

Table 32-1: Method of Installation of Cables

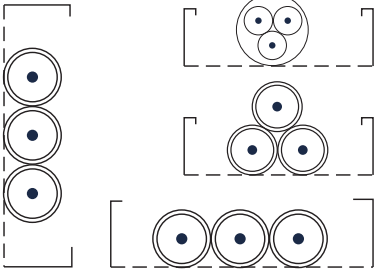
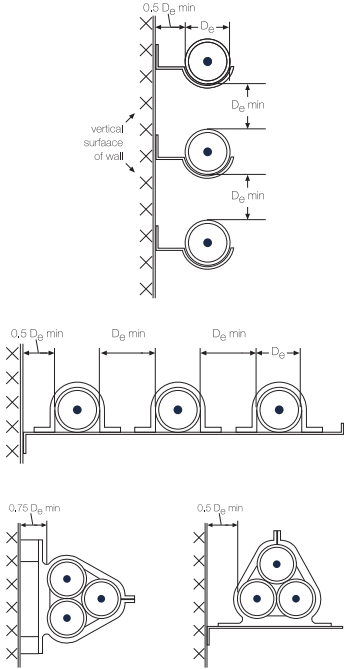
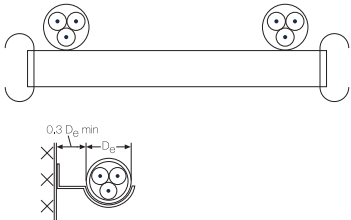

Installation Method	Examples	Appropriate Reference Method for Determining Current-Rating Capacity
Description		
OPEN AND CLIPPED DIRECT:		
Sheathed cables clipped direct to or lying on a non-metallic surface		Method 1
CABLES EMBEDDED DIRECT IN BUILDING MATERIALS:		
Sheathed cables embedded directly in masonry, brickwork, concrete, plaster or the like (other than thermally insulating materials).		Method 1
IN CONDUIT:		
Single core non-sheathed cables in metallic or non-metallic conduit on a wall or ceiling		Method 3
† Single core non-sheathed cables in metallic or non-metallic conduit in a thermally insulating wall or above a thermally insulating ceiling, the conduit being in contact with a thermally conductive surface on one side		Method 4
Multicore cables having non-metallic sheath, in metallic or non-metallic conduit on a wall or ceiling		Method 3

† The wall is assumed to consist of an outer weatherproof skin, thermal insulation and an inner skin of plasterboard or wood-like material having a coefficient of heat transfer not less than 10 W/m²K. The conduit is fixed so as to be close to, but not necessarily touching, the inner skin. Heat from the cables is assumed to escape through the inner skin only.

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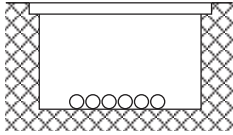
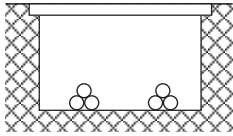
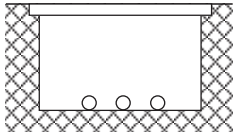
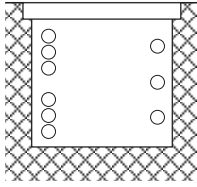
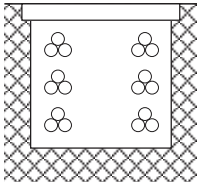
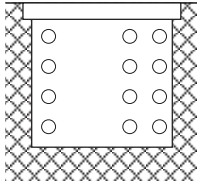
Table 32-2: Method of Installation of Cables

Installation Method Description	Examples	Appropriate Reference Method for Determining Current-Rating Capacity
ON TRAYS:		
<p>Sheathed cables on a perforated cable tray, bunched and unenclosed. A perforated cable tray is considered as a tray in which the holes occupy at least 30% of the surface area</p>		<p>Method 11</p>
IN FREE AIR, ON CLEATS, BRACKETS OR A LADDER:		
<p>Sheathed single-core cables in free air (any supporting metalwork under the cables occupying less than 10% of the plan area):</p> <p>Two or three cables vertically one above the other, minimum distance between cable surfaces equal to the overall cable diameter (D_e); distance from the wall not less than $0.5 D_e$</p> <p>Two or three cables horizontally, with spacings as above</p> <p>Three cables in trefoil, distance between wall and surface of nearest cable $0.5 D_e$ or nearest cables $0.75 D_e$</p>		<p>Method 12</p>
<p>Sheathed multicore cables on ladder or brackets, separation greater than $2 D_e$</p> <p>Sheathed multicore cables in free air distance between wall and cable surface not less than $0.3 D_e$</p> <p>Any supporting metalwork under the cables occupying less than 10% of the plan area</p>		<p>Method 13</p>
<p>Cables suspended from or incorporating a catenary wire</p>		<p>Method 12 or 13, as appropriate</p>

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Table 32-3: Method of Installation of Cables

Installation Method Description	Examples	Appropriate Reference Method for Determining Current-Rating Capacity
CABLES IN TRENCHES:		
<p>Cables in enclosed trench 450 mm wide by 300 mm deep (minimum dimensions) including 100 mm cover</p>	 <p><i>Two single-core cables with surfaces separated by a minimum of one cable diameter</i></p>  <p><i>Three single-core cables in trefoil and touching throughout</i></p>  <p><i>Multicore cables or groups of single-core cables with surfaces separated by a minimum of 50 mm</i></p>	<p>Method 18 Use rating factors in Technical Table 32-14</p>
<p>Cables in enclosed trench 450 mm wide by 600 mm deep (minimum dimensions) including 100 mm cover</p>	<p><i>Single-core cables arranged in flat groups of two or three on the vertical trench wall with surfaces separated by one diameter with a minimum distance of 50 mm between groups. Multicore cables installed with surfaces separated by a minimum* of 75 mm. All cables spaced at least 25 mm from the trenched wall</i></p> 	<p>Method 19 Use rating factors in Technical Table 32-14</p>
<p>Cables in enclosed trench 600 mm wide by 760 mm deep (minimum dimensions) including 100 mm cover</p>	<p><i>Single-core cables arranged in groups of two or three in flat formation with the surfaces separated by one diameter or in trefoil formation with cables touching</i></p>  <p><i>Groups separated by a minimum* of 50 mm either horizontally or vertically. Multi core cables installed with surfaces separated by a minimum* of 75 mm either horizontally or vertically. All cables spaced at least 25 mm from the trench wall</i></p> 	<p>Method 20 Use rating factors in Technical Table 32-14</p>

* Larger spacing to be used where practicable

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