



## NSSHÖU

DB 1600500EN

valid from: 2010-10-11

**APPLICATION** (VDE 0298-3)

- These cables are made for normatively very high stresses, for example:
  - o Underground mining
  - o Open-cast mining
  - o Construction sites
  - o Industry
  - o Dry, damp and wet rooms
  - o Outdoors
  - o Fix installation also
  - o On plaster
  - o Tools
  - o Big machinery
  - o BuT
  - o Explosive areas
  - o Agricultural operation
- Suitability for protection class II
- Commercial organisations
- Maximum tensile strength per phase conductor, neutral conductor and PE conductor not split up per mm<sup>2</sup> of nominal conductor cross section during laying/installation:
  - o Stationary use: 50 N (during laying)
  - o Mobile use: 15 N (during laying and operation)
- No direct burial; Lead-through through fire-retarding sealing such as sand cups or temporarily limited covering of rubber cables NSSHÖU by means of soil, sand or similar material, e. g. at construction sites, are not considered as burial normatively
- At the connection of mobile equipment, NSSHÖU must be:
  - o Discharged from tensile and thrust force at the insertion points and
  - o Safeguarded against torsion and bending

**PERMISSIBLE VOLTAGES** (VDE 0298-3)

- Rated voltage  $U_0/U$ :
  - o Conductor/phase-to-ground (PE conductor)  $U_0$  600 V AC; 900 V DC
  - o Conductor/phase-to-conductor/phase U 1000 V AC; 1500 V DC
- Operating voltage  $U_b$  max:
  - o Conductor/phase-to-ground (PE conductor) 700 V AC; 900 V DC
  - o Conductor/phase-to-conductor/phase 1200 V AC; 1800 V DC

**CERTIFICATION** (VDE 0250-812)

- NSSHÖU-J or NSSHÖU-O according to the cable type standard VDE 0250-812

**MARKING** (VDE 0250-812 & VDE 0250-1)

- Cable type "NSSHÖU-J" or "NSSHÖU-O"
- ◀VDE▶ mark
- Other marking parts ...

**DESIGN** (VDE 0250-812)

- Conductor Tinned copper strands
- Conductor class Conductor class 5/fine-wired according to IEC 60228/VDE 0295
- Insulation Extruded rubber compound 3GI3 according to VDE 0207-20  
Insulation wall thickness: VDE 0250-812, table 1, column 3
- Insulation identification code Up to 5 conductors: HD 308/VDE 0293-308  
From 6 conductors: Black with white numbers
- Arrangement of conductors Twisted/stranded  
NSSHÖU-J: with PE conductor  
NSSHÖU-O: without PE conductor  
Movable under the inner sheath
- Inner sheath Rubber compound GM1b or 5GM5 according to VDE 0207-21  
Inner sheath wall thickness: VDE 0250-812, table 1, columns 5 - 12 & VDE 0250-812, table 2
- Outer jacket Rubber compound 5GM5 according to VDE 0207-21  
Outer jacket wall thickness: VDE 0250-812, table 1, columns 13 - 21 & VDE 0250-812, table 2
- Outer cable diameter VDE 0250-812, table 3, columns 2 - 12

**ELECTRICAL PROPERTIES AT +20 °C** (VDE 0250-812)

- Rated voltage  $U_0/U$  0.6/1 kV AC
- Test voltage 3 kV AC

**MECHANICAL, THERMAL, CHEMICAL PROPERTIES** (VDE 0250-812, VDE 0298-3, VDE 0207-20, VDE 0207-21)

- Temperatures At the conductor Operating temperature +90 °C  
At the surface Installed fixedly -40 °C to +80 °C  
During laying/flexible use -25 °C to +80 °C
- Minimum bending radii At free movement  $D^* \leq 8$  mm 3D\*  
(VDE 0298-3, table 3, contains 8 mm >  $D^* \geq 12$  mm 4D\*  
further application-dependent radii) 12 mm >  $D^* \geq 20$  mm 5D\*  
 $D^* > 20$  mm 5D\*
- Flame retardance DIN VDE 0472-804, test kind B
- Oil resistance DIN VDE 0472-803, test kind A
- Cable abrasion resistance DIN VDE 0472-605, test kind A 300 mm<sup>3</sup> max.
- Tear propagation resistance DIN VDE 0472-613 30 N/mm min.
- EC low voltage directive (LVD) This cable confirms to ECD 73/23/EEC (European low voltage directive - LVD).
- EC RoHS\*\* directive This cable complies with the European RoHS\*\* directive (2002/95/EC).

D\* = Outer cable diameter

RoHS\*\* = Restriction of (the use of certain) hazardous substances