







- |           |  |           |  |
|-----------|--|-----------|--|
| 1974. 4.  | Registered the manufacturing industry of electric supplies on April, 1974.     | 2004. 7.  | Obtained certification of superiority group in a Cable association on July, 2004.                |
| 1988. 5.  | Established Hanmi Cable Co. on May, 1988.                                      | 2004. 12. | Selected the top enterprise of Chungcheongbuk-do on December, 2004.                              |
| 1989. 1.  | Joined Trade Association on January, 1989.                                     | 2005. 4.  | Acquired certification for HFCO Safety on April, 2005.   |
| 1989. 1.  | Exported to Saudi Arabia on January 1989.                                      | 2008. 7.  | Completed the factory of Jincheon and moved on July, 2008.                                       |
| 1989. 8.  | Producing Power Cable on August, 1989.   | 2008. 8.  | Delivered goods to ACSR of Korea Electric Power Corp. on August, 2008.                           |
| 1991. 2.  | Reconverted incorporation to Hanmi Cable Co. on February, 1991.                | 2008. 10. | Acquired certification for developing ACSR/AW-OC of Korea Electric Power Corp. on October, 2008. |
| 1991. 8.  | Completed the factory in Eumseong and moved on August, 1991.                   | 2008. 10. | Established the technological institute attached of an enterprise on October, 2008.              |
| 1992. 11. | Joined a Public Cooperative Association of Korea Cable on November, 1992.      | 2009. 4.  | Obtained INNO-BIZ Venture Business   |
| 1993. 9.  | Starting delivery of goods to Korea Electric Power Corp., on September, 1993.  | 2009. 5.  | Obtained 6/10kV Korean Standard (KS) mark  |
| 1995. 12. | Producing a cable for control on December, 1995.                               | 2009. 5.  | Obtained HFCO, HFCCO Korean Standard (KS) mark   |
| 1996. 1.  | Selected an enterprise appointed for exception from military on January, 1996. | 2009. 5.  | Received the Order of Industrial Service Merit   |
| 1999. 2.  | Producing fire cable on February, 1999.  | 2010. 1.  | Obtained Environmene -Certification of ISO 14001 on January 2010                                 |
| 2000. 12. | Obtained certification of ISO 9002 on December, 2000.                          | 2010. 1.  | Acquired Certification for developing FR CNCO-W of korea Electric power Corp-on Januray. 2010    |
| 2001. 6.  | Selected a hopeful small and medium enterprise on June, 2001.                  | 2010. 12. | Obtained HFIX korean Standard(KS) mark   |
| 2002. 5.  | Producing Plenum cable for Tray on May, 2002.                                  |           |  |

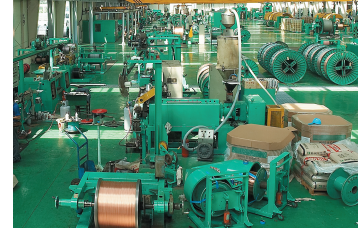
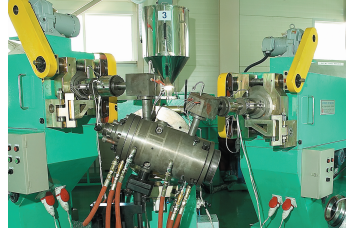
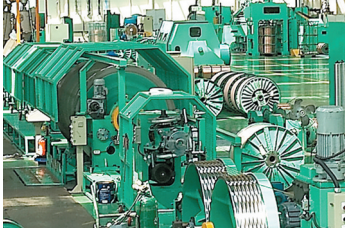


# HANMI

ELECTRIC WIRE & CABLE









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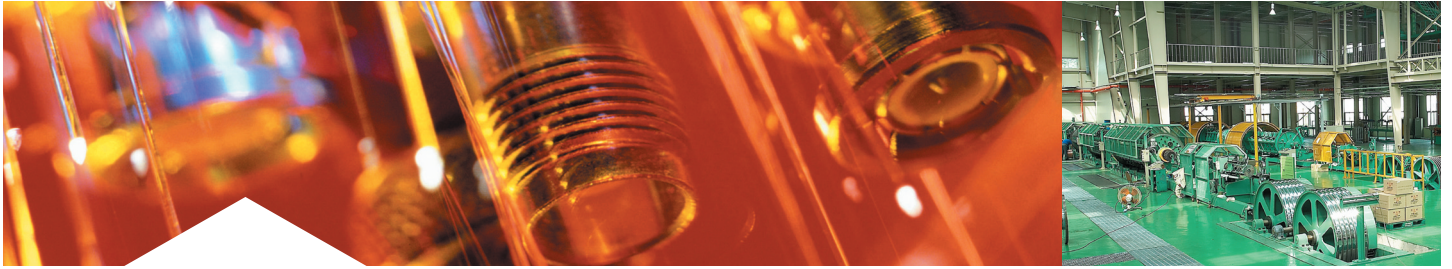
## 저독성 난연 폴리올레핀 케이블 Halogen Free Flame Retardant Polyolefin Cable

0.6/1kV 가교폴리에틸렌 절연 저독성 난연 폴리올레핀 시스 전력용 케이블 (0.6/1kV HFCCO) .....	90
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# Hanmi cable



## 나동선 BARE WIRE

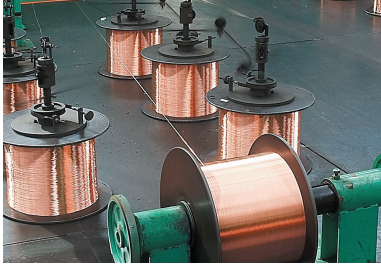
전기용 연동연선(AS)

Annealed Copper Stranded Wire for Electrical Purpose

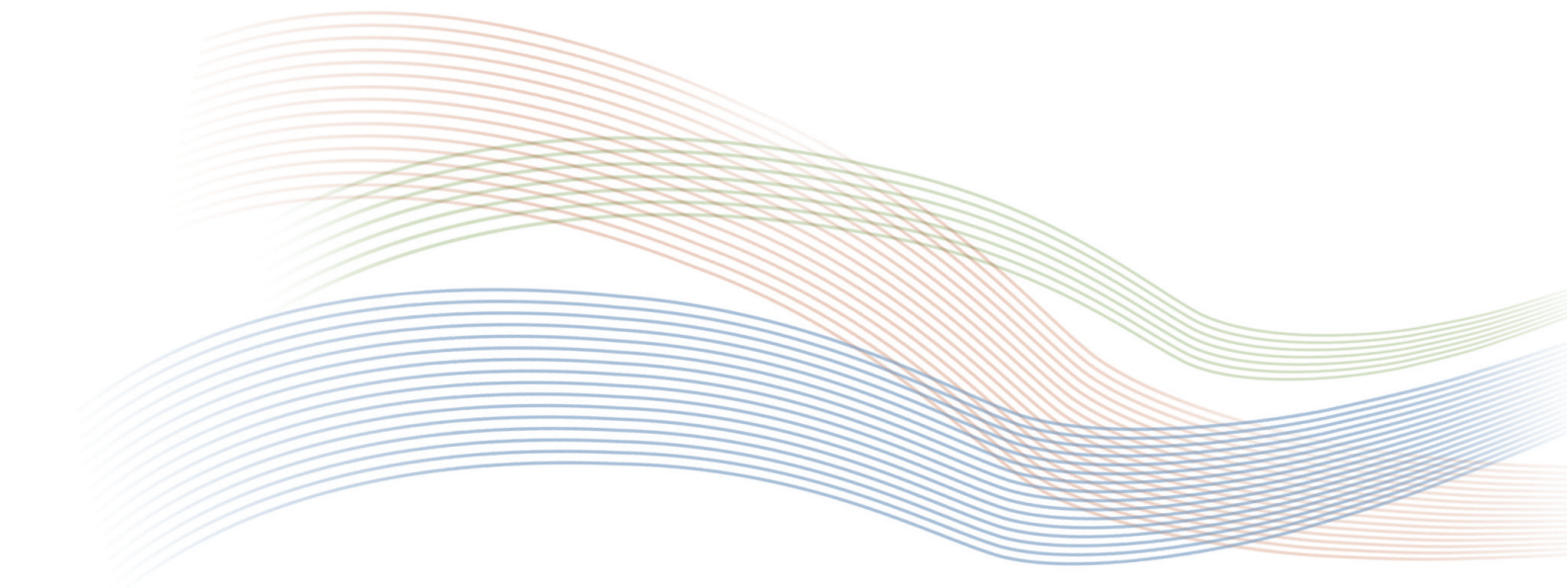
전기용 경동연선(HS)

Hard-Drawn Copper Stranded Wire for Electrical Purpose





# Hanmi Electric wire & Cable





## AS Annealed Copper Stranded Wire for Electrical Purpose

### 전기용연동연선

• 전기용도체및 기타에 사용

• Used for electric conductors

#### ■ 구조

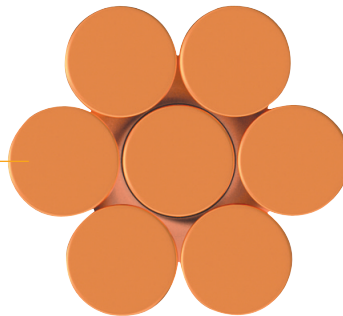
- 1.도체 : 전기용 연동연선
- 2.적용규격 : KS C 3103
- 3.제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

1. Conductor: Annealed copper wire
2. Standard: KS C 3103
3. Certificate: Korean Industrial Standards



전기용 연동연선  
Annealed copper wire



### KSC 3103

공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/지름 Number & Diameter of Wire No/mm	계산단면적 Calculated Sectional Area mm <sup>2</sup>	바깥지름 Overall Diameter mm	표준중량 Standard Weight kg/km	전기저항 Max. Conductor Resistance at 20°C Ω/km	표준길이 Standard Length m
0.9	7/0.4	0.8799	1.2	7.91	20.0	500
1.25	7/0.45	1.113	1.35	10.02	15.8	500
1.4	7/0.5	1.375	1.5	12.37	12.7	500
2.0	7/0.6	1.979	1.8	17.80	8.82	500
3.5	7/0.8	3.519	2.4	31.66	4.96	500
5.5	7/1.0	5.498	3.0	49.46	3.17	500
8	7/1.2	7.917	3.6	71.19	2.20	500
14	7/1.6	14.08	4.8	126.7	1.24	500
22	7/2.0	21.99	6.0	197.9	0.793	300
30	7/2.3	29.09	6.9	261.7	0.600	300
38	7/2.6	37.16	7.8	334.4	0.470	300
50	19/1.8	48.36	9.0	435.1	0.368	1000
60	19/2.0	59.70	10.0	537.0	0.292	1000
80	19/2.3	78.95	11.5	710.3	0.221	1000
100	19/2.6	100.9	13.0	907.6	0.173	600
125	19/2.9	125.5	14.5	1129	0.139	600
150	37/2.3	153.7	16.1	1390	0.114	600
200	37/2.6	196.4	18.2	1776	0.0893	500
250	61/2.3	253.5	20.7	2298	0.0964	300
325	61/2.6	323.8	23.4	2937	0.0543	300
400	61/2.9	402.9	26.1	3654	0.0136	300
500	61/3.2	490.6	28.8	4448	0.0559	300

### IEC 도체

공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/지름 Number & Diameter of Wire No/mm	계산단면적 Calculated Sectional Area mm <sup>2</sup>	바깥지름 Overall Diameter mm	표준중량 Standard Weight kg/km	전기저항 Max. Conductor Resistance at 20°C Ω/km	표준길이 Standard Length m
0.5	7/0.32	0.56	0.96	5.09	36.0	500
0.75	7/0.37	0.752	1.11	6.84	24.5	500
1	7/0.40	0.89	1.20	7.90	18.1	500
1.5	7/0.53	1.54	1.59	13.85	12.1	500
2.5	7/0.67	2.47	2.01	22.14	7.41	500
4	7/0.85	3.97	2.55	35.64	4.61	500
6	7/1.04	5.95	3.12	53.38	3.08	500
10	7/1.35	10.02	4.05	89.92	1.83	500
16	7/1.70	15.89	5.10	142.61	1.15	500
25	7/2.14	25.18	6.42	225.87	0.727	300
35	7/2.52	34.91	7.56	313.57	0.524	300
50	19/1.78	47.28	8.90	426.62	0.387	1000
70	19/2.14	68.34	10.70	616.68	0.268	1000
95	19/1.78	94.76	12.60	854.91	0.193	600
120	37/2.03	119.75	14.21	1084.59	0.153	600
150	37/2.25	147.11	15.75	1331.92	0.124	600
185	37/2.52	184.54	17.64	1671.85	0.0991	500
240	61/2.25	242.54	20.25	2211.04	0.0754	300
300	61/2.52	304.24	22.68	2775.72	0.0601	300
400	61/2.85	389.14	25.65	3549.98	0.0470	300
500	61/3.20	490.59	28.80	4470.04	0.0366	300
630	127/2.52	633.42	32.76	5854.30	0.0283	300
800	127/2.85	81.18	37.05	7481.70	0.0221	300
1000	127/3.20	1021.39	41.60	9469.86	0.0176	300



## HS Hard Drawn Copper Stranded Wire for Electrical Purpose

### 전기용 경동연선

• 가공전선, 배전선등에 사용  
(일반용과 가공송전용이 있음)

• It is used for overhead transmission lines,  
distribution lines and others  
(General Purpose and Overhead Transmission  
Purpose)

#### ■ 구조

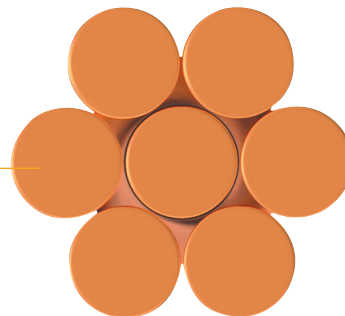
- 1.도체 : 전기용 경동연선
- 2.적용규격 : KS C 3103
- 3.제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

1. Conductor: Hard-Drawn wire
2. Standard: KS C 3103
3. Certificate: Korean Industrial Standards



전기용 경동연선  
Hard-Drawn wire





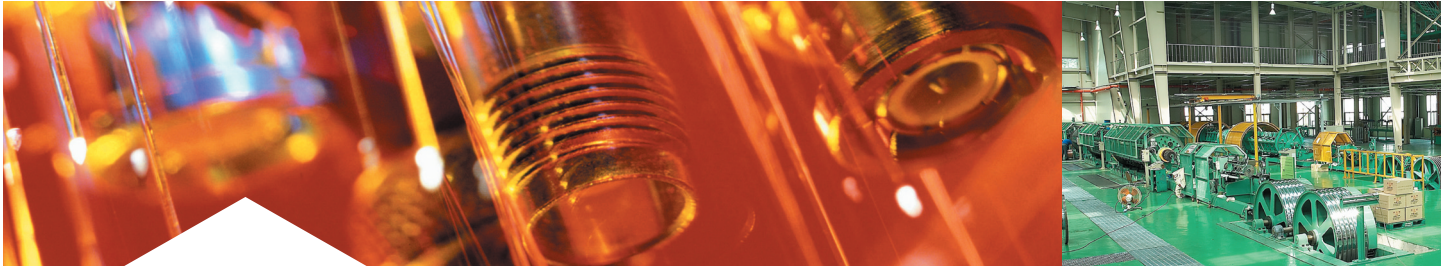
### KS C 3103 1종 일반용 (For General Purpose)

공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/지름 Number & Diameter of Wire No/mm	계산단면적 Calculated Sectional Area mm <sup>2</sup>	바깥지름 Overall Diameter mm	인장하중 Min Tensile Road kgf	표준중량 Standard Weight kg/km	전기저항 Max. Conductor Resistance at 20°C Ωkm	표준길이 Standard Length m
0.9	7/0.4	0.88	1.2	37(362.85)	7.91	20.7	500
1.4	7/0.5	1.38	1.5	58(568.79)	12.37	13.2	500
2.0	7/0.6	1.98	1.8	83(813.95)	17.80	9.18	500
3.5	7/0.8	3.52	2.4	146(1431.8)	31.66	5.17	500
5.5	7/1.0	5.50	3.0	227(2226.1)	49.46	3.31	500
8	7/1.2	7.92	3.6	326(3197.0)	71.19	2.30	500
14	7/1.6	14.08	4.8	574(5629.0)	136.7	1.29	500
22	7/2.0	21.99	6.0	888(8708.3)	197.9	0.818	300
30	7/2.3	29.09	6.9	1170(11474)	26.17	0.618	300
38	7/2.6	37.16	7.8	1480(14514)	334.4	0.484	1000(300)
50	19/1.8	48.36	9.0	1970(19319)	435.1	0.376	1000
60	19/2.0	59.70	10.0	2410(23634)	537.0	0.301	1000
80	19/2.3	78.95	11.5	3160(30989)	710.3	0.228	1000
100	19/2.6	100.9	13.0	4020(39423)	907.6	0.178	600
125	19/2.9	125.5	14.5	4960(48641)	1129	0.143	600
150	37/2.3	153.7	16.1	6160(60409)	1390	0.118	600
200	37/2.6	196.4	18.2	7830(76786)	1776	0.0920	500
250	61/2.3	253.5	20.7	10200(100030)	2298	0.0715	500
325	61/2.6	323.8	23.4	12900(126510)	2937	0.0560	300

### KS C 3103 2종 가공송전용 (For Overhead Transmission Purpose)

공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/지름 Number & Diameter of Wire No/mm	계산단면적 Calculated Sectional Area mm <sup>2</sup>	바깥지름 Overall Diameter mm	인장하중 Min Tensile Road kgf	표준중량 Standard Weight kg/km	전기저항 Max. Conductor Resistance at 20°C Ωkm	표준길이 Standard Length m
22	7/2.0	21.99	6.0	888(8708.3)	197.9	0.818	1200
30	7/2.3	29.09	6.9	1170(11474)	261.7	0.618	1200
38	7/2.6	37.16	7.8	1480(14514)	334.4	0.484	1000
45	7/2.9	46.24	8.7	1830(17946)	416.0	0.389	1000
55	7/3.2	56.29	9.6	2210(21673)	506.4	0.320	1000
75	7/3.7	75.25	11.1	2910(28537)	677.0	0.239	700
100	7/4.3	101.6	12.9	3880(38050)	914.5	0.177	600
125	19/2.9	125.5	14.5	4960(48641)	1129	0.143	1000
150	19/3.2	152.8	16.0	6000(58840)	1375	0.118	1000
180	19/3.5	182.8	17.5	7130(69921)	1645	0.0984	800
200	19/3.7	204.3	18.5	7900(77473)	1838	0.0880	700
240	19/4.0	238.8	20.0	9180(90025)	2148	0.0753	600

# Hanmi cable



## 알루미늄전선 ALUMINIUM WIRE

강심알루미늄 연선(ACSR)

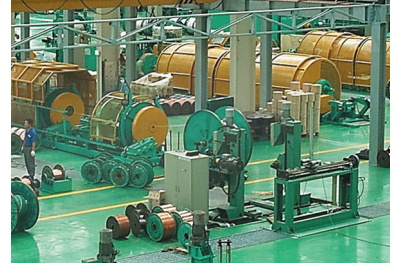
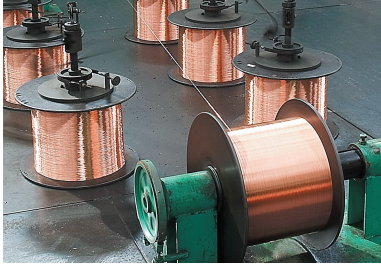
Aluminum Conductor Steel Reinforced Wire

알루미늄 피복강심 알루미늄 절연전선(ACSR/AW-OC)

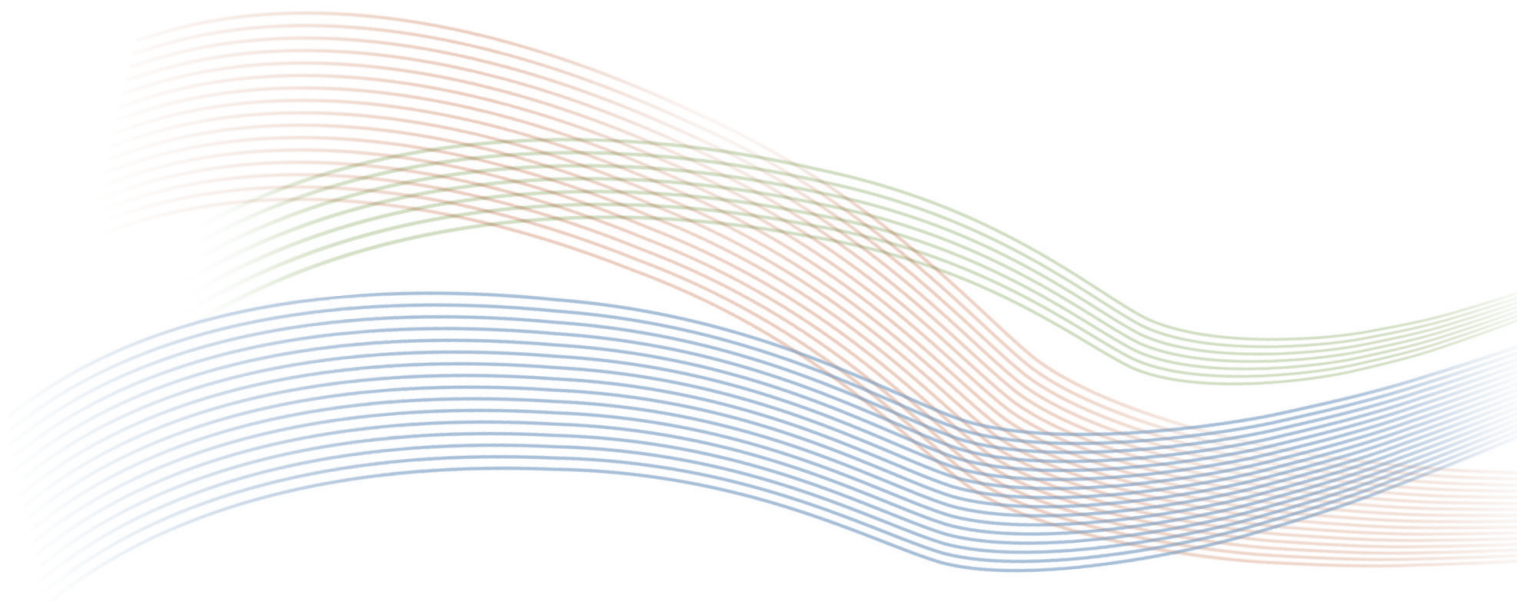
ACSR/AW Outdoor XLPE Insulated Wire







# Hanmi Electric wire & Cable





## ACSR Aluminum Stranded Conductors Steel Reinforced Wire

### 강심알루미늄 연선

• 가공 전선로에 사용한다.

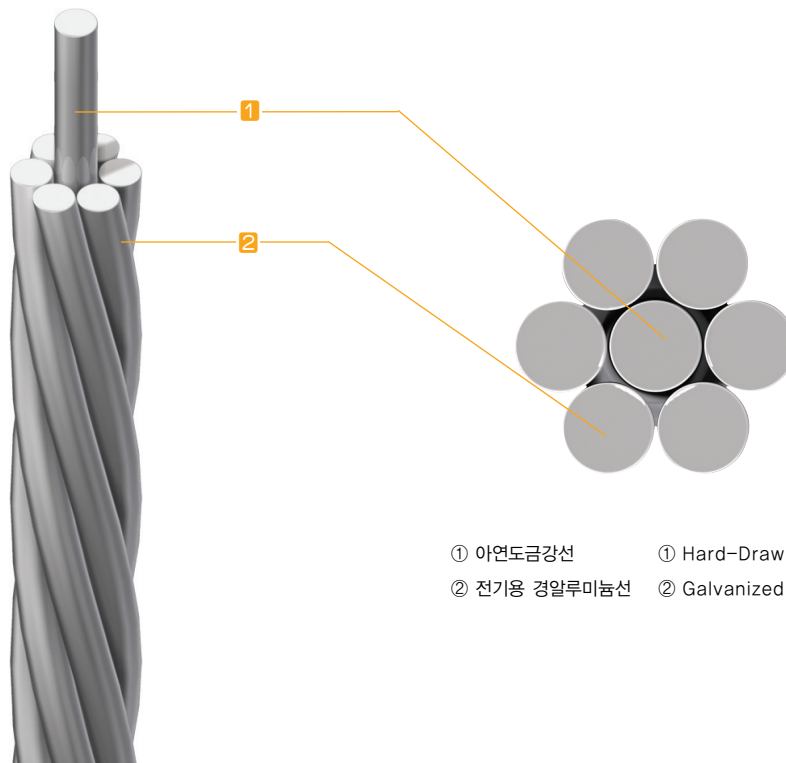
• This wire is used for voltage overhead transmission linet

#### ■ 구조

- 1.도체 : 전기용 경알루미늄선, 아연 도금강선
- 2.적용규격 : KS C 3113, ES6145-0005  
ES6145-0020, ES6145-0023
- 3.제품인증 : 한국산업규격(KS)  
한국전력규격

#### ■ CONSTRUCTION

1. Conductor : Hard-Drawn Aluminum wire  
Galvanized Steel Wire
2. Standard : KS C 3113, ES6145-0005  
ES6145-0020, ES6145-0023
3. Certificate : Korean Industrial Standards  
Korean Electric power corporation



- |              |                            |
|--------------|----------------------------|
| ① 아연도금강선     | ① Hard-Drawn Aluminum wire |
| ② 전기용 경알루미늄선 | ② Galvanized Steel Wire    |



### 강심 알루미늄 연선 (ACSR)

Aluminum Stranded Conductors Steel Reinforced

공칭 단면적 Nominal Sectional Area	소선수/지름		완성품 바깥지름(약) Overall Diameter	인장하중 Tensile Road	허용전류			개산중량 Weight	도체저항 Conductor Resistance at 20°C	표준길이 Standard Length
	Al	St			Current carrying Capacity A					
					40°C	30°C	20°C			
mm <sup>2</sup>	No./mm	mm <sup>2</sup>	mm	kgf				kg/km	Ω/km	m
19	6/2.0	1/2.0	6.0	698	112	124	135	76.12	1.52	1000
32	6/2.6	1/2.6	7.8	1,140	155	172	188	128.6	0.899	1000
58	6/3.5	1/3.5	10.5	1,980	222	248	271	233.1	0.497	1000
*65	12/2.6	7/2.6	13.0	5,415	-	-	-	465.0	0.4565	1000
80	6/4.2	1/4.2	12.6	2,770	-	-	-	335.5	0.345	1000
95	6/4.5	1/4.5	13.5	3,180	296	308	362	385.2	0.301	1300
*97	12/3.2	7/3.2	16.0	10,600	310	348	381	708.9	0.301	1300
*120	12/3.2	7/3.5	17.5	9,590	355	398	436	845.9	0.25	1300
120	30/2.3	7/2.3	16.1	5,550	355	398	436	573.9	0.233	1300
160	30/2.6	7/2.6	18.2	6,990	410	461	505	732.8	0.182	1300
200	30/2.9	7/2.9	20.3	8,620	473	532	583	911.7	0.147	1400
240	30/3.2	7/3.2	22.4	10,210	536	603	662	1,110	0.12	1400
330	26/4.0	7/3.1	26.3	10,930	643	825	796	1,320	0.0888	1000
410	26/4.5	7/3.5	28.5	13,890	749	845	929	1,673	0.0702	1000
*480	45/3.7	7/2.47	29.61	11,800	807	910	1001	1,599	0.05994	1000
520	54/3.5	7/3.5	31.5	15,600	851	960	1057	1,969	0.0559	1000
610	54/3.8	7/3.8	34.2	18,150	947	1070	1177	2,320	0.0474	1000

※한국전력공사의 규격입니다.

### 강심 알루미늄 연선 (Cardinal)

Aluminum Stranded Conductors Steel Reinforced

공칭 단면적 Nominal Sectional Area	연선구성		계산 단면적		최소 인장하중 Min Tensile Load	개산중량 Weight	최대 전기저항 Max. Conductor Resistance at 20°C	바깥지름		길이 Length
	Al	St	Calculated Section Area (mm <sup>2</sup> )					Overall Diameter (mm)		
			Al	St				Al	St	
mm <sup>2</sup>	No./mm	No./mm			kgf	kg/km	Ω/km	Al	St	m
480 Cardinal	54/3.38	7/3.38	484.53	62.81	15,300	1,836	0.0599	30.42	10.14	1,000 2,000

### 알루미늄 피복 강심 알루미늄 연선 (ACSR/AW)

Concentric-Lay Stranded Aluminum Conductors Aluminum-Clad Steel Reinforced

공칭 단면적 Nominal Sectional Area	소선수 및 지름		인장하중 Min Tensile Road	완성외경 (AL) Overall Diameter	허용전류			개산중량 Weight	전기저항 Electric Resistance	표준길이 Standard Length
	No. & Dia. of Wire No./mm				Current Carrying Capacity					
	Al	St			kgf	mm	40°C			
mm <sup>2</sup>								kg/km	Ω/km	m
32	6/2.6	1/2.6	1,140	7.8	159	177	193	120.6	0.852	1,000
58	6/3.5	1/3.5	1,980	10.5	228	255	278	299.7	0.471	1,000
65	12/2.6	7/2.6	5,415	13.0	242	271	296	401	0.380	1,000
95	6/4.5	1/4.5	3,180	13.5	304	340	372	362	0.285	1,000
97	12/3.2	7/3.2	10,600	16.0	313	351	385	608	0.295	1,000
120	12/3.5	7/3.5	9,590	17.5	382	429	470	737	0.210	1,000
160	30/2.6	7/2.6	6,990	18.2	426	478	524	676.4	0.169	1,000
240	30/3.2	7/3.2	10,210	22.4	558	627	689	1024	0.111	1,000
330	26/4.0	7/3.1	10,930	25.3	661	744	817	1239	0.0842	1,000
410	26/4.5	7/3.5	13,890	28.5	770	868	954	1578	0.0665	1,000
480	45/3.7	7/2.47	11,800	29.61	816	921	1012	1544	0.0586	1,000
520	54/3.5	7/3.5	15,600	31.5	869	981	1079	1848	0.0536	1,000



## ACSR/AW-OC

ACSR/AW Outdoor XLPE Insulated wire

### 알루미늄 피복강심 알루미늄 절연전선

• 고압 가공 전선로에 사용한다.

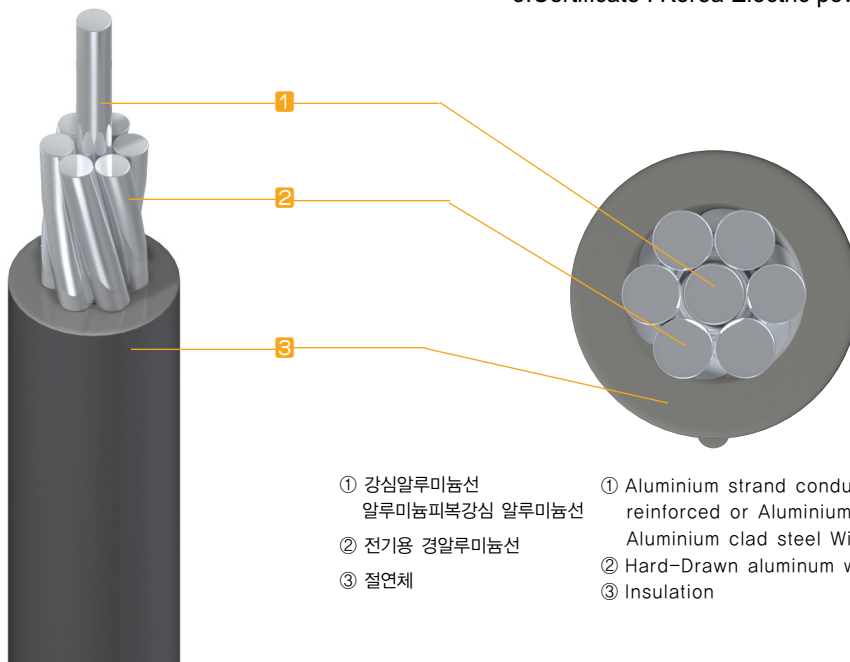
• This wire is used for high voltage overhead transmission lines

#### ■ 구조

- 1.도체 : 전기용 경알루미늄선, 강심 알루미늄선, 알루미늄 피복강심 알루미늄연선
- 2.절연체 : XLPE
- 3.절연체색상 : 흑색
- 4.적용규격 : ES 6145-0006~8
- 5.제품인증 : 한국전력인증

#### ■ CONSTRUCTION

- 1.Conductor : Hard-Drawn aluminum wire or Aluminium strand conductors steel reinforced or Aluminium stranded Conductor Aluminium clad steel Wire reinforced
- 2.Insulation : XLPE
- 3.Color of insulation : Black
- 4.Standard : ES 6145-0006~8
- 5.Certificate : Korea Electric power corporation



- ① 강심알루미늄선  
알루미늄피복강심 알루미늄선
- ② 전기용 경알루미늄선
- ③ 절연체

- ① Aluminium strand conductors steel reinforced or Aluminium stranded Conductor Aluminium clad steel Wire reinforced
- ② Hard-Drawn aluminum wire
- ③ Insulation



알루미늄 피복 강심 알루미늄 절연전선 (ACSR/AW-OC)

ACSR/AW Outdoor XLPE Insulated wires

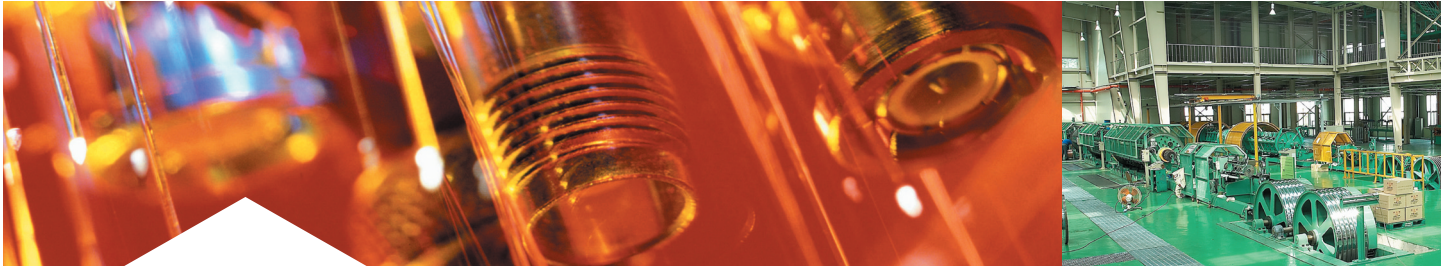
전압 Voltage	단면적 Nominal Sectional Area mm <sup>2</sup>	도체 Conductor			절연 두께 Insulation Thickness mm	완성 외경 Overall Diameter mm	도체 저항 Max. Conductor Resistance at 20°C Ω/km	시험 전압 Test Voltage kV	절연 저항 Min. Insulation Resistance at 20°C MΩ/km	인장 하중 Conductor Min. Tensile Road kgf	개산 중량 Weight kg/km	표준 길이 Standard Length m
		소선수 No. & Dia. of Wire (Al) No/mm	소선수 No. & Dia. of Wire (St) No/mm	외경 Outer Diameter mm								
6.6kV	32	6/SB	1/2.6	7.2	2.0	11.2	0.877	12	1,500	1,090	180	900
	58	6/SB	1/3.5	9.7	2.5	14.7	0.484	12	1,500	1,900	315	600
	95	6/SB	1/3.5	12.0	2.5	17.0	0.302	12	1,500	2,360	445	300
22.9kV	32	6/SB	1/2.6	7.2	3.0	13.2	0.877	25	2,000	1,090	210	900
	58	6/SB	1/3.5	9.7	3.0	15.7	0.484	25	1,500	1,900	330	600
	95	6/SB	1/3.5	12.0	3.5	19.0	0.302	25	1,500	2,360	530	600
	160	18/SB	1/3.2	15.4	4.0	23.4	0.183	25	1,500	3,080	730	600

(특)고압강심 알루미늄 절연전선(ACSR-OC)

ACSR Outdoor XLPE Insulated wires

전압 Voltage	단면적 Nominal Sectional Area mm <sup>2</sup>	도체 Conductor			절연 두께 Insulation Thickness mm	완성 외경 Overall Diameter mm	도체 저항 Max. Conductor Resistance at 20°C Ω/km	시험 전압 Test Voltage kV	절연 저항 Min. Insulation Resistance at 20°C MΩ/km	인장 하중 Conductor Min. Tensile Road kgf	개산 중량 Weight kg/km	표준 길이 Standard Length m
		소선수 No. & Dia. of Wire (Al) No/mm	소선수 No. & Dia. of Wire (St) No/mm	외경 Outer Diameter mm								
6.6kV	32	6/SB	1/2.6	7.2	2.0	11.2	0.928	12	1,500	1,090	185	900
	58	6/SB	1/3.5	9.7	2.5	14.7	0.512	12	1,500	1,900	325	600
	95	6/SB	1/3.5	12.0	2.5	17.0	0.313	12	1,500	2,360	455	300
22.9kV	32	6/SB	1/2.6	7.2	3.0	13.2	0.928	25	2,000	1,090	215	900
	58	6/SB	1/3.5	9.7	3.0	15.7	0.512	25	1,500	1,900	340	600
	95	6/SB	1/3.5	12.0	3.5	19.0	0.313	25	1,500	2,360	540	600
	160	18/SB	1/3.2	15.4	4.0	23.4	0.186	25	1,500	3,080	740	600

# Hanmi cable



## 절연전선 INSULATED WIRE

### 인하용 절연전선

Drop Wire for Pole Transformer (PDC, PDE)

300/500V 기기배선용 단심 비닐절연전선:90℃

300/500V Heat-Resistant PVC Insulated Wire

450/750V 일반용 단심비닐절연전선

450/750V PVC Insulated Wire

450/750V 저독성 가교 폴리올레핀 비닐절연전선(HFIX)

450/750V Halogen Free Crosslinked Polyolefin Insulation Wire

450/750V 일반용 유연성 단심 비닐절연전선(450/750V KIV)

450/750V PVC Insulated Wire for Electrical Apparatus

600V 옥외용 비닐절연전선(OW)

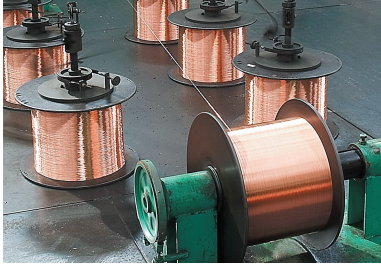
600V Outdoor Weather Proof PVC Insulated

600V 인입용 비닐절연전선(DV)

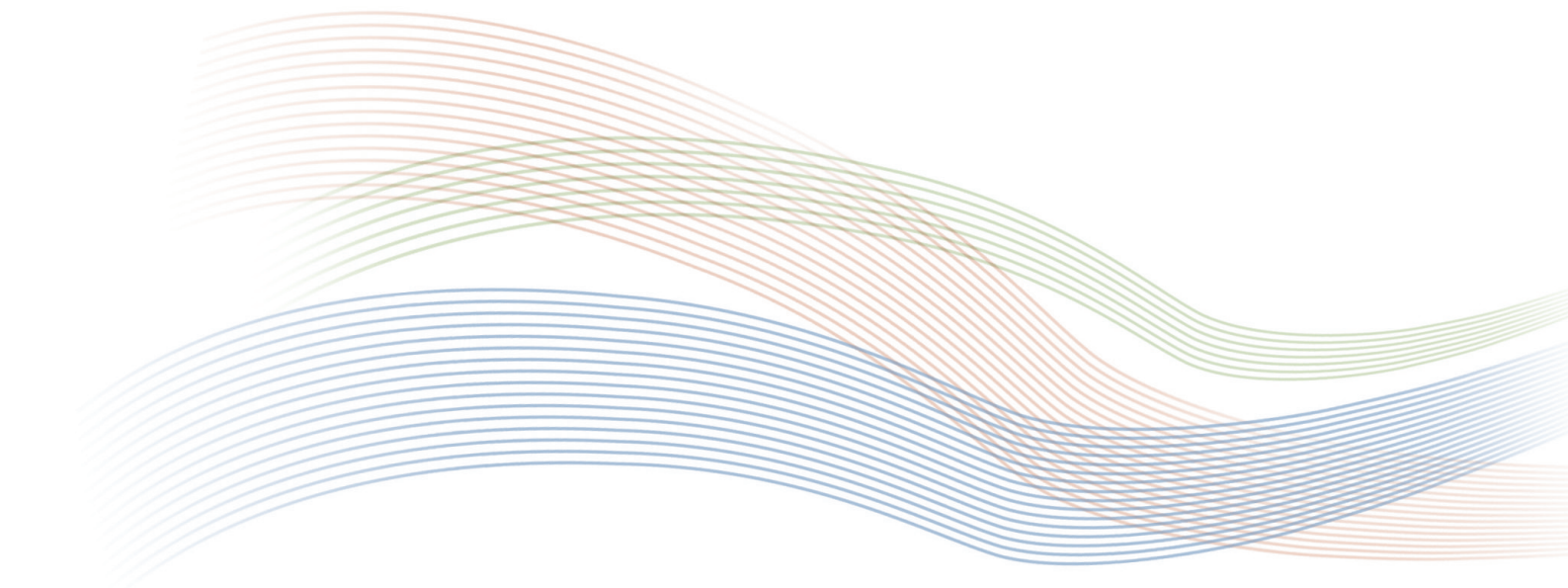
600V PVC Insulated Drop Wire







# Hanmi Electric wire & Cable





## 인하용 절연 전선 Drop Wire for Pole Transformer(PDC, PDE) 22.9kV 고압 인하용 XLPE 절연전선(PDC, PDE)

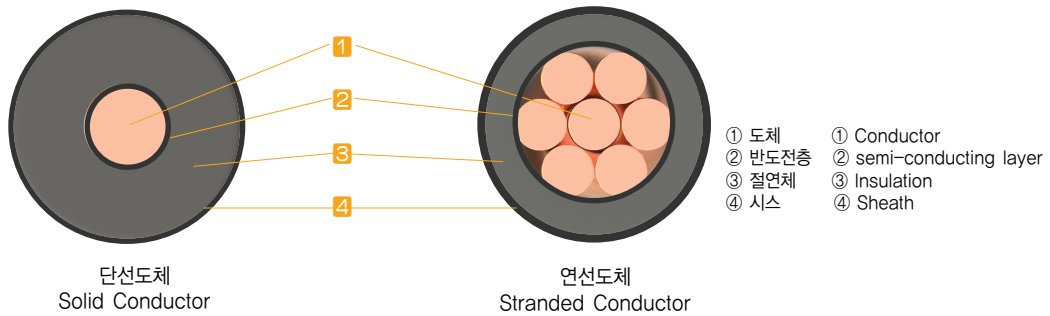
- 고압가공선로에서 주상변압기의 1차 측에 연결하는데 사용되는 전선이다.
- This wire is used for drop-in from high voltage overhead line to the Primary the pole transformer.

### ■ 구조

- 1.도체 : 전기용, 경동선 또는 연동선
- 2.반도전층 : 반도체성 XLPE
- 3.절연체 : XLPE, PE
- 4.절연체 색상 : 흑색
- 5.시스 : 흑색 (PDE에 한함)
- 6.제품인증 : 한미표준

### ■ CONSTRUCTION

- 1.Conductor : Hard-Drawn Copder wire or Annealed Copper wire
- 2.Conductor Screen : Semi-Conducting XLPE
- 3.Insulation : XLPE, PE
- 4.Color of insulation : Black
5. Sheath : Black (PDE only)
- 6.Certificate : HANMI STANDARDS



도체 Conductor			절연체두께 Insulation Thickness mm	완성지름 Approx. Overall Diameter mm	도체저항 Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	표준길이 Standard Length m	비 고
단면적 Sectional Area mm <sup>2</sup>	소선수/지름 No & Diameter of wire No/mm	바깥지름 Outer Diameter						
-	2.0	2.0	3.0	8.0	5.7	12	300	PDC
-	2.6	2.6	3.0	8.6	3.35	12	300	
-	3.2	3.2	3.0	9.2	2.21	12	300	
-	5.0	5.0	4.0	13.0	0.905	12	300	
5.5	7/1.0	3.0	3.0	9.0	3.33	12	300	
8	7/1.2	3.6	3.0	9.6	2.31	12	300	
14	7/1.6	4.8	3.0	11.0	1.30	12	300	
22	7/2.0	6.0	3.0	12.0	0.824	12	300	
30	7/2.3	6.9	3.0	13.0	0.623	12	300	
5.5	7/1.0	3.0	4.0	14.6	3.33	12	300	PDE



# 60227 KS IEC 07

## 300/500V 기기배선용 단심 비닐절연전선:90°C

• 주로 300/500V 이하의 일반 전기공작물이나 전기 기기의 배선에 사용하는 비닐전선으로 내열성 가소제를 첨가한 PVC로 절연한 전선이다.

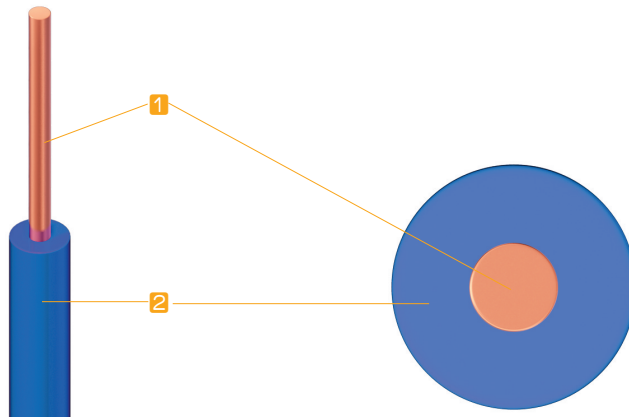
• It is used chiefly in wiring of electric apparatus and equipment under 300/500V grade, and insulated with compound mainly composed of PVC resin including heat-resistant plasticizer.

### ■ 구조

- 1.도체 : 1등급(단선) 도체
- 2.절연체 : PVC/E
- 3.절연체 색상 : 흑,백,적,녹,황,청
- 4.적용규격 : KS C IEC60227-3
- 5.제품인증 : 한국산업규격(KS)

### ■ CONSTRUCTION

- 1.Conductor : Solid(Class 1)
- 2.Insulation : PVC/E
- 3.Color of insulation : Black, White, Red, Green, Yellow and Blue
- 4.Standard : KS C IEC60227-3
- 5.Certificate : Korean Industrial Standards



단선도체  
Solid Conductor

- ① 도체    ① Conductor
- ② 절연체    ② Insulation

### KS C IEC60227-3

도체 Conductor		절연체두께 Insulation Thickness mm	평균완성외경 Mean Overall Diameter		도체저항(20°C) Conductor Resistance Ω/km	절연저항(90°C) Insulation Resistance MΩ · km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
공칭단면적 Nominal Area mm <sup>2</sup>	등급 Class		하한값 Lower Limit mm	상한값 Upper Limit mm				
1.5	1	0.7	2.6	3.2	12.1	0.011	2.5	20
2.5	1	0.8	3.2	3.9	7.41	0.009	2.5	40

## 60227 KS IEC 01

### 450/750V 일반용 단심비닐절연전선

• 주로 450/750V 이하의 옥내배선용으로 사용되며 내후성, 내구성이 양호한 절연전선이다.

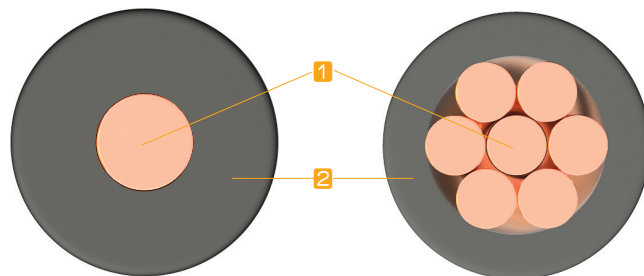
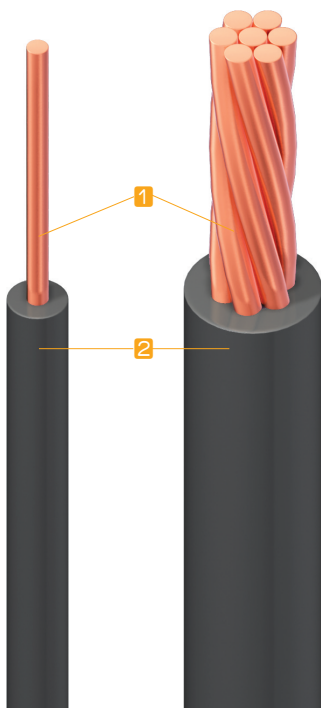
• It is chiefly used for indoor distribution line under 450/750V grade and highly weather proofing and safe use over a long period is assured.

#### ■ 구조

- 1.도체 : 1등급(단선) 또는 2등급(연선) 도체
- 2.절연체 : PVC/C
- 3.절연체 색상 : 흑, 백, 적, 녹, 황, 청
- 4.적용규격 : KS C IEC60227-3
- 5.제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

- 1.Conductor : Solid(Class 1) or Standed Annealed Copper(Class 2)
- 2.Insulation : PVC/C
- 3.Color of insulation : Black, White, Red, Green, Yellow and Blue
- 4.Standard : KS C IEC60227-3
- 5.Certificate : Korean Industrial Standards



단선도체  
Solid Conductor

① 도 체    ① Conductor  
② 절연체    ② Insulation

연선도체  
Stranded Conductor

## KS C IEC60227-3

도체 Conductor		절연체두께 Insulation Thickness	평균완성외경 Mean Overall Diameter		도체저항(20℃) Conductor Resistance	절연저항(70℃) Insulation Resistance	시험전압 Test Voltage	개산중량 Approx. Weight
공칭단면적 Nominal Area	등급 Class		하한값 Lower Limit	상한값 Upper Limit				
mm <sup>2</sup>	-	mm	mm	mm	Ω/km	MΩ · km	kV	kg/km
1.5	1	0.7	2.6	3.2	12.1	0.011	2.5	20
2.5	1	0.8	3.2	3.9	7.41	0.009	2.5	40
4.0	1	0.8	3.6	4.4	4.61	0.0085	2.5	50
6.0	1	0.8	4.1	5.0	3.08	0.0070	2.5	70
10	1	1.0	5.3	6.4	1.83	0.0070	2.5	120
1.5	2	0.7	2.7	3.3	12.1	0.010	2.5	20
2.5	2	0.8	3.3	4.0	7.41	0.009	2.5	40
4	2	0.8	3.8	4.6	4.61	0.0077	2.5	50
6	2	0.8	4.3	5.2	3.08	0.0065	2.5	70
10	2	1.0	5.6	6.7	1.83	0.0065	2.5	120
16	2	1.0	6.4	7.8	1.15	0.0050	2.5	170
25	2	1.2	8.1	9.7	0.727	0.0050	2.5	260
35	2	1.2	9.0	10.9	0.524	0.0043	2.5	350
50	2	1.4	10.6	12.8	0.387	0.0043	2.5	480
70	2	1.4	12.1	14.6	0.268	0.0035	2.5	670
95	2	1.6	14.1	17.1	0.193	0.0035	2.5	920
120	2	1.6	15.6	18.8	0.153	0.0032	2.5	1160
150	2	1.8	17.3	20.9	0.124	0.0032	2.5	1430
185	2	2.0	19.3	23.3	0.0991	0.0032	2.5	1780
240	2	2.0	22.3	26.6	0.0754	0.0032	2.5	2320
300	2	2.4	24.5	29.6	0.0601	0.0030	2.5	2930
400	2	2.6	27.5	33.2	0.0470	0.0028	2.5	3730



## 450/750 HFIX

### 450/750V 저독성 가교 폴리올레핀 절연전선

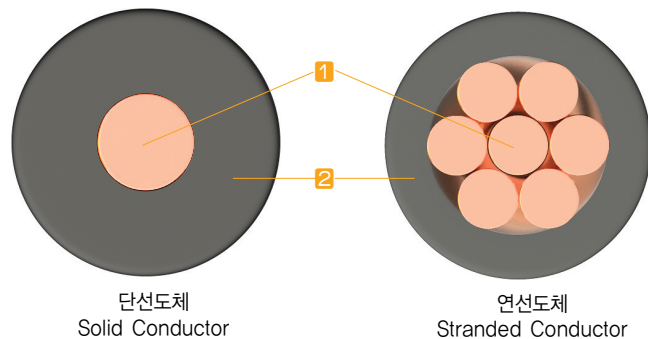
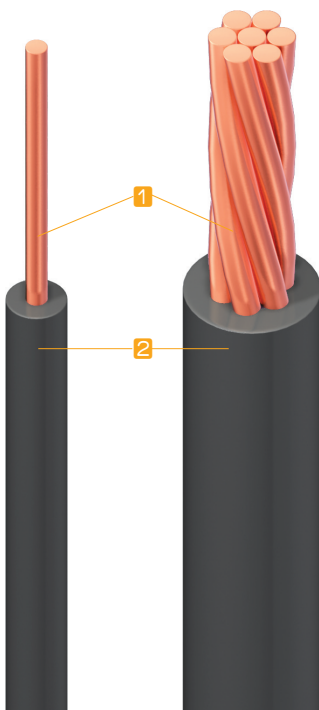
- 주로 450/750V 이하의 옥내배선용으로 사용되는 도체 최고 허용온도 90°C의 저독성 가교 폴리올레핀 절연전선이다.
- It is chiefly used for indoor distribution line under 450/750V grade and less the maximum permissible conductor temperature of 90°C insulated Halogen free crosslinked polyolefin

#### ■ 구조

1. 도체 : 1등급(단선) 또는 2등급(연선) 도체
2. 절연체 : 저독성 가교 폴리올레핀
3. 절연체 색상 : 흑, 백, 적, 녹, 황, 청
4. 적용규격 : KS C 3341
5. 제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

1. Conductor : Solid(Class 1) or Stranded Annealed Copper(Class 2)
2. Insulation : Halogen free Crosslinked Polyolefin
3. Color of insulation : Black, White, Red, Green, Yellow and Blue
4. Standard : KS C 3341
5. Certificate : Korean Industrial Standards



① 도체 ①Conductor  
② 절연체 ②Insulation

## KS C 3341

도체 Conductor		절연체두께 Insulation Thickness	평균완성외경 Mean Overall Diameter		도체저항(20℃) Conductor Resistance	절연저항(70℃) Insulation Resistance	시험전압 Test Voltage	개산중량 Approx. Weight
공칭단면적 Nominal Area	등급 Class		하한값 Lower Limit	상한값 Upper Limit				
mm <sup>2</sup>	-	mm	mm	mm	Ω/km	MΩ · km	kV	kg/km
1.5	1	0.7	2.6	3.2	12.1	0.011	2.5	20
2.5	1	0.8	3.2	3.9	7.41	0.009	2.5	40
4	1	0.8	3.6	4.4	4.61	0.0085	2.5	50
6	1	0.8	4.1	5.0	3.08	0.0070	2.5	70
10	1	1.0	5.3	6.4	1.83	0.0070	2.5	120
1.5	2	0.7	2.7	3.3	12.10	0.010	2.5	20
2.5	2	0.8	3.3	4.0	7.41	0.009	2.5	40
4	2	0.8	3.8	4.6	4.61	0.0077	2.5	50
6	2	0.8	4.3	5.2	3.08	0.0065	2.5	70
10	2	1.0	5.6	6.7	1.83	0.0065	2.5	120
16	2	1.0	6.4	7.8	1.15	0.0050	2.5	170
25	2	1.2	8.1	9.7	0.727	0.0050	2.5	260
35	2	1.2	9.0	10.9	0.524	0.0043	2.5	350
50	2	1.4	10.6	12.8	0.387	0.0043	2.5	480
70	2	1.4	12.1	14.6	0.268	0.0035	2.5	670
95	2	1.6	14.1	17.1	0.193	0.0035	2.5	920
120	2	1.6	15.6	18.8	0.153	0.0032	2.5	1160
150	2	1.8	17.3	20.9	0.124	0.0032	2.5	1430
185	2	2.0	19.3	23.3	0.0991	0.0032	2.5	1780
240	2	2.2	22.0	26.6	0.0754	0.0032	2.5	2320
300	2	2.4	24.5	29.6	0.0601	0.0030	2.5	2930
400	2	2.6	27.5	33.2	0.0470	0.0028	2.5	3730

## KIV 450/750V PVC Insulated wire for Electrical Apparatus

### 450/750V 일반용 유연성 단심 비닐절연전선(450/750V KIV)

• 주로 450/750V 이하의 전기기기 배선에 쓰이는  
가요성을 갖는 절연전선이다.

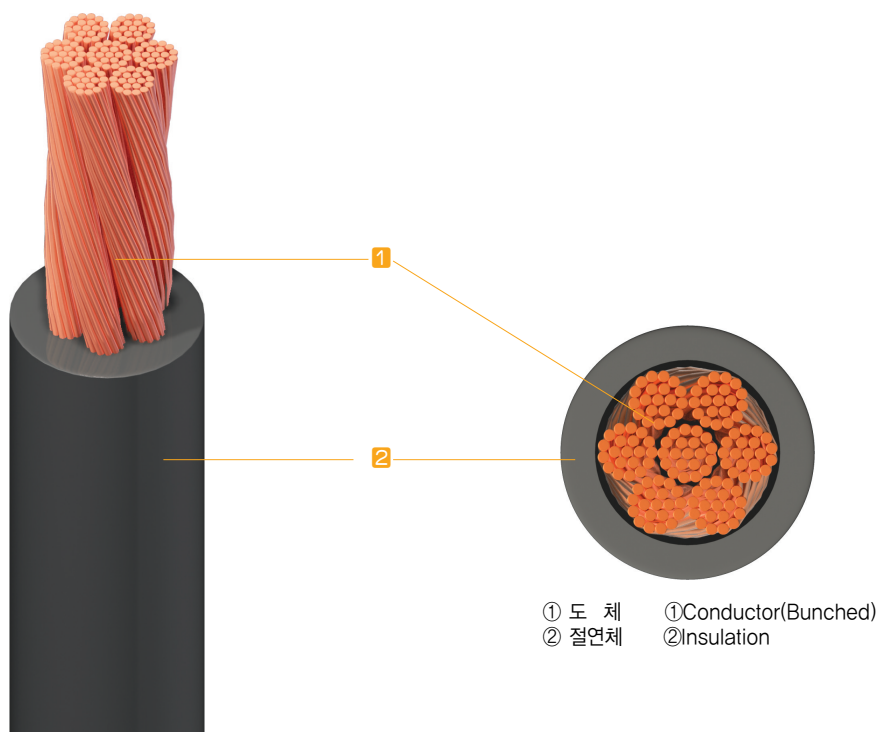
• It is chiefly used in wiring of electric apparatus  
under 450/750V grade, and is flexible.

#### ■ 구조

- 1.도체 : 5등급(집·복합 연선)도체
- 2.절연체 : PVC/C
- 3.절연체 색상 : 흑,백,적,녹,황,청
- 4.적용규격 : KS C IEC 60227-3
- 5.제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

- 1.Conductor : Flexible Stranded Annealed Copper  
(Class 5)
- 2.Insulation : PVC/C
- 3.Color of insulation : Black, White, Red, Green,  
Yellow and Blue
- 4.Standard : KS C IEC 60227-3
- 5.Certificate : Korean Industrial Standards





## KS C IEC 60227-3

도체 Conductor		절연체두께 Insulation Thickness	평균완성외경 Mean Overall Diameter		도체저항(20℃) Conductor Resistance		절연저항(70℃) Insulation Resistance	개산중량 Approx. Weight	표준길이 Standard Length
공칭단면적 Nominal Area mm <sup>2</sup>	등급 Class -		하한값 Lower Limit mm	상한값 Upper Limit mm	동선 Plain Ω/km	도금동선 Tinned Ω/km			
1.5	5	0.7	2.8	3.4	13.3	13.7	0.010	30	200
2.5	5	0.8	3.4	4.1	7.98	8.21	0.009	40	200
4	5	0.8	3.9	4.8	4.95	5.09	0.007	50	100
6	5	0.8	4.4	5.3	3.30	3.39	0.006	80	100
10	5	1.0	5.7	6.8	1.91	1.95	0.0056	130	100
16	5	1.0	6.7	8.1	1.21	1.24	0.0046	180	100
25	5	1.2	8.4	10.2	0.780	0.795	0.0044	280	100
35	5	1.2	9.7	11.7	0.554	0.565	0.0038	370	100
50	5	1.4	11.5	13.9	0.386	0.393	0.0037	500	100
70	5	1.4	13.2	16.0	0.272	0.277	0.0032	700	100
95	5	1.6	15.1	18.2	0.206	0.210	0.0032	970	100
120	5	1.6	16.7	20.2	0.161	0.164	0.0029	1200	100
150	5	1.8	18.6	22.5	0.129	0.132	0.0029	1490	100
185	5	2.0	20.6	24.9	0.106	0.108	0.0029	1850	100
240	5	2.2	23.5	28.4	0.0801	0.0817	0.0028	2440	100

## OW Outdoor Weather Proof PVC Insulated Wire

### 600V 옥외용 비닐 절연 전선

• 저압 가공전선으로 사용되며 전기용 경동선을 도체로 하여 PVC로 피복한 절연전선으로 내후성 및 내구성이 우수하다.

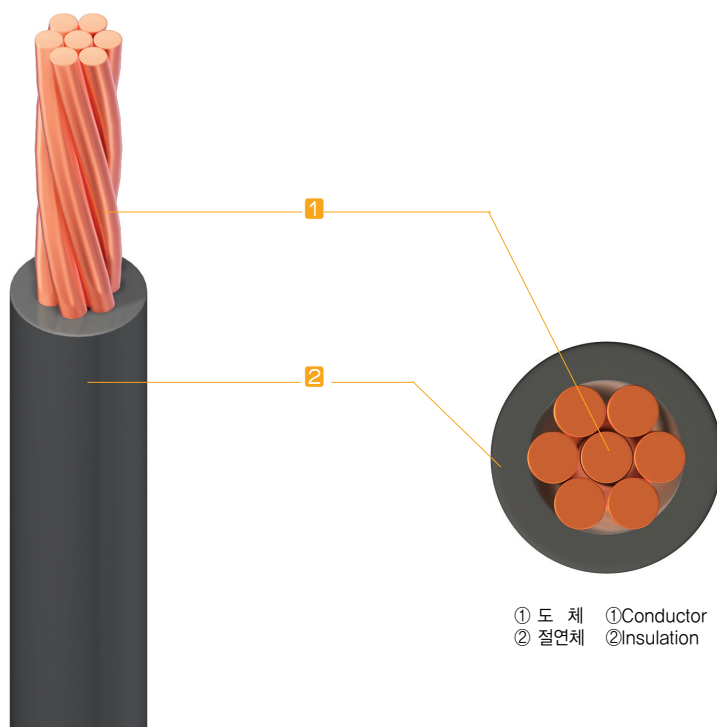
• It is use for overhead low-voltage distribution line and composed of hard-drawn copper wire and PVC insulation. It is highly weather proof and safe over a long period is assured

#### ■ 구조

- 1.도체 : 전기용 경동선, 경동연선
- 2.절연체 : PVC
- 3.절연체 색상 : 흑색
- 4.적용규격 : KS C 3313
- 5.제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

- 1.Conductor : hard-Drawn Copper Wire
- 2.Unsulation : PVC
- 3.Color of insulation : Black
- 4.Standard : KS C 3313
- 5.Certificate : Korean Industrial Standards



### 단선도체 (Solid Conductor)

도체 Conductor		절연체두께 Insulation Thickness mm	완성지름 Approx. Overall Diameter mm	도체저항(20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage V/1min	인장하중 Tensile Load kg	개산중량 Approx. Weight kg/km	표준길이 Standard Length m
도체지름 Diameter mm <sup>2</sup>	단면적 Sectional Area mm <sup>2</sup>							
2.0	3.142	0.4	2.8	5.83	3,000	134.0	32	300
2.6	5.309	0.5	3.6	3.45	3,000	223.2	54	300
3.2	8.042	0.6	4.4	2.28	3,000	333.0	81	200
4.0	12.57	1.0	6.0	1.46	3,000	499.1	135	200
5.0	19.64	1.0	7.4	0.932	3,000	759.8	210	200

### 연선도체 (Stranded Conductor)

도체 Conductor			절연체두께 PVC Insulation Thickness mm	완성지름 Approx. Overall Diameter mm	도체저항 Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage V/1min	인장하중 Tensile Load kg	개산중량 Approx. Weight kg/km	표준길이 Standard Length m
단면적 Sectional Area mm <sup>2</sup>	소선수/지름 No & Diameter of wire No/mm	바깥지름 Outer Diameter							
8	7/1.2	3.6	0.6	4.8	2.41	3,000	326	90	300
14	7/1.6	4.8	1.0	6.8	1.35	3,000	574	160	300
22	7/2.0	6.0	1.2	8.4	0.849	3,000	889	250	300
30	7/2.3	6.9	1.2	9.3	0.642	3,000	1,160	320	300
38	7/2.6	7.8	1.4	11.0	0.502	3,000	1,480	410	300
50	19/1.8	9.0	1.4	12.0	0.394	3,000	1,960	520	300
60	19/2.0	10.0	1.4	13.0	0.313	3,000	2,410	630	300
80	19/2.3	11.5	1.5	14.5	0.237	3,000	3,160	820	300
100	19/2.6	13.0	1.5	16.0	0.185	3,000	4,010	1,030	300



## DV PVC Insulated Drop Wire

### 600V 인입용 비닐 절연전선

• 주로 600V이하의 가공인입선으로 사용되며 각 심이 선명하게 착색되어 있으므로 배선시에 편리하고 피복의 내후성이 매우 우수하다. 따라서 화재 또는 감전의 사고없이 오랫동안 안전 하게 사용할 수 있다.

• It is chiefly used for drop-in from overhead distribution line, and very convenient for wiring, color being easily identified. It is weather proof and can be used for a long period without damage due to fire, electrical shock and other accidents.

#### ■ 구조

- 1.도체 : 전기용 경동선
- 2.절연체 : PVC
- 3.선심식별 : 착색

선심수	색
2심	흑,녹
3심	흑,녹,청

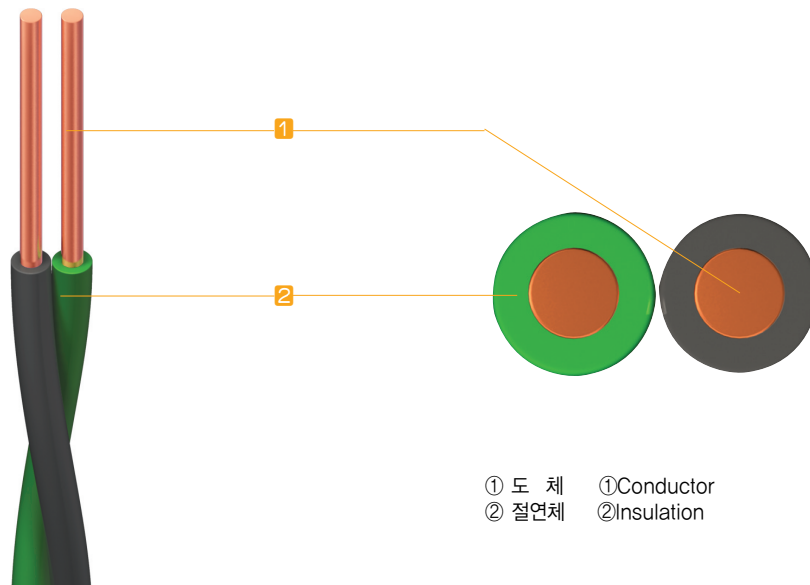
- 4.적용규격 : KS C 3315
- 5.제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

- 1.Conductor : hard-Drawn Copper Wire
- 2.Unsulation : PVC
- 3.Core Identification : Colouring Method

No. of cores	color
2cores	Black,Green
3cores	Black,Green,Blue

- 4.Standard : KS C 3315
- 5.Certificate : Korean Industrial Standards



① 도 체    ①Conductor  
② 절연체    ②Insulation

## 2개연 Duplex(DV-2R)

도체 Conductor			절연체두께 PVC Insulation Thickness mm	완성품의 바깥지름 Approx. Outer Diameter mm	도체저항 Max Conductor Resistance at 20℃ W/km	시험전압		절연저항 Min. Insulation Resistance MW · km		인장하중 Tensile Load kgf	허용전류 A	개산중량 Approx. Weight kg/km	표준길이 Standard Length m
단면적 Sectional Area mm <sup>2</sup>	소선수/지름 No & Diameter of wire No/mm	바깥지름 Outer Diameter mm				도체 상호간 (공중)	도체 상호간 (수중)	20℃	60℃				
								kgf					
—	2.0	2.0	0.8	7.2	5.89	3000	1500	50	0.15	127	28	75	300
—	2.6	2.6	1.0	9.2	3.48	3000	1500	50	0.15	211	38	125	200
—	3.2	3.2	1.2	11.5	2.30	3000	1500	50	0.15	316	40	190	200
8	7/1.2	3.6	1.2	12.0	2.46	3000	1500	50	0.15	326	49	205	300
14	7/1.6	4.8	1.4	15.5	1.38	3000	2000	40	0.1	574	70	340	300
22	7/2.0	6.0	1.6	18.5	0.832	4000	2000	40	0.1	418	92	525	300
*30	7/2.3	6.9	1.6	21.0	0.623	4000	2000	40	0.1	570	111	680	300
38	7/2.6	7.8	1.8	23.0	0.492	4000	2500	40	0.1	722	130	860	300
*50	19/1.8	9.0	1.8	26.0	0.382	4000	2500	30	0.1	900	152	1100	300

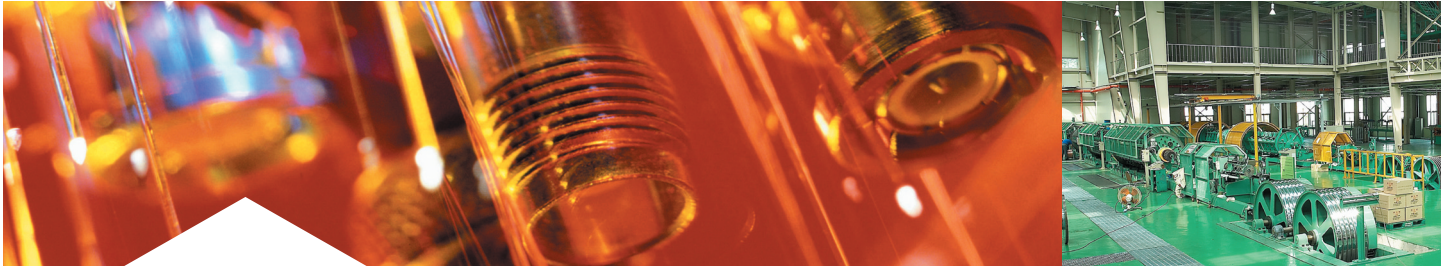
\* : 한국전력공사의 규격입니다.

## 3개연 Duplex(DV-3R)

도체 Conductor			절연체두께 PVC Insulation Thickness mm	완성품의 바깥지름 Approx. Outer Diameter mm	도체저항 Max Conductor Resistance at 20℃ W/km	시험전압		절연저항 Min. Insulation Resistance MW · km		인장하중 Tensile Load kgf	허용전류 A	개산중량 Approx. Weight kg/km	표준길이 Standard Length m
단면적 Sectional Area mm <sup>2</sup>	소선수/지름 No & Diameter of wire No/mm	바깥지름 Outer Diameter mm				도체 상호간 (공중)	도체 상호간 (수중)	20℃	60℃				
								kgf					
—	2.0	2.0	0.8	7.8	5.89	3000	1500	55	0.2	127	25	115	300
—	2.6	2.6	1.0	9.9	3.48	3000	1500	55	0.2	211	34	190	200
—	3.2	3.2	1.2	12.5	2.30	3000	1500	55	0.2	316	44	285	200
8	7/1.2	3.6	1.2	13.0	2.46	3000	1500	55	0.2	326	43	310	300
14	7/1.6	4.8	1.4	16.5	1.38	3000	2000	45	0.15	574	62	510	300
22	7/2.0	6.0	1.6	20.0	0.832	4000	2000	45	0.15	418	62	785	300
*30	7/2.3	6.9	1.6	22.0	0.629	4000	2000	45	0.15	570	97	1025	300
38	7/2.6	7.8	1.8	25.0	0.492	4000	2500	45	0.15	722	113	1290	300
*50	19/1.8	9.0	1.8	28.0	0.382	4000	2500	35	0.15	900	133	1650	300

\* : 한국전력공사의 규격입니다.

# Hanmi cable



## 전력케이블 POWER CABLE

0.6/1kV 가교폴리에틸렌 절연 비닐시스 케이블(0.6/1kV CV)

0.6/1kV XLPE Insulated PVC Sheathed Cable

0.6/1kV 비닐절연 비닐시스 케이블(0.6/1kV VV)

0.6/1kV Grade PVC Insulated and Sheathed Cable

6/10kV 가교폴리에틸렌 절연 비닐시스 케이블(6/10kV CV)

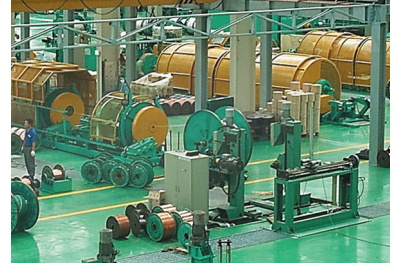
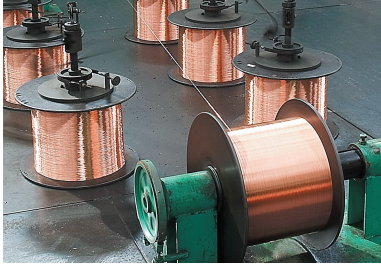
6/10kV XLPE Insulated PVC Sheathed Cable

22.9/kV 동심 중성선 전력 케이블

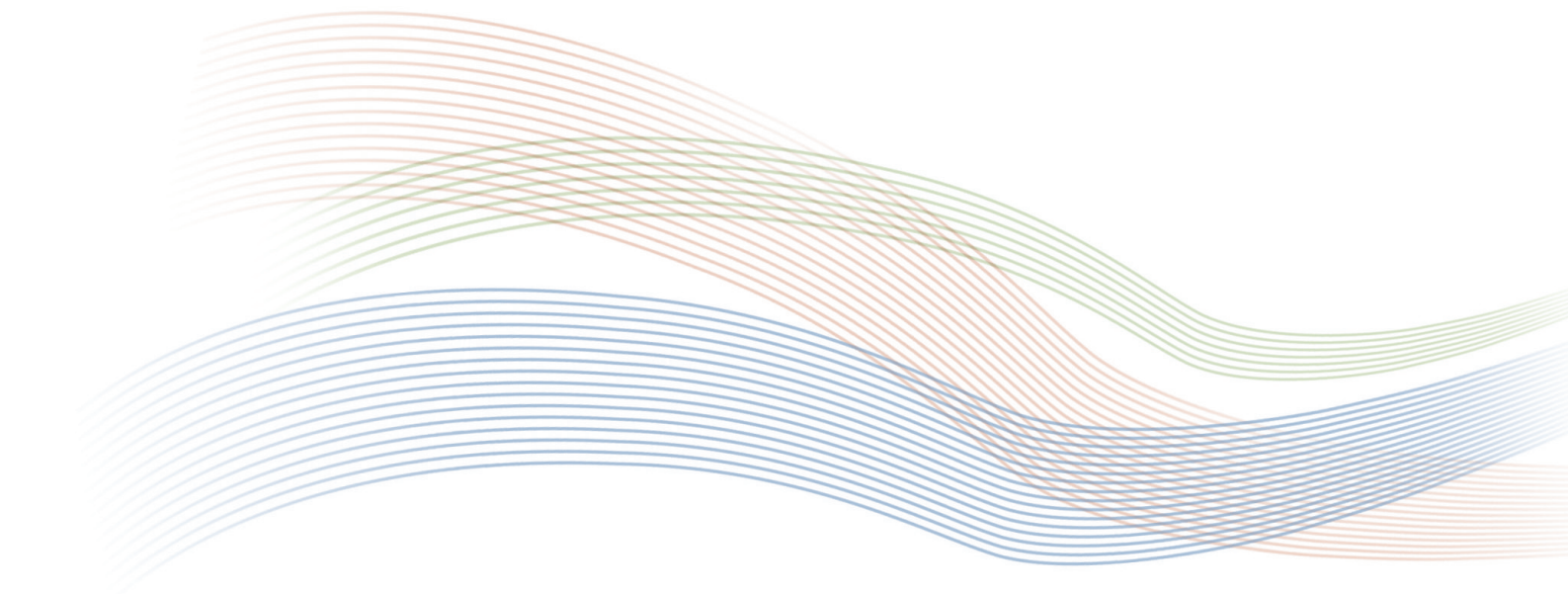
22.9/kV Concentric Neutral Type Power Cable XLPE Insulated PVC Sheathed







# Hanmi Electric wire & Cable



## 0.6/1kV CV 0.6/1kV XLPE Insulated PVC Sheathed Power Cable

### 0.6/1kV 가교폴리에틸렌 절연 비닐시스 케이블(0.6/1kV CV)

- 0.6/1kV 이하의 전력용 또는 제어용 회로에 사용하며 전기적, 물리적, 화학적 특성이 우수한 케이블이다.
- This cable is designed for the purpose of using in power, distribution line or control system under 0.6/1kV having excellent electrical, physical and chemical properties

#### ■ 구조

- 1.도체 : 전기용 연동연선(원형, 압축연선)
- 2.절연체 : XLPE
- 3.선심식별 : 색 테이프

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹

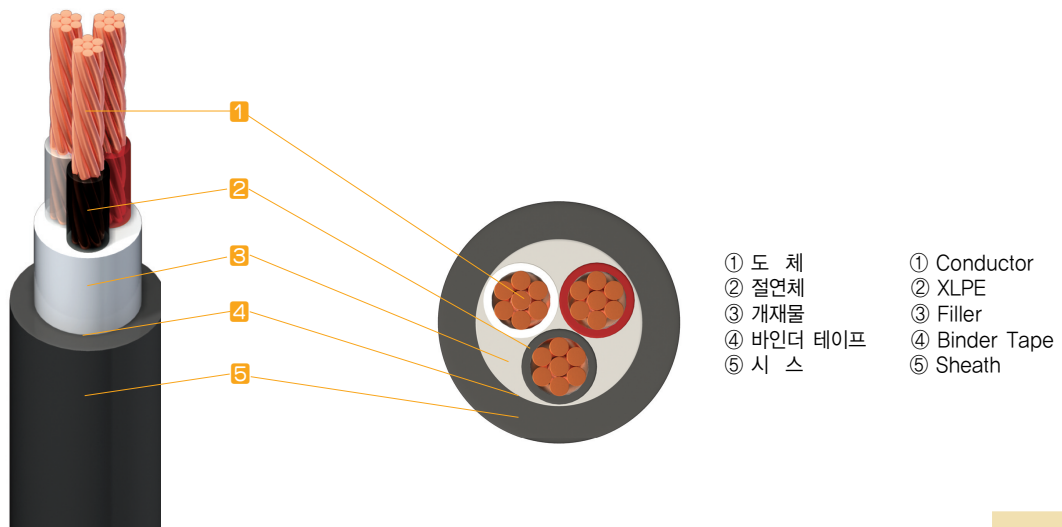
- 4.피복체 : PVC/ST2
- 5.적용규격 : KS C IEC60502-1
- 6.제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

1. Conductor : Annealed Copper wire (Concentric Circular, Compact Circular)
2. Insulation : XLPE
3. Core Identification : Color Tape

No. of cores	color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green

4. Shield : PVC/ST2
5. Standard : KS C IEC60502-1
6. Certificate : Korean Industrial Standards



## KS C IEC60502-1

선심수 No. of Cores  c	도체 Conductor			절연체두께 Insulation Thickness  mm	시스두께 Sheath Thickness  mm	완성외경 Overall Diameter  mm	도체저항(20℃) Conductor Resistance at 20℃  Ω/km	시험전압 Test Voltage  kV	개산중량 Approx. Weight  kg/km
	공칭단면적 Nominal Area  mm <sup>2</sup>	구성 Construction  No/mm	외경 Diameter  mm						
1	1.5	7/0.53	1.59	0.7	1.4	6.3	12.1	3.5	50
	2.5	7/0.67	2.01	0.7	1.4	6.7	7.41	3.5	70
	4	7/0.85	2.55	0.7	1.4	7.2	4.61	3.5	90
	6	7/1.04	3.12	0.7	1.4	7.8	3.08	3.5	110
	10	7/1.35	4.05	0.7	1.4	9.4	1.83	3.5	170
	16	원형압축	4.7	0.7	1.4	10	1.15	3.5	210
	25	원형압축	5.9	0.9	1.4	13.0	0.727	3.5	310
	35	원형압축	6.9	0.9	1.4	14.0	0.524	3.5	400
	50	원형압축	8.1	1.0	1.4	15.0	0.387	3.5	520
	70	원형압축	9.8	1.1	1.4	17.0	0.268	3.5	720
	95	원형압축	11.4	1.1	1.5	19.0	0.193	3.5	970
	120	원형압축	12.9	1.2	1.5	21.0	0.153	3.5	1210
	150	원형압축	14.4	1.4	1.6	23.0	0.124	3.5	1490
	185	원형압축	15.9	1.6	1.6	25.0	0.0991	3.5	1840
	240	원형압축	18.3	1.7	1.7	28.0	0.0754	3.5	2400
	300	원형압축	20.5	1.8	1.8	30.0	0.0601	3.5	2980
	400	원형압축	23.2	2.0	1.9	34.0	0.0470	3.5	3800
	500	원형압축	26.4	2.2	2.0	38.0	0.0366	3.5	4850
630	원형압축	30.2	2.4	2.2	42.0	0.0283	3.5	6240	
2	1.5	7/0.53	1.59	0.7	1.8	11	12.1	3.5	120
	2.5	7/0.67	2.01	0.7	1.8	12	7.41	3.5	150
	4	7/0.85	2.55	0.7	1.8	13	4.61	3.5	190
	6	7/1.04	3.12	0.7	1.8	14	3.08	3.5	240
	10	7/1.35	4.05	0.7	1.8	17	1.83	3.5	330
	16	원형압축	4.7	0.7	1.8	19.0	1.15	3.5	450
	25	원형압축	5.9	0.9	1.8	22.0	0.727	3.5	660
	35	원형압축	6.9	0.9	1.8	24.0	0.524	3.5	880
	50	원형압축	8.1	1.0	1.8	27.0	0.387	3.5	1150
	70	원형압축	9.8	1.1	1.8	31.0	0.268	3.5	1610
	95	원형압축	11.4	1.1	1.9	35.0	0.193	3.5	2170
	120	원형압축	12.9	1.2	2.0	38.0	0.153	3.5	2670
	150	원형압축	14.4	1.4	2.2	42.0	0.124	3.5	3310
	185	원형압축	15.9	1.6	2.3	47.0	0.0991	3.5	4110
	240	원형압축	18.3	1.7	2.5	52.0	0.0754	3.5	5340
300	원형압축	20.5	1.8	2.6	57.0	0.0601	3.5	6630	





선심수 No. of Cores c	도체 Conductor			절연체두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항(20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭단면적 Nominal Area mm <sup>2</sup>	구성 Construction No/mm	외경 Diameter mm						
3	1.5	7/0.53	1.59	0.7	1.8	11.5	12.1	3.5	150
	2.5	7/0.67	2.01	0.7	1.8	12.5	7.41	3.5	180
	4	7/0.85	2.55	0.7	1.8	13.5	4.61	3.5	240
	6	7/1.04	3.12	0.7	1.8	14.5	3.08	3.5	310
	10	7/1.35	4.05	0.7	1.8	18	1.83	3.5	450
	16	원형압축	4.7	0.7	1.8	20.0	1.15	3.5	610
	25	원형압축	5.9	0.9	1.8	23.0	0.727	3.5	900
	35	원형압축	6.9	0.9	1.8	26.0	0.524	3.5	1210
	50	원형압축	8.1	1.0	1.8	29.0	0.387	3.5	1560
	70	원형압축	9.8	1.1	1.9	33.0	0.268	3.5	2200
	95	원형압축	11.4	1.1	2.0	37.0	0.193	3.5	2970
	120	원형압축	12.9	1.2	2.1	41.0	0.153	3.5	3790
	150	원형압축	14.4	1.4	2.3	45.0	0.124	3.5	4670
	185	원형압축	15.9	1.6	2.4	50.0	0.0991	3.5	5830
240	원형압축	18.3	1.7	2.6	56.0	0.0754	3.5	7580	
300	원형압축	20.5	1.8	2.7	61.0	0.0601	3.5	9400	
4	1.5	7/0.53	1.59	0.7	1.8	12.5	12.1	3.5	170
	2.5	7/0.67	2.01	0.7	1.8	13.5	7.41	3.5	220
	4	7/0.85	2.55	0.7	1.8	14.5	4.61	3.5	290
	6	7/1.04	3.12	0.7	1.8	16	3.08	3.5	380
	10	7/1.35	4.05	0.7	1.8	20.0	1.83	3.5	570
	16	원형압축	4.7	0.7	1.8	22.0	1.15	3.5	790
	25	원형압축	5.9	0.9	1.8	26.0	0.727	3.5	1180
	35	원형압축	6.9	0.9	1.8	28.0	0.524	3.5	1550
	50	원형압축	8.1	1.0	1.9	32.0	0.387	3.5	2060
	70	원형압축	9.8	1.1	2.0	37.0	0.268	3.5	2930
	95	원형압축	11.4	1.1	2.1	41.0	0.193	3.5	3970
	120	원형압축	12.9	1.2	2.3	45.0	0.153	3.5	4980
	150	원형압축	14.4	1.4	2.4	50.0	0.124	3.5	6130
	185	원형압축	15.9	1.6	2.6	55.0	0.0991	3.5	7660
240	원형압축	18.3	1.7	2.8	62.0	0.0754	3.5	9960	
300	원형압축	20.5	1.8	3.0	68.0	0.0601	3.5	12380	

# 0.6/1kV V V 0.6/1kV Grade PVC Insulated and Sheathed Cable

## 0.6/1kV 비닐절연 비닐시스 케이블

• 장시간 사용하여도 내마모성, 내후성이 우수하여 0.6/1kV이하의 저압 회로에 널리 사용한다.

• This cable has superior weather proof and antifriction property, permitting of use for a long period of time and widely used for a low tension distribution wire under 0.6/1kV gradechemical properties

### ■ 구조

- 1.도체:전기용 연동연선(원형,압축연선)
- 2.절연체:PVC/A
- 3.선심식별:착색

선심수	색
2심	흑,백
3심	흑,백,적
4심	흑,백,적,녹

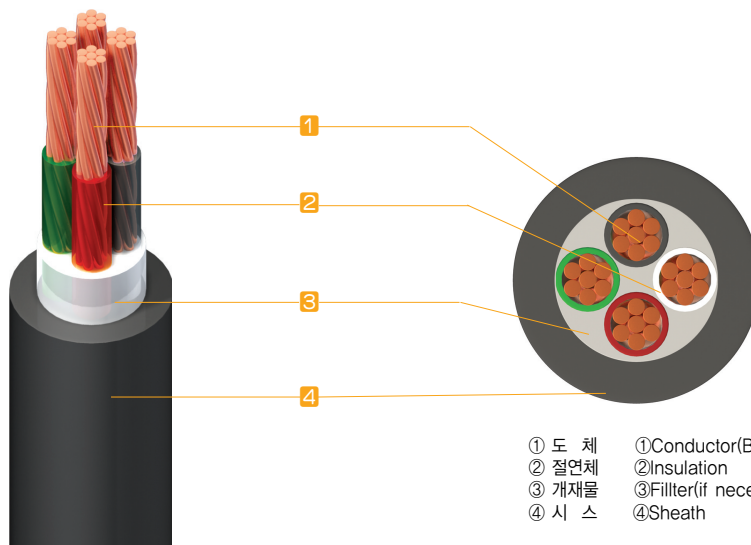
- 4.피복체 : PVC/ST1
- 5.적용규격 : KS C IEC60502-1
- 6.제품인증 : 한국산업규격(KS)

### ■ CONSTRUCTION

1. Conductor : Annealed Copper wire(Concentric Circular,Compact Circular)
2. Insulation : PVC/A
- 3.Color of insulation : Colouring Method

No. of cores	color
2cores	Black,White
3cores	Black,White,Red
4cores	Black,White,Red,Green

4. Shield:PVC/ST1
5. Standard:KS C IEC60502-1
6. Certificate:Korean Industrial Standards



- |       |                        |
|-------|------------------------|
| ① 도 체 | ①Conductor(Bunched)    |
| ② 절연체 | ②Insulation            |
| ③ 개재물 | ③Fillter(if necessary) |
| ④ 시 스 | ④Sheath                |

## KS C IEC60502-1

선심수 No. of Cores c	공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm	절연체두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 Max. Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km	표준길이 Standard Length m
1	1.5	7/0.53	1.59	0.8	1.4	6.5	12.1	3.5	65	300
	2.5	7/0.67	2.01	0.8	1.4	7.0	7.41	3.5	75	300
	4	7/0.85	2.55	0.8	1.4	8.0	4.61	3.5	105	300
	6	7/1.04	3.12	1.0	1.4	8.5	3.08	3.5	130	300
	10	7/1.35	4.05	1.0	1.4	9.5	1.83	3.5	180	300
	16	C.C	4.7	1.0	1.4	10.0	1.15	3.5	235	300
	25	C.C	5.9	1.2	1.4	12.0	0.727	3.5	345	300
	35	C.C	6.9	1.2	1.4	13.0	0.524	3.5	435	300
	50	C.C	8.1	1.4	1.4	14.5	0.387	3.5	605	300
	70	C.C	9.8	1.4	1.4	16.0	0.268	3.5	790	300
	95	C.C	11.4	1.6	1.5	18.5	0.193	3.5	1065	300
	120	C.C	12.9	1.6	1.5	20.0	0.153	3.5	1310	300
	150	C.C	14.4	1.8	1.6	22.0	0.124	3.5	1620	300
	185	C.C	15.9	2.0	1.7	25.0	0.0991	3.5	2015	200
	240	C.C	18.3	2.2	1.8	28.0	0.0754	3.5	2560	200
	300	C.C	20.5	2.4	1.9	30.0	0.0601	3.5	3200	200
400	C.C	23.2	2.6	2.0	34.0	0.0470	3.5	4150	150	
500	C.C	26.4	2.8	2.1	38.0	0.0366	3.5	5005	150	
630	C.C	30.2	2.8	2.2	42.0	0.0283	3.5	6650	150	
2	1.5	7/0.53	1.59	0.8	1.8	11.5	12.1	3.5	140	300
	2.5	7/0.67	2.01	0.8	1.8	12.0	7.41	3.5	170	300
	4	7/0.85	2.55	1.0	1.8	14.0	4.61	3.5	235	300
	6	7/1.04	3.12	1.0	1.8	15.5	3.08	3.5	290	300
	10	7/1.35	4.05	1.0	1.8	17.0	1.83	3.5	400	300
	16	C.C	4.7	1.0	1.8	18.5	1.15	3.5	530	300
	25	C.C	5.9	1.2	1.8	22	0.727	3.5	775	300
	35	C.C	6.9	1.2	1.8	24	0.524	3.5	1000	300
	50	C.C	8.1	1.4	1.8	27	0.387	3.5	1360	300
	70	C.C	9.8	1.4	1.9	31	0.268	3.5	1775	300
	95	C.C	11.4	1.6	2.0	35	0.193	3.5	2390	300
	120	C.C	12.9	1.6	2.1	38	0.153	3.5	2940	300
	150	C.C	14.4	1.8	2.2	43	0.124	3.5	3630	300
	185	C.C	15.9	2.0	2.3	47	0.0991	3.5	4500	200
	240	C.C	18.3	2.2	2.5	53	0.0754	3.5	5705	200
	300	C.C	20.5	2.4	2.7	58	0.0601	3.5	7140	200



선심수 No. of Cores c	공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm	절연체두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 Max. Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km	표준길이 Standard Length m
3	1.5	7/0.53	1.59	0.8	1.8	12.0	12.1	3.5	165	300
	2.5	7/0.67	2.01	0.8	1.8	13.0	7.41	3.5	210	300
	4	7/0.85	2.55	1.0	1.8	15.0	4.61	3.5	295	300
	6	7/1.04	3.12	1.0	1.8	16.0	3.08	3.5	370	300
	10	7/1.35	4.05	1.0	1.8	18.0	1.83	3.5	525	300
	16	C.C	4.7	1.0	1.8	19.0	1.15	3.5	705	300
	25	C.C	5.9	1.2	1.8	23	0.727	3.5	1045	300
	35	C.C	6.9	1.2	1.8	26	0.524	3.5	1360	300
	50	C.C	8.1	1.4	1.8	29	0.387	3.5	1850	300
	70	C.C	9.8	1.4	1.9	33	0.268	3.5	2455	300
	95	C.C	11.4	1.6	2.1	38	0.193	3.5	3325	300
	120	C.C	12.9	1.6	2.2	41	0.153	3.5	4115	300
	150	C.C	14.4	1.8	2.3	46	0.124	3.5	5085	300
	185	C.C	15.9	2.0	2.5	50	0.0991	3.5	6345	200
	240	C.C	18.3	2.2	2.7	57	0.0754	3.5	8065	200
300	C.C	20.5	2.4	2.8	63	0.0601	3.5	10065	200	
4	1.5	7/0.53	1.59	0.8	1.8	13.0	12.1	3.5	200	300
	2.5	7/0.67	2.01	0.8	1.8	14.0	7.41	3.5	250	300
	4	7/0.85	2.55	1.0	1.8	16.0	4.61	3.5	360	300
	6	7/1.04	3.12	1.0	1.8	17.5	3.08	3.5	460	300
	10	7/1.35	4.05	1.0	1.8	20	1.83	3.5	655	300
	16	C.C	4.7	1.0	1.8	22	1.150	3.5	895	300
	25	C.C	5.9	1.2	1.8	26	0.727	3.5	1335	300
	35	C.C	6.9	1.2	1.8	28	0.524	3.5	1755	300
	50	C.C	8.1	1.4	1.9	32	0.387	3.5	2425	300
	70	C.C	9.8	1.4	2.0	36	0.268	3.5	3200	300
	95	C.C	11.4	1.6	2.2	42	0.193	3.5	4355	300
	120	C.C	12.9	1.6	2.3	46	0.153	3.5	5380	300
	150	C.C	14.4	1.8	2.5	51	0.124	3.5	6665	300
	185	C.C	15.9	2.0	2.6	56	0.0991	3.5	8275	200
	240	C.C	18.3	2.2	2.9	63	0.0754	3.5	10595	200
300	C.C	20.5	2.4	3.1	70	0.0601	3.5	13260	200	

## 6/10kV CV 6/10kV XLPE Insulated PVC Sheathed Power Cable

### 6/10kV 가교폴리에틸렌 절연 비닐시스 케이블

• 6/10kV 전력회로에 사용하며 전기적, 물리적, 화학적 특성이 우수한 케이블이다.

• This cable is designed for the purpose of using in power, distribution line, having excellent electrical, physical and chemical properties.

#### ■ 구조

- 1.도체 : 전기용 연동연선(원형,압축연선)
- 2.절연체 : XLPE
- 3.선심식별 : 색 테이프

선심수	색
1심	자연색
3심	흑,백,적

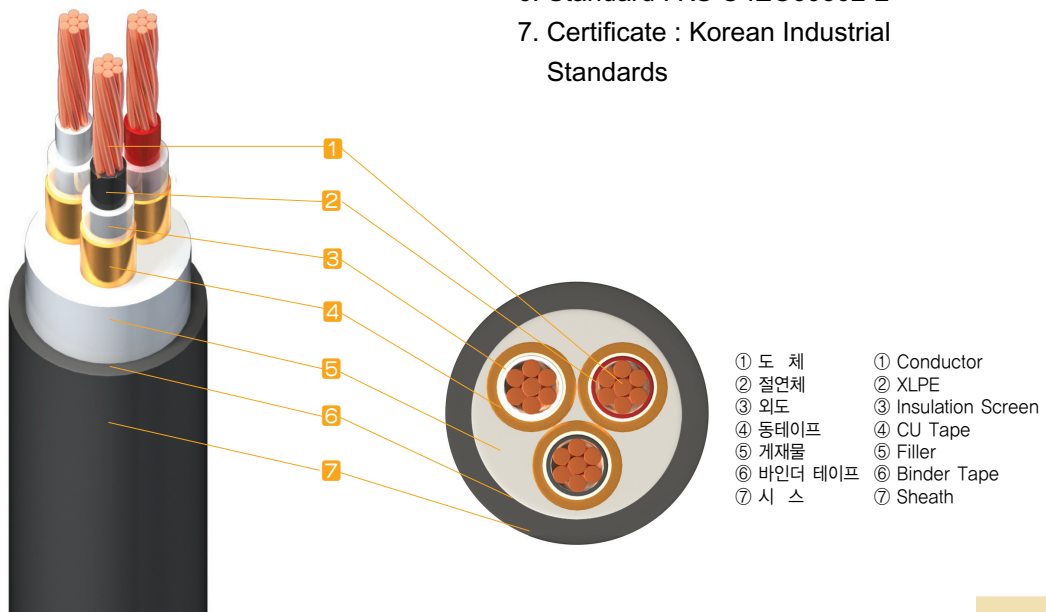
- 4.차폐 : 연동 테이프
- 5.피복체 : PVC/ST2
- 6.적용규격 : KS C IEC60502-2
- 7.제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

1. Conductor : Annealed copper wire  
(Concentric Circular, Compact Circular)
2. Insulation : XLPE
3. Core Identification: Color Tape

No. of cores	color
1cores	Nature
3cores	Black,White,Red

4. Shield : Copper tape
5. Sheath : PVC/ST2
6. Standard : KS C IEC60502-2
7. Certificate : Korean Industrial Standards



## KS C IEC60502-2

선심수 No. of Cores c	공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm	절연체두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 Max. Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km	표준길이 Standard Length m
1	16	원형압축	4.7	3.4	1.5	20	1.150	21	450	300
	25	원형압축	5.9	3.4	1.5	21	0.727	21	565	300
	35	원형압축	6.9	3.4	1.6	22	0.524	21	690	300
	50	원형압축	8.1	3.4	1.6	23	0.387	21	820	300
	70	원형압축	9.8	3.4	1.7	25	0.268	21	1060	300
	95	원형압축	11.4	3.4	1.7	27	0.193	21	1330	300
	120	원형압축	12.9	3.4	1.8	28	0.153	21	1605	300
	150	원형압축	14.4	3.4	1.8	30	0.124	21	1905	300
	185	원형압축	15.9	3.4	1.9	32	0.0991	21	2300	300
	240	원형압축	18.3	3.4	2.0	35	0.0754	21	2855	300
	300	원형압축	20.5	3.4	2.0	37	0.0601	21	3465	300
	400	원형압축	23.2	3.4	2.2	40	0.0470	21	4445	300
	500	원형압축	26.4	3.4	2.2	43	0.0366	21	5680	300
	630	원형압축	30.2	3.4	2.3	48	0.0283	21	6990	300
3	16	원형압축	4.7	3.4	2.1	39	1.150	21	1460	300
	25	원형압축	5.9	3.4	2.2	41	0.727	21	1830	300
	35	원형압축	6.9	3.4	2.3	43	0.524	21	2230	300
	50	원형압축	8.1	3.4	2.4	46	0.387	21	2770	300
	70	원형압축	9.8	3.4	2.5	50	0.268	21	3420	300
	95	원형압축	11.4	3.4	2.6	53	0.193	21	4290	300
	120	원형압축	12.9	3.4	2.7	57	0.153	21	5165	300
	150	원형압축	14.4	3.4	2.8	60	0.124	21	5380	300
	185	원형압축	15.9	3.4	2.9	64	0.0991	21	7345	300
	240	원형압축	18.3	3.4	3.1	69	0.0754	21	8370	300
	300	원형압축	20.5	3.4	3.3	74	0.0601	21	10920	300



## 22.9kV CNCV

22.9kV Concentric Neutral Type Power Cable XLPE Insulated PVC Sheathed

### 22.9kV 동심 중성선 전력 케이블

• 22.9kV 다중접지 계통의 지붕배전선로용으로 전기적, 물리적, 화학적으로 특성이 우수한 케이블이다.

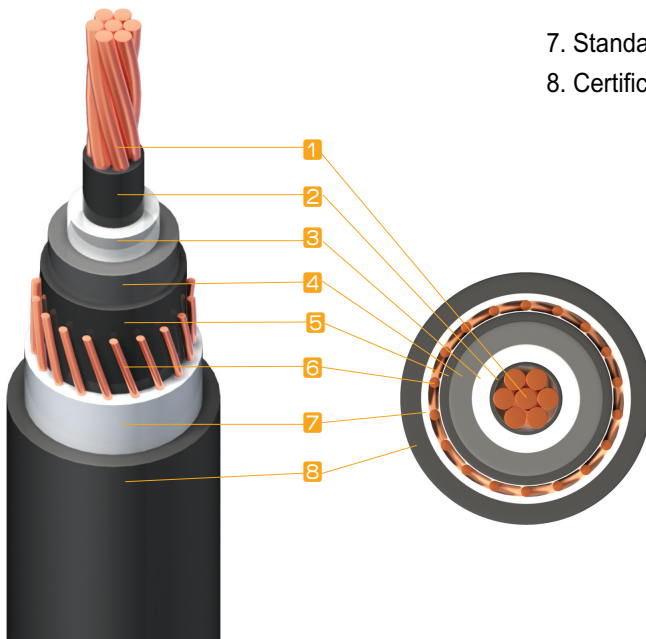
• This cable is the purpose of using in power distribution line having excellent electrical, physical and chemical properties

#### ■ 구조

- 1.도체 : 전기용 연동연선(수밀압축연선)
- 2.내부반도전층:반도전성 XLPE, 또는 TR 반도전성 XLPE
- 3.절연체:XLPE
- 4.외부반도전층:반도전성 XLPE, 또는 TR 반도전성 XLPE
- 5.동심중성선:전기용 연동선
- 6.피복체:PVC또는 저독성 난연 폴리올레핀
- 7.적용규격: ES 6145-0019
- 8.제품인증:한국전력인증

#### ■ CONSTRUCTION

1. Conductor : Annealed Copper wire(water blocking Compact Circular)
2. Conductor screen : Semi-conductive XLPE or TR Semi-conductive XLPE
3. Insulation : XLPE
4. Insulation screen : Semi-conductive XLPE or TR Semi-conductive XLPE
5. Concentric Neutral Conductor: Annealed copper wire
6. Seath : PVC or Non-halogen Flame retardant poly-olefin
7. Standard : ES 6145-0019
8. Certificate : Korean Electric power corporation



- ① 수밀 도체 : Water Blocking Conductor
- ② 내부 반도전층 : Semi-Conductive Compound TR Semi-Conductive Compound
- ③ 절연체 : XLPE Insulation
- ④ 외부 반도전층 : Semi-Conductive Compound TR Semi-Conductive Compound
- ⑤ 반도 전성 테이프 : Semi-Conductive SW Tape
- ⑥ 동심 중성선 : Concentric Neutral Conductor
- ⑦ 비도전성 테이프 : SW Tape
- ⑧ 시 스 : PVC Sheath

22.9kV 동심중성선 가교폴리에틸렌 절연 비닐 피복 수밀형 전력케이블 (22.9kV CNCV-W)

22.9kV Concentric Neutral type XLPE Insulated PVC Sheathed Power Cables

22.9kV 동심중성선 가교폴리에틸렌 절연 저독성난연 폴리올레핀 피복 수밀형 전력케이블 (22.9kV FR CNCO-W)

22.9kV Concentric Neutral type XLPE Insulated NFR-PO Sheathed Power Cables

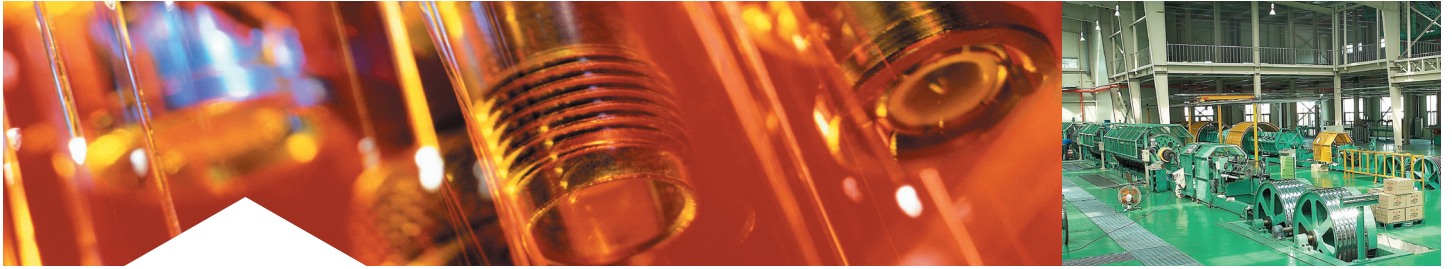
선심수 No. of Cores c	공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm	절연체두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 Max. Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km	표준길이 Standard Length m
1	38	원형압축	7.3	6.6	3.0	34	0.481	52	1,330	300
	60	원형압축	9.3	6.6	3.0	36	0.305	52	1,680	300
	100	원형압축	12.0	6.6	3.0	39	0.183	52	2,290	300
	150	원형압축	14.7	6.6	3.0	43	0.122	52	3,020	300
	200	원형압축	17.0	6.6	3.0	45	0.0915	52	3,710	300
	250	원형압축	19.0	6.6	3.0	48	0.0739	52	4,390	200
	325	원형압축	21.7	6.6	3.0	51	0.0568	52	5,500	200
	400	원형압축	24.1	6.6	3.2	55	0.0462	52	6,600	200
	500	원형압축	26.9	6.6	3.3	57	0.0369	52	7,900	200
	600	원형압축	29.5	6.6	4.0	61	0.0308	52	9,500	200

22.9kV 동심중성선 트리억제형 가교폴리에틸렌 절연 비닐 피복 수밀형 전력케이블 (22.9kV TR CNCV-W)

22.9kV Concentric Neutral type Tree Retardant XLPE Insulated PVC Sheathed Water-proof Power Cables

선심수 No. of Cores c	공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm	절연체두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 Max. Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km	표준길이 Standard Length m
	60	원형압축	9.3	6.6	3.0	34	0.305	52	1,700	300
	200	원형압축	17.0	6.6	3.0	36	0.0915	52	3,700	300
	325	원형압축	21.7	6.6	3.0	39	0.0568	52	5,400	200
	600	원형압축	29.5	6.6	3.0	43	0.0308	52	9,300	200

# Hanmi cable



## 제어용 케이블 CONTROL CABLE

0.6/1kV 비닐절연 비닐시스 제어용 케이블(0.6/1kV CVV)

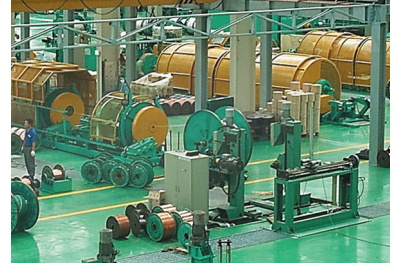
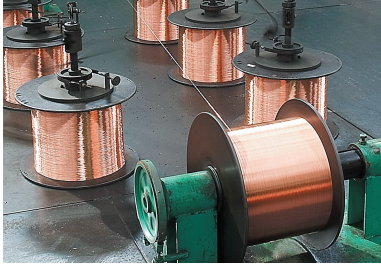
0.6/1kV PVC Insulated and PVC Sheathed Control Cable

0.6/1kV 정전차폐부 비닐절연 비닐시스 제어용 케이블(0.6/1kV CVVS)

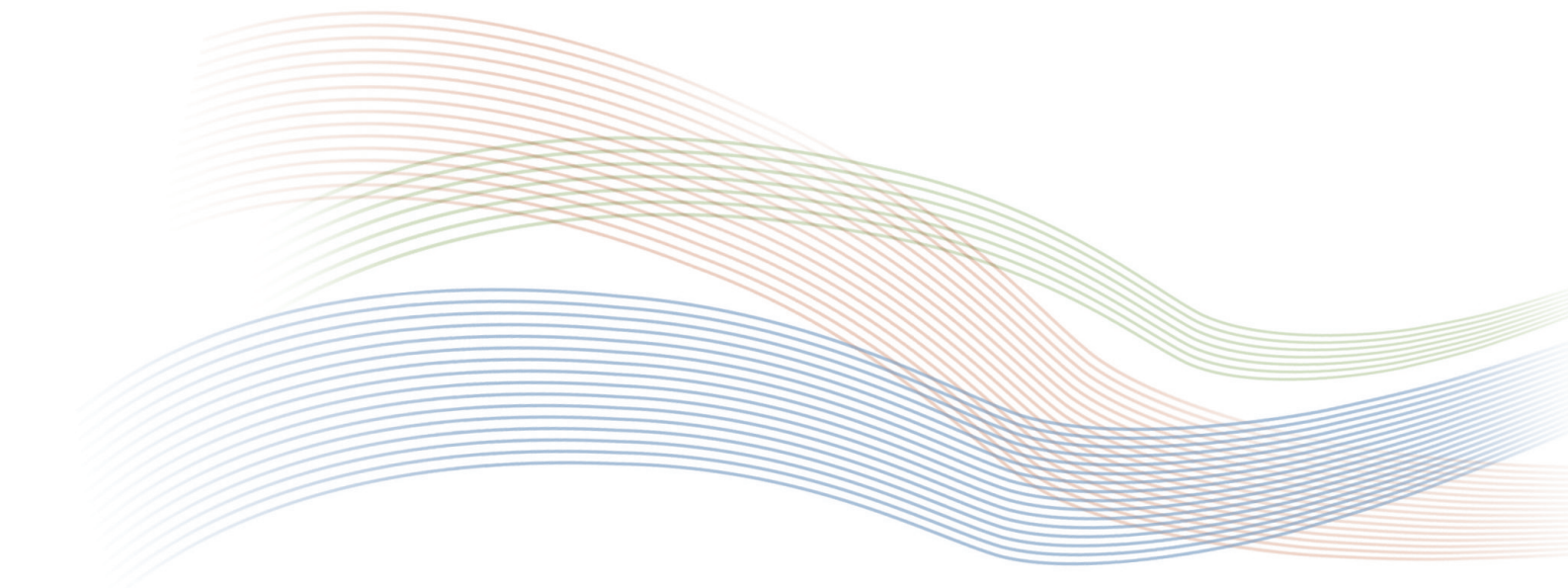
0.6/1kV PVC Insulated and PVC Sheathed Control Cable with Copper Tape Shield







# Hanmi Electric wire & Cable



## 0.6/1kV CVV

0.6/1kV PVC Insulated and PVC Sheathed Control Cable

### 0.6/1kV 비닐절연 비닐시스 제어용 케이블

- 0.6/1kV CVV는 주택, 상업적용도의 건물이나 산업시설의 제어용케이블로 사용한다
- The 0.6/1kV CVV is used for control circuits in residential, Commercial and industrial control line.

#### ■ 구조

- 1.도체 : 전기용 연동연선(원형연선)
- 2.절연체 : PVC/A
- 3.선심식별 : 착색

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹
5심	흑, 백, 적, 녹, 황
6심	흑, 백, 적, 녹, 황, 갈
7심	흑, 백, 적, 녹, 황, 갈, 청
8심이상	흑색에 번호표시

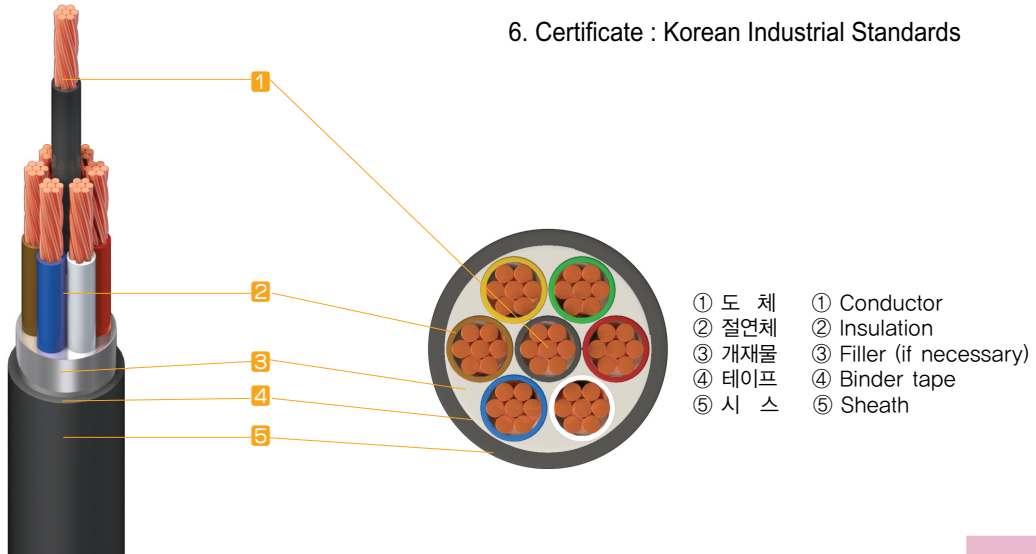
- 4.피복체 : PVC/ST1 \*5심이상 색상은 주문제작
- 5.적용규격 : KS C IEC 60502-1
- 6.제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

- 1.Conductor : Annealed copper wire (Concentric Circular)
- 2.Insulation : PVC/A
- 3.Core Identification : Colouring Method

No. of cores	Color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green
5cores	Black, White, Red, Green, Yellow
6cores	Black, White, Red, Green, Yellow, Brown
7cores	Black, White, Red, Green, Yellow, Brown, Blue
Above 8cores	Numbering code on Black

- 4.Sheath : PVC/ST1
- 5.Standard : KS C IEC 60502-1
6. Certificate : Korean Industrial Standards



## KSC IEC 60502-1

선심수 No. of Cores c	도체 Conductor			절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 (약) Approx Overall Diameter mm	최대 도체저항 Max. Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
2	1.5	7/0.53	1.59	0.8	1.8	11.0	12.1	3.5	150
	2.5	7/0.67	2.01	0.8	1.8	12.0	7.41	3.5	190
	4	7/0.85	2.55	1.0	1.8	14.0	4.61	3.5	250
	6	7/1.04	3.12	1.0	1.8	15.0	3.08	3.5	310
	10	7/1.35	4.05	1.0	1.8	17.0	1.83	3.5	420
3	1.5	7/0.53	1.59	0.8	1.8	11.5	12.1	3.5	190
	2.5	7/0.67	2.01	0.8	1.8	12.5	7.41	3.5	230
	4	7/0.85	2.55	1.0	1.8	14.5	4.61	3.5	320
	6	7/1.04	3.12	1.0	1.8	16.0	3.08	3.5	410
	10	7/1.35	4.05	1.0	1.8	18.0	1.83	3.5	560
4	1.5	7/0.53	1.59	0.8	1.8	12.5	12.1	3.5	230
	2.5	7/0.67	2.01	0.8	1.8	13.5	7.41	3.5	280
	4	7/0.85	2.55	1.0	1.8	16.0	4.61	3.5	400
	6	7/1.04	3.12	1.0	1.8	17.0	3.08	3.5	510
	10	7/1.35	4.05	1.0	1.8	19.5	1.83	3.5	710
5	1.5	7/0.53	1.59	0.8	1.8	13.5	12.1	3.5	270
	2.5	7/0.67	2.01	0.8	1.8	14.5	7.41	3.5	340
	4	7/0.85	2.55	1.0	1.8	17.0	4.61	3.5	490
	6	7/1.04	3.12	1.0	1.8	18.5	3.08	3.5	620
	10	7/1.35	4.05	1.0	1.8	21	1.83	3.5	870
6	1.5	7/0.53	1.59	0.8	1.8	14.5	12.1	3.5	310
	2.5	7/0.67	2.01	0.8	1.8	15.5	7.41	3.5	390
	4	7/0.85	2.55	1.0	1.8	18.5	4.61	3.5	570
	6	7/1.04	3.12	1.0	1.8	21	3.08	3.5	730
	10	7/1.35	4.05	1.0	1.8	17.0	1.83	3.5	1020
7	1.5	7/0.53	1.59	0.8	1.8	11.5	12.1	3.5	330
	2.5	7/0.67	2.01	0.8	1.8	12.5	7.41	3.5	420
	4	7/0.85	2.55	1.0	1.8	14.5	4.61	3.5	620
	6	7/1.04	3.12	1.0	1.8	16.0	3.08	3.5	800
	10	7/1.35	4.05	1.0	1.8	18.0	1.83	3.5	1140



선심수 No. of Cores c	도체 Conductor			절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 (약) Approx Overall Diameter mm	최대 도체저항 Max. Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/ 소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
8	1.5	7/0.53	1.59	0.8	1.8	12.5	12.1	3.5	380
	2.5	7/0.67	2.01	0.8	1.8	13.5	7.41	3.5	490
	4	7/0.85	2.55	1.0	1.8	16.0	4.61	3.5	720
	6	7/1.04	3.12	1.0	1.8	17.0	3.08	3.5	920
	10	7/1.35	4.05	1.0	1.8	19.5	1.83	3.5	1310
10	1.5	7/0.53	1.59	0.8	1.8	13.5	12.1	3.5	460
	2.5	7/0.67	2.01	0.8	1.8	14.5	7.41	3.5	590
	4	7/0.85	2.55	1.0	1.8	17.0	4.61	3.5	870
	6	7/1.04	3.12	1.0	1.8	18.5	3.08	3.5	1130
	10	7/1.35	4.05	1.0	1.8	21	1.83	3.5	1610
12	1.5	7/0.53	1.59	0.8	1.8	11.0	12.1	3.5	530
	2.5	7/0.67	2.01	0.8	1.8	12.0	7.41	3.5	680
	4	7/0.85	2.55	1.0	1.8	14.0	4.61	3.5	1020
	6	7/1.04	3.12	1.0	1.8	15.0	3.08	3.5	1320
	10	7/1.35	4.05	1.0	1.8	17.0	1.83	3.5	1890
15	1.5	7/0.35	1.59	0.8	1.8	11.5	12.1	3.5	630
	2.5	7/0.67	2.01	0.8	1.8	12.5	7.41	3.5	830
	4	7/0.85	2.55	1.0	1.8	14.5	4.61	3.5	1240
	6	7/1.04	3.12	1.0	1.8	16.0	3.08	3.5	1620
20	1.5	7/1.53	1.59	0.8	1.8	18.0	1.83	3.5	810
	2.5	7/1.67	2.01	0.8	1.8	12.5	12.1	3.5	1060
	4	7/1.85	2.55	1.0	1.8	13.5	4.61	3.5	1610
	6	7/1.04	3.12	1.0	1.8	16.0	3.08	3.5	2100
30	1.5	7/1.53	1.59	0.8	1.8	17.0	12.1	3.5	1150
	2.5	7/1.67	2.01	0.8	1.8	19.5	7.41	3.5	1520
	4	7/1.85	2.55	1.0	1.8	13.5	4.61	3.5	2350

# 0.6/1kV CVVS

0.6/1kV PVC Insulated and PVC Sheathed Control Cable with Copper Tape Shield

## 0.6/1kV 정전차폐부 비닐절연 비닐시스 제어용 케이블

• 0.6/1kV 이하의 정전차폐가 요구되는 제어용 회로에 산업시설의 제어용케이블로 사용한다.

• This cable is used for control circuits required electrostatic shielding in underground duct, conduit and open air under 0.6/1kV

### ■ 구조

- 1.도체 : 전기용 연동연선(원형연선)
- 2.절연체 : PVC/A
- 3.선심식별 : 착색

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹
5심	흑, 백, 적, 녹, 황
6심	흑, 백, 적, 녹, 황, 갈
7심	흑, 백, 적, 녹, 황, 갈, 청
8심이상	흑색에 번호표시

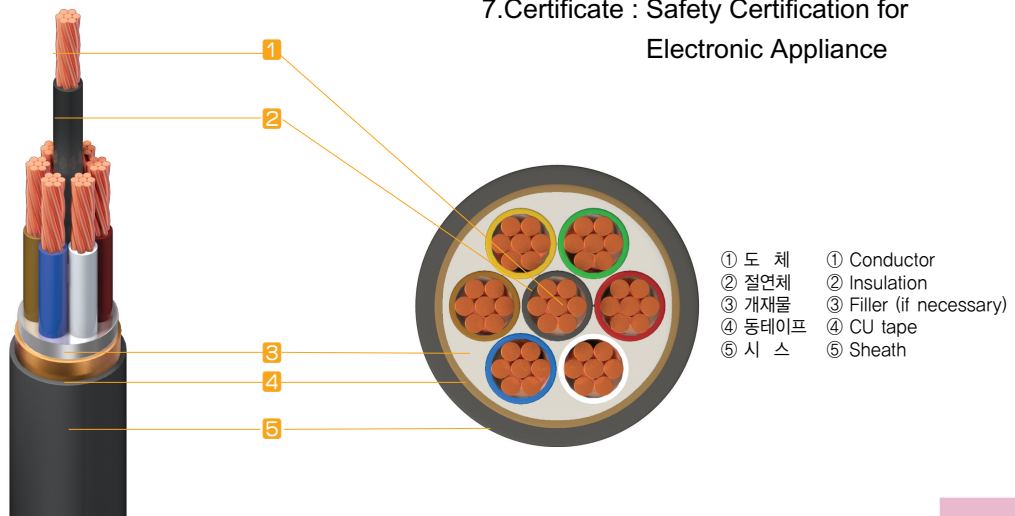
- 4.차폐 : 동 테이프 \*5심이상 색상은 주문제작
- 5.피복체 : PVC/ST1
- 6.적용규격 : K60502-1(참조)
- 7.제품인증 : 전기용품안전인증

### ■ CONSTRUCTION

- 1.Conductor : Annealed copper wire (Concentric Circular)
- 2.Insulation : PVC/A
- 3.Core Identification : Colouring Method

No. of cores	Color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green
5cores	Black, White, Red, Green, Yellow
6cores	Black, White, Red, Green, Yellow, Brown
7cores	Black, White, Red, Green, Yellow, Brown, Blue
Above 8cores	Numbering code on Black

- 4.Shield : Copper Tape
- 5.Sheath : PVC/ST1
- 6.Standard : K60502-1(Reference)
- 7.Certificate : Safety Certification for Electronic Appliance





### K60502-1

선심수 No. of Cores c	도체 Conductor			절연체두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경(약) Approx. Overall Diameter mm	최대도체저항 Max. Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
	공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
2	1.5	7/0.53	1.59	0.8	1.8	11.0	12.1	3.5	170
	2.5	7/0.67	2.01	0.8	1.8	12.0	7.41	3.5	200
	4	7/0.85	2.55	1.0	1.8	14.0	4.61	3.5	280
	6	7/1.04	3.12	1.0	1.8	15.0	3.08	3.5	340
	10	7/1.35	4.05	1.0	1.8	17.0	1.83	3.5	460
3	1.5	7/0.53	1.59	0.8	1.8	11.5	12.1	3.5	200
	2.5	7/0.67	2.01	0.8	1.8	12.5	7.41	3.5	250
	4	7/0.85	2.55	1.0	1.8	14.5	4.61	3.5	350
	6	7/1.04	3.12	1.0	1.8	15.5	3.08	3.5	440
	10	7/1.35	4.05	1.0	1.8	17.5	1.83	3.5	600
4	1.5	7/0.53	1.59	0.8	1.8	12.5	12.1	3.5	250
	2.5	7/0.67	2.01	0.8	1.8	13.5	7.41	3.5	310
	4	7/0.85	2.55	1.0	1.8	15.5	4.61	3.5	430
	6	7/1.04	3.12	1.0	1.8	17.0	3.08	3.5	550
	10	7/1.35	4.05	1.0	1.8	19.5	1.83	3.5	760
5	1.5	7/0.53	1.59	0.8	1.8	13.5	12.1	3.5	290
	2.5	7/0.67	2.01	0.8	1.8	14.5	7.41	3.5	360
	4	7/0.85	2.55	1.0	1.8	17.0	4.61	3.5	520
	6	7/1.04	3.12	1.0	1.8	18.5	3.08	3.5	660
	10	7/1.35	4.05	1.0	1.8	21.0	1.83	3.5	920
6	1.5	7/0.53	1.59	0.8	1.8	14.5	12.1	3.5	330
	2.5	7/0.67	2.01	0.8	1.8	15.5	7.41	3.5	420
	4	7/0.85	2.55	1.0	1.8	18.5	4.61	3.5	620
	6	7/1.04	3.12	1.0	1.8	20.0	3.08	3.5	780
	10	7/1.35	4.05	1.0	1.8	23.0	1.83	3.5	1090
7	1.5	7/0.53	1.59	0.8	1.8	14.5	12.1	3.5	360
	2.5	7/0.67	2.01	0.8	1.8	15.5	7.41	3.5	460
	4	7/0.85	2.55	1.0	1.8	18.5	4.61	3.5	670
	6	7/1.04	3.12	1.0	1.8	20.0	3.08	3.5	860
	10	7/1.35	4.05	1.0	1.8	23.0	1.83	3.5	1200



선심수 No. of Cores c	도체 Conductor			절연체두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경(약) Approx. Overall Diameter mm	최대도체저항 Max. Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
	공칭단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
8	1.5	7/0.53	1.59	0.8	1.8	15.5	12.1	3.5	410
	2.5	7/0.67	2.01	0.8	1.8	16.5	7.41	3.5	520
	4	7/0.85	2.55	1.0	1.8	20.0	4.61	3.5	780
	6	7/1.04	3.12	1.0	1.8	21.5	3.08	3.5	990
	10	7/1.35	4.05	1.0	1.8	25.0	1.83	3.5	1400
10	1.5	7/0.53	1.59	0.8	1.8	17.5	12.1	3.5	500
	2.5	7/0.67	2.01	0.8	1.8	19.0	7.41	3.5	640
	4	7/0.85	2.55	1.0	1.8	23.0	4.61	3.5	950
	6	7/1.04	3.12	1.0	1.8	25.5	3.08	3.5	1220
	10	7/1.35	4.05	1.0	1.9	29.5	1.83	3.5	1720
12	1.5	7/0.53	1.59	0.8	1.8	18.0	12.1	3.5	570
	2.5	7/0.67	2.01	0.8	1.8	20.0	7.41	3.5	730
	4	7/0.85	2.55	1.0	1.8	24.0	4.61	3.5	1090
	6	7/1.04	3.12	1.0	1.8	26.0	3.08	3.5	1400
	10	7/1.35	4.05	1.0	1.9	30.0	1.83	3.5	2000
15	1.5	7/0.53	1.59	0.8	1.8	19.5	12.1	3.5	680
	2.5	7/0.67	2.01	0.8	1.8	21.5	7.41	3.5	890
	4	7/0.85	2.55	1.0	1.8	25.5	4.61	3.5	1330
	6	7/1.04	3.12	1.0	1.9	28.5	3.08	3.5	1720
20	1.5	7/0.53	1.59	0.8	1.8	22.0	12.1	3.5	870
	2.5	7/0.67	2.01	0.8	1.8	24.0	7.41	3.5	1130
	4	7/0.85	2.55	1.0	1.9	29.5	4.61	3.5	1710
	6	7/1.04	3.12	1.0	2.0	32.5	3.08	3.5	2230
30	1.5	7/0.53	1.59	0.8	1.8	25.5	12.1	3.5	1230
	2.5	7/0.67	2.01	0.8	1.9	28.5	7.41	3.5	1620
	4	7/0.85	2.55	1.0	2.1	35.0	4.61	3.5	2480

# Hanmi cable



## 트레이용 난연 케이블 TRAY FLAME RETARDANT CABLE

0.6/1kV 가교폴리에틸렌절연 난연 비닐시스 트레이용 케이블(0.6/1kV TFR-CV)  
0.6/1kV XLPE Insulated and Tray Flame-Retardant PVC Sheathde Power Cable

0.6/1kV 비닐절연 난연비닐 시스 트레이용 제어케이블(0.6/1kV TFR-CW)  
0.6/1kV PVC Insulated and Tray Flame-Retardant Sheathde Control Cable

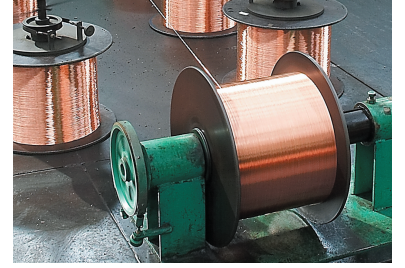
0.6/1kV 트레이용 정전차폐부 제어용 비닐절연 난연비닐시스 케이블(0.6/1kV TFR-CWS)  
0.6/1kV Tray Flame-Retardant PVC Insulation Cable for Grounding

0.6/1kV 트레이용 동편조차폐 제어용 비닐절연 난연비닐시스 케이블(0.6/1kV TFR-CWSB)  
0.6/1kV Tray Flame Retardant PVC Sheathed Copper Braid Shield Control Cable

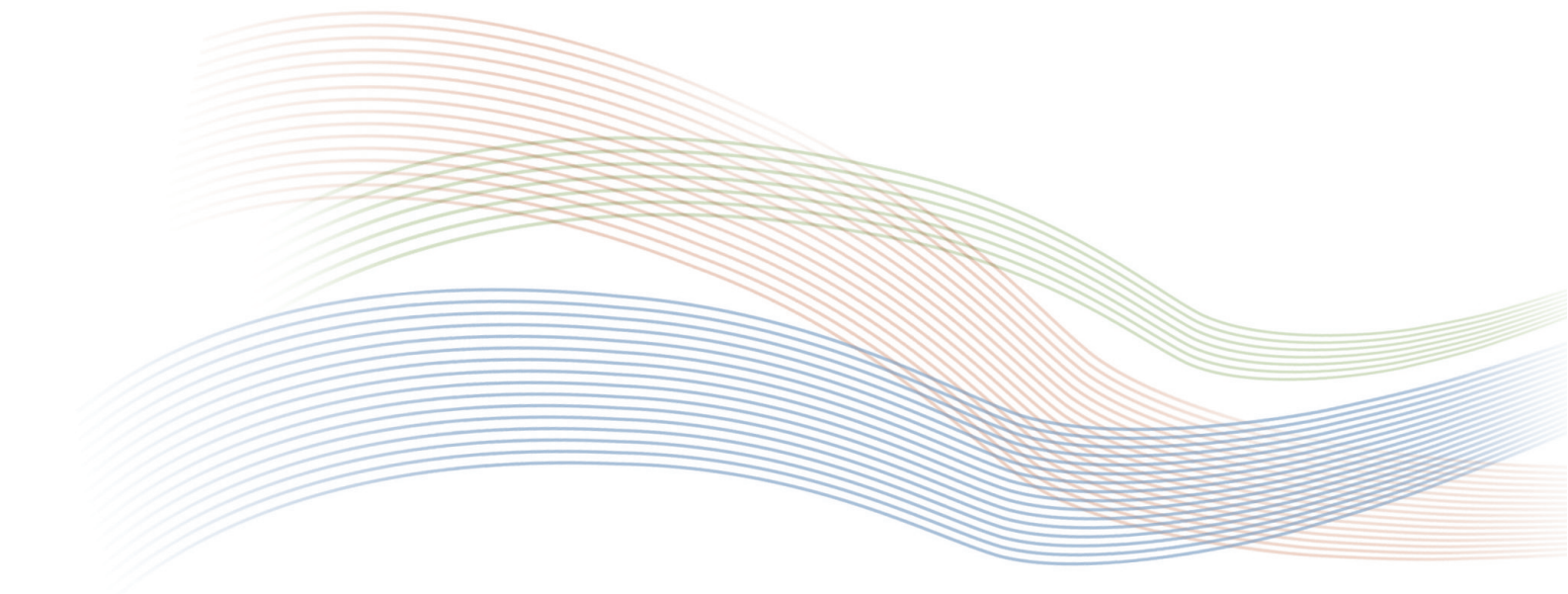
0.6/1kV 트레이용 난연비닐절연 접지용전선(0.6/1kV TFR-GV)  
0.6/1kV Tray Flame-Retardant Control Cabl with Copper Tape shield

6/10kV 트레이용 가교폴리에틸렌절연 난연 비닐시스 케이블(6/10kV TFR-CV)  
6/10kV XLPE Insulated and Tray Flame-Retardant PVC Sheathde Power Cable





# Hanmi Electric wire & Cable





## 0.6/1kV TFR-CV

0.6/1kV XLPE Insulated and Tray Flame-Retardant PVC Sheathde Power Cable

### 0.6/1kV 가교폴리에틸렌절연 난연 비닐시스 트레이용 케이블

• 0.6/1kV TFR-CV는 주택 상업용빌딩이나 산업시설의 전력케이블로 사용하며 PVC피복 케이블에 비하여 난연특성이 우수하다

• The 0.6/1kV TFR-CV is used for lighting and power in residential, Commercial and industrial distribution line, having excellent flame retardant

#### ■ 구조

- 1.도체 : 전기용 연동연선(원형연선, 압축연선)
- 2.절연체 : XLPE
- 3.선심식별 : 색 테이프

선심수	색
1심	흑
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹

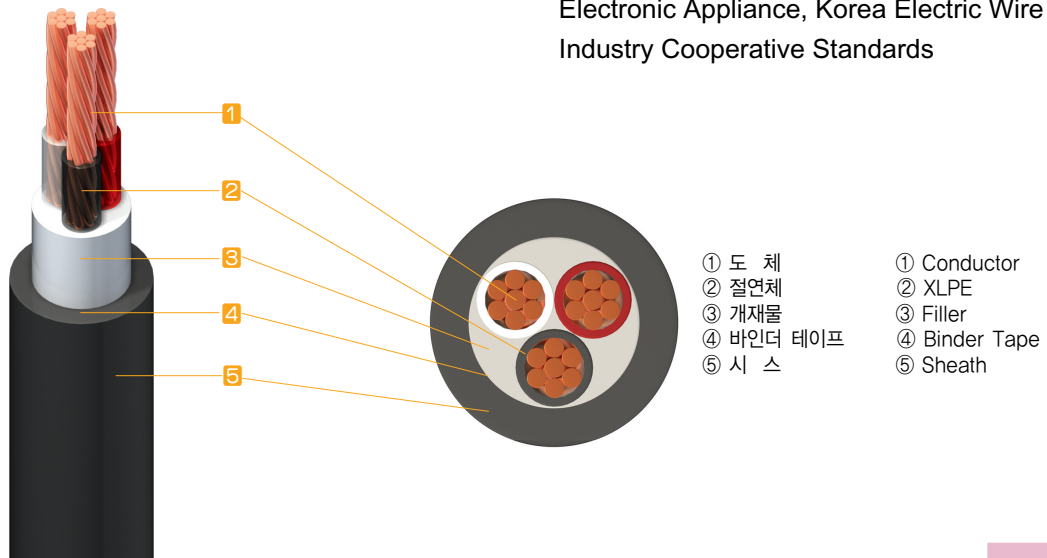
- 4.피복체 : 난연성 PVC/ST2
- 5.적용규격 : K60502-1 , KWS-410
- 6.제품인증 : 전기용품안전인증  
우수단체표준표시

#### ■ CONSTRUCTION

1. Conductor : Annealed copper wire (Concentric Circular, Compact Circular)
2. Insulation : XLPE
3. Core Identification : Color Tape

No. of cores	Color
1cores	Black
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green

4. Sheath : Flame Retardant PVC/ST2
5. Standard : K60502-1 , KWS-410
6. Certificate : Safety Certification for Electronic Appliance, Korea Electric Wire Industry Cooperative Standards



K60502-1, KWS-410(우수단체 표준표시 인증)

선심수	공 칭 단면적	(소선수/ 소선지름)	바깥지름	절연체 두께	시스두께	완성외경	도체저항 (20℃) Max. Conductor Resistance at 20℃	시험전압	개산중량
No. of Cores	Normal Sectional Area	Numder & Diameter of Wire	Outer Diameter	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Diameter	Ω/km	Test Voltage	Approx. Weight
c	mm <sup>2</sup>	No/mm	mm	mm	mm	mm		KV	kg/km
1	1.5	7/0.53	1.59	0.7	1.4	6.3	12.1	3.5	50
	2.5	7/0.67	2.01	0.7	1.4	6.7	7.41	3.5	70
	4	7/0.85	2.55	0.7	1.4	7.2	4.61	3.5	90
	6	7/1.04	3.12	0.7	1.4	7.8	3.08	3.5	110
	10	7/1.35	4.05	0.7	1.4	9.4	1.83	3.5	170
	16	원형압축	4.7	0.7	1.4	10.0	1.15	3.5	210
	25	원형압축	5.9	0.9	1.4	13.0	0.727	3.5	310
	35	원형압축	6.9	0.9	1.4	14.0	0.524	3.5	400
	50	원형압축	8.1	1.0	1.4	15.0	0.387	3.5	520
	70	원형압축	9.8	1.1	1.4	17.0	0.268	3.5	720
	95	원형압축	11.4	1.1	1.5	19.0	0.193	3.5	970
	120	원형압축	12.9	1.2	1.5	21.0	0.153	3.5	1210
	150	원형압축	14.4	1.4	1.6	23.0	0.124	3.5	1490
	185	원형압축	15.9	1.6	1.6	25.0	0.0991	3.5	1840
	240	원형압축	18.3	1.7	1.7	28.0	0.0754	3.5	2400
	300	원형압축	20.5	1.8	1.8	30.0	0.0601	3.5	2980
	400	원형압축	23.2	2.0	1.9	34.0	0.0470	3.5	3800
500	원형압축	26.4	2.2	2.0	38.0	0.0366	3.5	4850	
630	원형압축	30.2	2.4	2.2	42.0	0.0283	3.5	6240	
2	1.5	7/0.53	1.59	0.7	1.8	11	12.1	3.5	120
	2.5	7/0.67	2.01	0.7	1.8	12	7.41	3.5	150
	4	7/0.85	2.55	0.7	1.8	13	4.61	3.5	190
	6	7/1.04	3.12	0.7	1.8	14	3.08	3.5	240
	10	7/1.35	4.05	0.7	1.8	17	1.83	3.5	330
	16	원형압축	4.7	0.7	1.8	19.0	1.15	3.5	450
	25	원형압축	5.9	0.9	1.8	20.0	0.727	3.5	660
	35	원형압축	6.9	0.9	1.8	24.0	0.524	3.5	880
	50	원형압축	8.1	1.0	1.8	27.0	0.387	3.5	1150
	70	원형압축	9.8	1.1	1.8	31.0	0.268	3.5	1610
	95	원형압축	11.4	1.1	1.9	35.0	0.193	3.5	2170
	120	원형압축	12.9	1.2	2.0	38.0	0.153	3.5	2670
	150	원형압축	14.4	1.4	2.2	42.0	0.124	3.5	3310
	185	원형압축	15.9	1.6	2.3	47.0	0.0991	3.5	4110
	240	원형압축	18.3	1.7	2.5	52.0	0.0754	3.5	5340
300	원형압축	20.5	1.8	2.6	57.0	0.0601	3.5	6630	

선심수	공 칭 단면적	(소선수/ 소선지름)	바깥지름	절연체 두께	시스두께	완성외경	도체저항 (20℃)	시험전압	개산중량
No. of Cores	Normal Sectional Area	Number & Diameter of Wire	Outer Diameter	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Diameter	Max. Conductor Resistance at 20℃	Test Voltage	Approx. Weight
c	mm <sup>2</sup>	No/mm	mm	mm	mm	mm	Ω/km	KV	kg/km
3	1.5	7/0.53	1.59	0.7	1.8	11.5	12.1	3.5	150
	2.5	7/0.67	2.01	0.7	1.8	12.5	7.41	3.5	180
	4	7/0.85	2.55	0.7	1.8	13.5	4.61	3.5	240
	6	7/1.04	3.12	0.7	1.8	14.5	3.08	3.5	310
	10	7/1.35	4.05	0.7	1.8	18	1.83	3.5	450
	16	원형압축	4.7	0.7	1.8	20.0	1.15	3.5	610
	25	원형압축	5.9	0.9	1.8	23.0	0.727	3.5	900
	35	원형압축	6.9	0.9	1.8	26.0	0.524	3.5	1210
	50	원형압축	8.1	1.0	1.8	29.0	0.387	3.5	1560
	70	원형압축	9.8	1.1	1.9	33.0	0.268	3.5	2200
	95	원형압축	11.4	1.1	2.0	37.0	0.193	3.5	2970
	120	원형압축	12.9	1.2	2.1	41.0	0.153	3.5	3790
	150	원형압축	14.4	1.4	2.3	45.0	0.124	3.5	4670
	185	원형압축	15.9	1.6	2.4	50.0	0.0991	3.5	5830
	240	원형압축	18.3	1.7	2.6	56.0	0.0754	3.5	7580
300	원형압축	20.5	1.8	2.7	61.0	0.0601	3.5	9400	
4	1.5	7/0.53	1.59	0.7	1.8	14.0	12.1	3.5	170
	2.5	7/0.67	2.01	0.7	1.8	15.0	7.41	3.5	220
	4	7/0.85	2.55	0.7	1.8	16.0	4.61	3.5	290
	6	7/1.04	3.12	0.7	1.8	18.0	3.08	3.5	380
	10	7/1.35	4.05	0.7	1.8	20.0	1.83	3.5	570
	16	원형압축	4.7	0.7	1.8	22.0	1.15	3.5	790
	25	원형압축	5.9	0.9	1.8	26.0	0.727	3.5	1180
	35	원형압축	6.9	0.9	1.8	28.0	0.524	3.5	1550
	50	원형압축	8.1	1.0	1.8	32.0	0.387	3.5	2060
	70	원형압축	9.8	1.1	1.8	37.0	0.268	3.5	2930
	95	원형압축	11.4	1.1	1.9	41.0	0.193	3.5	3970
	120	원형압축	12.9	1.2	2.0	45.0	0.153	3.5	4980
	150	원형압축	14.4	1.4	2.2	50.0	0.124	3.5	6130
	185	원형압축	15.9	1.6	2.3	55.0	0.0991	3.5	7660
	240	원형압축	18.3	1.7	2.5	62.0	0.0754	3.5	9960
300	원형압축	20.5	1.8	2.6	68.0	0.0601	3.5	12380	



# 0.6/1kV TFR-CVV

0.6/1kV PVC Insulated and Tray Flame-Retardant PVC Sheathde Control Cable

## 0.6/1kV 비닐절연 난연비닐시스 트레이용제어 케이블

• 0.6/1kV TFR-CVV는 난연성을 필요로하는 제어 회로에 사용하며, PVC피복제어케 이블에 비해 난 연특성이 매우 우수하다

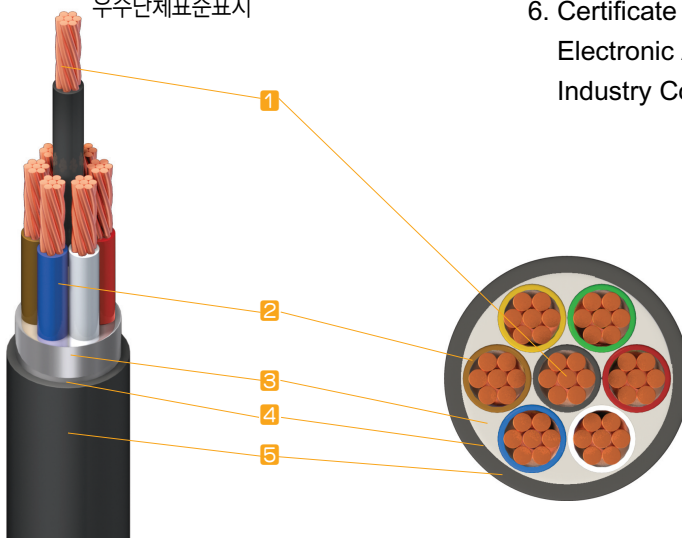
• The 0.6/1kV TFR-CVV is used for control circuits required fire protection in tray, underground duct, conduit and open air, having excellent flame retardant

### ■ 구조

- 1.도체 : 전기용 연동연선(원형연선)
- 2.절연체 : 난연 PVC/A
- 3.선심식별 : 착색

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹
5심	흑, 백, 적, 녹, 황
6심	흑, 백, 적, 녹, 황, 갈
7심	흑, 백, 적, 녹, 황, 갈, 청
8심이상	흑색에 번호표시

- 4.피복체 : 난연성 PVC/ST1
- 5.적용규격 : K60502-1, KWS-411
- 6.제품인증 : 전기용품안전인증  
우수단체표준표시



- |       |                         |
|-------|-------------------------|
| ① 도 체 | ① Conductor             |
| ② 절연체 | ② Insulation            |
| ③ 개재물 | ③ Filler (if necessary) |
| ④ 테이프 | ④ Binder tape           |
| ⑤ 시 스 | ⑤ Sheath                |

### ■ CONSTRUCTION

1. Conductor : Annealed copper wire (Concentric Circular)
2. Insulation : Flame Retardane PVC/A
3. Core Identification : Colouring Method

No. of cores	Color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green
5cores	Black, White, Red, Green, Yellow
6cores	Black, White, Red, Green, Yellow, Brown
7cores	Black, White, Red, Green, Yellow, Brown, Blue
Above 8cores	Numbering code on Black

4. Sheath : Flame Retardant PVC/ST1
5. Standard : K60502-1 , KWS-411
6. Certificate : Safety Certification for Electronic Appliance, Korea Electric Wire Industry Cooperative Standards

## K60502-1, KWS-411(우수단체 표준표시 인증)

선심수 No. of Cores c	도체 Conductor			절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	(소선수/소선지름) Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
2	1.5	7/0.53	1.59	0.8	1.8	11.0	12.1	3.5	150
	2.5	7/0.67	2.01	0.8	1.8	12.0	7.41	3.5	190
	4	7/0.85	2.55	1.0	1.8	14.0	4.61	3.5	250
	6	7/1.04	3.12	1.0	1.8	15.0	3.08	3.5	310
	10	7/1.35	4.05	1.0	1.8	17.0	1.83	3.5	420
3	1.5	7/0.53	1.59	0.8	1.8	11.5	12.1	3.5	190
	2.5	7/0.67	2.01	0.8	1.8	12.5	7.41	3.5	230
	4	7/0.85	2.55	1.0	1.8	14.5	4.61	3.5	320
	6	7/1.04	3.12	1.0	1.8	16.0	3.08	3.5	410
	10	7/1.35	4.05	1.0	1.8	18.0	1.83	3.5	560
4	1.5	7/0.53	1.59	0.8	1.8	12.5	12.1	3.5	230
	2.5	7/0.67	2.01	0.8	1.8	13.5	7.41	3.5	280
	4	7/0.85	2.55	1.0	1.8	16.0	4.61	3.5	400
	6	7/1.04	3.12	1.0	1.8	17.0	3.08	3.5	510
	10	7/1.35	4.05	1.0	1.8	19.5	1.83	3.5	710
5	1.5	7/0.53	1.59	0.8	1.8	13.5	12.1	3.5	270
	2.5	7/0.67	2.01	0.8	1.8	14.5	7.41	3.5	340
	4	7/0.85	2.55	1.0	1.8	17.0	4.61	3.5	490
	6	7/1.04	3.12	1.0	1.8	18.5	3.08	3.5	620
	10	7/1.35	4.05	1.0	1.8	21.0	1.83	3.5	870
6	1.5	7/0.53	1.59	0.8	1.8	14.5	12.1	3.5	310
	2.5	7/0.67	2.01	0.8	1.8	15.5	7.41	3.5	390
	4	7/0.85	2.55	1.0	1.8	18.5	4.61	3.5	570
	6	7/1.04	3.12	1.0	1.8	21.0	3.08	3.5	730
	10	7/1.35	4.05	1.0	1.8	23.0	1.83	3.5	1020
7	1.5	7/0.53	1.59	0.8	1.8	14.5	12.1	3.5	330
	2.5	7/0.67	2.01	0.8	1.8	15.5	7.41	3.5	420
	4	7/0.85	2.55	1.0	1.8	18.5	4.61	3.5	620
	6	7/1.04	3.12	1.0	1.8	21.0	3.08	3.5	800
	10	7/1.35	4.05	1.0	1.8	23.0	1.83	3.5	1140

K60502-1, KWS-411(우수단체 표준표시 인증)

선심수 No. of Cores c	도체 Conductor			절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	(소선수/소선지름) Number & Diameter of Wire No./mm	바깥지름 Outer Diameter mm						
8	1.5	7/0.53	1.59	0.8	1.8	15.5	12.1	3.5	380
	2.5	7/0.67	2.01	0.8	1.8	16.5	7.41	3.5	490
	4	7/0.85	2.55	1.0	1.8	20.0	4.61	3.5	720
	6	7/1.04	3.12	1.0	1.8	22.0	3.08	3.5	920
	10	7/1.35	4.05	1.0	1.8	25.0	1.83	3.5	1310
10	1.5	7/0.53	1.59	0.8	1.8	18.0	12.1	3.5	460
	2.5	7/0.67	2.01	0.8	1.8	19.5	7.41	3.5	590
	4	7/0.85	2.55	1.0	1.8	23.0	4.61	3.5	870
	6	7/1.04	3.12	1.0	1.8	26.0	3.08	3.5	1130
	10	7/1.35	4.05	1.0	1.8	29.0	1.83	3.5	1610
12	1.5	7/0.53	1.59	0.8	1.8	18.5	12.1	3.5	530
	2.5	7/0.67	2.01	0.8	1.8	20.0	7.41	3.5	680
	4	7/0.85	2.55	1.0	1.8	24.0	4.61	3.5	1020
	6	7/1.04	3.12	1.0	1.8	27.0	3.08	3.5	1320
	10	7/1.35	4.05	1.0	1.8	30.0	1.83	3.5	1890
15	1.5	7/0.53	1.59	0.8	1.8	19.5	12.1	3.5	630
	2.5	7/0.67	2.01	0.8	1.8	22.0	7.41	3.5	830
	4	7/0.85	2.55	1.0	1.8	26.0	4.61	3.5	1240
	6	7/1.04	3.12	1.0	1.8	29.0	3.08	3.5	1620
20	1.5	7/0.53	1.59	0.8	1.8	22.0	12.1	3.5	810
	2.5	7/0.67	2.01	0.8	1.8	24.0	7.41	3.5	1060
	4	7/0.85	2.55	1.0	1.8	29.0	4.61	3.5	1610
	6	7/1.04	3.12	1.0	1.8	32.0	3.08	3.5	2100
30	1.5	7/0.53	1.59	0.8	1.8	26.0	12.1	3.5	1150
	2.5	7/0.67	2.01	0.8	1.8	28.0	7.41	3.5	1520
	4	7/0.85	2.55	1.0	1.9	35.0	4.61	3.5	2350

## 0.6/1kV TFR-CVVS

0.6/1kV Tray Flame Retardant Control Cable with Copper Tape Shield

### 0.6/1kV 트레이용 정전차폐부 제어용 비닐절연 난연비닐시스 케이블

- 0.6/1kV 이하의 제어용회로에 외부장애에 의한 오작동을 일으킬수 있는것을 방지할 수 있는 케이블로 난연성 특성이 매우 우수하다
- The cable is designed for the purpose of using remote control system required electrostatic shield in power plant and substation 1/1kV having excellent flame retardant

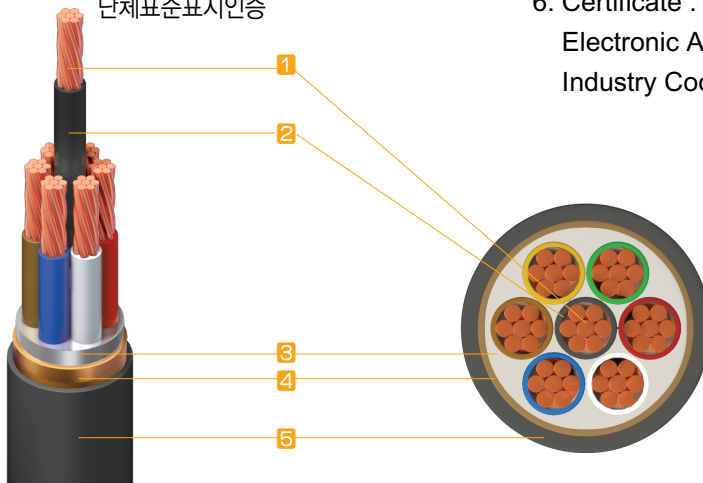
#### ■ 구조

- 1.도체 : 전기용 연동연선(원형연선)
- 2.절연체 : 난연 PVC/A
- 3.선심식별 : 착색

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹
5심	흑, 백, 적, 녹, 황
6심	흑, 백, 적, 녹, 황, 갈
7심	흑, 백, 적, 녹, 황, 갈, 청
8심이상	흑색에 번호표시

\*5심이상 색상은 주문제작

- 4.피복체 : 난연성 PVC/ST1
- 5.적용규격 : K60502-1, KWS-411
- 6.제품인증 : 전기용품안전인증  
단체표준표시인증



- ① 도 체      ① Conductor
- ② 절연체    ② Insulation
- ③ 개재물    ③ Filler (if necessary)
- ④ 동테이프   ④ CU tape
- ⑤ 시 스      ⑤ Sheath

#### ■ CONSTRUCTION

1. Conductor : Annealed copper wire (Concentric Circular)
2. Insulation : Flame Retardane PVC/A
3. Core Identification : Colouring Method

No. of cores	Color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green
5cores	Black, White, Red, Green, Yellow
6cores	Black, White, Red, Green, Yellow, Brown
7cores	Black, White, Red, Green, Yellow, Brown, Blue
Above 8cores	Numbering code on Black

4. Sheath : Flame Retardant PVC/ST1
5. Standard : K60502-1 , KWS-411
6. Certificate : Safety Certification for Electronic Appliance, Korea Electric Wire Industry Cooperative Standards



K60502-1, KWS-411(우수단체 표준표시 인증)

선심수 No. of Cores c	도체 Conductor			절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	(소선수/소선지름) Numder & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
2	1.5	7/0.53	1.59	0.8	1.8	11.5	12.1	3.5	154
	2.5	7/0.67	2.01	0.8	1.8	12.5	7.41	3.5	186
	4	7/0.85	2.55	1	1.8	14.5	4.61	3.5	257
	6	7/1.04	3.12	1	1.8	15.5	3.08	3.5	315
3	1.5	7/0.53	1.59	0.8	1.8	12	12.1	3.5	182
	2.5	7/0.67	2.01	0.8	1.8	13	7.41	3.5	227
	4	7/0.85	2.55	1	1.8	15	4.61	3.5	317
	6	7/1.04	3.12	1	1.8	16.5	3.08	3.5	395
4	1.5	7/0.53	1.59	0.8	1.8	13	12.1	3.5	216
	2.5	7/0.67	2.01	0.8	1.8	14.5	7.41	3.5	271
	4	7/0.85	2.55	1	1.8	16.5	4.61	3.5	386
	6	7/1.04	3.12	1	1.8	17.5	3.08	3.5	488
5	1.5	7/0.53	1.59	0.8	1.8	14	12.1	3.5	256
	2.5	7/0.67	2.01	0.8	1.8	15	7.41	3.5	319
	4	7/0.85	2.55	1	1.8	17.5	4.61	3.5	454
	6	7/1.04	3.12	1	1.8	19	3.08	3.5	556
6	1.5	7/0.53	1.59	0.8	1.8	15	12.1	3.5	294
	2.5	7/0.67	2.01	0.8	1.8	16	7.41	3.5	370
	4	7/0.85	2.55	1	1.8	19	4.61	3.5	532
	6	7/1.04	3.12	1	1.8	22	3.08	3.5	691
7	1.5	7/0.53	1.59	0.8	1.8	15	12.1	3.5	309
	2.5	7/0.67	2.01	0.8	1.8	16	7.41	3.5	398
	4	7/0.85	2.55	1	1.8	19	4.61	3.5	576
	6	7/1.04	3.12	1	1.8	22	3.08	3.5	752

선심수 No. of Cores c	도체 Conductor			절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
	공칭 단면적 Norminal Sectional Area mm <sup>2</sup>	(소선수/소선지름) Numder & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
8	1.5	7/0.53	1.59	0.8	1.8	16	12.1	3.5	341
	2.5	7/0.67	2.01	0.8	1.8	17	7.41	3.5	452
	4	7/0.85	2.55	1	1.8	21	4.61	3.5	657
	6	7/1.04	3.12	1	1.8	23	3.08	3.5	849
10	1.5	7/0.53	1.59	0.8	1.8	18.5	12.1	3.5	431
	2.5	7/0.67	2.01	0.8	1.8	20	7.41	3.5	554
	4	7/0.85	2.55	1	1.8	24	4.61	3.5	822
	6	7/1.04	3.12	1	1.8	27	3.08	3.5	1063
12	1.5	7/0.53	1.59	0.8	1.8	19	12.1	3.5	484
	2.5	7/0.67	2.01	0.8	1.8	21	7.41	3.5	630
	4	7/0.85	2.55	1	1.8	25	4.61	3.5	927
	6	7/1.04	3.12	1	1.8	27	3.08	3.5	1207
15	1.5	7/0.53	1.59	0.8	1.8	20	12.1	3.5	558
	2.5	7/0.67	2.01	0.8	1.8	21	7.41	3.5	732
	4	7/0.85	2.55	1	1.8	27	4.61	3.5	1120
	6	7/1.04	3.12	1	1.8	29	3.08	3.5	1460
20	1.5	7/0.53	1.59	0.8	1.8	23	12.1	3.5	703
	2.5	7/0.67	2.01	0.8	1.8	25	7.41	3.5	930
	4	7/0.85	2.55	1	1.8	30	4.61	3.5	1439
	6	7/1.04	3.12	1	1.8	33	3.08	3.5	1876
30	1.5	7/0.53	1.59	0.8	1.8	27	12.1	3.5	983
	2.5	7/0.67	2.01	0.8	1.8	29	7.41	3.5	1331
	4	7/0.85	2.55	1	1.8	35	4.61	3.5	1992

# 0.6/1kV TFR-CVVSb

0.6/1kV Tray Flame Retardant PVC Sheathed Copper Braid Shield Control Cable

## 0.6/1kV 트레이용 동편조차폐 제어용 비닐절연 난연비닐시스 케이블

• 0.6/1kV 이하의 제어용회로에 외부장애에 의한 오작동을 일으킬수 있는것을 방지할 수 있는 케이블로 동편조로 차폐하여 가요성, 난연성, 내마모성이 매우 우수하다

• This cable is designed for the purpose of using remote control system requiring electrostatic shielding in power plant and substation under 0.6/1kv, having excellent flame retardant.

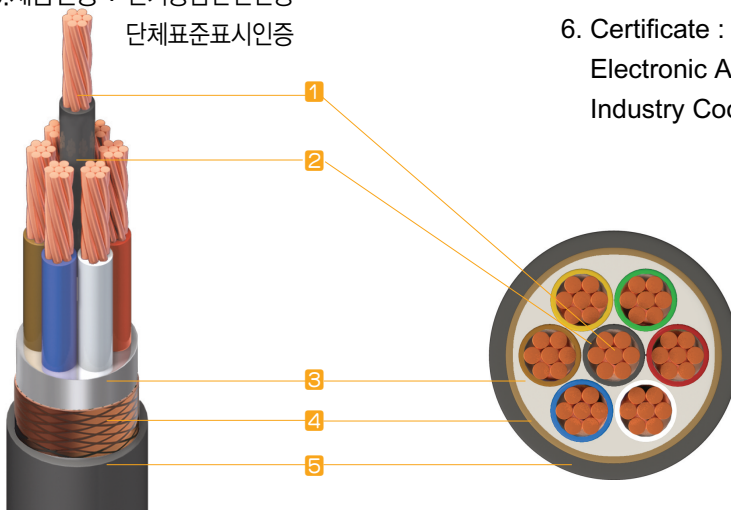
### ■ 구조

- 1.도체 : 전기용 연동연선(원형연선)
- 2.절연체 : 난연 PVC/A
- 3.선심식별 : 착색

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹
5심	흑, 백, 적, 녹, 황
6심	흑, 백, 적, 녹, 황, 갈
7심	흑, 백, 적, 녹, 황, 갈, 청
8심이상	흑색에 번호표시

\*5심이상 색상은 주문제작

- 4.피복체 : 난연성 PVC/ST1
- 5.적용규격 : K60502-1, KWS-411
- 6.제품인증 : 전기용품안전인증  
단체표준표시인증



### ■ CONSTRUCTION

1. Conductor : Annealed copper wire (Concentric Circular)
2. Insulation : Flame Retardane PVC/A
- 3.Core Identification : Colouring Method

No. of cores	Color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green
5cores	Black, White, Red, Green, Yellow
6cores	Black, White, Red, Green, Yellow, Brown
7cores	Black, White, Red, Green, Yellow, Brown, Blue
Above 8cores	Numbering code on Black

4. Sheath : Flame Retardant PVC/ST1
5. Standard : K60502-1 , KWS-411
6. Certificate : Safety Certification for Electronic Appliance, Korea Electric Wire Industry Cooperative Standards

- |       |                         |
|-------|-------------------------|
| ① 도 체 | ① Conductor             |
| ② 절연체 | ② Insulation            |
| ③ 개재물 | ③ Filler (if necessary) |
| ④ 동편조 | ④ Copper braid shield   |
| ⑤ 시 스 | ⑤ Sheath                |

## K60502-1, KWS-411(우수단체 표준표시 인증)

선심수 No. of Cores c	도체 Conductor			절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	(소선수/소선지름) Numder & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
2	1.5	7/0.53	1.59	0.8	1.8	11.5	12.1	3.5	154
	2.5	7/0.67	2.01	0.8	1.8	12.5	7.41	3.5	186
	4	7/0.85	2.55	1	1.8	14.5	4.61	3.5	257
	6	7/1.04	3.12	1	1.8	15.5	3.08	3.5	315
3	1.5	7/0.53	1.59	0.8	1.8	12	12.1	3.5	182
	2.5	7/0.67	2.01	0.8	1.8	13	7.41	3.5	227
	4	7/0.85	2.55	1	1.8	15	4.61	3.5	317
	6	7/1.04	3.12	1	1.8	16.5	3.08	3.5	395
4	1.5	7/0.53	1.59	0.8	1.8	13	12.1	3.5	216
	2.5	7/0.67	2.01	0.8	1.8	14.5	7.41	3.5	271
	4	7/0.85	2.55	1	1.8	16.5	4.61	3.5	386
	6	7/1.04	3.12	1	1.8	17.5	3.08	3.5	488
5	1.5	7/0.53	1.59	0.8	1.8	14	12.1	3.5	256
	2.5	7/0.67	2.01	0.8	1.8	15	7.41	3.5	319
	4	7/0.85	2.55	1	1.8	17.5	4.61	3.5	454
	6	7/1.04	3.12	1	1.8	19	3.08	3.5	556
6	1.5	7/0.53	1.59	0.8	1.8	15	12.1	3.5	294
	2.5	7/0.67	2.01	0.8	1.8	16	7.41	3.5	370
	4	7/0.85	2.55	1	1.8	19	4.61	3.5	532
	6	7/1.04	3.12	1	1.8	22	3.08	3.5	691
7	1.5	7/0.53	1.59	0.8	1.8	15	12.1	3.5	309
	2.5	7/0.67	2.01	0.8	1.8	16	7.41	3.5	398
	4	7/0.85	2.55	1	1.8	19	4.61	3.5	576
	6	7/1.04	3.12	1	1.8	22	3.08	3.5	752



선심수 No. of Cores c	도체 Conductor			절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
	공칭 단면적 Norminal Sectional Area mm <sup>2</sup>	(소선수/소선지름) Numder & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
8	1.5	7/0.53	1.59	0.8	1.8	16	12.1	3.5	341
	2.5	7/0.67	2.01	0.8	1.8	17	7.41	3.5	452
	4	7/0.85	2.55	1	1.8	21	4.61	3.5	657
	6	7/1.04	3.12	1	1.8	23	3.08	3.5	849
10	1.5	7/0.53	1.59	0.8	1.8	18.5	12.1	3.5	431
	2.5	7/0.67	2.01	0.8	1.8	20	7.41	3.5	554
	4	7/0.85	2.55	1	1.8	24	4.61	3.5	822
	6	7/1.04	3.12	1	1.8	27	3.08	3.5	1063
12	1.5	7/0.53	1.59	0.8	1.8	19	12.1	3.5	484
	2.5	7/0.67	2.01	0.8	1.8	21	7.41	3.5	630
	4	7/0.85	2.55	1	1.8	25	4.61	3.5	927
	6	7/1.04	3.12	1	1.8	27	3.08	3.5	1207
15	1.5	7/0.53	1.59	0.8	1.8	20	12.1	3.5	558
	2.5	7/0.67	2.01	0.8	1.8	21	7.41	3.5	732
	4	7/0.85	2.55	1	1.8	27	4.61	3.5	1120
	6	7/1.04	3.12	1	1.8	29	3.08	3.5	1460
20	1.5	7/0.53	1.59	0.8	1.8	23	12.1	3.5	703
	2.5	7/0.67	2.01	0.8	1.8	25	7.41	3.5	930
	4	7/0.85	2.55	1	1.8	30	4.61	3.5	1439
	6	7/1.04	3.12	1	1.8	33	3.08	3.5	1876
30	1.5	7/0.53	1.59	0.8	1.8	27	12.1	3.5	983
	2.5	7/0.67	2.01	0.8	1.8	29	7.41	3.5	1331
	4	7/0.85	2.55	1	1.8	35	4.61	3.5	1992

### 0.6/1kV TFR-GV

0.6/1kV Tray Flame Retardant PVC Insulation Cable for Grounding.

### 0.6/1kV 트레이용 난연비닐절연 접지용 전선

• 0.6/1kV TFR-GV는 저압 전기기기나 구조물의 접지용으로 사용한다.

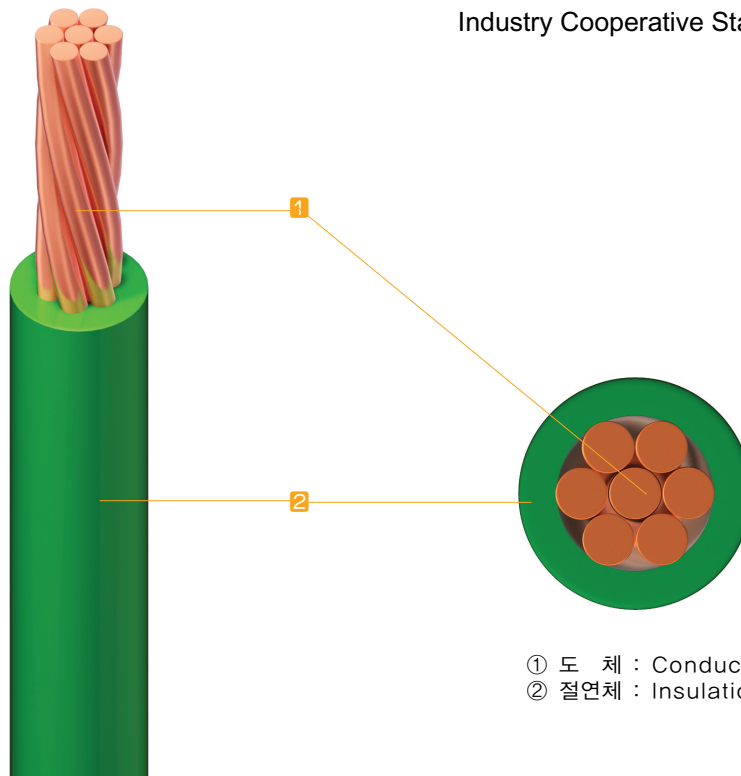
• The 0.6/1kV TFR-GV is used for 1st class and 2nd class of grounding construction in accordance with Construction Regulation.

#### ■ 구조

- 1.도체 : 전기용 연동연선(원형, 원형연선)
- 2.선심식별 : 착색
- 3.절연체색상 : 녹색
- 4.적용규격 : K60502-1 , KWS-412
- 5.제품인증 : 전기용품안전인증  
단체표준표시인증

#### ■ CONSTRUCTION

1. Conductor : Annealed copper wire  
(Concentric Circular, compact Circular)
2. Core Identification : Colouring Method
3. Color of insulation : Green
4. Standard : K60502-1, KWS-412
5. Certificate : Safety Certification for Electronic Appliance, Korea Electric Wire Industry Cooperative Standards



① 도 체 : Conductor  
② 절연체 : Insulation

K60502-1, KWS-412(단체 표준표시 인증)

도체 Conductor			절연체 두께	완성품 바깥지름	도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	(소선수/소선지름) Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm					
1.5	7/0.53	1.59	2.2	6.5	12.1	3.5	60
2.5	7/0.67	2.01	2.2	7.0	7.41	3.5	80
4	7/0.85	2.55	2.4	8.0	4.61	3.5	110
6	7/1.04	3.12	2.4	8.5	3.08	3.5	130
10	7/1.35	4.05	2.4	9.5	1.83	3.5	180
16	원형압축	4.7	2.4	10.0	1.15	3.5	230
25	원형압축	5.9	2.6	12.0	0.727	3.5	340
35	원형압축	6.9	2.6	13.0	0.524	3.5	440
50	원형압축	8.1	2.8	14.5	0.387	3.5	570
70	원형압축	9.8	2.8	16.0	0.268	3.5	780
95	원형압축	11.4	3.1	18.5	0.193	3.5	1060
120	원형압축	12.9	3.1	20.0	0.153	3.5	1300
150	원형압축	14.4	3.4	22.0	0.124	3.5	1600
185	원형압축	15.9	3.7	25.0	0.0991	3.5	1980
240	원형압축	18.3	4.0	28.0	0.0754	3.5	2580
300	원형압축	20.5	4.3	30.0	0.0601	3.5	3210
400	원형압축	23.2	4.6	34.0	0.0470	3.5	4050
500	원형압축	26.4	4.9	38.0	0.0366	3.5	5150
630	원형압축	30.2	5.0	42.0	0.0283	3.5	6570



### 6/10kV TFR-CV

6/10kV XLPE Insulated and Tray Flame Retardant PVC Sheathed Power Cable

### 6/10kV 트레이용 가교폴리에틸렌절연 난연비닐시스 케이블

• 6/10kV 전력회로에 사용하며 전기적, 물리적, 화학적 특성이 우수한 케이블이다.

• The cable is designed for the purpose of using in power, distribution line, having excellent electrical, physical and chemical properties

#### ■ 구조

1. 도체 : 전기용 연동연선(원형, 압축연선)
2. 절연체 : XLPE
3. 선심식별 : 색 테이프

선심수	색
1심	자연색
3심	흑,백,적

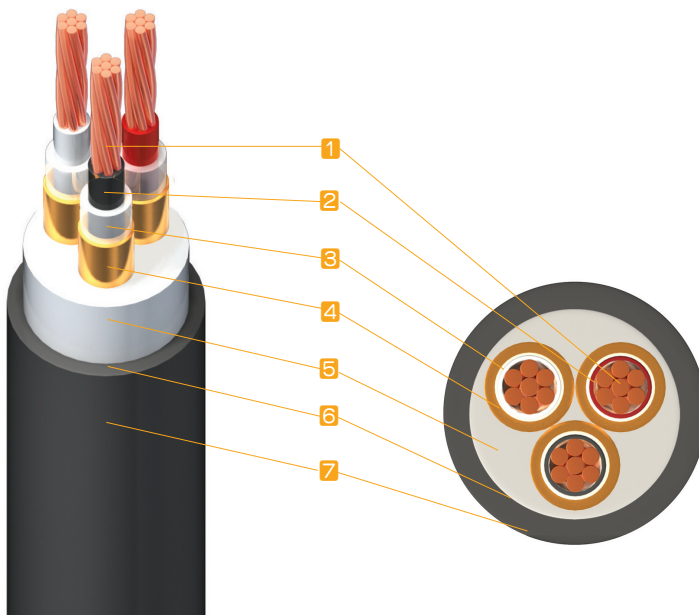
4. 차폐 : 연동테이프
5. 피복체 : 난연성 PVC/ST2
6. 적용규격 : KS C IEC60502-2
7. 제품인증 : 한미표준

#### ■ CONSTRUCTION

1. Conductor : Annealed copper wire (Concentric Circular, Compact Circular)
2. Insulation : XLPE
3. Core Identification : Color Tape

No. of cores	color
1cores	Nature
3cores	Black,White,Red

4. Shield : Copper tape
5. Sheath : Flame PVC/ST2
6. Standard : KS C IEC60502-2
7. Certificate : HANMI Standards



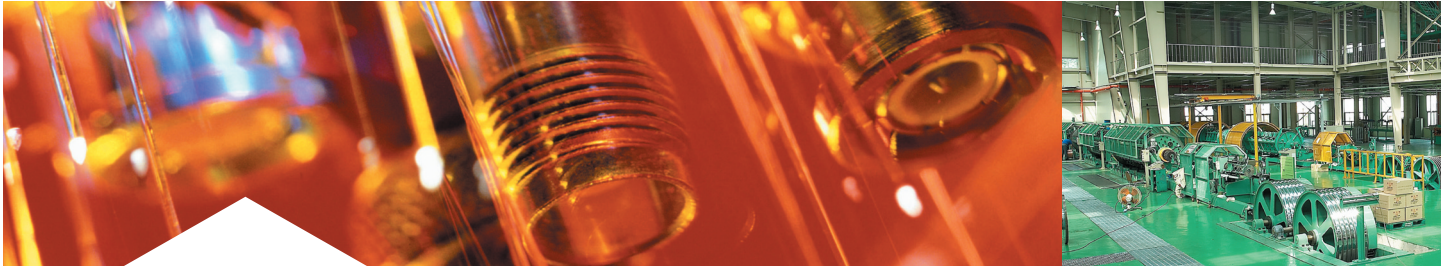
- |           |                     |
|-----------|---------------------|
| ① 도 체     | ① Conductor         |
| ② 절연체     | ② XLPE              |
| ③ 외도      | ③ Insulation Screen |
| ④ 동테이프    | ④ CU Tape           |
| ⑤ 개재물     | ⑤ Filler            |
| ⑥ 바인더 테이프 | ⑥ Binder Tape       |
| ⑦ 시 스     | ⑦ Sheath            |



KS C IEC60502-2

선심수 No. of Cores c	공 칭 단면적 Nominal Sectional Area mm <sup>2</sup>	(소선수/ 소선지름) Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm	절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	완성외경 Approx. Overall Diameter mm	도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage KV	개산중량 Approx. Weight kg/km
1	16	원형압축	4.7	3.4	1.5	20	1.15	21	460
	25	원형압축	5.9	3.4	1.5	21	0.727	21	570
	35	원형압축	6.9	3.4	1.6	22	0.524	21	700
	50	원형압축	8.1	3.4	1.6	23	0.387	21	840
	70	원형압축	9.8	3.4	1.7	25	0.268	21	1100
	95	원형압축	11.4	3.4	1.7	27	0.193	21	1380
	120	원형압축	12.9	3.4	1.8	28	0.153	21	1660
	150	원형압축	14.4	3.4	1.8	30	0.124	21	1950
	185	원형압축	15.9	3.4	1.9	32	0.0991	21	2360
	240	원형압축	18.3	3.4	2.0	35	0.0754	21	3010
	300	원형압축	20.5	3.4	2.0	37	0.0601	21	3650
	400	원형압축	23.2	3.4	2.2	40	0.0470	21	4520
	500	원형압축	26.4	3.4	2.2	43	0.0366	21	5650
	630	원형압축	30.2	3.4	2.3	48	0.0283	21	7230
3	16	원형압축	4.7	3.4	2.1	39	1.15	21	1520
	25	원형압축	5.9	3.4	2.2	41	0.727	21	1930
	35	원형압축	6.9	3.4	2.3	43	0.524	21	2320
	50	원형압축	8.1	3.4	2.4	46	0.387	21	2810
	70	원형압축	9.8	3.4	2.5	50	0.268	21	3600
	95	원형압축	11.4	3.4	2.6	53	0.193	21	4530
	120	원형압축	12.9	3.4	2.7	57	0.153	21	5460
	150	원형압축	14.4	3.4	2.8	60	0.124	21	6410
	185	원형압축	15.9	3.4	2.9	64	0.0991	21	7690
	240	원형압축	18.3	3.4	3.1	69	0.0754	21	9900
	300	원형압축	20.5	3.4	3.3	74	0.0601	21	22910

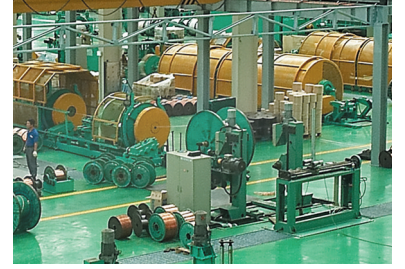
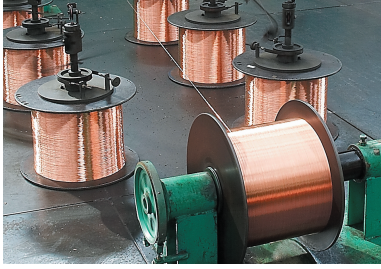
# Hanmi cable



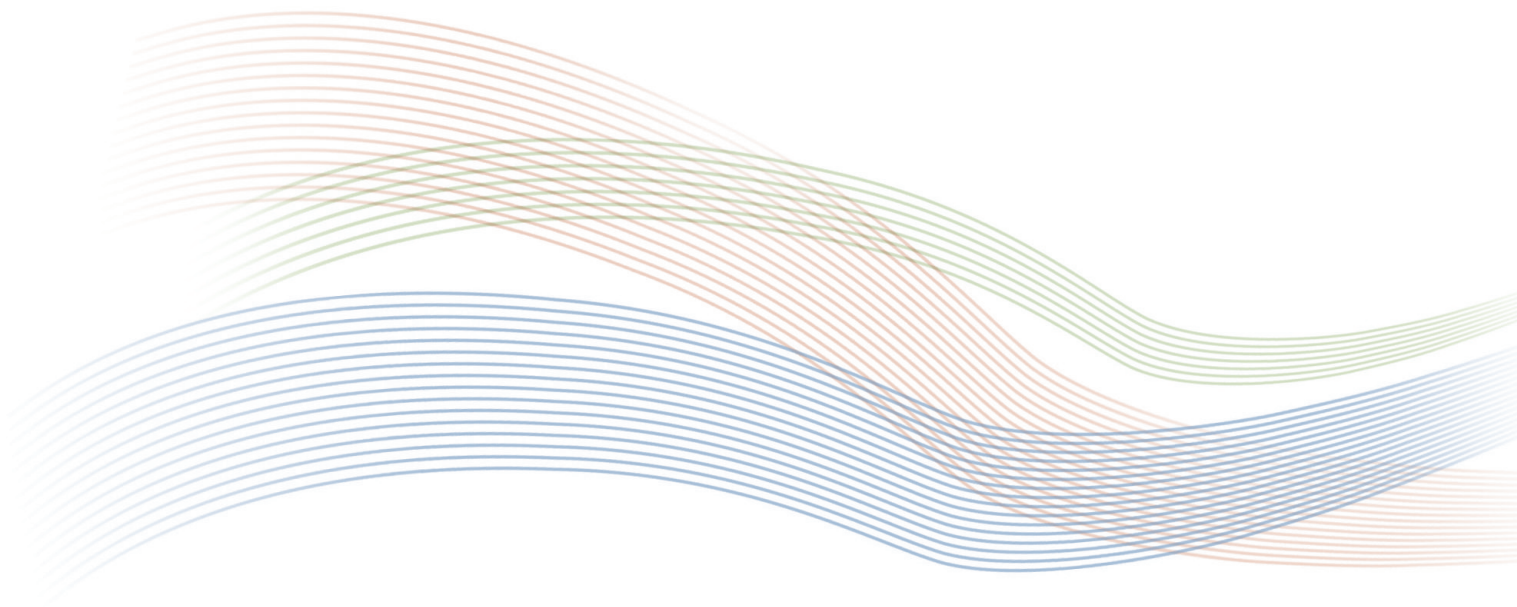
## 비닐코드 FLEXIBLE CORD

300/500V 연질비닐시스코드, 300/500V 평형비닐코드, 300/500V 실내장식전등기구용코드  
300/500V PVC Insulated Flexible Cords





# Hanmi Electric wire & Cable



## 300/500V VCTF 300/500V PVC Insulated Flexible Cords(60227 KS IEC 53)

300/500V 연질비닐시스코드, 300/500V 평형비닐코드, 300/500V 실내장식전등기구용코드

• 주로 옥내에서 AC 300/500V 이하의 소형전기 기구에 사용되는 전선으로 가열성 및 절연성이 좋 으며 색상이 선명함

• Widely used in electrical home apparatus under AC 300/500V for its flexibility, insulation easy coloring

### ■ 구조

1. 도체 : 5등급(집, 복합연선) 도체
2. 절연체 : PVC(70°C, 90°C)
3. 선심식별 : 착색

선심수	색
1심	흑
2심	하늘색, 갈색
3심	녹/황, 하늘색, 갈색 또는 하늘색, 흑색, 갈색
4심	녹/황, 하늘색, 흑색, 갈색 또는 하늘색, 흑색 갈색, 흑색 또는 갈색
5심	녹/황, 하늘색, 흑, 갈색, 흑 혹은 갈색 또는 하늘색, 흑, 흑, 흑갈색 혹은 갈색, 흑, 혹은 갈색

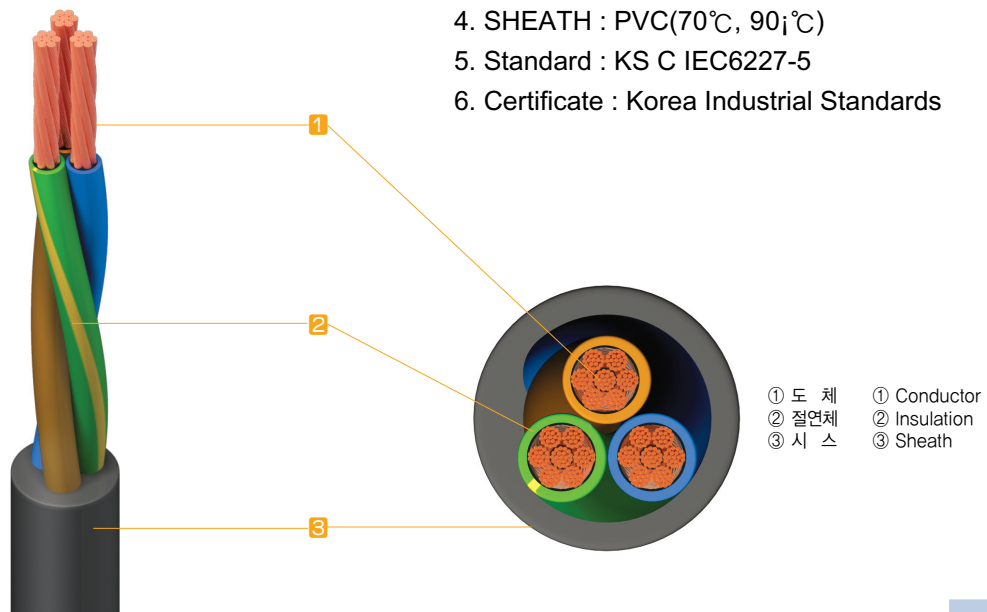
4. 피복체 : PVC(70°C, 90°C)
6. 적용규격 : KS C IEC6227-5
7. 제품인증 : 한국산업규격(KS)

### ■ CONSTRUCTION

1. Conductor : Flexible Standed Annealed copper (Class 5)
2. Insulation : PVC(70°C, 90°C)
3. Core Identification : Colouring Method

No. of cores	color
1cores	Black
2cores	Sky Blue, Brown
3cores	Green/yellow, Sky Blue, Brown or Sky Blue, Black, Brown
4cores	Green/yellow, Sky Blue, Black, Brown or Sky Blue, Black, Brown, Black, Brown,
5cores	Green/yellow, Sky Blue, Black, Brown Black or Brower Sky Blue, Black, Dark Brown or Brown, Black or Brown

4. SHEATH : PVC(70°C, 90j°C)
5. Standard : KS C IEC6227-5
6. Certificate : Korea Industrial Standards



① 도 체 ① Conductor  
 ② 절연체 ② Insulation  
 ③ 시 스 ③ Sheath



기 호 Symbol	선심수 No. of Cores c	도 체 Conductor		절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	평균완성외경 Mean Overall Diameter		도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	절연저항 Insulation Resistance 90℃ MΩ · km
		공칭 단면적 Nominal Sectional Area	등급 Class			하한값 Lower Limit mm	상한값 Upper Limit mm		
60227 KS IEC 42 (VFF)	2	0.5	6	0.8	—	2.4×4.9	3.0×5.9	39.0	0.016
	2	0.75	6	0.8	—	2.6×5.2	3.1×6.3	26.0	0.014
60227 KS IEC 52 (VCTFK)	2	0.5	5	0.5	0.6	4.6	5.9	39.0	0.012
	2	0.75	5	0.5	0.6	4.9	6.3	26.0	0.010
	3	0.5	5	0.5	0.6	4.9	6.3	39.0	0.012
	3	0.75	5	0.5	0.6	5.2	6.7	26.0	0.010
	2	0.5	5	0.5	0.6	3.0×4.9	3.7×5.9	39.0	0.012
	2	0.75	5	0.5	0.6	3.2×5.2	3.8×6.3	26.0	0.010
60227 KS IEC 56 (HVCTFK)	2	0.5	5	0.5	0.6	4.6	5.9	39.0	0.012
	2	0.75	5	0.5	0.6	4.9	6.3	26.0	0.010
	3	0.5	5	0.5	0.6	4.9	6.3	39.0	0.012
	3	0.75	5	0.5	0.6	5.2	6.7	26.0	0.010
	2	0.5	5	0.5	0.6	3.0×4.9	3.7×5.9	39.0	0.012
	2	0.75	5	0.5	0.6	3.2×5.2	3.8×6.3	26.0	0.010
60227 KS IEC 06 (VSF)	1	0.5	5	0.6	—	2.1	2.5	39.0	0.013
	1	0.75	5	0.6	—	2.2	2.7	26.0	0.011
	1	1.0	5	0.6	—	2.4	2.8	19.5	0.010
60227 KS IEC 08 (HVSF)	1	1.0	5	0.6	—	2.4	2.8	19.5	0.010
	1	1.5	5	0.7	—	2.8	3.4	13.3	0.009
	1	2.5	5	0.8	—	3.4	4.1	7.98	0.009

기 호 Symbol	선심수 No. of Cores c	도 체 Conductor		절연체 두께 Nominal Insulation Thickness mm	시스두께 Nominal Sheath Thickness mm	평균원성외경 Mean Overall Diameter		도체저항 (20℃) Max. Conductor Resistance at 20℃ Ω/km	절연저항 Insulation Resistance
		공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	등급 Class			하한값 Lower Limit mm	상한값 Upper Limit mm		90℃ MΩ · km
60227 KS IEC 53 (VCTF)	2	0.75	5	0.6	0.8	5.7	7.2	26.0	0.011
	2	1.0	5	0.6	0.8	5.9	7.5	19.5	0.010
	2	1.5	5	0.7	0.8	6.8	8.6	13.3	0.010
	2	2.5	5	0.8	1.0	8.4	10.6	7.98	0.009
	3	0.75	5	0.6	0.8	6.0	7.6	26.0	0.011
	3	1.0	5	0.6	0.8	6.3	8.0	19.5	0.010
	3	1.5	5	0.7	0.9	7.4	9.4	13.3	0.010
	3	2.5	5	0.8	1.1	9.2	11.4	7.98	0.009
	4	0.75	5	0.6	0.8	6.6	8.3	26.0	0.011
	4	1.0	5	0.6	0.9	7.1	9.0	19.5	0.010
	4	1.5	5	0.7	1.0	8.4	10.5	13.3	0.010
	4	2.5	5	0.8	1.1	10.1	12.5	7.98	0.009
	5	0.75	5	0.6	0.9	7.4	9.3	26.0	0.011
	5	1.0	5	0.6	0.9	7.8	9.8	19.5	0.010
	5	1.5	5	0.7	1.1	9.3	11.6	13.3	0.010
	5	2.5	5	0.8	1.2	11.2	13.9	7.98	0.009
60227 KS IEC 57 (HVCTF)	2	0.75	5	0.6	0.8	5.7	7.2	26.0	0.011
	2	1.0	5	0.6	0.8	5.9	7.5	19.5	0.010
	2	1.5	5	0.7	0.8	6.9	8.6	13.3	0.010
	2	2.5	5	0.8	1.0	8.4	10.6	7.98	0.009
	3	0.75	5	0.6	0.8	6.0	7.6	26.0	0.011
	3	1.0	5	0.6	0.8	6.3	8.0	19.5	0.010
	3	1.5	5	0.7	0.9	7.4	9.4	13.3	0.010
	3	2.5	5	0.8	1.1	9.2	11.4	7.98	0.009
	4	0.75	5	0.6	0.8	6.6	8.3	26.0	0.011
	4	1.0	5	0.6	0.9	7.1	9.0	19.5	0.010
	4	1.5	5	0.7	1.0	8.4	10.5	13.3	0.010
	4	2.5	5	0.8	1.1	10.1	12.5	7.98	0.009
	5	0.75	5	0.6	0.9	7.4	9.3	26.0	0.011
	5	1.0	5	0.6	0.9	7.8	9.8	19.5	0.010
	5	1.5	5	0.7	1.1	9.3	11.6	13.3	0.010
	5	2.5	5	0.8	1.2	11.2	13.9	7.98	0.009

# Hanmi cable



## 이동용 케이블 MOVABLE CABLE

0.6/1kV 비닐절연 비닐캡타이어 케이블 (0.6/1kV VCT)

0.6/1kV PVC Insulated and PVC Sheathed Portable Power Cable



## 0.6/1kV VCT

0.6/1kV PVC Insulated and PVC Sheathed Flexible Power Cable

### 0.6/1kV 비닐절연 비닐캡타이어 케이블

• 주로 공장, 광산, 농장등에서 0.6/1kV이하의 전압을 사용하는 이동용 전기기기 또는 배선용으로 사용한다.

• This cable is generally used for connecting mobile electric apparatus under 0.6/4kV as power source lead wire in factory mine area and farm.

#### ■ 구조

- 도체 : 5등급(집, 복합연선) 도체
- 절연체 : PVC/A
- 선심식별 : 착색

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹

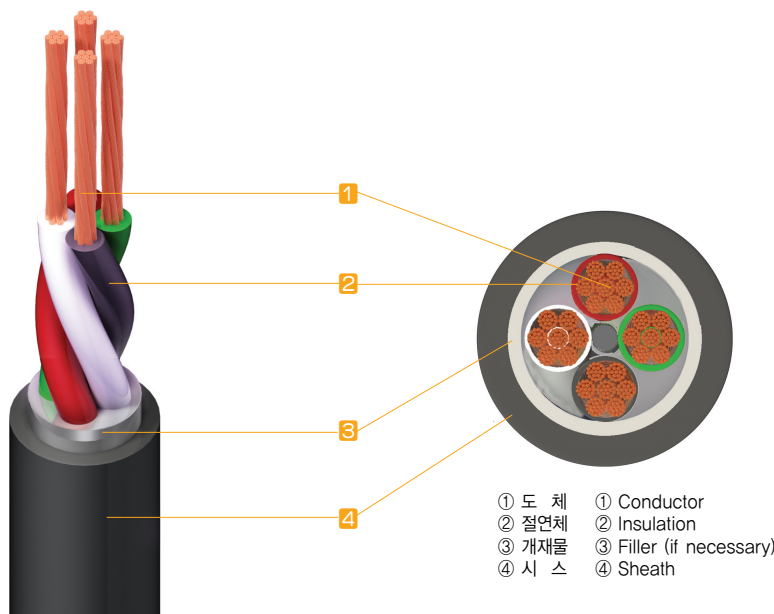
- 피복체 : PVC/ST1
- 적용규격 : KS C IEC 60502-1
- 제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

- Conductor : Flexible Standed Annealed copper (Class 5)
- Insulation : PVC/A
- Core Identification : Colouring Method

No. of cores	color
2cores	Black, White
2cores	Black, White, Red
4cores	Black, White, Red, Green

- Sheath : PVC/ST1
- Standard : KS C IEC 60502-1
- Certificate : Korea Industrial Standards

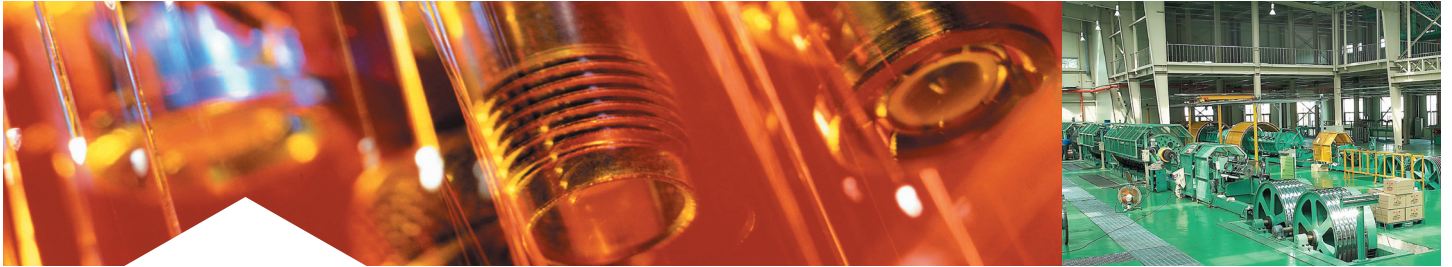




## KS C IEC 60502-1

선심수 No. of Cores c	도체 Conductor			절연체 두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
1	1.0	0.21	1.3	0.8	1.4	6.0	19.5	3.5	50
	1.5	0.26	1.6	0.8	1.4	6.5	13.3	3.5	60
	2.5	0.26	2.1	0.8	1.4	7.0	7.98	3.5	80
	4	0.31	2.6	1.0	1.4	8.0	4.95	3.5	100
	6	0.31	3.6	1.0	1.4	9.0	3.30	3.5	130
	10	0.41	4.8	1.0	1.4	10.0	1.91	3.5	180
	16	0.41	6.0	1.0	1.4	11.0	1.21	3.5	240
	25	0.41	7.4	1.2	1.4	13.0	0.780	3.5	350
	35	0.41	8.7	1.2	1.4	14.5	0.554	3.5	450
	50	0.41	10.4	1.4	1.4	16.5	0.386	3.5	610
	70	0.51	12.5	1.4	1.4	18.5	0.272	3.5	8200
	95	0.51	14.5	1.6	1.5	21.5	0.206	3.5	1110
	120	0.51	16.2	1.6	1.5	23.0	0.161	3.5	1370
	150	0.51	18.2	1.8	1.6	26.0	0.129	3.5	1680
	185	0.51	20.2	2.0	1.7	28.0	0.106	3.5	2070
	240	0.51	23.3	2.2	1.8	32.0	0.0801	3.5	2710
	300	0.51	26.0	2.4	1.9	35.5	0.0641	3.5	3360
2	1.0	0.21	1.3	0.8	1.8	10.0	20.0	3.5	120
	1.5	0.26	1.6	0.8	1.8	10.5	13.7	3.5	130
	2.5	0.26	2.1	0.8	1.8	11.5	8.21	3.5	160
	4	0.31	2.6	1.0	1.8	13.5	5.09	3.5	220
	6	0.31	3.6	1.0	1.8	15.5	3.39	3.5	290
	10	0.41	4.8	1.0	1.8	17.5	1.95	3.5	400
	16	0.41	6.0	1.0	1.8	20.0	1.24	3.5	530
	25	0.41	7.4	1.2	1.8	23.5	0.795	3.5	770
	35	0.41	8.7	1.2	1.8	26.5	0.565	3.5	980
	50	0.41	10.4	1.4	1.9	30.5	0.393	3.5	1320
70	0.51	12.5	1.4	2.1	35.5	0.277	3.5	1800	
95	0.51	14.5	1.6	2.2	40.5	0.210	3.5	2430	
3	1.0	0.21	1.3	0.8	1.8	10.5	19.5	3.5	140
	1.5	0.26	1.6	0.8	1.8	11.0	13.3	3.5	160
	2.5	0.26	2.1	0.8	1.8	12.0	7.98	3.5	200
	4	0.31	2.6	1.0	1.8	14.0	4.95	3.5	280
	6	0.31	3.6	1.0	1.8	16.0	3.30	3.5	370
	10	0.41	4.8	1.0	1.8	19.0	1.91	3.5	520
	16	0.41	6.0	1.0	1.8	21.5	1.21	3.5	700
	25	0.41	7.4	1.2	1.8	25.0	0.780	3.5	1030
	35	0.41	8.7	1.2	1.8	28.0	0.554	3.5	1340
	50	0.41	10.4	1.4	2.0	33.0	0.366	3.5	1820
	70	0.51	12.5	1.4	2.2	38.0	0.272	3.5	2500
95	0.51	14.5	1.6	2.3	43.5	0.206	3.5	3380	
4	1.0	0.21	1.3	0.8	1.8	11.0	19.5	3.5	170
	1.5	0.26	1.6	0.8	1.8	12.0	13.3	3.5	190
	2.5	0.26	2.1	0.8	1.8	13.0	7.98	3.5	240
	4	0.31	2.6	1.0	1.8	15.0	4.95	3.5	340
	6	0.31	3.6	1.0	1.8	17.5	3.30	3.5	460
	10	0.41	4.8	1.0	1.8	20.5	1.91	3.5	650
	16	0.41	6.0	1.0	1.8	23.5	1.21	3.5	900
	25	0.41	7.4	1.2	1.8	28.0	0.780	3.5	1330

# Hanmi cable

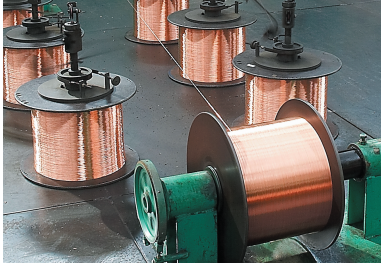


## 소방용 케이블 FIRE PROTECTION CABLE

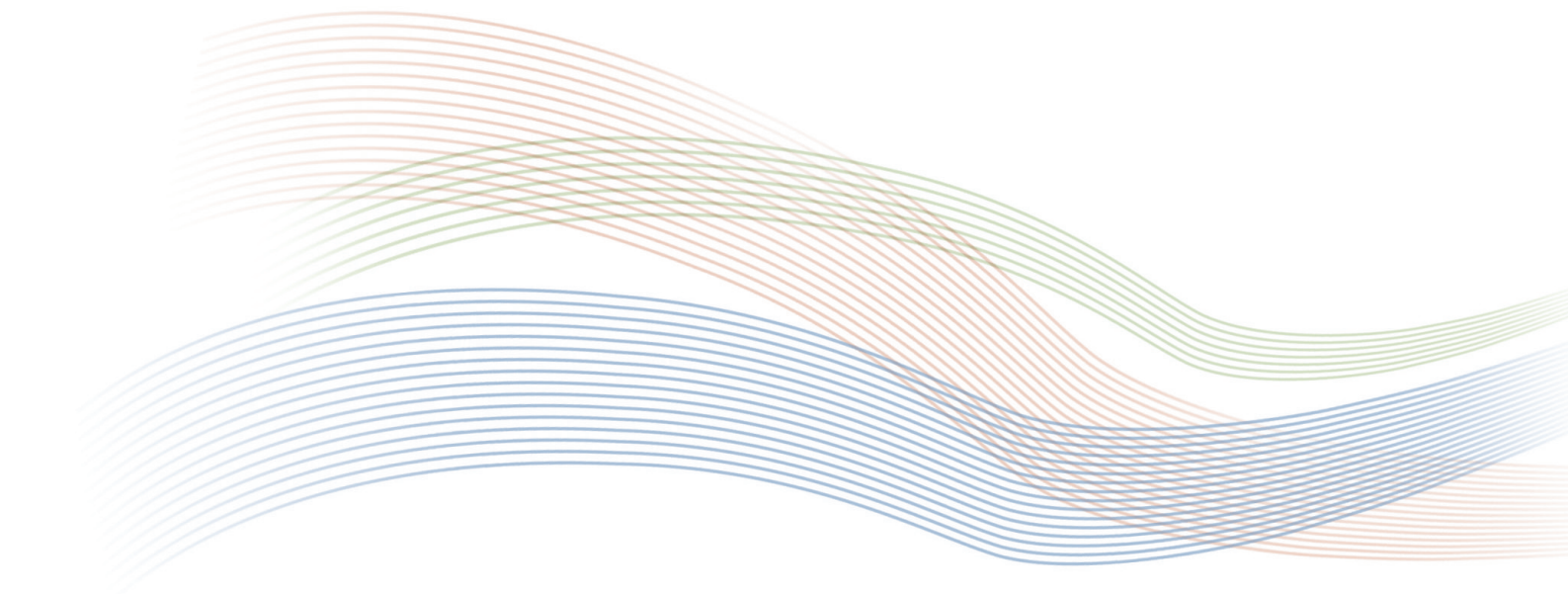
0.6/1kV 트레이용 가교폴리에틸렌 절연 난연 비닐시스 화재경보용 내열전선(0.6/1kV TFR-3)  
0.6/1kV Tray Heat Resistant Control and Signal Cable for Fire Service

0.6/1kV 트레이용 난연 내화케이블(0.6/1kV TFR-8)  
0.6/1kV Tray Flame Resistant Power Cable for Fire Service





# Hanmi Electric wire & Cable



## 0.6/1kV TFR-3

0.6/1kV Tray Heat Resistant Control and Signal Cable for Fire Service

### 0.6/1kV 트레이용 가교폴리에틸렌 절연 난연 비닐시스 화재경보용 내열전선

• 화재경보 및 비상경보장치의 회로에 사용되는 제어, 신호용 케이블이다

• This cable is used for operation and interconnection of fire alarm and emergency information equipment

#### ■ 구조

- 1.도체 : 1등급(단선) 또는 2등급(연선) 도체
- 2.절연체 : XLPE
- 3.선심식별 : 색테이프

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹
5심이상	각층마다 흑-적 tracer방식으로 배열

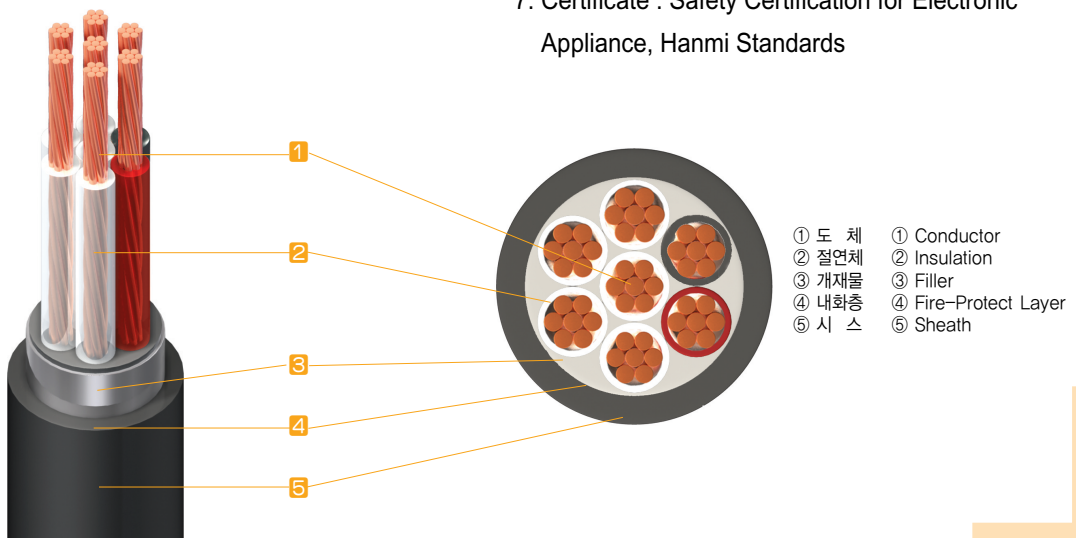
- 4.내열보강층 : 내화테이프
- 5.피복체 : 난연성 PVC/ST2
- 6.적용규격 : K60502-1
- 7.제품인증 : 전기용품안전인증, 한미표준

#### ■ CONSTRUCTION

1. Conductor : Solid(Class 1)or circular Stranded Annealed Copper(Class2)
2. Insulation : XLPE
- 3.Core Identification : Color Tape

No. of cores	color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green
Above 5cores	Colour tracer coding tracer colour : Black, Red

4. Heat resistant layer : Fire retardant tape
5. Sheath : Flame Retardant PVC/ST2
6. Standard : K60502-1
7. Certificate : Safety Certification for Electronic Appliance, Hanmi Standards





## K60502-1

선심수 No. of Cores c	도체 Conductor		절연체 두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm²	등급 Class						
2	1.5	1	0.7	1.8	11.0	12.1	3.5	140
	2.5	1	0.7	1.8	12.0	7.41	3.5	170
	4	1	0.7	1.8	13.0	4.61	3.5	210
3	1.5	1	0.7	1.8	11.5	12.1	3.5	160
	2.5	1	0.7	1.8	12.5	7.41	3.5	210
	4	1	0.7	1.8	13.5	4.61	3.5	260
4	1.5	1	0.7	1.8	12	12.1	3.5	200
	2.5	1	0.7	1.8	13	7.41	3.5	250
	4	1	0.7	1.8	14.5	4.61	3.5	320
5	1.5	1	0.7	1.8	13.0	12.1	3.5	230
	2.5	1	0.7	1.8	14.0	7.41	3.5	290
	4	1	0.7	1.8	15.5	4.61	3.5	390
6	1.5	1	0.7	1.8	14.0	12.1	3.5	260
	2.5	1	0.7	1.8	15.0	7.41	3.5	340
	4	1	0.7	1.8	16.5	4.61	3.5	450
7	1.5	1	0.7	1.8	14.0	12.1	3.5	280
	2.5	1	0.7	1.8	15.0	7.41	3.5	360
	4	1	0.7	1.8	15.5	4.61	3.5	490
8	1.5	1	0.7	1.8	15.0	12.1	3.5	320
	2.5	1	0.7	1.8	16.0	7.41	3.5	420
	4	1	0.7	1.8	18.5	4.61	3.5	560
10	1.5	1	0.7	1.8	17.0	12.1	3.5	380
	2.5	1	0.7	1.8	18.5	7.41	3.5	500
	4	1	0.7	1.8	20.5	4.61	3.5	690
12	1.5	1	0.7	1.8	17.5	12.1	3.5	430
	2.5	1	0.7	1.8	19.0	7.41	3.5	570
	4	1	0.7	1.8	21.0	4.61	3.5	780
15	1.5	1	0.7	1.8	19.0	12.1	3.5	510
	2.5	1	0.7	1.8	20.5	7.41	3.5	690
	4	1	0.7	1.8	23.0	4.61	3.5	950
20	1.5	1	0.7	1.8	20.5	12.1	3.5	650
	2.5	1	0.7	1.8	23.0	7.41	3.5	880
	4	1	0.7	1.8	25.5	4.61	3.5	1230
30	1.5	1	0.7	1.8	24.0	12.1	3.5	910
	2.5	1	0.7	1.8	26.5	7.41	3.5	1250
	4	1	0.7	1.8	29.5	4.61	3.5	1750

선심수 No. of Cores c	도체 Conductor		절연체 두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	등급 Class						
2	1.5	2	0.7	1.8	11.5	12.1	3.5	140
	2.5	2	0.7	1.8	12.0	7.41	3.5	170
	4	2	0.7	1.8	13.5	4.61	3.5	210
3	1.5	2	0.7	1.8	12.0	12.1	3.5	160
	2.5	2	0.7	1.8	13.0	7.41	3.5	210
	4	2	0.7	1.8	14.0	4.61	3.5	260
4	1.5	2	0.7	1.8	12.5	12.1	3.5	200
	2.5	2	0.7	1.8	13.5	7.41	3.5	250
	4	2	0.7	1.8	15.0	4.61	3.5	320
5	1.5	2	0.7	1.8	13.5	12.1	3.5	230
	2.5	2	0.7	1.8	14.5	7.41	3.5	290
	4	2	0.7	1.8	16.0	4.61	3.5	390
6	1.5	2	0.7	1.8	14.5	12.1	3.5	260
	2.5	2	0.7	1.8	16.0	7.41	3.5	340
	4	2	0.7	1.8	17.5	4.61	3.5	450
7	1.5	2	0.7	1.8	14.5	12.1	3.5	280
	2.5	2	0.7	1.8	16.0	7.41	3.5	360
	4	2	0.7	1.8	17.5	4.61	3.5	490
8	1.5	2	0.7	1.8	16.0	12.1	3.5	320
	2.5	2	0.7	1.8	17.5	7.41	3.5	420
	4	2	0.7	1.8	19.0	4.61	3.5	560
10	1.5	2	0.7	1.8	17.5	12.1	3.5	380
	2.5	2	0.7	1.8	19.5	7.41	3.5	500
	4	2	0.7	1.8	21.5	4.61	3.5	690
12	1.5	2	0.7	1.8	18.0	12.1	3.5	430
	2.5	2	0.7	1.8	20.0	7.41	3.5	570
	4	2	0.7	1.8	22.0	4.61	3.5	780
15	1.5	2	0.7	1.8	20.0	12.1	3.5	510
	2.5	2	0.7	1.8	22.0	7.41	3.5	690
	4	2	0.7	1.8	24.5	4.61	3.5	950
20	1.5	2	0.7	1.8	22.0	12.1	3.5	650
	2.5	2	0.7	1.8	24.0	7.41	3.5	880
	4	2	0.7	1.8	27.0	4.61	3.5	1230
30	1.5	2	0.7	1.8	25.0	12.1	3.5	910
	2.5	2	0.7	1.8	28.0	7.41	3.5	1250
	4	2	0.7	1.8	31.5	4.61	3.5	1750

# 0.6/1kV TFR-8

0.6/1kV Tray Flame Resistant Power Cable for Fire Service

## 0.6/1kV 트레이용 난연 내화케이블

• TFR-8 케이블은 불연성을 필요로 하는 화재경보기, 스프링클러 계통, 비상 등 회로의 전원공급용으로 소방과 관련된 장비에 사용한다.

• The TFR-8 is used for fire related equipments such as fire alarms, sprinklers system, emergency lightning supply required power supplying of fire-resistant properties.

### ■ 구조

1. 도체 : 전기용 연동연선(원형, 압축연선)
2. 내화층 : 내화 테이프
3. 절연체 : XLPE
4. 선심식별 : 색 테이프

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹

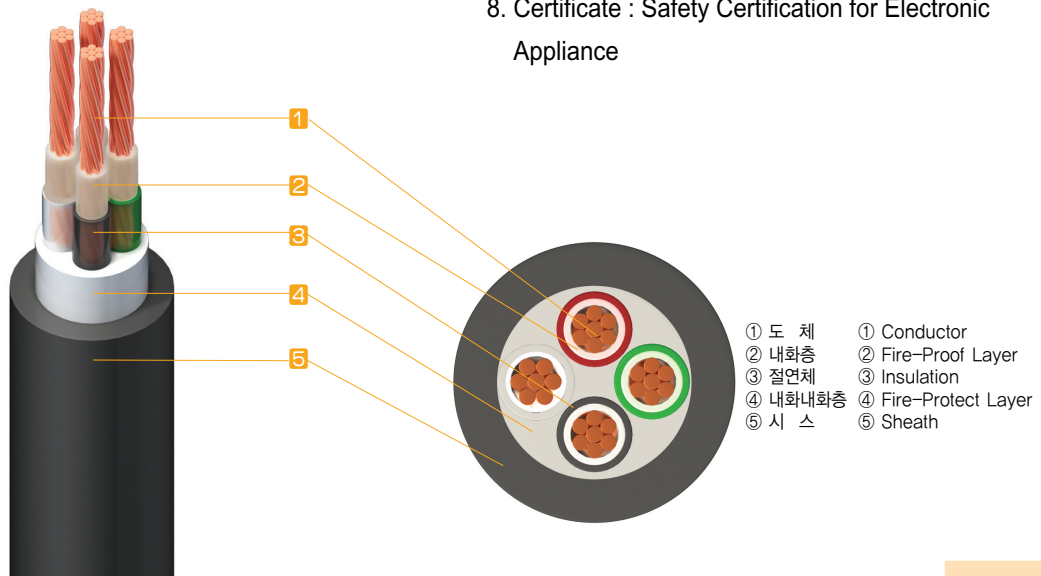
5. 내열보강층 : Mica Tape
6. 피복체 : 난연성 PVC/ST2
7. 적용규격 : K60502-1, 한미표준
8. 제품인증 : 전기용품 안전인증

### ■ CONSTRUCTION

1. Conductor : Annealed copper wire (Concentric Circular, Compact Circular)
2. Fire retardant Layer : Fire Retardant Tape
3. Insulation : XLPE
4. Core Identification : Colouring Method

No. of cores	color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green

5. Heat resistant layer : Mica Tape
6. Shield : Flame PVC/ST2
7. Standard : K60502-1, HANMI Standards
8. Certificate : Safety Certification for Electronic Appliance



- |         |                      |
|---------|----------------------|
| ① 도 체   | ① Conductor          |
| ② 내화층   | ② Fire-Proof Layer   |
| ③ 절연체   | ③ Insulation         |
| ④ 내화내화층 | ④ Fire-Protect Layer |
| ⑤ 시 스   | ⑤ Sheath             |

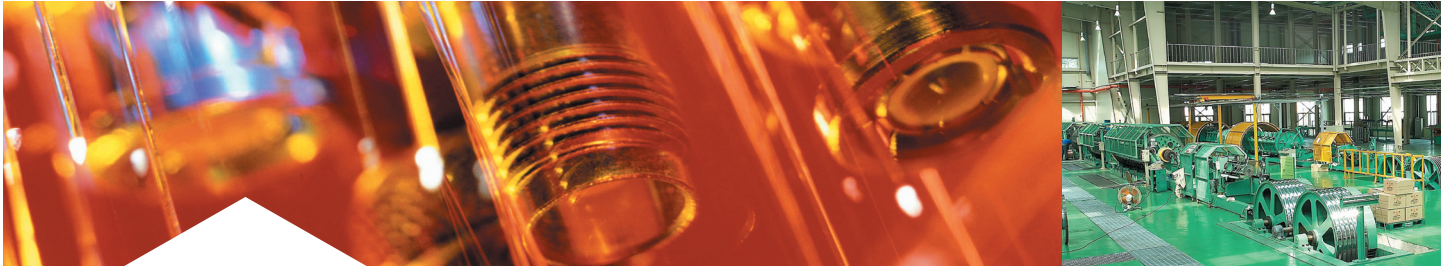
## K60502-1

선심수 No. of Cores c	도체 Conductor			절연체 두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/ 지름 Number & Diameter of Wire No./mm	바깥지름 Outer Diameter mm						
1	1.5	7/0.53	1.59	0.7	1.4	8.5	12.1	3.5	60
	2.5	7/0.67	2.01	0.7	1.4	9.0	7.41	3.5	80
	4	7/0.85	2.55	0.7	1.4	9.5	4.61	3.5	100
	6	7/1.04	3.12	0.7	1.4	10.0	3.08	3.5	120
	10	7/1.35	4.05	0.7	1.4	11.0	1.83	3.5	180
	16	원형압축	4.7	0.7	1.4	12.0	1.15	3.5	220
	25	원형압축	5.9	0.9	1.4	13.5	0.727	3.5	320
	35	원형압축	6.9	0.9	1.4	15.0	0.524	3.5	430
	50	원형압축	8.1	1.0	1.4	16.5	0.387	3.5	540
	70	원형압축	9.8	1.1	1.4	18.5	0.268	3.5	740
	95	원형압축	11.4	1.1	1.5	20.5	0.193	3.5	990
	120	원형압축	12.9	1.2	1.5	22.5	0.153	3.5	1230
	150	원형압축	14.4	1.4	1.6	25.0	0.124	3.5	1530
	185	원형압축	15.9	1.6	1.6	27.0	0.0991	3.5	1890
	240	원형압축	18.3	1.7	1.7	30.0	0.0754	3.5	2450
	300	원형압축	20.5	1.8	1.8	33.0	0.0601	3.5	3040
	400	원형압축	23.2	2.0	1.9	36.5	0.0470	3.5	3860
500	원형압축	26.4	2.2	2.0	41.0	0.0366	3.5	4920	
630	원형압축	30.2	2.4	2.2	46.0	0.0283	3.5	6320	
2	1.5	7/0.53	1.59	0.7	1.8	14.0	12.1	3.5	130
	2.5	7/0.67	2.01	0.7	1.8	15.0	7.41	3.5	170
	4	7/0.85	2.55	0.7	1.8	16.0	4.61	3.5	210
	6	7/1.04	3.12	0.7	1.8	17.5	3.08	3.5	260
	10	7/1.35	4.05	0.7	1.8	19.5	1.83	3.5	350
	16	원형압축	4.7	0.7	1.8	21.0	1.15	3.5	470
	25	원형압축	5.9	0.9	1.8	24.5	0.727	3.5	680
	35	원형압축	6.9	0.9	1.8	26.5	0.524	3.5	910
	50	원형압축	8.1	1.0	1.8	30.0	0.387	3.5	1180
	70	원형압축	9.8	1.1	1.8	34.5	0.268	3.5	1640
	95	원형압축	11.4	1.1	1.9	38.0	0.193	3.5	2210
	120	원형압축	12.9	1.2	2.0	42.0	0.153	3.5	2710
	150	원형압축	14.4	1.4	2.2	46.5	0.124	3.5	3390
	185	원형압축	15.9	1.6	2.3	51.0	0.0991	3.5	4200
240	원형압축	18.3	1.7	2.5	57.5	0.0754	3.5	5440	
300	원형압축	20.5	1.8	2.6	63.0	0.0601	3.5	6740	



선심수 No. of Cores c	도체 Conductor			절연체 두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
3	1.5	7/0.53	1.59	0.7	1.8	15.0	12.1	3.5	170
	2.5	7/0.67	2.01	0.7	1.8	16.0	7.41	3.5	200
	4	7/0.85	2.55	0.7	1.8	17.0	4.61	3.5	270
	6	7/1.04	3.12	0.7	1.8	18.5	3.08	3.5	340
	10	7/1.35	4.05	0.7	1.8	20.5	1.83	3.5	470
	16	원형압축	4.7	0.7	1.8	22.0	1.15	3.5	640
	25	원형압축	5.9	0.9	1.8	26.0	0.727	3.5	930
	35	원형압축	6.9	0.9	1.8	28.5	0.524	3.5	1250
	50	원형압축	8.1	1.0	1.9	32.0	0.387	3.5	1600
	70	원형압축	9.8	1.1	2.0	37.0	0.268	3.5	2240
	95	원형압축	11.4	1.1	2.1	41.0	0.193	3.5	3020
	120	원형압축	12.9	1.2	2.3	45.5	0.153	3.5	3850
	150	원형압축	14.4	1.4	2.4	50.5	0.124	3.5	4790
	185	원형압축	15.9	1.6	2.6	55.5	0.0991	3.5	5960
	240	원형압축	18.3	1.7	2.8	62.0	0.0754	3.5	7730
300	원형압축	20.5	1.8	2.9	68.0	0.0601	3.5	9570	
4	1.5	7/0.53	1.59	0.7	1.8	16.0	12.1	3.5	190
	2.5	7/0.67	2.01	0.7	1.8	17.0	7.41	3.5	250
	4	7/0.85	2.55	0.7	1.8	18.5	4.61	3.5	330
	6	7/1.04	3.12	0.7	1.8	20.0	3.08	3.5	420
	10	7/1.35	4.05	0.7	1.8	22.5	1.83	3.5	600
	16	원형압축	4.7	0.7	1.8	24.5	1.15	3.5	820
	25	원형압축	5.9	0.9	1.8	28.5	0.727	3.5	1220
	35	원형압축	6.9	0.9	1.8	31.5	0.524	3.5	1600
	50	원형압축	8.1	1.0	2.0	35.5	0.387	3.5	2110
	70	원형압축	9.8	1.1	2.1	41.0	0.268	3.5	2990
	95	원형압축	11.4	1.1	2.3	45.5	0.193	3.5	4040
	120	원형압축	12.9	1.2	2.4	50.5	0.153	3.5	5050
	150	원형압축	14.4	1.4	2.6	56.0	0.124	3.5	6280
	185	원형압축	15.9	1.6	2.7	61.5	0.0991	3.5	7830
	240	원형압축	18.3	1.7	3.0	69.0	0.0754	3.5	10160
300	원형압축	20.5	1.8	3.2	76.0	0.0601	3.5	12600	

# Hanmi cable



## 저독성 난연 폴리올레핀 케이블 Halogen Free Flame Retardant Polyolefin Cable

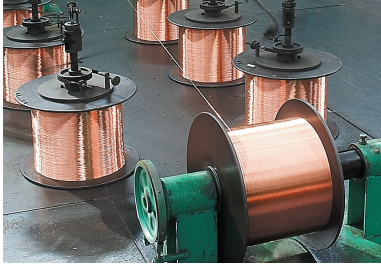
0.6/1kV 가교폴리에틸렌 절연 저독성 난연 폴리올레핀 시스 전력용 케이블 (0.6/1kV HFCCO)  
0.6/1kV XLPE Insulated Halogen Free Flame Retardant Polyolefin Shathed Power Cable

0.6/1kV 가교폴리에틸렌 절연 저독성 난연 폴리올레핀 시스 제어용 케이블 (0.6/1kV HFCCO)  
0.6/1kV XLPE Insulated Halogen Free Flame Retardant Polyolefin Shathed Control Cable

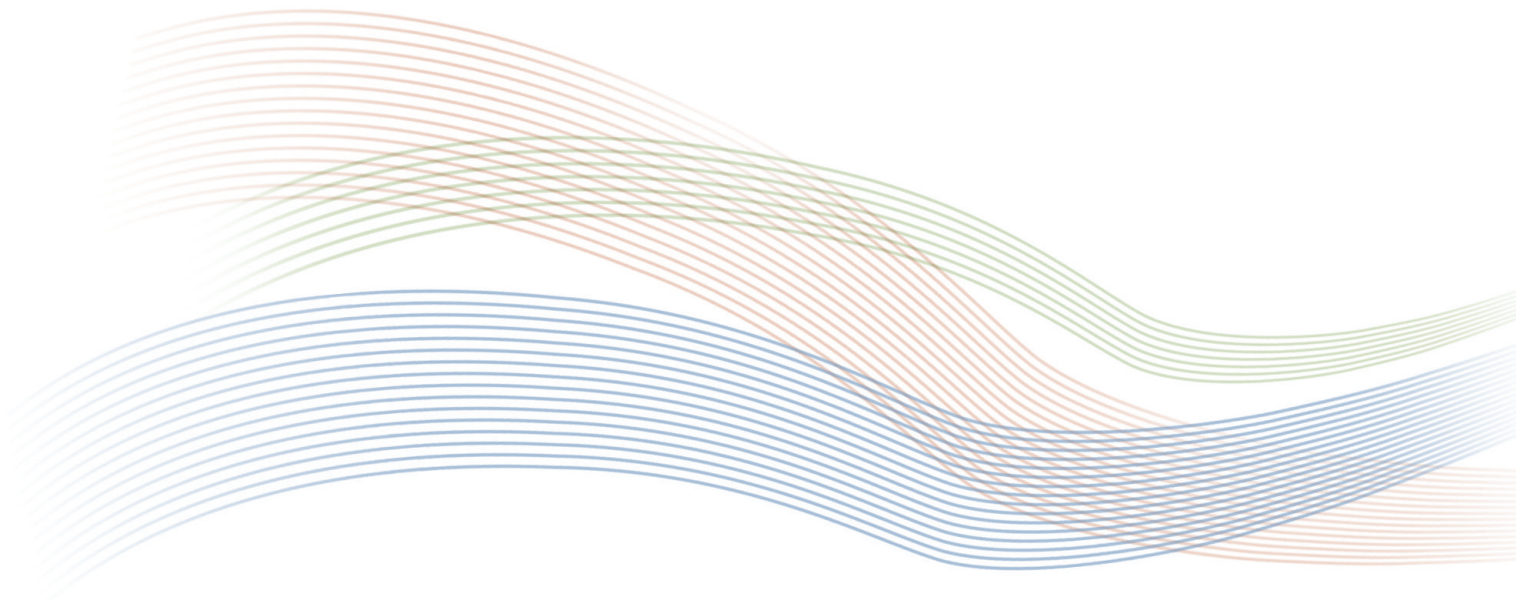
0.6/1kV 저독성 난연 폴리올레핀 내화 케이블 (0.6/1kV NFR-8)  
0.6/1kV Halogen Free Flame Retardant Polyolefin Cable for Fire Service

0.6/1kV 저독성 난연 폴리올레핀 내열 케이블 (0.6/1kV NFR-3)  
0.6/1kV Halogen Free Flame Retardant Polyolefin Control Signal Cable for Fire Service





# Hanmi Electric wire & Cable



## 0.6/1kV HFCO

0.6/1kV XLPE Insulated Halogen Free Flame Retardant Polyolefin Shathed Power Cable

### 0.6/1kV 가교폴리에틸렌 절연 저독성 난연 폴리올레핀 시스 전력용 케이블

- 주거 및 상업적 용도의 건물내 및 산업용전력 및 조명회로에 사용하며, 난연특성이 우수하고 저독성으로 독소가스가 발생치 않는다.
- This cable is designed for the purpose of using in power distribution line, having excellent low smoking nontoxic and flame retardant.power supplying of fire-resistant properties.

#### ■ 구조

1. 도체 : 전기용 연동연선(원형, 압축연선)
2. 절연체 : XLPE
3. 선심식별 : 색 테이프

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹

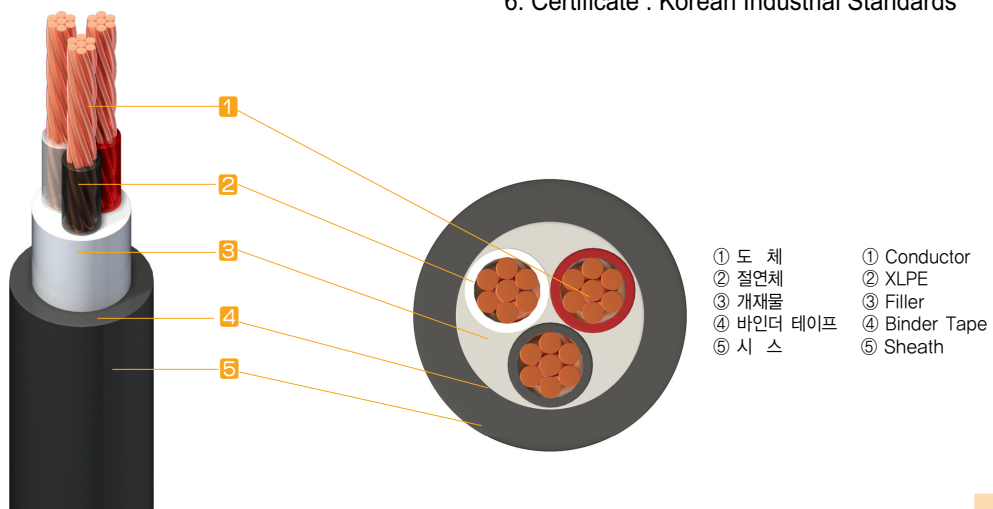
4. 피복체 : 저독성 난연 폴리올레핀 (ST8)
5. 적용규격 : KS C IEC 60502-1
6. 제품인증 : 한국산업규격(KS)

#### ■ CONSTRUCTION

1. Conductor : Annealed copper wire (Concentric Circular, Compact Circular)
2. Insulation : XLPE
3. Core Identification : Color Tape

No. of cores	color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green

4. Sheath : Halogen free flame retardant Polyolefin (ST8)
5. Standard : KS C IEC 60502-1
6. Certificate : Korean Industrial Standards





## KS C IEC 60502-1

선심수 No. of Cores c	도체 Conductor			절연체 두께 PVC Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20°C) Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
1	1.5	7/0.53	1.59	0.7	1.4	8.0	12.1	3.5	50
	2.5	7/0.67	2.01	0.7	1.4	8.0	7.41	3.5	70
	4	7/0.85	2.55	0.7	1.4	9.0	4.61	3.5	90
	6	7/1.04	3.12	0.7	1.4	9.0	3.08	3.5	110
	10	7/1.35	4.05	0.7	1.4	10.0	1.83	3.5	170
	16	원형압축	4.7	0.7	1.4	11.0	1.15	3.5	210
	25	원형압축	5.9	0.9	1.4	13.0	0.727	3.5	310
	35	원형압축	6.9	0.9	1.4	14.0	0.524	3.5	400
	50	원형압축	8.1	1.0	1.4	15.0	0.387	3.5	520
	70	원형압축	9.8	1.1	1.4	17.0	0.238	3.5	720
	95	원형압축	11.4	1.1	1.5	19.0	0.193	3.5	970
	120	원형압축	12.9	1.2	1.5	21.0	0.153	3.5	1210
	150	원형압축	14.4	1.4	1.6	23.0	0.124	3.5	1490
	185	원형압축	15.9	1.6	1.6	25.0	0.0991	3.5	1840
	240	원형압축	18.3	1.7	1.7	28.0	0.0754	3.5	2400
	300	원형압축	20.5	1.8	1.8	30.0	0.0601	3.5	2980
	400	원형압축	23.2	2.0	1.9	34.0	0.0470	3.5	3800
500	원형압축	26.4	2.2	2.0	38.0	0.0366	3.5	4850	
630	원형압축	30.2	2.4	2.2	42.0	0.0283	3.5	6240	
2	1.5	7/0.53	1.59	0.7	1.8	13.0	12.1	3.5	120
	2.5	7/0.67	2.01	0.7	1.8	13.0	7.41	3.5	150
	4	7/0.85	2.55	0.7	1.8	15.0	4.61	3.5	190
	6	7/1.04	3.12	0.7	1.8	16.0	3.08	3.5	240
	10	7/1.35	4.05	0.7	1.8	18.0	1.83	3.5	330
	16	원형압축	4.7	0.7	1.8	19.0	1.15	3.5	450
	25	원형압축	5.9	0.9	1.8	20.0	0.727	3.5	660
	35	원형압축	6.9	0.9	1.8	24.0	0.524	3.5	880
	50	원형압축	8.1	1.0	1.8	27.0	0.387	3.5	1150
	70	원형압축	9.8	1.1	1.8	31.0	0.268	3.5	1610
	95	원형압축	11.4	1.1	1.9	35.0	0.193	3.5	2170
	120	원형압축	12.9	1.2	2.0	38.0	0.153	3.5	2670
	150	원형압축	14.4	1.4	2.2	42.0	0.124	3.5	3310
	185	원형압축	15.9	1.6	2.3	47.0	0.0991	3.5	4110
240	원형압축	18.3	1.7	2.5	52.0	0.0754	3.5	5340	
300	원형압축	20.5	1.8	2.6	57.0	0.0601	3.5	6630	

선심수 No. of Cores c	도체 Conductor			절연체 두께 PVC Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/ 지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
3	1.5	7/0.53	1.59	0.7	1.8	13.0	12.1	3.5	150
	2.5	7/0.67	2.01	0.7	1.8	14.0	7.41	3.5	180
	4	7/0.85	2.55	0.7	1.8	15.0	4.61	3.5	240
	6	7/1.04	3.12	0.7	1.8	16.0	3.08	3.5	310
	10	7/1.35	4.05	0.7	1.8	19.0	1.83	3.5	450
	16	원형압축	4.7	0.7	1.8	20.0	1.15	3.5	610
	25	원형압축	5.9	0.9	1.8	23.0	0.727	3.5	900
	35	원형압축	6.9	0.9	1.8	26.0	0.524	3.5	1210
	50	원형압축	8.1	1.0	1.8	29.0	0.387	3.5	1560
	70	원형압축	9.8	1.1	1.9	33.0	0.268	3.5	2200
	95	원형압축	11.4	1.1	2.0	37.0	0.193	3.5	2970
	120	원형압축	12.9	1.2	2.1	41.0	0.153	3.5	3790
	150	원형압축	14.4	1.4	2.3	45.0	0.124	3.5	4670
	185	원형압축	15.9	1.6	2.4	50.0	0.0991	3.5	5830
	240	원형압축	18.3	1.7	2.6	56.0	0.0754	3.5	7580
300	원형압축	20.5	1.8	2.7	61.0	0.0601	3.5	9400	
4	1.5	7/0.53	1.59	0.7	1.8	14.0	12.1	3.5	170
	2.5	7/0.67	2.01	0.7	1.8	15.0	7.41	3.5	220
	4	7/0.85	2.55	0.7	1.8	16.0	4.61	3.5	290
	6	7/1.04	3.12	0.7	1.8	18.0	3.08	3.5	380
	10	7/1.35	4.05	0.7	1.8	20.0	1.83	3.5	570
	16	원형압축	4.7	0.7	1.8	22.0	1.15	3.5	790
	25	원형압축	5.9	0.9	1.8	26.0	0.727	3.5	1180
	35	원형압축	6.9	0.9	1.8	28.0	0.524	3.5	1550
	50	원형압축	8.1	1.0	1.9	32.0	0.387	3.5	2060
	70	원형압축	9.8	1.1	2.0	37.0	0.268	3.5	2930
	95	원형압축	11.4	1.1	2.1	41.0	0.193	3.5	3970
	120	원형압축	12.9	1.2	2.3	45.0	0.153	3.5	4980
	150	원형압축	14.4	1.4	2.4	50.0	0.124	3.5	6130
	185	원형압축	15.9	1.6	2.6	55.0	0.0991	3.5	7660
	240	원형압축	18.3	1.7	2.8	62.0	0.0754	3.5	9960
300	원형압축	20.5	1.8	3.0	68.0	0.0601	3.5	12380	

# 0.6/1kV HFCCO

0.6/1kV XLPE Insulated Halogen Free Flame Retardant Polyolefin Sheathed Control Cable

## 0.6/1kV 가교폴리에틸렌 절연 저독성 난연 폴리올레핀 시스 제어용 케이블

• 발전소, 변전소 등의 원격 제어용 회로에 적합한 케이블로서 난연특성이 우수하고 저독성으로 독소가스가 발생하지 않는다.

• This cable is designed for the purpose of using in remote control system in power plant and substation, having excellent low smoking nontoxic and flame retardant.

### ■ 구조

1. 도체 : 전기용 연동연선(원형, 압축연선)
2. 절연체 : XLPE
3. 선심식별 : 색 테이프

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹
5심이상	흑색에 번호표시

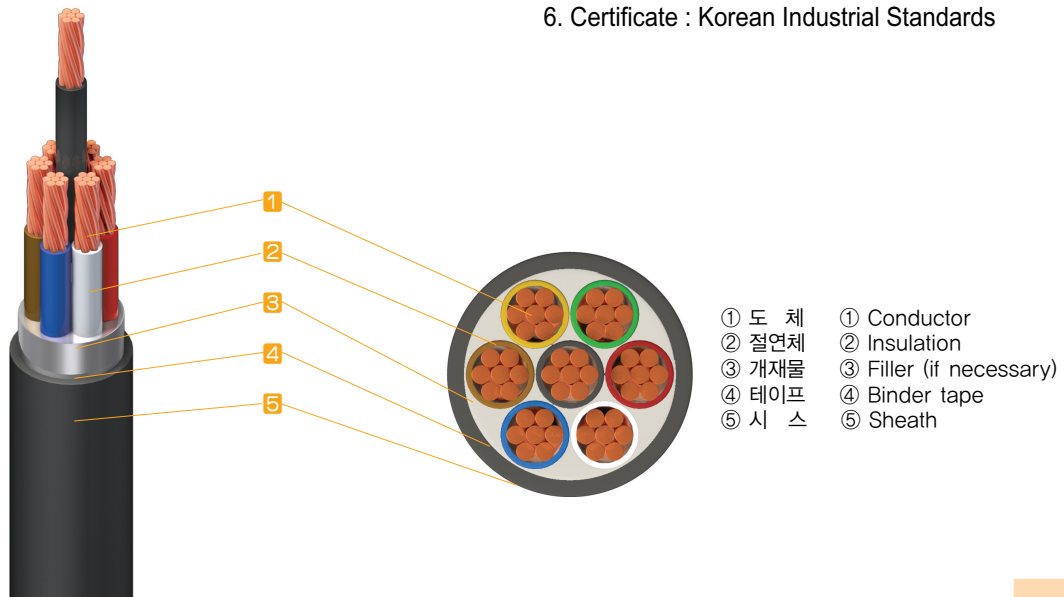
4. 피복체 : 저독성 난연 폴리올레핀 (ST8)
5. 적용규격 : KS C IEC 60502-1
6. 제품인증 : 한국산업규격(KS)

### ■ CONSTRUCTION

1. Conductor : Annealed copper wire (Concentric Circular, Compact Circular)
2. Insulation : XLPE
3. Core Identification : Color Tape

No. of cores	color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green
Above 5cores	Numbering Code on Black

4. Sheath : Halogen free flame retardant Polyolefin (ST8)
5. Standard : KS C IEC 60502-1
6. Certificate : Korean Industrial Standards



### KS C IEC 60502-1

선심수 No. of Cores c	도체 Conductor			절연체 두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/ 소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
2	1.5	7/0.53	1.59	0.7	1.8	10.5	12.1	3.5	130
	2.5	7/0.67	2.01	0.7	1.8	11.5	7.41	3.5	160
	4	7/0.85	2.55	0.7	1.8	12.5	4.61	3.5	200
	6	7/1.04	3.12	0.7	1.8	13.5	3.08	3.5	260
	10	7/1.35	4.05	0.7	1.8	15.5	1.83	3.5	350
3	1.5	7/0.53	1.59	0.7	1.8	11.0	12.1	3.5	160
	2.5	7/0.67	2.01	0.7	1.8	12.0	7.41	3.5	200
	4	7/0.85	2.55	0.7	1.8	13.0	4.61	3.5	260
	6	7/1.04	3.12	0.7	1.8	14.5	3.08	3.5	330
	10	7/1.35	4.05	0.7	1.8	16.5	1.83	3.5	470
4	1.5	7/0.53	1.59	0.7	1.8	11.5	12.1	3.5	190
	2.5	7/0.67	2.01	0.7	1.8	13.0	7.41	3.5	250
	4	7/0.85	2.55	0.7	1.8	14.5	4.61	3.5	320
	6	7/1.04	3.12	0.7	1.8	15.5	3.08	3.5	420
	10	7/1.35	4.05	0.7	1.8	18.0	1.83	3.5	600
5	1.5	7/0.53	1.59	0.7	1.8	13.0	12.1	3.5	230
	2.5	7/0.67	2.01	0.7	1.8	14.0	7.41	3.5	290
	4	7/0.85	2.55	0.7	1.8	15.5	4.61	3.5	380
	6	7/1.04	3.12	0.7	1.8	17.0	3.08	3.5	500
	10	7/1.35	4.05	0.7	1.8	19.5	1.83	3.5	730
6	1.5	7/0.53	1.59	0.7	1.8	13.5	12.1	3.5	260
	2.5	7/0.67	2.01	0.7	1.8	15.0	7.41	3.5	340
	4	7/0.85	2.55	0.7	1.8	16.5	4.61	3.5	450
	6	7/1.04	3.12	0.7	1.8	18.5	3.08	3.5	590
	10	7/1.35	4.05	0.7	1.8	21.0	1.83	3.5	850
7	1.5	7/0.53	1.59	0.7	1.8	13.5	12.1	3.5	270
	2.5	7/0.67	2.01	0.7	1.8	15.0	7.41	3.5	360
	4	7/0.85	2.55	0.7	1.8	16.5	4.61	3.5	480
	6	7/1.04	3.12	0.7	1.8	18.5	3.08	3.5	640
	10	7/1.35	4.05	0.7	1.8	21.0	1.83	3.5	940



선심수 No. of Cores c	도체 Conductor			절연체 두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/ 소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
8	1.5	7/0.53	1.59	0.7	1.8	14.5	12.1	3.5	320
	2.5	7/0.67	2.01	0.7	1.8	16.0	7.41	3.5	410
	4	7/0.85	2.55	0.7	1.8	18.0	4.61	3.5	550
	6	7/1.04	3.12	0.7	1.8	20.0	3.08	3.5	740
	10	7/1.35	4.05	0.7	1.8	23.0	1.83	3.5	1090
10	1.5	7/0.53	1.59	0.7	1.8	26.5	12.1	3.5	380
	2.5	7/0.67	2.01	0.7	1.8	18.5	7.41	3.5	500
	4	7/0.85	2.55	0.7	1.8	21.0	4.61	3.5	670
	6	7/1.04	3.12	0.7	1.8	23.0	3.08	3.5	900
	10	7/1.35	4.05	0.7	1.8	27.0	1.83	3.5	1330
12	1.5	7/0.53	1.59	0.7	1.8	17.0	12.1	3.5	430
	2.5	7/0.67	2.01	0.7	1.8	19.0	7.41	3.5	570
	4	7/0.85	2.55	0.7	1.8	22.0	4.61	3.5	780
	6	7/1.04	3.12	0.7	1.8	24.0	3.08	3.5	1050
	10	7/1.35	4.05	0.7	1.8	28.0	1.83	3.5	1560
15	1.5	7/0.53	1.59	0.7	1.8	18.5	12.1	3.5	510
	2.5	7/0.67	2.01	0.7	1.8	21.0	7.41	3.5	690
	4	7/0.85	2.55	0.7	1.8	23.0	4.61	3.5	950
	6	7/1.04	3.12	0.7	1.8	26.0	3.08	3.5	1280
20	1.5	7/0.53	1.59	0.7	1.8	21.0	1.83	3.5	650
	2.5	7/0.67	2.01	0.7	1.8	23.0	12.1	3.5	880
	4	7/0.85	2.55	0.7	1.8	26.0	7.41	3.5	1220
	6	7/1.04	3.12	0.7	1.8	29.0	4.61	3.5	1660
30	1.5	7/0.53	1.59	0.7	1.8	24.0	3.08	3.5	920
	2.5	7/0.67	2.01	0.7	1.8	27.0	1.83	3.5	1250
	4	7/0.85	2.55	0.7	1.9	31.0	12.1	3.5	1750

## 0.6/1kV NFR-8

0.6/1kV Halogen Free Flame Retardant Polyolefin Cable for fire service

### 0.6/1kV 저독성 난연 폴리올레핀 내화 케이블

• 독소가스가 발생하지 않는 저독성으로 불연성을 필요로 하는 화재경보기, 스프링 쿨러 계통, 비상 등 회로의 전원 공급용으로 소방과 관련된 장비에 사용한다.

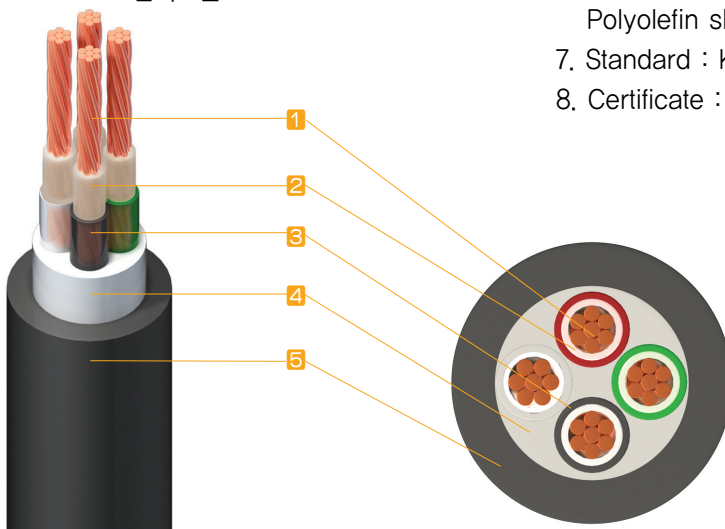
• The NFR-8 is used for fire related equipments such as fire alarms, sprinklers system, emergency lightning supply required power supplying of fire-resistant properties and having excellent low smoking nontoxic.

#### ■ 구조

1. 도체 : 전기용 연동연선(원형, 압축연선)
2. 내화층 : 내화 테이프
3. 절연체 : XLPE
4. 선심식별 : 색 테이프

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹

5. 내열보강층 : Mica Tape
6. 피복체 : 저독성 난연 폴리올레핀시스/ST8
7. 적용규격 : K60502-1
8. 제품인증 : 전기용품 안전인증 한미표준



#### ■ CONSTRUCTION

1. Conductor : Annealed copper wire (Concentric Circular, Compact Circular)
2. Fire retardant Layer : Fire Retardant Tape
3. Insulation : XLPE
4. Core Identification : Color Tape

No. of cores	color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green

5. Heat resistant layer : Mica Tape
6. Shield : Low Smoke Flame Retardant Polyolefin sheath/ST8
7. Standard : K60502-1
8. Certificate : Safety Certification for Electronic Appliance, HANMI Standards

- |           |                         |
|-----------|-------------------------|
| ① 도 체     | ① Conductor             |
| ② 내화층     | ② Flame retardant layer |
| ③ 절연체     | ③ Insulation            |
| ④ 개재물     | ④ Heat retardant layer  |
| ⑤ 저독성난연시스 | ⑤ low smoke Sheath      |

## K60502-1

선심수 No. of Cores c	도체 Conductor			절연체 두께 PVC Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20°C) Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/ 소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
1	1.5	7/0.53	1.59	0.7	1.4	8.5	12.1	3.5	60
	2.5	7/0.67	2.01	0.7	1.4	9.0	7.41	3.5	80
	4	7/0.85	2.55	0.7	1.4	9.5	4.61	3.5	100
	6	7/1.04	3.12	0.7	1.4	10.0	3.08	3.5	120
	10	7/1.35	4.05	0.7	1.4	11.0	1.83	3.5	180
	16	원형압축	4.7	0.7	1.4	12.0	1.15	3.5	220
	25	원형압축	5.9	0.9	1.4	13.5	0.727	3.5	320
	35	원형압축	6.9	0.9	1.4	15.0	0.524	3.5	430
	50	원형압축	8.1	1.0	1.4	16.5	0.387	3.5	540
	70	원형압축	9.8	1.1	1.4	18.5	0.268	3.5	740
	95	원형압축	11.4	1.1	1.5	20.5	0.193	3.5	990
	120	원형압축	12.9	1.2	1.5	22.5	0.153	3.5	1230
	150	원형압축	14.4	1.4	1.6	25.0	0.124	3.5	1530
	185	원형압축	15.9	1.6	1.6	27.0	0.0991	3.5	1890
	240	원형압축	18.3	1.7	1.7	30.0	0.0754	3.5	2450
	300	원형압축	20.5	1.8	1.8	33.0	0.0601	3.5	3040
	400	원형압축	23.2	2.0	1.9	36.5	0.0470	3.5	3860
500	원형압축	26.4	2.2	2.0	41.0	0.0366	3.5	4920	
630	원형압축	30.2	2.4	2.2	46.0	0.0283	3.5	6320	
2	1.5	7/0.53	1.59	0.7	1.8	14.0	12.1	3.5	130
	2.5	7/0.67	2.01	0.7	1.8	15.0	7.41	3.5	170
	4	7/0.85	2.55	0.7	1.8	16.0	4.61	3.5	210
	6	7/1.04	3.12	0.7	1.8	17.5	3.08	3.5	260
	10	7/1.35	4.05	0.7	1.8	19.5	1.83	3.5	350
	16	원형압축	4.7	0.7	1.8	21.0	1.15	3.5	470
	25	원형압축	5.9	0.9	1.8	24.5	0.727	3.5	680
	35	원형압축	6.9	0.9	1.8	26.5	0.524	3.5	910
	50	원형압축	8.1	1.0	1.8	30.0	0.387	3.5	1180
	70	원형압축	9.8	1.1	1.8	34.5	0.268	3.5	1640
	95	원형압축	11.4	1.1	1.9	38.0	0.193	3.5	2210
	120	원형압축	12.9	1.2	2.0	42.0	0.153	3.5	2710
	150	원형압축	14.4	1.4	2.2	46.5	0.124	3.5	3390
	185	원형압축	15.9	1.6	2.3	51.0	0.0991	3.5	4200
	240	원형압축	18.9	1.7	2.5	57.5	0.0754	3.5	5440
300	원형압축	20.5	1.8	2.6	63.0	0.0601	3.5	6740	

선심수 No. of Cores c	도체 Conductor			절연체 두께 PVC Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20℃) Conductor Resistance at 20℃ Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	소선수/ 소선지름 Number & Diameter of Wire No/mm	바깥지름 Outer Diameter mm						
3	1.5	7/0.53	1.59	0.7	1.8	15.0	12.1	3.5	170
	2.5	7/0.67	2.01	0.7	1.8	16.0	7.41	3.5	200
	4	7/0.85	2.55	0.7	1.8	17.0	4.61	3.5	270
	6	7/1.04	3.12	0.7	1.8	18.5	3.08	3.5	340
	10	7/1.35	4.05	0.7	1.8	20.5	1.83	3.5	470
	16	원형압축	4.7	0.7	1.8	22.0	1.15	3.5	640
	25	원형압축	5.9	0.9	1.8	26.0	0.727	3.5	930
	35	원형압축	6.9	0.9	1.8	28.5	0.524	3.5	1250
	50	원형압축	8.1	1.0	1.9	32.0	0.387	3.5	1600
	70	원형압축	9.8	1.1	2.0	37.0	0.268	3.5	2240
	95	원형압축	11.4	1.1	2.1	41.0	0.193	3.5	3020
	120	원형압축	12.9	1.2	2.3	45.5	0.153	3.5	3850
	150	원형압축	14.4	1.4	2.4	50.5	0.124	3.5	4790
	185	원형압축	15.9	1.6	2.6	55.5	0.0991	3.5	5960
	240	원형압축	18.3	1.7	2.8	62.0	0.0754	3.5	7730
300	원형압축	20.5	1.8	2.9	68.0	0.0601	3.5	9570	
4	1.5	7/0.53	1.59	0.7	1.8	16.0	12.1	3.5	190
	2.5	7/0.67	2.01	0.7	1.8	17.0	7.41	3.5	250
	4	7/0.85	2.55	0.7	1.8	18.5	4.61	3.5	330
	6	7/1.04	3.12	0.7	1.8	20.0	3.08	3.5	420
	10	7/1.35	4.05	0.7	1.8	22.5	1.83	3.5	600
	16	원형압축	4.7	0.7	1.8	24.5	1.15	3.5	820
	25	원형압축	5.9	0.9	1.8	28.5	0.727	3.5	1220
	35	원형압축	6.9	0.9	1.8	31.5	0.524	3.5	1600
	50	원형압축	8.1	1.0	2.0	35.5	0.387	3.5	2110
	70	원형압축	9.8	1.1	2.1	41.0	0.268	3.5	2990
	95	원형압축	11.4	1.1	2.3	45.5	0.193	3.5	4040
	120	원형압축	12.9	1.2	2.4	50.5	0.153	3.5	5050
	150	원형압축	14.4	1.4	2.6	56.0	0.124	3.5	6280
	185	원형압축	15.9	1.6	2.7	61.5	0.0991	3.5	7830
	240	원형압축	18.3	1.7	3.0	69.0	0.0754	3.5	10160
300	원형압축	20.5	1.8	3.2	76.0	0.0601	3.5	12600	



# 0.6/1kV NFR-3

0.6/1kV Halogen Free Flame Retardant Polyolefin Control Signal Cable for Fire Service

## 0.6/1kV 저독성 난연 폴리올레핀 내열 케이블

• 화재경보 및 비상경보장치의 회로에 사용되는 저독성 제어, 신호용 케이블이다.

• This cable is used for operation and interconnection of fire alarm and emergency information equipment.

### ■ 구조

1. 도체 : 1등급(단선) 또는 2등급(연선)도체
2. 절연체 : XLPE
3. 선심식별 : 색 테이프

선심수	색
2심	흑, 백
3심	흑, 백, 적
4심	흑, 백, 적, 녹
5심이상	각층마다 흑-적 tracer 방식으로 배열

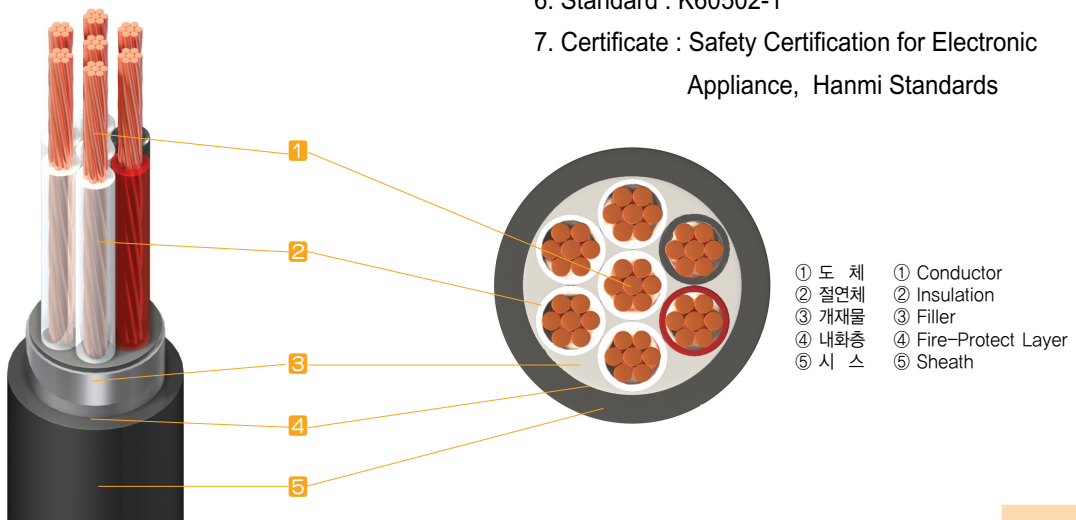
4. 내열보강층 : 내화테이프
5. 피복체 : 저독성 난연 폴리올레핀시스(ST8)
6. 적용규격 : K60502-1
7. 제품인증 : 전기용품 안전인증, 한미표준

### ■ CONSTRUCTION

1. Conductor : Solid(Class1)or circular Stranded Annealed Copper(Class2)
2. Insulation : XLPE
3. Core Identification : Color Tape

No. of cores	color
2cores	Black, White
3cores	Black, White, Red
4cores	Black, White, Red, Green
Above 5cores	Colour tracer coding tracer colour : Black, Red

4. Heat resistant layer : Mica Tape
5. Shield : Low Smoke Flame Retardant and Halogen Free sheath(ST8)
6. Standard : K60502-1
7. Certificate : Safety Certification for Electronic Appliance, Hanmi Standards



- |       |                      |
|-------|----------------------|
| ① 도체  | ① Conductor          |
| ② 절연체 | ② Insulation         |
| ③ 개재물 | ③ Filler             |
| ④ 내화층 | ④ Fire-Protect Layer |
| ⑤ 시스  | ⑤ Sheath             |

## K60502-1

선심수 No. of Cores c	도 체 Conductor		절연체 두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20°C) Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	등급 Class						
2	1.5	1	0.7	1.8	11.0	12.1	3.5	140
	2.5	1	0.7	1.8	12.0	7.41	3.5	170
	4	1	0.7	1.8	13.0	4.61	3.5	210
3	1.5	1	0.7	1.8	11.5	12.1	3.5	160
	2.5	1	0.7	1.8	12.5	7.41	3.5	210
	4	1	0.7	1.8	13.5	4.61	3.5	260
4	1.5	1	0.7	1.8	12.5	12.1	3.5	200
	2.5	1	0.7	1.8	13.5	7.41	3.5	250
	4	1	0.7	1.8	14.5	4.61	3.5	320
5	1.5	1	0.7	1.8	13.0	12.1	3.5	230
	2.5	1	0.7	1.8	14.0	7.41	3.5	290
	4	1	0.7	1.8	15.5	4.61	3.5	390
6	1.5	1	0.7	1.8	14.0	12.1	3.5	260
	2.5	1	0.7	1.8	15.0	7.41	3.5	340
	4	1	0.7	1.8	16.5	4.61	3.5	450
7	1.5	1	0.7	1.8	14.0	12.1	3.5	280
	2.5	1	0.7	1.8	15.0	7.41	3.5	360
	4	1	0.7	1.8	15.5	4.61	3.5	490
8	1.5	1	0.7	1.8	15.0	12.1	3.5	320
	2.5	1	0.7	1.8	16.0	7.41	3.5	420
	4	1	0.7	1.8	18.5	4.61	3.5	560
10	1.5	1	0.7	1.8	17.0	12.1	3.5	380
	2.5	1	0.7	1.8	18.5	7.41	3.5	500
	4	1	0.7	1.8	20.5	4.61	3.5	690
12	1.5	1	0.7	1.8	17.5	12.1	3.5	430
	2.5	1	0.7	1.8	19.0	7.41	3.5	570
	4	1	0.7	1.8	21.0	4.61	3.5	780
15	1.5	1	0.7	1.8	19.0	12.1	3.5	510
	2.5	1	0.7	1.8	20.5	7.41	3.5	690
	4	1	0.7	1.8	23.0	4.61	3.5	950
20	1.5	1	0.7	1.8	20.5	12.1	3.5	650
	2.5	1	0.7	1.8	23.0	7.41	3.5	880
	4	1	0.7	1.8	25.5	4.61	3.5	1230
30	1.5	1	0.7	1.8	24.0	12.1	3.5	910
	2.5	1	0.7	1.8	26.5	7.41	3.5	1250
	4	1	0.7	1.8	29.5	4.61	3.5	1750

선심수 No. of Cores c	도 체 Conductor		절연체 두께 Insulation Thickness mm	시스두께 Sheath Thickness mm	완성외경 Overall Diameter mm	도체저항 (20°C) Conductor Resistance at 20°C Ω/km	시험전압 Test Voltage kV	개산중량 Approx. Weight kg/km
	공칭 단면적 Nominal Sectional Area mm <sup>2</sup>	등급 Class						
2	1.5	2	0.7	1.8	11.5	12.1	3.5	140
	2.5	2	0.7	1.8	12.0	7.41	3.5	170
	4	2	0.7	1.8	13.5	4.61	3.5	220
3	1.5	2	0.7	1.8	12.0	12.1	3.5	170
	2.5	2	0.7	1.8	13.0	7.41	3.5	210
	4	2	0.7	1.8	14.0	4.61	3.5	270
4	1.5	2	0.7	1.8	12.5	12.1	3.5	200
	2.5	2	0.7	1.8	13.5	7.41	3.5	260
	4	2	0.7	1.8	15.0	4.61	3.5	330
5	1.5	2	0.7	1.8	13.5	12.1	3.5	240
	2.5	2	0.7	1.8	14.5	7.41	3.5	300
	4	2	0.7	1.8	16.0	4.61	3.5	400
6	1.5	2	0.7	1.8	14.5	12.1	3.5	270
	2.5	2	0.7	1.8	16.0	7.41	3.5	350
	4	2	0.7	1.8	17.5	4.61	3.5	460
7	1.5	2	0.7	1.8	14.5	12.1	3.5	290
	2.5	2	0.7	1.8	16.0	7.41	3.5	380
	4	2	0.7	1.8	17.5	4.61	3.5	500
8	1.5	2	0.7	1.8	16.0	12.1	3.5	330
	2.5	2	0.7	1.8	17.5	7.41	3.5	430
	4	2	0.7	1.8	19.0	4.61	3.5	580
10	1.5	2	0.7	1.8	17.5	12.1	3.5	400
	2.5	2	0.7	1.8	19.5	7.41	3.5	520
	4	2	0.7	1.8	21.5	4.61	3.5	710
12	1.5	2	0.7	1.8	18.0	12.1	3.5	450
	2.5	2	0.7	1.8	20.0	7.41	3.5	590
	4	2	0.7	1.8	22.0	4.61	3.5	810
15	1.5	2	0.7	1.8	20.0	12.1	3.5	540
	2.5	2	0.7	1.8	22.0	7.41	3.5	710
	4	2	0.7	1.8	24.5	4.61	3.5	980
20	1.5	2	0.7	1.8	22.0	12.1	3.5	680
	2.5	2	0.7	1.8	24.0	7.41	3.5	910
	4	2	0.7	1.8	27.0	4.61	3.5	1260
30	1.5	2	0.7	1.8	25.0	12.1	3.5	950
	2.5	2	0.7	1.8	28.0	7.41	3.5	1290
	4	2	0.7	1.8	31.5	4.61	3.5	1800

## 허용전류

### Current Carrying Capacity

- 적용규격 : KS E ICE 60364-5-523
  - 토양의 열저항율 : 2.5K · m/W
  - 주위온도(무부하시) : 기중 30℃, 지중20℃
  - 케이블배치 : 평면형상(Flat formation)
- ※ 상기 위외에 다른 조건에서는 적용 규격인 KS C IEC 60364-5-523의 조건별 표에 따른다.  
단 6/10kV 케이블은 IEC 60287에 준함

#### 0.6/1kV XLPE 절연케이블

1 적용제품 : CV, TFR-CV, TFR-8, TFR-3, HFCCO, HFCCO, NFR-8, NFR-3

2 KS C IEC 60364-5-523의 적용방법

- ① 시공방법 : 표52-B1의 E방식
- ② 허용전류값 : 표52-C11

(단위 : A)

포설조건 공칭단면적(mm <sup>2</sup> )	기중암거포설			직접매설포설	
	단심	2심	3·4심	2심	3·4심
	3가닥 s=d	1가닥	1가닥	1가닥	1가닥
1.5	22	26	23	26	22
2.5	30	36	32	34	29
4	42	49	42	44	37
6	55	63	54	56	46
10	77	86	75	73	61
16	105	115	100	95	79
25	141	149	127	121	101
35	176	185	158	146	122
50	216	225	192	173	144
70	279	289	246	213	178
95	342	352	298	252	211
120	400	410	346	287	240
150	464	473	399	324	271
185	522	542	456	363	304
240	634	641	538	419	351
300	736	742	621	474	396
400	868	892	745	-	-
500	998	-	-	-	-
630	1151	-	-	-	-





## 6/10kV XLPE 절연케이블

1 적용제품 : CV, TFR-CV, HFCO

2 KS C IEC 60287의 적용방법

(단위 : A)

포설조건 공칭단면적(mm <sup>2</sup> )	기중암거포설		직접매설포설	
	단심	3심	단심	3심
	1가닥	1가닥	1가닥	1가닥
16	120	105	120	115
25	160	140	155	150
35	195	165	185	180
50	235	200	215	210
70	295	250	265	255
95	360	305	320	305
120	420	355	360	345
150	480	405	405	385
185	555	465	460	435
240	660	550	530	505
300	765	635	600	565
400	900	-	690	-
500	1045	-	775	-
630	1220	-	880	-



## 0.6/1kV PVC 절연케이블

1 적용제품 : VV

2 KS C IEC 60287의 적용방법

① 시공방법 : 표52-B1의 E방식

② 허용전류값 : 표52-C9

(단위 : A)

포설조건 공칭단면적(mm <sup>2</sup> )	기중암거포설			직접매설포설	
	단심	2심	3·4심	2심	3·4심
	3가닥 s=d	1가닥	1가닥	1가닥	1가닥
1.5	19	22	18.5	22	18
2.5	28	30	25	29	24
4	36	40	34	38	31
6	47	51	43	47	39
10	64	70	60	63	52
16	85	94	80	81	67
25	114	119	101	104	86
35	143	148	126	125	103
50	174	180	153	148	122
70	225	232	196	183	151
95	275	282	238	216	179
120	321	328	276	246	203
150	372	379	319	278	230
185	427	434	364	312	258
240	507	514	430	361	297
300	587	593	497	408	336
400	689	-	-	-	-
500	789	-	-	-	-
630	905	-	-	-	-

# 기술자료 Technical Data

## 300/500V 내열 PVC 절연전선



1 적용제품 : HIV

2 KS C IEC 60287의 적용방법

① 시공방법 : 표52-B1의 A1 및 B1

② 허용전류값 : 표52-C2

(단위 : A)

포설조건 공칭단면적(mm <sup>2</sup> )		
	단열이 된 벽 내의 전선관에 시공한 절연 전선	목재 벽면의 전선관에 시공한 절연전선
1.5	19	23
2.5	26	31

## 보정계수

아래 제시된 보전 계수 또는 감소 계수 이외에는 KS C IEC 60364-5-523을 참조할 것

1 기중 케이블의 허용 전류에 적용하는 30℃ 이외의 주위 온도에 대한 보정 계수

주위온도(℃)	절 연 체			
	PVC	XLPE 또는 ERP	무기	
			PVC 또는 노출로 접촉할 우려가 있는 것(70℃)	노출로 접촉할 우려가 없는 것(105℃)
10	1.22	1.15	1.26	1.14
15	1.17	1.12	1.20	1.11
20	1.12	1.08	1.14	1.07
25	1.06	1.04	1.07	1.04
30	1.0	1.0	1.0	1.0
35	0.94	0.96	0.93	0.96
40	0.87	0.91	0.85	0.92
45	0.79	0.87	0.87	0.88
50	0.71	0.82	0.67	0.84
55	0.61	0.76	0.57	0.80
60	0.50	0.71	0.45	0.75
65	-	0.65	-	0.70
70	-	0.58	-	0.65
75	-	0.50	-	0.60
80	-	0.41	-	0.54
85	-	-	-	0.47
90	-	-	-	0.40
95	-	-	-	0.32





2 복수 회로 또는 다심 케이블 복수의 집합에 대한 감소 계수

배치형태(케이블 밀착)	회로 또는 다심 케이블의 수											
	1	2	3	4	5	6	7	8	9	12	16	20
기중이나 벽면에 묶거나 매설 또는 수납 벽 또는 막힘형 트레이의 단일층	1.00	0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.45	0.41	0.38
목재 천장면 아래에 직접 고정된 단일층	1.00	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.71	9개이상의 회로나 다심 케이블인 경우 이 이상의 감소 계수는 없음		
환기형 수평 또는 수직 트레이의 단일층	0.95	0.81	0.72	0.68	0.66	0.64	0.63	0.62	0.62			
사다리 지지대 또는 클리트의 단일층	1.00	0.88	0.82	0.77	0.75	0.73	0.73	0.72	0.72			
	1.00	0.87	0.82	0.80	0.80	0.79	0.79	0.78	0.78			



## PVC 절연전선과 PVC 케이블

### 1 KS C IEC 60364-5-523의 표 52-C1 및 C3 적용방법

구분    공칭단면적(mm <sup>2</sup> )	절연전선과 케이블의 시설방법							
	기준주위온도(30℃)				기준지중온도(30℃)			
								
	절연벽내 전선과 내의 절연전선		벽면에 시설한 전선관내의 절연전선		벽면에 시설한 케이블		지중덕트 내 다심케이블	
	전선관내 전선수		전선관내 전선수		케이블의 심수		케이블의 심수	
	2	3	2	3	2	3	2	3
1.0	11	10.5	13.5	12	15	13.5	17.5	14.5
1.5	14.5	13	17.5	15.5	19.5	17.5	22	18
2.5	19.5	18	24	21	26	24	29	24
4	26	24	32	28	35	32	38	31
6	34	31	41	36	46	41	47	39
10	46	42	57	50	63	57	63	52
16	61	56	76	68	85	76	81	67
25	80	73	101	89	112	96	104	86
35	99	89	125	111	138	119	125	103
50	119	108	151	134	168	144	148	122
70	151	136	192	171	213	184	183	151
95	182	164	232	207	258	223	216	179
120	210	188	269	239	299	259	246	203
150	240	216	-	-	344	294	278	230
185	273	248	-	-	392	341	312	257
240	320	286	-	-	461	403	360	297
300	367	328	-	-	530	464	407	336

상기표에 의한 시설방법이 A, B, C로 기준주위 온도에 30℃ 이외인 경우와 시설방법이 D로 기준 지중온도가 20℃ 이외인 경우(60364-523의 표 52D1과 D2에서 발취)

주위온도 지중온도(℃)	시설방법이 A, B, C로 기준주위 온도가 30℃ 이외인 경우의 보정계수	시설방법이 D로 기준지중온도가 20℃ 이외인 경우의 보정 계수
10	1.22	1.10
15	1.17	1.05
20	1.12	-
25	1.06	0.95
30	-	0.89
35	0.94	0.84
40	0.87	0.77
45	0.79	0.71
50	0.71	0.63
55	0.61	0.55
60	0.50	0.45
65	-	-
70	-	-
75	-	-
80	-	-
85	-	-
90	-	-
95	-	-

# 기술자료 Technical Data

## KS C IEC 60364-5-523의 표 52-C9

구분 (기준주위온도30℃)	절연전선과 케이블의 시설방법 (기준주위온도 30℃)						
	다심케이블		단심케이블				
	2부하도체 E	3부하도체 E	단심2개연 F	단심3개연 F	밀착F	단심3개연	
						이격	
공칭단면적(mm <sup>2</sup> )							
1.5	22	18.5	-	-	-	-	-
2.5	30	25	-	-	-	-	-
4	40	34	-	-	-	-	-
6	51	43	-	-	-	-	-
10	70	60	-	-	-	-	-
16	94	80	-	-	-	-	-
25	119	101	131	110	114	146	130
35	148	126	162	137	143	181	162
50	181	153	196	167	174	219	197
70	232	196	251	216	225	281	254
95	282	238	304	264	275	341	311
120	328	276	352	307	320	396	362
150	379	319	406	356	371	456	419
185	434	364	463	407	426	521	480
240	513	430	546	482	504	615	569
300	594	497	629	556	582	709	659
400	-	-	754	664	698	852	795
500	-	-	888	757	797	982	920
630	-	-	1005	856	899	1138	1070

상기표에서 기준 지중온도가 30℃ 이외인 경우의 보정계수(60364-523의 표 52D1에서 발취)

주위온도(℃)	보정계수
10	1.22
15	1.17
20	1.12
25	1.06
30	-
35	0.94
40	0.87
45	0.79
50	0.71
55	0.61
60	0.50
65	-
70	-
75	-
80	-
85	-
90	-
95	-





## 0.6/1kV 트레이용 접지용 비닐절연전선

- ❶ 적용제품 : 0.6/1kV TFR-GV, 0.6/1kV VV 단심
- ❷ KS C IEC 60364-5-523의 표 52-C9 및 A52-1

공칭단면적(mm <sup>2</sup> )	단심케이블로 자유공기와 접촉한 경우 (도체온도 : 70℃, 주위온도 : 30℃) - 시공방법 F	
	2개 부하도체 밀착	3개 부하도체 밀착 평면 배열
1.5	23	-
2.5	31	-
4	42	-
6	54	-
10	75	-
16	100	-
25	131	114
35	162	143
50	196	174
70	251	225
95	304	275
120	352	321
150	406	372
185	463	427
240	546	507

### 주위온도 보정계수

주위온도(℃)	보정계수
15	1.17
20	1.12
25	1.06
35	0.94
40	0.87
45	0.79
50	0.71
55	0.61
60	0.50

### 집합 감소계수

배치형태(케이블 밀착)	시공 방법	회로 또는 다심 케이블의 수										
		2	3	4	5	6	7	8	9	12	16	20
기중이나 벽면에 묶거나 매설 또는 수납	A~F	0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.45	0.41	0.38
환기형 수평 또는 수직 트레이의 단일층	E, F	0.88	0.82	0.77	0.75	0.07	0.73	0.72	0.72	9개 이상의 회로나 다심 케이블인 경우 이 이상의 감소 계수는 없음		
사다리 지지대 또는 클리트의 단일층	E, F	0.87	0.82	0.80	0.80	0.79	0.79	0.78	0.78			

## 허용전류 (코드 류) Current Carrying Capacity

### IEC 53 전선의 허용전류

❶ 도 체 : CU

❷ 절연체 : PVC (70°C)

도체단면적 (mm <sup>2</sup> )	Core (코어수)	온도 보정 계수를 적용한 최대 허용 전류 (A)										
		10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
0.75	2	7	7	7	6	6	6	5	5	4	4	3
	3	6	6	6	5	5	5	4	4	4	3	3
	4	6	6	6	5	5	5	4	4	4	3	3
1.00	2	15	14	13	13	12	11	10	9	9	7	6
	3	12	12	11	10	10	9	9	8	7	6	5
	4	10	9	9	8	8	8	7	6	6	5	4
1.50	2	27	26	25	23	22	21	19	17	16	13	11
	3	23	22	21	20	19	18	17	15	13	12	10
	4	18	18	17	16	15	14	13	12	11	9	8
2.5	2	37	35	34	32	30	28	26	24	21	18	15
	3	31	29	28	27	25	24	22	20	18	15	13
	4	24	23	22	21	20	19	17	16	14	12	10

# 케이블 정수

## Fixed Number of Cable

1 적용제품 : 0.6/1kV CV, TFR-CV, HFCO, TFR-8, NFR-8  
0.6/1kV CV, TFR-CV, HFCO

### 교류 도체저항

공칭단면적(mm <sup>2</sup> )	20℃ 직류도체 저항(Ω/km)	90℃ 교류 도체저항(Ω/km), 평면배열, 60Hz : 단심		90℃ 교류 도체저항(Ω/km) : 다심		
		s=50(s=100)	s=100(s=150)	0.6/1kV(2심)	0.6/1kV(3,4심)	0.6/1kV(3심)
1.5	12.1	15.429	15.429	15.429	15.429	-
2.5	7.41	9.449	9.449	9.449	9.449	-
4	4.61	5.878	5.878	5.878	5.878	-
6	3.08	3.927	3.927	3.927	3.927	-
10	1.83	2.333	2.333	2.334	2.334	-
16	1.15	1.466	1.466	1.467	1.467	1.466
25	0.727	0.9271	0.9271	0.9273	0.9275	0.9272
35	0.524	0.6683	0.6683	0.6686	0.6688	0.6685
50	0.387	0.4937	0.4937	0.4941	0.4944	0.4939
70	0.268	0.3421	0.3421	0.3427	0.3431	0.3425
95	0.193	0.2467	0.2466	0.2475	0.2481	0.2472
120	0.153	0.1959	0.1957	0.1969	0.1976	0.1966
150	0.124	0.1591	0.1589	0.1603	0.1612	0.1601
185	0.0991	0.1277	0.1274	0.1291	0.1291	0.1289
240	0.0754	0.09804	0.09753	0.09981	0.09981	0.09966
300	0.0601	0.07922	0.07842	0.08128	0.08128	0.08120
400	0.0470	-	-	-	-	-
500	0.0366	-	-	-	-	-
630	0.0283	-	-	-	-	-

### 인덕턴스

공칭단면적(mm <sup>2</sup> )	인덕턴스(mH/km), 평면배열 : 단심		인덕턴스(mH/km) : 다심	
	s=50(s=100)	s=100(s=150)	0.6/1kV(2,3,4심)	0.6/1kV(3심)
1.5	0.899	1.029	0.3279	-
2.5	0.8314	0.9700	0.3007	-
4	0.7838	0.9224	0.2816	-
6	0.7435	0.8821	0.2676	-
10	0.6913	0.8299	0.2520	-
16	0.6615	0.8002	0.2443	0.4069
25	0.6127	0.7513	0.2447	0.3758
35	0.5819	0.7204	0.2376	0.3577
50	0.5551	0.6938	0.2368	0.3429
70	0.5146	0.6532	0.2324	0.3221
95	0.4826	0.6212	0.2265	0.3072
120	0.4596	0.5982	0.2254	0.2972
150	0.4390	0.5776	0.2269	0.2888
185	0.4178	0.5564	0.2278	0.2807
240	0.3919	0.5305	0.2255	0.2716
300	0.3660	0.5046	0.2230	0.2631

## 곡률반경

### Minimum Bending Radius

D : 케이블 외경(mm)

구분		드럼	포설시	포설후
단심	-	R=10D	R=15D	R=12D
다심	0.6/1kV이하	R=6D	R=12D	R=10D
	0.6/1kV초과	R=8D	R=15D	R=12D

## 도체비교표

### Conductor Table

구 KS 도체					IEC 도체			
공칭단면적	구성	외경	저항(단심)	저항(다심)	공칭단면적	구성	외경	저항
(mm <sup>2</sup> )	No/mm	mm	Ω/km	Ω/km	(mm <sup>2</sup> )	No/mm	mm	Ω/km
1.25	7/0.45	1.35	16.5	16.8	1.5	7/0.53	1.59	12.1
2.0	7/0.6	1.8	9.24	9.42	2.5	7/0.67	2.01	7.41
3.5	7/0.8	2.4	5.20	5.30	4	7/0.85	2.55	4.61
5.5	7/1.0	3.0	3.33	3.40	6	7/1.04	3.12	3.08
8	7/1.2	3.6	2.31	2.36	10	7/1.35	4.05	1.83
14	원형압축	4.4	1.31	1.34	16	원형압축	4.7	1.15
22	원형압축	5.5	0.832	0.849	25	원형압축	5.9	0.727
38	원형압축	7.3	0.481	0.491	35	원형압축	6.9	0.524
					50	원형압축	8.1	0.387
60	원형압축	9.3	0.305	0.311				
					70	원형압축	9.8	0.268
100	원형압축	12.0	0.183	0.187	95	원형압축	11.4	0.193
					120	원형압축	12.9	0.153
150	원형압축	14.7	0.122	0.124	150	원형압축	14.4	0.124
200	원형압축	17.0	0.0915	0.0933	185	원형압축	15.9	0.0991
250	원형압축	19.0	0.0739	0.0754	240	원형압축	18.3	0.0754
325	원형압축	21.7	0.0568	0.0579	300	원형압축	20.5	0.0601
400	원형압축	24.1	0.0462	0.0471	400	원형압축	23.2	0.0470
500	원형압축	26.9	0.0369	0.0376	500	원형압축	26.4	0.0366
600	원형압축	29.5	0.0308	0.0314	630	원형압축	30.2	0.0283

· 도체등급 : Class2(연선:Stranded-원형:Circular, 원형압축:Compact)



# IEC 도체 등급 구분

## IEC Conductor Classification

### 1등급 단심 및 다심 케이블용 단선 도체(Class 1)

공칭단면적 (mm <sup>2</sup> )	최대도체저항(20℃)		
	원형 동		알루미늄 (Ω/km)
	도금없음(Ω/km)	도금있음(Ω/km)	
0.5	36.0	36.7	-
0.75	24.5	24.8	-
1.0	18.1	18.2	-
1.5	12.1	12.2	18.1
2.5	7.41	7.56	12.1
4	4.61	4.70	7.41
6	3.08	3.00	4.61
10	1.83	1.84	3.08
16	1.15	1.16	1.91
25	0.727	-	1.20
35	0.524	-	0.868
50	0.387	-	0.641
70	0.268	-	0.443
95	0.193	-	0.320
120	0.153	-	0.253
150	0.124	-	0.206
185	-	-	0.164
240	-	-	0.125
300	-	-	0.100

### 2등급 단심 및 다심 케이블용 꼬임선 도체(Class 2)

공칭단면적 (mm <sup>2</sup> )	도체의 최소 소선 수						최대 도체 저항(20℃)		
	원형비압축		원형압축		부채형		동		알루미늄 (Ω/km)
	Cu	Al	Cu	Al	Cu	Al	도금없음(Ω/km)	도금있음(Ω/km)	
0.5	7	-	-	-	-	-	36.0	36.7	-
0.75	7	-	-	-	-	-	24.5	24.7	-
1.0	7	-	-	-	-	-	18.1	18.2	-
1.5	7	-	6	-	-	-	12.1	12.2	-
2.5	7	-	6	-	-	-	7.41	7.56	-
4	7	7	6	-	-	-	4.61	4.70	7.41
6	7	7	6	-	-	-	3.08	3.11	4.61
10	7	7	6	-	-	-	1.83	1.84	3.08
16	7	7	6	6	6	-	1.15	1.16	1.91
25	7	7	6	6	6	6	0.727	0.734	1.20
35	19	7	6	6	6	6	0.524	0.529	0.868
50	19	19	6	6	6	6	0.387	0.391	0.641
70	19	19	12	12	12	12	0.268	0.270	0.443
95	37	19	15	15	15	15	0.193	0.195	0.320
120	37	37	18	18	18	18	0.153	0.154	0.253
150	37	37	18	18	18	18	0.124	0.126	0.206
185	61	37	30	30	30	30	0.0991	0.100	0.164
240	61	61	34	34	34	34	0.0754	0.762	0.125
300	61	61	34	34	34	34	0.0601	0.0607	0.100
400	61	61	53	53	53	53	0.0470	0.0475	0.078
500	91	61	53	53	53	53	0.0366	0.0369	0.0605
630	91	91	53	53	53	53	0.0283	0.0286	0.0469
800	91	91	53	53	-	-	0.0221	0.0224	0.0367
1000	91	91	53	53	-	-	0.0176	0.0177	0.0291
1200	-	-	-	-	-	-	0.0151	-	0.0247
(1400)	-	-	-	-	-	-	0.0129	-	0.0212
1600	-	-	-	-	-	-	0.0113	-	0.0186
(1800)	-	-	-	-	-	-	0.0101	-	0.0165
2000	-	-	-	-	-	-	0.0090	-	0.0149

## 안전관련 주의사항

다음에 표시되어 있는 안전에 관련된 주의사항들은 제품을 안전하고 정확하게 사용하여 예기치 못한 위험이나 손해를 사전에 방지하기 위한 것입니다. 안전에 관련된 주의사항은 잘못 사용하면 예상되는 위험과 손해의 크기 정도, 그리고 위험 발생의 긴급 정도에 따라서 다음과 같이 구분하고 있습니다.

**주의 :** 이 표시사항을 무시하여 잘못 사용하는 경우, 경상이나 재산상 손해가 발생할 수 있는 내용을 기재한 것입니다.



**케이블이 풀리지 않습니다.**  
드럼은 경사지지 않은 곳에 세워서 적치하십시오.



**포장목과 묶음선이 될 수 있습니다.**  
포장목 해체시 포장목과 묶음선이 될 수 있습니다.



**케이블 손상의 원인이 됩니다.**  
드럼을 떨어뜨리지 마십시오. 지게차나 크레인을 사용하십시오.



**케이블 손상의 원인이 됩니다.**  
드럼을 크레인에 걸 때는 와이어 각도가 60도 이하



**케이블 손상의 원인이 됩니다.**  
포설하지 않은 케이블 단말은 물이 침투되지 않도록 하십시오.



**케이블 단선 및 파손의 원인이 됩니다.**  
허용 인장력 및 곡률반경을 지켜주십시오.



**케이블 손상의 원인이 됩니다.**  
케이블 종류에 따라 정해진 용도 이외는 사용하지 마십시오.  
**정상적인 사용을 할 수 없습니다.**  
저온(-10°C 이하) 및 고온(60°C 이상)에서 사용하지 마십시오.

**경고 :** 이 표시사항을 무시하여 잘못 사용하는 경우, 사망 또는 중상의 가능성이 예상되는 내용을 기재한 것입니다.



**소손 및 화재의 원인이 됩니다.**  
정격전압, 허용전류를 초과하여 사용하지 마십시오.

**감전의 원인인 됩니다.**  
수리된 중고 케이블을 사용하거나 제품을 분해, 개조하지 마십시오.

**케이블 손상의 원인이 됩니다.**  
습한 곳이나 물 속에 직접 케이블을 포설하지 마십시오.



**감전의 원인이 됩니다.**  
연결작업은 전원이 인과된 상태 및 젖은 손으로 하지 마십시오.  
차폐층은 확실하게 접지시켜 주십시오.

# Wire & Cable

## Safety-related Instruction

The following safety-related instructions are to help you use products safely and precisely, and to prevent unexpected danger or damage.

According to the extent of risk, damage and emergency of risk occurrence anticipated when products are incorrently used, the safety-related instructions are classified as follows;

**Caution :** In case of using products incorrectly by ignoring this indication, it is possible to anticipate slight wounds or property damage.



Cable is not untied.  
Pile up drums after making them stand on not sloping groun.



It may be the cause of damage to a cable.  
In case of processing the terminal of cable, keep water from percolating.



The batten or binder may be spring from drum when disassembling.



It may be the cause of disconnection or breakdown of a cable  
Keep the permissible pulling tension and radius of bend.



It may be the cause of damage to a cable.  
Do not drop a drum.  
Use an A-frame carrier or a crane.



It may be the cause of damage to a cable.  
Do not use a cable except its fixed purpose according to each kind of cables.  
A cable may not be used normally.  
Do not use a cable at extreme air condition min. -10°C and max.60°C



It may be the cause of damage to a cable  
When you hang a drum on the crane, keep sufficient length to the extent that an angle of the wire can be under 60 degrees.

**Warning :** It case of using products incorrectly by ignoring this indication, it is possible to anticipate mortality risks or serve wounds.



It may be the cause of a fire or damage by a fire.  
Do not use a cable in excess of a rated voltage and an allowable current.  
Keep heat-resisting temperature of a cable, considering the environment of using.

It may be the cause of a fire or an electric shock.  
Do not disassemble or covert products.



It may be the cause of an electric shock.  
Do not conduct connection operations when power is on and by wet hand.  
Be sure to earth screened products.

- Before using products, read these instrucion.
- Use products after verifying indefinite details besides the above descriptions from our company.
- Keep these safety-related instructions in a place where they can always be seen and read by the user.

# Hanmi cable

