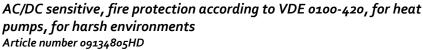
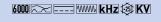


## DATA SHEET

# residual current circuit-breaker DFS 4 040-4/0,03-HP HD







#### **Function**

Residual current circuit-breakers (RCCBs) are components for implementing protective measure "Automatic disconnection of the power supply" as per VDE 0100 part 410 or corresponding international installation regulations. Devices in the DFS 4 series are compact four-pole residual current circuit-breakers for single-phase or three-phase networks. In the standard version, they only occupy four division units. The AC/DC-sensitive switches detect smooth DC residual currents and all other residual currents in accordance with DIN VDE 0664-400. Switches of the HP (Heat Pump) series have been specially developed for the protection of heat pumps. The protection level of the AC/DC sensitive residual current circuit breaker meets all requirements of heat pump manufacturers. In addition, the HP-optimised short-time delay ensures increased system availability. With an airtight, encapsulated tripping mechanism from a special alloy and the stainless steel latch, residual current circuit-breakers in HD design are protected, in particular from corrosion, corrosive gases, moisture and extreme temperature fluctuations. Devices in the standard design are intended for monitoring circuits with a rated voltage of 230 V, 400 V and a rated frequency of 50 Hz. With an airtight, encapsulated tripping mechanism from a special alloy and the stainless steel latch, residual current circuit-breakers in HD design are protected, in particular from corrosion, corrosive gases, moisture and extreme temperature fluctuations.

#### **Features**

AC/DC sensitive for residual currents with frequencies and mixed frequencies from o Hz to 20 kHz, fire protection according to VDE 0100-420, complete functionality with mains voltages from at least 50 V AC on any two active conductors, high short-circuit resistance, ouble-sided double-decker terminals for large conductor cross-section and busbar connection, switching position indicator, multifunction control toggle with three positions: "on", "off", "triggered", any neutral conductor position

#### Mounting

quick fastening to mounting rail, any installation position, supply preferably from above

### **Applications**

RCCBs of the variant HP are suitable for private, commercial and industrial installations with TN-S-, TT- and TN-C-S systems which use heat pumps.

#### Notes

suitable for use in 50 Hz AC networks, not intended for use on the output side of controlled electrical equipment such as frequency converters

#### Accessories

automatic reclosing devices DFA, terminal caps KA, information stickers HAS, auxiliary switches DHi, restart locks DFS WES, software DBS

#### Technical Data

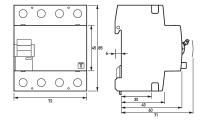
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Technical Data	DFS 4 040-4/0,03-HP HD
Series	DFS 4 HP HD
Number of poles	4
Residual current type	B+
Rated current (AC)	40 A
Rated residual current I∆n	o.o3 A
Short-time delayed	true
Selective	false

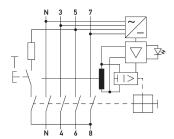
min. Operating voltage range of test circuit  max. Operating voltage (Type A)AC operation)  Minimum rated operating  voltage (Type B) ACC operation)  Non-trip time  13 ms  Tripping frequency  0 Ht 30 kHz  Maximum disconnection times  internal consumption  1 Lilar. 33 oom 55, 5 Lilar. 34 om  internal consumption  1 max. 3 W  Specification  Ioad disconnect contact  min. Contact opening  4 mm  Rated voltage (AC)  730 V, 400 V  Rated diston-circuit current  6 kA  Surge current strength  13 kA  max. Total rated switching  capacity  Rated insulation voltage  4 kV  Rated insulation voltage  4 kV  Rated inguise withstand voltage  Rated i	Technical Data	DFS 4 040-4/0,03-HP HD
test circuit  Minimum rated operating voltage range of test circuit  Minimum rated operating voltage (Type A)AC operation)  Minimum rated operating voltage (Type A)AC operation)  Non-trip time  13 ms  Tropping frequency  0 Hz 20 kHz  Maximum disconnection times  1 Libris 300 ms; 5 Libris 40 ms  Internal consumption  Rated voltage (Type A)AC  Specification  Induction of the circuit consumption  Rated voltage (A)  Rated short-circuit current  6 kA  Surge current strength  3 kA  max. Total rated switching  capacity  Rated injudies withstand voltage  4 kV  Rated injudies withstand voltage  4 kV  Rated injudies withstand voltage  4 kV  Rated frequency  50 Hz  Current heat loss per current  1 3 W  Short-circuit backup-fuse OCPD  40 A  Short-circuit backup-fuse SCPD  100 A  Back-up fuse Vyes PD  9 G  Sorew-type terminal top and bottom (load circuit)  Neutral conductor position  Protection against direct contact  DGUV V3, VDE o660-5x4, finger and back-of-hand proof  Connecting capacity flexible  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5 mm² 16 mm²  Cross section solid  1 wire: 1,5 mm² 50 mm²; 2 wire: 1,5		
test circuit  Minimum rated operating voltage (Type A/AC operation)  Minimum rated operating voltage (Type A/AC operation)  Non-trip time  13 ms  Tripping frequency  Next 20 kHz  Maximum disconnection times  Internal consumption  Internal consumption  Inderdirect  Specification  Inderdirect  Specification  Ioad directit  Specification  Ioad disconnect contact  Ioad directit  Specification  Ioad disconnect contact  Ioad circuit  Specification  Ioad disconnect contact  Ioad disconnection contact  Ioad disconnection contact contact  Ioad disconnection contact  Ioad disconnec	test circuit	
voltage (Type A)AC operation) Minimum rated operating voltage (Type B operation) Non-trip pime 13 ms Tripping frequency 0 Hz 20 kHz Maximum disconnection times 1 - I.An: \$ 300 ms; 5 - I.An: \$ 40 ms Internal consumption Max. 1.3 W  Internal consumption Inad direcut Specification Indeed direcut Specification Incontact opening 4 mm Rated voltage (AC) 230 V, 400 V Rated current (AC) 40 A Rated surrent (AC) 50 G Rated Surrent (AC) 80 G Rated Short-circuit current 80 G Rated Short-circuit current 90 G Rated impulse withstand voltage 4 oo V Rated impulse withstand voltage 4 kV Rated frequency 50 Hz Current heat loss per current 13 W Path Post Control of CPD 100 A Back-up-fuse OCPD 100 A Back-up-fuse OCPD 100 A Back-up-fuse Vppe 9G Serew-type terminal top and bottom (load circuit) Neutral conductor position Protection against direct contact DSUV V3, VDE 0660-514, finger and back-of-hand proof Connection C1 Maximum 12 (conductors of same type and cross-section) number of conductors per terminal Cross section AWG, flexible 151 Cross section AWG, flexible 151 Tightening torque 12 .S Mm3 Nm 6Cenardia Clark Cores section AWG, flexible 151 Tightening torque 18 .S Mm3 Nm 6Cenardia call endurance Inn., 4000 cycles Electrical endurance Inn.,		440 V
Minimum rated operation voltage (Type B operation)  Non-trip time  13 ms  Tripping frequency  0 Hz 20 kHz  Maximum disconnection times  Internal consumption  max. 1.3 W  Ioad circuit  Specification  Ioad disconnect contact  min. Contact opening  4 mm  Rated voltage (AC)  23 0 V, 400 V  Rated short-circuit current  6 kA  Surge current (AC)  40 A  Rated short-circuit current  5 po A  Sated insulation voltage  4 kV  Rated insulation voltage  4 kV  Rated frequency  50 Hz  Current hact loss per current  1.3 W  Thermal Backup-fuse SCPD  30 A  Short-circuit backup-fuse SCPD  30 A  Short-circuit backup-fuse SCPD  30 CA  Sorrew-type terminal top and bottom (load circuit)  Neutral conductor position  1 eft  Protection against direct contact  Connection Cs Maximum  2 (conductors per terminal of Connection Cs Maximum  number of conductors per terminal  Cross section solid  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section stranded  1 -wire: 1.5 mm², 50 mm²; 2-wire: 1.5 mm²,16 mm²  Cross section strande		o V AC
voltage (Type B operation)  Non-trip time  13 ms  Tripping frequency  Naximum disconnection times  1 · I\ldn: \$ 300 ms; 5 · I\ldn: \$ 40 ms  Internal consumption  max. 1.3 W  Internal consumption  Ioad dircuit  Specification  Ioad dircuit  Specification  Ioad disconnect contact  min. Contact opening  Rated voltage (AC)  230 V, 400 V  Rated current (AC)  40 A  Rated short-circuit current  6 Is A  Surge current strength  3 kA  max. Total rated switching capacity  Rated insulation voltage  4 Is V  Rated insulation voltage  Rated insulation voltage  4 Is V  Rated insulation voltage  Rated insulation voltage  30 Hz  Current beat loss per current  1 3 W  Path  Thermal Backup fuse OCPD  40 A  Short-circuit backup-fuse SCPD  50 FOR Current beat loss per current  path  Protection against direct contact  DGUV 3, VDE 0660-54, finger and back-of-hand proof  Connection C1 Maximum  number of conductors per  terminal  Cross section solid  1 · wire: 1.5 mm² 50 mm²; 2 · wire: 1.5 mm² 16 mm²  Cross section AWG, stranded  1 5 1  Cross section AWG, flexible  Tightening torque  2 · SNm 3 Nm  General data  Operating position  potional  max. Operating attriude above  MSI.  Mechanical endurance  part with mix of max. Operating attriude above  MSI.  Mechanical endurance  An Harch environmental conditions		50 V AC
Tripping frequency Maximum disconnection times Internal consumption  React 3, 300 ms, 5, 1-\(\text{An} \times 4, 0 ms\) Internal consumption  Specification Ioad disconnect contact Internal consumption  Specification Ioad disconnect contact Internal consumption  A mm  Rated voltage (AC) Rated current (AC) Rated current (AC) Rated short-circuit current Ac A Rated short-circuit current Ac A Rated short-circuit current Ac A Rated short-discont current Ac A Rated short-discont current Ac A Rated short-circuit current Ac A Rated insulation voltage Ac A Rated		<b>5</b>
Maximum disconnection times Internal consumption Internal consumption Indeed circuit  Specification Iload disconnect contact Inin. Contact opening Iload disconnect contact Iload disconnect contact Iload Iload disconnect contact Iload	Non-trip time	
Internal consumption	Tripping frequency	0 Hz 20 kHz
Ioad circuit   Specification   Ioad disconnect contact	Maximum disconnection times	1 · IΔn: ≤ 300 ms; 5 · IΔn: ≤ 40 ms
Specification   Iload disconnect contact   min. Contact opening   4 mm	Internal consumption	
min. Contact opening Rated Voltage (AC) Rated voltage (AC) Rated current (AC) Rated short-circuit current 6 kA Surge current strength 3 kA max. Total rated switching capacity Rated insulation voltage Rated dinsulation voltage Rated insulation voltage Rated voltage voltag		load circuit
Rated voltage (AC) Rated current (AC) Rated short-circuit current 6 kA Surge current strength 3 kA max. Total rated switching capacity Rated insulation voltage Rated frequency So Hz Current heat loss per current 1.3 W  Thermal Backup-fuse OCPD 40 A Short-circuit backup-fuse SCPD 9 G Sorew-type terminal top and bottom (load circuit) Reutral conductor position Protection against direct contact DGUV V3, VDE 0660-514, finger and back-of-hand proof Connection C1 Maximum number of conductors per terminal Cross section Solid 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section stranded 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section stranded 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section AWG, solid 15 1 Cross section AWG, solid 15 1 Cross section AWG, flexible 15 1 Cross section AWG, flexible 15 1 Cross section AWG, slexible 15 1 Cross section AWG, flexible 16 1 Cross section AWG, flexible 17 1 Cross section AWG, flexible 18 1 Cross section AWG, flexible 19 1 Cross section AWG, flexible 19 1 Cross section AWG, flexible 10 1 Cross section AWG, flexible 10 1 Cross section AWG, flexible 11 1 Cross section AWG, flexible 12 1 Cross section AWG, flexible 13 1 Cross section AWG, flexible 14 1 Cross section AWG, flexible 15 1 Cross section AWG, flexible 16 1 Cross section AWG, flexible 17 1 Cross se	<u>'</u>	load disconnect contact
Rated current (AC) Rated short-circuit current 6 kA Surge current strength max. Total rated switching capacity Rated insulation voltage Rated insulation voltage Rated frequency Current heat loss per current path Thermal Backup-fuse OCPD 40 A Short-circuit backup-fuse SCPD 9 G Back-up fuse type 9 G Screw-type terminal top and bottom (load circuit) Neutral conductor position Protection against direct contact Connection C al Maximum number of conductors per terminal Cross section sNdG, sloild 1-wire: 1,5 mm² 50 mm², 2-wire: 1,5 mm² 16 mm² Cross section AWG, solid Cross section AWG, sloild 15 1 Cross section AWG, flexible Tightening torque Rated sport of the solid section of the solid sol		· · · · · · · · · · · · · · · · · · ·
Rated short-circuit current  Surge current strength  3 kA  max. Total rated switching capacity  Rated insulation voltage  Rated insulation voltage  Rated insulation voltage  Rated frequency  50 Hz  Current heat loss per current path  Thermal Backup-fuse OCPD  40 A  Short-circuit backup-fuse SCPD  Short-circuit backup-fuse SCPD  Back-up fuse type  gG  screw-type terminal top and bottom (load circuit)  Neutral conductor position  left  Protection against direct contact  Connection C1 Maximum number of conductors per terminal  Cross section solid  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section stranded  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section NWG, solid  15 1  Cross section AWG, Stranded  15 1  Cross section AWG, flexible  15 1  Cross section AWG, flexible  15 1  Cross section AWG, flexible  15 1  General data  Operating position  optional  max. Operating altitude above  MSL  Mechanical endurance  in in, 2000 cycles  Electrical endurance  in in, 2000 cycles  Instrument a conditions		
Surge current strength  max. Total rated switching capacity  Rated insulation voltage  Rated ins		<u> </u>
max. Total rated switching capacity  Rated insulation voltage Rated ins		
Rated insulation voltage Rated insulation voltage Rated inspulse withstand voltage Rated frequency So Hz Current heat loss per current path Premral Backup-fuse OCPD 40 A Short-circuit backup-fuse SCPD 100 A Back-up fuse type Screw-type terminal top and bottom (load circuit)  Neutral conductor position Protection against direct contact DGUV V3, VDE 0660-514, finger and back-of-hand proof Connection C1 Maximum 2 (conductors of same type and cross-section)  number of conductors per terminal Cross section solid 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section standed 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section AWG, solid 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section AWG, solid 15 1 Cross section AWG, flexible 15 1 Cross section AWG, flexible with ferrule Tightening torque 2.5 Nm 3 Nm General data Operating position optional max. Operating altitude above MSL Mechanical endurance Inin. 4000 cycles Electrical endurance Inin. 2000 cycles Surrounding atmosphere		
Rated impulse withstand voltage Rated frequency Current heat loss per current path Thermal Backup-fuse OCPD 40 A Short-circuit backup-fuse SCPD Back-up fuse type GG Screw-type terminal top and bottom (load circuit) Neutral conductor position Neutral conductor position Protection against direct contact DGUV V3, VDE 0660-514, finger and back-of-hand proof Connection C1 Maximum 12 (conductors of same type and cross-section) Number of conductors per terminal Cross section solid 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section stranded 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section AWG, solid 15 1 Cross section AWG, stranded 15 1 Cross section AWG, flexible 15 1 Cross section AWG, flexible with ferrule Tightening torque 2.5 Nm 3 Nm General data Operating position optional max. Operating altitude above MSL Mechanical endurance min. 4000 cycles Electrical endurance min. 4000 cycles Electrical endurance harsh environmental conditions	3	
Rated frequency  Current heat loss per current path  1.3 W  1.3 W  Short-circuit backup-fuse OCPD  Short-circuit backup-fuse SCPD  100 A  Back-up fuse type  GG  Screw-type terminal top and bottom (load circuit)  Neutral conductor position  Protection against direct contact  Connection C1 Maximum  number of conductors per terminal  Cross section solid  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Connecting capacity flexible  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section stranded  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section AWG, solid  151  Cross section AWG, flexible  151  Cross section AWG, flexible  151  Cross section AWG, flexible  151  Cross section AWG, flexible with ferrule  Tightening torque  Ceneral data  Operating position  Optional  max. Operating altitude above  MSL  Mechanical endurance  min. 4000 cycles  Electrical endurance  Mars environmental conditions		
Current heat loss per current path Thermal Backup-fuse OCPD 40 A Short-circuit backup-fuse SCPD 100 A Back-up fuse type gG screw-type terminal top and bottom (load circuit) Neutral conductor position left Protection against direct contact DGUV V3, VDE 0660-514, finger and back-of-hand proof Connection C1 Maximum number of conductors per terminal Cross section solid 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section stranded 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section AWG, solid 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section AWG, stranded 15 1 Cross section AWG, flexible 15 1 Cross section AWG, flexible with ferrule Tightening torque 2.5 Nm 3 Nm General data Operating position max. Operating altitude above MSL Mechanical endurance min. 4000 cycles Electrical endurance min. 2000 cycles Surrounding atmosphere		4 kV
Path Thermal Backup-fuse OCPD 40 A Short-circuit backup-fuse SCPD 100 A Back-up fuse type gG screw-type terminal top and bottom (load circuit) Neutral conductor position left Protection against direct contact DGUV V3, VDE 0660-514, finger and back-of-hand proof Connection C3 Maximum number of conductors per terminal Cross section solid 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Consecting capacity flexible 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section AWG, solid 1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm² Cross section AWG, solid 15 1 Cross section AWG, stranded 15 1 Cross section AWG, flexible 15 1 Cross section AWG, flexible 15 1 Cross section AWG, flexible with ferrule Tightening torque 2.5 Nm 3 Nm General data Operating position optional max. Operating altitude above MSL Mechanical endurance min. 4000 cycles Electrical endurance min. 2000 cycles Surrounding atmosphere		
Short-circuit backup-fuse SCPD  Back-up fuse type  gG  screw-type terminal top and bottom (load circuit)  Neutral conductor position  Protection against direct contact  DGUV V3, VDE o66o-514, finger and back-of-hand proof  Connection C1 Maximum  number of conductors per terminal  Cross section solid  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Connecting capacity flexible  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section stranded  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section AWG, solid  15 1  Cross section AWG, stranded  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  optional  max. Operating altitude above  MSL  Mechanical endurance  min. 4000 cycles  Electrical endurance  barsh environmental conditions		1.3 W
Back-up fuse type   gG  screw-type terminal top and bottom (load circuit)  Neutral conductor position  Protection against direct contact  DGUV V3, VDE o66o-514, finger and back-of-hand proof  Connection C1 Maximum  number of conductors per terminal  Cross section solid  1-wire: 1.5 mm² 50 mm², 2-wire: 1.5 mm² 16 mm²  Connecting capacity flexible  1-wire: 1.5 mm² 50 mm², 2-wire: 1.5 mm² 16 mm²  Cross section stranded  1-wire: 1.5 mm² 50 mm², 2-wire: 1.5 mm² 16 mm²  Cross section AWG, solid  15 1  Cross section AWG, stranded  15 1  Cross section AWG, flexible  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  optional  max. Operating altitude above  MSL  Mechanical endurance  min. 4000 cycles  Electrical endurance  min. 2000 cycles  Surrounding atmosphere	Thermal Backup-fuse OCPD	40 A
Screw-type terminal top and bottom (load circuit)   Neutral conductor position   left	Short-circuit backup-fuse SCPD	100 Å
Neutral conductor position  Protection against direct contact  DGUV V3, VDE o66o-514, finger and back-of-hand proof  Connection C1 Maximum number of conductors per terminal  Cross section solid  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Connecting capacity flexible  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section stranded  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section AWG, solid  15 1  Cross section AWG, stranded  15 1  Cross section AWG, flexible  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  max. Operating altitude above MSL  Mechanical endurance  min. 4000 cycles  Electrical endurance  Surrounding atmosphere	Back-up fuse type	<u>-</u>
Protection against direct contact  Connection C1 Maximum number of conductors per terminal  Cross section solid  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Connecting capacity flexible  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section stranded  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section AWG, solid  15 1  Cross section AWG, stranded  Cross section AWG, flexible  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  optional  max. Operating altitude above  MSL  Mechanical endurance  min. 4000 cycles  Electrical endurance  harsh environmental conditions		
Connection C1 Maximum number of conductors per terminal  Cross section solid  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Connecting capacity flexible  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section stranded  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section AWG, solid  15 1  Cross section AWG, flexible  Cross section AWG, flexible  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  optional  max. Operating altitude above  MSL  Mechanical endurance  min. 4000 cycles  Electrical endurance  harsh environmental conditions		· · · · · · · · · · · · · · · · · · ·
number of conductors per terminal  Cross section solid  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Connecting capacity flexible  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section stranded  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section AWG, solid  15 1  Cross section AWG, stranded  15 1  Cross section AWG, flexible  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  optional  max. Operating altitude above MSL  Mechanical endurance  min. 4000 cycles  Electrical endurance  min. 2000 cycles  Surrounding atmosphere		
Connecting capacity flexible  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section stranded  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section AWG, solid  15 1  Cross section AWG, flexible  15 1  Cross section AWG, flexible  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  max. Operating altitude above  MSL  Mechanical endurance  Electrical endurance  min. 4000 cycles  Surrounding atmosphere  harsh environmental conditions	number of conductors per	2 (conductors of same type and cross-section)
Cross section stranded  1-wire: 1.5 mm² 50 mm²; 2-wire: 1.5 mm² 16 mm²  Cross section AWG, solid  15 1  Cross section AWG, stranded  15 1  Cross section AWG, flexible  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  max. Operating altitude above MSL  Mechanical endurance  Electrical endurance  Surrounding atmosphere  harsh environmental conditions	Cross section solid	1-wire: 1.5 mm <sup>2</sup> 50 mm <sup>2</sup> ; 2-wire: 1.5 mm <sup>2</sup> 16 mm <sup>2</sup>
Cross section AWG, solid  Cross section AWG, stranded  15 1  Cross section AWG, flexible  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  max. Operating altitude above MSL  Mechanical endurance  Electrical endurance  Surrounding atmosphere  harsh environmental conditions	Connecting capacity flexible	1-wire: 1.5 mm <sup>2</sup> 50 mm <sup>2</sup> ; 2-wire: 1.5 mm <sup>2</sup> 16 mm <sup>2</sup>
Cross section AWG, stranded  Cross section AWG, flexible  15 1  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  max. Operating altitude above MSL  Mechanical endurance  Electrical endurance  Surrounding atmosphere  15 1  16 1  17 1  18 1  19 1  19 1  10 1  10 1  10 1  10 1  11 1  12 1  13 1  14 1  15 1  15 1  16 1  17 1  18 1  19 1  19 1  10	Cross section stranded	1-wire: 1.5 mm <sup>2</sup> 50 mm <sup>2</sup> ; 2-wire: 1.5 mm <sup>2</sup> 16 mm <sup>2</sup>
Cross section AWG, flexible  Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  max. Operating altitude above MSL  Mechanical endurance  Electrical endurance  Surrounding atmosphere  15 1  2.5 Nm 3 Nm  General data  Optional  2000 m  MSL  Mechanical endurance  min. 4000 cycles  min. 2000 cycles  harsh environmental conditions	Cross section AWG, solid	15 1
Cross section AWG, flexible with ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  max. Operating altitude above MSL  Mechanical endurance  Electrical endurance  Surrounding atmosphere  15 1  2.5 Nm 3 Nm  Optional  2000 m  MSL  Min. 2000 cycles  Min. 2000 cycles  harsh environmental conditions	-	15 1
ferrule  Tightening torque  2.5 Nm 3 Nm  General data  Operating position  max. Operating altitude above MSL  Mechanical endurance  Electrical endurance  Surrounding atmosphere  2.5 Nm 3 Nm  optional  2000 m  min. 4000 cycles  min. 2000 cycles  harsh environmental conditions	Cross section AWG, flexible	15 1
General data Operating position optional max. Operating altitude above MSL  Mechanical endurance min. 4000 cycles Electrical endurance min. 2000 cycles Surrounding atmosphere harsh environmental conditions		15 1
Operating position optional max. Operating altitude above MSL  Mechanical endurance min. 4000 cycles  Electrical endurance min. 2000 cycles  Surrounding atmosphere harsh environmental conditions	Tightening torque	2.5 Nm 3 Nm
max. Operating altitude above MSL  Mechanical endurance  Electrical endurance  Surrounding atmosphere  min. 2000 cycles  min. 2000 cycles  harsh environmental conditions		General data
MSL  Mechanical endurance min. 4000 cycles  Electrical endurance min. 2000 cycles  Surrounding atmosphere harsh environmental conditions		optional
Electrical endurance min. 2000 cycles Surrounding atmosphere harsh environmental conditions		2000 m
Surrounding atmosphere harsh environmental conditions	Mechanical endurance	min. 4000 cycles
3 1	Electrical endurance	min. 2000 cycles
Storage temperature -35 °C 75 °C		harsh environmental conditions
	Storage temperature	-35 °C 75 °C

Technical Data	DFS 4 040-4/0,03-HP HD
Ambient temperature	-25 °C 60 °C
Climate resistance	according to IEC 60068-2-30: humid heat / cyclic (25 °C / 55 °C; 93 % / 97 % RH)
Housing type	distribution board housing
Installation type	Mounting rail (35 mm)
Housing material	thermoplastic
Protection class	IP20 (installed: IP40)
sealable	true
Width	72 mm
Height	85 mm
Depth	75 mm
Installation depth	69 mm
Module widths	4
Weight	o.453 kg
Design requirements/Standards	VDE 0664-10, VDE 0664-400, ÖVE/ÖNORM E 8601
Degree of pollution	2

## Dimensions



## Wiring example



Dimensional drawing Group view

Wiring diagram