



Short-circuiting and earthing systems (installations)

### Insulating sticks for substation use

Short circuiting and earthing systems for substation. Telescopic sticks for voltage detectors and earthing systems for use in dry and wet conditions.

Reference	~	∅ mm	↔ Folded	↔	kg
CE-4-21-(*)	90 kV	41/32	1.15 m	2 m	1.5
CM-7-10-A	Rallonge*	36	-	1 m	1
CE-75-(*)	75 kV	41/32	1.15 m	2 m	1.2

(\*) Specify type of mounting when ordering: C or K. Delivered with wall mounted support CI-10-D.  
\* For CE-4-21.

### Standard sticks

For short circuiting and earthing system. For use in dry conditions.

Reference	~	∅ mm	↔	g
CF-3-72...-(*)	72.5 kV	36	1.50 m	880
CF-3-90...-(*)	90 kV	36	2 m	1 060

(\*) Specify type of mounting when ordering: C or K. Delivered with wall mounted support CI-10-D.

### Sticks with skirts

For short circuiting and earthing system. For use in dry conditions.

Reference	~	∅ mm	↔	kg
CF-5-40-(*)	40 kV	36	1.50 m	1.55
CF-5-90-(*)	90 kV	36	2 m	1.55

(\*) Specify type of mounting when ordering: C, K or E.

### Short length stick

For MV telescopic sticks.

Reference	~	↔	g
CE-3-24-C	20 kV	Insulating Length = 0.52 Overall Length = 0.80 Folded Length = 0.56	370



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∅ Diameter   ↔ Total length   ⚖ Weight   📏 Dimensions

## Telescopic sticks for voltage detector

Suitable for wet conditions.

Reference	~	∅ mm	↔ Folded up	↔	kg
CE-4-21-(*)	90 kV	41/32	1.15 m	2 m	1.5
CE-4-30-C	150 kV	41/32	1.75 m	3 m	2
CM-7-10-A	Extension*	36	–	1 m	1
CE-75-(*)	75 kV	41/32	1.15 m	2 m	2

(\*) Please specify type C or K when ordering.  
Delivered with wall mounted supports CI-10-D.  
\* For CE-4-21.

Lockable button.

## Fixed length sticks

Suitable for wet conditions.

Reference	~	↔	Skirt nbr	kg
CF-5-40-(*)	40 kV	1.50 m	1	1.15
CF-5-90-(*)	90 kV	2 m	1	1.55
CF-5-110-(*)	110 kV	2.50 m	2	2
CF-5-170-(*)	170 kV	3 m	3	2.4

(\*) Please specify type C or K when ordering.

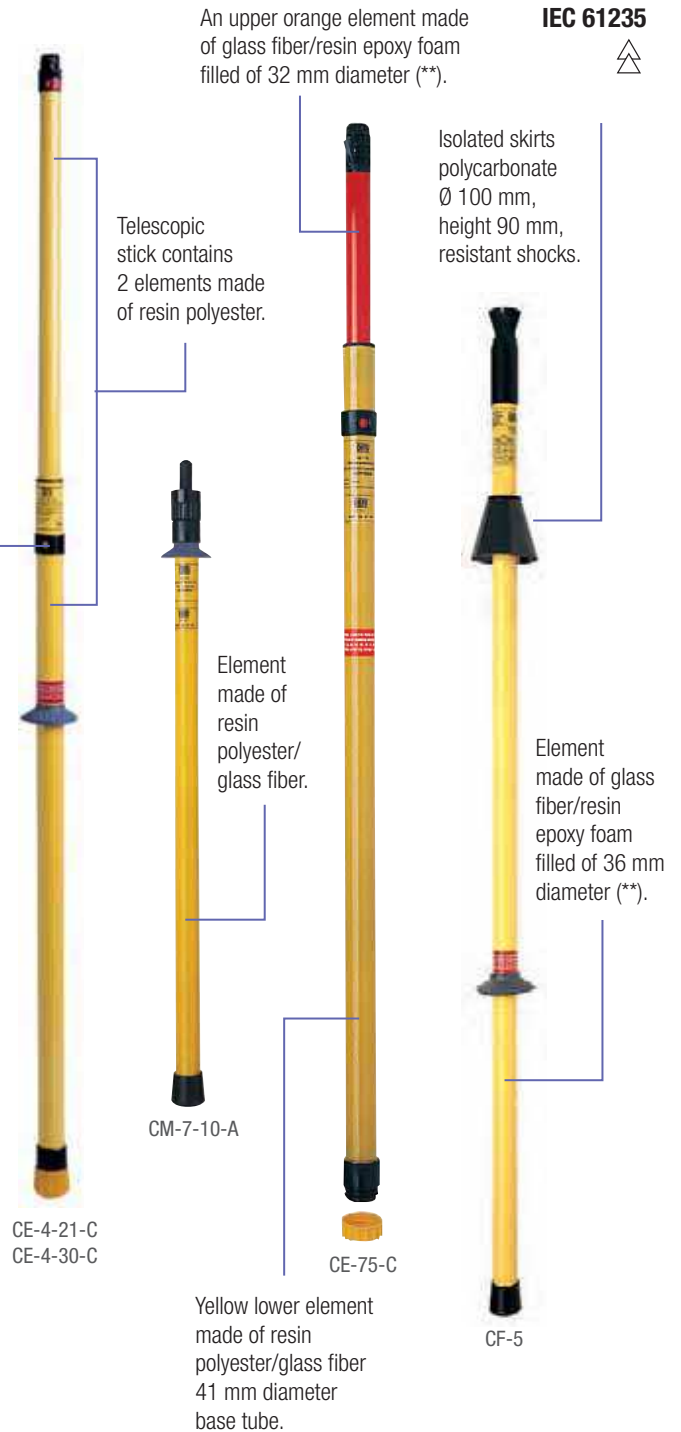
## Wall mounted supports

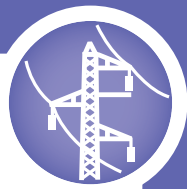
For sticks and voltage detectors. Plastic.

Reference	Top ∅ mm	Bottom ∅ mm
CI-06-D	28-30	36 max
CI-10-D	32-36	58 max
CI-12-D	28-30	56 max
CI-08	16-20	36 max

Delivered with wood screws.

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Insulating sticks

## Insulating sticks for short-circuiting and earthing systems

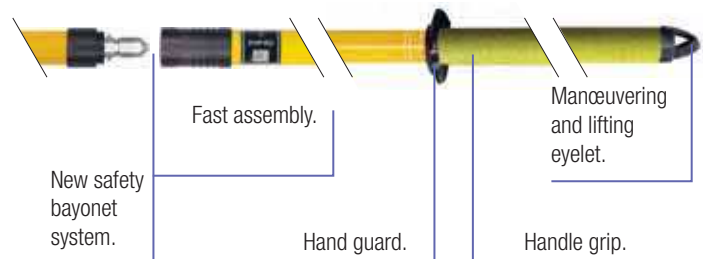
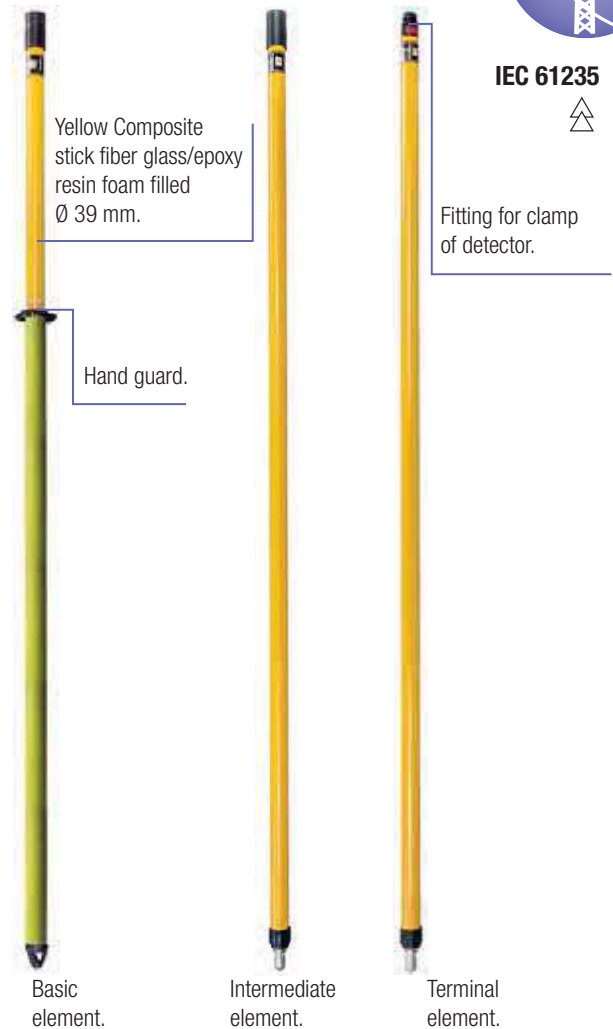
This range allows a stick-length limitation in case of space requirements and carrying capabilities.

For common applications a serie of complete sets including 2 or 3 elements are made to give simple solutions for working distance from 2 to 6 meters.

Reference	↔		isolation	kg
	smallest end fitting	biggest end fitting		
<b>Basic</b>				
CM-4410	1.13 m	–	0.7 m	1.25
CM-4415	1.63 m	–	1 m	1.7
CM-4420	2.13 m	–	1.2 m	2.7
CM-4425	2.63 m	–	1.5 m	3.2
<b>Intermediate</b>				
CM-4410-I	1.165 m	–	0.9 m	1.2
CM-4415-I	1.665 m	–	1.4 m	1.6
CM-4420-I	2.165 m	–	1.9 m	2.5
CM-4425-I	2.665 m	–	2.4 m	3
<b>Terminal</b>				
CM-4410-(* )	1.115 m	1.21 m	0.9-1 m	0.9
CM-4415-(* )	1.615 m	1.71 m	1.4-1.5 m	1.3
CM-4420-(* )	2.115 m	2.21 m	1.9-2 m	2.1
CM-4425-(* )	2.615 m	2.71 m	2.4-2.5 m	2.6

(\* ) Add end-fitting: B-C-E-H-K-T-D.

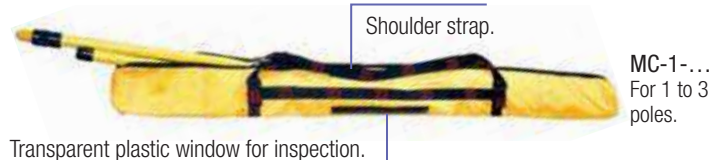
Reference	↔	g
	smallest end fitting	
CM-4400-J	0.362 m	950



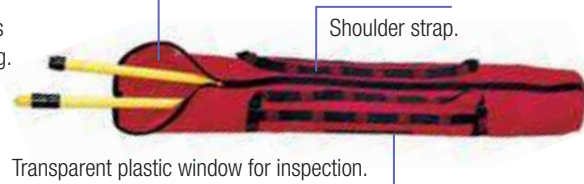
## Insulating Stick bags

Strong waterproof canvas cases with a heavy duty zipper closure.

Reference	mm
CM-1-10	1.30 m de Lg
CM-1-15	1.80 m de Lg
CM-1-20	2.40 m de Lg
CM-3-03	0.575 x 1.950 (elmt 1.75 m de Lg)
CM-3-04	0.575 x 2.450 (elmt 2 m de Lg)
CM-3-05	0.575 x 2.850 (elmt 2,50 m de Lg)
CM-3-06	0.575 x 3.400 (elmt 3 m de Lg)



The flared shape allows easy accessories positionning. No need to take them out.



## Insulating sticks for manoeuvring detectors & short-circuiting and earthing systems

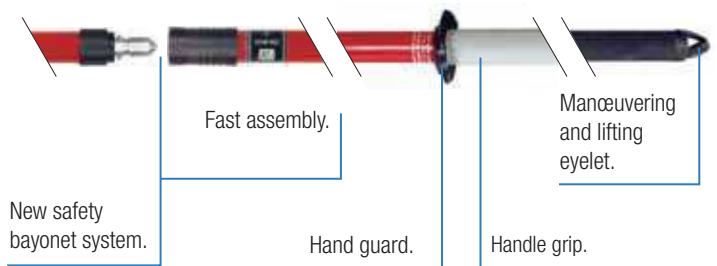
This range thus allows a stick-length limitation in case of space requirements and carrying capabilities.

For common applications a serie of complete sets including 2 or 3 elements are providing simple solutions for working distance from 2 to 6 meters.

Reference	↔ smallest end fitting	↔ biggest end fitting	↔ Insulating	kg
<b>Basic</b>				
CM-4610	1.13 m	–	0.08 m	1.35
CM-4615	1.63 m	–	0.33 m	1.8
CM-4620	2.13 m	–	0.33 m	2.8
CM-4625	2.63 m	–	0.83 m	3.3
<b>Intermediate</b>				
CM-4610-I	1.165 m	–	0.8 m	1.3
CM-4615-I	1.665 m	–	1.3 m	1.7
CM-4620-I	2.165 m	–	1.8 m	2.6
CM-4625-I	2.665 m	–	2.3 m	3.1
<b>Terminal</b>				
CM-4610-(* )	1.115 m	1.21 m	0.78 m	1
CM-4615-(* )	1.615 m	1.71 m	1.28 m	1.4
CM-4620-(* )	2.115 m	2.21 m	1.78 m	2.2
CM-4625-(* )	2.615 m	2.71 m	2.28 m	2.7
<b>Fixed sticks</b>				
CM-4115-(* )	1.575 m	1.675 m	0.82 m	1.35
CM-4120-(* )	2.075 m	2.175 m	1.07 m	1.8
CM-4125-(* )	2.575 m	2.675 m	1.32 m	2.8
CM-4130-(* )	3.075 m	3.175 m	1.82 m	3.3

(\* ) Reference to be completed by fitting: C-E-H-K-T-D.

Reference	↔ smallest end fitting	g
CM-3900-J	0.36 m	950



## Set of sticks

Complete sets of sticks for common applications.

Reference	Composition	↔
CM-4220-(* )	2 elements : CM-4610+CM-4610-(* )	2 m
CM-4230-(* )	2 elements : CM-4615+CM-4615-(* )	3 m
CM-4240-(* )	2 elements : CM-4620+CM-4620-(* )	4 m
CM-4345-(* )	3 elements : CM-4615+CM-4615-I+CM-4615-(* )	4.5 m
CM-4360-(* )	3 elements : CM-4620+CM-4620-I+CM-4620-(* )	6 m

(\* ) Reference to be completed by fitting: C-E-H-K-T-D.



## Insulating sticks for short circuiting and earthing systems

**CM-6** series is recommended for cables  $\geq 95 \text{ mm}^2$ . Yellow colour elements, with superior characteristics, they are connected between them without any prior order of assembly. These elements allow "long length" assemblies which can support short-circuit systems with large cross-section cables. Shockproof guard and pole end cap. Yellow colour elements.



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Reference	↔	∅ mm	kg
<b>CM-6-15</b>	1.5 m	47	2.4
<b>CM-6-20</b>	2 m	47	3.2
<b>CM-6-25</b>	2.5 m	47	4
<b>CM-6-30</b>	3 m	47	4.8

## Earth clamps for over head live networks and substations

Copper aluminium bronze earth clamps.

Reference	Rating	Use	Connection ∅ (mm)	□ mm	⚡ mm	g
<b>MT-843</b>	40 kA/1 s	Substation/ Overhead line	Hole: ∅ 12.5	45 x 106 x 165	• ∅ 6 -25 — 0 - 35	950
<b>MT-843-P</b>	40 kA/1 s	Substation	3 holes: ∅ 12.5	45 x 106 x 165	• ∅ 6 -35 — 0 - 35	950
<b>MT-847</b>	25 kA/0.5 s	Overhead line	Hole: ∅ 13	45 x 106 x 170	— 0 - 30	1000
<b>MT-852</b>	63 kA/0.5 s	Substation	Hole: ∅ 13	70 x 125 x 155	Fixed points	1400
<b>MT-853</b>	40 kA/0.5 s	Substation	Hole: ∅ 13	65 x 130 x 135	Fixed points	1000



MT-843



MT-843-P



MT-847



MT-852



MT-853

## Copper cables

Extra-flexible braided multi-strand copper. Delivered to the meter with a minimum of 5 meters. Available in vinyl or silicone sheath.



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See page 150.