

## SERVICE CABLES (with or without control wires)

**Standards :**

NF C 33-210 (EDF), HD 603.

### Rated voltage

Rated voltage : 0,6/1 kV

### Application/Features

	S	↑	⊕	⊖	⚙	⚗	⌊	🔥
<b>Excellent</b>		•						
<b>Very good</b>					•		•	
<b>Good</b>			•	•		•		
<b>Medium</b>								•
<b>bad</b>	•							

These cables are mainly used for connection public network.  
They can not be used on networks having neutral not directly linked to the earth.

### Usual laying technics

As described in legal texts dated May, the 26<sup>th</sup> 1978 and November the 14 1988, LV services cables can be directly buried, a galvanized steel armour existing over the phase and neutral conductors.

They can be also installed in single or multi-way ducts or in air

- Bending radius:
  - After laying (static) : 10D
  - During laying (dynamic) : 20D
 where D is the apparent outer diameter of the bundle.

### Design

**Phase conductor :**

- Solid conductor (class 1) and circular.
- Black XLPE insulation.

**Neutral conductor :**

- Solid conductor (class 1) and circular
- Lead sheath for watertightness properties.

**Control wires (optional):**

- Solid conductor (copper).
- Black XLPE insulation.

**Stranding :** A waterproof material can be applied between phases on demand.

**Metallic armour :** Galvanized steel tape(s) helically applied and in a direct contact with the neutral conductor.

**Outer sheath :** Black PVC.



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**SILEC CABLE**

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SAS au capital de 60 037 000 € - 484 920 194



## LV Service cables H1 XDV-AU (continued)

## Maximum allowable temperature on conductor

- during continuous operation : 90°C.
- during short-circuit : 250°C.

## Identification and outer marking

- Phase conductor : number 1,2 or 3.
- Outer sheath: H1 XDV-AU SILEC 221 3xS1 ou 1xS1 + 1xS1 - Day - Year - NF C 33-210 and length marking.

## Characteristics

Apparent outer diameter approx. mm	Approximate weight kg/km	Quantity and cross section of conductors mm <sup>2</sup>	Maximum allowable ampacity A						Voltage drop per km and per A (cos φ=0.8) V
			Buried cables				In air		
			Summer		Winter		Summer	Winter	
			Continu	Discontinu	Continu	Discontinu			
22.5	800	1x35 + 35	135	150	165	180	125	140	1.8
22.5	950	1x35 + 35 + 1p1,5	135	150	165	180	125	140	1.8
19.5	690	3x16 + 16	73	82	88	100	73	79	3.3
23.5	930	3x25 + 25	96	110	120	130	95	105	2.1
26	1050	3x35 + 35	120	130	145	160	115	125	1.6
26	1100	3x35 + 35 + 1p1,5	120	130	145	160	115	125	1.6
26	990	1x50 + 50	155	180	190	210	150	170	1.4

	Summer	Winter
Maximale air temperature °C	30 °C	20 °C
Maximale soil temperature °C	20 °C	10 °C
Thermal resistivity soil K.m/W	1.2	0.85

# DISTRIBUTION CABLES H1 XDV-AS (or AR)

**Standards :**

NF C 33-210 (EDF), HD 603.

**Rated voltage**

Rated voltage: 0.6/1 kV

**Application / Features**

	S	T	Thermometer 1	Thermometer 2	Sun	Flask	Waves	Fire
<b>Excellent</b>		•						
<b>Very good</b>					•		•	
<b>Good</b>			•	•		•		
<b>Medium</b>								•
<b>Bad</b>	•							

These cables are mainly used for distribution public network.  
They can not be used on networks having neutral not directly linked to the earth.

**Usual laying technics**

- As described in legal texts dated May, the 26<sup>th</sup> 1978 and November the 14 1988, LV services cables can be directly buried, a galvanized steel armour existing over the phase and neutral conductors.

They can be also installed in single or multi –way ducts or in air.

- Bending radius:
  - After laying (static) : 8 D
  - During laying (dynamic) : 10 D
 where D is the apparent outer diameter of the bundle.

**Design**

**Phase conductor :**

- Stranded conductor (class 2) and circular (50 mm<sup>2</sup>) or sector shaped (≥ 95 mm<sup>2</sup>).
- Black XLPE insulation.

**Neutral conductor :**

- Stranded conductor (class 2) and circular
- Lead sheath for watertightness properties.

**Stranding :** A waterproof material is applied between phases.

**Metallic armour :** 2 Galvanized steel tapes helically applied and in a direct contact with the neutral conductor.

**Outer sheath :** Black PVC.



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## Distribution H1 XDV-AS (continued)

## Maximum allowable temperature on conductor

- During continuous operation : 90°C.
- During short circuit : 250°C.

## Identification and outer marking

- Phase conductor : number 1, 2 or 3.
- Outer sheath : H1 XDV-AR (ou AS) SILEC 221 3xS1 + 1xS2 - Day - Year - NF C 33-210 et length marking.

## Characteristics

Approximate apparent outer diameter.  mm	Approximate weight  kg/km	Quantity and cross section of conductors  mm <sup>2</sup>	Maximum allowable ampacity A						Voltage drop per km and per A (cos φ=0.8)  V	
			Buried cables				In air			
			Summer		Winter		Summ.	wint		
			Continu	Discontin	Continu	Discontin				
30.0	1450	3x50 + 50	140	155	170	190	140	150	1.2	
36.0	1900	3x95 + 50	210	235	260	290	210	225	0.62	
40.5	2650	3x150 + 70	280	310	340	380	280	300	0.43	
44.0	3030	3x150 + 150	280	310	340	380	280	300	0.43	
51.0	3900	3x240 + 95	370	410	455	500	375	405	0.29	

	Summer	Winter
Maximum air temperature °C	30 °C	20 °C
Maximum soil temperature °C	20 °C	10 °C
Thermal resistivity soil K.m/W	1.2	0.85

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