



## AP8 – Street Lighting Material

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## AP8 Street Lighting Materials

### 8.1 Approved Materials

The following specifications related to the work involved with road lighting apply:

TNZ M/19	Tubular Steel Lighting Columns
TNZ M/19:2002 Notes	Tubular Steel Lighting Columns
TNZ C/24:1991	Maintenance of Highway Lighting
TNZ C/24:1991 Notes	Maintenance of Highway Lighting
AS/NZS 1158:	Road Lighting
NZS 6705:1986	Luminaires for Road and Street Lighting
NZS 3000:1997	Electrical Installations – Buildings, structures & premises
AS/NZS 4680:1999	Hot dip galvanised coatings on fabricated ferrous articles.

For underground cables the following jointing types are used:

In-line joints at 11kV and 33kV	Heat-shrink polymeric
For terminations at 11kV and 33kV	Heat-shrink polymeric and cold shrink for single core 25mm <sup>2</sup> 11kV terminations. Note that only Raychem brand terminations with shrink or re-enterable roll-on boots are approved for use with ABB SD switch units.
In-line joints 400V	Heat-shrink polymeric “Endless” rubber sleeve with mastic.
Tap-offs 400V	Resin-filled joint box normally (only in retro-fit situations where 400V reticulation is already in place).
	Cap joint compression in above ground connection box.

For all the above joints and terminations except for the 400V resin-filled box, the conductor is joined or lugged using compression techniques.

The 400V tap-offs from multi-core cable make use of a three-phase plus neutral insulation piercing connector and the resin-filled box noted above.



Where aluminium cable is to be terminated onto an overhead line, an in-line compression joint shall be made using a connector blanked off in the centre to prevent ingress of moisture into the cable by capillary action.

Bi-metal connectors and lugs shall be used where appropriate.

Underground connections to neutral screen cables are not permitted.

For more information refer to UND 006: Jointing of overhead and underground cable.

### Low Voltage Cables

The following table lists low voltage cables to be used for new distribution lines.

Cores & Size (mm <sup>2</sup> )	Conductor		Insulation & Sheath	Rating (A)		Application
	Material	Stranding (mm)		Buried Direct	Single way in ducts	
4 x 185	Al	37/2.52	XLPE/PVC	350	295	Distribution line & transformer looms
4 x 120	Al	37/2.03	XLPE/PVC	275	230	Distribution line & transformer looms
4 x 95	Al	19/2.52	XLPE/PVC	240	200	Distribution Line
4 x 70	Al	19/2.14	XLPE/PVC	200	165	Distribution Line
4 x 70	Cu	19/2.14	XLPE/PVC	250	215	Distribution line tee-off to customer
1 x 16NS or 1 x 10NS	Cu	7/1.04	PVC/PVC	74	74	<b>Street Lighting</b>
1 x 4	Cu	7/0.85	PVC/PVC			HW pilot