

**OIL & GAS - On-shore (Eni, Saipem & Agip standards)**

**POWER SUPPLY CABLES**



Halogen free cables

- ◆ HEPR/PVC
- ◆ PVC/PVC
- ◆ XLPE/PVC
- ◆ EPDM/EPDM

**Manufactured with the following components/features:**

- Rated voltage:
  - 1,8/3 kV
  - 0,6/1 kV
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Bare or tinned copper concentric conductor:
  - braid
  - wires
- Colour of insulation according to International Standards or on customer specification
- Shields:
  - aluminium/polyester tape with tinned copper drain wire
  - bare or tinned copper braid
  - copper wires
  - copper tapes
- Armours:
  - steel braid (aluminium for single-core cables)
  - steel wires (aluminium for single-core cables)
  - steel tapes (aluminium for single-core cables)
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

- ◆ HEPR/LSZH
- ◆ EPR/LSZH
- ◆ XLPE/LSZH

**Manufactured with the following components/features:**

- Rated voltage:
  - 1,8/3 kV
  - 0,6/1 kV
- Bare or tinned copper conductor:
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- Armours:
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  - steel wires (aluminium for single-core cables)
  - steel tapes (aluminium for single-core cables)
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

## Fire resistant/circuit integrity cables

- ◆ MGT/HEPR/LSZH
- ◆ MGT/EPR/LSZH
- ◆ MGT/XLPE/LSZH
- ◆ MGT/XLPE/PVC

### Manufactured with the following components/features:

- Rated voltage:
  - 1,8/3 kV
  - 0,6/1 kV
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Fire resistance according to:
  - IEC 60331-21
  - CEI EN 50200 or CEI EN 50362
- Bare or tinned copper concentric conductor:
  - braid
  - wires
- Colour of insulation according to International Standards or on customer specification
- Shields:
  - aluminium/polyester tape with tinned copper drain wire
  - bare or tinned copper braid
  - copper wires
  - copper tapes
- Armours:
  - steel braid (aluminium for single-core cables)
  - steel wires (aluminium for single-core cables)
  - steel tapes (aluminium for single-core cables)
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

## Cables for low-temperature applications

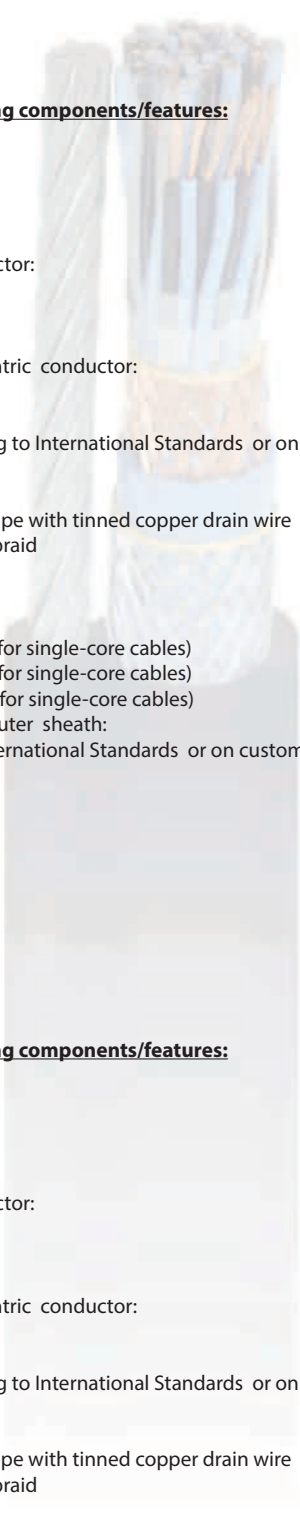
- ◆ EPDM/EPDM
- ◆ HEPR/PVC
- ◆ PVC/PVC
- ◆ EPR/LSZH
- ◆ XLPE/PVC
- ◆ XLPE/LSZH

### Manufactured with the following components/features:

- Rated voltage:
  - 1,8/3 kV
  - 0,6/1 kV
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Fire resistance according to:
  - IEC 60331-21
  - CEI EN 50200 or CEI EN 50362
- Bare or tinned copper concentric conductor:
  - braid
  - wires
- Colour of insulation according to International Standards or on customer specification
- Shields:
  - aluminium/polyester tape with tinned copper drain wire
  - bare or tinned copper braid
  - copper wires
  - copper tapes
- Armours:
  - steel braid (aluminium for single-core cables)
  - steel wires (aluminium for single-core cables)

- steel tapes (aluminium for single-core cables)
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - PVC and LSZH sheath available in versions ARCTIC -40 °C or ARCTIC -60 °C
  - chemical resistant
  - UV resistant
  - thermite resistant

## CONTROL CABLES



- ◆ **HEPR/PVC**
- ◆ **PVC/PVC**
- ◆ **XLPE/PVC**
- ◆ **EPDM/EPDM**

### Manufactured with the following components/features:

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Bare or tinned copper concentric conductor:
  - braid
  - wires
- Colour of insulation according to International Standards or on customer specification
- Shields:
  - aluminium/polyester tape with tinned copper drain wire
  - bare or tinned copper braid
  - copper wires
  - copper tapes
- Armours:
  - steel braid (aluminium for single-core cables)
  - steel wires (aluminium for single-core cables)
  - steel tapes (aluminium for single-core cables)
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

## Halogen free cables

- ◆ **HEPR/LSZH**
- ◆ **EPR/LSZH**
- ◆ **XLPE/LSZH**

### Manufactured with the following components/features:

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Bare or tinned copper concentric conductor:
  - braid
  - wires
- Colour of insulation according to International Standards or on customer specification
- Shields:
  - aluminium/polyester tape with tinned copper drain wire
  - bare or tinned copper braid

- copper wires
- copper tapes
- Armours:
  - steel braid (aluminium for single-core cables)
  - steel wires (aluminium for single-core cables)
  - steel tapes (aluminium for single-core cables)
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

### Fire resistant/circuit integrity cables

- ◆ MGT/HEPR/LSZH
- ◆ MGT/EPR/LSZH
- ◆ MGT/XLPE/LSZH
- ◆ MGT/XLPE/PVC

#### Manufactured with the following components/features:

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Fire resistance according to:
  - IEC 60331-21
  - CEI EN 50200 or CEI EN 50362
- Bare or tinned copper concentric conductor:
  - braid
  - wires
- Colour of insulation according to International Standards or on customer specification
- Shields:
  - aluminium/polyester tape with tinned copper drain wire
  - bare or tinned copper braid
  - copper wires
  - copper tapes
- Armours:
  - steel braid (aluminium for single-core cables)
  - steel wires (aluminium for single-core cables)
  - steel tapes (aluminium for single-core cables)
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

### Cables for low-temperature applications

- ◆ EPDM/EPDM
- ◆ HEPR/PVC
- ◆ PVC/PVC
- ◆ EPR/LSZH
- ◆ XLPE/PVC
- ◆ XLPE/LSZH

#### Manufactured with the following components/features:

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded



## INSTRUMENTATION CABLES

- solid round
- Fire resistance according to:
  - IEC 60331-21
  - CEI EN 50200 or CEI EN 50362
- Bare or tinned copper concentric conductor:
  - braid
  - wires
- Colour of insulation according to International Standards or on customer specification
- Shields:
  - aluminium/polyester tape with tinned copper drain wire
  - bare or tinned copper braid
  - copper wires
  - copper tapes
- Armours:
  - steel braid (aluminium for single-core cables)
  - steel wires (aluminium for single-core cables)
  - steel tapes (aluminium for single-core cables)
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - PVC and LSZH sheath available in versions ARCTIC -40 °C or ARCTIC -60 °C
  - chemical resistant
  - UV resistant
  - thermite resistant

- ◆ HEPR/PVC
- ◆ PVC/PVC
- ◆ PE/PVC
- ◆ XLPE/PVC

### **Manufactured with the following components/features:**

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
  - 150/250 V
  - 100/100 V
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Colour of insulation according to International Standards or on customer specification
- Cores twisted in:
  - pairs
  - triads
  - quads
- Aluminium/polyester tape shield with tinned copper drain wire:
  - on each pair/triad/quad
  - overall
  - on each pair/triad/quad and overall
- Bare or tinned copper braid shield:
  - on each pair/triad/quad
  - overall
  - on each pair/triad/quad and overall
- Armours:
  - bare or tinned copper braid
  - steel braid
  - steel wires
  - steel tapes
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

## Halogen free cables

- ◆ HEP/LSZH
- ◆ EPR/LSZH
- ◆ PE/LSZH
- ◆ XLPE/LSZH

### Manufactured with the following components/features:

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
  - 150/250 V
  - 100/100 V
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Colour of insulation according to International Standards or on customer specification
- Cores twisted in:
  - pairs
  - triads
  - quads
- Aluminium/polyester tape shield with tinned copper drain wire:
  - on each pair/triad/quad
  - overall
  - on each pair/triad/quad and overall
- Bare or tinned copper braid shield:
  - on each pair/triad/quad
  - overall
  - on each pair/triad/quad and overall
- Armours:
  - bare or tinned copper braid
  - steel braid
  - steel wires
  - steel tapes
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

## Fire resistant/circuit integrity cables

- ◆ MGT/HEPR/LSZH
- ◆ MGT/EPR/LSZH
- ◆ MGT/PE/LSZH
- ◆ MGT/XLPE/LSZH
- ◆ MGT/XLPE/PVC

### Manufactured with the following components/features:

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
  - 150/250 V
  - 100/100 V
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Fire resistance according to:
  - IEC 60331-21
  - CEI EN 50200 or CEI EN 50362
- Colour of insulation according to International Standards or on customer specification
- Cores twisted in:
  - pairs

- triads
- quads
- Aluminium/polyester tape shield with tinned copper drain wire:
  - on each pair/triad/quad
  - overall
  - on each pair/triad/quad and overall
- Bare or tinned copper braid shield:
  - on each pair/triad/quad
  - overall
  - on each pair/triad/quad and overall
- Armours:
  - bare or tinned copper braid
  - steel braid
  - steel wires
  - steel tapes
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

### Cables for low-temperature applications

- ◆ HEPR/PVC
- ◆ PVC/PVC
- ◆ EPR/LSZH
- ◆ XLPE/PVC
- ◆ XLPE/LSZH

#### Manufactured with the following components/features:

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
  - 150/250 V
  - 100/100 V
- Bare or tinned copper conductor:
  - flexible stranded
  - round stranded
  - solid round
- Fire resistance according to:
  - IEC 60331-21
  - CEI EN 50200 or CEI EN 50362
- Colour of insulation according to International Standards or on customer specification
- Cores twisted in:
  - pairs
  - triads
  - quads
- Aluminium/polyester tape shield with tinned copper drain wire:
  - on each pair/triad/quad
  - overall
  - on each pair/triad/quad and overall
- Bare or tinned copper braid shield:
  - on each pair/triad/quad
  - overall
  - on each pair/triad/quad and overall
- Armours:
  - bare or tinned copper braid
  - steel braid
  - steel wires
  - steel tapes
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - PVC and LSZH sheath available in versions ARCTIC -40 °C or ARCTIC -60 °C
  - chemical resistant
  - UV resistant
  - thermite resistant

## THERMOCOUPLE CABLES

- ◆ HEPR/PVC
- ◆ PVC/PVC
- ◆ PE/PVC
- ◆ XLPE/PVC

### Manufactured with the following components/features:

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
  - 150/250 V
  - 100/100 V
- Versions in compliance with:
  - ANSI MC 96.1 standard
  - IEC 60584 A standard
  - NF-C-42-324 standard
  - DIN 43710 standard
  - BS 4937 and BS 1843 standards
- Flexible stranded or solid round alloy conductor (cables for extension):
  - type E (+ NiCr / - CuNi)
  - type J (+ Fe / - CuNi)
  - type K (+ NiCr / - Ni)
  - type N (+ NiCrSi / - NiSi)
  - type T (+ Cu / - CuNi)
- Flexible stranded or solid round alloy conductor (cables for compensation):
  - type B (+ Cu / - Cu)
  - type R (+ Cu / - CuNi)
  - type S (+ Cu / - CuNi)
  - type W (+ NiCr / - Ni)
- Colour of insulation according to International Standards or on customer specification
- Cores twisted in pairs
- Aluminium/polyester tape shield with tinned copper drain wire:
  - on each pair
  - overall
  - on each pair and overall
- Bare or tinned copper braid shield:
  - on each pair
  - overall
  - on each pair and overall
- Armours:
  - bare or tinned copper braid
  - steel braid
  - steel wires
  - steel tapes
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

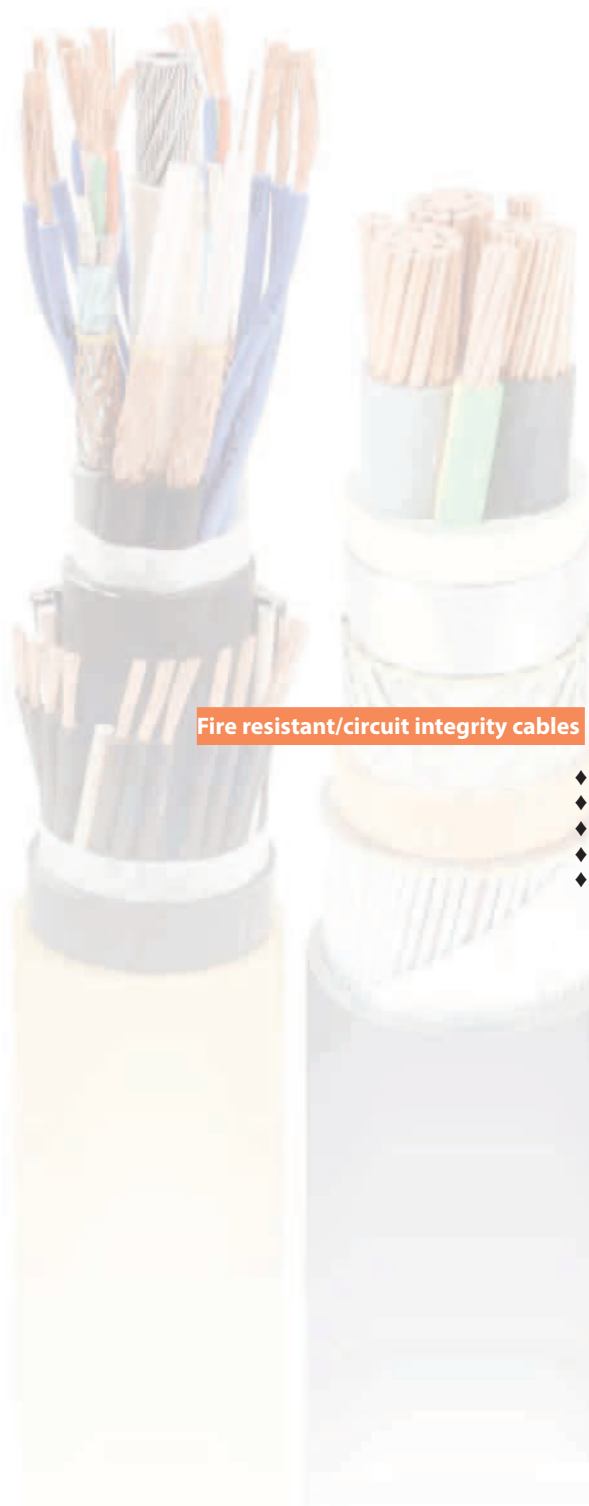
### Halogen free cables

- ◆ HEPR/LSZH
- ◆ EPR/LSZH
- ◆ PE/LSZH
- ◆ XLPE/LSZH

### Manufactured with the following components/features:

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
  - 150/250 V
  - 100/100 V





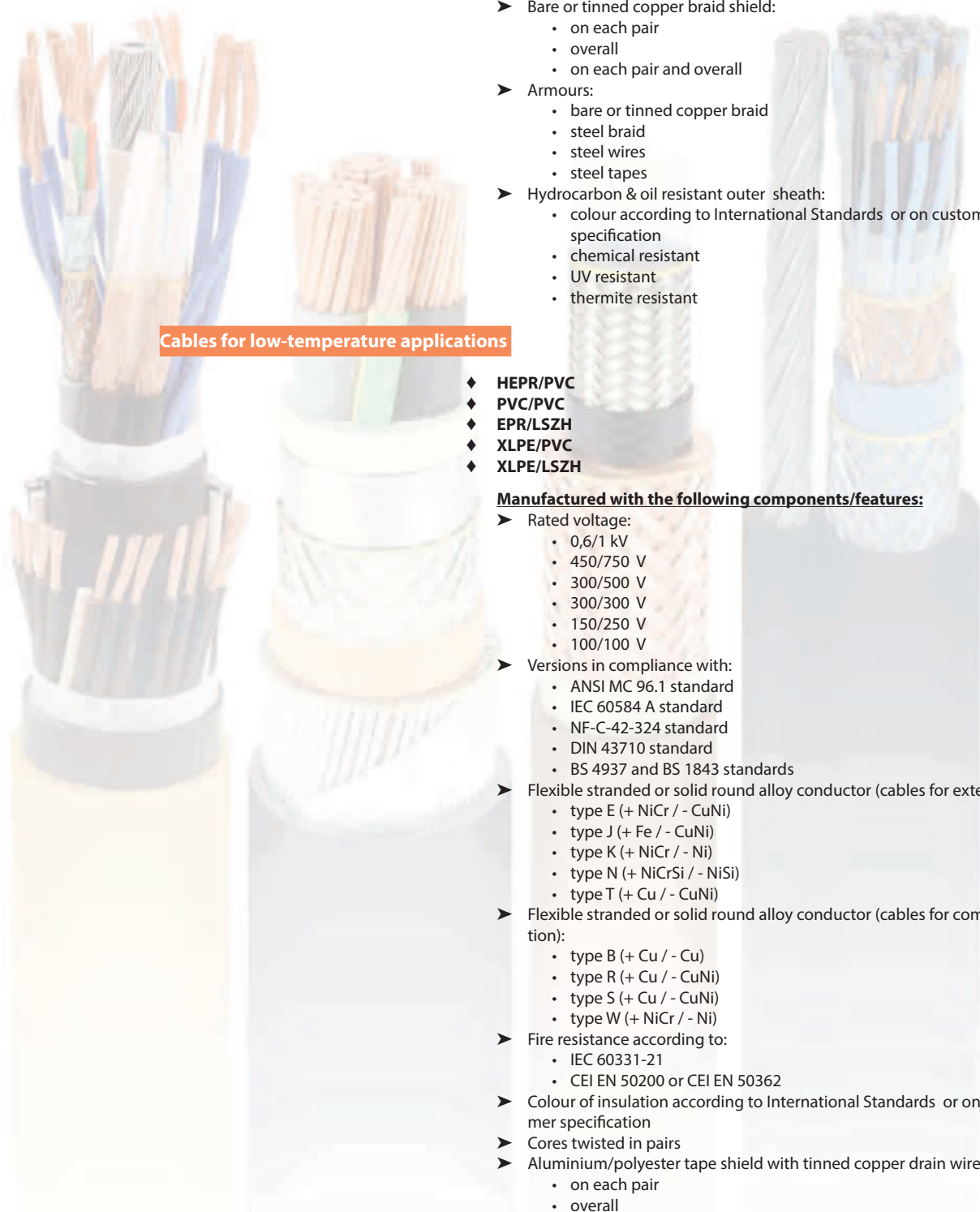
**Fire resistant/circuit integrity cables**

- Versions in compliance with:
  - ANSI MC 96.1 standard
  - IEC 60584 A standard
  - NF-C-42-324 standard
  - DIN 43710 standard
  - BS 4937 and BS 1843 standards
- Flexible stranded or solid round alloy conductor (cables for extension):
  - type E (+ NiCr / - CuNi)
  - type J (+ Fe / - CuNi)
  - type K (+ NiCr / - Ni)
  - type N (+ NiCrSi / - NiSi)
  - type T (+ Cu / - CuNi)
- Flexible stranded or solid round alloy conductor (cables for compensation):
  - type B (+ Cu / - Cu)
  - type R (+ Cu / - CuNi)
  - type S (+ Cu / - CuNi)
  - type W (+ NiCr / - Ni)
- Colour of insulation according to International Standards or on customer specification
- Cores twisted in pairs
- Aluminium/polyester tape shield with tinned copper drain wire:
  - on each pair
  - overall
  - on each pair and overall
- Bare or tinned copper braid shield:
  - on each pair
  - overall
  - on each pair and overall
- Armours:
  - bare or tinned copper braid
  - steel braid
  - steel wires
  - steel tapes
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

- ◆ MGT/HEPR/LSZH
- ◆ MGT/EPR/LSZH
- ◆ MGT/PE/LSZH
- ◆ MGT/XLPE/LSZH
- ◆ MGT/XLPE/PVC

**Manufactured with the following components/features:**

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
  - 150/250 V
  - 100/100 V
- Versions in compliance with:
  - ANSI MC 96.1 standard
  - IEC 60584 A standard
  - NF-C-42-324 standard
  - DIN 43710 standard
  - BS 4937 and BS 1843 standards
- Flexible stranded or solid round alloy conductor (cables for extension):
  - type E (+ NiCr / - CuNi)
  - type J (+ Fe / - CuNi)
  - type K (+ NiCr / - Ni)
  - type N (+ NiCrSi / - NiSi)
  - type T (+ Cu / - CuNi)
- Flexible stranded or solid round alloy conductor (cables for compensation):
  - type B (+ Cu / - Cu)



**Cables for low-temperature applications**

- type R (+ Cu / - CuNi)
- type S (+ Cu / - CuNi)
- type W (+ NiCr / - Ni)
- Fire resistance according to:
  - IEC 60331-21
  - CEI EN 50200 or CEI EN 50362
- Colour of insulation according to International Standards or on customer specification
- Cores twisted in pairs
- Aluminium/polyester tape shield with tinned copper drain wire:
  - on each pair
  - overall
  - on each pair and overall
- Bare or tinned copper braid shield:
  - on each pair
  - overall
  - on each pair and overall
- Armours:
  - bare or tinned copper braid
  - steel braid
  - steel wires
  - steel tapes
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - chemical resistant
  - UV resistant
  - thermite resistant

- ◆ **HEPR/PVC**
- ◆ **PVC/PVC**
- ◆ **EPR/LSZH**
- ◆ **XLPE/PVC**
- ◆ **XLPE/LSZH**

**Manufactured with the following components/features:**

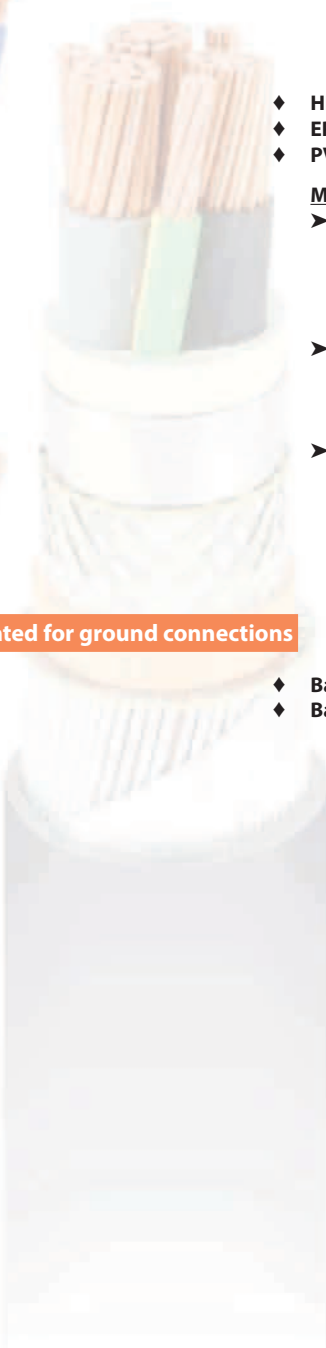
- Rated voltage:
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  - 300/300 V
  - 150/250 V
  - 100/100 V
- Versions in compliance with:
  - ANSI MC 96.1 standard
  - IEC 60584 A standard
  - NF-C-42-324 standard
  - DIN 43710 standard
  - BS 4937 and BS 1843 standards
- Flexible stranded or solid round alloy conductor (cables for extension):
  - type E (+ NiCr / - CuNi)
  - type J (+ Fe / - CuNi)
  - type K (+ NiCr / - Ni)
  - type N (+ NiCrSi / - NiSi)
  - type T (+ Cu / - CuNi)
- Flexible stranded or solid round alloy conductor (cables for compensation):
  - type B (+ Cu / - Cu)
  - type R (+ Cu / - CuNi)
  - type S (+ Cu / - CuNi)
  - type W (+ NiCr / - Ni)
- Fire resistance according to:
  - IEC 60331-21
  - CEI EN 50200 or CEI EN 50362
- Colour of insulation according to International Standards or on customer specification
- Cores twisted in pairs
- Aluminium/polyester tape shield with tinned copper drain wire:
  - on each pair
  - overall

- on each pair and overall
- Bare or tinned copper braid shield:
  - on each pair
  - overall
  - on each pair and overall
- Armours:
  - bare or tinned copper braid
  - steel braid
  - steel wires
  - steel tapes
- Hydrocarbon & oil resistant outer sheath:
  - colour according to International Standards or on customer specification
  - PVC and LSZH sheath available in versions ARCTIC -40 °C or ARCTIC -60 °C
  - chemical resistant
  - UV resistant
  - thermite resistant



**EARTHING CABLES**

**Insulated**



**Not insulated for ground connections**

- ◆ HEPR
- ◆ EPR
- ◆ PVC

**Manufactured with the following components/features:**

- Rated voltage:
  - 0,6/1 kV
  - 450/750 V
  - 300/500 V
  - 300/300 V
- Bare or tinned copper conductor:
  - extra-flexible stranded
  - flexible stranded
  - round stranded
- Insulation:
  - colour according to International Standards or on customer specification
  - oil resistant
  - hydrocarbon resistant
  - UV resistant

- ◆ Bare or tinned copper ropes
- ◆ Bare or tinned copper flat braids