Up to IP65 (IEC 60529) / IK 10 (IEC62262)					
Operation and enviromental conditions						
Ambient temperature	-20 °C to max. +55°C					
Altitude above sea level (MLS)	Standard 2000m above, max. 4000m (DERATING applies)					
Relative Humidity	Indoor: Max. 50% at +40°C, max. 90% at +20°C (not condensating) Outdoor application: temporarily up to 95% at +25°C (not condensating)					

HISbox[®] DC COMBINER 1000V

Strings 16-20-24

Technical Data	HDC-03-16-FF-011-A001	HDC-04-16-FF-011-A001	HDC-03-20-FF-011-A001	HDC-04-20-FF-011-A001	HDC-03-24-FF-011-A001	HDC-04-24-FF-011-A001
Max. String Input	16	16	20	20	24	24
DC Main cable	1 (2 on request)					
Nominal Voltage (U _e)	1000V DC					
Max. rated current (I _{na})	160A	160A	240A	240A	240A	240A
Max. input current per string	10A	10A	10A	10A	10A	10A
Protection Class (acc. IEC 61140)	II, insulated					
Conformity	IEC 61439-1;-2					
Connection						
Plus-Pole	Fuse-holder (Cross-section 4-10mm ²)					
Minus-Pole	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder
Cable feedthrough	Cable glands (Ø 6mm to 13mm); Optionally with PV-connectors					
PE- Cable Gland	M20 (Ø 6mm to 13mm)					
DC output	M8, directly ion load break switch					
Protection devices						
Overvoltage device	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A
Fuse links (acc. IEC60269-6) (Plus/Minus)	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Load break switch (IEC 60947-3)	250A	250A	315A	315A	315A	315A
Enclosure						
Dimension height x width x depth	845x635x300	845x635x300	845x635x300	845x635x300	845x635x300	845x635x300
Material	Glass-fiber reinforced Polyester (GRP); UV- and ozone stable					
Description	Incl. venting valve; mounting brackets in stainless steel					
Protection Class / Impact resistance	Up to IP65 (IEC 60529) / IK 10 (IEC62262)					
Operation and enviromental conditions						
Ambient temperature	-20 °C to max. +55°C					
Altitude above sea level (MLS)	Standard 2000m above, max. 4000m (DERATING applies)					
Relative Humidity	Indoor: Max. 50% at +40°C, max. 90% at +20°C (not condensating) Outdoor application: temporarily up to 95% at +25°C (not condensating)					

HISbox[®] DC COMBINER 1500V

Strings 10-12-14

Technical Data	HDC1500-03-10-FF-011-A001	HDC1500-04-10-FF-011-A001	HDC1500-03-12-FT-011-A001	HDC1500-04-12-FF-011-A001	HDC1500-03-14-FT-011-A001	HDC1500-04-14-FF-011-A001
Max. String Input	10	10	12	12	14	14
DC Main cable	1 (2 on request)					
Nominal Voltage (Ue)	1500V DC					
Max. rated current (I _{na})	100A	100A	120A	120A	280A	280A
Max. input current per string	10A	10A	10A	10A	20A	20A
Protection Class (acc. IEC 61140)	II, insulated					
Conformity	IEC 61439-1;-2					

Connection						
Plus-Pole	Fuse-holder (Cross-section 4-10mm ²)					
Minus-Pole	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder
Cable feedthrough	Cable glands (Ø 6mm to 13mm); Optionally with PV-connectors					
PE- Cable Gland	M20 (Ø 6mm to 13mm)					
DC output	M8, directly ion load break switch					

Protection devices						
Overvoltage device	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A
Fuse links (acc. IEC60269-6) (Plus/Minus)	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Load break switch (IEC 60947-3)	250A	250A	250A	250A	400A	400A

Enclosure						
Dimension height x width x depth	845x635x300	845x635x300	845x635x300	845x635x300	845x635x300	845x635x300
Material	Glass-fiber reinforced Polyester (GRP); UV- and ozone stable					
Description	Incl. venting valve; mounting brackets in stainless steel					
Protection Class / Impact resistance	Up to IP65 (IEC 60529) / IK 10 (IEC62262)					

Operation and enviromental conditions	
Ambient temperature	-20 °C to max. +55°C
Altitude above sea level (MLS)	Standard 2000m above, max. 4000m (DERATING applies)
Relative Humidity	Indoor: Max. 50% at +40°C, max. 90% at +20°C (not condensating) Outdoor application: temporarily up to 95% at +25°C (not condensating)

HISbox[®] DC COMBINER 1500V

Strings 16-20-24

Technical Data	HDC-03-16-FT-011-A001	HDC-04-16-FF-011-A001	HDC-03-20-FT-011-A001	HDC-04-20-FF-011-A001	HDC-03-24-FT-011-A001	HDC-04-24-FF-011-A001
Max. String Input	16	16	20	20	24	24
DC Main cable	1 (2 on request)					
Nominal Voltage (Ue)	1500V DC					
Max. rated current (I _{na})	160A	160A	240A	240A	240A	240A
Max. input current per string	10A	10A	10A	10A	10A	10A
Protection Class (acc. IEC 61140)	II, insulated					
Conformity	IEC 61439-1;-2					
Connection						
Plus-Pole	Fuse-holder (Cross-section 4-10mm ²)					
Minus-Pole	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder
Cable feedthrough	Cable glands (∅ 6mm to 13mm); Optionally with PV-connectors					
PE- Cable Gland	M20 (∅ 6mm to 13mm)					
DC output	M8, directly ion load break switch					
Protection devices						
Overvoltage device	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A
Fuse links (acc. IEC60269-6) (Plus/Minus)	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Load break switch (IEC 60947-3)	315A	315A	315A	315A	315A	315A
Enclosure						
Dimension height x width x depth	845x635x300	845x635x300	845x635x300	845x635x300	845x635x300	845x635x300
Material	Glass-fiber reinforced Polyester (GRP); UV- and ozone stable					
Description	Incl. venting valve; mounting brackets in stainless steel					
Protection Class / Impact resistance	Up to IP65 (IEC 60529) / IK 10 (IEC62262)					
Operation and enviromental conditions						
Ambient temperature	-20 °C to max. +55°C					
Altitude above sea level (MLS)	Standard 2000m above, max. 4000m (DERATING applies)					
Relative Humidity	Indoor: Max. 50% at +40°C, max. 90% at +20°C (not condensating) Outdoor application: temporarily up to 95% at +25°C (not condensating)					

HISbox[®] Monitoring



Simple, flexible system planning though modular design and a great variety of combinations available.

- Shunt Sensors and Hall Sensors
- Current and voltage measurement
- High Accuracy
- Open data protocol, transmission via RS485
- Low power consumption of monitoring units



HISbox[®] HSK Monitoring 1000V

Strings 10-12-14

Technical Data	HMP-10-10-FF-A001	HMP-10-10-FF-A002	HMP-12-12-FF-A001	HMP-12-12-FF-A002	HMP-14-14-FF-A001	HMP-14-14-FF-A002
Max. String Input	10	10	12	12	14	14
DC Main cable	1 (2 on request)					
Nominal Voltage (Ue)	1000V DC					
Max. rated current (I _{na})	120A	120A	120A	120A	240A	240A
Max. input current per string	10A	10A	10A	10A	17A	17A
Protection Class (acc. IEC 61140)	II, insulated					
Conformity	IEC 61439-1;-2					

Connection						
Plus-pole	Fuse-holder (Cross-section 4-10mm ²)					
Minus Pole	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder
Cable feedthrough	Cable glands (Ø 6mm to 13mm); Optionally with PV-connectors					
PE- Cable Gland	M20 (Ø 6mm to 13mm)					
DC output	M8, directly ion load break switch					

Protection devices						
Overtoltage device	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A
Fuse links (acc. IEC60269-6) (Plus/Minus)	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Load break switch (IEC 60947-3)	160A	160A	200A	200A	315A	315A

Enclosure						
Dimension height x width x depth	745x535x300	745x535x300	745x535x300	745x535x300	845x635x300	845x635x300
Material	Glass-fiber reinforced Polyester (GRP); UV- and ozone stable					
Description	Incl. venting valve; mounting brackets in stainless steel					
Protection Class / Impact resistance	Up to IP65 (IEC 60529) / IK 10 (IEC62262)					

Operation and enviromental conditions	
Ambient temperature	-20 °C to max. +55°C
Altitude above sea level (MLS)	Standard 2000m above, max. 4000m (DEARTING applies)
Relative Humidity	Indoor: Max. 50% at +40°C, max. 90% at +20°C (not condensating) Outdoor application: temporarily up to 95% at +25°C (not condensating)

HISbox[®] HSK Monitoring 1000V Strings 16-20-24

Technical Data	HMP-16-16-FF-A001	HMP-16-16-FF-A002	HMP-20-20-FF-A001	HMP-20-20-FF-A002	HMP-24-24-FF-A001	HMP-24-24-FF-A002
Max. String Input	16	16	20	20	24	24
DC Main cable	1 (2 on request)					
Nominal Voltage (Ue)	1000V DC					
Max. rated current (I _{na})	160A	160A	240A	240A	240A	240A
Max. input current per string	10A	10A	10A	10A	10A	10A
Protection Class (acc. IEC 61140)	II, insulated					
Conformity	IEC 61439-1;-2					

Connection						
Plus-pole	Fuse-holder (Cross-section 4-10mm ²)					
Minus Pole	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder
Cable feedthrough	Cable glands (Ø 6mm to 13mm); Optionally with PV-connectors					
PE- Cable Gland	M20 (Ø 6mm to 13mm)					
DC output	M8, directly ion load break switch					

Protection devices						
Overtoltage device	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A
Fuse links (acc. IEC60269-6) (Plus/Minus)	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Load break switch (IEC 60947-3)	315A	315A	315A	315A	315A	315A

Enclosure						
Dimension height x width x depth	845x635x300	845x635x300	845x635x300	845x635x300	845x635x300	845x635x300
Material	Glass-fiber reinforced Polyester (GRP); UV- and ozone stable					
Description	Incl. venting valve; mounting brackets in stainless steel					
Protection Class / Impact resistance	Up to IP65 (IEC 60529) / IK 10 (IEC62262)					

Operation and enviromental conditions	
Ambient temperature	-20 °C to max. +55°C
Altitude above sea level (MLS)	Standard 2000m above, max. 4000m (DEARTING applies)
Relative Humidity	Indoor: Max. 50% at +40°C, max. 90% at +20°C (not condensating) Outdoor application: temporarily up to 95% at +25°C (not condensating)

HISbox[®] HMP Monitoring 1500V

Strings 10-12-14

Technical Data	HMP1500-10-10-FF-A001	HMP1500-10-10-FF-A002	HMP1500-12-12-FF-A001	HMP1500-12-12-FF-A002	HMP1500-14-14-FF-A001	HMP1500-14-14-FF-A002
Max. String Input	10	10	12	12	14	14
DC Main cable	1 (2 on request)					
Nominal Voltage (Ue)	1500V DC					
Max. rated current (I _{na})	120A	120A	120A	120A	240A	240A
Max. input current per string	10A	10A	10A	10A	17A	17A
Protection Class (acc. IEC 61140)	II, insulated					
Conformity	IEC 61439-1;-2					

Connection						
Plus-pole	Fuse-holder (Cross-section 4-10mm ²)					
Minus Pole	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder
Cable feedthrough	Cable glands (Ø 6mm to 13mm); Optionally with PV-connectors					
PE- Cable Gland	M20 (Ø 6mm to 13mm)					
DC output	M8, directly on load break switch					

Protection devices						
Overvoltage device	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A
Fuse links (acc. IEC60269-6) (Plus/Minus)	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Load break switch (IEC 60947-3)	250A	250A	250A	250A	400A	400A

Enclosure						
Dimension height x width x dept	845x635x300	845x635x300	845x635x300	845x635x300	845x635x300	845x635x3000
Material	Glass-fiber reinforced Polyester (GRP); UV- and ozone stable					
Description	Incl. venting valve; mounting brackets in stainless steel					
Protection Class / Impact resistance	Up to IP65 (IEC 60529) / IK 10 (IEC62262)					

Operation and enviromental conditions	
Ambient temperature	-20 °C to max. +55°C
Altitude above sea level (MLS)	Standard 2000m above, max. 4000m (DEARTING applies)
Relative Humidity	Indoor: Max. 50% at +40°C, max. 90% at +20°C (not condensating) Outdoor application: temporarily up to 95% at +25°C (not condensating)

HISbox[®] HMP Monitoring 1500V Strings 16-20-24

Technical Data	HMP1500-16-16-FF-A004	HMP1500-16-16-FF-A005	HMP1500-20-20-FF-A001	HMP1500-20-20-FF-A002	HMP1500-24-24-FF-A001	HMP1500-24-24-FF-A002
Max. String Input	16	16	20	20	24	24
DC Main cable	1 (2 on request)					
Nominal Voltage (Ue)	1500V DC					
Max. rated current (I _{na})	160A	295A	240A	240A	240A	240A
Max. input current per string	10A	18A	12A	12A	10A	10A
Protection Class (acc. IEC 61140)	II, insulated					
Conformity	IEC 61439-1;-2					

Connection						
Plus-pole	Fuse-holder (Cross-section 4-10mm ²)					
Minus Pole	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder	Fuse-holder
Cable feedthrough	Cable glands (Ø 6mm to 13mm); Optionally with PV-connectors					
PE- Cable Gland	M20 (Ø 6mm to 13mm)					
DC output	M8, directly on load break switch					

Protection devices						
Overvoltage device	Type 1+2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A	Type 2 I _n = 15kA I _{max} = 40A	Type 1+2 I _n = 15kA I _{max} = 40A
Fuse links (acc. IEC60269-6) (Plus/Minus)	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
Load break switch (IEC 60947-3)	250A	400A	400A	400A	400A	400A

Enclosure						
Dimension height x width x dept	1056x852x350	1056x852x350	1056x852x350	1056x852x350	1056x852x350	1056x852x350
Material	Glass-fiber reinforced Polyester (GRP); UV- and ozone stable					
Description	Incl. venting valve; mounting brackets in stainless steel					
Protection Class / Impact resistance	Up to IP65 (IEC 60529) / IK 10 (IEC62262)					

Operation and enviromental conditions	
Ambient temperature	-20 °C to max. +55°C
Altitude above sea level (MLS)	Standard 2000m above, max. 4000m (DEARTING applies)
Relative Humidity	Indoor: Max. 50% at +40°C, max. 90% at +20°C (not condensating) Outdoor application: temporarily up to 95% at +25°C (not condensating)

HIS CONNECT PLUS[®]

wiring solution for solar business

Tracker Solutions

Overview



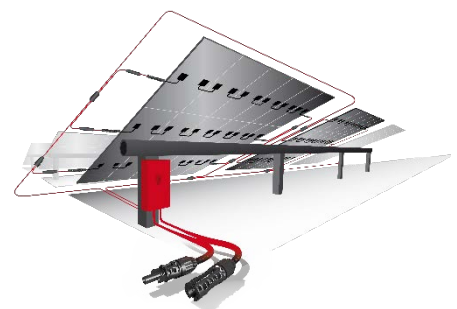
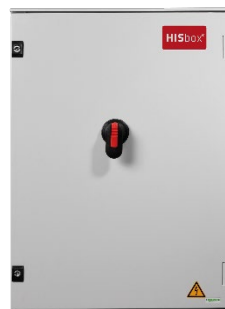
TRACKER SOLUTIONS

XXXXXXXXXX

COST EFFECTIVE AND SUSTAINABLE COMPLETE SOLUTION FOR PV PROJECTS

At the development of a HIS CONNECT PLUS® solution, the requirements of all those involved in the project are taken into account. This results in individual benefits for all concerned.

- High bankability for simpler project financing
- Integrated system for all cabling and switching tasks
- Frictionless commissioning and compliance with project deadlines
- Greater plant availability due to long-life cabling and switching solutions
- Much reduced supply chain and access to HIS Logistic expertise
- Pluggable components and reduced installation times
- Reduced costs in operational plants because of low maintenance



HISkon®
PV cabling components
part of HIS CONNECT®

+

HISbox®
DC/AC string boxes
part of HIS CONNECT®

=

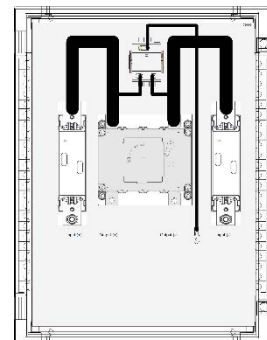
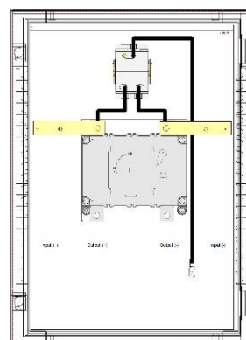
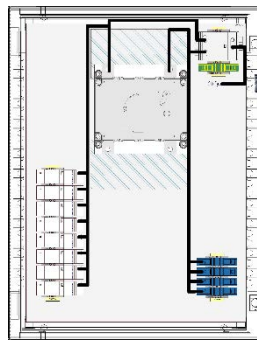
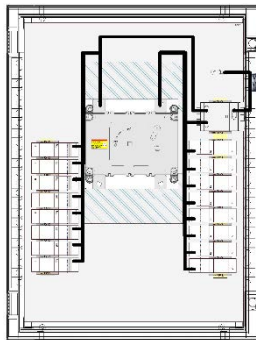
HISCONNECT®
solar wiring system

DC COMBINER



HISbox® String boxes are synonymous with uncompromising product quality, the greatest possible cost-efficiency and longevity. We plan, develop and manufacture string boxes optimized and ready for connection from high quality industrial components of leading manufacturers to meet the exact requirements of your plant.

Technical Description	
Protection Class (acc. IEC 61140)	II, insulated
Conformity	IEC 61439-1;-2
Overvoltage device	Type 1+2 $I_n = 15kA$ $I_{max} = 40A$
Fuse links	acc. IEC60269-6
Load break switch	IEC 60947-3
Enclosure	Glass-fiber reinforced Polyester (GRP); UV- and ozone stable; Incl. anti-pressure ventile; mounting brackets in stainless steel
Cable feedthrough	Cable glands (\varnothing 6mm to 13mm); Optionally with Stäubli MC4, MC4-EVO2 (2,5-10mm ²), Phoenix Contact Sunclix (6-16mm ²)
Protection Class / Impact resistance	Up to IP65 (IEC 60529) / IK 10 (IEC62262)
Ambient temperature	-20 °C to max. +55°C
Altitude above sea level (MLS)	Standard 2000m above, max. 4000m (DERATING applies)
Relative Humidity	Indoor: Max. 50% at +40°C, max. 90% at +20°C (not condensating) Outdoor application: temporarily up to 95% at +25°C (not condensating)



Part No.	Amount strings	Max. rated current (I _{na})	Fuses (+)	Fuses (-)	Standard
HDC1500-15-08-FF-011-A001	8	240	Yes	Yes	IEC
HDC1500-15-08-FT-011-A001	8	240	Yes	No	IEC
HDC1500-15-08-FF-011-A002	8	240	Yes	Yes	AS/NZ
HDC1500-15-08-FT-011-A002	8	240	Yes	No	AS/NZ
HDC1500-15-09-FF-011-A001	9	270	Yes	Yes	IEC
HDC1500-15-09-FT-011-A001	9	270	Yes	No	IEC
HDC1500-15-09-FF-011-A002	9	270	Yes	Yes	AS/NZ
HDC1500-15-09-FT-011-A002	9	270	Yes	No	AS/NZ
HDC1500-04-01-TT-011-A003	1	320	No	No	IEC
HDC1500-04-01-TT-011-A004	1	320	No	No	AS/NZ
HDC1500-04-01-FF-011-A002	1	320	Yes	Yes	IEC
HDC1500-04-01-FF-011-A003	1	320	Yes	Yes	AS/NZ

