



Pushing Performance
Since 1945



PEOPLE. POWER. PARTNERSHIP.

HARTING Han® S

Safe and error-free connections
in energy storage systems

HARTING Han® S

Solution overview and compliance to standards

In line with the market trends for energy storage systems, Han® S was developed as a front mounting solution for high power transmissions with flexibility and safety. This single pole connector family can work with rated currents up to 200 A at a voltage of 1500 V, while assuring safe installations with finger safe contacts with different termination types (bolt or busbar) and visible control of the locking status. Moreover, the product is vibration proof and available in different colours, complete with a mechanical coding system that makes misconnections impossible.

Han® S complies with all relevant standards for energy storage systems

- IEC 60664-1 (VDE 0110-0)**
Principles, requirements and tests
- IEC 61984 (VDE 0627)**
Connectors, safety requirements and tests
- UL 1977 (in release processing)**
Standard for component connectors for use in data, signal, control and power applications
- UL 4128**
Outline of investigation for intercell and intertier connectors for use in electrochemical battery system applications
- UL 1973**
Standard for batteries in use in stationary, vehicle auxiliary power and light electrical rail
- UL 9540**
Standard for energy storage and equipment



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Key features and advantages

Besides the fact of holding the brand-new approval UL 4128, Han® S provides important additional features currently not existing in the segment. As a matter of a fact, Han® S assures safe and error-free connections with high flexibility.



High power transmission in a compact design: rated currents up to 200 A at a voltage of 1500 V due to an effective contact resistance of less than 0.3 mΩ



Safe installations due to visible control of the locking status, finger protected contacts, mechanical & colour coding system and shock & vibration resistance



Easy (dis) assembly due to (un) screwing the contact of the screw mounted housing from the front. Easy mating through a self-opening single lever



High flexibility due to different mounting possibilities and contact terminations as well as 360° positioning for cable entry



Complies with all relevant energy storage standards, including the brand-new UL 4128



Free of lead and halogens

For more information refer to our homepage:
www.HARTING.com/hans

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Technical characteristics

Inserts/electrical data acc. to DIN EN 60664-1 and DIN EN 61984

Number of contacts	1
Rated current	
- Han® S 120	120 A
- Han® S 200	200 A
Rated voltage	1500 V
Rated impulse voltage	8 kV
Pollution degree	2
Insulation resistance	≥ 10 ⁸ Ω
Contact resistance	≤ 0.3 mΩ
Limiting temperatures	-40 °C ... +125 °C
Number of mating cycles	≥ 500
Degree of protection acc. to IEC/EN 60529	Touch safe male and female contacts
- mated condition	IP40
- unmated condition	IP20 (1500 VDC, 1000 VAC)
Coding system	Mechanical & colour
Locking system	Single lever (with visible status)
Vibration and shock resistance acc. to IEC 16373	Category 1, class B
Cable entry	Angled, available rotation through 360°

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Technical characteristics

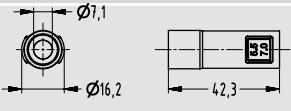
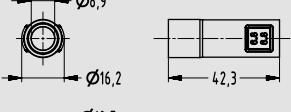
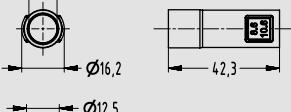
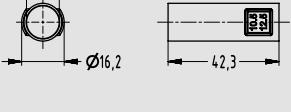
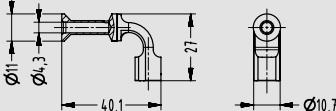
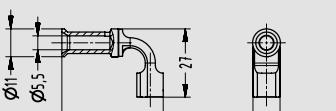
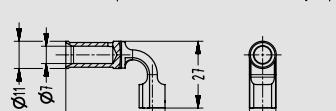
Inserts/electrical data acc. to DIN EN 60664-1 and DIN EN 61984

Cable outer diameter	
- Han® S 120	5.5 -12.5 mm
- Han® S 200	6.4 -14.6 mm
Cable gland tightening torque	
- Han® S 120	1.5 Nm
- Han® S 200	2.5 Nm
Contact termination (hood)	
- cable stripping length	Crimp (conductor cross-section 10 ... 50 mm ²)
- suitable tools/crimp-dies	22 mm refer to the Han® S Assembly Instructions
Contact termination (housing)	
- recommended tightening torque	Bolt/busbar
• Han® S 120	4 Nm*
• Han® S 200	11 Nm*
Fixing screws (housing)	
- recommended tightening torque	M3, 6 mm long, flat headed (acc. to ISO 7380-2) 0.5 - 0.8 Nm
Colour (hood/housing)	
- black	RAL 9005 (jet black)
- red	RAL 3001 (signal red)
- blue	RAL 5015 (sky blue)
Material (hood/housing)	Polyamide (PA)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0

* for bulkhead mounted housings, the use of a counter wrench is mandatory if applying more than recommended tightening torque.

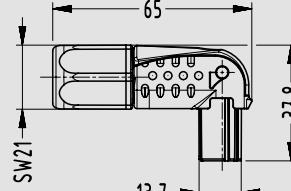
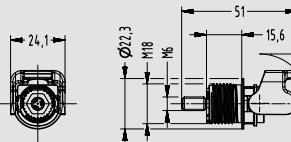
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Components and part numbers

Han® S 120			
	Identification/part no.	Figure	Drawings
Rubber sleeve	Cable outer diameter 5.5 – 7.0 mm 09 93 000 8220		   
	Cable outer diameter 6.8 – 8.8 mm 09 93 000 8221		
	Cable outer diameter 8.6 – 10.6 mm 09 93 000 8222		
	Cable outer diameter 10.5 – 12.5 mm 09 93 000 8223		
Contact	120 A female crimp contact, silver plated		  
	10 mm ² conductor cross-section 09 93 000 8260		
	16 mm ² conductor cross-section 09 93 000 8261		
	25 mm ² conductor cross-section 09 93 000 8262		

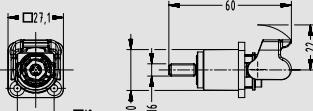
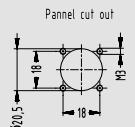
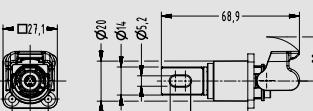
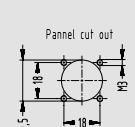
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Components and part numbers

Han® S 120			
	Identification/part no.	Figure	Drawings
Hood	Angled hood, 10 ... 25 mm ² conductor cross-section contact, incl. cable gland	 	
	Black 09 93 001 1501		
SMH/Bolt	Red 09 93 001 1502		
	Screw mounted housing, incl. male contact with M6 bolt termination	 	
	Black 09 93 001 1101		
	Red 09 93 001 1102		

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Components and part numbers

Han® S 120			
	Identification/part no.	Figure	Drawings
BMH/Bolt	Bulkhead mounted housing, incl. male contact with M6 bolt termination		 
	Black 09 93 001 1301		
BMH/Busbar	Bulkhead mounted housing, incl. male contact with busbar termination		 
	Black 09 93 001 1303		

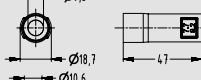
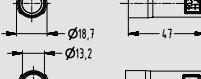
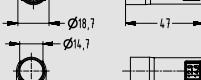
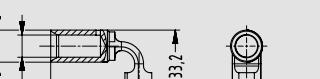
Han® S 120 parts also available in blue colour, having an exclusive mechanical coding

Han® S 120 housings also available with **Unlocking Protected lever** (unlocking only possible using a tool)

Han® S 120 accessories available, such as protect cover for transport purposes and assembly tools

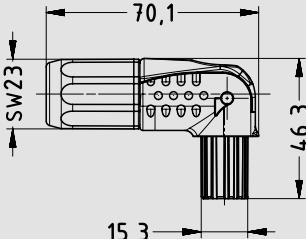
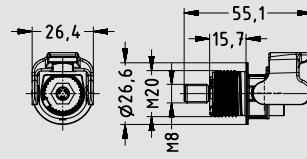
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Components and part numbers

Han® S 200			
	Identification/part no.	Figure	Drawings
Rubber sleeve	Cable outer diameter 6.4 – 7.9 mm 09 93 000 7221		
	Cable outer diameter 7.7 – 9.2 mm 09 93 000 7222		
	Cable outer diameter 9.0 – 10.5 mm 09 93 000 7223		
	Cable outer diameter 10.3 – 11.8 mm 09 93 000 7224		
	Cable outer diameter 11.6 – 13.1 mm 09 93 000 7225		
	Cable outer diameter 12.9 – 14.6 mm 09 93 000 7226		
Contact	200 A female crimp contact, silver plated		
	25 mm ² conductor cross-section 09 93 000 7262		
	35 mm ² conductor cross-section 09 93 000 7263		
	50 mm ² conductor cross-section 09 93 000 7264		

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Components and part numbers

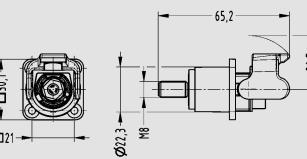
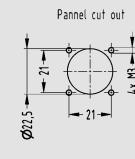
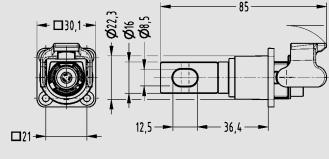
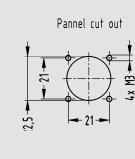
Han® S 200			
	Identification/part no.	Figure	Drawings
Hood	Angled hood, 25 ... 50 mm ² conductor cross-section, contact incl. cable gland		
	Black 09 93 001 0501		
SMH/Bolt	Black 09 93 001 0101		
	Red 09 93 001 0102		

For more information:
<https://b2b.harting.com/ebusiness/55956>



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Components and part numbers

Han® S 200			
	Identification/part no.	Figure	Drawings
BMH/Bolt	Bulkhead mounted housing, incl. male contact with M8 bolt termination		
	Black 09 93 001 0301		
BMH/Busbar	Bulkhead mounted housing, incl. male contact with busbar termination		
	Black 09 93 001 0303		

Han® S 200 parts also available in blue colour, having an exclusive mechanical coding
 Han® S 200 housings also available with Unlocking Protected lever (unlocking only possible using a tool)
 Han® S 200 accessories available, such as protect cover for transport purposes and assembly tools
 Han® S 200 cable assemblies available



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