

Raychem

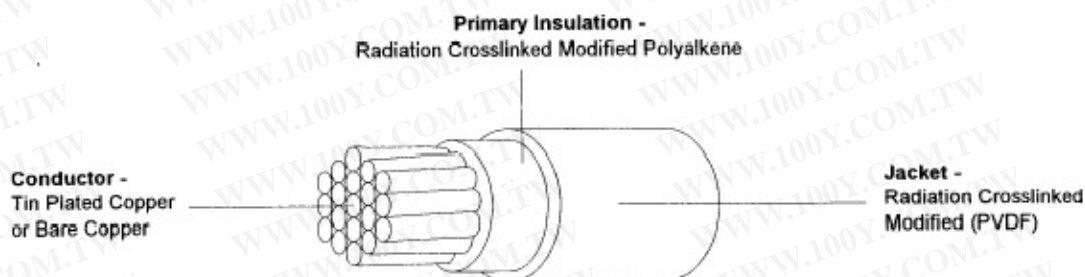
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FLT011X-***-Y
 Issue 5
 April 1996

FLEXLITE™

HIGH PERFORMANCE EQUIPMENT WIRE 600V/150°C

The complete requirements for procuring the wire described herein shall consist of this document and the issue in effect of Raychem Specification WCD 645.



Part Number	Nominal CSA (mm ²)	Conductor Stranding No/Dia (mm)	Conductor Diameter (mm)		Maximum Resistance @20°C (ohms/km)	Finished Wire Diameter (mm)		Nominal Weight (kg/km)
			Min	Max		Min	Max	
			FLT011X-0.25-Y	0.25		19/0.127	0.55	
FLT011X-0.35-Y	0.35	19/0.15	0.70	0.80	56.1	1.06	1.21	4.14
FLT011X-0.50-Y	0.50	19/0.19	0.82	0.90	40.1	1.18	1.31	6.63
FLT011X-0.75-Y	0.75	19/0.23	1.05	1.15	24.7	1.41	1.56	8.20
FLT011X-1.00-Y	1.00	19/0.25	1.17	1.26	20.0	1.55	1.70	10.86
FLT011X-1.50-Y	1.50	19/0.32	1.35	1.60	13.7	1.73	2.06	16.47
FLT011X-2.00-Y	2.00	19/0.36	1.66	1.85	9.9	2.12	2.38	20.32
FLT011X-2.50-Y	2.50	19/0.41	1.85	2.05	8.2	2.31	2.61	26.56

PART NUMBER:

The 'X' in the part number shall be replaced by a conductor designator as follows:

- 1 - Tin plated copper
- 9 - Bare copper

The 'Y' in the part number shall be replaced by a standard colour code designator in accordance with:

- | | |
|------------|------------|
| 0 - Black | 5 - Green |
| 1 - Brown | 6 - Blue |
| 2 - Red | 7 - Violet |
| 2L - Pink | 8 - Grey |
| 3 - Orange | 9 - White |
| 4 - Yellow | |

eg: size 0.25mm² tinned copper conductor, white insulation - FLT0111-0.25-9

If compliance with UL style 1385 is required, the suffix (S92) should be added to the part number eg: FLT0111-1.00-9(S92)

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Flexible, Double Insulated, High Performance Wire for a Wide Range of Industrial Applications

Product Facts

- Highly flame retardant/non melting
- Limited fire hazard
- 600V rated
- Excellent fluid resistance
- Flexible
- Double insulation (for Class 2 equipment)
- Tough, thin wall
- Small size, light weight

FLT



Applications

FLT dual-wall wire combines flexibility with tough thin wall insulation to enable bundles to be routed through areas in which conventional wires cannot be used. Typical applications include control panels, instruments, lighting equipment, electrical appliances, electric motors, electric pumps, robotics, and the automotive industries.

Available in:	Americas	Europe	Asia Pacific
		■	

Approvals

FLT (Continued)

UL Styles 1385
CSA Class 5851
IEC 332-1

Standard Colors

Color Code	Black 0	Brown 1	Red 2	Orange 3	Yellow 4
Color Code	Green 5	Blue 6	Violet 7	Grey 8	White 9

Physical Characteristics

Small Size

FLT equipment wire 600 volt rated has a 0.20 mm nominal wall thickness compared to 0.25mm and 0.38mm for equivalent PTFE and PVC wires in MIL-W-16878, MIL-W-22759 or BS3G210.

For Example: FLT0111 - 0.35 equipment wire 4.38 grams/meter max.

22 AWG PTFE equipment wire MIL-W-22759 5.54 grams/meter max.

strippers. For details of appropriate tools see separate wire handling guide. The tin-plated copper conductor usually specified is easily soldered or crimped.

Light Weight

Due to the thin wall and low density of the insulation materials, considerable weight savings are made over similarly rated PTFE wires.

General Handling

The flexibility of FLT and the ease with which it takes a 'set' makes it one of the easiest of the 'high performance' wires to install. Stripping is done with conventional die blade

Lengths

FLT is available in long continuous lengths and can be supplied for use on automatic cut and strip preparation machines.

Typical Properties

Temperature rated	(Tin-plated conductor) -65°C to +150°C [-85°F to +302°F]
Rated at 125°C [257°F]	In UL style sheet 1385
Voltage rating	600V
No Voltage rating specified	In UL style sheet 1385
Tensile strength + elongation of insulation	30 N/mm ² , 230%
Notch propagation BS 3G230 0.05 mm notch	Pass
Meets BS4066/IEC332-1 Flammability test	Pass
Solder iron resistance (370°C [698°F], 1 minute)	Pass
Shrinkage @ +150°C [+302°F]	< 1%
Low temperature bend	-65°C [-85°F]

Flexible, Double Insulated, High Performance Wire for a Wide Range of Industrial Applications

FLT (Continued)

Environmental Performance

Temperature Rating

FLT wire is rated for continuous operation from -65°C to +125°C [-85°F to +257°F] and for short periods at much higher temperatures.

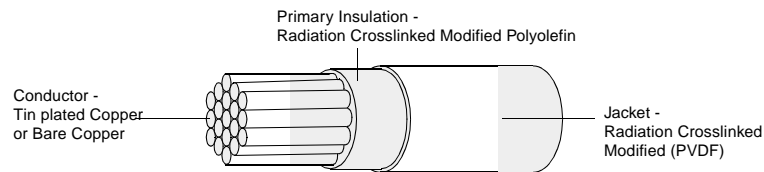
Mechanical Performance

Radiation crosslinking of the FLT insulation significantly improves the following mechanical characteristics; scrape (sharp edges), cut-through resistance and creep resistance.

Solder Iron/Overload Resistance

Radiation crosslinking ensures that the insulation does not melt at high temperature. As a result FLT wire is resistant to hot solder irons and current overloads which would melt most thermoplastic insulations.

Ordering Information



Nominal CSA mm ²	Conductor Stranding No/Dia mm	Conductor Diameter		Finished Wire Maximum Resistance @20°C (68°F) ohms/km	Diameter		Nominal Weight kg/km	Ordering Description
		min. mm [inch]	max. mm [inch]		min. mm [inch]	max. mm [inch]		
0.25	19/0.127	0.55 [.022]	0.63 [.025]	83.6	0.91 [.036]	1.04 [.041]	2.96	FLT011X-0.25-Y
0.35	19/0.15	0.70 [.028]	0.80 [.031]	56.1	1.06 [.042]	1.21 [.048]	4.14	FLT011X-0.35-Y
0.50	19/0.19	0.82 [.032]	0.90 [.035]	40.1	1.18 [.046]	1.31 [.052]	6.63	FLT011X-0.50-Y
0.75	19/0.23	1.05 [.041]	1.15 [.045]	24.7	1.41 [.056]	1.56 [.061]	8.20	FLT011X-0.75-Y
1.00	19/0.25	1.17 [.046]	1.26 [.050]	20.0	1.55 [.061]	1.70 [.067]	10.86	FLT011X-1.00-Y
1.50	19/0.32	1.35 [.053]	1.60 [.063]	13.7	1.73 [.068]	2.06 [.081]	16.47	FLT011X-1.50-Y
2.00	19/0.36	1.66 [.065]	1.85 [.073]	9.9	2.12 [.083]	2.38 [.093]	20.32	FLT011X-2.00-Y
2.50	19/0.41	1.85 [.073]	2.05 [.081]	8.2	2.31 [.091]	2.61 [.103]	26.56	FLT011X-2.50-Y

Note: X = Conductor Type 1 = Tin Plated Copper 9 = Bare Copper
Y = Color (see color code on page 9-58)