

Minimum Internal Radii of bends for cables subject to flexing and of bends in cables for fixed wiring - low voltage

	INSULATION	FINISH	OVERALL DIAMETER	MINIMUM INTERNAL RADIUS OF BEND (TIME OVERALL DIAMETER OF CABLE)	
Minimum internal radii of bends for flexible cables and flexible cords in a fixed situation.	Rubber, PVC or XLPE	Non-metallic sheath and / or textile braid	Not exceeding 10mm	2	
			Exceeding 10mm but not exceeding 25mm	3	
			Exceeding 25mm	4	
Minimum internal radii of bends for flexible cables and flexible cords and subject of flexing.	Rubber, PVC or XLPE	Non-metallic sheath and / or textile braid	Not exceeding 25mm	6	
			Exceeding 25mm	8	
		Non-metallic sheath with textile reinforcement screen or flexible armour ‡	Not exceeding 25mm	8	
			Exceeding 25mm	10	
Minimum internal radii of bends in cables for fixed wiring	Rubber, PVC or XLPE	Non-armoured (excluding smooth aluminium sheath)	Not exceeding 10mm	3	
			Exceeding 10mm but not exceeding 25mm	4*	
			Exceeding 25mm	6*	
		Armoured (excluding smooth aluminium sheath)	Any	6*	
			Smooth aluminium sheath with or without armour	Not exceeding 12.5mm	8†
		Exceeding 12.5mm but not exceeding 20mm		10†	
		Exceeding 20mm but not exceeding 30mm		12†	
	Impregnated paper	Lead or corrugated aluminium sheath with or without armour	Any	12	
			Smooth aluminium sheath with or without armour	Not exceeding 30mm	12†
				Exceeding 30mm but not exceeding 50mm	15†
		Exceeding 50mm		18†	
		Mineral	Copper sheath with or without PVC covering	Any	6

At temperatures approaching 0°C, standard grade PVC becomes rigid and brittle, therefore, care should be taken when bending cables at low temperature.

* For circular conductors only. For shaped conductors, the minimum bending radius factor is 8. Otherwise this table applies to both circular and shaped conductors.

†The factors applied are applied to the diameter over the aluminium sheath.

‡Armoured flexible cables are suitable for use over reels or pulleys only when the movements are slow and intermittent.

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