

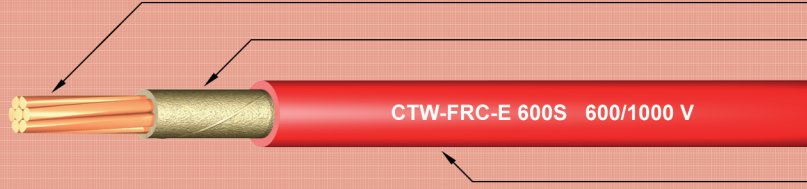
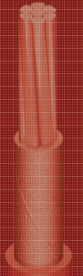


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-E 600S**

SINGLE CORE LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (NON-SHEATHED) 600/1000 V

PAGES 1/2



CONDUCTOR

FIRE BARRIER (MICA TAPE)

INSULATION

CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Low smoke & halogen free Cross-linked polyethylene (LSHF-XLPE : EI5). Red Colour (Other colours to special order).

STANDARDS ACHIEVED

Construction	Based on BS 7211
Circuit integrity	BS 6387 Categories C, W, Z
Flame propagation	BS 4066-3 Categories C IEEE 383
Acid gas emission	BS 6425-2 (BS EN 50267-2-2)
Smoke emission	BS 7622-2 (BS EN 50268-2)

APPLICATION

Preferably used for installation into trunking and conduit where by a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 2.5 kV

CTW-FRC-E 600S		Conductor			Thickness of insulation mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Maximum conductor resistance at 20°C Ω/km	Minimum insulation resistance at 20°C M Ω - km	Allowable ampacities in free air at 40° (ambient) A	Standard packing m
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm							
C65014501	1 x 1.5	1.5	7/0.50 : CR	1.50	0.7	3.80	25	12.1	0.0100	24	100/C
C65014502	1 x 2.5	2.5	7/0.67 : CR	2.01	0.8	4.60	40	7.41	0.0090	33	100/C
C65014004	1 x 4	4	7/0.85 : CR	2.55	0.8	5.10	55	4.61	0.0077	44	100/C
C65014006	1 x 6	6	7/1.04 : CR	3.12	0.8	5.70	75	3.08	0.0065	57	100/C
C65014010	1 x 10	10	7/1.35 : CR	4.05	1.0	7.00	120	1.83	0.0065	79	300/R
C65018016	1 x 16	16	7 : CP	4.69	1.0	7.60	175	1.15	0.0050	105	300/R
C65018025	1 x 25	25	7 : CP	5.90	1.2	9.30	270	0.727	0.0050	145	300/R
C65018035	1 x 35	35	7 : CP	6.95	1.2	10.50	370	0.524	0.0043	180	300/R
C65018050	1 x 50	50	19 : CP	8.33	1.4	12.20	530	0.387	0.0043	220	300/R
C65018070	1 x 70	70	19 : CP	9.73	1.4	13.70	720	0.268	0.0035	280	300/R
C65018095	1 x 95	95	19 : CP	11.45	1.6	16.00	980	0.193	0.0035	350	300/R
C65018120	1 x 120	120	19 : CP	12.95	1.6	17.50	1,200	0.153	0.0032	405	300/R
C65018150	1 x 150	150	37 : CP	14.27	1.8	19.20	1,500	0.124	0.0032	465	300/R
C65018185	1 x 185	185	37 : CP	15.98	2.0	22.00	1,880	0.0991	0.0032	540	300/R
C65018240	1 x 240	240	37 : CP	18.47	2.2	24.40	2,400	0.0754	0.0032	645	300/R
C65018300	1 x 300	300	61 : CP	20.68	2.4	27.10	3,000	0.0601	0.0030	740	300/R

C = Packing in coil
R = Packing in reel

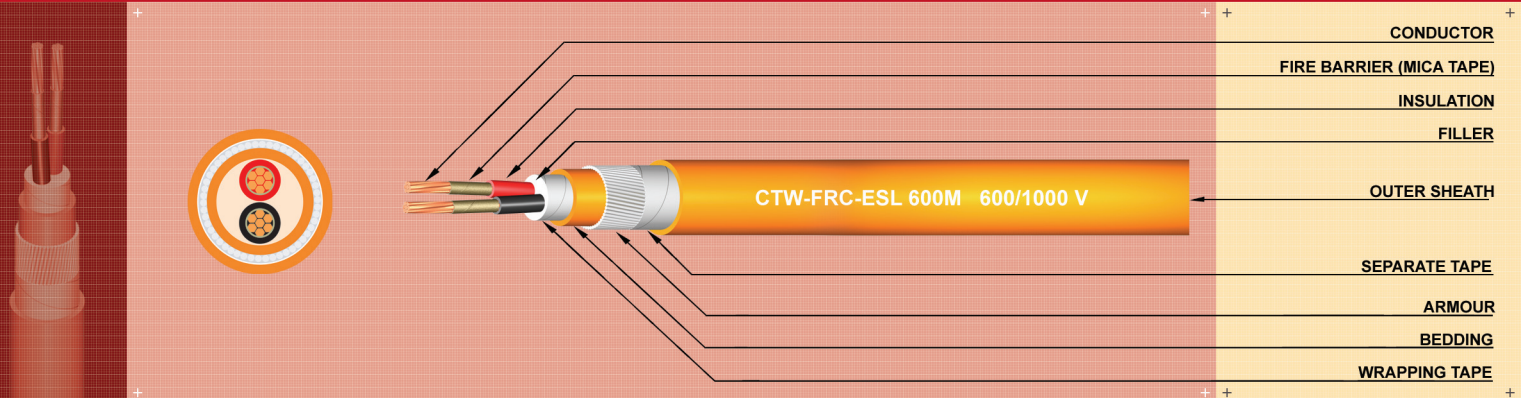
Fire Resistant & Flame Retardant Cable 09



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-ESL 600M**

TWO CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 600/1000 V



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE : GP8) : Red, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	BS 7846-F2
Circuit integrity	BS 6387 Categories C, W, Z
Flame propagation	BS 4066-3 Categories A, B, C
Acid gas emission	BS 6425-2 (BS EN 50267-2-2)
Smoke emission	BS 7622-2 (BS EN 50268-2)

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-ESL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 90°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area	Number and diameter of wire	Diameter (Approx.)										
PRODUCT CODE	SIZE core x mm ²	mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	M Ω - km	A	m/R
C68024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.6	0.8	0.90	1.3	14.0	310	12.1	0.7828	26	500
C68024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	0.8	0.90	1.4	16.0	390	7.41	0.7350	34	500
C68024004	2 x 4	4	7/0.85 : CR	2.55	0.7	0.8	0.90	1.4	17.0	450	4.61	0.6290	45	500
C68024006	2 x 6	6	7/1.04 : CR	3.12	0.7	0.8	0.90	1.4	18.0	540	3.08	0.5462	58	500
C68024010	2 x 10	10	7/1.35 : CR	4.05	0.7	0.8	0.90	1.5	20.0	680	1.83	0.4498	77	500
C68028016	2 x 16	16	7 : CP	4.69	0.7	0.8	1.25	1.5	22.0	970	1.15	0.3999	100	500
C68028025	2 x 25	25	7 : CP	5.90	0.9	0.8	1.25	1.6	25.5	1,300	0.727	0.4098	135	500
C68028035	2 x 35	35	7 : CP	6.95	0.9	1.0	1.60	1.7	29.0	1,800	0.524	0.3582	165	500
C68028050	2 x 50	50	19 : CP	8.33	1.0	1.0	1.60	1.8	32.5	2,200	0.387	0.3366	200	500
C68028070	2 x 70	70	19 : CP	9.73	1.1	1.0	1.60	1.9	36.5	2,800	0.268	0.3198	250	500
C68028095	2 x 95	95	19 : CP	11.45	1.1	1.2	2.00	2.0	41.5	3,800	0.193	0.2778	310	500
C68028120	2 x 120	120	19 : CP	12.95	1.2	1.2	2.00	2.1	45.0	4,500	0.153	0.2690	360	500
C68028150	2 x 150	150	37 : CP	14.27	1.4	1.2	2.00	2.2	49.0	5,400	0.124	0.2829	410	500
C68028185	2 x 185	185	37 : CP	15.98	1.6	1.4	2.50	2.4	55.0	7,000	0.0991	0.2880	480	500
C68028240	2 x 240	240	37 : CP	18.47	1.7	1.4	2.50	2.5	60.0	8,500	0.0754	0.2673	570	250
C68028300	2 x 300	300	61 : CP	20.68	1.8	1.6	2.50	2.6	67.0	10,100	0.0601	0.2541	660	250
C68028400	2 x 400	400	61 : CP	23.39	2.0	1.6	2.50	2.8	74.0	12,700	0.0470	0.2500	760	250

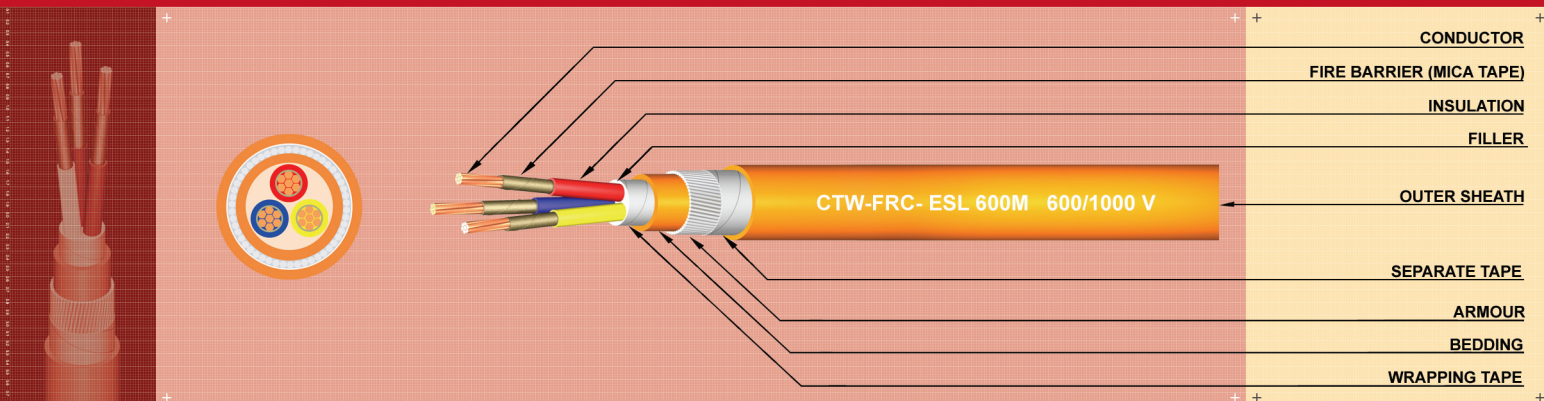
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-ESL 600M**

THREE CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 600/1000 V



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE : GP8) : Red, Yellow, Blue Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	BS 7846-F2
Circuit integrity	BS 6387 Categories C, W, Z
Flame propagation	BS 4066-3 Categories A, B, C
Acid gas emission	BS 6425-2 (BS EN 50267-2-2)
Smoke emission	BS 7622-2 (BS EN 50268-2)

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

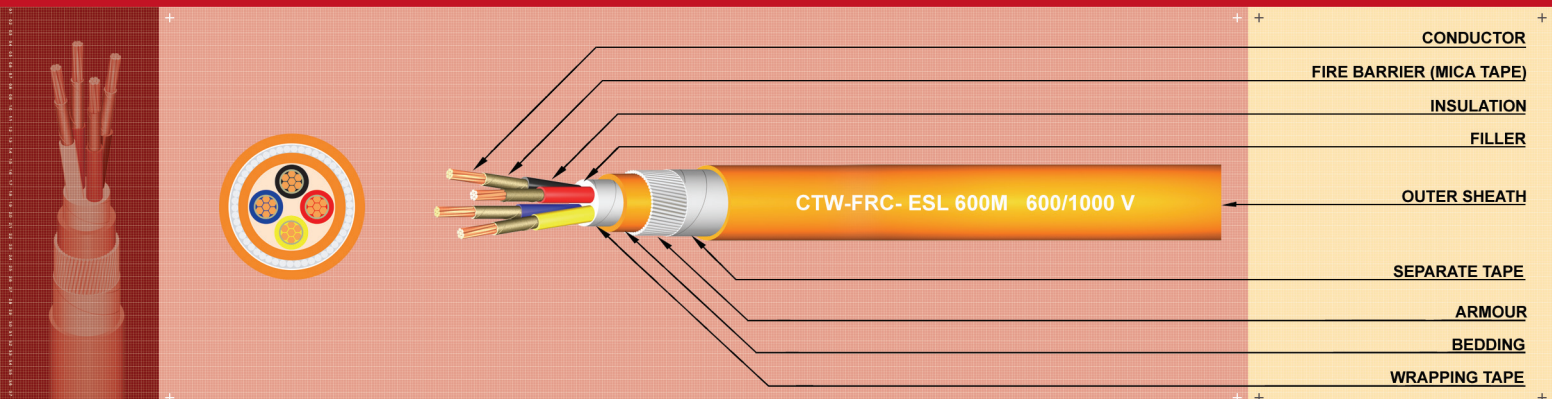
CTW-FRC-ESL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 90°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	mm	kg/km	Ω/km	$\text{M}\Omega \cdot \text{km}$	A	m/R
C68034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.6	0.8	0.90	1.3	14.5	350	12.1	0.7828	22	500
C68034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	0.8	0.90	1.4	16.5	440	7.41	0.7350	30	500
C68034004	3 x 4	4	7/0.85 : CR	2.55	0.7	0.8	0.90	1.4	18.0	520	4.61	0.6290	39	500
C68034006	3 x 6	6	7/1.04 : CR	3.12	0.7	0.8	0.90	1.4	19.0	620	3.08	0.5462	50	500
C68034010	3 x 10	10	7/1.35 : CR	4.05	0.7	0.8	1.25	1.5	22.0	940	1.83	0.4498	67	500
C68038016	3 x 16	16	7 : CP	4.69	0.7	0.8	1.25	1.6	23.0	1,200	1.15	0.3999	89	500
C68038025	3 x 25	25	7 : CP	5.90	0.9	1.0	1.60	1.7	28.0	1,800	0.727	0.4098	115	500
C68038035	3 x 35	35	7 : CP	6.95	0.9	1.0	1.60	1.8	31.0	2,200	0.524	0.3582	140	500
C68038050	3 x 50	50	19 : CP	8.33	1.0	1.0	1.60	1.8	34.0	2,800	0.387	0.3366	170	500
C68038070	3 x 70	70	19 : CP	9.73	1.1	1.0	1.60	1.9	38.0	3,600	0.268	0.3198	215	500
C68038095	3 x 95	95	19 : CP	11.45	1.1	1.2	2.00	2.1	44.0	4,900	0.193	0.2778	265	500
C68038120	3 x 120	120	19 : CP	12.95	1.2	1.2	2.00	2.2	48.0	5,800	0.153	0.2690	310	500
C68038150	3 x 150	150	37 : CP	14.27	1.4	1.4	2.50	2.3	53.0	7,500	0.124	0.2829	355	500
C68038185	3 x 185	185	37 : CP	15.98	1.6	1.4	2.50	2.4	59.0	9,000	0.0991	0.2880	410	250
C68038240	3 x 240	240	37 : CP	18.47	1.7	1.4	2.50	2.6	65.0	11,000	0.0754	0.2673	490	250
C68038300	3 x 300	300	61 : CP	20.68	1.8	1.6	2.50	2.7	71.0	13,300	0.0601	0.2541	565	200
C68038400	3 x 400	400	61 : CP	23.39	2.0	1.6	2.50	2.9	79.0	16,800	0.047	0.2500	655	200



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-ESL 600M**

FOUR CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 600/1000 V



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE : GP8) : Red, Yellow, Blue, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	BS 7846-F2
Circuit integrity	BS 6387 Categories C, W, Z
Flame propagation	BS 4066-3 Categories A, B, C
Acid gas emission	BS 6425-2 (BS EN 50267-2-2)
Smoke emission	BS 7622-2 (BS EN 50268-2)

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-ESL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 90°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area	Number and diameter of wire	Diameter (Approx.)										
PRODUCT CODE	SIZE core x mm ²	mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ · km	A	m/R
C68044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.6	0.8	0.90	1.3	15.5	400	12.1	0.7828	23	500
C68044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	0.8	0.90	1.4	18.0	500	7.41	0.7350	30	500
C68044004	4 x 4	4	7/0.85 : CR	2.55	0.7	0.8	0.90	1.4	19.0	600	4.61	0.6290	40	500
C68044006	4 x 6	6	7/1.04 : CR	3.12	0.7	0.8	1.25	1.5	21.5	850	3.08	0.5462	51	500
C68044010	4 x 10	10	7/1.35 : CR	4.05	0.7	0.8	1.25	1.5	24.0	1,100	1.83	0.4498	68	500
C68048016	4 x 16	16	7 : CP	4.69	0.7	0.8	1.25	1.6	25.0	1,400	1.15	0.3990	90	500
C68048025	4 x 25	25	7 : CP	5.90	0.9	1.0	1.60	1.7	30.5	2,100	0.727	0.4098	115	500
C68048035	4 x 35	35	7 : CP	6.95	0.9	1.0	1.60	1.8	33.5	2,600	0.524	0.3582	145	500
C68048050	4 x 50	50	19 : CP	8.33	1.0	1.0	1.60	1.9	37.5	3,400	0.387	0.3366	170	500
C68048070	4 x 70	70	19 : CP	9.73	1.1	1.2	2.00	2.1	43.5	4,800	0.268	0.3198	220	500
C68048095	4 x 95	95	19 : CP	11.45	1.1	1.2	2.00	2.2	48.0	6,000	0.193	0.2778	260	500
C68048120	4 x 120	120	19 : CP	12.95	1.2	1.4	2.50	2.3	54.0	7,800	0.153	0.2690	305	500
C68048150	4 x 150	150	37 : CP	14.27	1.4	1.4	2.50	2.4	58.5	9,400	0.124	0.2829	350	250
C68048185	4 x 185	185	37 : CP	15.98	1.6	1.4	2.50	2.6	64.5	11,200	0.0991	0.2880	400	250
C68048240	4 x 240	240	37 : CP	18.47	1.7	1.6	2.50	2.7	72.0	13,900	0.0754	0.2673	480	250
C68048300	4 x 300	300	61 : CP	20.68	1.8	1.6	2.50	2.9	79.0	16,800	0.0601	0.2541	540	200
C68048400	4 x 400	400	61 : CP	23.39	2.0	1.8	3.15	3.2	89.0	21,500	0.047	0.2500	630	200

C = Packing in coil
R = Packing in reel

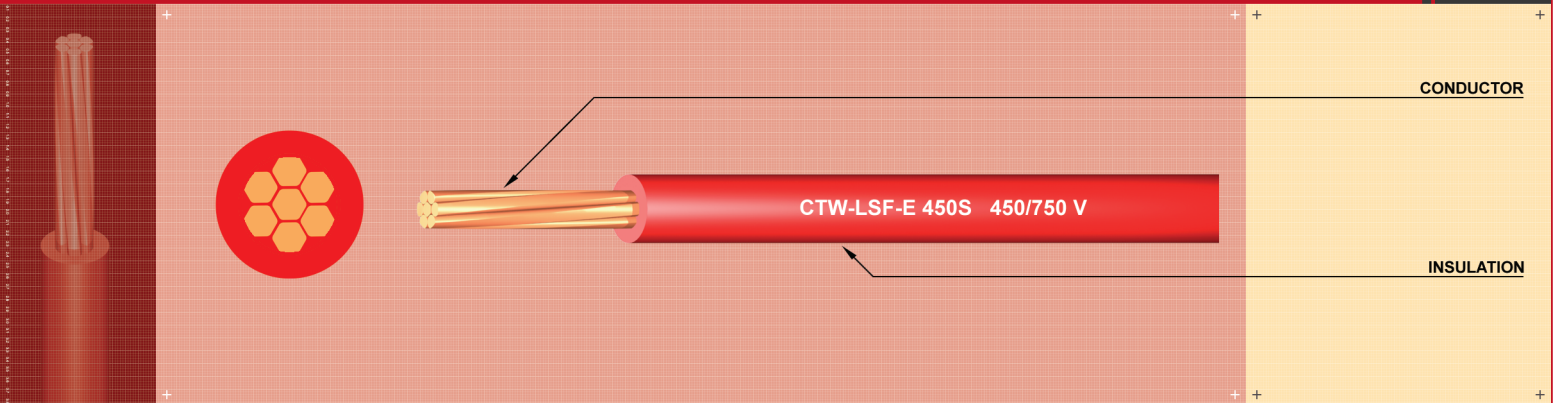


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-E 450S**

SINGLE CORE LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (NON-SHEATHED) 450/750 V

PAGES 1/ 2



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Low smoke & halogen free Cross-linked polyethylene (LSHF-XLPE : EI5). Red Colour (Other colours to special order).

STANDARDS ACHIEVED

Construction	BS 7211
Flame propagation	BS 4066-3 Categories C IEEE 383
Acid gas emission	BS 6425-2 (BS EN 50267-2-2)
Smoke emission	BS 7622-2 (BS EN 50268-2)

APPLICATION

Preferably used for installation into trunking and conduit whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 750 volts.
AC Test Voltage : 2.5 kV

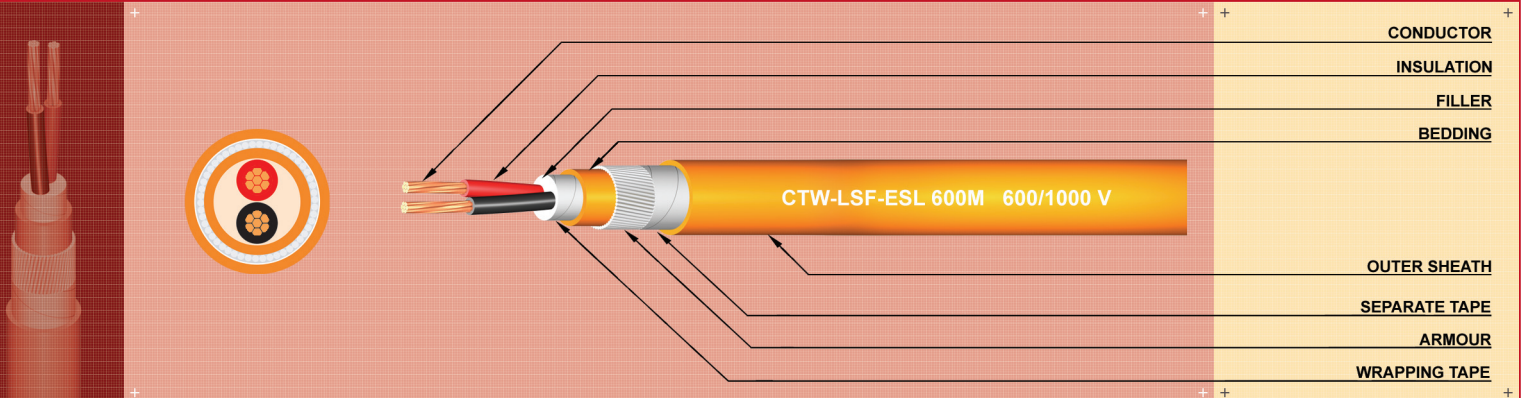
CTW-LSF-E 450S		Conductor			Thickness of insulation	Overall diameter (Approx.)	Limit of mean overall diameter (lower/upper)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core $\times$ mm 2	Nominal cross-sectional area mm 2	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω /km	M Ω - km	A	m
C90014501	1 x 1.5	1.5	7/0.50 : CR	1.50	0.7	3.30	2.7 / 3.4	22	12.1	0.0100	22	100/C
C90014502	1 x 2.5	2.5	7/0.67 : CR	2.01	0.8	4.00	3.3 / 4.1	35	7.41	0.0090	31	100/C
C90014004	1 x 4	4	7/0.85 : CR	2.55	0.8	4.60	3.8 / 4.7	50	4.61	0.0077	42	100/C
C90014006	1 x 6	6	7/1.04 : CR	3.12	0.8	5.20	4.3 / 5.4	70	3.08	0.0065	54	100/C
C90014010	1 x 10	10	7/1.35 : CR	4.05	1.0	6.60	5.6 / 7.0	120	1.83	0.0065	76	300/R
C90018016	1 x 16	16	7 : CP	4.69	1.0	7.10	6.4 / 8.0	170	1.15	0.0050	100	300/R
C90018025	1 x 25	25	7 : CP	5.90	1.2	8.80	8.1 / 10.1	260	0.727	0.0050	140	300/R
C90018035	1 x 35	35	7 : CP	6.95	1.2	9.90	9.0 / 11.3	360	0.524	0.0043	175	300/R
C90018050	1 x 50	50	19 : CP	8.33	1.4	11.70	10.6 / 13.2	520	0.387	0.0043	215	300/R
C90018070	1 x 70	70	19 : CP	9.73	1.4	13.20	12.1 / 15.1	700	0.268	0.0035	275	300/R
C90018095	1 x 95	95	19 : CP	11.45	1.6	16.00	14.1 / 17.6	950	0.193	0.0035	345	300/R
C90018120	1 x 120	120	19 : CP	12.95	1.6	17.50	15.6 / 19.4	1,200	0.153	0.0032	400	300/R
C90018150	1 x 150	150	37 : CP	14.27	1.8	19.20	17.3 / 21.6	1,500	0.124	0.0032	460	300/R
C90018185	1 x 185	185	37 : CP	15.98	2.0	22.00	19.3 / 24.1	1,850	0.0991	0.0032	535	300/R
C90018240	1 x 240	240	37 : CP	18.47	2.2	24.40	22.0 / 27.5	2,350	0.0754	0.0032	640	300/R
C90018300	1 x 300	300	61 : CP	20.68	2.4	27.10	24.5 / 30.6	2,950	0.0601	0.0030	735	300/R



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-ESL 600M

TWO CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 600/1000 V



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE : GP8) : Red, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	BS 6724
Flame propagation	BS 4066-3 Categories A, B, C
Acid gas emission	BS 6425-2 (BS EN 50267-2-2)
Smoke emission	BS 7622-2 (BS EN 50268-2)

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

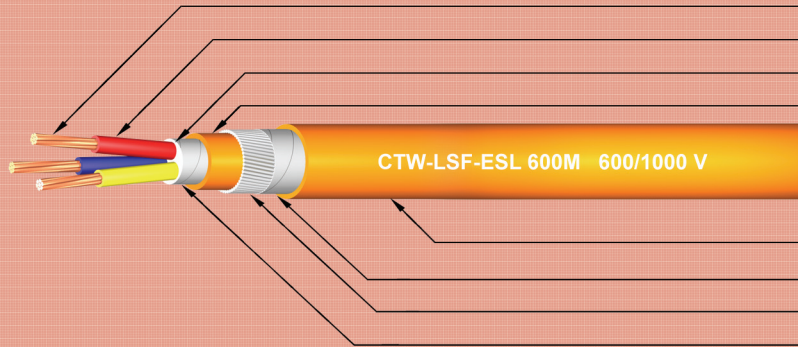
CTW-LSF-ESL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 90°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area mm^2	Number and diameter of wire No./mm	Diameter (Approx.) mm										
PRODUCT CODE	SIZE core mm^2													
C93024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.6	0.8	0.90	1.3	13.0	280	12.1	0.9802	26	500
C93024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	0.8	0.90	1.4	14.5	350	7.41	0.8785	34	500
C93024004	2 x 4	4	7/0.85 : CR	2.55	0.7	0.8	0.90	1.4	16.0	400	4.61	0.7305	45	500
C93024006	2 x 6	6	7/1.04 : CR	3.12	0.7	0.8	0.90	1.4	17.0	500	3.08	0.6208	58	500
C93024010	2 x 10	10	7/1.35 : CR	4.05	0.7	0.8	0.90	1.5	19.5	650	1.83	0.4990	77	500
C93028016	2 x 16	16	7 : CP	4.69	0.7	0.8	1.25	1.5	21.0	900	1.15	0.4382	100	500
C93028025	2 x 25	25	7 : CP	5.90	0.9	0.8	1.25	1.6	24.0	1,200	0.727	0.4410	135	500
C93028035	2 x 35	35	7 : CP	6.95	0.9	1.0	1.60	1.7	28.0	1,700	0.524	0.3818	165	500
C93028050	2 x 50	50	19 : CP	8.33	1.0	1.0	1.60	1.8	31.5	2,200	0.387	0.3553	200	500
C93028070	2 x 70	70	19 : CP	9.73	1.1	1.0	1.60	1.9	35.0	2,700	0.268	0.3351	250	500
C93028095	2 x 95	95	19 : CP	11.45	1.1	1.2	2.00	2.0	40.0	3,800	0.193	0.2892	310	500
C93028120	2 x 120	120	19 : CP	12.95	1.2	1.2	2.00	2.1	44.0	4,500	0.153	0.2788	360	500
C93028150	2 x 150	150	37 : CP	14.27	1.4	1.2	2.00	2.2	48.0	5,300	0.124	0.2923	410	500
C93028185	2 x 185	185	37 : CP	15.98	1.6	1.4	2.50	2.4	54.0	6,800	0.0991	0.2965	480	500
C93028240	2 x 240	240	37 : CP	18.47	1.7	1.4	2.50	2.5	60.0	8,300	0.0754	0.2741	570	250
C93028300	2 x 300	300	61 : CP	20.68	1.8	1.6	2.50	2.6	66.0	10,000	0.0601	0.2599	660	250
C93028400	2 x 400	400	61 : CP	23.39	2.0	1.6	2.50	2.8	73.0	12,500	0.0470	0.2551	760	250



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-ESL 600M**

THREE CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 600/1000 V



CONDUCTOR

INSULATION

FILLER

BEDDING

OUTER SHEATH

SEPARATE TAPE

ARMOUR

WRAPPING TAPE

CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE : GP8) : Red, Yellow, Blue Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	BS 6724
Flame propagation	BS 4066-3 Categories A, B, C
Acid gas emission	BS 6425-2 (BS EN 50267-2-2)
Smoke emission	BS 7622-2 (BS EN 50268-2)

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-ESL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 90°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing m/R
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	mm	kg/km	Ω/km	M Ω - km	A	m/R
C93034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.6	0.8	0.90	1.3	13.5	310	12.1	0.9802	22	500
C93034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	0.8	0.90	1.4	15.0	390	7.41	0.8785	30	500
C93034004	3 x 4	4	7/0.85 : CR	2.55	0.7	0.8	0.90	1.4	16.5	480	4.61	0.7305	39	500
C93034006	3 x 6	6	7/1.04 : CR	3.12	0.7	0.8	0.90	1.4	18.0	580	3.08	0.6208	50	500
C93034010	3 x 10	10	7/1.35 : CR	4.05	0.7	0.8	1.25	1.5	21.0	870	1.83	0.4990	67	500
C93038016	3 x 16	16	7 : CP	4.69	0.7	0.8	1.25	1.6	22.0	1,100	1.15	0.4382	89	500
C93038025	3 x 25	25	7 : CP	5.90	0.9	1.0	1.60	1.7	27.0	1,700	0.727	0.4410	115	500
C93038035	3 x 35	35	7 : CP	6.95	0.9	1.0	1.60	1.8	29.5	2,100	0.524	0.3818	140	500
C93038050	3 x 50	50	19 : CP	8.33	1.0	1.0	1.60	1.8	33.0	2,700	0.387	0.3553	170	500
C93038070	3 x 70	70	19 : CP	9.73	1.1	1.0	1.60	1.9	37.0	3,500	0.268	0.3351	215	500
C93038095	3 x 95	95	19 : CP	11.45	1.1	1.2	2.00	2.1	42.0	4,700	0.193	0.2892	265	500
C93038120	3 x 120	120	19 : CP	12.95	1.2	1.2	2.00	2.2	46.5	5,700	0.153	0.2788	310	500
C93038150	3 x 150	150	37 : CP	14.27	1.4	1.4	2.50	2.3	52.0	7,300	0.124	0.2923	355	500
C93038185	3 x 185	185	37 : CP	15.98	1.6	1.4	2.50	2.4	57.0	8,800	0.0991	0.2965	410	250
C93038240	3 x 240	240	37 : CP	18.47	1.7	1.4	2.50	2.6	63.0	10,800	0.0754	0.2741	490	250
C93038300	3 x 300	300	61 : CP	20.68	1.8	1.6	2.50	2.7	69.0	13,000	0.0601	0.2599	565	200
C93038400	3 x 400	400	61 : CP	23.39	2.0	1.6	2.50	2.9	77.0	16,500	0.047	0.2551	655	200

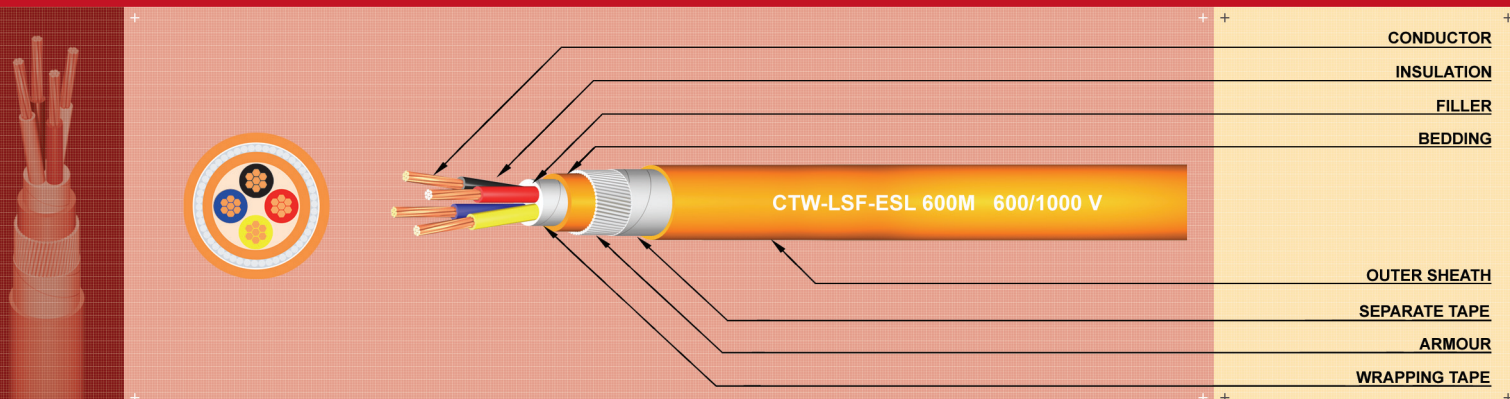
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-ESL 600M

FOUR CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 600/1000 V



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE : GP8) : Red, Yellow, Blue, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : LST1) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	BS 6724
Flame propagation	BS 4066-3 Categories A, B, C
Acid gas emission	BS 6425-2 (BS EN 50267-2-2)
Smoke emission	BS 7622-2 (BS EN 50268-2)

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-ESL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 90°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	mm	kg/km	Ω/km	M Ω - km	A	m/R
C93044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.6	0.8	0.90	1.3	14.0	340	12.1	0.9802	23	500
C93044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	0.8	0.90	1.4	16.0	450	7.41	0.8785	30	500
C93044004	4 x 4	4	7/0.85 : CR	2.55	0.7	0.8	0.90	1.4	18.0	550	4.61	0.7305	40	500
C93044006	4 x 6	6	7/1.04 : CR	3.12	0.7	0.8	1.25	1.5	20.0	800	3.08	0.6208	51	500
C93044010	4 x 10	10	7/1.35 : CR	4.05	0.7	0.8	1.25	1.5	23.0	1,040	1.83	0.4990	68	500
C93048016	4 x 16	16	7 : CP	4.69	0.7	0.8	1.25	1.6	24.0	1,300	1.15	0.4382	90	500
C93048025	4 x 25	25	7 : CP	5.90	0.9	1.0	1.60	1.7	29.0	2,000	0.727	0.4410	115	500
C93048035	4 x 35	35	7 : CP	6.95	0.9	1.0	1.60	1.8	32.0	2,500	0.524	0.3818	145	500
C93048050	4 x 50	50	19 : CP	8.33	1.0	1.0	1.60	1.9	36.0	3,300	0.387	0.3553	170	500
C93048070	4 x 70	70	19 : CP	9.73	1.1	1.2	2.00	2.1	42.0	4,700	0.268	0.3351	220	500
C93048095	4 x 95	95	19 : CP	11.45	1.1	1.2	2.00	2.2	47.0	5,900	0.193	0.2892	260	500
C93048120	4 x 120	120	19 : CP	12.95	1.2	1.4	2.50	2.3	53.0	7,600	0.153	0.2788	305	500
C93048150	4 x 150	150	37 : CP	14.27	1.4	1.4	2.50	2.4	57.0	9,200	0.124	0.2923	350	250
C93048185	4 x 185	185	37 : CP	15.98	1.6	1.4	2.50	2.6	63.0	11,000	0.0991	0.2965	400	250
C93048240	4 x 240	240	37 : CP	18.47	1.7	1.6	2.50	2.7	71.0	13,500	0.0754	0.2741	480	250
C93048300	4 x 300	300	61 : CP	20.68	1.8	1.6	2.50	2.9	77.0	16,500	0.0601	0.2599	540	200
C93048400	4 x 400	400	61 : CP	23.39	2.0	1.8	3.15	3.2	88.0	22,200	0.047	0.2551	630	200

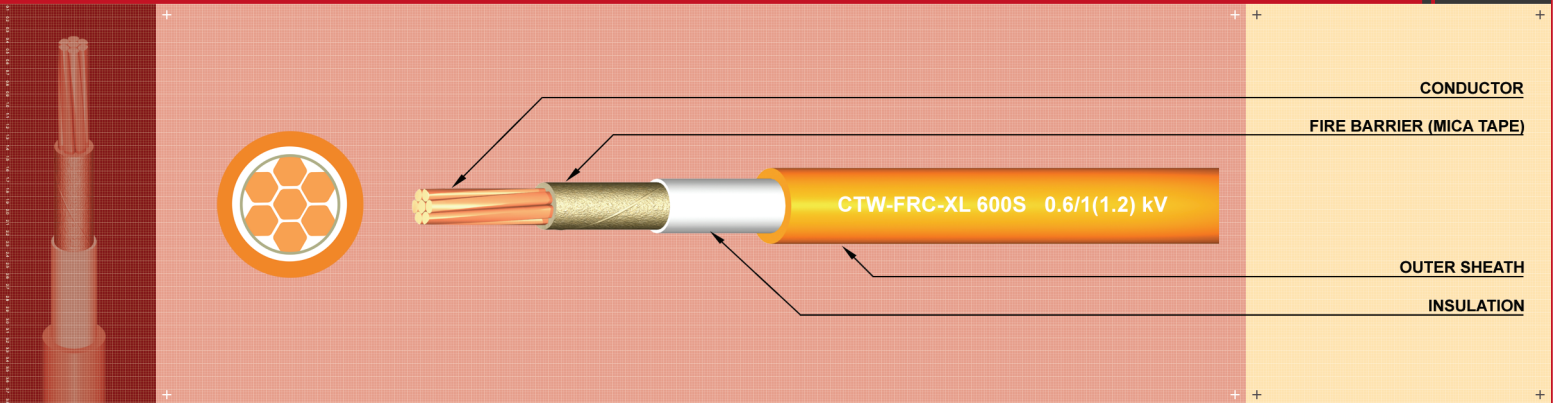


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XL 600S**

SINGLE CORE LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV

PAGES 1/2



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE) : Natural (Translucent) Colour.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Circuit integrity	BS 6387 Categories C, W, Z IEC 60331 at 750°C 3 hours
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of fire major hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

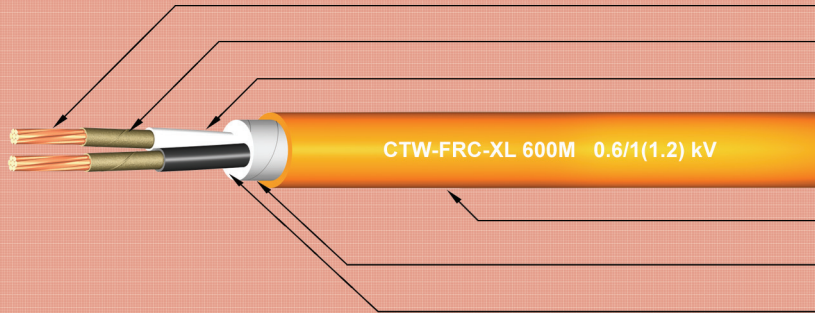
CTW-FRC-XL 600S		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C56014501	1 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.4	7.0	60	12.1	2,400	27	500
C56014502	1 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.4	7.5	75	7.41	2,100	36	500
C56014004	1 x 4	4	7/0.85 : CR	2.55	0.7	1.4	8.0	95	4.61	1,800	48	500
C56014006	1 x 6	6	7/1.04 : CR	3.12	0.7	1.4	8.5	120	3.08	1,500	61	500
C56014010	1 x 10	10	7/1.35 : CR	4.05	0.7	1.4	9.5	160	1.83	1,200	82	500
C56018016	1 x 16	16	7 : CP	4.69	0.7	1.4	10.0	220	1.15	1,100	110	500
C56018025	1 x 25	25	7 : CP	5.90	0.9	1.4	12.0	320	0.727	1,100	145	500
C56018035	1 x 35	35	7 : CP	6.95	0.9	1.4	13.0	430	0.524	1,000	180	500
C56018050	1 x 50	50	19 : CP	8.33	1.0	1.4	14.5	580	0.387	900	220	500
C56018070	1 x 70	70	19 : CP	9.73	1.1	1.4	16.5	790	0.268	900	280	500
C56018095	1 x 95	95	19 : CP	11.45	1.1	1.5	18.5	1,040	0.193	800	345	500
C56018120	1 x 120	120	19 : CP	12.95	1.2	1.5	20.0	1,300	0.153	800	400	500
C56018150	1 x 150	150	37 : CP	14.27	1.4	1.6	22.0	1,610	0.124	800	460	500
C56018185	1 x 185	185	37 : CP	15.98	1.6	1.6	24.5	1,970	0.0991	800	530	500
C56018240	1 x 240	240	37 : CP	18.47	1.7	1.7	27.5	2,520	0.0754	700	630	500
C56018300	1 x 300	300	61 : CP	20.68	1.8	1.8	30.5	3,120	0.0601	700	725	500



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XL 600M**

TWO CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Circuit integrity	BS 6387 Categories C, W, Z IEC 60331 at 750°C 3 hours
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of fire major hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

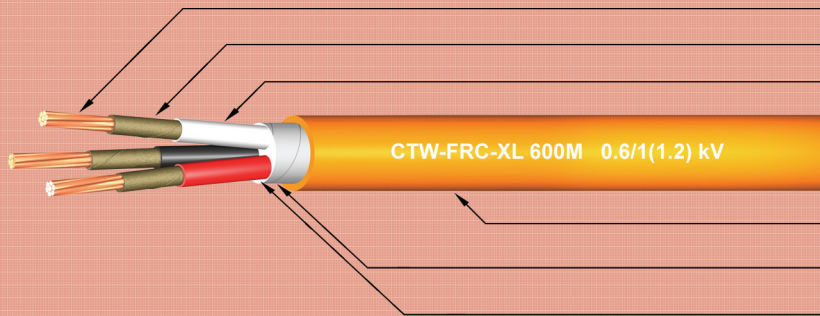
CTW-FRC-XL 600M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C56024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	12.5	150	12.1	2,400	25	500
C56024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	13.5	190	7.41	2,100	34	500
C56024004	2 x 4	4	7/0.85 : CR	2.55	0.7	1.8	14.5	240	4.61	1,800	44	500
C56024006	2 x 6	6	7/1.04 : CR	3.12	0.7	1.8	15.5	300	3.08	1,500	57	500
C56024010	2 x 10	10	7/1.35 : CR	4.05	0.7	1.8	17.5	410	1.83	1,200	77	500
C56028016	2 x 16	16	7 : CP	4.69	0.7	1.8	19.0	540	1.15	1,100	100	500
C56028025	2 x 25	25	7 : CP	5.90	0.9	1.8	22.0	790	0.727	1,100	135	500
C56028035	2 x 35	35	7 : CP	6.95	0.9	1.8	24.0	1,020	0.524	1,000	165	500
C56028050	2 x 50	50	19 : CP	8.33	1.0	1.8	27.5	1,390	0.387	900	205	500
C56028070	2 x 70	70	19 : CP	9.73	1.1	1.8	31.0	1,850	0.268	900	255	500
C56028095	2 x 95	95	19 : CP	11.45	1.1	2.0	35.0	2,450	0.193	800	315	500
C56028120	2 x 120	120	19 : CP	12.95	1.2	2.1	38.5	3,049	0.153	800	365	500
C56028150	2 x 150	150	37 : CP	14.27	1.4	2.2	43.0	3,760	0.124	800	415	500
C56028185	2 x 185	185	37 : CP	15.98	1.6	2.3	47.0	4,610	0.0991	800	485	500
C56028240	2 x 240	240	37 : CP	18.47	1.7	2.5	53.0	5,920	0.0754	700	580	500
C56028300	2 x 300	300	61 : CP	20.68	1.8	2.7	58.0	7,330	0.0601	700	675	300
C56028400	2 x 400	400	61 : CP	23.39	2.0	2.9	64.5	9,570	0.047	700	790	300



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XL 600M**

THREE CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONDUCTOR

FIRE BARRIER (MICA TAPE)

INSULATION

OUTER SHEATH

WRAPPING TAPE

FILLER

CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural, Red Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Circuit integrity	BS 6387 Categories C, W, Z IEC 60331 at 750°C 3 hours
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of fire major hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-XL 600M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing
PRODUCT CODE	SIZE corexmm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km		m/R
C56034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	13.0	180	12.1	2,400	21	500
C56034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	14.0	230	7.41	2,100	28	500
C56034004	3 x 4	4	7/0.85 : CR	2.55	0.7	1.8	15.5	290	4.61	1,800	37	500
C56034006	3 x 6	6	7/1.04 : CR	3.12	0.7	1.8	16.5	370	3.08	1,500	48	500
C56034010	3 x 10	10	7/1.35 : CR	4.05	0.7	1.8	18.5	520	1.83	1,200	64	500
C56038016	3 x 16	16	7 : CP	4.69	0.7	1.8	20.0	710	1.15	1,100	86	500
C56038025	3 x 25	25	7 : CP	5.90	0.9	1.8	23.5	1,040	0.727	1,100	115	500
C56038035	3 x 35	35	7 : CP	6.95	0.9	1.8	26.0	1,380	0.524	1,000	140	500
C56038050	3 x 50	50	19 : CP	8.33	1.0	1.8	29.5	1,880	0.387	900	170	500
C56038070	3 x 70	70	19 : CP	9.73	1.1	1.9	33.5	2,550	0.268	900	215	500
C56038095	3 x 95	95	19 : CP	11.45	1.1	2.0	37.5	3,360	0.193	800	260	500
C56038120	3 x 120	120	19 : CP	12.95	1.2	2.1	41.5	4,200	0.153	800	305	500
C56038150	3 x 150	150	37 : CP	14.27	1.4	2.3	46.0	5,220	0.124	800	350	500
C56038185	3 x 185	185	37 : CP	15.98	1.6	2.4	50.0	6,410	0.0991	800	405	500
C56038240	3 x 240	240	37 : CP	18.47	1.7	2.6	56.5	8,230	0.0754	700	490	300
C56038300	3 x 300	300	61 : CP	20.68	1.8	2.8	62.5	10,190	0.0601	700	565	300
C56038400	3 x 400	400	61 : CP	23.39	2.0	3.1	69.5	13,450	0.047	700	655	200

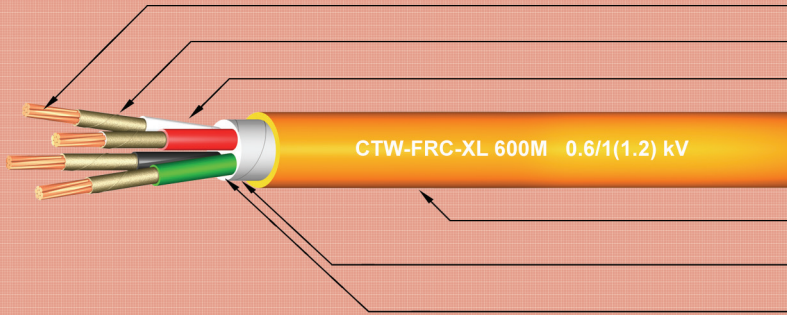
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XL 600M**

FOUR CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONDUCTOR

FIRE BARRIER (MICA TAPE)

INSULATION

OUTER SHEATH

WRAPPING TAPE

FILLER

CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural, Red, Green Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Circuit integrity	BS 6387 Categories C, W, Z IEC 60331 at 750°C 3 hours
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of fire major hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-XL 600M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE corexmm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C56044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	14.0	210	12.1	2,400	21	500
C56044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	15.0	270	7.41	2,100	28	500
C56044004	4 x 4	4	7/0.85 : CR	2.55	0.7	1.8	17.0	360	4.61	1,800	37	500
C56044006	4 x 6	6	7/1.04 : CR	3.12	0.7	1.8	18.0	460	3.08	1,500	48	500
C56044010	4 x 10	10	7/1.35 : CR	4.05	0.7	1.8	20.5	660	1.83	1,200	64	500
C56048016	4 x 16	16	7 : CP	4.69	0.7	1.8	22.0	910	1.15	1,100	86	500
C56048025	4 x 25	25	7 : CP	5.90	0.9	1.8	26.0	1,340	0.727	1,100	115	500
C56048035	4 x 35	35	7 : CP	6.95	0.9	1.8	28.5	1,780	0.524	1,000	140	500
C56048050	4 x 50	50	19 : CP	8.33	1.0	1.9	32.5	2,460	0.387	900	170	500
C56048070	4 x 70	70	19 : CP	9.73	1.1	2.0	37.0	3,330	0.268	900	215	500
C56048095	4 x 95	95	19 : CP	11.45	1.1	2.1	41.5	4,410	0.193	800	260	500
C56048120	4 x 120	120	19 : CP	12.95	1.2	2.3	46.0	5,530	0.153	800	305	500
C56048150	4 x 150	150	37 : CP	14.27	1.4	2.4	50.5	6,850	0.124	800	350	300
C56048185	4 x 185	185	37 : CP	15.98	1.6	2.6	56.0	8,440	0.0991	800	405	300
C56048240	4 x 240	240	37 : CP	18.47	1.7	2.8	63.0	10,830	0.0754	700	490	300
C56048300	4 x 300	300	61 : CP	20.68	1.8	3.0	69.5	13,450	0.0601	700	565	200
C56048400	4 x 400	400	61 : CP	23.39	2.0	3.3	77.5	17,710	0.047	700	655	200

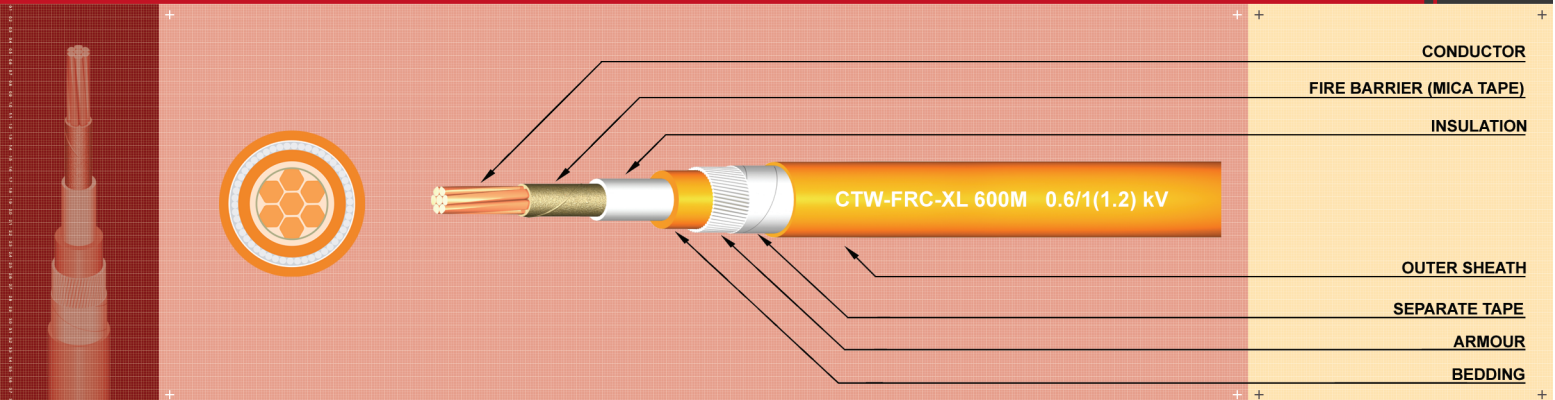


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XAL 600S**

SINGLE CORE LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV

PAGES 1/2



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE) : Natural (Translucent) Colour.
Bedding	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Armour	Aluminum wire for single core.
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Circuit integrity	BS 6387 Categories C, W, Z IEC 60331 at 750°C 3 hours
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-XAL 600S		Conductor			Thickness of insulation mm	Thickness of bedding mm	Armour wire diameter mm	Thickness of outer sheath mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Maximum conductor resistance at 20°C Ω/km	Minimum insulation resistance at 20°C MΩ · km	Allowable ampacities in free air at 40° (ambient) A	Standard packing m/R
		Nominal cross-sectional area mm²	Number and diameter of wire No./mm	Diameter (Approx.) mm										
PRODUCT CODE	SIZE core x mm²													
-	1 x 1.5	1.5	7/0.50 : CR	1.50	-	-	-	-	-	-	-	-	-	-
-	1 x 2.5	2.5	7/0.67 : CR	2.01	-	-	-	-	-	-	-	-	-	-
-	1 x 4	4	7/0.85 : CR	2.55	-	-	-	-	-	-	-	-	-	-
-	1 x 6	6	7/1.04 : CR	3.12	-	-	-	-	-	-	-	-	-	-
-	1 x 10	10	7/1.35 : CR	4.05	-	-	-	-	-	-	-	-	-	-
-	1 x 16	16	7 : CP	4.69	-	-	-	-	-	-	-	-	-	-
-	1 x 25	25	7 : CP	5.90	-	-	-	-	-	-	-	-	-	-
-	1 x 35	35	7 : CP	6.95	-	-	-	-	-	-	-	-	-	-
C57018050	1 x 50	50	19 : CP	8.33	1.0	1.0	1.25	1.8	20.0	810	0.387	900	210	500
C57018070	1 x 70	70	19 : CP	9.73	1.1	1.0	1.25	1.8	22.0	1,040	0.268	900	260	500
C57018095	1 x 95	95	19 : CP	11.45	1.1	1.0	1.6	1.8	24.5	1,360	0.193	800	325	500
C57018120	1 x 120	120	19 : CP	12.95	1.2	1.0	1.6	1.8	26.5	1,640	0.153	800	375	500
C57018150	1 x 150	150	37 : CP	14.27	1.4	1.0	1.6	1.8	28.5	1,980	0.124	800	425	500
C57018185	1 x 185	185	37 : CP	15.98	1.6	1.0	1.6	1.9	30.5	2,380	0.0991	800	485	500
C57018240	1 x 240	240	37 : CP	18.47	1.7	1.0	1.6	2.0	33.5	2,980	0.0754	700	565	500
C57018300	1 x 300	300	61 : CP	20.68	1.8	1.0	1.6	2.1	36.5	3,630	0.0601	700	635	500

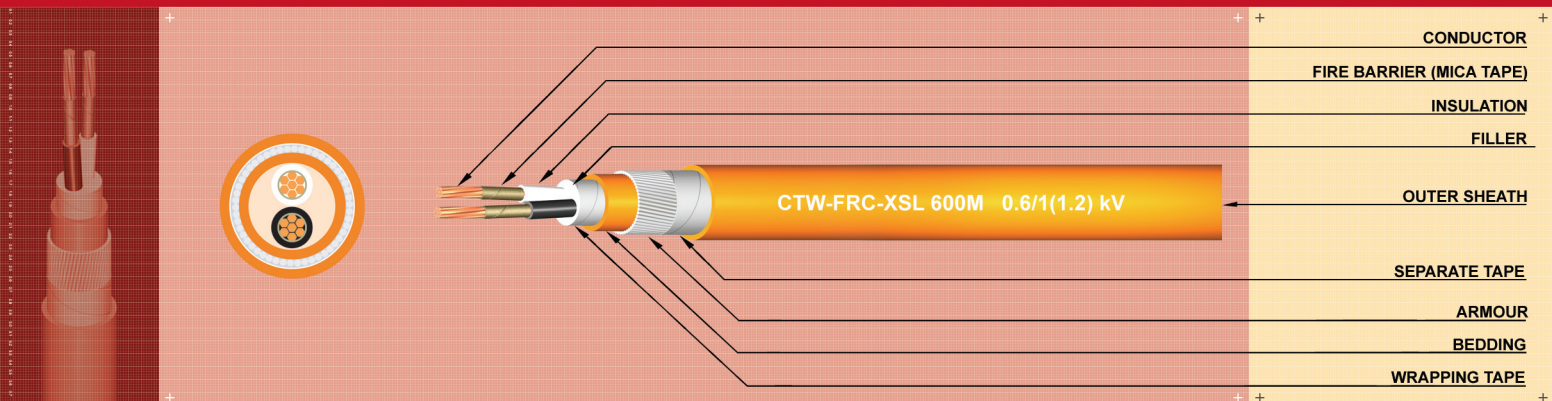
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-FRC-XSL 600M

TWO CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Circuit integrity	BS 6387 Categories C, W, Z IEC 60331 at 750°C 3 hours
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-XSL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area	Number and diameter of wire	Diameter (Approx.)										
PRODUCT CODE	SIZE core x mm ²	mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ · km	A	m/R
C58024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	17.0	404	12.1	2,400	25	500
C58024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	0.9	1.8	18.0	460	7.41	2,100	35	500
C58024004	2 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	20.0	630	4.61	1,800	45	500
C58024006	2 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	21.0	720	3.08	1,500	55	500
C58024010	2 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	23.0	880	1.83	1,200	75	500
C58028016	2 x 16	16	7 : CP	4.69	0.7	1.0	1.25	1.8	24.0	1,030	1.15	1,100	105	500
C58028025	2 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	28.0	1,510	0.727	1,100	145	500
C58028035	2 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.8	30.0	1,810	0.524	1,000	175	500
C58028050	2 x 50	50	19 : CP	8.33	1.0	1.0	1.6	1.8	33.5	2,270	0.387	900	210	500
C58028070	2 x 70	70	19 : CP	9.73	1.1	1.0	1.6	2.0	37.0	2,870	0.268	900	260	500
C58028095	2 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.1	42.0	3,890	0.193	800	325	500
C58028120	2 x 120	120	19 : CP	12.95	1.2	1.2	2.0	2.2	45.5	4,620	0.153	800	375	500
C58028150	2 x 150	150	37 : CP	14.27	1.4	1.2	2.0	2.3	49.0	5,470	0.124	800	425	500
C58028185	2 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.5	55.0	7,020	0.0991	800	485	500
C58028240	2 x 240	240	37 : CP	18.47	1.7	1.4	2.5	2.7	61.0	8,610	0.0754	700	565	250
C58028300	2 x 300	300	61 : CP	20.68	1.8	1.6	2.5	2.8	66.5	10,280	0.0601	700	635	250
C58028400	2 x 400	400	61 : CP	23.39	2.0	1.6	2.5	3.1	73.5	12,840	0.047	700	725	250

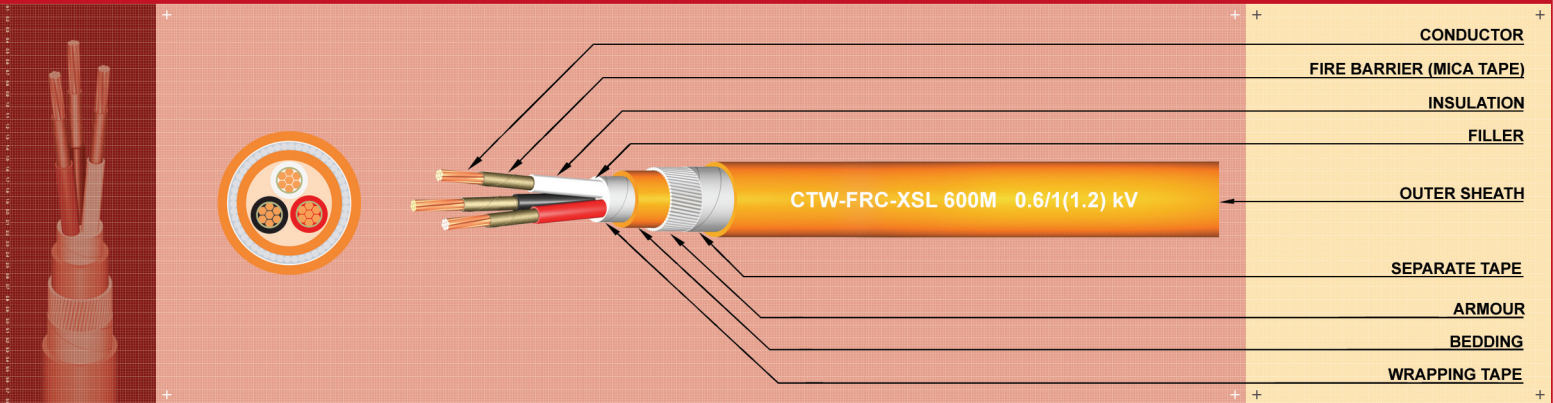
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XSL 600M**

THREE CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural, Red Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Circuit integrity	BS 6387 Categories C, W, Z IEC 60331 at 750°C 3 hours
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

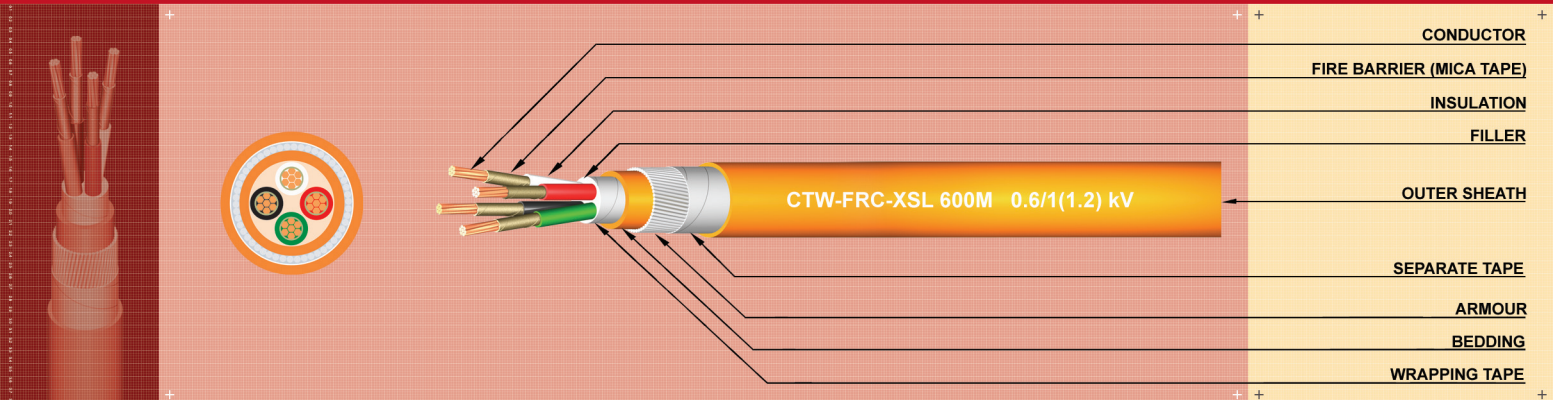
CTW-FRC-XSL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area	Number and diameter of wire	Diameter (Approx.)										
PRODUCT CODE	SIZE core x mm ²	mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C58034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	17.5	440	12.1	2,400	20	500
C58034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	0.9	1.8	19.0	510	7.41	2,100	30	500
C58034004	3 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	20.5	712	4.61	1,800	35	500
C58034006	3 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	22.0	824	3.08	1,500	50	500
C58034010	3 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	24.0	1,020	1.83	1,200	65	500
C58038016	3 x 16	16	7 : CP	4.69	0.7	1.0	1.25	1.8	25.0	1,240	1.15	1,100	90	500
C58038025	3 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	29.5	1,830	0.727	1,100	125	500
C58038035	3 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.8	31.5	2,230	0.524	1,000	150	500
C58038050	3 x 50	50	19 : CP	8.33	1.0	1.0	1.6	1.9	35.0	2,850	0.387	900	180	500
C58038070	3 x 70	70	19 : CP	9.73	1.1	1.2	2.0	2.0	40.0	3,970	0.268	900	230	500
C58038095	3 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.2	44.5	4,940	0.193	800	280	500
C58038120	3 x 120	120	19 : CP	12.95	1.2	1.2	2.0	2.3	48.0	5,940	0.153	800	320	500
C58038150	3 x 150	150	37 : CP	14.27	1.4	1.4	2.5	2.5	54.0	7,610	0.124	800	360	500
C58038185	3 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.6	58.5	9,050	0.0991	800	420	250
C58038240	3 x 240	240	37 : CP	18.47	1.7	1.6	2.5	2.8	65.5	11,230	0.0754	700	490	250
C58038300	3 x 300	300	61 : CP	20.68	1.8	1.6	2.5	3.0	71.0	13,500	0.0601	700	560	200
C58038400	3 x 400	400	61 : CP	23.39	2.0	1.6	2.5	3.2	78.0	17,030	0.047	700	650	200



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XSL 600M**

FOUR CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural, Red, Green Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Circuit integrity	BS 6387 Categories C, W, Z IEC 60331 at 750°C 3 hours
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-XSL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area	Number and diameter of wire	Diameter (Approx.)										
PRODUCT CODE	SIZE core x mm ²	mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ · km	A	m/R
C58044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	18.5	490	12.1	2,400	20	500
C58044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	1.25	1.8	20.5	680	7.41	2,100	30	500
C58044004	4 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	22.0	810	4.61	1,800	35	500
C58044006	4 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	23.5	940	3.08	1,500	50	500
C58044010	4 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	25.5	1,200	1.83	1,200	65	500
C58048016	4 x 16	16	7 : CP	4.69	0.7	1.0	1.6	1.8	27.5	1,620	1.15	1,100	90	500
C58048025	4 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	31.5	2,190	0.727	1,100	125	500
C58048035	4 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.9	34.0	2,720	0.524	1,000	150	500
C58048050	4 x 50	50	19 : CP	8.33	1.0	1.0	1.6	2.0	38.5	3,530	0.387	900	180	500
C58048070	4 x 70	70	19 : CP	9.73	1.1	1.2	2.0	2.2	44.0	4,880	0.268	900	230	500
C58048095	4 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.3	48.0	6,140	0.193	800	280	500
C58048120	4 x 120	120	19 : CP	12.95	1.2	1.4	2.5	2.5	54.0	7,940	0.153	800	320	500
C58048150	4 x 150	150	37 : CP	14.27	1.4	1.4	2.5	2.6	58.5	9,470	0.124	800	360	250
C58048185	4 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.8	64.0	11,310	0.0991	800	420	250
C58048240	4 x 240	240	37 : CP	18.47	1.7	1.6	2.5	3.0	71.5	14,140	0.0754	700	490	250
C58048300	4 x 300	300	61 : CP	20.68	1.8	1.6	2.5	3.2	78.0	17,020	0.0601	700	560	200
C58048400	4 x 400	400	61 : CP	23.39	2.0	1.8	3.15	3.5	88.0	22,680	0.047	700	650	200

C = Packing in coil
R = Packing in reel

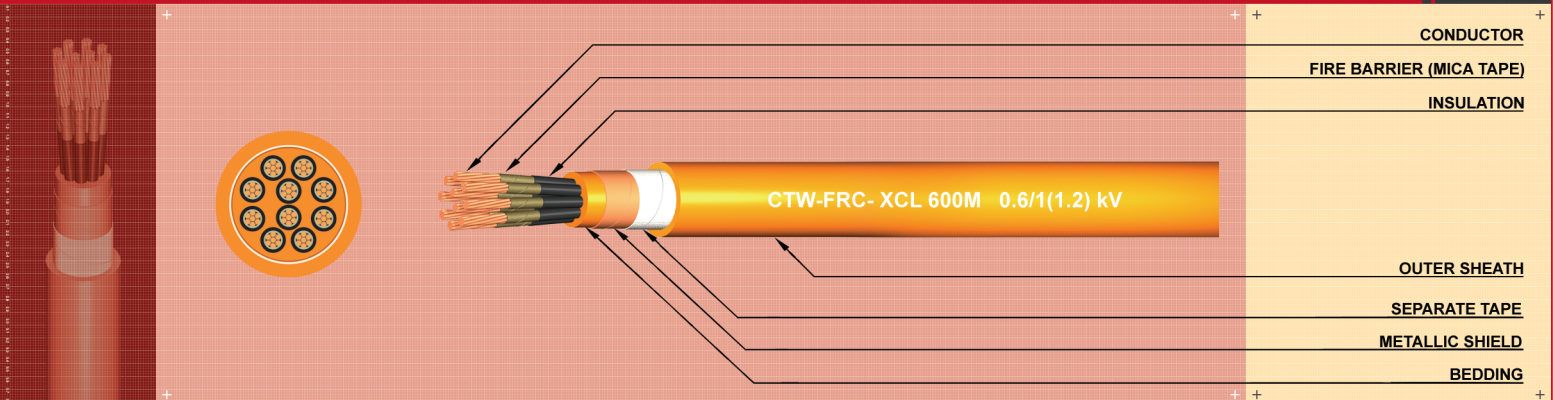


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-FRC-XCL 600M

MULTI CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CONTROL CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

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CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked polyethylene (XLPE) : Black Colour with marking number.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Inner Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Metallic Shield	Annealed copper tape.
Separator Tape	Polyester and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Circuit integrity	BS 6387 Categories C, W, Z IEC 60331 at 750°C 3 hours
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 90 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-XCL 600M		Conductor			Thickness of insulation	Thickness of bedding sheath	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Standard packing
PRODUCT CODE	No. of Core	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	kg/km	Ω/km	M Ω - km	m/R
C70024501	2	1.5	7/0.50	1.50	0.7	1.0	1.8	18	380	12.10	2,500	500
C70024502		2.5	7/0.67	2.01	0.7	1.0	1.8	19	440	7.41	2,100	500
C70024004		4	7/0.85	2.55	0.7	1.0	1.8	20	510	4.61	1,800	500
C70024006		6	7/1.04	3.12	0.7	1.0	1.8	21	590	3.08	1,500	500
C70024010		10	7/1.35	4.05	0.7	1.0	1.8	23	740	1.83	1,200	500
C70034501	3	1.5	7/0.50	1.50	0.7	1.0	1.8	18	410	12.10	2,500	500
C70034502		2.5	7/0.67	2.01	0.7	1.0	1.8	19	480	7.41	2,100	500
C70034004		4	7/0.85	2.55	0.7	1.0	1.8	21	570	4.61	1,800	500
C70034006		6	7/1.04	3.12	0.7	1.0	1.8	22	670	3.08	1,500	500
C70034010		10	7/1.35	4.05	0.7	1.0	1.8	24	860	1.83	1,200	500
C70044501	4	1.5	7/0.50	1.50	0.7	1.0	1.8	19	460	12.10	2,500	500
C70044502		2.5	7/0.67	2.01	0.7	1.0	1.8	21	540	7.41	2,100	500
C70044004		4	7/0.85	2.55	0.7	1.0	1.8	22	650	4.61	1,800	500
C70044006		6	7/1.04	3.12	0.7	1.0	1.8	23	780	3.08	1,500	500
C70044010		10	7/1.35	4.05	0.7	1.0	1.8	26	1,020	1.83	1,200	500



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XCL 600M**

MULTI CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CONTROL CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

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CTW-FRC-XCL 600M		Conductor			Thickness of insulation	Thickness of bedding sheath	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Standard packing
PRODUCT CODE	No. of Core	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ-km	m/R
C70054501	5	1.5	7/0.50	1.50	0.7	1.0	1.8	20	510	12.10	2,500	500
C70054502		2.5	7/0.67	2.01	0.7	1.0	1.8	22	620	7.41	2,100	500
C70054004		4	7/0.85	2.55	0.7	1.0	1.8	23	750	4.61	1,800	500
C70054006		6	7/1.04	3.12	0.7	1.0	1.8	25	910	3.08	1,500	500
C70054010		10	7/1.35	4.05	0.7	1.0	1.8	28	1,200	1.83	1,200	500
C70064501	6	1.5	7/0.50	1.50	0.7	1.0	1.8	22	570	12.10	2,500	500
C70064502		2.5	7/0.67	2.01	0.7	1.0	1.8	23	700	7.41	2,100	500
C70064004		4	7/0.85	2.55	0.7	1.0	1.8	25	850	4.61	1,800	500
C70064006		6	7/1.04	3.12	0.7	1.0	1.8	27	1,040	3.08	1,500	500
C70064010		10	7/1.35	4.05	0.7	1.0	1.8	30	1,390	1.83	1,200	500
C70074501	7	1.5	7/0.50	1.50	0.7	1.0	1.8	22	580	12.10	2,500	500
C70074502		2.5	7/0.67	2.01	0.7	1.0	1.8	23	710	7.41	2,100	500
C70074004		4	7/0.85	2.55	0.7	1.0	1.8	25	870	4.61	1,800	500
C70074006		6	7/1.04	3.12	0.7	1.0	1.8	27	1,070	3.08	1,500	500
C70074010		10	7/1.35	4.05	0.7	1.0	1.8	30	1,460	1.83	1,200	500
C70084501	8	1.5	7/0.50	1.50	0.7	1.0	1.8	23	640	12.10	2,500	500
C70084502		2.5	7/0.67	2.01	0.7	1.0	1.8	25	790	7.41	2,100	500
C70084004		4	7/0.85	2.55	0.7	1.0	1.8	26	980	4.61	1,800	500
C70084006		6	7/1.04	3.12	0.7	1.0	1.8	28	1,210	3.08	1,500	500
C70084010		10	7/1.35	4.05	0.7	1.0	1.9	32	1,680	1.83	1,200	500
C70094501	9	1.5	7/0.50	1.50	0.7	1.0	1.8	24	700	12.10	2,500	500
C70094502		2.5	7/0.67	2.01	0.7	1.0	1.8	26	880	7.41	2,100	500
C70094004		4	7/0.85	2.55	0.7	1.0	1.8	28	1,100	4.61	1,800	500
C70094006		6	7/1.04	3.12	0.7	1.0	1.8	30	1,360	3.08	1,500	500
C70094010		10	7/1.35	4.05	0.7	1.0	1.9	34	1,880	1.83	1,200	500
C70104501	10	1.5	7/0.50	1.50	0.7	1.0	1.8	25	790	12.10	2,500	500
C70104502		2.5	7/0.67	2.01	0.7	1.0	1.8	27	990	7.41	2,100	500
C70104004		4	7/0.85	2.55	0.7	1.0	1.8	30	1,240	4.61	1,800	500
C70104006		6	7/1.04	3.12	0.7	1.0	1.9	32	1,560	3.08	1,500	500
C70104010		10	7/1.35	4.05	0.7	1.0	2.0	36	2,180	1.83	1,200	500

C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XCL 600M**

MULTI CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CONTROL CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

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CTW-FRC-XCL 600M		Conductor			Thickness of insulation mm	Thickness of bedding sheath mm	Thickness of outer sheath mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Maximum conductor resistance at 20°C Ω/km	Minimum insulation resistance at 20°C MΩ - km	Standard packing m/R
		Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm								
PRODUCT CODE	No. of Core											
C70114501	11	1.5	7/0.50	1.50	0.7	1.0	1.8	25	800	12.10	2,500	500
C70114502		2.5	7/0.67	2.01	0.7	1.0	1.8	27	1,000	7.41	2,100	500
C70114004		4	7/0.85	2.55	0.7	1.0	1.8	30	1,270	4.61	1,800	500
C70114006		6	7/1.04	3.12	0.7	1.0	1.9	32	1,600	3.08	1,500	500
C70114010		10	7/1.35	4.05	0.7	1.0	2.0	37	2,240	1.83	1,200	500
C70124501	12	1.5	7/0.50	1.50	0.7	1.0	1.8	26	840	12.10	2,500	500
C70124502		2.5	7/0.67	2.01	0.7	1.0	1.8	28	1,060	7.41	2,100	500
C70124004		4	7/0.85	2.55	0.7	1.0	1.8	30	1,340	4.61	1,800	500
C70124006		6	7/1.04	3.12	0.7	1.0	1.9	55	1,700	3.08	1,500	500
C70124010		10	7/1.35	4.05	0.7	1.2	2.1	38	2,480	1.83	1,200	500
C70134501	13	1.5	7/0.50	1.50	0.7	1.0	1.8	26	860	12.10	2,500	500
C70134502		2.5	7/0.67	2.01	0.7	1.0	1.8	28	1,100	7.41	2,100	500
C70134004		4	7/0.85	2.55	0.7	1.0	1.8	31	1,390	4.61	1,800	500
C70134006		6	7/1.04	3.12	0.7	1.0	1.9	34	1,770	3.08	1,500	500
C70134010		10	7/1.35	4.05	0.7	1.2	2.1	39	2,590	1.83	1,200	500
C70144501	14	1.5	7/0.50	1.50	0.7	1.0	1.8	27	910	12.10	2,500	500
C70144502		2.5	7/0.67	2.01	0.7	1.0	1.8	29	1,160	7.41	2,100	500
C70144004		4	7/0.85	2.55	0.7	1.0	1.9	32	1,490	4.61	1,800	500
C70144006		6	7/1.04	3.12	0.7	1.0	2.0	35	1,910	3.08	1,500	500
C70144010		10	7/1.35	4.05	0.7	1.2	2.1	40	2,760	1.83	1,200	500
C70154501	15	1.5	7/0.50	1.50	0.7	1.0	1.8	28	940	12.10	2,500	500
C70154502		2.5	7/0.67	2.01	0.7	1.0	1.8	30	1,210	7.41	2,100	500
C70154004		4	7/0.85	2.55	0.7	1.0	1.9	33	1,560	4.61	1,800	500
C70154006		6	7/1.04	3.12	0.7	1.0	2.0	36	2,010	3.08	1,500	500
C70154010		10	7/1.35	4.05	0.7	1.2	2.1	42	2,900	1.83	1,200	500
C70164501	16	1.5	7/0.50	1.50	0.7	1.0	1.8	28	990	12.10	2,500	500
C70164502		2.5	7/0.67	2.01	0.7	1.0	1.8	30	1,270	7.41	2,100	500
C70164004		4	7/0.85	2.55	0.7	1.0	1.9	33	1,640	4.61	1,800	500
C70164006		6	7/1.04	3.12	0.7	1.0	2.0	36	2,110	3.08	1,500	500
C70164010		10	7/1.35	4.05	0.7	1.2	2.2	42	3,080	1.83	1,200	500



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XCL 600M**

MULTI CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CONTROL CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

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CTW-FRC-XCL 600M		Conductor			Thickness of insulation	Thickness of bedding sheath	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Standard packing
PRODUCT CODE	No. of Core	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	kg/km	Ω /km	MΩ - km	m/R
C70174501	17	1.5	7/0.50	1.50	0.7	1.0	1.8	28	1,030	12.10	2,500	500
C70174502		2.5	7/0.67	2.01	0.7	1.0	1.8	31	1,330	7.41	2,100	500
C70174004		4	7/0.85	2.55	0.7	1.0	1.9	34	1,730	4.61	1,800	500
C70174006		6	7/1.04	3.12	0.7	1.2	2.1	38	2,300	3.08	1,500	500
C70174010		10	7/1.35	4.05	0.7	1.2	2.2	43	3,250	1.83	1,200	500
C70184501	18	1.5	7/0.50	1.50	0.7	1.0	1.8	29	1,070	12.10	2,500	500
C70184502		2.5	7/0.67	2.01	0.7	1.0	1.9	32	1,400	7.41	2,100	500
C70184004		4	7/0.85	2.55	0.7	1.0	2.0	35	1,830	4.61	1,800	500
C70184006		6	7/1.04	3.12	0.7	1.2	2.1	39	2,420	3.08	1,500	500
C70184010		10	7/1.35	4.05	0.7	1.2	2.2	44	3,400	1.83	1,200	500
C70194501	19	1.5	7/0.50	1.50	0.7	1.0	1.8	29	1,080	12.10	2,500	500
C70194502		2.5	7/0.67	2.01	0.7	1.0	1.9	32	1,420	7.41	2,100	500
C70194004		4	7/0.85	2.55	0.7	1.0	2.0	35	1,860	4.61	1,800	500
C70194006		6	7/1.04	3.12	0.7	1.2	2.1	39	2,450	3.08	1,500	500
C70194010		10	7/1.35	4.05	0.7	1.2	2.2	44	3,470	1.83	1,200	500
C70204501	20	1.5	7/0.50	1.50	0.7	1.0	1.8	30	1,130	12.10	2,500	500
C70204502		2.5	7/0.67	2.01	0.7	1.0	1.9	32	1,480	7.41	2,100	500
C70204004		4	7/0.85	2.55	0.7	1.0	2.0	36	1,950	4.61	1,800	500
C70204006		6	7/1.04	3.12	0.7	1.2	2.1	40	2,570	3.08	1,500	500
C70204010		10	7/1.35	4.05	0.7	1.2	2.3	46	3,690	1.83	1,200	500
C70214501	21	1.5	7/0.50	1.50	0.7	1.0	1.8	30	1,160	12.10	2,500	500
C70214502		2.5	7/0.67	2.01	0.7	1.0	1.9	33	1,530	7.41	2,100	500
C70214004		4	7/0.85	2.55	0.7	1.0	2.0	37	2,020	4.61	1,800	500
C70214006		6	7/1.04	3.12	0.7	1.2	2.1	41	2,670	3.08	1,500	500
C70214010		10	7/1.35	4.05	0.7	1.2	2.3	47	3,840	1.83	1,200	500
C70224501	22	1.5	7/0.50	1.50	0.7	1.0	1.8	31	1,220	12.10	2,500	500
C70224502		2.5	7/0.67	2.01	0.7	1.0	1.9	34	1,610	7.41	2,100	500
C70224004		4	7/0.85	2.55	0.7	1.2	2.1	39	2,210	4.61	1,800	500
C70224006		6	7/1.04	3.12	0.7	1.2	2.2	42	2,820	3.08	1,500	500
C70224010		10	7/1.35	4.05	0.7	1.2	2.3	48	4,030	1.83	1,200	500

C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-XCL 600M**

MULTI CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CONTROL CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

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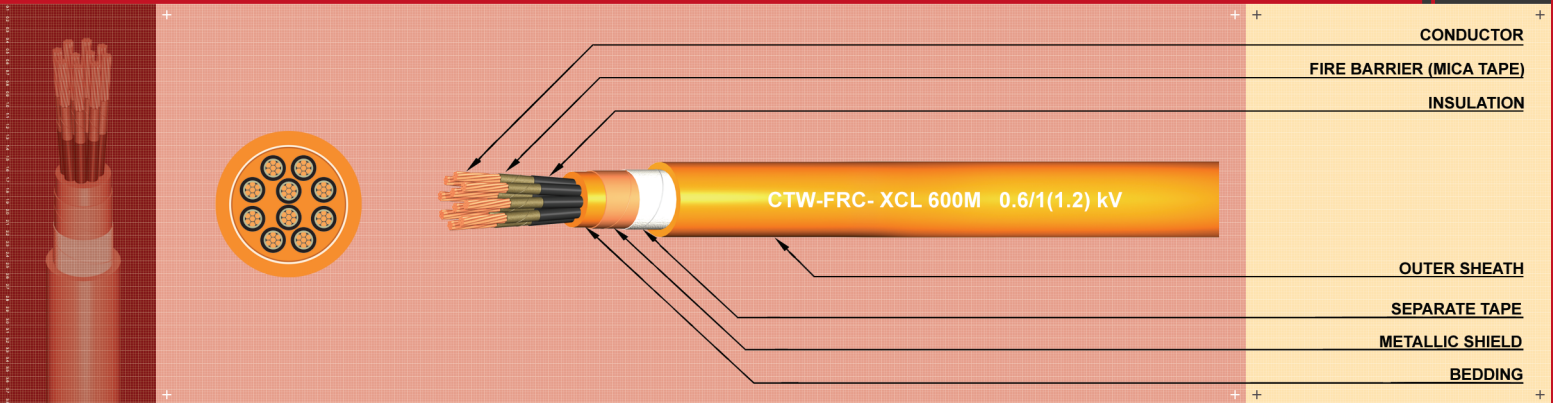
CTW-FRC-XCL 600M		Conductor			Thickness of insulation	Thickness of bedding sheath	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Standard packing
PRODUCT CODE	No. of Core	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	m/R
C70234501	23	1.5	7/0.50	1.50	0.7	1.0	1.9	32	1,270	12.10	2,500	500
C70234502		2.5	7/0.67	2.01	0.7	1.0	2.0	35	1,700	7.41	2,100	500
C70234004		4	7/0.85	2.55	0.7	1.2	2.1	39	2,280	4.61	1,800	500
C70234006		6	7/1.04	3.12	0.7	1.2	2.2	43	2,920	3.08	1,500	500
C70234010		10	7/1.35	4.05	0.7	1.2	2.4	49	4,200	1.83	1,200	500
C70244501	24	1.5	7/0.50	1.50	0.7	1.0	1.9	33	1,380	12.10	2,500	500
C70244502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,840	7.41	2,100	500
C70244004		4	7/0.85	2.55	0.7	1.2	2.1	47	2,470	4.61	1,800	500
C70244006		6	7/1.04	3.12	0.7	1.2	2.3	45	3,200	3.08	1,500	500
C70244010		10	7/1.35	4.05	0.7	1.4	2.5	52	4,660	1.83	1,200	500
C70254501	25	1.5	7/0.50	1.50	0.7	1.0	1.9	33	1,390	12.10	2,500	500
C70254502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,860	7.41	2,100	500
C70254004		4	7/0.85	2.55	0.7	1.2	2.1	41	2,500	4.61	1,800	500
C70254006		6	7/1.04	3.12	0.7	1.2	2.3	45	3,240	3.08	1,500	500
C70254010		10	7/1.35	4.05	0.7	1.4	2.5	52	4,730	1.83	1,200	500
C70264501	26	1.5	7/0.50	1.50	0.7	1.0	1.9	33	1,400	12.10	2,500	500
C70264502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,870	7.41	2,100	500
C70264004		4	7/0.85	2.55	0.7	1.2	2.1	41	2,520	4.61	1,800	500
C70264006		6	7/1.04	3.12	0.7	1.2	2.3	45	3,280	3.08	1,500	500
C70264010		10	7/1.35	4.05	0.7	1.4	2.5	52	4,790	1.83	1,200	500
C70274501	27	1.5	7/0.50	1.50	0.7	1.0	1.9	34	1,430	12.10	2,500	500
C70274502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,930	7.41	2,100	500
C70274004		4	7/0.85	2.55	0.7	1.2	2.2	42	2,620	4.61	1,800	500
C70274006		6	7/1.04	3.12	0.7	1.2	2.3	45	3,390	3.08	1,500	500
C70274010		10	7/1.35	4.05	0.7	1.4	2.5	52	4,960	1.83	1,200	500
C70284501	28	1.5	7/0.50	1.50	0.7	1.0	1.9	34	1,460	12.10	2,500	500
C70284502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,950	7.41	2,100	500
C70284004		4	7/0.85	2.55	0.7	1.2	2.2	42	2,660	4.61	1,800	500
C70284006		6	7/1.04	3.12	0.7	1.2	2.3	46	3,440	3.08	1,500	500
C70284010		10	7/1.35	4.05	0.7	1.4	2.5	53	5,040	1.83	1,200	500



CONTROL CABLE CORE ASSEMBLY

FIRE RESISTANT CONTROL CABLE WITH METALLIC SHIELD 0.6/1 (1.2) kV

PAGES 7/7



Control Cable 2 Cores



Control Cable 3 Cores



Control Cable 4 Cores



Control Cable 5 Cores



Control Cable 6 Cores



Control Cable 7 Cores



Control Cable 8 Cores



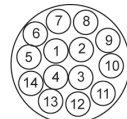
Control Cable 9 Cores



Control Cable 10 Cores



Control Cable 12 Cores



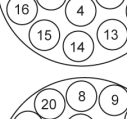
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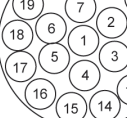
Control Cable 16 Cores



Control Cable 19 Cores



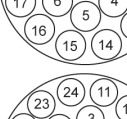
Control Cable 20 Cores



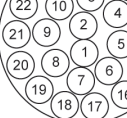
Control Cable 21 Cores



Control Cable 24 Cores



Control Cable 27 Cores



Control Cable 30 Cores

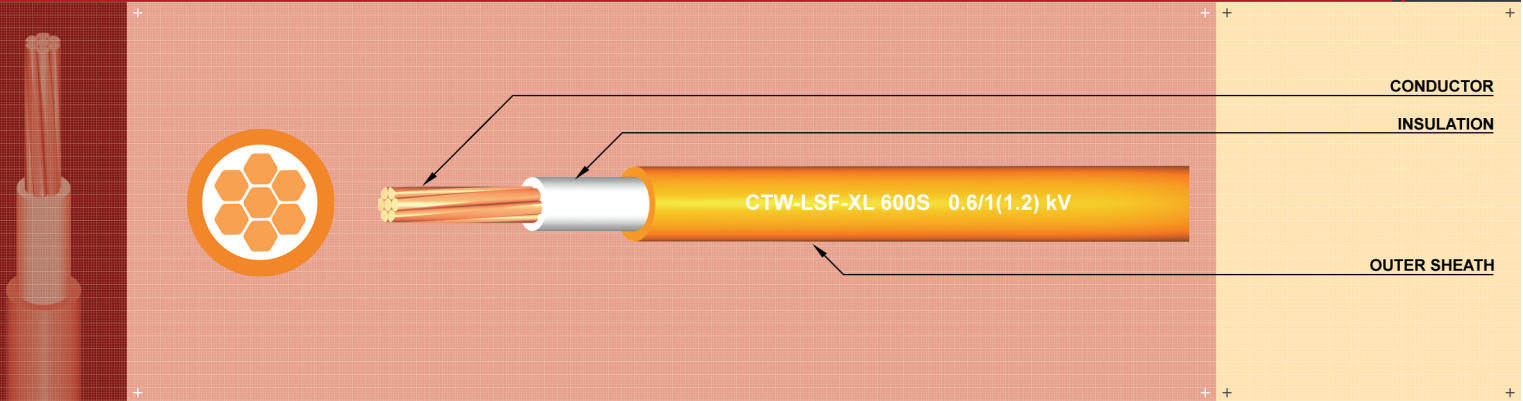


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-XL 600S**

SINGLE CORE LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV

PAGES 1/2



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE) : Natural (Translucent) Colour.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-XL 600S		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	M Ω - km	A	m/R
C81014501	1 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.4	7.0	60	12.1	2,400	27	500
C81014502	1 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.4	7.5	75	7.41	2,100	36	500
C81014004	1 x 4	4	7/0.85 : CR	2.55	0.7	1.4	8.0	95	4.61	1,800	48	500
C81014006	1 x 6	6	7/1.04 : CR	3.12	0.7	1.4	8.5	120	3.08	1,500	61	500
C81014010	1 x 10	10	7/1.35 : CR	4.05	0.7	1.4	9.5	160	1.83	1,200	82	500
C81018016	1 x 16	16	7 : CP	4.69	0.7	1.4	10.0	220	1.15	1,100	110	500
C81018025	1 x 25	25	7 : CP	5.90	0.9	1.4	12.0	320	0.727	1,100	145	500
C81018035	1 x 35	35	7 : CP	6.95	0.9	1.4	13.0	430	0.524	1,000	180	500
C81018050	1 x 50	50	19 : CP	8.33	1.0	1.4	14.5	580	0.387	900	220	500
C81018070	1 x 70	70	19 : CP	9.73	1.1	1.4	16.5	790	0.268	900	280	500
C81018095	1 x 95	95	19 : CP	11.45	1.1	1.5	18.5	1,040	0.193	800	345	500
C81018120	1 x 120	120	19 : CP	12.95	1.2	1.5	20.0	1,300	0.153	800	400	500
C81018150	1 x 150	150	37 : CP	14.27	1.4	1.6	22.0	1,610	0.124	800	460	500
C81018185	1 x 185	185	37 : CP	15.98	1.6	1.6	24.5	1,970	0.0991	800	530	500
C81018240	1 x 240	240	37 : CP	18.47	1.7	1.7	27.5	2,520	0.0754	700	630	500
C81018300	1 x 300	300	61 : CP	20.68	1.8	1.8	30.5	3,120	0.0601	700	725	500

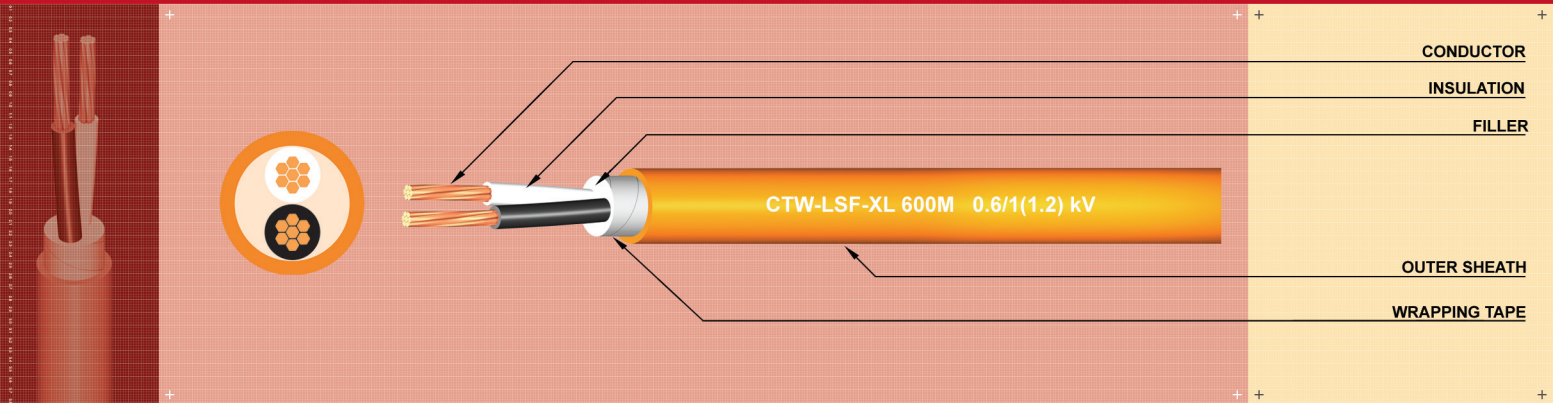
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-XL 600M**

TWO CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-XL 600M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	M Ω - km	A	m/R
C81024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	12.5	150	12.1	2,400	25	500
C81024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	13.5	190	7.41	2,100	34	500
C81024004	2 x 4	4	7/0.85 : CR	2.55	0.7	1.8	14.5	240	4.61	1,800	44	500
C81024006	2 x 6	6	7/1.04 : CR	3.12	0.7	1.8	15.5	300	3.08	1,500	57	500
C81024010	2 x 10	10	7/1.35 : CR	4.05	0.7	1.8	17.5	410	1.83	1,200	77	500
C81028016	2 x 16	16	7 : CP	4.69	0.7	1.8	19.0	540	1.15	1,100	100	500
C81028025	2 x 25	25	7 : CP	5.90	0.9	1.8	22.0	790	0.727	1,100	135	500
C81028035	2 x 35	35	7 : CP	6.95	0.9	1.8	24.0	1,020	0.524	1,000	165	500
C81028050	2 x 50	50	19 : CP	8.33	1.0	1.8	27.5	1,390	0.387	900	205	500
C81028070	2 x 70	70	19 : CP	9.73	1.1	1.8	31.0	1,850	0.268	900	255	500
C81028095	2 x 95	95	19 : CP	11.45	1.1	2.0	35.0	2,450	0.193	800	315	500
C81028120	2 x 120	120	19 : CP	12.95	1.2	2.1	38.5	3,049	0.153	800	365	500
C81028150	2 x 150	150	37 : CP	14.27	1.4	2.2	43.0	3,760	0.124	800	415	500
C81028185	2 x 185	185	37 : CP	15.98	1.6	2.3	47.0	4,610	0.0991	800	485	500
C81028240	2 x 240	240	37 : CP	18.47	1.7	2.5	53.0	5,920	0.0754	700	580	500
C81028300	2 x 300	300	61 : CP	20.68	1.8	2.7	58.0	7,330	0.0601	700	675	300
C81028400	2 x 400	400	61 : CP	23.39	2.0	2.9	64.5	9,570	0.047	700	790	300

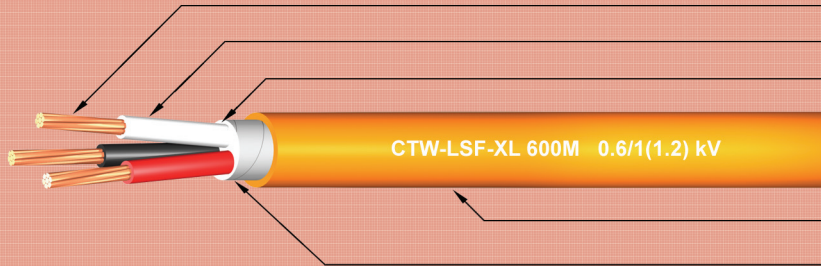
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-XL 600M**

THREE CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONDUCTOR

INSULATION

FILLER

OUTER SHEATH

WRAPPING TAPE

CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural, Red Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

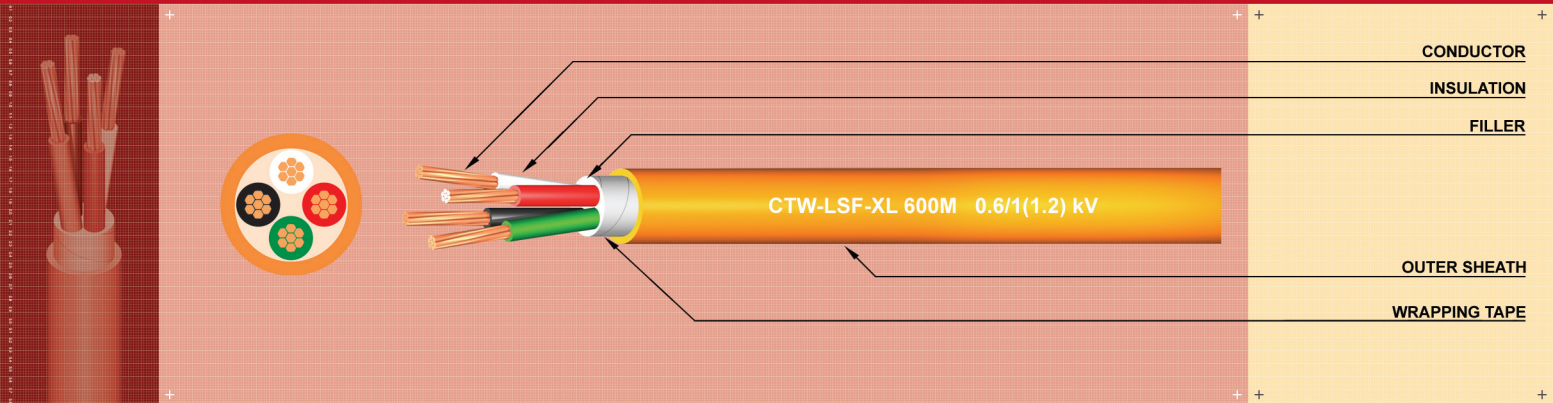
CTW-LSF-XL 600M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core $\times$ mm 2	Nominal cross-sectional area mm 2	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	M Ω - km	A	m/R
C81034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	13.0	180	12.1	2,400	21	500
C81034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	14.0	230	7.41	2,100	28	500
C81034004	3 x 4	4	7/0.85 : CR	2.55	0.7	1.8	15.5	290	4.61	1,800	37	500
C81034006	3 x 6	6	7/1.04 : CR	3.12	0.7	1.8	16.5	370	3.08	1,500	48	500
C81034010	3 x 10	10	7/1.35 : CR	4.05	0.7	1.8	18.5	520	1.83	1,200	64	500
C81038016	3 x 16	16	7 : CP	4.69	0.7	1.8	20.0	710	1.15	1,100	86	500
C81038025	3 x 25	25	7 : CP	5.90	0.9	1.8	23.5	1,040	0.727	1,100	115	500
C81038035	3 x 35	35	7 : CP	6.95	0.9	1.8	26.0	1,380	0.524	1,000	140	500
C81038050	3 x 50	50	19 : CP	8.33	1.0	1.8	29.5	1,880	0.387	900	170	500
C81038070	3 x 70	70	19 : CP	9.73	1.1	1.9	33.5	2,550	0.268	900	215	500
C81038095	3 x 95	95	19 : CP	11.45	1.1	2.0	37.5	3,360	0.193	800	260	500
C81038120	3 x 120	120	19 : CP	12.95	1.2	2.1	41.5	4,200	0.153	800	305	500
C81038150	3 x 150	150	37 : CP	14.27	1.4	2.3	46.0	5,220	0.124	800	350	500
C81038185	3 x 185	185	37 : CP	15.98	1.6	2.4	50.0	6,410	0.0991	800	405	500
C81038240	3 x 240	240	37 : CP	18.47	1.7	2.6	56.5	8,230	0.0754	700	490	300
C81038300	3 x 300	300	61 : CP	20.68	1.8	2.8	62.5	10,190	0.0601	700	565	300
C81038400	3 x 400	400	61 : CP	23.39	2.0	3.1	69.5	13,450	0.047	700	655	200



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-XL 600M**

FOUR CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural, Red, Green Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-XL 600M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	M Ω - km	A	m/R
C81044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	14.0	210	12.1	2,400	21	500
C81044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	15.0	270	7.41	2,100	28	500
C81044004	4 x 4	4	7/0.85 : CR	2.55	0.7	1.8	17.0	360	4.61	1,800	37	500
C81044006	4 x 6	6	7/1.04 : CR	3.12	0.7	1.8	18.0	460	3.08	1,500	48	500
C81044010	4 x 10	10	7/1.35 : CR	4.05	0.7	1.8	20.5	660	1.83	1,200	64	500
C81048016	4 x 16	16	7 : CP	4.69	0.7	1.8	22.0	910	1.15	1,100	86	500
C81048025	4 x 25	25	7 : CP	5.90	0.9	1.8	26.0	1,340	0.727	1,100	115	500
C81048035	4 x 35	35	7 : CP	6.95	0.9	1.8	28.5	1,780	0.524	1,000	140	500
C81048050	4 x 50	50	19 : CP	8.33	1.0	1.9	32.5	2,460	0.387	900	170	500
C81048070	4 x 70	70	19 : CP	9.73	1.1	2.0	37.0	3,330	0.268	900	215	500
C81048095	4 x 95	95	19 : CP	11.45	1.1	2.1	41.5	4,410	0.193	800	260	500
C81048120	4 x 120	120	19 : CP	12.95	1.2	2.3	46.0	5,530	0.153	800	305	500
C81048150	4 x 150	150	37 : CP	14.27	1.4	2.4	50.5	6,850	0.124	800	350	300
C81048185	4 x 185	185	37 : CP	15.98	1.6	2.6	56.0	8,440	0.0991	800	405	300
C81048240	4 x 240	240	37 : CP	18.47	1.7	2.8	63.0	10,830	0.0754	700	490	300
C81048300	4 x 300	300	61 : CP	20.68	1.8	3.0	69.5	13,450	0.0601	700	565	200
C81048400	4 x 400	400	61 : CP	23.39	2.0	3.3	77.5	17,710	0.047	700	655	200

C = Packing in coil
R = Packing in reel

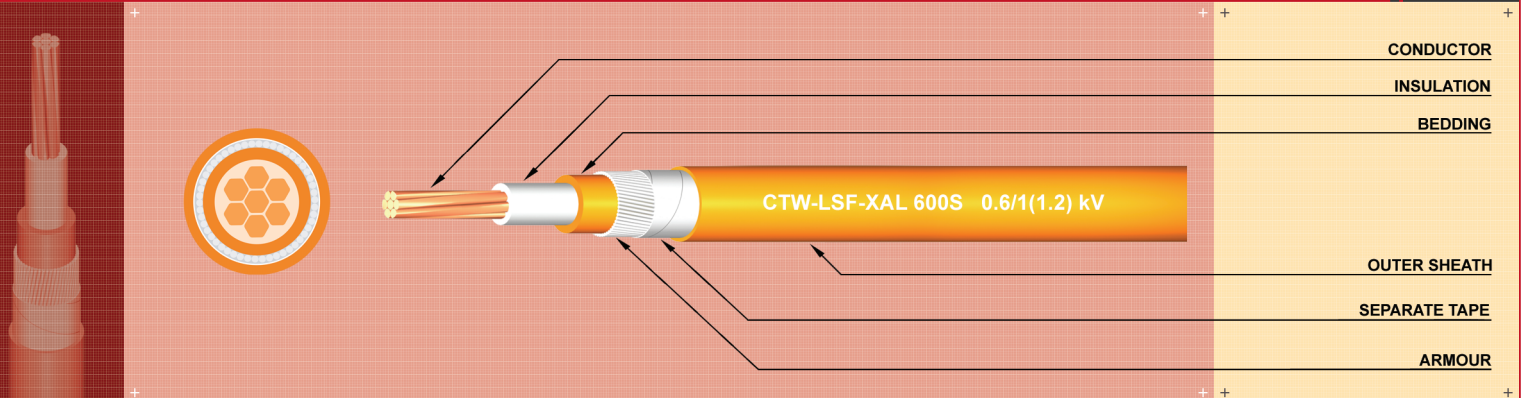


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-XAL 600S

SINGLE CORE LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV

PAGES 1/2



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE) : Natural (Translucent) Colour.
Bedding	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Armour	Aluminum wire for single core.
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

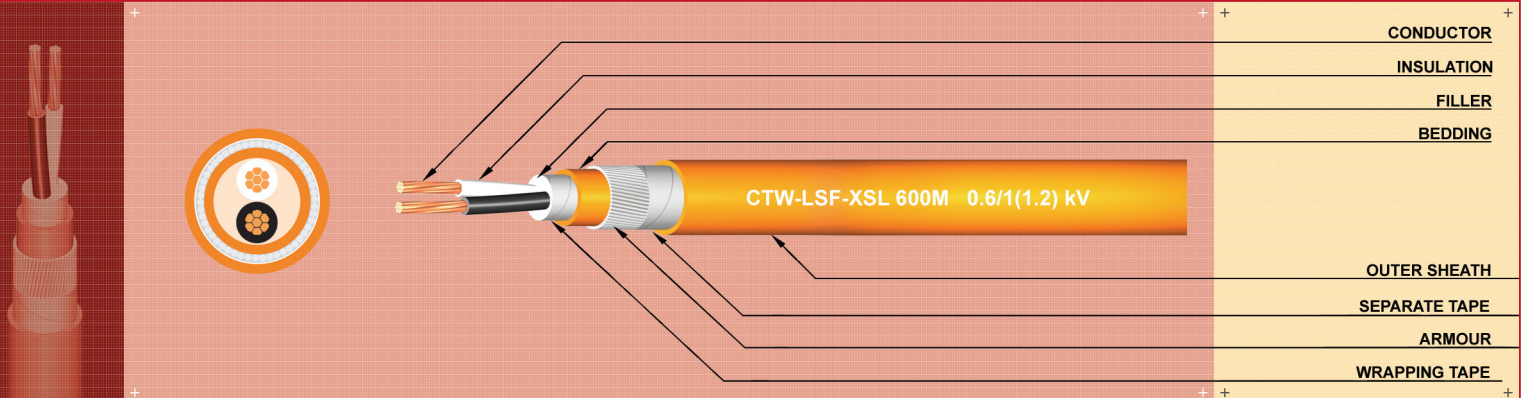
CTW-LSF-XAL 600S		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core $\times$ mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	mm	kg/km	Ω /km	M Ω -km	A	m/R
-	1 x 1.5	1.5	7/0.50 : CR	1.50	-	-	-	-	-	-	-	-	-	-
-	1 x 2.5	2.5	7/0.67 : CR	2.01	-	-	-	-	-	-	-	-	-	-
-	1 x 4	4	7/0.85 : CR	2.55	-	-	-	-	-	-	-	-	-	-
-	1 x 6	6	7/1.04 : CR	3.12	-	-	-	-	-	-	-	-	-	-
-	1 x 10	10	7/1.35 : CR	4.05	-	-	-	-	-	-	-	-	-	-
-	1 x 16	16	7 : CP	4.69	-	-	-	-	-	-	-	-	-	-
-	1 x 25	25	7 : CP	5.90	-	-	-	-	-	-	-	-	-	-
-	1 x 35	35	7 : CP	6.95	-	-	-	-	-	-	-	-	-	-
C82018050	1 x 50	50	19 : CP	8.33	1.0	1.0	1.25	1.8	20.0	810	0.387	900	210	500
C82018070	1 x 70	70	19 : CP	9.73	1.1	1.0	1.25	1.8	22.0	1,040	0.268	900	260	500
C82018095	1 x 95	95	19 : CP	11.45	1.1	1.0	1.6	1.8	24.5	1,360	0.193	800	325	500
C82018120	1 x 120	120	19 : CP	12.95	1.2	1.0	1.6	1.8	26.5	1,640	0.153	800	375	500
C82018150	1 x 150	150	37 : CP	14.27	1.4	1.0	1.6	1.8	28.5	1,980	0.124	800	425	500
C82018185	1 x 185	185	37 : CP	15.98	1.6	1.0	1.6	1.9	30.5	2,380	0.0991	800	485	500
C82018240	1 x 240	240	37 : CP	18.47	1.7	1.0	1.6	2.0	33.5	2,980	0.0754	700	565	500
C82018300	1 x 300	300	61 : CP	20.68	1.8	1.0	1.6	2.1	36.5	3,630	0.0601	700	635	500



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-XSL 600M

TWO CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

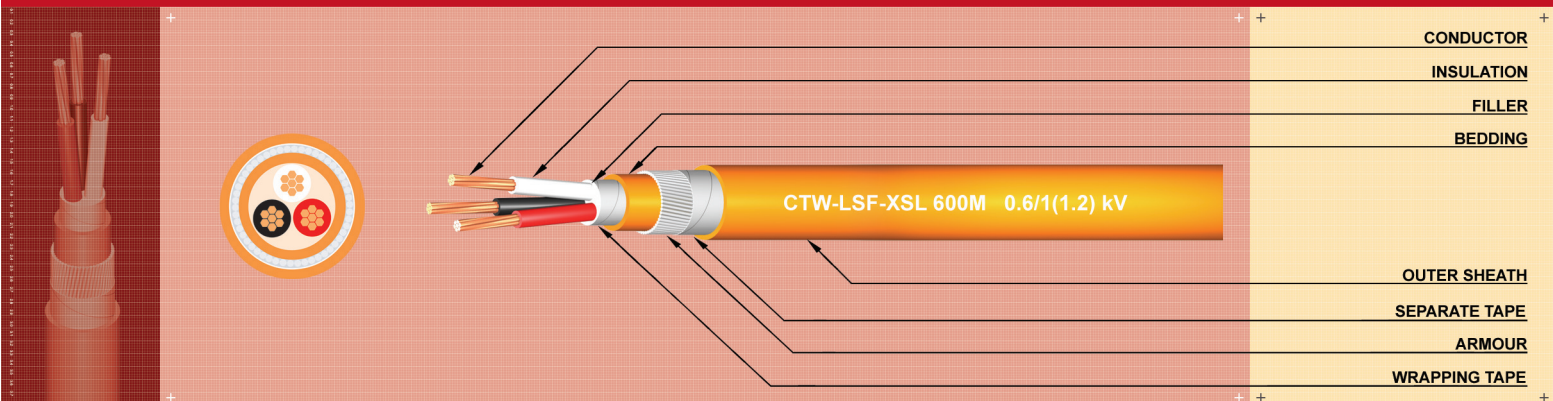
CTW-LSF-XSL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area	Number and diameter of wire	Diameter (Approx.)										
PRODUCT CODE	SIZE core x mm ²	mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	M Ω - km	A	m/R
C83024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	17.0	404	12.1	2,400	25	500
C83024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	0.9	1.8	18.0	460	7.41	2,100	35	500
C83024004	2 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	20.0	630	4.61	1,800	45	500
C83024006	2 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	21.0	720	3.08	1,500	55	500
C83024010	2 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	23.0	880	1.83	1,200	75	500
C83028016	2 x 16	16	7 : CP	4.69	0.7	1.0	1.25	1.8	24.0	1,030	1.15	1,100	105	500
C83028025	2 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	28.0	1,510	0.727	1,100	145	500
C83028035	2 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.8	30.0	1,810	0.524	1,000	175	500
C83028050	2 x 50	50	19 : CP	8.33	1.0	1.0	1.6	1.8	33.5	2,270	0.387	900	210	500
C83028070	2 x 70	70	19 : CP	9.73	1.1	1.0	1.6	2.0	37.0	2,870	0.268	900	260	500
C83028095	2 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.1	42.0	3,890	0.193	800	325	500
C83028120	2 x 120	120	19 : CP	12.95	1.2	1.2	2.0	2.2	45.5	4,620	0.153	800	375	500
C83028150	2 x 150	150	37 : CP	14.27	1.4	1.2	2.0	2.3	49.0	5,470	0.124	800	425	500
C83028185	2 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.5	55.0	7,020	0.0991	800	485	500
C83028240	2 x 240	240	37 : CP	18.47	1.7	1.4	2.5	2.7	61.0	8,610	0.0754	700	565	250
C83028300	2 x 300	300	61 : CP	20.68	1.8	1.6	2.5	2.8	66.5	10,280	0.0601	700	635	250
C83028400	2 x 400	400	61 : CP	23.39	2.0	1.6	2.5	3.1	73.5	12,840	0.047	700	725	250



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-XSL 600M

THREE CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural, Red Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.

AC Test Voltage : 3.5 kV

CTW-LSF-XSL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area	Number and diameter of wire	Diameter (Approx.)										
PRODUCT CODE	SIZE core x mm ²	mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	M $\Omega \cdot \text{km}$	A	m/R
C83034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	17.5	440	12.1	2,400	20	500
C83034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	0.9	1.8	19.0	510	7.41	2,100	30	500
C83034004	3 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	20.5	712	4.61	1,800	35	500
C83034006	3 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	22.0	824	3.08	1,500	50	500
C83034010	3 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	24.0	1,020	1.83	1,200	65	500
C83038016	3 x 16	16	7 : CP	4.69	0.7	1.0	1.25	1.8	25.0	1,240	1.15	1,100	90	500
C83038025	3 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	29.5	1,830	0.727	1,100	125	500
C83038035	3 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.8	31.5	2,230	0.524	1,000	150	500
C83038050	3 x 50	50	19 : CP	8.33	1.0	1.0	1.6	1.9	35.0	2,850	0.387	900	180	500
C83038070	3 x 70	70	19 : CP	9.73	1.1	1.2	2.0	2.0	40.0	3,970	0.268	900	230	500
C83038095	3 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.2	44.5	4,940	0.193	800	280	500
C83038120	3 x 120	120	19 : CP	12.95	1.2	1.2	2.0	2.3	48.0	5,940	0.153	800	320	500
C83038150	3 x 150	150	37 : CP	14.27	1.4	1.4	2.5	2.5	54.0	7,610	0.124	800	360	500
C83038185	3 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.6	58.5	9,050	0.0991	800	420	250
C83038240	3 x 240	240	37 : CP	18.47	1.7	1.6	2.5	2.8	65.5	11,230	0.0754	700	490	250
C83038300	3 x 300	300	61 : CP	20.68	1.8	1.6	2.5	3.0	71.0	13,500	0.0601	700	560	200
C83038400	3 x 400	400	61 : CP	23.39	2.0	1.6	2.5	3.2	78.0	17,030	0.047	700	650	200

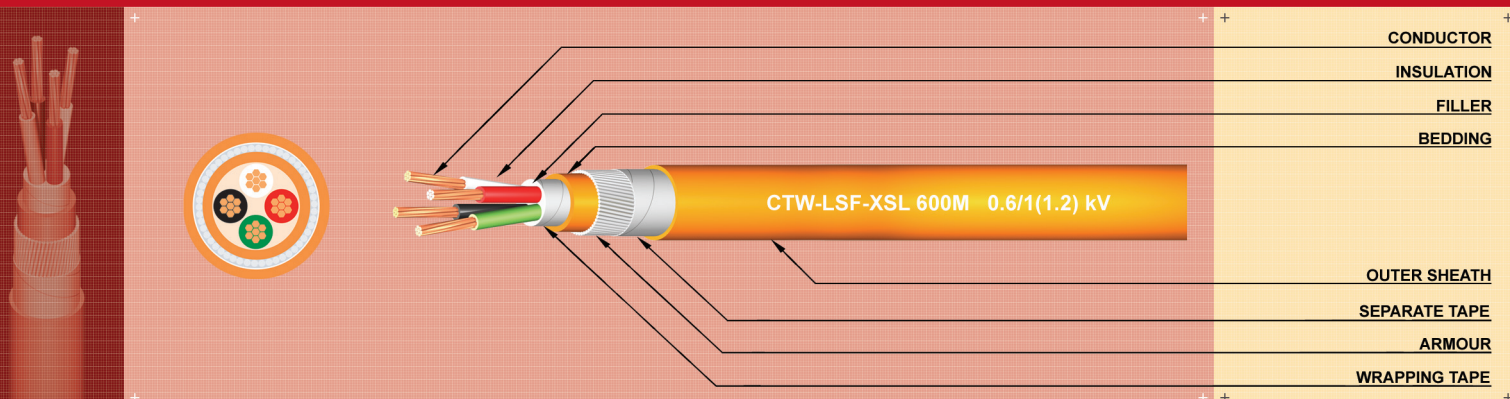
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-XSL 600M

FOUR CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE) : Black, Natural, Red, Green Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Flame propagation	IEC 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.

AC Test Voltage : 3.5 kV

CTW-LSF-XSL 600M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area mm^2	Number and diameter of wire No./mm	Diameter (Approx.) mm										
PRODUCT CODE	SIZE core mm^2													
C83044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	18.5	490	12.1	2,400	20	500
C83044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	1.25	1.8	20.5	680	7.41	2,100	30	500
C83044004	4 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	22.0	810	4.61	1,800	35	500
C83044006	4 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	23.5	940	3.08	1,500	50	500
C83044010	4 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	25.5	1,200	1.83	1,200	65	500
C83048016	4 x 16	16	7 : CP	4.69	0.7	1.0	1.6	1.8	27.5	1,620	1.15	1,100	90	500
C83048025	4 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	31.5	2,190	0.727	1,100	125	500
C83048035	4 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.9	34.0	2,720	0.524	1,000	150	500
C83048050	4 x 50	50	19 : CP	8.33	1.0	1.0	1.6	2.0	38.5	3,530	0.387	900	180	500
C83048070	4 x 70	70	19 : CP	9.73	1.1	1.2	2.0	2.2	44.0	4,880	0.268	900	230	500
C83048095	4 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.3	48.0	6,140	0.193	800	280	500
C83048120	4 x 120	120	19 : CP	12.95	1.2	1.4	2.5	2.5	54.0	7,940	0.153	800	320	500
C83048150	4 x 150	150	37 : CP	14.27	1.4	1.4	2.5	2.6	58.5	9,470	0.124	800	360	250
C83048185	4 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.8	64.0	11,310	0.0991	800	420	250
C83048240	4 x 240	240	37 : CP	18.47	1.7	1.6	2.5	3.0	71.5	14,140	0.0754	700	490	250
C83048300	4 x 300	300	61 : CP	20.68	1.8	1.6	2.5	3.2	78.0	17,020	0.0601	700	560	200
C83048400	4 x 400	400	61 : CP	23.39	2.0	1.8	3.15	3.5	88.0	22,680	0.047	700	650	200

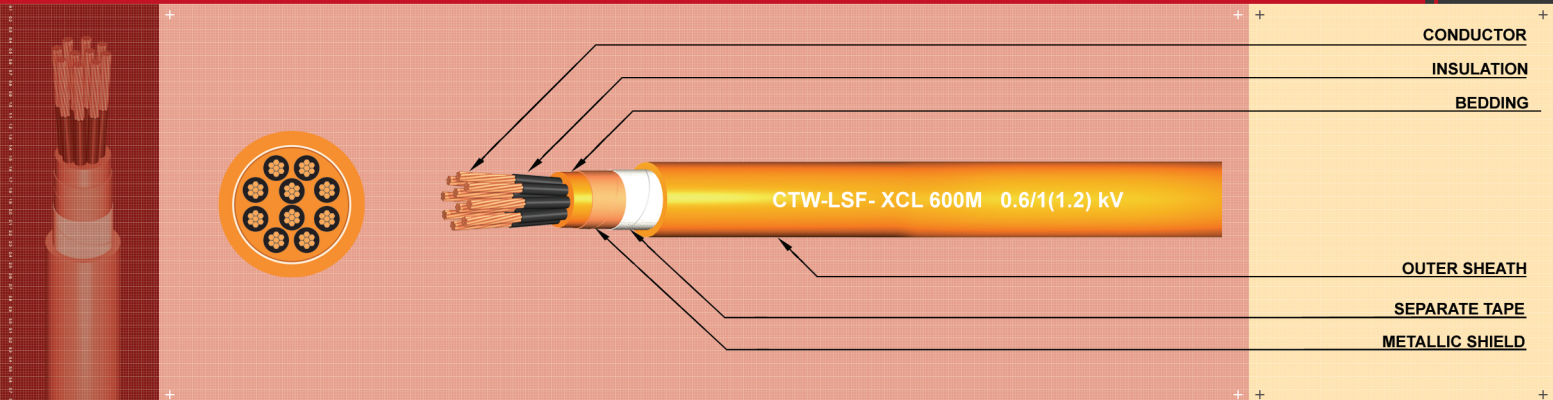


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-XCL 600M**

MULTI CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

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CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked polyethylene (XLPE) : Black Colour with marking number.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Inner Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour.
Metallic Shield	Annealed copper tape.
Separator Tape	Polyester and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : ST8) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Construction	IEC 60228, IEC 60502-1
Flame propagation	BS 60332-1 IEC 60332-3 Categories A, B, C
Acid gas emission	IEC 60754-2
Smoke emission	IEC 61034

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 90°C ,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-XCL 600M		Conductor			Thickness of insulation	Thickness of bedding sheath	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Standard packing
PRODUCT CODE	No. of Core	Nominal cross-sectional area mm^2	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	kg/km	Ω/km	$\text{M}\Omega \cdot \text{km}$	m/R
C96024501	2	1.5	7/0.50	1.50	0.7	1.0	1.8	18	380	12.10	2,500	500
C96024502		2.5	7/0.67	2.01	0.7	1.0	1.8	19	440	7.41	2,100	500
C96024004		4	7/0.85	2.55	0.7	1.0	1.8	20	510	4.61	1,800	500
C96024006		6	7/1.04	3.12	0.7	1.0	1.8	21	590	3.08	1,500	500
C96024010		10	7/1.35	4.05	0.7	1.0	1.8	23	740	1.83	1,200	500
C96034501	3	1.5	7/0.50	1.50	0.7	1.0	1.8	18	410	12.10	2,500	500
C96034502		2.5	7/0.67	2.01	0.7	1.0	1.8	19	480	7.41	2,100	500
C96034004		4	7/0.85	2.55	0.7	1.0	1.8	21	570	4.61	1,800	500
C96034006		6	7/1.04	3.12	0.7	1.0	1.8	22	670	3.08	1,500	500
C96034010		10	7/1.35	4.05	0.7	1.0	1.8	24	860	1.83	1,200	500
C96044501	4	1.5	7/0.50	1.50	0.7	1.0	1.8	19	460	12.10	2,500	500
C96044502		2.5	7/0.67	2.01	0.7	1.0	1.8	21	540	7.41	2,100	500
C96044004		4	7/0.85	2.55	0.7	1.0	1.8	22	650	4.61	1,800	500
C96044006		6	7/1.04	3.12	0.7	1.0	1.8	23	780	3.08	1,500	500
C96044010		10	7/1.35	4.05	0.7	1.0	1.8	26	1,020	1.83	1,200	500

C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-XCL 600M**

MULTI CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

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CTW-LSF-XCL 600M		Conductor			Thickness of insulation mm	Thickness of bedding sheath mm	Thickness of outer sheath mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Maximum conductor resistance at 20°C Ω/km	Minimum insulation resistance at 20°C MΩ - km	Standard packing m/R
		Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm								
PRODUCT CODE	No. of Core											
C96054501	5	1.5	7/0.50	1.50	0.7	1.0	1.8	20	510	12.10	2,500	500
C96054502		2.5	7/0.67	2.01	0.7	1.0	1.8	22	620	7.41	2,100	500
C96054004		4	7/0.85	2.55	0.7	1.0	1.8	23	750	4.61	1,800	500
C96054006		6	7/1.04	3.12	0.7	1.0	1.8	25	910	3.08	1,500	500
C96054010		10	7/1.35	4.05	0.7	1.0	1.8	28	1,200	1.83	1,200	500
C96064501	6	1.5	7/0.50	1.50	0.7	1.0	1.8	22	570	12.10	2,500	500
C96064502		2.5	7/0.67	2.01	0.7	1.0	1.8	23	700	7.41	2,100	500
C96064004		4	7/0.85	2.55	0.7	1.0	1.8	25	850	4.61	1,800	500
C96064006		6	7/1.04	3.12	0.7	1.0	1.8	27	1,040	3.08	1,500	500
C96064010		10	7/1.35	4.05	0.7	1.0	1.8	30	1,390	1.83	1,200	500
C96074501	7	1.5	7/0.50	1.50	0.7	1.0	1.8	22	580	12.10	2,500	500
C96074502		2.5	7/0.67	2.01	0.7	1.0	1.8	23	710	7.41	2,100	500
C96074004		4	7/0.85	2.55	0.7	1.0	1.8	25	870	4.61	1,800	500
C96074006		6	7/1.04	3.12	0.7	1.0	1.8	27	1,070	3.08	1,500	500
C96074010		10	7/1.35	4.05	0.7	1.0	1.8	30	1,460	1.83	1,200	500
C96084501	8	1.5	7/0.50	1.50	0.7	1.0	1.8	23	640	12.10	2,500	500
C96084502		2.5	7/0.67	2.01	0.7	1.0	1.8	25	790	7.41	2,100	500
C96084004		4	7/0.85	2.55	0.7	1.0	1.8	26	980	4.61	1,800	500
C96084006		6	7/1.04	3.12	0.7	1.0	1.8	28	1,210	3.08	1,500	500
C96084010		10	7/1.35	4.05	0.7	1.0	1.9	32	1,680	1.83	1,200	500
C96094501	9	1.5	7/0.50	1.50	0.7	1.0	1.8	24	700	12.10	2,500	500
C96094502		2.5	7/0.67	2.01	0.7	1.0	1.8	26	880	7.41	2,100	500
C96094004		4	7/0.85	2.55	0.7	1.0	1.8	28	1,100	4.61	1,800	500
C96094006		6	7/1.04	3.12	0.7	1.0	1.8	30	1,360	3.08	1,500	500
C96094010		10	7/1.35	4.05	0.7	1.0	1.9	34	1,880	1.83	1,200	500
C96104501	10	1.5	7/0.50	1.50	0.7	1.0	1.8	25	790	12.10	2,500	500
C96104502		2.5	7/0.67	2.01	0.7	1.0	1.8	27	990	7.41	2,100	500
C96104004		4	7/0.85	2.55	0.7	1.0	1.8	30	1,240	4.61	1,800	500
C96104006		6	7/1.04	3.12	0.7	1.0	1.9	32	1,560	3.08	1,500	500
C96104010		10	7/1.35	4.05	0.7	1.0	2.0	36	2,180	1.83	1,200	500



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-XCL 600M**

MULTI CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

PAGE 3/7

CTW-LSF-XCL 600M		Conductor			Thickness of insulation	Thickness of bedding sheath	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Standard packing
PRODUCT CODE	No. of Core	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	kg/km	Ω /km	MΩ - km	m/R
C96114501	11	1.5	7/0.50	1.50	0.7	1.0	1.8	25	800	12.10	2,500	500
C96114502		2.5	7/0.67	2.01	0.7	1.0	1.8	27	1,000	7.41	2,100	500
C96114004		4	7/0.85	2.55	0.7	1.0	1.8	30	1,270	4.61	1,800	500
C96114006		6	7/1.04	3.12	0.7	1.0	1.9	32	1,600	3.08	1,500	500
C96114010		10	7/1.35	4.05	0.7	1.0	2.0	37	2,240	1.83	1,200	500
C96124501	12	1.5	7/0.50	1.50	0.7	1.0	1.8	26	840	12.10	2,500	500
C96124502		2.5	7/0.67	2.01	0.7	1.0	1.8	28	1,060	7.41	2,100	500
C96124004		4	7/0.85	2.55	0.7	1.0	1.8	30	1,340	4.61	1,800	500
C96124006		6	7/1.04	3.12	0.7	1.0	1.9	55	1,700	3.08	1,500	500
C96124010		10	7/1.35	4.05	0.7	1.2	2.1	38	2,480	1.83	1,200	500
C96134501	13	1.5	7/0.50	1.50	0.7	1.0	1.8	26	860	12.10	2,500	500
C96134502		2.5	7/0.67	2.01	0.7	1.0	1.8	28	1,100	7.41	2,100	500
C96134004		4	7/0.85	2.55	0.7	1.0	1.8	31	1,390	4.61	1,800	500
C96134006		6	7/1.04	3.12	0.7	1.0	1.9	34	1,770	3.08	1,500	500
C96134010		10	7/1.35	4.05	0.7	1.2	2.1	39	2,590	1.83	1,200	500
C96144501	14	1.5	7/0.50	1.50	0.7	1.0	1.8	27	910	12.10	2,500	500
C96144502		2.5	7/0.67	2.01	0.7	1.0	1.8	29	1,160	7.41	2,100	500
C96144004		4	7/0.85	2.55	0.7	1.0	1.9	32	1,490	4.61	1,800	500
C96144006		6	7/1.04	3.12	0.7	1.0	2.0	35	1,910	3.08	1,500	500
C96144010		10	7/1.35	4.05	0.7	1.2	2.1	40	2,760	1.83	1,200	500
C96154501	15	1.5	7/0.50	1.50	0.7	1.0	1.8	28	940	12.10	2,500	500
C96154502		2.5	7/0.67	2.01	0.7	1.0	1.8	30	1,210	7.41	2,100	500
C96154004		4	7/0.85	2.55	0.7	1.0	1.9	33	1,560	4.61	1,800	500
C96154006		6	7/1.04	3.12	0.7	1.0	2.0	36	2,010	3.08	1,500	500
C96154010		10	7/1.35	4.05	0.7	1.2	2.1	42	2,900	1.83	1,200	500
C96164501	16	1.5	7/0.50	1.50	0.7	1.0	1.8	28	990	12.10	2,500	500
C96164502		2.5	7/0.67	2.01	0.7	1.0	1.8	30	1,270	7.41	2,100	500
C96164004		4	7/0.85	2.55	0.7	1.0	1.9	33	1,640	4.61	1,800	500
C96164006		6	7/1.04	3.12	0.7	1.0	2.0	36	2,110	3.08	1,500	500
C96164010		10	7/1.35	4.05	0.7	1.2	2.2	42	3,080	1.83	1,200	500

C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-XCL 600M**

MULTI CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

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CTW-LSF-XCL 600M		Conductor			Thickness of insulation	Thickness of bedding sheath	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Standard packing
PRODUCT CODE	No. of Core	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ·km	m/R
C96174501	17	1.5	7/0.50	1.50	0.7	1.0	1.8	28	1,030	12.10	2,500	500
C96174502		2.5	7/0.67	2.01	0.7	1.0	1.8	31	1,330	7.41	2,100	500
C96174004		4	7/0.85	2.55	0.7	1.0	1.9	34	1,730	4.61	1,800	500
C96174006		6	7/1.04	3.12	0.7	1.2	2.1	38	2,300	3.08	1,500	500
C96174010		10	7/1.35	4.05	0.7	1.2	2.2	43	3,250	1.83	1,200	500
C96184501	18	1.5	7/0.50	1.50	0.7	1.0	1.8	29	1,070	12.10	2,500	500
C96184502		2.5	7/0.67	2.01	0.7	1.0	1.9	32	1,400	7.41	2,100	500
C96184004		4	7/0.85	2.55	0.7	1.0	2.0	35	1,830	4.61	1,800	500
C96184006		6	7/1.04	3.12	0.7	1.2	2.1	39	2,420	3.08	1,500	500
C96184010		10	7/1.35	4.05	0.7	1.2	2.2	44	3,400	1.83	1,200	500
C96194501	19	1.5	7/0.50	1.50	0.7	1.0	1.8	29	1,080	12.10	2,500	500
C96194502		2.5	7/0.67	2.01	0.7	1.0	1.9	32	1,420	7.41	2,100	500
C96194004		4	7/0.85	2.55	0.7	1.0	2.0	35	1,860	4.61	1,800	500
C96194006		6	7/1.04	3.12	0.7	1.2	2.1	39	2,450	3.08	1,500	500
C96194010		10	7/1.35	4.05	0.7	1.2	2.2	44	3,470	1.83	1,200	500
C96204501	20	1.5	7/0.50	1.50	0.7	1.0	1.8	30	1,130	12.10	2,500	500
C96204502		2.5	7/0.67	2.01	0.7	1.0	1.9	32	1,480	7.41	2,100	500
C96204004		4	7/0.85	2.55	0.7	1.0	2.0	36	1,950	4.61	1,800	500
C96204006		6	7/1.04	3.12	0.7	1.2	2.1	40	2,570	3.08	1,500	500
C96204010		10	7/1.35	4.05	0.7	1.2	2.3	46	3,690	1.83	1,200	500
C96214501	21	1.5	7/0.50	1.50	0.7	1.0	1.8	30	1,160	12.10	2,500	500
C96214502		2.5	7/0.67	2.01	0.7	1.0	1.9	33	1,530	7.41	2,100	500
C96214004		4	7/0.85	2.55	0.7	1.0	2.0	37	2,020	4.61	1,800	500
C96214006		6	7/1.04	3.12	0.7	1.2	2.1	41	2,670	3.08	1,500	500
C96214010		10	7/1.35	4.05	0.7	1.2	2.3	47	3,840	1.83	1,200	500
C96224501	22	1.5	7/0.50	1.50	0.7	1.0	1.8	31	1,220	12.10	2,500	500
C96224502		2.5	7/0.67	2.01	0.7	1.0	1.9	34	1,610	7.41	2,100	500
C96224004		4	7/0.85	2.55	0.7	1.2	2.1	39	2,210	4.61	1,800	500
C96224006		6	7/1.04	3.12	0.7	1.2	2.2	42	2,820	3.08	1,500	500
C96224010		10	7/1.35	4.05	0.7	1.2	2.3	48	4,030	1.83	1,200	500



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-XCL 600M**

MULTI CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES WITH METALLIC SHIELD TAPE 0.6/1(1.2) kV

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CTW-LSF-XCL 600M		Conductor			Thickness of insulation	Thickness of bedding sheath	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Standard packing
PRODUCT CODE	No. of Core	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	kg/km	Ω /km	MΩ - km	m/R
C96234501	23	1.5	7/0.50	1.50	0.7	1.0	1.9	32	1,270	12.10	2,500	500
C96234502		2.5	7/0.67	2.01	0.7	1.0	2.0	35	1,700	7.41	2,100	500
C96234004		4	7/0.85	2.55	0.7	1.2	2.1	39	2,280	4.61	1,800	500
C96234006		6	7/1.04	3.12	0.7	1.2	2.2	43	2,920	3.08	1,500	500
C96234010		10	7/1.35	4.05	0.7	1.2	2.4	49	4,200	1.83	1,200	500
C96244501	24	1.5	7/0.50	1.50	0.7	1.0	1.9	33	1,380	12.10	2,500	500
C96244502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,840	7.41	2,100	500
C96244004		4	7/0.85	2.55	0.7	1.2	2.1	47	2,470	4.61	1,800	500
C96244006		6	7/1.04	3.12	0.7	1.2	2.3	45	3,200	3.08	1,500	500
C96244010		10	7/1.35	4.05	0.7	1.4	2.5	52	4,660	1.83	1,200	500
C96254501	25	1.5	7/0.50	1.50	0.7	1.0	1.9	33	1,390	12.10	2,500	500
C96254502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,860	7.41	2,100	500
C96254004		4	7/0.85	2.55	0.7	1.2	2.1	41	2,500	4.61	1,800	500
C96254006		6	7/1.04	3.12	0.7	1.2	2.3	45	3,240	3.08	1,500	500
C96254010		10	7/1.35	4.05	0.7	1.4	2.5	52	4,730	1.83	1,200	500
C96264501	26	1.5	7/0.50	1.50	0.7	1.0	1.9	33	1,400	12.10	2,500	500
C96264502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,870	7.41	2,100	500
C96264004		4	7/0.85	2.55	0.7	1.2	2.1	41	2,520	4.61	1,800	500
C96264006		6	7/1.04	3.12	0.7	1.2	2.3	45	3,280	3.08	1,500	500
C96264010		10	7/1.35	4.05	0.7	1.4	2.5	52	4,790	1.83	1,200	500
C96274501	27	1.5	7/0.50	1.50	0.7	1.0	1.9	34	1,430	12.10	2,500	500
C96274502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,930	7.41	2,100	500
C96274004		4	7/0.85	2.55	0.7	1.2	2.2	42	2,620	4.61	1,800	500
C96274006		6	7/1.04	3.12	0.7	1.2	2.3	45	3,390	3.08	1,500	500
C96274010		10	7/1.35	4.05	0.7	1.4	2.5	52	4,960	1.83	1,200	500
C96284501	28	1.5	7/0.50	1.50	0.7	1.0	1.9	34	1,460	12.10	2,500	500
C96284502		2.5	7/0.67	2.01	0.7	1.0	2.0	37	1,950	7.41	2,100	500
C96284004		4	7/0.85	2.55	0.7	1.2	2.2	42	2,660	4.61	1,800	500
C96284006		6	7/1.04	3.12	0.7	1.2	2.3	46	3,440	3.08	1,500	500
C96284010		10	7/1.35	4.05	0.7	1.4	2.5	53	5,040	1.83	1,200	500

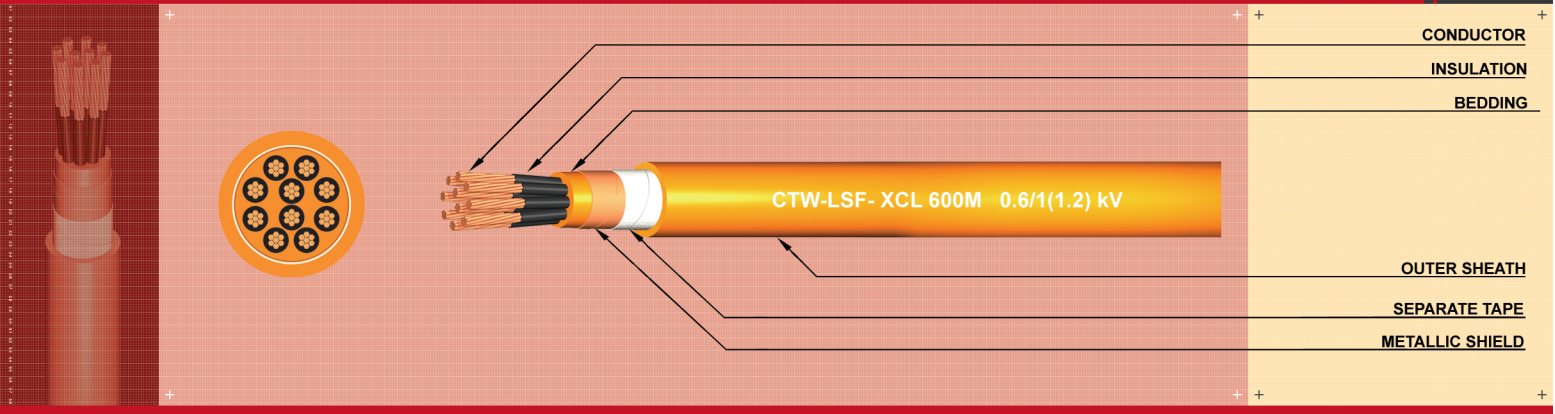
C = Packing in coil
R = Packing in reel



CONTROL CABLE CORE ASSEMBLY

FLAME RETARDANT CONTROL CABLE WITH METALLIC SHIELD 0.6/1 (1.2) kV

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Control Cable 2 Cores



Control Cable 3 Cores



Control Cable 4 Cores



Control Cable 5 Cores



Control Cable 6 Cores



Control Cable 7 Cores



Control Cable 8 Cores



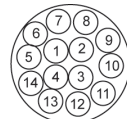
Control Cable 9 Cores



Control Cable 10 Cores



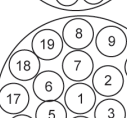
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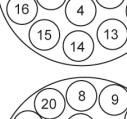
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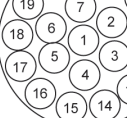
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Control Cable 19 Cores



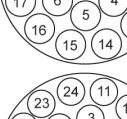
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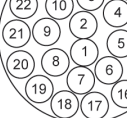
Control Cable 21 Cores



Control Cable 24 Cores



Control Cable 27 Cores



Control Cable 30 Cores

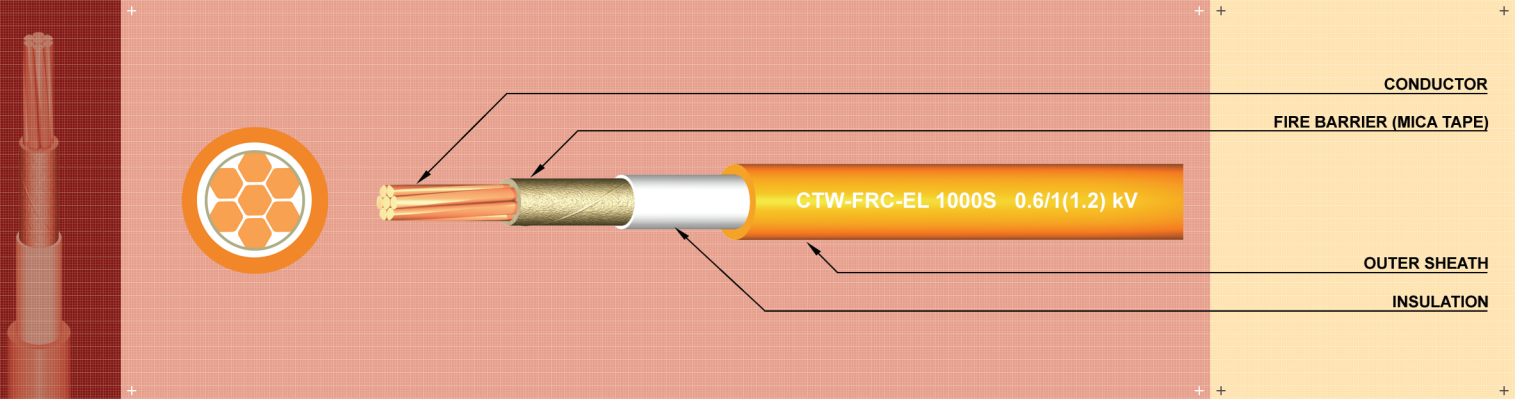


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-FRC-EL 1000S

SINGLE CORE LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV

PAGES 1/2



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Natural (Translucent) Colour.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3013, AS/NZS 3198
Circuit integrity	AS/NZS 1660.5.5 Categories C, W, Z
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of fire major hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-EL 1000S		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C61014501	1 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.4	7.0	70	12.1	8.41	27	500
C61014502	1 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.4	7.5	90	7.41	7.27	36	500
C61014004	1 x 4	4	7/0.85 : CR	2.55	0.7	1.4	8.0	110	4.61	6.36	48	500
C61014006	1 x 6	6	7/1.04 : CR	3.12	0.7	1.4	8.5	130	3.08	5.62	61	500
C61014010	1 x 10	10	7/1.35 : CR	4.05	0.7	1.4	9.5	180	1.83	4.72	82	500
C61018016	1 x 16	16	7 : CP	4.69	0.7	1.4	10.0	250	1.15	4.25	110	500
C61018025	1 x 25	25	7 : CP	5.90	0.9	1.4	12.0	360	0.727	4.37	145	500
C61018035	1 x 35	35	7 : CP	6.95	0.9	1.4	13.0	460	0.524	3.85	180	500
C61018050	1 x 50	50	19 : CP	8.33	1.0	1.4	14.5	630	0.387	3.64	220	500
C61018070	1 x 70	70	19 : CP	9.73	1.1	1.4	16.5	840	0.268	3.47	280	500
C61018095	1 x 95	95	19 : CP	11.45	1.1	1.5	18.5	1,100	0.193	3.03	345	500
C61018120	1 x 120	120	19 : CP	12.95	1.2	1.5	20.0	1,360	0.153	2.94	400	500
C61018150	1 x 150	150	37 : CP	14.27	1.4	1.6	22.0	1,690	0.124	3.08	460	500
C61018185	1 x 185	185	37 : CP	15.98	1.6	1.6	24.5	2,060	0.0991	3.14	530	500
C61018240	1 x 240	240	37 : CP	18.47	1.7	1.7	27.5	2,630	0.0754	2.92	630	500
C61018300	1 x 300	300	61 : CP	20.68	1.8	1.8	30.5	3,250	0.0601	2.78	725	500

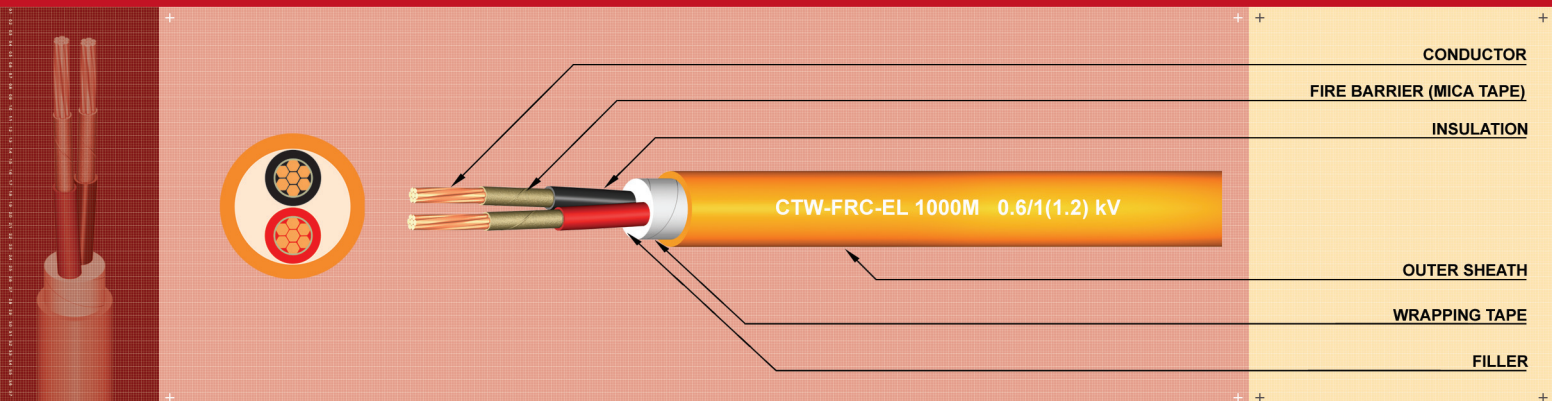
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-FRC-EL 1000M

TWO CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3013, AS/NZS 3198
Circuit integrity	AS/NZS 1660.5.5 Categories C, W, Z
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of fire major hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-EL 1000M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C61024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	12.5	180	12.1	8.41	25	500
C61024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	13.5	220	7.41	7.27	34	500
C61024004	2 x 4	4	7/0.85 : CR	2.55	0.7	1.8	14.5	280	4.61	6.36	44	500
C61024006	2 x 6	6	7/1.04 : CR	3.12	0.7	1.8	15.5	340	3.08	5.62	57	500
C61024010	2 x 10	10	7/1.35 : CR	4.05	0.7	1.8	17.5	460	1.83	4.72	77	500
C61028016	2 x 16	16	7 : CP	4.69	0.7	1.8	19.0	600	1.15	4.25	100	500
C61028025	2 x 25	25	7 : CP	5.90	0.9	1.8	22.0	860	0.727	4.37	135	500
C61028035	2 x 35	35	7 : CP	6.95	0.9	1.8	24.0	1,100	0.524	3.85	165	500
C61028050	2 x 50	50	19 : CP	8.33	1.0	1.8	27.5	1,480	0.387	3.64	205	500
C61028070	2 x 70	70	19 : CP	9.73	1.1	1.8	31.0	1,960	0.268	3.47	255	500
C61028095	2 x 95	95	19 : CP	11.45	1.1	2.0	35.0	2,570	0.193	3.03	315	500
C61028120	2 x 120	120	19 : CP	12.95	1.2	2.1	38.5	3,200	0.153	2.94	365	500
C61028150	2 x 150	150	37 : CP	14.27	1.4	2.2	43.0	3,930	0.124	3.08	415	500
C61028185	2 x 185	185	37 : CP	15.98	1.6	2.3	47.0	4,820	0.0991	3.14	485	500
C61028240	2 x 240	240	37 : CP	18.47	1.7	2.5	53.0	6,170	0.0754	2.92	580	500
C61028300	2 x 300	300	61 : CP	20.68	1.8	2.7	58.0	7,600	0.0601	2.78	675	300
C61028400	2 x 400	400	61 : CP	23.39	2.0	2.9	64.5	9,910	0.047	2.73	790	300

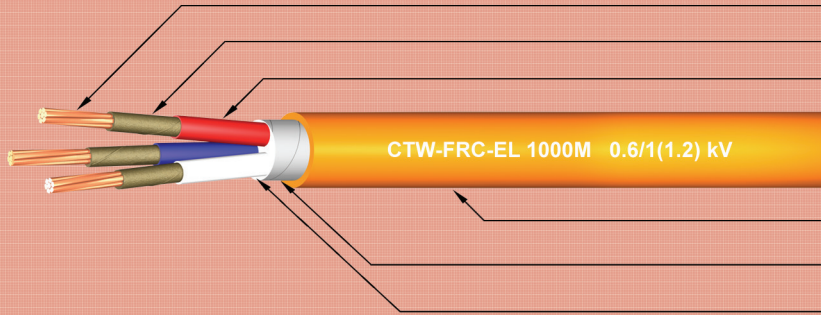
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-FRC-EL 1000M

THREE CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONDUCTOR

FIRE BARRIER (MICA TAPE)

INSULATION

OUTER SHEATH

WRAPPING TAPE

FILLER

CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, White, Blue Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3013, AS/NZS 3198
Circuit integrity	AS/NZS 1660.5.5 Categories C, W, Z
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of fire major hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

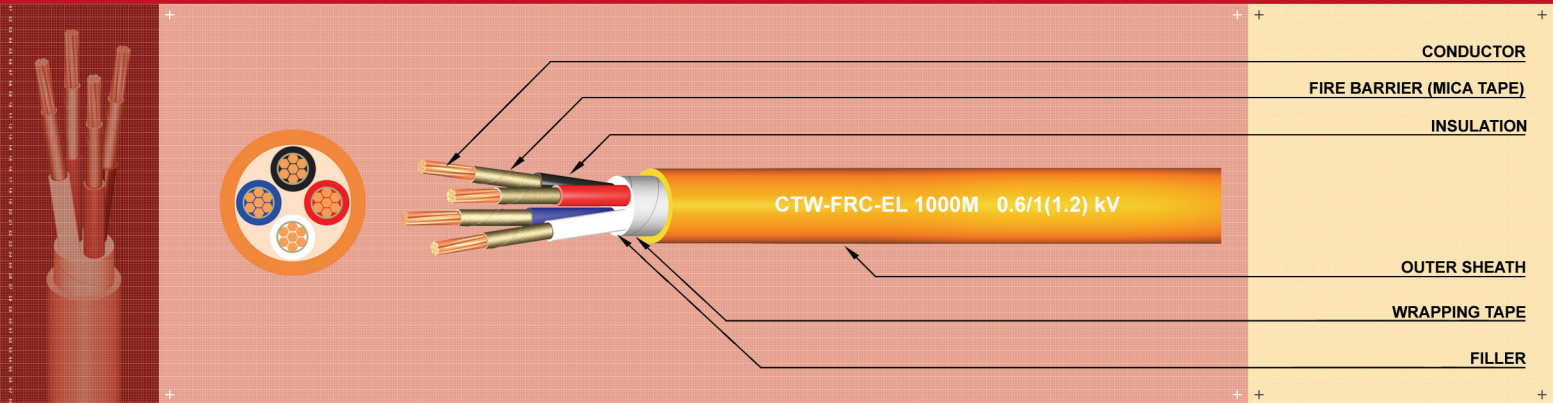
CTW-FRC-EL 1000M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C61034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	13.0	220	12.1	8.41	21	500
C61034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	14.0	270	7.41	7.27	28	500
C61034004	3 x 4	4	7/0.85 : CR	2.55	0.7	1.8	15.5	340	4.61	6.36	37	500
C61034006	3 x 6	6	7/1.04 : CR	3.12	0.7	1.8	16.5	420	3.08	5.62	48	500
C61034010	3 x 10	10	7/1.35 : CR	4.05	0.7	1.8	18.5	590	1.83	4.72	64	500
C61038016	3 x 16	16	7 : CP	4.69	0.7	1.8	20.0	780	1.15	4.25	86	500
C61038025	3 x 25	25	7 : CP	5.90	0.9	1.8	23.5	1,140	0.727	4.37	115	500
C61038035	3 x 35	35	7 : CP	6.95	0.9	1.8	26.0	1,480	0.524	3.85	140	500
C61038050	3 x 50	50	19 : CP	8.33	1.0	1.8	29.5	2,010	0.387	3.64	170	500
C61038070	3 x 70	70	19 : CP	9.73	1.1	1.9	33.5	2,710	0.268	3.47	215	500
C61038095	3 x 95	95	19 : CP	11.45	1.1	2.0	37.5	3,540	0.193	3.03	260	500
C61038120	3 x 120	120	19 : CP	12.95	1.2	2.1	41.5	4,400	0.153	2.94	305	500
C61038150	3 x 150	150	37 : CP	14.27	1.4	2.3	46.0	5,470	0.124	3.08	350	500
C61038185	3 x 185	185	37 : CP	15.98	1.6	2.4	50.0	6,700	0.0991	3.14	405	500
C61038240	3 x 240	240	37 : CP	18.47	1.7	2.6	56.5	8,570	0.0754	2.92	490	300
C61038300	3 x 300	300	61 : CP	20.68	1.8	2.8	62.5	10,590	0.0601	2.78	565	300
C61038400	3 x 400	400	61 : CP	23.39	2.0	3.1	69.5	13,930	0.047	2.73	655	200



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-FRC-EL 1000M**

FOUR CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, White, Blue, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3013, AS/NZS 3198
Circuit integrity	AS/NZS 1660.5.5 Categories C, W, Z
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of fire major hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-EL 1000M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C61044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	14.0	260	12.1	8.41	21	500
C61044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	15.0	330	7.41	7.27	28	500
C61044004	4 x 4	4	7/0.85 : CR	2.55	0.7	1.8	17.0	420	4.61	6.36	37	500
C61044006	4 x 6	6	7/1.04 : CR	3.12	0.7	1.8	18.0	530	3.08	5.62	48	500
C61044010	4 x 10	10	7/1.35 : CR	4.05	0.7	1.8	20.5	740	1.83	4.72	64	500
C61048016	4 x 16	16	7 : CP	4.69	0.7	1.8	22.0	1,000	1.15	4.25	86	500
C61048025	4 x 25	25	7 : CP	5.90	0.9	1.8	26.0	1,470	0.727	4.37	115	500
C61048035	4 x 35	35	7 : CP	6.95	0.9	1.8	28.5	1,920	0.524	3.85	140	500
C61048050	4 x 50	50	19 : CP	8.33	1.0	1.9	32.5	2,630	0.387	3.64	170	500
C61048070	4 x 70	70	19 : CP	9.73	1.1	2.0	37.0	3,540	0.268	3.47	215	500
C61048095	4 x 95	95	19 : CP	11.45	1.1	2.1	41.5	4,640	0.193	3.03	260	500
C61048120	4 x 120	120	19 : CP	12.95	1.2	2.3	46.0	5,800	0.153	2.94	305	500
C61048150	4 x 150	150	37 : CP	14.27	1.4	2.4	50.5	7,170	0.124	3.08	350	300
C61048185	4 x 185	185	37 : CP	15.98	1.6	2.6	56.0	8,820	0.0991	3.14	405	300
C61048240	4 x 240	240	37 : CP	18.47	1.7	2.8	63.0	11,290	0.0754	2.92	490	300
C61048300	4 x 300	300	61 : CP	20.68	1.8	3.0	69.5	13,970	0.0601	2.78	565	200
C61048400	4 x 400	400	61 : CP	23.39	2.0	3.3	77.5	18,330	0.047	2.73	655	200

C = Packing in coil
R = Packing in reel

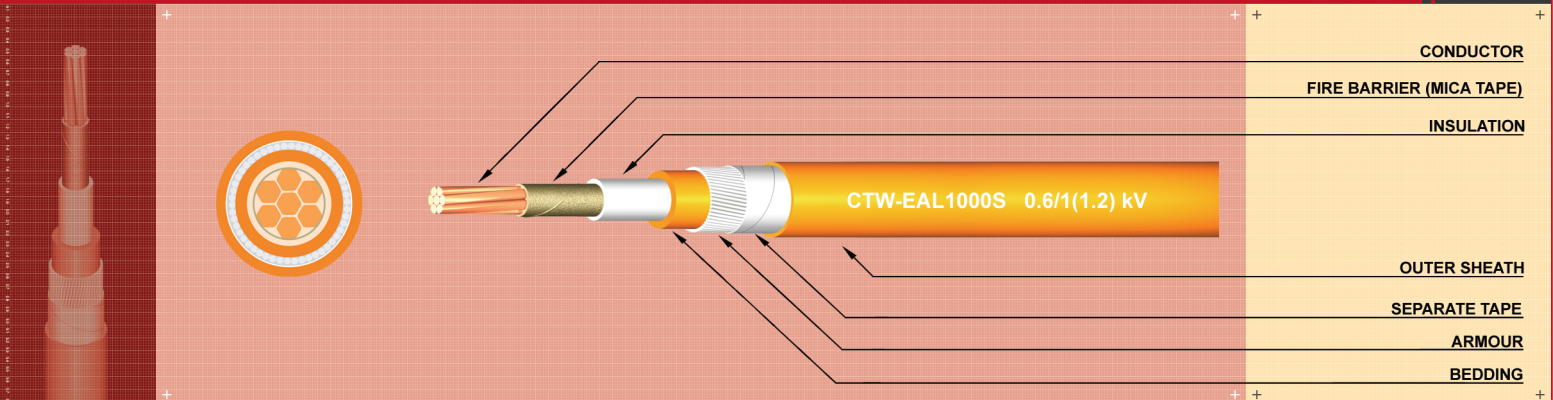


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-FRC-EAL 1000S

SINGLE CORE LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV

PAGES 1/2



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Natural (Translucent) Colour.
Bedding	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour.
Armour	Aluminum wire for single core.
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3013, AS/NZS 3198
Circuit integrity	AS/NZS 1660.5.5 Categories C, W, Z
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

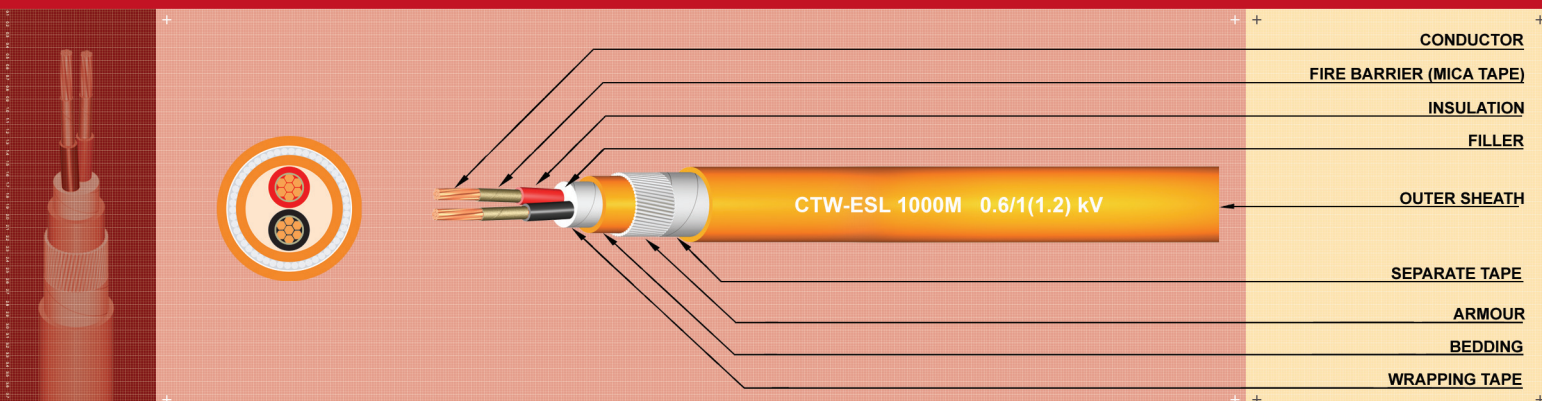
CTW-FRC-EAL 1000S		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
		Nominal cross-sectional area	Number and diameter of wire	Diameter (Approx.)										
PRODUCT CODE	SIZE core x mm ²	mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
-	1 x 1.5	1.5	7/0.50 : CR	1.50	-	-	-	-	-	-	-	-	-	-
-	1 x 2.5	2.5	7/0.67 : CR	2.01	-	-	-	-	-	-	-	-	-	-
-	1 x 4	4	7/0.85 : CR	2.55	-	-	-	-	-	-	-	-	-	-
-	1 x 6	6	7/1.04 : CR	3.12	-	-	-	-	-	-	-	-	-	-
-	1 x 10	10	7/1.35 : CR	4.05	-	-	-	-	-	-	-	-	-	-
-	1 x 16	16	7 : CP	4.69	-	-	-	-	-	-	-	-	-	-
-	1 x 25	25	7 : CP	5.90	-	-	-	-	-	-	-	-	-	-
-	1 x 35	35	7 : CP	6.95	-	-	-	-	-	-	-	-	-	-
C62018050	1 x 50	50	19 : CP	8.33	1.0	1.0	1.25	1.8	20.0	840	0.387	3.64	210	500
C62018070	1 x 70	70	19 : CP	9.73	1.1	1.0	1.25	1.8	22.0	1,080	0.268	3.47	260	500
C62018095	1 x 95	95	19 : CP	11.45	1.1	1.0	1.6	1.8	24.5	1,400	0.193	3.03	325	500
C62018120	1 x 120	120	19 : CP	12.95	1.2	1.0	1.6	1.8	26.5	1,680	0.153	2.94	375	500
C62018150	1 x 150	150	37 : CP	14.27	1.4	1.0	1.6	1.8	28.5	2,100	0.124	3.08	425	500
C62018185	1 x 185	185	37 : CP	15.98	1.6	1.0	1.6	1.9	30.5	2,410	0.0991	3.14	485	500
C62018240	1 x 240	240	37 : CP	18.47	1.7	1.0	1.6	2.0	33.5	3,200	0.0754	2.92	565	500
C62018300	1 x 300	300	61 : CP	20.68	1.8	1.0	1.6	2.1	36.5	3,660	0.0601	2.78	635	500



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-FRC-ESL 1000M

TWO CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3013, AS/NZS 3198
Circuit integrity	AS/NZS 1660.5.5 Categories C, W, Z
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C, Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

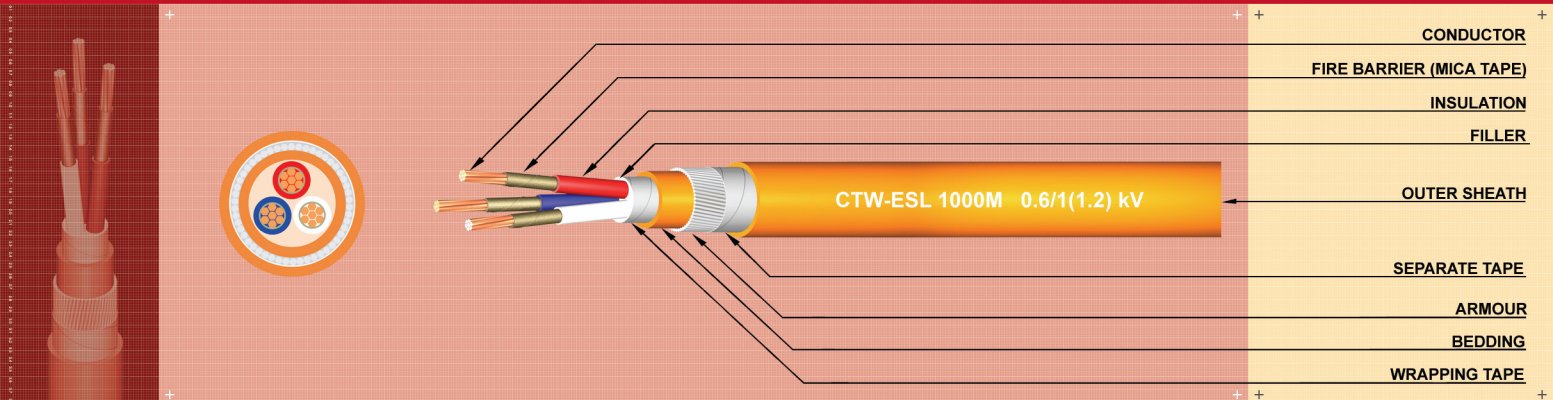
CTW-FRC-ESL 1000M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing
		Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm										
PRODUCT CODE	SIZE core x mm ²													
C63024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	17.0	420	12.1	8.41	25	500
C63024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	0.9	1.8	18.0	480	7.41	7.27	35	500
C63024004	2 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	20.0	650	4.61	6.36	45	500
C63024006	2 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	21.0	750	3.08	5.62	55	500
C63024010	2 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	23.0	900	1.83	4.72	75	500
C63028016	2 x 16	16	7 : CP	4.69	0.7	1.0	1.25	1.8	24.0	1,050	1.15	4.25	105	500
C63028025	2 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	28.0	1,550	0.727	4.37	145	500
C63028035	2 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.8	30.0	1,850	0.524	3.85	175	500
C63028050	2 x 50	50	19 : CP	8.33	1.0	1.0	1.6	1.8	33.5	2,300	0.387	3.64	210	500
C63028070	2 x 70	70	19 : CP	9.73	1.1	1.0	1.6	2.0	37.0	2,900	0.268	3.47	260	500
C63028095	2 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.1	42.0	3,920	0.193	3.03	325	500
C63028120	2 x 120	120	19 : CP	12.95	1.2	1.2	2.0	2.2	45.5	4,650	0.153	2.94	375	500
C63028150	2 x 150	150	37 : CP	14.27	1.4	1.2	2.0	2.3	49.0	5,500	0.124	3.08	425	500
C63028185	2 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.5	55.0	7,050	0.0991	3.14	485	500
C63028240	2 x 240	240	37 : CP	18.47	1.7	1.4	2.5	2.7	61.0	8,650	0.0754	2.92	565	250
C63028300	2 x 300	300	61 : CP	20.68	1.8	1.6	2.5	2.8	66.5	10,300	0.0601	2.78	635	250
C63028400	2 x 400	400	61 : CP	23.39	2.0	1.6	2.5	3.1	73.5	12,880	0.047	2.73	725	250



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-FRC-ESL 1000M

THREE CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, White, Blue Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3013, AS/NZS 3198
Circuit integrity	AS/NZS 1660.5.5 Categories C, W, Z
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C, Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-ESL 1000M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing
		Nominal cross-sectional area	Number and diameter of wire	Diameter (Approx.)										
PRODUCT CODE	SIZE core x mm ²	mm ²	No./mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ - km		m/R
C63034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	17.5	470	12.1	8.41	20	500
C63034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	0.9	1.8	19.0	550	7.41	7.27	30	500
C63034004	3 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	20.5	730	4.61	6.36	35	500
C63034006	3 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	22.0	850	3.08	5.62	50	500
C63034010	3 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	24.0	1,050	1.83	4.72	65	500
C63038016	3 x 16	16	7 : CP	4.69	0.7	1.0	1.25	1.8	25.0	1,280	1.15	4.25	90	500
C63038025	3 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	29.5	1,860	0.727	4.37	125	500
C63038035	3 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.8	31.5	2,260	0.524	3.85	150	500
C63038050	3 x 50	50	19 : CP	8.33	1.0	1.0	1.6	1.9	35.0	2,880	0.387	3.64	180	500
C63038070	3 x 70	70	19 : CP	9.73	1.1	1.2	2.0	2.0	40.0	3,400	0.268	3.47	230	500
C63038095	3 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.2	44.5	4,980	0.193	3.03	280	500
C63038120	3 x 120	120	19 : CP	12.95	1.2	1.2	2.0	2.3	48.0	5,980	0.153	2.94	320	500
C63038150	3 x 150	150	37 : CP	14.27	1.4	1.4	2.5	2.5	54.0	7,650	0.124	3.08	360	500
C63038185	3 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.6	58.5	9,100	0.0991	3.14	420	250
C63038240	3 x 240	240	37 : CP	18.47	1.7	1.6	2.5	2.8	65.5	11,260	0.0754	2.92	490	250
C63038300	3 x 300	300	61 : CP	20.68	1.8	1.6	2.5	3.0	71.0	13,550	0.0601	2.78	560	200
C63038400	3 x 400	400	61 : CP	23.39	2.0	1.6	2.5	3.2	78.0	17,050	0.047	2.73	650	200

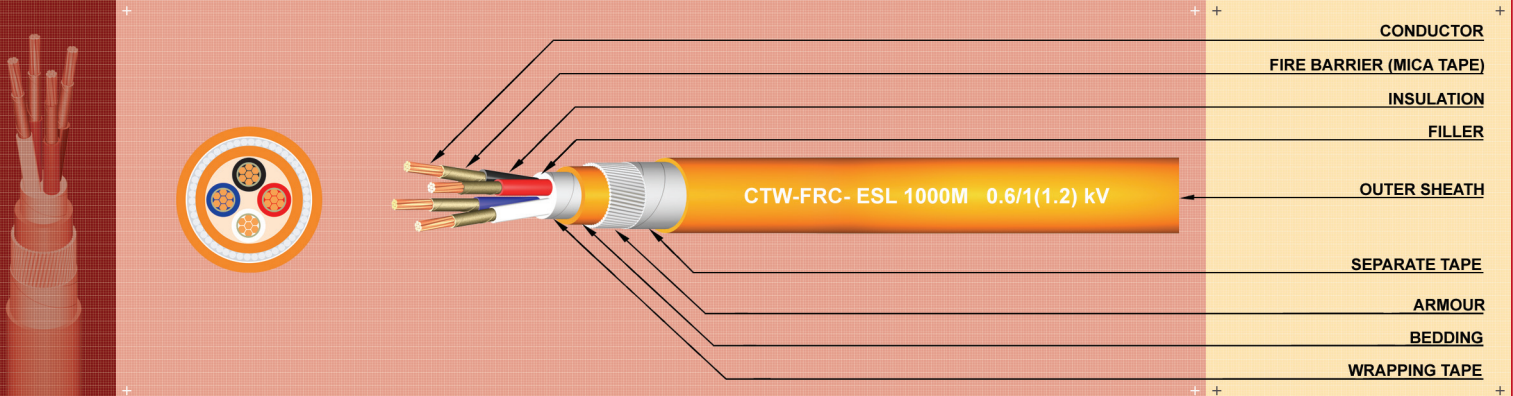
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-FRC-ESL 1000M

FOUR CORES LOW SMOKE & HALOGEN FREE FIRE RESISTANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Fire Barrier	Mineral ceramic (Mica) fire resistant tape.
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, White, Blue, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3013, AS/NZS 3198
Circuit integrity	AS/NZS 1660.5.5 Categories C, W, Z
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and continue supply electricity in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-FRC-ESL 1000M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing
		Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm										
PRODUCT CODE	SIZE core x mm ²				mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ - km		m/R
C63044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	18.5	530	12.1	8.41	20	500
C63044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	1.25	1.8	20.5	710	7.41	7.27	30	500
C63044004	4 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	22.0	850	4.61	6.36	35	500
C63044006	4 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	23.5	970	3.08	5.62	50	500
C63044010	4 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	25.5	1,250	1.83	4.72	65	500
C63048016	4 x 16	16	7 : CP	4.69	0.7	1.0	1.6	1.8	27.5	1,650	1.15	4.25	90	500
C63048025	4 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	31.5	2,220	0.727	4.37	125	500
C63048035	4 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.9	34.0	2,750	0.524	3.85	150	500
C63048050	4 x 50	50	19 : CP	8.33	1.0	1.0	1.6	2.0	38.5	3,550	0.387	3.64	180	500
C63048070	4 x 70	70	19 : CP	9.73	1.1	1.2	2.0	2.2	44.0	4,910	0.268	3.47	230	500
C63048095	4 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.3	48.0	6,170	0.193	3.03	280	500
C63048120	4 x 120	120	19 : CP	12.95	1.2	1.4	2.5	2.5	54.0	7,980	0.153	2.94	320	500
C63048150	4 x 150	150	37 : CP	14.27	1.4	1.4	2.5	2.6	58.5	9,480	0.124	3.08	360	250
C63048185	4 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.8	64.0	11,350	0.0991	3.14	420	250
C63048240	4 x 240	240	37 : CP	18.47	1.7	1.6	2.5	3.0	71.5	14,180	0.0754	2.92	490	250
C63048300	4 x 300	300	61 : CP	20.68	1.8	1.6	2.5	3.2	78.0	17,050	0.0601	2.78	560	200
C63048400	4 x 400	400	61 : CP	23.39	2.0	1.8	3.15	3.5	88.0	22,720	0.047	2.73	650	200

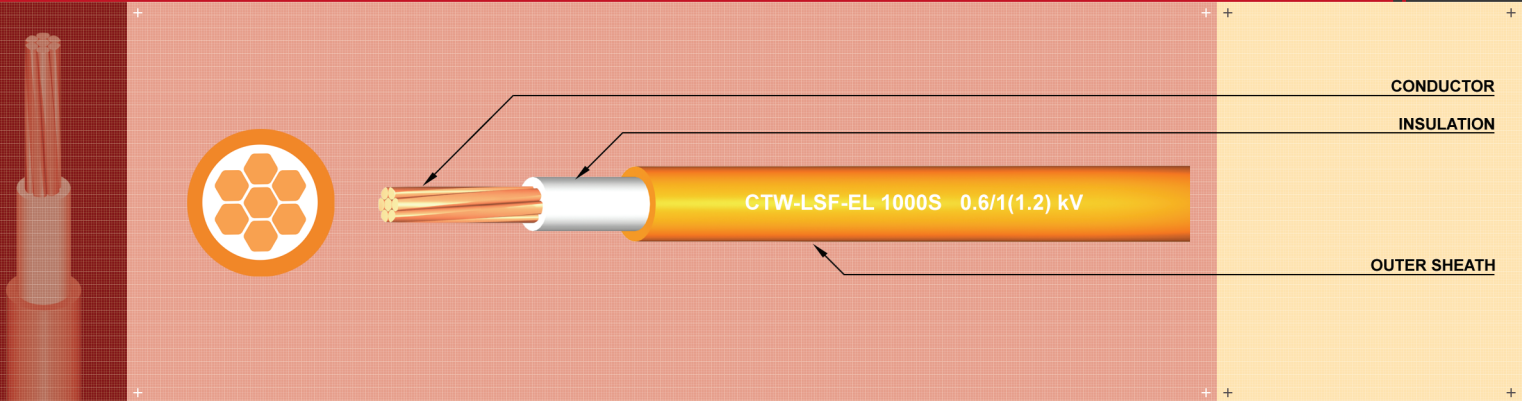


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-EL 1000S**

SINGLE CORE LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV

PAGES 1/2



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Natural (Translucent) Colour.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3198
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-EL 1000S		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km		m/R
C86014501	1 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.4	7.0	70	12.1	8.41	27	500
C86014502	1 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.4	7.5	90	7.41	7.27	36	500
C86014004	1 x 4	4	7/0.85 : CR	2.55	0.7	1.4	8.0	110	4.61	6.36	48	500
C86014006	1 x 6	6	7/1.04 : CR	3.12	0.7	1.4	8.5	130	3.08	5.62	61	500
C86014010	1 x 10	10	7/1.35 : CR	4.05	0.7	1.4	9.5	180	1.83	4.72	82	500
C86018016	1 x 16	16	7 : CP	4.69	0.7	1.4	10.0	250	1.15	4.25	110	500
C86018025	1 x 25	25	7 : CP	5.90	0.9	1.4	12.0	360	0.727	4.37	145	500
C86018035	1 x 35	35	7 : CP	6.95	0.9	1.4	13.0	460	0.524	3.85	180	500
C86018050	1 x 50	50	19 : CP	8.33	1.0	1.4	14.5	630	0.387	3.64	220	500
C86018070	1 x 70	70	19 : CP	9.73	1.1	1.4	16.5	840	0.268	3.47	280	500
C86018095	1 x 95	95	19 : CP	11.45	1.1	1.5	18.5	1,100	0.193	3.03	345	500
C86018120	1 x 120	120	19 : CP	12.95	1.2	1.5	20.0	1,360	0.153	2.94	400	500
C86018150	1 x 150	150	37 : CP	14.27	1.4	1.6	22.0	1,690	0.124	3.08	460	500
C86018185	1 x 185	185	37 : CP	15.98	1.6	1.6	24.5	2,060	0.0991	3.14	530	500
C86018240	1 x 240	240	37 : CP	18.47	1.7	1.7	27.5	2,630	0.0754	2.92	630	500
C86018300	1 x 300	300	61 : CP	20.68	1.8	1.8	30.5	3,250	0.0601	2.78	725	500

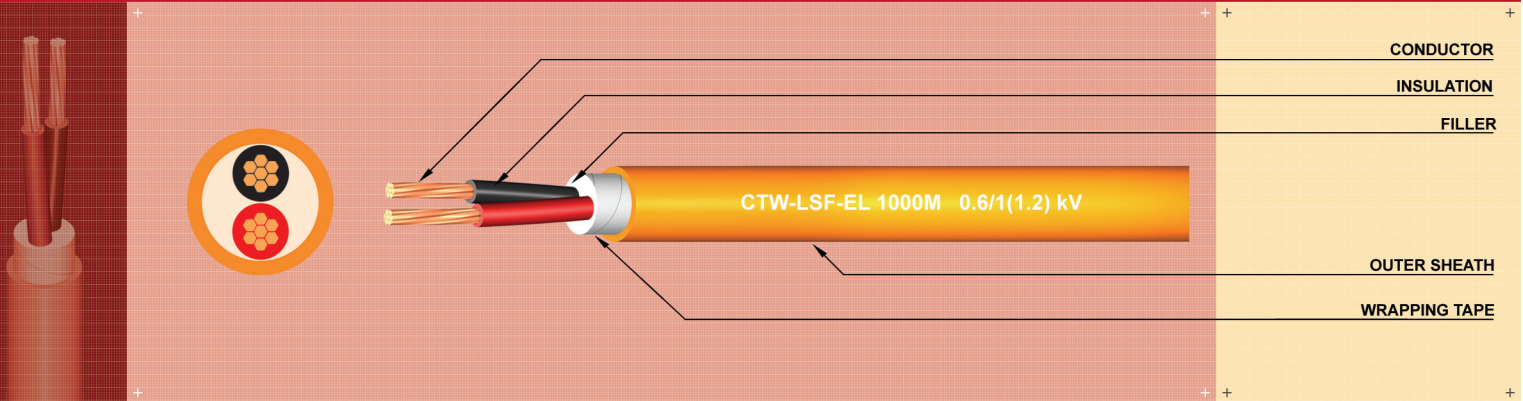
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-EL 1000M

TWO CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3198
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-EL 1000M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C86024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	12.5	180	12.1	8.41	25	500
C86024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	13.5	220	7.41	7.27	34	500
C86024004	2 x 4	4	7/0.85 : CR	2.55	0.7	1.8	14.5	280	4.61	6.36	44	500
C86024006	2 x 6	6	7/1.04 : CR	3.12	0.7	1.8	15.5	340	3.08	5.62	57	500
C86024010	2 x 10	10	7/1.35 : CR	4.05	0.7	1.8	17.5	460	1.83	4.72	77	500
C86028016	2 x 16	16	7 : CP	4.69	0.7	1.8	19.0	600	1.15	4.25	100	500
C86028025	2 x 25	25	7 : CP	5.90	0.9	1.8	22.0	860	0.727	4.37	135	500
C86028035	2 x 35	35	7 : CP	6.95	0.9	1.8	24.0	1,100	0.524	3.85	165	500
C86028050	2 x 50	50	19 : CP	8.33	1.0	1.8	27.5	1,480	0.387	3.64	205	500
C86028070	2 x 70	70	19 : CP	9.73	1.1	1.8	31.0	1,960	0.268	3.47	255	500
C86028095	2 x 95	95	19 : CP	11.45	1.1	2.0	35.0	2,570	0.193	3.03	315	500
C86028120	2 x 120	120	19 : CP	12.95	1.2	2.1	38.5	3,200	0.153	2.94	365	500
C86028150	2 x 150	150	37 : CP	14.27	1.4	2.2	43.0	3,930	0.124	3.08	415	500
C86028185	2 x 185	185	37 : CP	15.98	1.6	2.3	47.0	4,820	0.0991	3.14	485	500
C86028240	2 x 240	240	37 : CP	18.47	1.7	2.5	53.0	6,170	0.0754	2.92	580	500
C86028300	2 x 300	300	61 : CP	20.68	1.8	2.7	58.0	7,600	0.0601	2.78	675	300
C86028400	2 x 400	400	61 : CP	23.39	2.0	2.9	64.5	9,910	0.047	2.73	790	300

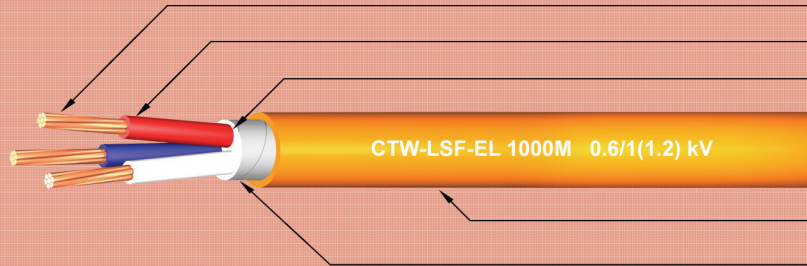
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-EL 1000M

THREE CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONDUCTOR

INSULATION

FILLER

OUTER SHEATH

WRAPPING TAPE

CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, White, Blue Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3198
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

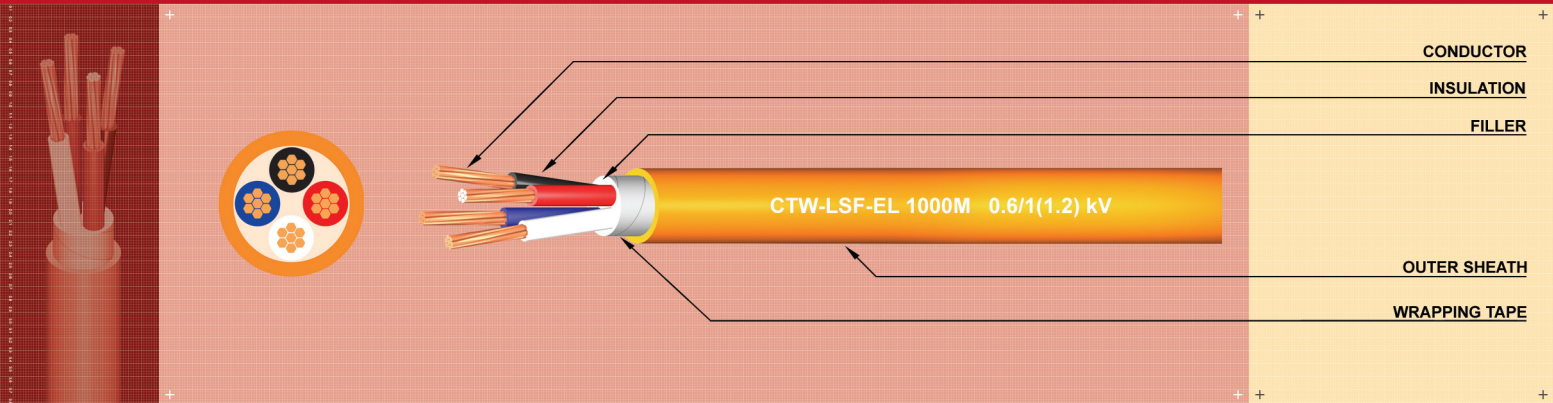
CTW-LSF-EL 1000M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE corexmm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C86034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	13.0	220	12.1	8.41	21	500
C86034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	14.0	270	7.41	7.27	28	500
C86034004	3 x 4	4	7/0.85 : CR	2.55	0.7	1.8	15.5	340	4.61	6.36	37	500
C86034006	3 x 6	6	7/1.04 : CR	3.12	0.7	1.8	16.5	420	3.08	5.62	48	500
C86034010	3 x 10	10	7/1.35 : CR	4.05	0.7	1.8	18.5	590	1.83	4.72	64	500
C86038016	3 x 16	16	7 : CP	4.69	0.7	1.8	20.0	780	1.15	4.25	86	500
C86038025	3 x 25	25	7 : CP	5.90	0.9	1.8	23.5	1,140	0.727	4.37	115	500
C86038035	3 x 35	35	7 : CP	6.95	0.9	1.8	26.0	1,480	0.524	3.85	140	500
C86038050	3 x 50	50	19 : CP	8.33	1.0	1.8	29.5	2,010	0.387	3.64	170	500
C86038070	3 x 70	70	19 : CP	9.73	1.1	1.9	33.5	2,710	0.268	3.47	215	500
C86038095	3 x 95	95	19 : CP	11.45	1.1	2.0	37.5	3,540	0.193	3.03	260	500
C86038120	3 x 120	120	19 : CP	12.95	1.2	2.1	41.5	4,400	0.153	2.94	305	500
C86038150	3 x 150	150	37 : CP	14.27	1.4	2.3	46.0	5,470	0.124	3.08	350	500
C86038185	3 x 185	185	37 : CP	15.98	1.6	2.4	50.0	6,700	0.0991	3.14	405	500
C86038240	3 x 240	240	37 : CP	18.47	1.7	2.6	56.5	8,570	0.0754	2.92	490	300
C86038300	3 x 300	300	61 : CP	20.68	1.8	2.8	62.5	10,590	0.0601	2.78	565	300
C86038400	3 x 400	400	61 : CP	23.39	2.0	3.1	69.5	13,930	0.047	2.73	655	200



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-EL 1000M**

FOUR CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITHOUT ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, White, Blue, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3198
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and surface wiring whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C, Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-EL 1000M		Conductor			Thickness of insulation	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient)	Standard packing
PRODUCT CODE	SIZE corexmm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	kg/km	Ω/km	MΩ - km	A	m/R
C86044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.8	14.0	260	12.1	8.41	21	500
C86044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.8	15.0	330	7.41	7.27	28	500
C86044004	4 x 4	4	7/0.85 : CR	2.55	0.7	1.8	17.0	420	4.61	6.36	37	500
C86044006	4 x 6	6	7/1.04 : CR	3.12	0.7	1.8	18.0	530	3.08	5.62	48	500
C86044010	4 x 10	10	7/1.35 : CR	4.05	0.7	1.8	20.5	740	1.83	4.72	64	500
C86048016	4 x 16	16	7 : CP	4.69	0.7	1.8	22.0	1,000	1.15	4.25	86	500
C86048025	4 x 25	25	7 : CP	5.90	0.9	1.8	26.0	1,470	0.727	4.37	115	500
C86048035	4 x 35	35	7 : CP	6.95	0.9	1.8	28.5	1,920	0.524	3.85	140	500
C86048050	4 x 50	50	19 : CP	8.33	1.0	1.9	32.5	2,630	0.387	3.64	170	500
C86048070	4 x 70	70	19 : CP	9.73	1.1	2.0	37.0	3,540	0.268	3.47	215	500
C86048095	4 x 95	95	19 : CP	11.45	1.1	2.1	41.5	4,640	0.193	3.03	260	500
C86048120	4 x 120	120	19 : CP	12.95	1.2	2.3	46.0	5,800	0.153	2.94	305	500
C86048150	4 x 150	150	37 : CP	14.27	1.4	2.4	50.5	7,170	0.124	3.08	350	300
C86048185	4 x 185	185	37 : CP	15.98	1.6	2.6	56.0	8,820	0.0991	3.14	405	300
C86048240	4 x 240	240	37 : CP	18.47	1.7	2.8	63.0	11,290	0.0754	2.92	490	300
C86048300	4 x 300	300	61 : CP	20.68	1.8	3.0	69.5	13,970	0.0601	2.78	565	200
C86048400	4 x 400	400	61 : CP	23.39	2.0	3.3	77.5	18,330	0.047	2.73	655	200

C = Packing in coil
R = Packing in reel

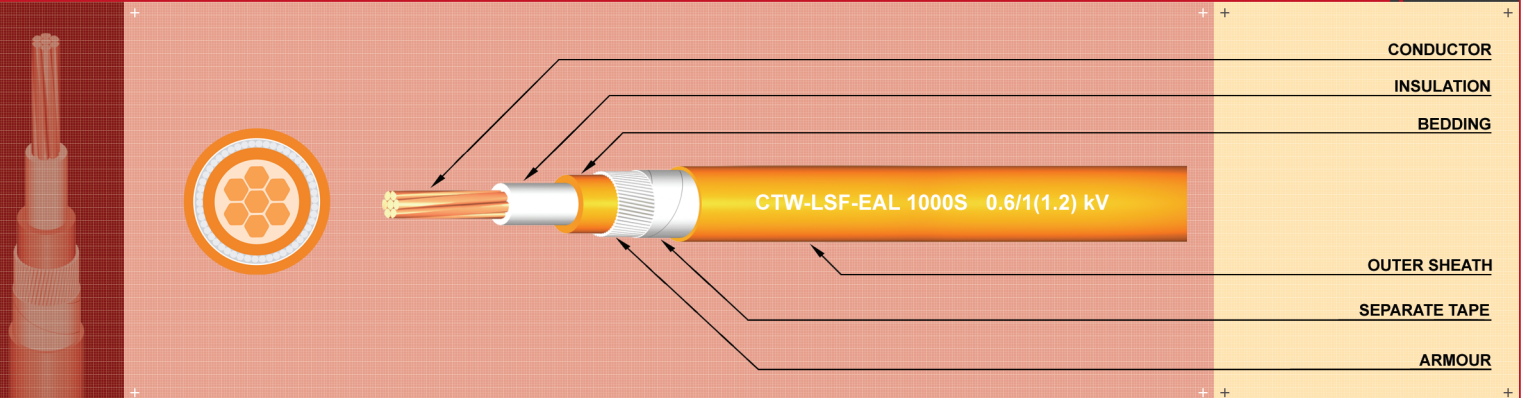


CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : **CTW-LSF-EAL 1000S**

SINGLE CORE LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV

PAGES 1/2



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Natural (Translucent) Colour.
Bedding	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour.
Armour	Aluminum wire for single core.
Wrapping Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3198
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C, Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

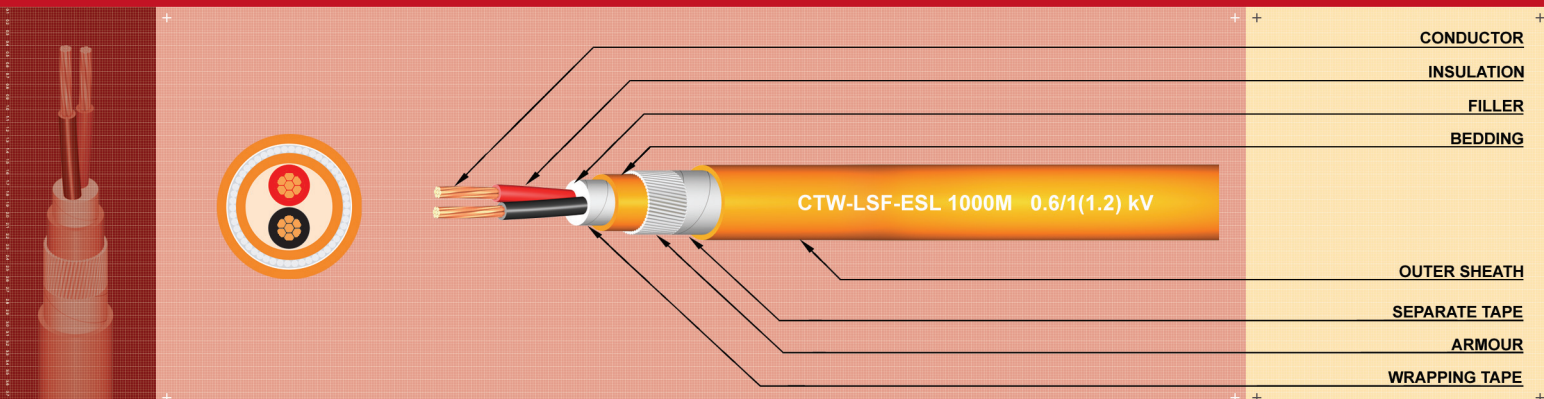
CTW-LSF-EAL 1000S		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing m/R
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ · km		
-	1 x 1.5	1.5	7/0.50 : CR	1.50	-	-	-	-	-	-	-	-	-	-
-	1 x 2.5	2.5	7/0.67 : CR	2.01	-	-	-	-	-	-	-	-	-	-
-	1 x 4	4	7/0.85 : CR	2.55	-	-	-	-	-	-	-	-	-	-
-	1 x 6	6	7/1.04 : CR	3.12	-	-	-	-	-	-	-	-	-	-
-	1 x 10	10	7/1.35 : CR	4.05	-	-	-	-	-	-	-	-	-	-
-	1 x 16	16	7 : CP	4.69	-	-	-	-	-	-	-	-	-	-
-	1 x 25	25	7 : CP	5.90	-	-	-	-	-	-	-	-	-	-
-	1 x 35	35	7 : CP	6.95	-	-	-	-	-	-	-	-	-	-
C87018050	1 x 50	50	19 : CP	8.33	1.0	1.0	1.25	1.8	20.0	840	0.387	3.64	210	500
C87018070	1 x 70	70	19 : CP	9.73	1.1	1.0	1.25	1.8	22.0	1,080	0.268	3.47	260	500
C87018095	1 x 95	95	19 : CP	11.45	1.1	1.0	1.6	1.8	24.5	1,400	0.193	3.03	325	500
C87018120	1 x 120	120	19 : CP	12.95	1.2	1.0	1.6	1.8	26.5	1,680	0.153	2.94	375	500
C87018150	1 x 150	150	37 : CP	14.27	1.4	1.0	1.6	1.8	28.5	2,100	0.124	3.08	425	500
C87018185	1 x 185	185	37 : CP	15.98	1.6	1.0	1.6	1.9	30.5	2,410	0.0991	3.14	485	500
C87018240	1 x 240	240	37 : CP	18.47	1.7	1.0	1.6	2.0	33.5	3,200	0.0754	2.92	565	500
C87018300	1 x 300	300	61 : CP	20.68	1.8	1.0	1.6	2.1	36.5	3,660	0.0601	2.78	635	500



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-ESL 1000M

TWO CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour.
Armour	Galvanized steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3198
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C,
Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

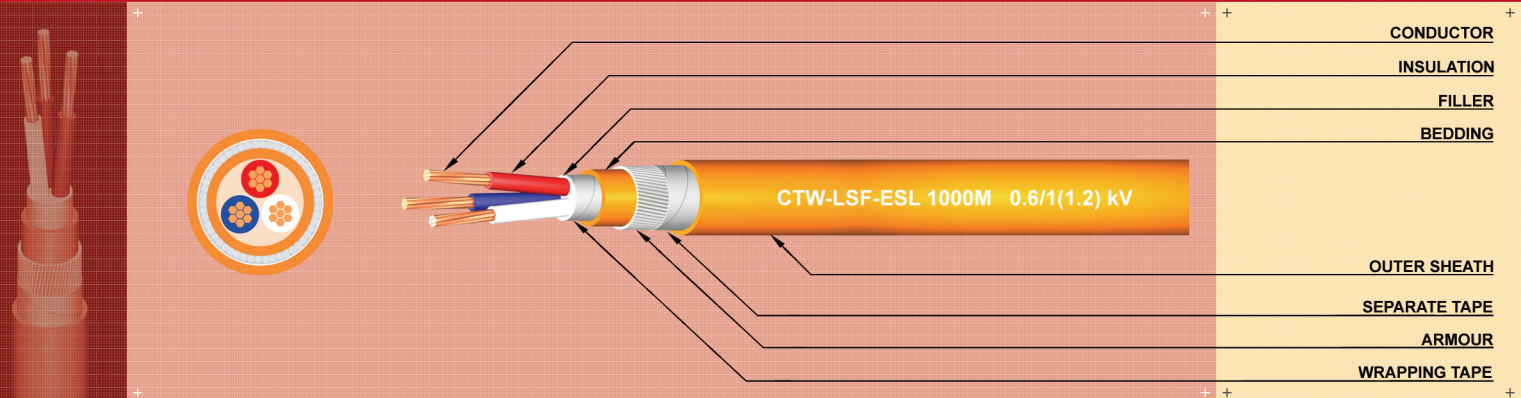
CTW-LSF-EAL 1000S		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing m/R
		Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm										
PRODUCT CODE	SIZE core x mm ²													
C88024501	2 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	17.0	420	12.1	8.41	25	500
C88024502	2 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	0.9	1.8	18.0	480	7.41	7.27	35	500
C88024004	2 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	20.0	650	4.61	6.36	45	500
C88024006	2 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	21.0	750	3.08	5.62	55	500
C88024010	2 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	23.0	900	1.83	4.72	75	500
C88028016	2 x 16	16	7 : CP	4.69	0.7	1.0	1.25	1.8	24.0	1,050	1.15	4.25	105	500
C88028025	2 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	28.0	1,550	0.727	4.37	145	500
C88028035	2 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.8	30.0	1,850	0.524	3.85	175	500
C88028050	2 x 50	50	19 : CP	8.33	1.0	1.0	1.6	1.8	33.5	2,300	0.387	3.64	210	500
C88028070	2 x 70	70	19 : CP	9.73	1.1	1.0	1.6	2.0	37.0	2,900	0.268	3.47	260	500
C88028095	2 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.1	42.0	3,920	0.193	3.03	325	500
C88028120	2 x 120	120	19 : CP	12.95	1.2	1.2	2.0	2.2	45.5	4,650	0.153	2.94	375	500
C88028150	2 x 150	150	37 : CP	14.27	1.4	1.2	2.0	2.3	49.0	5,500	0.124	3.08	425	500
C88028185	2 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.5	55.0	7,050	0.0991	3.14	485	500
C88028240	2 x 240	240	37 : CP	18.47	1.7	1.4	2.5	2.7	61.0	8,650	0.0754	2.92	565	250
C88028300	2 x 300	300	61 : CP	20.68	1.8	1.6	2.5	2.8	66.5	10,300	0.0601	2.78	635	250
C88028400	2 x 400	400	61 : CP	23.39	2.0	1.6	2.5	3.1	73.5	12,880	0.047	2.73	725	250



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-ESL 1000M

THREE CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, White, Blue Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3198
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C, Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-EAL 1000M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing m/R
		Nominal cross-sectional area mm²	Number and diameter of wire No./mm	Diameter (Approx.) mm										
PRODUCT CODE	SIZE core x mm²									kg/km	Ω/km	MΩ · km		
C88034501	3 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	17.5	470	12.1	8.41	20	500
C88034502	3 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	0.9	1.8	19.0	550	7.41	7.27	30	500
C88034004	3 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	20.5	730	4.61	6.36	35	500
C88034006	3 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	22.0	850	3.08	5.62	50	500
C88034010	3 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	24.0	1,050	1.83	4.72	65	500
C88038016	3 x 16	16	7 : CP	4.69	0.7	1.0	1.25	1.8	25.0	1,280	1.15	4.25	90	500
C88038025	3 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	29.5	1,860	0.727	4.37	125	500
C88038035	3 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.8	31.5	2,260	0.524	3.85	150	500
C88038050	3 x 50	50	19 : CP	8.33	1.0	1.0	1.6	1.9	35.0	2,880	0.387	3.64	180	500
C88038070	3 x 70	70	19 : CP	9.73	1.1	1.2	2.0	2.0	40.0	3,400	0.268	3.47	230	500
C88038095	3 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.2	44.5	4,980	0.193	3.03	280	500
C88038120	3 x 120	120	19 : CP	12.95	1.2	1.2	2.0	2.3	48.0	5,980	0.153	2.94	320	500
C88038150	3 x 150	150	37 : CP	14.27	1.4	1.4	2.5	2.5	54.0	7,650	0.124	3.08	360	500
C88038185	3 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.6	58.5	9,100	0.0991	3.14	420	250
C88038240	3 x 240	240	37 : CP	18.47	1.7	1.6	2.5	2.8	65.5	11,260	0.0754	2.92	490	250
C88038300	3 x 300	300	61 : CP	20.68	1.8	1.6	2.5	3.0	71.0	13,550	0.0601	2.78	560	200
C88038400	3 x 400	400	61 : CP	23.39	2.0	1.6	2.5	3.2	78.0	17,050	0.047	2.73	650	200

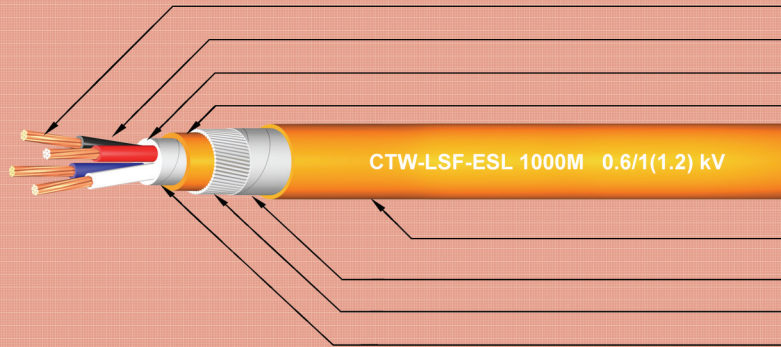
C = Packing in coil
R = Packing in reel



CHAROONG THAI WIRE & CABLE PUBLIC COMPANY LIMITED

CABLE TYPE : CTW-LSF-ESL 1000M

FOUR CORES LOW SMOKE & HALOGEN FREE FLAME RETARDANT CABLES (WITH ARMOUR) 0.6/1(1.2) kV



CONDUCTOR

INSULATION

FILLER

BEDDING

OUTER SHEATH

SEPARATE TAPE

ARMOUR

WRAPPING TAPE

CONSTRUCTION

Conductor	Compact or Round concentric lay stranded copper -CR : Concentric lay stranded of conductor : $\leq 10 \text{ mm}^2$ -CP : Compact round concentric lay stranded of conductor : $> 10 \text{ mm}^2$
Insulation	Cross-linked Ethylene Vinyl Acetate (XLEVA 110°C : X-HF-110) : Red, Black Colour.
Filler	LSHF filler and/or Polypropylene (Nonhygroscopic material)
Wrapping Tape	Polyester tape and/or Spunbond tape.
Bedding	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour.
Armour	Galvanised steel wire for multi core.
Separator Tape	Polyester tape and/or Spunbond tape.
Outer Sheath	Low smoke & halogen free compound (LSHF : HFS-110-TP) : Orange Colour. Other colours to special order.

STANDARDS ACHIEVED

Cable comply to	AS/NZS 3198
Flame propagation	AS/NZS 1660.5.1 Categories A, B, C
Acid gas emission	AS/NZS 1660.5.4
Smoke emission	AS/NZS 1660.5.2

APPLICATION

Preferably used for installation into conduit and open tray whereby a prevention of major fire hazard and the cable offer safety during in case of fire.

CLASSIFICATION

Maximum conductor temperature 110 °C, Circuit voltage does not exceed 1,000 volts.
AC Test Voltage : 3.5 kV

CTW-LSF-ESL 1000M		Conductor			Thickness of insulation	Thickness of bedding	Armour wire diameter	Thickness of outer sheath	Overall diameter (Approx.)	Cable weight (Approx.)	Maximum conductor resistance at 20°C	Minimum insulation resistance at 20°C	Allowable ampacities in free air at 40° (ambient) A	Standard packing
PRODUCT CODE	SIZE core x mm ²	Nominal cross-sectional area mm ²	Number and diameter of wire No./mm	Diameter (Approx.) mm	mm	mm	mm	mm	mm	kg/km	Ω/km	MΩ - km		m/R
C88044501	4 x 1.5	1.5	7/0.50 : CR	1.50	0.7	1.0	0.9	1.8	18.5	530	12.1	8.41	20	500
C88044502	4 x 2.5	2.5	7/0.67 : CR	2.01	0.7	1.0	1.25	1.8	20.5	710	7.41	7.27	30	500
C88044004	4 x 4	4	7/0.85 : CR	2.55	0.7	1.0	1.25	1.8	22.0	850	4.61	6.36	35	500
C88044006	4 x 6	6	7/1.04 : CR	3.12	0.7	1.0	1.25	1.8	23.5	970	3.08	5.62	50	500
C88044010	4 x 10	10	7/1.35 : CR	4.05	0.7	1.0	1.25	1.8	25.5	1,250	1.83	4.72	65	500
C88048016	4 x 16	16	7 : CP	4.69	0.7	1.0	1.6	1.8	27.5	1,650	1.15	4.25	90	500
C88048025	4 x 25	25	7 : CP	5.90	0.9	1.0	1.6	1.8	31.5	2,220	0.727	4.37	125	500
C88048035	4 x 35	35	7 : CP	6.95	0.9	1.0	1.6	1.9	34.0	2,750	0.524	3.85	150	500
C88048050	4 x 50	50	19 : CP	8.33	1.0	1.0	1.6	2.0	38.5	3,550	0.387	3.64	180	500
C88048070	4 x 70	70	19 : CP	9.73	1.1	1.2	2.0	2.2	44.0	4,910	0.268	3.47	230	500
C88048095	4 x 95	95	19 : CP	11.45	1.1	1.2	2.0	2.3	48.0	6,170	0.193	3.03	280	500
C88048120	4 x 120	120	19 : CP	12.95	1.2	1.4	2.5	2.5	54.0	7,980	0.153	2.94	320	500
C88048150	4 x 150	150	37 : CP	14.27	1.4	1.4	2.5	2.6	58.5	9,480	0.124	3.08	360	250
C88048185	4 x 185	185	37 : CP	15.98	1.6	1.4	2.5	2.8	64.0	11,350	0.0991	3.14	420	250
C88048240	4 x 240	240	37 : CP	18.47	1.7	1.6	2.5	3.0	71.5	14,180	0.0754	2.92	490	250
C88048300	4 x 300	300	61 : CP	20.68	1.8	1.6	2.5	3.2	78.0	17,050	0.0601	2.78	560	200
C88048400	4 x 400	400	61 : CP	23.39	2.0	1.8	3.15	3.5	88.0	22,720	0.047	2.73	650	200