



iman Company

شركة ايمان للمقاولات الكهربائية والتجارة العامة المحدودة

تأسست شركة إيمان في أربيل سنة ١٩٨٢ ، منذ تأسيسها
باشرت في عمل المقاولات وأنجزت العديد من المشاريع
المختلفة (الجسور ، المستشفيات الطرق المدارس ، وأبنية
مختلفة) كما تخصصت في استيراد المواد الكهربائية منذ
سنة ٢٠٠٢ ، فهي وكيل معتمد لعدة شركات تركية عالمية ذات
ماركات معروفة من ضمنها (هاس جليك) لإنتاج الأسلاك
الألمنيوم والكابلات المجدولة تويست كيبل ، و (هيس كابلو
(لإنتاج الكابلات النحاسية للضغط العالي والضغط الواطي ،
إضافة لشركة (IES) لإنتاج أعمدة الكهرباء والإنارة



**Iman Company for general trading of electrical
was founded in 1982 in Erbil, since its foundation
it started to work in contracting and have
achieved many projects (bridges, hospitals,
streets, schools and various buildings) after that
in 2002 it specialized in importing electric
materials.**

**Iman company is agent for Turkish companies
(HASCELIK) for aluminum wire and twisted cable,
(HES KABLO) for LV cables and MV cables and
(IES galvaniz) for electrical poles and lightening
poles.**



شركة ايمان للمقاولات الكهربائية والتجارة العامة المحدودة

Mobile : +964 750 446 61 19
+964 770 446 61 19
+964 770 100 01 22
+964 750 100 91 50
+964 750 100 91 51
+964 750 555 09 88

Email : info@imancompany.net
iman_firma@yahoo.com

Company Adress : Iraq - Erbil
Kuran malchmour street
near ismail yaqube mosque

Cable warehouse Adress : Iraq - Erbil
qwer rood - Erbil warehouse complex

Cable warehouse Mobile : +964 750 290 94 95
+964 750 100 91 52

Pole warehouse Mobile : Iraq - Erbil
Kerkuk rood - qushtapa

Pole warehouse Mobile : +964 750 296 81 01
+964 750 100 91 53

موبايل : +964 750 446 61 19
+964 770 446 61 19
+964 770 100 01 22
+964 750 100 91 50
+964 750 100 91 51
+964 750 555 09 88

إيميل : info@imancompany.net
iman_firma@yahoo.com

عنوان الشركة : العراق - اربيل
شارع كوران مخمور
قرب جامع اسماعيل يعقوبي

عنوان مخزن كيبلات : العراق - اربيل
طريق گویر - مجمع مخازن اربيل

رقم مخزن كيبلات : +964 750 290 94 95
+964 750 100 91 52

عنوان مخزن الأعمدة : العراق - اربيل
طريق كركوك - قوشتبه

رقم مخزن الأعمدة : +964 750 296 81 01
+964 750 100 91 53

**Iman Company Electrical
Contracting And
General Trading**



www.imancompany.net







الوكيل الحصري لشركة HES Cable التركية





Code: YVV-U, YVV-R, CU/PVC/PVC, NYY

U: Solid Conductor
R: Stranded Conductor

Standards: IEC 60502-1, VDE 0276-603

Technical Data

Max. operating temperature : 70°C
Max. short circuit temperature : (max. 5 sec.)
Cross section • 300 mm² : 160°C
Cross section > 300 mm² : 140°C
Rated voltage : 0,6/1 kV
Min. bending radius : 12 x D
D : Cable outer diameter

Application

Indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is no risk of mechanical damage.

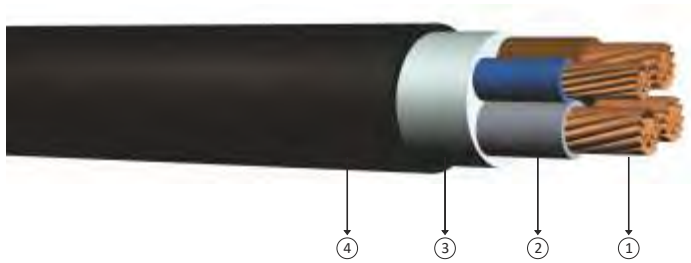
Construction

- 1 Solid or stranded copper conductor
- 2 PVC insulation
- 3 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES				
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)			
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C		In air at 30°C	
					***	**	***	**
1x1,5	5,8	50	1000	12,1	-	30	25	20
1x2,5	6,2	60	1000	7,41	-	39	34	27
1x4	7,0	85	1000	4,61	-	50	45	37
1x6	7,5	105	1000	3,08	-	62	57	48
1x10	9,0	160	1000	1,83	-	83	78	66
1x16	10,0	215	1000	1,15	127	107	103	89
1x25	11,5	320	1000	0,727	163	137	137	118
1x35	12,5	420	1000	0,524	195	165	169	145
1x50	14,0	570	1000	0,387	230	195	206	176
1x70	15,5	780	1000	0,268	282	239	261	224
1x95	18,0	1050	1000	0,193	336	287	321	271
1x120	19,5	1300	1000	0,153	382	326	374	314
1x150	21,0	1600	1000	0,124	428	366	428	361
1x185	23,5	1950	1000	0,0991	483	414	494	412
1x240	27,0	2550	1000	0,0754	561	481	590	484
1x300	30,5	3150	1000	0,0601	632	542	678	549
1x400	34,0	4200	1000	0,0470	730	624	817	657
1x500	37,0	5200	1000	0,0366	823	698	940	749
1x630	42,0	6450	500	0,0283	866	775	1042	858

Note
In ground : Current carrying capacities are valid under the following conditions;
In air : 20 °C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
*** : 30 °C, load factor 1,0
*** : Flat formation, gap between cables; in air = 1 x Cable outer diameter, in ground = 7 cm
*** : Trefoil formation
Number of system : 1

0,6/1 kV PVC insulated, multi-core cables, with copper conductor



Code: YVV-R, CU/PVC/PVC, NYY

R: Stranded Conductor

Standards: IEC 60502-1, VDE 0276-603

Technical Data

Max. operating temperature : 70°C
Max. short circuit temperature : (max. 5 sec.)
Cross section • 300 mm² : 160°C
Cross section > 300 mm² : 140°C
Rated voltage : 0,6/1 kV
Min. bending radius : 12 x D
D : Cable outer diameter

Application

Indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is no risk of mechanical damage.

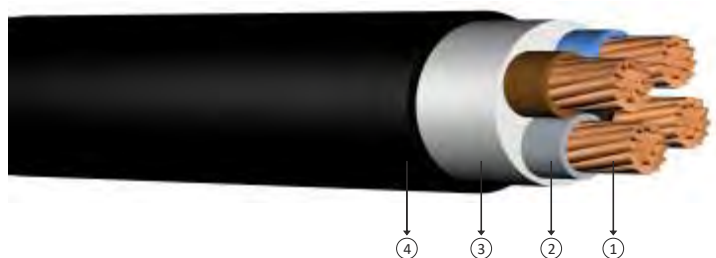
Construction

- 1 Stranded copper conductor
- 2 PVC insulation
- 3 Thermoplastic filler
- 4 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
3x16+10	21,5	970	1000	1,15	98	80
3x25+16	25,0	1400	1000	0,727	128	106
3x35+16	27,0	1750	1000	0,524	157	131
3x50+25	31,0	2400	1000	0,387	185	159
3x70+35	35,0	3300	1000	0,268	228	202
3x95+50	40,0	4400	1000	0,193	275	244
3x120+70	44,5	5550	500	0,153	313	282
3x150+70	48,0	6550	500	0,124	353	324
3x185+95	53,0	8200	500	0,0991	399	371
3x240+120	60,5	10600	500	0,0754	464	436
3x300+150	68,0	13100	250	0,0601	524	481
3x400+185	76,0	17000	250	0,0470	600	560

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

0,6/1 kV PVC insulated, multi-core cables, with copper conductor



Code: YVV-U, YVV-R, CU/PVC/PVC, NYY

U: Solid Conductor
R: Stranded Conductor

Standards: IEC 60502-1, VDE 0276-603

Technical Data

Max. operating temperature : 70°C
Max. short circuit temperature : (max. 5 sec.)
Cross section • 300 mm² : 160°C
Cross section > 300 mm² : 140°C
Rated voltage : 0,6/1 kV
Min. bending radius : 12 x D
D : Cable outer diameter

Application

Indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is no risk of mechanical damage.

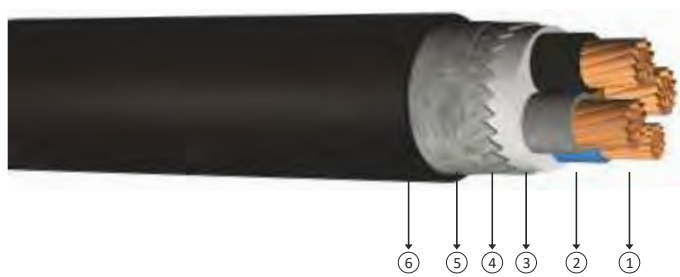
Construction

- ① Solid or stranded copper conductor
- ② PVC insulation
- ③ Thermoplastic filler
- ④ PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
4x1,5	11,6	235	1000	12,1	26	18.5
4x2,5	12,6	270	1000	7,41	34	25
4x4	14,8	400	1000	4,61	44	34
4x6	16,0	520	1000	3,08	56	43
4x10	18,0	690	1000	1,83	75	60
4x16	21,5	1050	1000	1,15	98	80
4x25	26,0	1550	1000	0,727	128	106
4x35	28,5	2000	1000	0,524	157	131
4x50	33,0	2750	1000	0,387	185	159
4x70	37,5	3750	1000	0,268	228	202
4x95	42,5	5000	1000	0,193	275	244
4x120	46,5	6200	500	0,153	313	282
4x150	51,5	7600	500	0,124	353	324
4x185	57,0	9450	500	0,0991	399	371
4x240	65,0	12200	500	0,0754	464	436
4x300	73,0	15200	250	0,0601	524	481
4x400	79,0	19500	250	0,0470	600	560

Note
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

0,6/1 kV PVC Insulated, flat steel wire armoured, multi-core cables with copper conductor



Code: YVZ3V-R, NYFGY

R: Stranded Conductor

Standards: IEC 60502-1, VDE 0276-603

Technical Data

Max. operating temperature : 70°C
Max. short circuit temperature : (max. 5 sec.)
Cross section • 300 mm² : 160°C
Cross section > 300 mm² : 140°C
Rated voltage : 0,6/1 kV
Min. bending radius : 15 x D

Application

Indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is risk of mechanical damage.

Construction

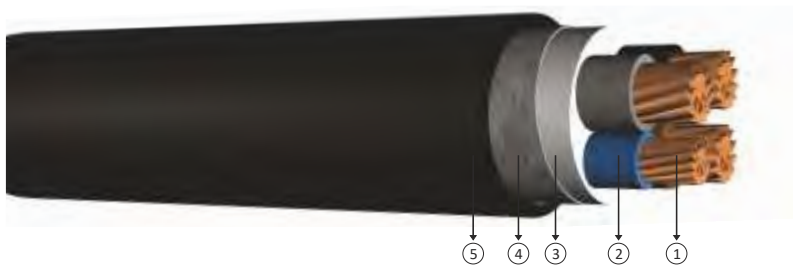
- 1 Stranded copper conductors
- 2 PVC insulation
- 3 Thermoplastic filler
- 4 Galvanized flat steel wire
- 5 Galvanized steel binding tape
- 6 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
4x10	22,0	1150	1000	1,83	75	60
4x16	24,5	1500	1000	1,15	98	80
4x25	28,0	2050	1000	0,727	128	106
4x35	31,0	2600	1000	0,524	157	131
4x50	35,0	3450	1000	0,387	185	159
4x70	39,5	4500	1000	0,268	228	202
4x95	45,0	5850	500	0,193	275	244
4x120	49,0	7150	500	0,153	313	282
4x150	54,0	8700	500	0,124	353	324
4x185	59,5	10650	500	0,0991	399	371
4x240	67,0	13550	250	0,0754	464	436
4x300	76,0	16750	250	0,0601	524	481
4x400	85,5	21850	250	0,0470	600	560

Note
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

www.imancompany.net

0,6/1 kV PVC Insulated, double steel tape armoured, multi-core cables with copper conductor



Code: YVZ4V-R, NYBY

R: Stranded Conductor

Standards: IEC 60502-1, VDE 0276-603

Technical Data

Max. operating temperature : 70°C
 Max. short circuit temperature : (max. 5 sec.)
 Cross section • 300 mm² : 160°C
 Cross section > 300 mm² : 140°C
 Rated voltage : 0,6/1 kV
 Min. bending radius : 15 x D
 D : Cable outer diameter

Application

Indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is risk of mechanical damage.

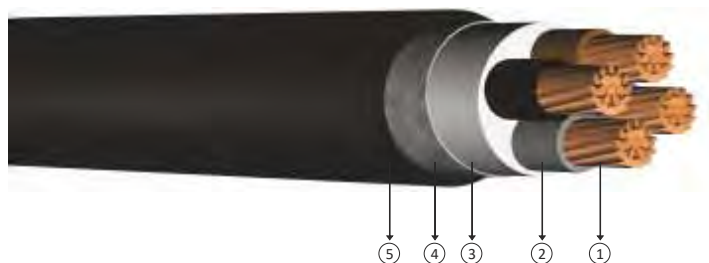
Construction

- 1 Stranded copper conductors
- 2 PVC insulation
- 3 Thermoplastic filler
- 4 Galvanized double steel tape
- 5 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
3x16+10	23,0	1200	1000	1,15	98	80
3x25+16	26,5	1700	1000	0,727	128	106
3x35+16	28,0	2050	1000	0,524	157	131
3x50+25	32,0	2750	1000	0,387	185	159
3x70+35	36,5	3700	1000	0,268	228	202
3x95+50	42,0	5200	500	0,193	275	244
3x120+70	46,5	6400	500	0,153	313	282
3x150+70	50,0	7500	500	0,124	353	324
3x185+95	55,5	9250	500	0,0991	399	371
3x240+120	62,5	11800	250	0,0754	464	436
3x300+150	70,0	14500	250	0,0601	524	481
3x400+185	79,0	18700	250	0,0470	600	560

Note : Current carrying capacities are valid under the following conditions;
 In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
 In air : 30°C, load factor 1,0
 Number of system : 1

0,6/1 kV PVC Insulated, double steel tape armoured, multi-core cables with copper conductor



Code: YVZ4V-U, YVZ4V-R, NYBY

U: Solid Conductor
R: Stranded Conductor

Standards: IEC 60502-1, VDE 0276-603

Technical Data

Max. operating temperature : 70°C
Max. short circuit temperature : (max. 5 sec.)
Cross section • 300 mm² : 160°C
Cross section > 300 mm² : 140°C
Rated voltage : 0,6/1 kV
Min. bending radius : 15 x D
D : Cable outer diameter

Application

Indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is risk of mechanical damage.

Construction

- 1 Solid or stranded copper conductor
- 2 PVC insulation
- 3 Thermoplastic filler
- 4 Galvanized double steel tape
- 5 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
4x1,5	14,0	360	1000	12,1	26	18.5
4x2,5	15,0	440	1000	7,41	34	25
4x4	17,0	580	1000	4,61	44	34
4x6	18,0	700	1000	3,08	56	43
4x10	21,0	980	1000	1,83	75	60
4x16	23,5	1300	1000	1,15	98	80
4x25	27,0	1850	1000	0,727	128	106
4x35	29,5	2350	1000	0,524	157	131
4x50	34,0	3100	1000	0,387	185	159
4x70	39,0	4450	1000	0,268	228	202
4x95	44,5	5800	500	0,193	275	244
4x120	49,0	7100	500	0,153	313	282
4x150	53,5	8600	500	0,124	353	324
4x185	59,0	10500	250	0,0991	399	371
4x240	67,0	13400	250	0,0754	464	436
4x300	75,5	16600	250	0,0601	524	481
4x400	85,5	21650	250	0,0470	600	560

Note
In ground
In air
Number of system

: Current carrying capacities are valid under the following conditions;
: 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
: 30°C, load factor 1,0
: 1

0,6/1 kV XLPE Insulated, single-core cables with copper conductor



Code: YXV-U, YXV-R, CU/XLPE/PVC, N2XY

U: Solid Conductor
R: Stranded Conductor

Standards: IEC 60502-1, VDE 0276-603

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 0,6/1 kV
Min. bending radius : 12 x D
D : Cable outer diameter

Application

These cables have a low dielectric loss, used in indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is no risk of mechanical damage.

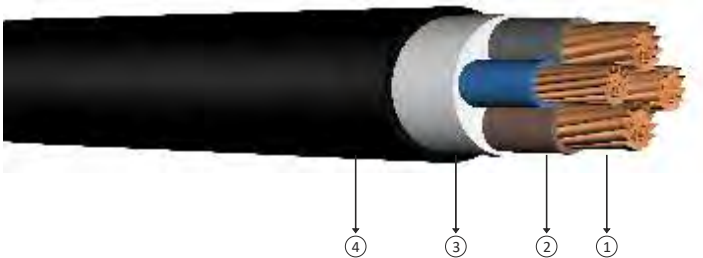
Construction

- 1 Solid or stranded copper conductor
- 2 XLPE insulation
- 3 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES				
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)			
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C		In air at 30°C	
					***	**	***	**
1x1,5	5,5	45	1000	12,1	39	32	32	25
1x2,5	6,0	55	1000	7,41	51	43	42	34
1x4	6,5	75	1000	4,61	66	55	56	44
1x6	7,0	90	1000	3,08	82	68	71	57
1x10	8,0	140	1000	1,83	109	90	96	77
1x16	9,0	200	1000	1,15	139	115	128	102
1x25	10,5	300	1000	0,727	179	149	173	139
1x35	11,5	400	1000	0,524	213	178	212	170
1x50	13,0	530	1000	0,387	251	211	258	208
1x70	15,0	750	1000	0,268	307	259	328	265
1x95	17,0	1000	1000	0,193	366	310	404	326
1x120	18,5	1250	1000	0,153	416	352	471	381
1x150	20,5	1550	1000	0,124	465	396	541	438
1x185	22,5	1900	1000	0,0991	526	449	626	507
1x240	25,5	2450	1000	0,0754	610	521	749	606
1x300	29,0	3000	1000	0,0601	689	587	864	697
1x400	32,0	4000	1000	0,0470	788	669	1018	816
1x500	35,5	5000	1000	0,0366	889	748	1173	933
1x630	39,0	6100	1000	0,0283	980	843	1315	1083

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
*** : Flat formation, gap between cables; in air = 1 x Cable outer diameter, in ground = 7 cm
** : Trefoil formation
Number of system : 1

0,6/1 kV XLPE insulated, multi-core cables with copper conductor



Code: YXV-R, CU/XLPE/PVC, N2XY

R: Stranded Conductor	Standards: IEC 60502-1, VDE 0276-603
-----------------------	--------------------------------------

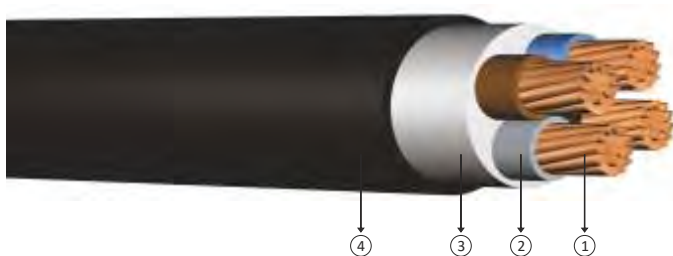
Technical Data Max. operating temperature : 90°C Max. short circuit temperature : 250°C (max. 5 sec.) Rated voltage : 0,6/1 kV Min. bending radius : 12 x D D : Cable outer diameter	Application These cables have a low dielectric loss, used in indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is no risk of mechanical damage.
--	--

Construction

- 1 Stranded copper conductors
2 XLPE insulation
3 Thermoplastic filler
4 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
3x16+10	20,0	850	1000	1,15	111	96
3x25+16	23,5	1300	1000	0,727	143	130
3x35+16	25,5	1650	1000	0,524	173	160
3x50+25	29,0	2200	1000	0,387	205	195
3x70+35	33,5	3100	1000	0,268	252	247
3x95+50	37,5	4100	1000	0,193	303	305
3x120+70	42,0	5200	500	0,153	346	355
3x150+70	45,5	6250	500	0,124	390	407
3x185+95	51,0	7800	500	0,0991	441	469
3x240+120	58,0	10100	500	0,0754	511	551
3x300+150	65,0	12500	250	0,0601	580	638
3x400+185	73,5	16300	250	0,0470	663	746

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1



Code: YXV-U, YXV-R, CU/XLPE/PVC, N2XY

U: Solid Conductor
R: Stranded Conductor

Standards: IEC 60502-1, VDE 0276-603

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 0,6/1 kV
Min. bending radius : 12 x D
D : Cable outer diameter

Application

These cables have a low dielectric loss, used in indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is no risk of mechanical damage.

Construction

- 1 Solid or stranded copper conductor
- 2 XLPE insulation
- 3 Thermoplastic filler
- 4 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
4x1.5	12,0	200	1000	12,1	30	24
4x2.5	13,0	250	1000	7,41	40	32
4x4	14,0	350	1000	4,61	52	42
4x6	15,5	450	1000	3,08	64	53
4x10	17,5	630	1000	1,83	86	73
4x16	20,5	905	1000	1,15	111	96
4x25	24,5	1400	1000	0,727	143	130
4x35	27,0	1850	1000	0,524	173	160
4x50	30,5	2500	1000	0,387	205	195
4x70	35,5	3500	1000	0,268	252	247
4x95	39,5	4650	1000	0,193	303	305
4x120	44,5	5900	500	0,153	346	355
4x150	49,0	7200	500	0,124	390	407
4x185	54,5	8950	500	0,0991	441	469
4x240	62,0	11600	250	0,0754	511	551
4x300	70,0	14400	250	0,0601	580	638
4x400	80,0	19000	250	0,0470	663	746

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

0,6/1 kV XLPE Insulated, round aluminium wire armoured, single core cables with copper conductor



Code: 6941X, YXVY2V-R, CU/XLPE/PVC/AWA/PVC, N2XYR(A)Y

R: Stranded Conductor

Standards: IEC 60502-1, BS 5467

Technical Data

Max. operating temperature : 90°C
 Max. short circuit temperature : 250°C (max. 5 sec.)
 Rated voltage : 0,6/1 kV
 Min. bending radius : 15 x D
 D : Cable outer diameter

Application

These cables have a low dielectric loss, used in indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is risk of mechanical damage.

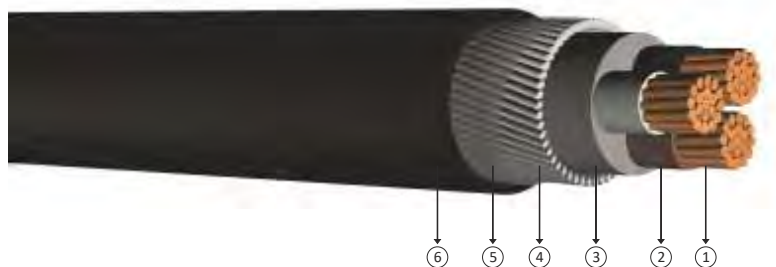
Construction

- ❶ Stranded copper conductor
- ❸ Thermoplastic inner sheath
- ❺ PP tape
- ❷ XLPE insulation
- ❹ Round aluminium wire
- ❻ PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
1x50	16,1	632	100	0,387	251	258
1x70	18,5	881	1000	0,268	307	328
1x95	20,3	1151	1000	0,193	366	404
1x120	22,1	1408	1000	0,153	416	471
1x150	25,0	1774	1000	0,124	465	541
1x185	27,2	2165	1000	0,0991	526	626
1x240	30,0	2744	1000	0,0754	610	749
1x300	32,4	3367	1000	0,0601	689	864
1x400	37,0	4357	1000	0,0470	788	1018
1x500	40,6	5430	500	0,0366	889	1173
1x630	44,9	6818	500	0,0283	980	1315
1x800	51,9	8762	500	0,0221	1160	1520
1x1000	55,8	10615	250	0,0176	1160	1520

Note : Current carrying capacities are valid under the following conditions;
 In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
 In air : 30°C, load factor 1,0
 Number of system : 1

0,6/1 kV XLPE Insulated, round steel wire armoured, multi-core cables with copper conductor



Code: YXZ2V-U, YXZ2V-R, CU/XLPE/SWA/PVC, N2XRY

U: Solid Conductor
R: Stranded Conductor

Standards: IEC 60502-1

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 0,6/1 kV
Min. bending radius : 15 x D
D : Cable outer diameter

Application

These cables have a low dielectric loss, used in indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is risk of mechanical damage.

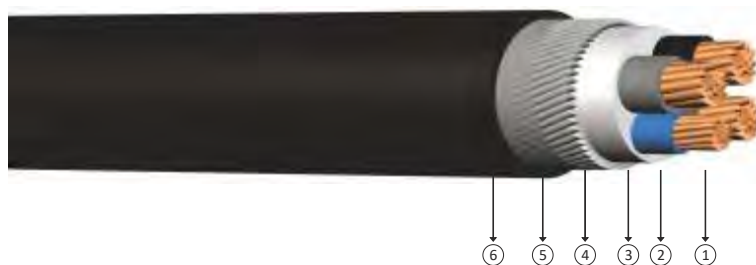
Construction

- 1 Solid or stranded copper conductor
- 2 XLPE insulation
- 3 Thermoplastic filler
- 4 Galvanized round steel wire
- 5 PP tape
- 6 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
3x1,5	14,5	395	1000	12,1	30	24
3x2,5	15,5	460	1000	7,41	40	32
3x4	16,5	540	1000	4,61	52	42
3x6	17,8	640	1000	3,08	64	53
3x10	20,0	950	1000	1,83	86	73
3x16	22,0	1200	1000	1,15	111	96
3x25	26,0	1800	1000	0,727	143	130
3x35	28,0	2200	1000	0,524	173	160
3x50	31,0	2800	1000	0,387	205	195
3x70	36,5	4000	1000	0,268	252	247
3x95	40,5	5000	500	0,193	303	305
3x120	44,5	6050	500	0,153	346	355
3x150	50,0	7750	500	0,124	390	407
3x185	55,0	9300	500	0,0991	441	469
3x240	61,5	11650	250	0,0754	511	551
3x300	69,0	14000	250	0,0601	580	638
3x400	77,0	18000	250	0,0470	663	746

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

0,6/1 kV XLPE Insulated, round steel wire armoured, multi-core cables with copper conductor



Code: YXZ2V-R, CU/XLPE/SWA/PVC, N2XRY

R: Stranded Conductor

Standards: IEC 60502-1

Technical Data

Max. operating temperature : 90°C
 Max. short circuit temperature : 250°C (max. 5 sec.)
 Rated voltage : 0,6/1 kV
 Min. bending radius : 15 x D
 D : Cable outer diameter

Application

These cables have a low dielectric loss, used in indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is risk of mechanical damage.

Construction

- 1 Stranded copper conductors
- 2 XLPE insulation
- 3 Thermoplastic filler
- 4 Galvanized round steel wire
- 5 PP tape
- 6 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
3x16+10	23,0	1300	1000	1,15	111	96
3x25+16	27,0	2000	1000	0,727	143	130
3x35+16	29,0	2350	1000	0,524	173	160
3x50+25	32,5	3100	1000	0,387	205	195
3x70+35	38,0	4400	1000	0,268	252	247
3x95+50	42,0	5500	500	0,193	303	305
3x120+70	46,5	6850	500	0,153	346	355
3x150+70	51,5	8450	500	0,124	390	407
3x185+95	56,5	10300	250	0,0991	441	469
3x240+120	63,5	12850	250	0,0754	511	551
3x300+150	70,5	15600	250	0,0601	580	638
3x400+185	80,0	20750	250	0,0470	663	746

Note : Current carrying capacities are valid under the following conditions;
 In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
 In air : 30°C, load factor 1,0
 Number of system : 1

0,6/1 kV XLPE Insulated, round steel wire armoured, multi-core cables with copper conductor



Code: YXZ2V-U, YXZ2V-R, CU/XLPE/SWA/PVC, N2XRY

U: Solid Conductor
R: Stranded Conductor

Standards: IEC 60502-1

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 0,6/1 kV
Min. bending radius : 15 x D
D : Cable outer diameter

Application

These cables have a low dielectric loss, used in indoor and outdoor applications, in cable ducts, underground, in power or switching stations, local energy distributions, industrial plants, where there is risk of mechanical damage.

Construction

- ① Solid or stranded copper conductor
- ② XLPE insulation
- ③ Thermoplastic filler
- ④ Galvanized round steel wire
- ⑤ PP tape
- ⑥ PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
4x1,5	15,3	430	1000	12,1	30	24
4x2,5	16,4	510	1000	7,41	40	32
4x4	17,6	615	1000	4,61	52	42
4x6	20,0	800	1000	3,08	64	53
4x10	21,0	1100	1000	1,83	86	73
4x16	24,0	1550	1000	1,15	111	96
4x25	28,0	2150	1000	0,727	143	130
4x35	30,5	2700	1000	0,524	173	160
4x50	34,0	3400	1000	0,387	205	195
4x70	40,0	4850	1000	0,268	252	247
4x95	44,0	6150	1000	0,193	303	305
4x120	50,5	8000	500	0,153	346	355
4x150	55,0	9600	500	0,124	390	407
4x185	60,5	11570	250	0,0991	441	469
4x240	68,0	14550	250	0,0754	511	551
4x300	76,0	17750	250	0,0601	580	638
4x400	87,0	23800	250	0,0470	663	746

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

0,6/1 kV halogen free, flame retardant, XLPE insulated, single core cables with copper conductor



Code: YXZ1-U, YXZ1-R, N2XH-O, N2XH-J, CU/XLPE/LSZH

U: Solid Conductor O : Without yellow/green wire **Standards:** HD 604 S1, IEC 60502-1, VDE 0276-604
R: Stranded Conductor J : With yellow/green wire

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 0,6/1 kV
Min. bending radius : 12 x D
D : Cable outer diameter

Application

Used in energy networks in refineries, mines, hotels, schools, tunnels, high constructions, hospitals, power plant, data processing centers, business centers where there is a risk of fire.

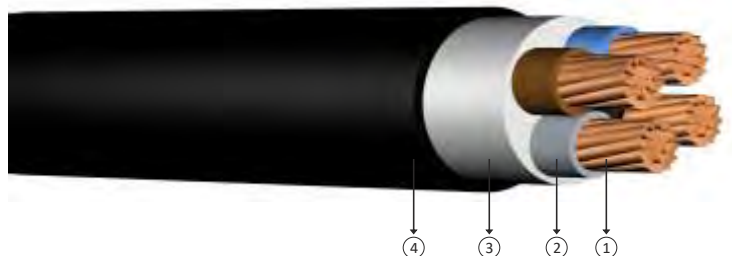
Construction

1 Solid or stranded copper conductor 2 XLPE insulation 3 HFFR outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES				
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)			
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C		In air at 30°C	
					***	**	***	**
1x4	6,5	70	1000	4,61	66	55	56	44
1x6	7,0	95	1000	3,08	82	68	71	57
1x10	8,5	130	1000	1,83	109	90	96	77
1x16	9,5	200	1000	1,15	139	115	128	102
1x25	11,0	300	1000	0,727	179	149	173	139
1x35	12,0	400	1000	0,524	213	178	212	170
1x50	13,5	500	1000	0,387	251	211	258	208
1x70	15,5	750	1000	0,268	307	259	328	265
1x95	17,5	950	1000	0,193	366	310	404	326
1x120	19,5	1200	1000	0,153	416	352	471	381
1x150	20,5	1500	1000	0,124	465	396	541	438
1x185	23,5	1850	1000	0,0991	526	449	626	507
1x240	26,5	2350	1000	0,0754	610	521	749	606
1x300	28,5	3000	1000	0,0601	689	587	864	697
1x400	32,5	3900	1000	0,0470	788	669	1018	816
1x500	35,0	4900	1000	0,0366	889	748	1173	933

Note
In ground : Current carrying capacities are valid under the following conditions;
In air : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
*** : 30°C, load factor 1,0
** : Flat formation, gap between cables; in air = 1 x Cable outer diameter, in ground = 7 cm
Number of system : Trefoil formation : 1

0,6/1 kV halogen free, flame retardant, XLPE insulated, multi core cables with copper conductor



Code: YXZ1-U, YXZ1-R, N2XH, CU/XLPE/LSZH

U: Solid Conductor
R: Stranded Conductor

O : Without yellow/green wire
J : With yellow/green wire

Standards: HD 604 S1, IEC 60502-1, VDE 0276-604

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 0,6/1 kV
Min. bending radius : 12 x D
D : Cable outer diameter

Application

Used in energy networks in refineries, mines, hotels, schools, tunnels, high constructions, hospitals, power plant, data processing centers, business centers where there is a risk of fire.

Construction

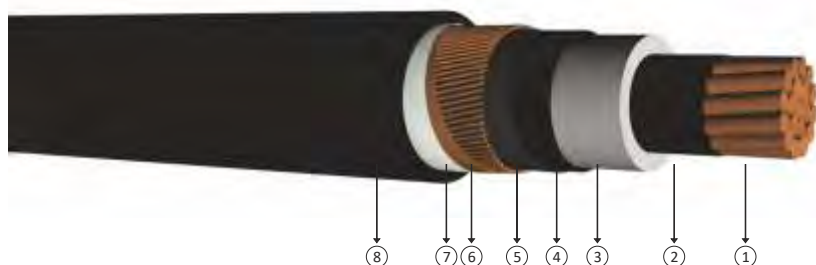
① Solid or stranded copper conductor ② XLPE insulation ③ Thermoplastic filler ④ HFFR outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	In ground at 20°C	In air at 30°C
4x1,5	12,0	200	1000	12,1	30	24
4x2,5	13,0	250	1000	7,41	40	32
4x4	14,0	300	1000	4,61	52	42
4x6	15,5	400	1000	3,08	64	53
4x10	17,5	580	1000	1,83	86	73
4x16	20,0	850	1000	1,15	111	96
4x25	24,5	1300	1000	0,727	143	130
4x35	26,0	1700	1000	0,524	173	160
4x50	30,0	2300	1000	0,387	205	195
4x70	34,0	3200	1000	0,268	252	247
4x95	38,0	4250	1000	0,193	303	305
4x120	43,0	5400	500	0,153	346	355
4x150	48,0	7000	500	0,124	390	407
4x185	53,0	8800	500	0,0991	441	469
4x240	61,0	11400	250	0,0754	511	551
4x300	67,0	14000	250	0,0601	580	638
4x400	76,0	18200	250	0,0470	663	746

Note
In ground
In air
Number of system

: Current carrying capacities are valid under the following conditions;
: 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
: 30°C, load factor 1,0
: 1

12/20 kV or 12,7/22 kV XLPE insulated, longitudinally sealed, single core cables with copper conductor



Code: N2XS(F)2Y, CU/XLPE/WBT/CWS/WBT/PE

Standards: IEC 60502-2, BS 7870-4.10

Technical Data

Max. operating temperature : 90°C
 Max. short circuit temperature : 250°C (max. 5 sec.)
 Rated voltage : 12/20 kV
 12,7/22 kV
 Min. bending radius : 15 x D
 D : Cable outer diameter

Application

These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts. Swellable tape prevents cable damage by stopping water or moisture if water ingress to the cable.

Construction

- ① Stranded copper conductors ③ XLPE insulation ⑤ Semi conductive swelling tape ⑦ Swellable tape
 ② Inner semi conductive layer ④ Outer semi conductive layer ⑥ Copper screen ⑧ PE outer sheath

Dimension and Weights				Electrical Properties									
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	DC Conductor Resistance at 90°C (Max)	Operation Inductance (approx)		Operation Capacitance (approx)	Current Carrying Capacity (A)				
mm²	mm	kg/km	m	Ω/km	Ω/km	*** mH/km	** mH/km	μF/km	In ground at 20°C		In air at 30°C		
									***	**	***	**	
1x35/16	30,0	900	1000	0,524	0,6707	0,676	0,436	0,157	213	189	233	199	
1x50/16	31,0	1100	1000	0,387	0,4954	0,650	0,416	0,174	250	223	279	238	
1x70/16	33,0	1300	1000	0,268	0,3430	0,619	0,394	0,197	304	273	347	296	
1x95/16	34,5	1600	1000	0,193	0,2470	0,595	0,377	0,218	361	325	420	358	
1x120/16	36,5	1850	1000	0,153	0,1958	0,576	0,365	0,238	407	368	483	412	
1x150/25	38,0	2250	1000	0,124	0,1587	0,559	0,353	0,258	445	410	540	466	
1x185/25	40,0	2650	1000	0,0991	0,1268	0,543	0,343	0,278	498	463	614	534	
1x240/25	42,5	3200	1000	0,0754	0,0965	0,523	0,330	0,308	569	534	718	627	
1x300/25	44,5	3800	1000	0,0601	0,0769	0,506	0,321	0,336	633	601	813	715	
1x400/35	48,0	4900	1000	0,0470	0,0602	0,485	0,309	0,377	686	674	904	819	
1x500/35	51,0	5900	500	0,0366	0,0468	0,469	0,300	0,413	756	750	1011	927	
1x630/35	55,0	7150	500	0,0283	0,0362	0,452	0,292	0,455	842	836	1128	1041	

Note

In ground

In air

**

Number of system

: Current carrying capacities are valid under the following conditions;

: 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7

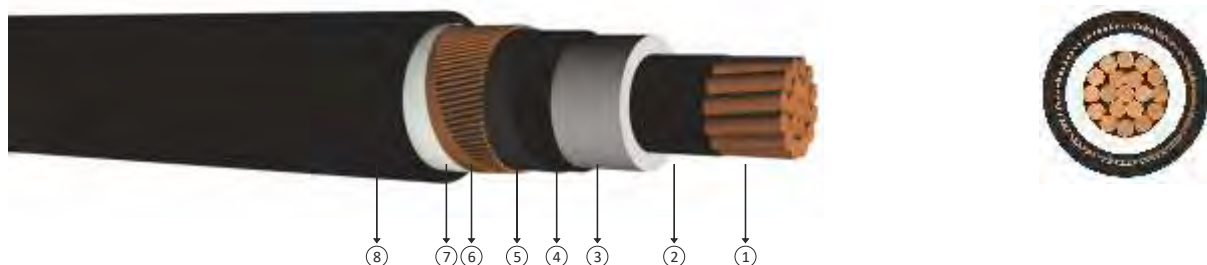
: 30°C, load factor 1,0

: Flat formation, gap between cables; in air = 1 x Cable outer diameter, in ground = 7 cm

: Trefoil formation

: 1

18/30 kV or 19/33 kV XLPE insulated, longitudinally sealed, single core cables with copper conductor



Code: N2XS(F)2Y

Standards: IEC 60502-2, BS 7870-4.10

Technical Data

Max. operating temperature : 90°C
 Max. short circuit temperature : 250°C (max. 5 sec.)
 Rated voltage : 18/30 kV
 : 19/33 kV
 Min. bending radius : 15 x D
 D : Cable outer diameter

Application

These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts. Swellable tape prevents cable damage by stopping water or moisture if water ingress to the cable.

Construction

- ① Stranded copper conductors ③ XLPE insulation ⑤ Semi conductive swelling tape ⑦ Swellable tape
 ② Inner semi conductive layer ④ Outer semi conductive layer. ⑥ Copper screen ⑧ PE outer sheath

Dimension and Weights				Electrical Properties								
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	DC Conductor Resistance at 90°C (Max)	Operation Inductance (approx)		Operation Capacitance (approx)	Current Carrying Capacity (A)			
mm²	mm	kg/km	m	Ω/km	Ω/km	***	**	μF/km	In ground at 20°C		In air at 30°C	
						mH/km	mH/km		***	**	***	**
1x35/16	35,0	1150	1000	0,524	0,6707	0,686	0,467	0,123	214	192	233	202
1x50/16	36,5	1300	1000	0,387	0,4954	0,660	0,448	0,135	251	226	279	241
1x70/16	38,0	1550	1000	0,268	0,3430	0,629	0,423	0,151	306	276	348	299
1x95/16	40,0	1850	1000	0,193	0,2470	0,605	0,405	0,166	363	329	421	362
1x120/16	42,0	2150	1000	0,153	0,1958	0,586	0,391	0,180	410	373	483	416
1x150/25	43,5	2550	1000	0,124	0,1587	0,568	0,379	0,194	449	415	540	469
1x185/25	45,0	2950	1000	0,0991	0,1268	0,552	0,367	0,208	503	468	614	536
1x240/25	48,0	3550	1000	0,0754	0,0965	0,532	0,354	0,229	576	541	718	630
1x300/25	50,0	4150	1000	0,0601	0,0769	0,515	0,343	0,248	641	608	813	717
1x400/35	53,5	5300	500	0,0470	0,0602	0,494	0,330	0,276	697	684	904	823
1x500/35	56,5	6300	500	0,0366	0,0468	0,478	0,320	0,301	768	762	1011	929
1x630/35	60,5	7600	500	0,0283	0,0362	0,461	0,310	0,330	858	847	1128	1043

Note
 In ground : Current carrying capacities are valid under the following conditions;
 : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
 In air : 30°C, load factor 1,0
 *** : Flat formation, gap between cables; in air = 1 x Cable outer diameter, in ground = 7 cm
 ** : Trefoil formation
 Number of system : 1

**12/20 kV or 12,7/22 kV XLPE insulated,
round aluminium wire armoured,
single core cables with copper conductor**



Code: N2XSYR(A)Y, CU/XLPE/CWS/PVC/AWA/PVC

Standards: IEC 60502-2, BS 6622

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 12/20 kV
12,7/22 kV
Min. bending radius : 20 x D
D : Cable outer diameter

Application

These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts.

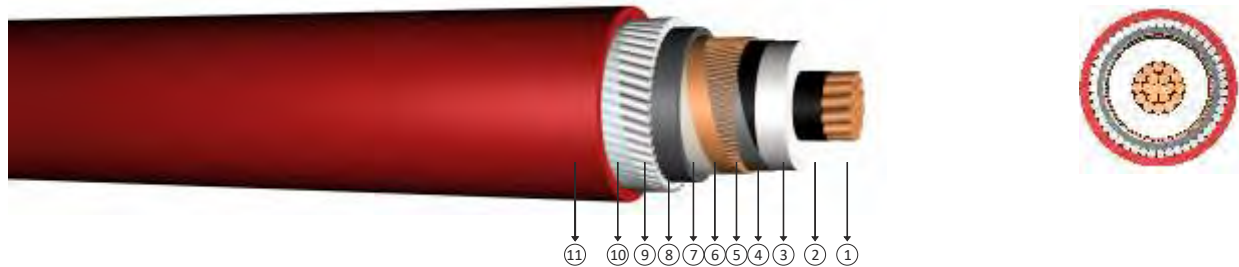
Construction

- ① Stranded copper conductors ④ Outer semi conductive layer ⑦ PP tape ⑩ PP tape
- ② Inner semi conductive layer ⑤ Semi conductive tape ⑧ PVC inner sheath ⑪ PVC outer sheath
- ③ XLPE insulation ⑥ Copper screen ⑨ Round aluminium wire

Dimension and Weights				Electrical Properties									
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	DC Conductor Resistance at 90°C (Max)	Operation Inductance (approx)		Operation Capacitance (approx)	Current Carrying Capacity (A)				
mm²	mm	kg/km	m	Ω/km	Ω/km	*** mH/km	*** mH/km	µF/km	In ground at 20°C		In air at 30°C		
									***	***	***	***	
1x35/16	32,6	1482	1000	0,524	0,6707	0,657	0,367	0,123	213	189	233	199	
1x50/16	34,5	1730	1000	0,387	0,4954	0,632	0,351	0,135	250	223	279	238	
1x70/16	36,4	2020	1000	0,268	0,3430	0,601	0,332	0,151	304	273	348	296	
1x95/16	38,1	2330	1000	0,193	0,2470	0,577	0,318	0,166	361	325	421	358	
1x120/16	39,8	2640	1000	0,153	0,1958	0,558	0,308	0,180	407	368	483	412	
1x150/25	41,1	3040	1000	0,124	0,1587	0,541	0,299	0,194	445	410	540	466	
1x185/25	43,0	3465	1000	0,0991	0,1268	0,525	0,292	0,208	498	463	615	534	
1x240/25	46,8	4290	1000	0,0754	0,0965	0,506	0,284	0,229	569	534	718	627	
1x300/25	48,9	4935	500	0,0601	0,0769	0,490	0,279	0,248	633	601	812	715	
1x400/35	52,4	6045	500	0,0470	0,0602	0,471	0,275	0,276	686	674	904	819	
1x500/35	55,8	7185	500	0,0366	0,0468	0,456	0,270	0,301	756	750	1011	927	
1x630/35	56,0	8660	500	0,0283	0,0362	0,440	0,264	0,330	842	836	1128	1041	

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
*** : Flat formation, gap between cables; in air = 1 x Cable outer diameter, in ground = 7 cm
** : Trefoil formation
Number of system : 1

18/30 kV or 19/33 XLPE insulated, round aluminium wire armoured, single core cables with copper conductor



Code: N2XSYR(A)Y, CU/XLPE/CWS/PVC/AWA/PVC

Standards: IEC 60502-2, BS 6622

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 18/30 kV
19/33 kV
Min. bending radius : 20 x D
D : Cable outer diameter

Application

These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts.

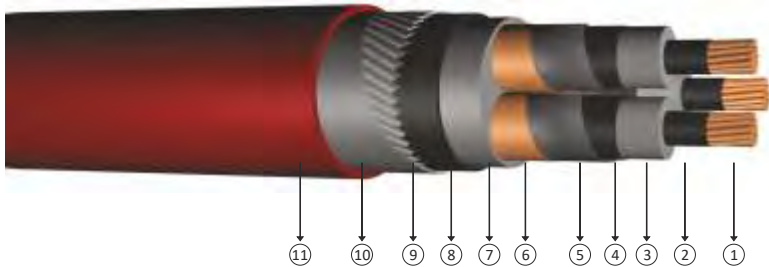
Construction

- 1 Stranded copper conductors
- 2 Inner semi conductive layer
- 3 XLPE insulation
- 4 Outer semi conductive layer
- 5 Semi conductive tape
- 6 Copper screen
- 7 PP tape
- 8 PVC inner sheath
- 9 Round aluminium wire
- 10 PP tape
- 11 PVC outer sheath

Dimension and Weights				Electrical Properties								
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	DC Conductor Resistance at 90°C (Max)	Operation Inductance (approx)		Operation Capacitance (approx)	Current Carrying Capacity (A)			
mm²	mm	kg/km	m	Ω/km	Ω/km	*** mH/km	** mH/km	μF/km	In ground at 20°C		In air at 30°C	
									***	**	***	**
1x35/16	39,0	1927	1000	0,524	0,6707	0,657	0,367	0,123	214	192	233	202
1x50/16	40,0	2100	1000	0,387	0,4954	0,632	0,351	0,135	251	226	279	241
1x70/16	41,8	2400	1000	0,268	0,3430	0,601	0,332	0,151	306	276	348	299
1x95/16	43,5	2735	1000	0,193	0,2470	0,577	0,318	0,166	363	329	421	362
1x120/16	46,4	3220	1000	0,153	0,1958	0,558	0,308	0,180	410	373	483	416
1x150/25	48,0	3660	1000	0,124	0,1587	0,541	0,299	0,194	449	415	540	469
1x185/25	49,6	4090	1000	0,0991	0,1268	0,525	0,292	0,208	503	468	615	536
1x240/25	52,4	4800	1000	0,0754	0,0965	0,506	0,284	0,229	576	541	718	630
1x300/25	54,6	5465	500	0,0601	0,0769	0,490	0,279	0,248	641	608	812	717
1x400/35	58,0	6610	500	0,0470	0,0602	0,471	0,275	0,276	697	684	904	823
1x500/35	61,2	7686	500	0,0366	0,0468	0,456	0,270	0,301	768	762	1011	929
1x630/35	66,0	9308	500	0,0283	0,0362	0,440	0,264	0,330	858	847	1128	1043

Note
In ground : Current carrying capacities are valid under the following conditions;
In air : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
*** : 30°C, load factor 1,0
*** : Flat formation, gap between cables; in air = 1 x Cable outer diameter; in ground = 7 cm
** : Trefoil formation
Number of system : 1

12/20 kV or 12,7/22 kV XLPE insulated,
round steel wire armoured,
three core cables with copper conductor



Code: YXC8VZ2V-R, N2XSEYRY, CU/XLPE/CTS/PVC/SWA/PVC

R: Stranded Conductor	Standards: IEC 60502-2, BS 6622
Technical Data	Application
Max. operating temperature : 90°C	These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts.
Max. short circuit temperature : 250°C (max. 5 sec.)	
Rated voltage : 12/20 kV 12,7/22 kV	
Min. bending radius : 20x D	
D : Cable outer diameter	

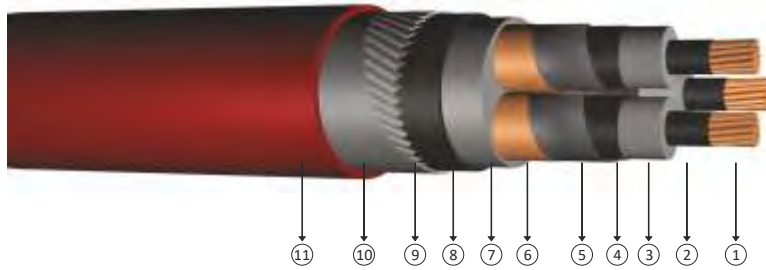
Construction

- 1 Stranded copper conductors
- 2 Inner semi conductive layer
- 3 XLPE insulation
- 4 Outer semi conductive layer
- 5 Semi conductive tape
- 6 Copper screen
- 7 Thermoplastic filler
- 8 PVC inner sheath
- 9 Galvanized round steel wire
- 10 PP Tape
- 11 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES				
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	Operation Inductance (approx)	Operation Capacitance (approx)	Current Carrying Capacity (A)	
mm²	mm	kg/km	m	Ω/km	mH/km	µF/km	In ground at 20°C	In air at 30°C
3x35/16	66,0	6550	500	0,524	0,416	0,141	183	182
3x50/16	69,0	7400	500	0,387	0,395	0,155	216	217
3x70/16	72,0	8500	500	0,268	0,373	0,172	264	269
3x95/16	78,0	10950	250	0,193	0,355	0,191	316	326
3x120/16	82,0	12300	250	0,153	0,340	0,209	360	377
3x150/25	86,0	13850	250	0,124	0,329	0,225	404	426
3x185/25	90,0	15500	250	0,0991	0,319	0,243	457	488
3x240/25	96,0	18250	250	0,0754	0,304	0,273	532	576
3x300/25	102,0	20850	200	0,0601	0,295	0,296	599	654
3x400/35	110,0	25300	200	0,0470	0,284	0,331	685	750

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

18/30 kV or 19/33 kV XLPE insulated, round steel wire armoured, three core cables with copper conductor



Code: YXC8VZ2V-R, N2XSEYRY, CU/XLPE/CTS/PVC/SWA/PVC

R: Stranded Conductor

Standards: IEC 60502-2, BS 6622

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 18/30 kV
19/33 kV
Min. bending radius : 20 x D
D : Cable outer diameter

Application

These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts.

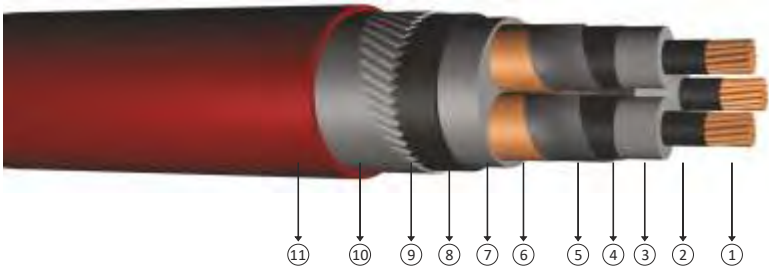
Construction

- 1 Stranded copper conductors
- 2 Inner semi conductive layer
- 3 XLPE insulation
- 4 Outer semi conductive layer
- 5 Semi conductive tape
- 6 Copper screen
- 7 Thermoplastic filler
- 8 PVC inner sheath
- 9 Galvanized round steel wire
- 10 PP Tape
- 11 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES				
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	Operation Inductance (approx)	Operation Capacitance (approx)	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	mH/km	μF/km	In ground at 20°C	In air at 30°C
3x35/16	79,0	9750	500	0,5240	0,457	0,114	183	182
3x50/16	82,5	10750	250	0,3870	0,434	0,124	216	217
3x70/16	86,5	12000	250	0,2680	0,410	0,137	264	269
3x95/16	90,5	13500	250	0,1930	0,389	0,150	316	326
3x120/16	95,0	14950	250	0,1530	0,372	0,163	360	377
3x150/25	98,0	16400	250	0,1240	0,360	0,174	404	426
3x185/25	102,0	18200	250	0,0991	0,348	0,188	457	488
3x240/25	109,5	21250	200	0,0754	0,331	0,209	532	576

Note
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

12/20 kV or 12,7/22 kV XLPE insulated,
round aluminium wire armoured,
three core cables with copper conductor



Code: N2XSEYR(A)Y, CU/XLPE/CTS/PVC/AWA/PVC

R: Stranded Conductor	Standards: IEC 60502-2, BS 6622
Technical Data	Application
Max. operating temperature : 90°C	These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts.
Max. short circuit temperature : 250°C (max. 5 sec.)	
Rated voltage : 12/20 kV 12,7/22 kV	
Min. bending radius : 20 x D	
D : Cable outer diameter	

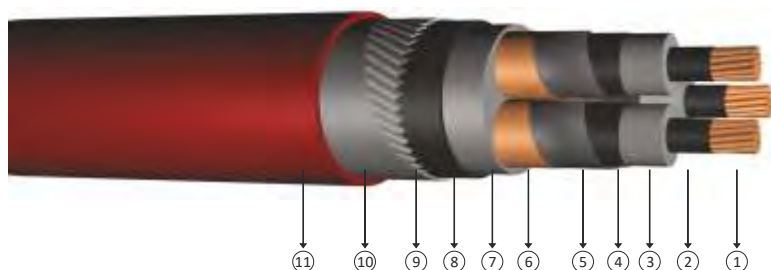
Construction

- 1 Stranded copper conductors
- 2 Inner semi conductive layer
- 3 XLPE insulation
- 4 Outer semi conductive layer
- 5 Semi conductive tape
- 6 Copper screen
- 7 Thermoplastic filler
- 8 PVC inner sheath
- 9 Aluminium round wire
- 10 PP Tape
- 11 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES				
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	Operation Inductance (approx)	Operation Capacitance (approx)	Current Carrying Capacity (A)	
mm²	mm	kg/km	m	Ω/km	mH/km	µF/km	In ground at 20°C	In air at 30°C
3x35/16	66,0	6550	500	0,524	0,416	0,141	183	182
3x50/16	69,0	7400	500	0,387	0,395	0,155	216	217
3x70/16	72,0	8500	500	0,268	0,373	0,172	264	269
3x95/16	78,0	10950	250	0,193	0,355	0,191	316	326
3x120/16	82,0	12300	250	0,153	0,340	0,209	360	377
3x150/25	86,0	13850	250	0,124	0,329	0,225	404	426
3x185/25	90,0	15500	250	0,0991	0,319	0,243	457	488
3x240/25	96,0	18250	250	0,0754	0,304	0,273	532	576
3x300/25	102,0	20850	200	0,0601	0,295	0,296	599	654
3x400/35	110,0	25300	200	0,0470	0,284	0,331	685	750

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

18/30 kV or 19/33 kV XLPE insulated, round aluminium wire armoured, three core cables with copper conductor



Code: N2XSEYR(A)Y, CU/XLPE/CTS/PVC/AWA/PVC

R: Stranded Conductor

Standards: IEC 60502-2, BS 6622

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 18/30 kV
19/33 kV
Min. bending radius : 20 x D
D : Cable outer diameter

Application

These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts.

Construction

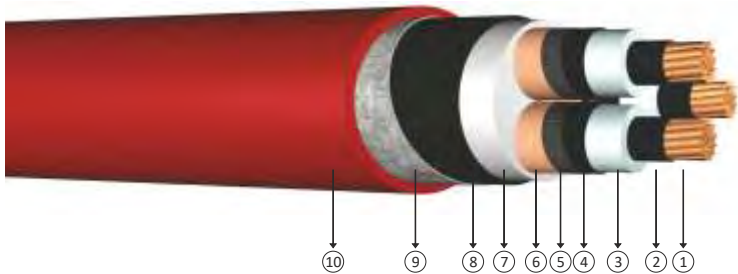
- 1 Stranded copper conductors
- 2 Inner semi conductive layer
- 3 XLPE insulation
- 4 Outer semi conductive layer
- 5 Semi conductive tape
- 6 Copper screen
- 7 Thermoplastic filler
- 8 PVC inner sheath
- 9 Aluminium round wire
- 10 PP Tape
- 11 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES				
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	Operation Inductance (approx)	Operation Capacitance (approx)	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	mH/km	μF/km	In ground at 20°C	In air at 30°C
3x35/16	79,0	9750	500	0,5240	0,457	0,114	183	182
3x50/16	82,5	10750	250	0,3870	0,434	0,124	216	217
3x70/16	86,5	12000	250	0,2680	0,410	0,137	264	269
3x95/16	90,5	13500	250	0,1930	0,389	0,150	316	326
3x120/16	95,0	14950	250	0,1530	0,372	0,163	360	377
3x150/25	98,0	16400	250	0,1240	0,360	0,174	404	426
3x185/25	102,0	18200	250	0,0991	0,348	0,188	457	488
3x240/25	109,5	21250	200	0,0754	0,331	0,209	532	576

Note
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

: Current carrying capacities are valid under the following conditions;
: 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
: 30°C, load factor 1,0
: 1

12/20 kV or 12,7/22 kV XLPE insulated,
double steel tape armoured,
three core cables with copper conductor



Code: YXC8VZ4V-R, N2XSEYBY, CU/XLPE/CTS/PVC/STA/PVC

R: Stranded Conductor	Standards: IEC 60502-2, BS 6622
Technical Data	Application
Max. operating temperature : 90°C	These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts.
Max. short circuit temperature : 250°C (max. 5 sec.)	
Rated voltage : 12/20 kV 12,7/22 kV	
Min. bending radius : 20 x D	
D : Cable outer diameter	

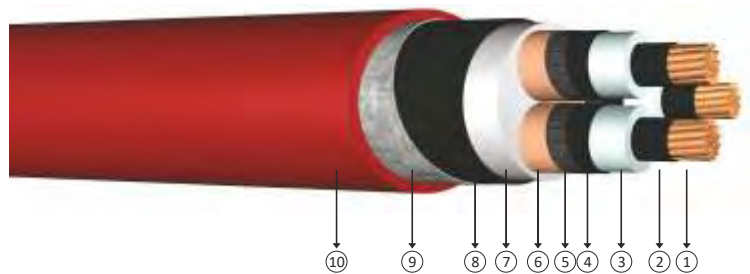
Construction

- 1 Stranded copper conductors
- 2 Inner semi conductive layer
- 3 XLPE insulation
- 4 Outer semi conductive layer
- 5 Semi conductive tape
- 6 Copper screen
- 7 Thermoplastic filler
- 8 PVC inner sheath
- 9 Galvanized double steel tape
- 10 PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES				
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	Operation Inductance (approx)	Operation Capacitance (approx)	Current Carrying Capacity (A)	
mm²	mm	kg/km	m	Ω/km	mH/km	µF/km	In ground at 20°C	In air at 30°C
3x35/16	62,0	5350	500	0,524	0,416	0,141	183	182
3x50/16	62,0	6100	500	0,387	0,395	0,155	216	217
3x70/16	69,0	7100	500	0,268	0,373	0,172	264	269
3x95/16	73,0	8300	500	0,193	0,355	0,191	316	326
3x120/16	77,0	9500	500	0,153	0,340	0,209	360	377
3x150/25	81,0	10900	250	0,124	0,329	0,225	404	426
3x185/25	86,0	13000	250	0,0991	0,319	0,243	457	488
3x240/25	92,5	15550	250	0,0754	0,304	0,273	532	576
3x300/25	98,0	18000	250	0,0601	0,295	0,296	599	654
3x400/35	106,5	22200	200	0,0470	0,284	0,331	685	750

Note : Current carrying capacities are valid under the following conditions;
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

18/30 kV or 19/33 kV XLPE insulated, double steel tape armoured, three core cables with copper conductor



Code: YXC8VZ4V-R, N2XSEYBY, CU/XLPE/CTS/PVC/STA/PVC

R: Stranded Conductor

Standards: IEC 60502-2, BS 6622

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 18/30 kV
19/33 kV
Min. bending radius : 20 x D
D : Cable outer diameter

Application

These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts.

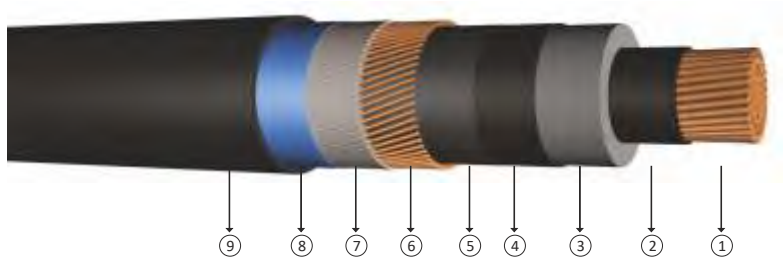
Construction

- ① Stranded copper conductors
- ② Inner semi conductive layer
- ③ XLPE insulation
- ④ Outer semi conductive layer
- ⑤ Semi conductive tape
- ⑥ Copper screen
- ⑦ Thermoplastic filler
- ⑧ PVC inner sheath
- ⑨ Galvanized double steel tape
- ⑩ PVC outer sheath

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES				
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C (Max)	Operation Inductance (approx)	Operation Capacitance (approx)	Current Carrying Capacity (A)	
mm ²	mm	kg/km	m	Ω/km	mH/km	μF/km	In ground at 20°C	In air at 30°C
3x35/16	74,5	7150	500	0,5240	0,457	0,114	-	-
3x50/16	77,5	8050	500	0,3870	0,434	0,124	214	217
3x70/16	81,5	9150	500	0,2680	0,410	0,137	261	269
3x95/16	86,5	11050	250	0,1930	0,389	0,150	313	326
3x120/16	91,0	12400	250	0,1530	0,372	0,163	356	377
3x150/25	94,0	13800	250	0,1240	0,360	0,174	400	426
3x185/25	98,0	15450	250	0,0991	0,348	0,188	441	488
3x240/25	105,5	18250	250	0,0754	0,331	0,209	510	576
3x300/25	110,5	20850	200	0,0601	0,321	0,226	-	-
3x400/35	118,5	25100	200	0,0470	0,307	0,251	-	-

Note
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
Number of system : 1

76/132kV XLPE insulated,
radial and longitudinally sealed,
single core cables with copper conductor



Code: N2XS(FL)2Y

Standards: VDE 0276-632, IEC 60840

Technical Data

Max. operating temperature : 90°C
Max. short circuit temperature : 250°C (max. 5 sec.)
Rated voltage : 76/132kV
Min. bending radius : 20 x D
D : Cable outer diameter

Application

These are cables with low dielectric losses used in energy networks with sudden load changes. Laid in residential or industrial areas, underground or in ducts. Swellable tape prevents cable damage by stopping water or moisture if water ingress to the cable.

Construction

- 1 Stranded aluminium conductor 4 Outer semi conductive layer 7 Semi conductor swelling tape
2 Inner semi conductive layer 5 Semi conductive swelling tape 8 PE coated aluminium foil
3 XLPE insulation 6 Copper screen 9 PE outer sheath

DIMENSION AND WEIGHTS			ELECTRICAL PROPERTIES					
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Operation Capacitance (approx)	DC Conductor Resistance at 20°C (Max)	Current Carrying Capacity (A)			
mm²	mm	kg/km	µF/km	Ω/km	In ground at 20°C	In duct 20°C	In air at 30°C	
							***	**
1x240/25	76,0	7100	0,15	0,0754	525	492	673	601
1x300/25	79,0	7800	0,16	0,0601	593	555	774	688
1x400/35	82,0	8900	0,17	0,0470	675	632	896	792
1x500/35	85,0	10000	0,19	0,0366	767	716	1033	908
1x630/35	89,0	11500	0,21	0,0283	872	811	1200	1045
1x800/35	93,0	13500	0,24	0,0221	979	932	1374	1182
1x1000/50	100,0	15500	0,23	0,0176	1145	1087	1649	1420
1x1200/50	105,0	17500	0,23	0,0151	1233	1212	1801	1539
1x1600/70	112,0	21500	0,25	0,0113	1414	1388	2125	1784
1x2000/95	120,0	25800	0,31	0,0090	1569	1532	2418	2003

Note
In ground : 20°C, 70 cm depth of lay, soil-thermal resistivity 1 K.m/W, load factor 0,7
In air : 30°C, load factor 1,0
*** : Flat formation, gap between cables; in air = 1 x Cable outer diameter, in ground = 7 cm
*** : Trefoil formation
Number of system : 1



Construction

Stranded Copper Conductors are produced by stranding of hard copper wires to obtain maximum tensile strength in accordance with TS-3 standart. Round steel wires are stranded around a central element in one or more layers.

Standards

TS-2, TS-3, TS EN 13602, DIN 48201

Nominal Cross-Section	Number of Wire/Wire Diameter	Overall Diameter of Cables (approx)	Net Weight (approx)	DC Conductor Resistance at 20°C de max	Max Break Strength
mm ²	Number/mm	mm	kg/km	Ω/km	kN
10	7/1,32	3,96	85,8	1,915	3,96
16	7/1,70	5,1	142,4	1,154	6,5
25	7/2,12	6,36	221,4	0,742	9,99
35	7/2,50	7,5	308	0,534	13,91
50	7/3,00	9	443,5	0,369	19,57
50	19/1,80	9	436,3	0,384	19,36
70	19/2,12	10,6	605,2	0,275	26,55
95	19/2,50	12,5	841,7	0,198	36,93
120	19/2,80	14	1056	0,158	45,27
150	37/2,24	15,68	1320	0,127	57,73
185	37/2,50	17,5	1644	0,102	71,91
240	61/2,24	20,2	2179	0,077	95,17
300	61/2,24	22,55	2715	0,062	118,56



Construction

Soft annealed copper conductors are manufactured according to TS EN 13602 and ASTM B3-1990

Standards

TS EN 13602, TS EN 60228

Nominal Cross Section	Number of Wire	Overall Diameter of Cables (Approx)	Net Weight (Approx)	DC Conductor Resistance at 20°C de max
mm ²	Number	mm	kg/km	Ω/km
10	7	3,9	85,2	1,83
16	7	4,90	135,4	1,15
25	7	6,10	214,4	0,727
35	7	7,0	296,8	0,524
50	10	8,05	406,2	0,387
70	14	9,75	586,9	0,268
95	19	11,45	810,6	0,193
120	24	12,9	1030,6	0,153
150	30	14,25	1255	0,124
185	37	15,90	1575,6	0,0991
240	49	18,13	2086	0,0754
300	60	20,45	2620	0,0601



TECHNICAL DATASHEET

(N)2XS(F)Y 1x400/35 mm² 19/33 kV

Design No: 50521.102.2.03

General Properties

Cable Code	:	(N)2XS(F)Y
Applied Standard/Standards	:	IEC 60502-2
Rated Voltage (U ₀ /U)	(kV) :	19/33
Maximum Operating Voltage (U _m)	(kV) :	36
Number of Cores and Nominal Cross Section	(mm ²) :	1x400/35

Construction

Conductor

Type	:	Electrolytic Pure Copper (Compacted)
Class	:	Class 2: Stranded - according to IEC 60228

Inner Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0,45
Thickness (Minimum Point)	(mm) :	0,3

Insulation

Type	:	Cross-linked Polyethylene (XLPE)
Thickness (Nom.)	(mm) :	8,0
Thickness (Min.)	(mm) :	7,1

Outer Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0,45
Thickness (Minimum Point)	(mm) :	0,3
Over Diameter of Screen (Nom.)	(mm) :	41,0

Metallic Screen

Type	:	Concentric Copper Wires + Copper Equalizing Tape
Geometrical Area	(mm ²) :	35

Core Lay-up

Assembly	:	Single Core
Filler	:	N/A
Colours for core identification ^[1]	:	Black

Inner Sheath

Type	:	N/A
------	---	-----

Armour

Type	:	N/A
------	---	-----

Outer Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Red
Thickness (Nom.)	(mm) :	2,5
Thickness (Min.)	(mm) :	2,03
Overall Diameter (Nom.)	(mm) :	50 ± 2
UV Resistant	:	No
Additives	:	Antirodent, Antitermite

Watertightness

Longitudinally Water Blocked Conductor	:	No
Longitudinally Water Blocked Metallic Screen	:	Yes (with swellable compound)
Radially Water Blocked Outer Sheath	:	No

TECHNICAL DATASHEET

(N)2XS(F)Y 1x400/35 mm² 19/33 kV

Design No: 50521.102.2.03

Electrical Properties

Power Freq. Test Voltage (5 min.)	(kV-rms)	:	63
Impulse Test Voltage	(kV-Peak)	:	170
DC Resistance of Conductor at 20°C (Max.)	(Ω/km)	:	0,0470
Maximum Continuous Conductor Temperature	(°C)	:	90
DC Resistance at Maximum Operating Temperature	(Ω/km)	:	0,0602
Operating Capacitance at 20°C	(μF/km)	:	0,251
Operating Inductance (Flat formation)	(mH/km)	:	0,509
Operating Inductance (Trefoil formation)	(mH/km)	:	0,334
Partial Discharge (Max.) (at 1.73U ₀)	(pC)	:	10

Short-Circuit Current Ratings

Maximum Short-Circuit Conductor Temperature	(°C)	:	250
Maximum Short-Circuit Current (Phase to Phase) ^[2]	(for 1 second)	(kA)	57,2
Maximum Short-Circuit Current (Phase to Ground) ^[3]	(for 1 second)	(kA)	4,7

Current Carrying Capacities

In Air ^[4]	Flat formation	(A)	904
	Trefoil formation	(A)	823
Under Ground ^[5]	Flat formation	(A)	697
	Trefoil formation	(A)	684

Flammability Ratings

Flame Retardant	:	According to IEC 60332-1
Fire Retardant	:	N/A

Drum*

Type	:	Wooden
Flange (Wheel) Diameter	(mm)	1700
Outside Width	(mm)	1100
Delivery Length	(m)	500

Other Properties

Minimum Bending Radius	(mm)	:	750
Lowest Installation Temperature	(°C)	:	-5
Net Weight	(kg/km)	:	5168 ± 3%
Gross Weight	(kg/drum)	:	3084 ± 3%

Cable Marking^[1] : [METER] HES [CABLE TYPE] [NUMBER OF CORES] [CROSS SECTION] [OPERATING VOLTAGE] [APPLIED STANDART] [PRODUCTION DATE]

- Notes:
- [1] As per customer request.
 - [2] Initial Temperature: 90°C, Final Temperature: 250°C
 - [3] Initial Temperature: 70°C, Final Temperature: 200°C
 - [4] Load Factor: 1, Ambient Temperature: 30°C
 - [5] Load Factor: 0,7, Depth of laying: 70 cm, Soil Temperature: 20°C, Thermal resistivity of soil: 1 K.m/W
- * For special drum dimensions, please contact HES Kablo

TECHNICAL DATASHEET

(N)2XSEYB(F)Y 3x150/25 mm² 12/20 kV

Design No: M0519.251.1.08

General Properties

Cable Code	:	(N)2XSEYB(F)Y
Applied Standard/Standards	:	IEC 60502-2
Rated Voltage (U ₀ /U)	(kV) :	12/20
Maximum Operating Voltage (U _m)	(kV) :	24
Number of Cores and Nominal Cross Section	(mm ²) :	3x150/25

Construction

Conductor

Type	:	Electrolytic Pure Copper (Compacted)
Class	:	Class 2: Stranded - according to IEC 60228

Inner Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0,5 ±0,1
Thickness (Minimum Point)	(mm) :	0,3

Insulation

Type	:	Cross-linked Polyethylene (XLPE)
Thickness (Nom.)	(mm) :	5,5
Thickness (Min.)	(mm) :	4,85

Outer Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0,45
Thickness (Minimum Point)	(mm) :	0,3
Over Diameter of Screen (Nom.)	(mm) :	27,1

Metallic Screen

Type	:	Concentric Copper Wires + Copper Equalizing Tape
Geometrical Area	(mm ²) :	25

Core Lay-up

Assembly	:	Cores laid up together
Filler	:	Extruded Thermoplastic Filler
Colours for core identification ^[1]	:	Red,yellow,blue

Inner Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Black
Thickness (Nom.)	(mm) :	1,9

Armour

Type	:	Double Steel Tape
Steel Tape Thickness (Nom.)	(mm) :	0,5

Outer Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Red
Thickness (Nom.)	(mm) :	3,4
Thickness (Min.)	(mm) :	2,79
Overall Diameter (Nom.)	(mm) :	80 ± 3
Additives	:	Antirodent, Antitermite

Watertightness

Conductor	:	No
Metallic Screen	:	No
Radially	:	No (Swelling tape over of armour)

TECHNICAL DATASHEET

(N)2XSEYB(F)Y 3x150/25 mm² 12/20 kV

Design No: M0519.251.1.08

Electrical Properties

Power Freq. Test Voltage	(5 min.)	(kV-rms)	: 42
Impulse Test Voltage		(kV-Peak)	: 125
DC Resistance of Conductor at 20°C (Max.)		(Ω/km)	: 0,124
Maximum Continuous Conductor Temperature		(°C)	: 90
DC Resistance at Maximum Operating Voltage		(Ω/km)	: 0,159
Operating Capacitance at 20°C		(uF/km)	: 0,235
Operating Inductance (Flat formation)		(mH/km)	: 0,335
Partial Discharge (Max.)	(at 1.73U ₀)	(pC)	: 10

Short-Circuit Current Ratings

Maximum Short-Circuit Conductor Temperature		(°C)	: 250
Maximum Short-Circuit Current (Phase to Phase) ^[2]	(for 1 second)	(kA)	: 21,4
Maximum Short-Circuit Current (Phase to Ground) ^[3]	(for 1 second)	(kA)	: 3,3

Current Carrying Capacities

In Air ^[4]	Flat formation	(A)	: 426
Under Ground ^[5]	Flat formation	(A)	: 404

Flammability Ratings

Flame Retardant	: According to IEC 60332-1
Fire Retardant	: N/A

Drum*

Type	:	Wooden
Flange (Wheel) Diameter	(mm) :	2200
Outside Width	(mm) :	1450
Delivery Length	(m) :	250

Other Properties

Minimum Bending Radius	(mm)	: 1600
Lowest Installation Temperature	(°C)	: -5
Net Weight	(kg/km)	: 11330 ± 3%
Gross Weight	(kg/drum)	: 3673 ± 3%

Cable Marking^[1] : Cable Code, Standart, Rated Voltage; Cross Section, Copper Cable; XLPE insulated, MoE-IRAQ, 2019, HES KABLO

- Notes:**
- [1] As per customer request.
 - [2] Initial Temperature: 90°C, Final Temperature: 250°C
 - [3] Initial Temperature: 70°C, Final Temperature: 200°C
 - [4] Load Factor: 1, Ambient Temperature: 30°C
 - [5] Load Factor: 0.7, Depth of laying: 70 cm, Soil Temperature: 20°C, Thermal resistivity of soil: 1 K.m/W
- * For special drum dimensions, please contact HES Kablo



TECHNICAL DATASHEET

(N)2XSEYB(F)Y 3x150/35 mm² 19/33 kV

Design No: M0921.643.1.01

General Properties

Cable Code	:	(N)2XSEYB(F)Y
Applied Standard/Standards	:	IEC 60502-2
Rated Voltage (U ₀ /U)	(kV) :	19/33
Maximum Operating Voltage (U _m)	(kV) :	36
Number of Cores and Nominal Cross Section	(mm ²) :	3x150/35

Construction

Conductor

Type	:	Electrolytic Pure Copper (Compacted)
Class	:	Class 2: Stranded - according to IEC 60228

Inner Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0.5 ±0.1
Thickness (Minimum Point)	(mm) :	0,3

Insulation

Type	:	Cross-linked Polyethylene (XLPE)
Thickness (Nom.)	(mm) :	8,0
Thickness (Min.)	(mm) :	7,1

Outer Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0,45
Thickness (Minimum Point)	(mm) :	0,3
Over Diameter of Screen (Nom.)	(mm) :	32,1

Metallic Screen

Type	:	Concentric Copper Wires + Copper Equalizing Tape
Geometrical Area	(mm ²) :	35

Core Lay-up

Assembly	:	Cores laid up together
Filler	:	Extruded Thermoplastic Filler
Colours for core identification ⁽¹⁾	:	Red, Yellow, Blue

Inner Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Black
Thickness (Nom.)	(mm) :	2,2

Armour

Type	:	Double Steel Tape
Steel Tape Thickness (Nom.)	(mm) :	0,8

Outer Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Red
Thickness (Nom.)	(mm) :	4,0
Thickness (Min.)	(mm) :	3,30
Overall Diameter (Nom.)	(mm) :	95 ± 3
Additives	:	Antirodent, Antitermite

Watertightness

Conductor	:	No
Metallic Screen	:	No
Radially	:	No (Swelling tape over of armour)

TECHNICAL DATASHEET

(N)2XSEYB(F)Y 3x150/35 mm² 19/33 kV

Design No: M0921.643.1.01

Electrical Properties

Power Freq. Test Voltage	(5 min.)	(kV-rms)	:	63
Impulse Test Voltage		(kV-Peak)	:	170
DC Resistance of Conductor at 20°C (Max.)		(Ω/km)	:	0,124
Maximum Continuous Conductor Temperature		(°C)	:	90
DC Resistance at Maximum Operating Voltage		(Ω/km)	:	0,159
Operating Capacitance at 20°C		(uF/km)	:	0,178
Operating Inductance (Flat formation)		(mH/km)	:	0,367
Partial Discharge (Max.)	(at 1.73U ₀)	(pC)	:	10

Short-Circuit Current Ratings

Maximum Short-Circuit Conductor Temperature		(°C)	:	250
Maximum Short-Circuit Current (Phase to Phase) ^[2]	(for 1 second)	(kA)	:	21,4
Maximum Short-Circuit Current (Phase to Ground) ^[3]	(for 1 second)	(kA)	:	4,7

Current Carrying Capacities

In Air ^[4]	Flat formation	(A)	:	418
Under Ground ^[5]	Flat formation	(A)	:	400

Flammability Ratings

Flame Retardant	:	According to IEC 60332-1
Fire Retardant	:	N/A

Drum*

Type	:	Wooden
Flange (Wheel) Diameter	(mm)	: 2500
Outside Width	(mm)	: 1700
Delivery Length	(m)	: 250

Other Properties

Minimum Bending Radius	(mm)	:	1900
Lowest Installation Temperature	(°C)	:	-5
Net Weight	(kg/km)	:	14490 ± 3%
Gross Weight	(kg/drum)	:	4573 ± 3%

Cable Marking^[1] : Cable Code, Standart, Rated Voltage; Cross Section, Copper Cable; XLPE insulated, MoE-IRAQ, 2019, HES KABLO

Notes:

- [1] As per customer request.
 - [2] Initial Temperature: 90°C, Final Temperature: 250°C
 - [3] Initial Temperature: 70°C, Final Temperature: 200°C
 - [4] Load Factor: 1, Ambient Temperature: 30°C
 - [5] Load Factor: 0.7, Depth of laying: 70 cm, Soil Temperature: 20°C, Thermal resistivity of soil: 1 K.m/W
- * For special drum dimensions, please contact HES Kablo

TECHNICAL DATASHEET

CU/XLPE/CWS/ST/PVC/AWA/ST/MDPE 1x240/25 mm² 19/33 kV

Design No: H0820.439.1.01R6

General Properties

Cable Code	:	CU/XLPE/CWS/ST/PVC/AWA/ST/MDPE
Applied Standard/Standards	:	BS 6622
Rated Voltage (U ₀ /U)	(kV)	19/33
Maximum Operating Voltage (U _m)	(kV)	36
Number of Cores and Nominal Cross Section	(mm ²)	1x240/25

Construction

Conductor

Type	:	Electrolytic Pure Copper (Compacted)
Class	:	Class 2: Stranded - according to IEC 60228

Inner Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm)	0,5
Thickness (Minimum Point)	(mm)	0,3

Insulation

Type	:	Cross-linked Polyethylene (XLPE)
Thickness (Nom.)	(mm)	8,0
Thickness (Min.)	(mm)	7,1

Outer Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm)	0,45
Thickness (Minimum Point)	(mm)	0,3
Over Diameter of Screen (Nom.)	(mm)	36,3

Semiconductive Tape	(Yes/No)	Yes(Swellable Tape)
---------------------	----------	---------------------

Metallic Screen

Type	:	Concentric Copper Wires + Copper Equalizing Tape
Geometrical Area	(mm ²)	25
Swellable Tape	(Yes/No)	Yes

Core Lay-up

Assembly	:	Single Core
Filler	:	N/A
Colours for core identification ⁽¹⁾	:	Black

Inner Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Black
Thickness (Nom.)	(mm)	1,4

Armour

Type	:	Aluminium Wire
Wire Diameter (Nom.)	(mm)	2,5
Swellable Tape	(Yes/No)	Yes

Outer Sheath

Type	:	Medium-density Polyethylene (MDPE)
Colour	:	Red
Thickness (Nom.)	(mm)	2,6
Thickness (Min.)	(mm)	2,11
Overall Diameter (Nom.)	(mm)	54 ± 3
Semiconductive Layer	:	Graphite Coating

Watertightness

Conductor	:	No
Metallic Screen	:	Yes
Radially	:	No
Armoured	:	Yes

TECHNICAL DATASHEET

CU/XLPE/CWS/ST/PVC/AWA/ST/MDPE 1x240/25 mm² 19/33 kV

Design No: H0820.439.1.01R6

Electrical Properties

Power Freq. Test Voltage	(15 min.)	(kV-rms)	76
Impulse Test Voltage		(kV-Peak)	194
DC Resistance of Conductor at 20°C (Max.)		(Ω/km)	0,0754
Maximum Continuous Conductor Temperature		(°C)	90
DC Resistance at Maximum Operating Voltage		(Ω/km)	0,0965
Operating Capacitance at 20°C		(uF/km)	0,213
Operating Inductance (Flat formation)		(mH/km)	0,560
Operating Inductance (Trefoil formation)		(mH/km)	0,393
Partial Discharge (Max.)	(at 2U ₀)	(pC)	10

Short-Circuit Current Ratings

Maximum Short-Circuit Conductor Temperature		(°C)	250
Maximum Short-Circuit Current (Phase to Phase) ^[2]	(for 1 second)	(kA)	34,3
Maximum Short-Circuit Current (Phase to Ground) ^[3]	(for 1 second)	(kA)	3,3

Current Carrying Capacities

In Air ^[4]	Flat formation	(A)	718
	Trefoil formation	(A)	630
Under Ground ^[5]	Flat formation	(A)	576
	Trefoil formation	(A)	541

Flammability Ratings

Flame Retardant		N/A
Fire Retardant		N/A

Drum*

Type		Wooden
Flange (Wheel) Diameter	(mm)	2400
Outside Width	(mm)	1700
Delivery Length	(m)	1000

Other Properties

Minimum Bending Radius	(mm)	1080
Lowest Installation Temperature	(°C)	-20
Net Weight	(kg/km)	4530 ± 3%
Gross Weight	(kg/drum)	5460 ± 3%

Cable Marking^[1] :

[METER] ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART] HES [NUMBER OF CORES] [CROSS SECTION] [PRODUCTION DATE]
ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART]

- Notes:**
- [1] As per customer request.
 - [2] Initial Temperature: 90°C, Final Temperature: 250°C
 - [3] Initial Temperature: 70°C, Final Temperature: 200°C
 - [4] Load Factor: 1, Ambient Temperature: 30°C
 - [5] Load Factor: 0.7, Depth of laying: 70 cm, Soil Temperature: 20°C, Thermal resistivity of soil: 1 K.m/W
- * For special drum dimensions, please contact HES Kablo

TECHNICAL DATASHEET

CU/XLPE/CWS/ST/PVC/AWA/ST/MDPE 1x400/35 mm² 19/33 kV

Design No: M1122.1089.1.01

General Properties

Cable Code	:	CU/XLPE/CWS/ST/PVC/AWA/ST/MDPE
Applied Standard/Standards	:	BS 6622
Rated Voltage (U ₀ /U)	(kV) :	19/33
Maximum Operating Voltage (U _m)	(kV) :	36
Number of Cores and Nominal Cross Section	(mm ²) :	1x400/35

Construction

Conductor

Type	:	Electrolytic Pure Copper (Compacted)
Class	:	Class 2: Stranded - according to IEC 60228

Inner Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0,45
Thickness (Minimum Point)	(mm) :	0,3

Insulation

Type	:	Cross-linked Polyethylene (XLPE)
Thickness (Nom.)	(mm) :	8,0
Thickness (Min.)	(mm) :	7,1

Outer Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0,45
Thickness (Minimum Point)	(mm) :	0,3
Over Diameter of Screen (Nom.)	(mm) :	41,0

Metallic Screen

Type	:	Concentric Copper Wires + Copper Equalizing Tape
Geometrical Area	(mm ²) :	35

Core Lay-up

Assembly	:	Single Core
Filler	:	N/A
Colours for core identification ^[1]	:	Black

Inner Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Black
Thickness (Min.)	(mm) :	1

Armour

Type	:	Aluminium Wire
Wire Diameter (Nom.)	(mm) :	2,5

Outer Sheath

Type	:	Medium-density Polyethylene (MDPE)
Colour	:	Red
Thickness (Min.)	(mm) :	2,04
Overall Diameter (Nom.)	(mm) :	57 ± 3
UV Resistant	:	No

Watertightness

Longitudinally Water Blocked Conductor	:	No
Longitudinally Water Blocked Metallic Screen	:	Yes (with swellable compound)
Radially Water Blocked Outer Sheath	:	No
Armor	:	Yes (with swellable compound)

TECHNICAL DATASHEET

CU/XLPE/CWS/ST/PVC/AWA/ST/MDPE 1x400/35 mm² 19/33 kV

Design No: M1122.1089.1.01

Electrical Properties

Power Freq. Test Voltage (15 min.)	(kV-rms)	:	76
Impulse Test Voltage	(kV-Peak)	:	194
DC Resistance of Conductor at 20°C (Max.)	(Ω/km)	:	0,0470
Maximum Continuous Conductor Temperature	(°C)	:	90
DC Resistance at Maximum Operating Temperature	(Ω/km)	:	0,0602
Operating Capacitance at 20°C	(μF/km)	:	0,251
Operating Inductance (Flat formation)	(mH/km)	:	0,521
Operating Inductance (Trefoil formation)	(mH/km)	:	0,361
Partial Discharge (Max.) (at 2U ₀)	(pC)	:	10

Short-Circuit Current Ratings

Maximum Short-Circuit Conductor Temperature	(°C)	:	250
Maximum Short-Circuit Current (Phase to Phase) ^[2]	(for 1 second)	(kA)	57,2
Maximum Short-Circuit Current (Phase to Ground) ^[3]	(for 1 second)	(kA)	4,7

Current Carrying Capacities

In Air ^[4]	Flat formation	(A)	904
	Trefoil formation	(A)	823
Under Ground ^[5]	Flat formation	(A)	697
	Trefoil formation	(A)	684

Flammability Ratings

Flame Retardant	:	N/A
Fire Retardant	:	N/A

Drum*

Type	:	Wooden
Flange (Wheel) Diameter	(mm)	2000
Outside Width	(mm)	1160
Delivery Length	(m)	500

Other Properties

Minimum Bending Radius	(mm)	:	1140
Lowest Installation Temperature	(°C)	:	-20
Net Weight of Total Copper	(kg/m)	:	3,744 ± 3%
Net Weight	(kg/km)	:	5907 ± 3%
Gross Weight	(kg/drum)	:	3534 ± 3%

Cable Marking^[1] :

[METER] ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART] HES [NUMBER OF CORES] [CROSS SECTION] [PRODUCTION DATE]
ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART]

Notes:

- [1] As per customer request.
- [2] Initial Temperature: 90°C, Final Temperature: 250°C
- [3] Initial Temperature: 70°C, Final Temperature: 200°C
- [4] Load Factor: 1, Ambient Temperature: 30°C
- [5] Load Factor: 0,7, Depth of laying: 70 cm, Soil Temperature: 20°C, Thermal resistivity of soil: 1 K.m/W
- * For special drum dimensions, please contact HES Kablo

TECHNICAL DATASHEET

CU/XLPE/CWS+CTS/ST/PVC/SWA/ST/MDPE 3x50/25 mm² 12,7/22 kV

Design No: H1219.487.2.02R9

General Properties

Cable Code	:	CU/XLPE/CWS+CTS/ST/PVC/SWA/ST/MDPE
Applied Standard/Standards	:	BS 6622
Rated Voltage (U ₀ /U)	(kV)	12,7/22
Maximum Operating Voltage (U _m)	(kV)	24
Number of Cores and Nominal Cross Section	(mm ²)	3x50/25

Construction

Conductor

Type	:	Electrolytic Pure Copper (Compacted)
Class	:	Class 2: Stranded - according to IEC 60228

Inner Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm)	0,5
Thickness (Minimum Point)	(mm)	0,3

Insulation

Type	:	Cross-linked Polyethylene (XLPE)
Thickness (Nom.)	(mm)	5,5
Thickness (Min.)	(mm)	4,85

Outer Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm)	0,45
Thickness (Minimum Point)	(mm)	0,3

Semi conductive tape	(Yes/No)	Yes(Swellable Tape)
----------------------	----------	---------------------

Metallic Screen

Type	:	Concentric Copper Wires + Copper Equalizing Tape
Geometrical Area	(mm ²)	25

Core Lay-up

Assembly	:	Cores laid up together
Filler	:	PP Yarn
Colours for core identification ¹⁾	:	Red, Yellow, Blue
Semi conductive tape	(Yes/No)	Yes(Swellable Tape)

Inner Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Black
Thickness (Nom.)	(mm)	1,6

Armour

Type	:	Steel Round Wire
Thickness(Nom.)	(mm)	2,5
Swellable tape	(Yes/No)	Yes

Outer Sheath

Type	:	Medium-density Polyethylene (MDPE)
Colour	:	Red
Thickness (Nom.)	(mm)	3,1
Thickness (Min.)	(mm)	2,54
Overall Diameter (Nom.)	(mm)	68 ± 3

Watertightness

Conductor	:	No
Metallic Screen	:	No
Radially	:	No
Armoured	:	Yes

TECHNICAL DATASHEET

CU/XLPE/CWS+CTS/ST/PVC/SWA/ST/MDPE 3x50/25 mm² 12,7/22 kV

Design No: H1219.487.2.02R9

Electrical Properties

Power Freq. Test Voltage	(15 min.)	(kV-rms)	51
Impulse Test Voltage		(kV-Peak)	144
DC Resistance of Conductor at 20°C (Max.)		(Ω/km)	0,387
Maximum Continuous Conductor Temperature		(°C)	90
DC Resistance at Maximum Operating Voltage		(Ω/km)	0,495
Operating Capacitance at 20°C		(uF/km)	0,162
Operating Inductance (Flat formation)		(mH/km)	0,404
Partial Discharge (Max.)	(at 2U ₀)	(pC)	10

Short-Circuit Current Ratings

Maximum Short-Circuit Conductor Temperature		(°C)	250
Maximum Short-Circuit Current (Phase to Phase) ^[2]	(for 1 second)	(kA)	7,1
Maximum Short-Circuit Current (Phase to Ground) ^[3]	(for 1 second)	(kA)	3,3

Current Carrying Capacities

In Air ^[4]	Flat formation	(A)	217
Under Ground ^[5]	Flat formation	(A)	216

Flammability Ratings

Flame Retardant		N/A
Fire Retardant		N/A

Drum

Type		Wooden
Flange (Wheel) Diameter	(mm)	2200
Outside Width	(mm)	1450
Delivery Length	(m)	500

Other Properties

Minimum Bending Radius	(mm)	1020
Lowest Installation Temperature	(°C)	-20
Net Weight	(kg/km)	6150 ± 3%
Gross Weight	(kg/drum)	3915 ± 3%

Cable Marking^[1] :

[METER] ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART] HES [NUMBER OF CORES] [CROSS SECTION] [PRODUCTION DATE]
ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART]

- Notes:**
- [1] As per customer request.
 - [2] Initial Temperature: 90°C, Final Temperature: 250°C
 - [3] Initial Temperature: 70°C, Final Temperature: 200°C
 - [4] Load Factor: 1, Ambient Temperature: 30°C
 - [5] Load Factor: 0.7, Depth of laying: 70 cm, Soil Temperature: 20°C, Thermal resistivity of soil: 1 K.m/W
- * For special drum dimensions, please contact HES Kablo

TECHNICAL DATASHEET

CU/XLPE/CWS+CTS/ST/PVC/SWA/ST/MDPE 3x150/25 mm² 12,7/22 kV

Design No: H1219.487.2.01R9

General Properties

Cable Code	:	CU/XLPE/CWS+CTS/ST/PVC/SWA/ST/MDPE
Applied Standard/Standards	:	BS 6622
Rated Voltage (U ₀ /U)	(kV)	12,7/22
Maximum Operating Voltage (U _m)	(kV)	24
Number of Cores and Nominal Cross Section	(mm ²)	3x150/25

Construction

Conductor

Type	:	Electrolytic Pure Copper (Compacted)
Class	:	Class 2: Stranded - according to IEC 60228

Inner Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm)	0,5
Thickness (Minimum Point)	(mm)	0,3

Insulation

Type	:	Cross-linked Polyethylene (XLPE)
Thickness (Nom.)	(mm)	5,5
Thickness (Min.)	(mm)	4,85

Outer Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm)	0,45
Thickness (Minimum Point)	(mm)	0,3

Semi conductive tape	(Yes/No)	Yes(Swellable Tape)
----------------------	----------	---------------------

Metallic Screen

Type	:	Concentric Copper Wires + Copper Equalizing Tape
Geometrical Area	(mm ²)	25

Core Lay-up

Assembly	:	Cores laid up together
Filler	:	PP Yarn
Colours for core identification ¹⁾	:	Red, Yellow, Blue
Semi conductive tape	(Yes/No)	Yes(Swellable Tape)

Inner Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Black
Thickness (Nom.)	(mm)	1,9

Armour

Type	:	Steel Round Wire
Thickness(Nom.)	(mm)	3,15
Swellable tape	(Yes/No)	Yes

Outer Sheath

Type	:	Medium-density Polyethylene (MDPE)
Colour	:	Red
Thickness (Nom.)	(mm)	3,6
Thickness (Min.)	(mm)	2,96
Overall Diameter (Nom.)	(mm)	84 ± 3

Watertightness

Conductor	:	No
Metallic Screen	:	No
Radially	:	No
Armoured	:	Yes

TECHNICAL DATASHEET

CU/XLPE/CWS+CTS/ST/PVC/SWA/ST/MDPE 3x150/25 mm² 12,7/22 kV

Design No: H1219.487.2.01R9

Electrical Properties

Power Freq. Test Voltage	(15 min.)	(kV-rms)	: 51
Impulse Test Voltage		(kV-Peak)	: 144
DC Resistance of Conductor at 20°C (Max.)		(Ω/km)	: 0,124
Maximum Continuous Conductor Temperature		(°C)	: 90
DC Resistance at Maximum Operating Voltage		(Ω/km)	: 0,159
Operating Capacitance at 20°C		(uF/km)	: 0,235
Operating Inductance (Flat formation)		(mH/km)	: 0,339
Partial Discharge (Max.)	(at 2U ₀)	(pC)	: 10

Short-Circuit Current Ratings

Maximum Short-Circuit Conductor Temperature		(°C)	: 250
Maximum Short-Circuit Current (Phase to Phase) ^[2]	(for 1 second)	(kA)	: 21,4
Maximum Short-Circuit Current (Phase to Ground) ^[3]	(for 1 second)	(kA)	: 3,3

Current Carrying Capacities

In Air ^[4]	Flat formation	(A)	: 426
Under Ground ^[5]	Flat formation	(A)	: 404

Flammability Ratings

Flame Retardant	: N/A
Fire Retardant	: N/A

Drum *

Type	:	Wooden
Flange (Wheel) Diameter	(mm) :	2700
Outside Width	(mm) :	1900
Delivery Length	(m) :	500

Other Properties

Minimum Bending Radius	(mm)	: 1260
Lowest Installation Temperature	(°C)	: -20
Net Weight	(kg/km)	: 11110 ± 3%
Gross Weight	(kg/drum)	: 6705 ± 3%

Cable Marking^[1] :

[METER] ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART] HES [NUMBER OF CORES] [CROSS SECTION] [PRODUCTION DATE]
ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART]

Notes:

- [1] As per customer request.
- [2] Initial Temperature: 90°C, Final Temperature: 250°C
- [3] Initial Temperature: 70°C, Final Temperature: 200°C
- [4] Load Factor: 1, Ambient Temperature: 30°C
- [5] Load Factor: 0.7, Depth of laying: 70 cm, Soil Temperature: 20°C, Thermal resistivity of soil: 1 K.m/W
- * For special drum dimensions, please contact HES Kablo



TECHNICAL DATASHEET

CU/XLPE/CWS+CTS/ST/PVC/SWA/ST/MDPE 3x185/25 mm² 12,7/22 kV

Design No: H1219.487.1.01R8

General Properties

Cable Code	:	CU/XLPE/CWS+CTS/ST/PVC/SWA/ST/MDPE
Applied Standard/Standards	:	BS 6622
Rated Voltage (U ₀ /U)	(kV) :	12,7/22
Maximum Operating Voltage (U _m)	(kV) :	24
Number of Cores and Nominal Cross Section	(mm ²) :	3x185/25

Construction

Conductor

Type	:	Electrolytic Pure Copper (Compacted)
Class	:	Class 2: Stranded - according to IEC 60228

Inner Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0,45
Thickness (Minimum Point)	(mm) :	0,3

Insulation

Type	:	Cross-linked Polyethylene (XLPE)
Thickness (Nom.)	(mm) :	5,5
Thickness (Min.)	(mm) :	4,85

Outer Semiconducting Screen

Type	:	Semiconductive XLPE
Thickness (Nom.)	(mm) :	0,45
Thickness (Minimum Point)	(mm) :	0,3
Over Diameter of Screen (Nom.)	(mm) :	28,6
Swellable & semiconductive tape	:	Yes

Metallic Screen

Type	:	Concentric Copper Wires + Copper Equalizing Tape
Geometrical Area	(mm ²) :	25

Core Lay-up

Assembly	:	Cores laid up together
Filler	:	PP Yarn
Colours for core identification ^[1]	:	Red, Yellow, Blue
Swellable tape	:	Yes

Inner Sheath

Type	:	Polyvinyl chloride (PVC)
Colour	:	Black
Thickness (Nom.)	(mm) :	1,9

Armour

Type	:	Steel Round Wire
Thickness(Nom.)	(mm) :	3,15

Outer Sheath

Type	:	Medium-density Polyethylene (MDPE)
Colour	:	Red
Thickness (Nom.)	(mm) :	3,7
Thickness (Min.)	(mm) :	3,05
Overall Diameter (Nom.)	(mm) :	88 ± 3

Watertightness

Conductor	:	No
Metallic Screen	:	No
Radially	:	No
Armoured	:	Yes with swellable tapes



TECHNICAL DATASHEET

CU/XLPE/CWS+CTS/ST/PVC/SWA/ST/MDPE 3x185/25 mm² 12,7/22 kV

Design No: H1219.487.1.01R8

Electrical Properties

Power Freq. Test Voltage	(15 min.)	(kV-rms)	:	51
Impulse Test Voltage		(kV-Peak)	:	144
DC Resistance of Conductor at 20°C (Max.)		(Ω/km)	:	0,0991
Maximum Continuous Conductor Temperature		(°C)	:	90
DC Resistance at Maximum Operating Voltage		(Ω/km)	:	0,1268
Operating Capacitance at 20°C		(uF/km)	:	0,253
Operating Inductance (Flat formation)		(mH/km)	:	0,327
Partial Discharge (Max.)	(at 2U ₀)	(pC)	:	10

Short-Circuit Current Ratings

Maximum Short-Circuit Conductor Temperature		(°C)	:	250
Maximum Short-Circuit Current (Phase to Phase) ^[2]	(for 1 second)	(kA)	:	26,4
Maximum Short-Circuit Current (Phase to Ground) ^[3]	(for 1 second)	(kA)	:	3,3

Current Carrying Capacities

In Air ^[4]	Flat formation	(A)	:	488
Under Ground ^[5]	Flat formation	(A)	:	457

Flammability Ratings

Flame Retardant	:	N/A
Fire Retardant	:	N/A

Drum*

Type	:	Wooden
Flange (Wheel) Diameter	(mm)	: 2800
Outside Width	(mm)	: 1900
Delivery Length	(m)	: 500

Other Properties

Minimum Bending Radius	(mm)	:	1320
Lowest Installation Temperature	(°C)	:	-20
Net Weight	(kg/km)	:	12070 ± 3%
Gross Weight	(kg/drum)	:	7135 ± 3%

Cable Marking^[1] :

[METER] ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART] HES [NUMBER OF CORES] [CROSS SECTION] [PRODUCTION DATE]
ELECTRIC CABLE [OPERATING VOLTAGE] [APPLIED STANDART]

Notes:

- [1] As per customer request.
- [2] Initial Temperature: 90°C, Final Temperature: 250°C
- [3] Initial Temperature: 70°C, Final Temperature: 200°C
- [4] Load Factor: 1, Ambient Temperature: 30°C
- [5] Load Factor: 0.7, Depth of laying: 70 cm, Soil Temperature: 20°C, Thermal resistivity of soil: 1 K.m/W
- * For special drum dimensions, please contact HES Kablo





KALİTE YÖNETİM SİSTEMİ BELGESİ

QUALITY MANAGEMENT SYSTEM CERTIFICATE

EK / APPENDIX



Belge No / Certificate No: KY-054-03/KG-93/09-R15

Belgeli Kuruluş Adı, Adresi:

Name and Address of the Certified Organization:

Belge Kapsamı:

TS EN ISO 9001:2015

MERKEZ:

- TELEFON KABLOLARI
- ALÇAK, ORTA VE YÜKSEK GERİLİM ENERJİ KABLOLARI
- HAVA HATLARINDA KULLANILAN ÖRGÜLÜ BAKIR İLETKENLER
- EMAYE BOBİN TELİ
- FİBER OPTİK KABLOLAR
- HAVA HATLARINDA KULLANILAN ALÜMİNYUM İLETKENLER
- DATA KABLOLARI
- GRANÜL ÜRETİM
- FİBER OPTİK KABLO AKSESUARLARI
- DATA KABLO AKSESUARLARI
- TASARIM VE ÜRETİM

- GÜMRÜK, DIŞ TİCARET, ÜRETİM, LOJİSTİK, YÖNETİM VE İDARİ ORGANİZASYON FAALİYETLERİ
SUNUMU

ŞUBE:

- HAVA HATLARINDA KULLANILAN ALÜMİNYUM İLETKENLİ KABLOLAR
- HAVA HATLARINDA KULLANILAN ÖRGÜLÜ BAKIR İLETKENLER
- BAKIR FİLMAŞIN
- ALÜMİNYUM FİLMAŞIN
- BAKIR TEL
- ALÜMİNYUM TEL
- ÇELİK ÖZLÜ ALÜMİNYUM İLETKENLER
- OPGW FİBER OPTİK KORUMALI İLETKEN
- TASARIM VE ÜRETİM



Belge Tarihi / Date of Certificate: 18.03.2021

HES HACILAR ELEKTRİK SAN. VE TİC. A.Ş.
MERKEZ:ERCİYES MAH. HES CAD. NO:22
HACILAR - KAYSERİ
ŞUBE:OSB 20. CAD. NO:68 MELİKGAZI -
KAYSERİ / TÜRKİYE

Scope of the Certificate:

TS EN ISO 9001:2015

CENTRE:

- DESIGN AND PRODUCTION OF
- PHONE CABLES
- LOW, MEDIUM AND HIGH VOLTAGE POWER CABLES
- STRANDED COPPER CONDUCTOR FOR OVERHEAD LINES
- ENAMELLED COPPER WIRE
- FIBER OPTIC CABLES
- ALUMINIUM CONDUCTORS FOR OVERHEAD LINES
- DATA CABLES
- GRANULE PRODUCTION
- FIBER OPTIC CABLE ACCESSORIES
- DATA CABLE ACCESSORIES

DELIVERY OF

- CUSTOMS, FOREIGN TRADE, PRODUCTION, LOGISTICS, MANAGEMENT AND ADMINISTRATIVE ORGANIZATION ACTIVITIES

BRANCH:

- DESIGN AND PRODUCTION OF
- CABLES WITH ALUMINIUM CONDUCTORS FOR OVERHEAD LINES
- STRANDED COPPER CONDUCTOR FOR OVERHEAD LINES
- COPPER WIRE ROD
- ALUMINIUM WIRE ROD
- COPPER WIRE
- ALUMINIUM WIRE
- STEEL CORE ALUMINIUM CONDUCTORS
- OPGW FIBER OPTIC GROUNDED WIRE CONDUCTOR

38180320211057Si-032



KALİTE YÖNETİM SİSTEMİ BELGESİ

QUALITY MANAGEMENT SYSTEM CERTIFICATE



TÜRK STANDARDLARI ENSTİTÜSÜ
bu belge ile

HES HACILAR ELEKTRİK SAN. VE TİC. A.Ş.
MERKEZ:ERCİYES MAH. HES CAD. NO:22
HACILAR - KAYSERİ
ŞUBE:OSB 20. CAD. NO:68 MELİKGAZI -
KAYSERİ / TÜRKİYE

kuruluşunun TS EN ISO 9001:2015 şartlarına uygun bir KALİTE
YÖNETİM SİSTEMİNE sahip olduğunu onaylar.

Belge kapsamı Ek'te verilmiştir



Bu belge belgelendirme şartlarına
uygunluk sağlandığı sürece geçerlidir.



TÜRK STANDARDLARI ENSTİTÜSÜ
TURKISH STANDARDS INSTITUTION

Kayseri Belgelendirme Müdürü
Kayseri Certification Manager

Ahmedi Mahmut Ulaş

Türk Standardları Enstitüsü Türk Akreditasyon Kurumu TÜRKAK tarafından akredite edilmiştir.
Turkish Standards Institution, has been accredited by the Turkish Accreditation Agency TÜRKAK.

TURKISH STANDARDS INSTITUTION
hereby certifies that the organization

HES HACILAR ELEKTRİK SAN. VE TİC. A.Ş.
MERKEZ:ERCİYES MAH. HES CAD. NO:22
HACILAR - KAYSERİ
ŞUBE:OSB 20. CAD. NO:68 MELİKGAZI -
KAYSERİ / TÜRKİYE

has a QUALITY MANAGEMENT SYSTEM which fulfills
the requirements of the TS EN ISO 9001:2015

Scope of the certificate is given in annex

Belge No / Certificate No
KY-054-03/KG-93/09-R15
Belge Tarihi / Date of Certificate
18.03.2021
Geçerlilik Tarihi / Valid Until
18.03.2024
Revizyon Tarihi / Date of Revision
18.03.2021
İlk Belge Tarihi / Initial Certification Date
15.11.1993

This certificate is valid provided that compliance
with the certification requirement is maintained.

38180320211057Si-032



THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

TSE has issued an IQNet recognized certificate that the organization:

HES HACILAR ELEKTRİK SAN. VE TİC. A.Ş.

MERKEZ:ERCIYES MAH. HES CAD. NO:22 HACILAR - KAYSERİ

ŞUBE:OSB 20. CAD. NO:68 MELİKGAZI -

KAYSERİ / TÜRKİYE

has implemented and maintains a

QUALITY MANAGEMENT SYSTEM

which fulfills the requirements of the following standard:

TS EN ISO 9001:2015

Issued on: 18-03-2021

Expires on: 18-03-2024

This attestation is directly linked to the IQNet Partner's original certificate and shall not be used as a stand-alone document

Registration Number : TR-KY-054-03/KG-93/09-R15



Alex Stoichitoiu
President of IQNet

Ahmedi Mahmut Ulaş
Kayseri Certification Manager

IQNet Partners*:

AENOR Spain AFNOR Certification France APCER Portugal CISQ Italy
CQC China CQM China CQS Czech Republic Cro Cert Croatia DQS Holding GmbH Germany FCAV Brazil
FONDONORMA Venezuela ICONTEC Colombia Inspecta Sertifiointi Oy Finland INTECO Costa Rica
IRAM Argentina JQA Japan KFQ Korea MIRTEC Greece MSZT Hungary Nemko AS Norway NSAI Ireland
NYCE - SIGE México PCBC Poland Quality Austria Austria RR Russia SII Israel SIQ Slovenia
SIRIM QAS International Malaysia SQS Switzerland SRAC Romania TEST St Petersburg Russia TSE Turkey YUQS Serbia
IQNet is represented in the USA by: AFNOR Certification, CISQ, DQS Holding GmbH and NSAI Inc.

* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com





شركة ايمان للمقاولات الكهربائية والتجارة العامة المحدودة

Mobile : +964 750 446 61 19
+964 770 446 61 19
+964 770 100 01 22
+964 750 100 91 50
+964 750 100 91 51
+964 750 555 09 88

Email : info@imancompany.net
iman_firma@yahoo.com

Company Address : Iraq - Erbil
Kuran malchmour street
near ismail yaqube mosque

Cable warehouse Address : Iraq - Erbil
qwer rood - Erbil warehouse complex

Cable warehouse Mobile : +964 750 290 94 95
+964 750 100 91 52

Pole warehouse Mobile : Iraq - Erbil
Kerkuk rood - qushtapa

Pole warehouse Mobile : +964 750 296 81 01
+964 750 100 91 53

موبايل : +964 750 446 61 19
+964 770 446 61 19
+964 770 100 01 22
+964 750 100 91 50
+964 750 100 91 51
+964 750 555 09 88

إيميل : info@imancompany.net
iman_firma@yahoo.com

عنوان الشركة : العراق - اربيل
شارع كوران مخمور
قرب جامع اسماعيل يعقوبي

عنوان مخزن كيبلات : العراق - اربيل
طريق گویر - مجمع مخازن اربيل

رقم مخزن كيبلات : +964 750 290 94 95
+964 750 100 91 52

عنوان مخزن الأعمدة : العراق - اربيل
طريق كركوك - قوشتپه

رقم مخزن الأعمدة : +964 750 296 81 01
+964 750 100 91 53

Iman Company Electrical Contracting And General Trading



www.imancompany.net

