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Since 1945



PEOPLE. POWER. PARTNERSHIP.

HARTING Han® S 120

Safe and error-free connections
in energy storage systems

HARTING Han® S 120

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 120 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



HARTING Han® S 120

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 120 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

HARTING Han® S 120

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 |
| Rated voltage | 1500 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 2 |
| Insulation resistance | ≥ 108 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° |

HARTING Han® S 120

Technical characteristics

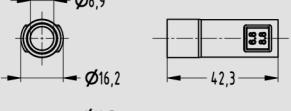
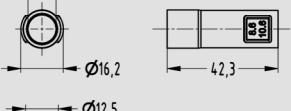
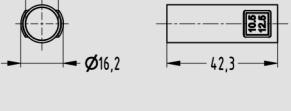
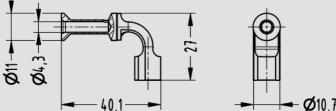
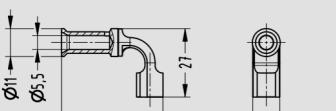
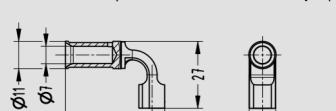
Inserts/electrical data acc. to DIN EN 60664-1 and DIN EN 61984

| | |
|--|--|
| Cable outer diameter - Han® S 120 | 5.5 -12.5 mm |
| Cable gland tightening torque - Han® S 120 | 1.5 Nm |
| Contact termination (hood) - cable stripping length - suitable tools/crimp-dies | Crimp (conductor cross-section 10 ... 25 mm ²) 22 mm refer to the Han® S Assembly Instructions |
| Contact termination (housing) - recommended tightening torque •Han® S 120 | Bolt/busbar 4 Nm* |
| Fixing screws (housing) - recommended tightening torque | M3, 6 mm long, flat head (acc. to ISO 7380-2) 0.5 - 0.8 Nm |
| Colour (hood/housing) - black - red - blue | RAL 9005 (jet black) RAL 3001 (signal red) 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.

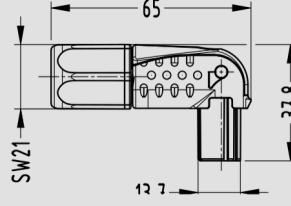
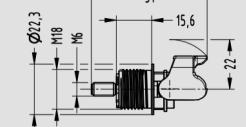
HARTING Han® S 120

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 |  | |
| SMB/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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