

GENERAL

SPE 485 three phase outdoor isolator, is designed to be employed in rural or suburban districts distribution networks up to 36 kV and they are used for

disconnection of lines or transformation spots on outdoor pole. It is pantograph disconnection with central oscillating insulator.

MOUNTING

SPE 485 outdoor isolator can be **mounted** on pole top or vertical position.

They are suitable for metal, concrete or timber poles, through standard fixing devices or special on request.

CURRENT CARRYING SET

Moving contact consists in a pantograph made of three blades, two of them mounted in parallel.
Fixed contact is made of bent sheet having a feature, which ensure an optimal working.
 For both, material is copper Cu-ETP 99,90 tin-coated. Contacts pressure is controlled by stainless steel springs during normal conditions and by the

self-tightening action when high current flow through them in particular conditions.
 Stainless steel bolts or brass clamps on request, carry out connecting of copper or aluminium alloy cables from 4.5-to14 mm of diameter.
 All small components like bolts, pins of the current carrying set, are made of stainless steel

BREAKING DEVICE

SPE 485 outdoor isolator is equipped with a device that allows low load **breaking capacity**. Breaking comes across the air, it consist of a stainless steel

whip spring loaded by the moving contacts during opening phase and then quickly released

INSULATORS

Insulating components used are the following:

- **High-quality glazed porcelain insulators**
- **Glass insulators**
- **Composite in fibre glass and silicone rubber insulators**
- **Other on request.**

All kind of insulators have hot dip galvanized cast iron fittings and are in accordance to IEC standards. Different leakage distance can be chosen according to the environment pollution level.

OPERATING MECHANISM AND OPERATING DEVICES

Operating mechanism The opening / closing speed is dependent of the operator.

Operating devices used are the following:

- **Manual intermediate transmission device** consists on a balancer manoeuvrable through an insulating rod.
- **Manual bottom transmission device** consists on a handle control manoeuvrable directly.

Devices are braced to the operating mechanism by means of one or more 1" pipe transmission rods and transmitting rod joint. An eyes hook allows to lock the operating device in open or closed position. Optional padlock can be fitted.
 They are made of welded structural and bent metal sheets, protected against corrosion by hot-dip galvanization treatment.
 Different operating devices are available on request.

MANUFACTURING, STANDARDS, QUALITY ASSURANCE

SPE 485 outdoor isolator is born from the experience of Eleron and can boast thousands installations and many years of duty.

The Eleron **manufactures** directly main parts of disconnecter as contacts, frame, operating mechanism and devices. Remaining parts come from chosen suppliers, finally Eleron carry out to assembling and test the product.

An internal standard **Quality Assurance** in compliance with governs all manufacturing process UNI EN ISO 9001 standard

Before shipment, all SPE 485 outdoor isolators are subject to the following **routine tests**:

- Dielectric test
- Measurement of the resistance of the main circuit
- Mechanical operating test

SPE low load break switch isolators comply with the following **standards**:

- International IEC 62271-102
- National CEI EN 62271-102
- ENEL (Italian Electricity Board)

TECHNICAL CHARACTERISTICS

Ambient temperature	[°C]	-25÷50	
Nr. of mechanical manoeuvre	/	1000	
Ice making capacity	mm	10	
Isolator's electrical characteristics		24kV	36kV
Rated normal voltage	[kV]	24	36
Rated withstand voltage toward earth and between phases (50-60 Hz/1 min.)	[kV]	50	70
Rated withstand voltage between open contacts (50-60 Hz/1 min.)	[kV]	60	80
Impulse withstands voltage toward earth and between phases	[kV]	125	170
Impulse withstands voltage between open contacts	[kV]	145	195
Rated normal frequency	[Hz]	50÷60	
Rated normal thermal current	[A]	400÷630	
Rated admissible short-time current (1 sec.)	[kA]	12,5	
Rated breaking capacity	[A]	10	
Rated breaking capacity of capacitive current	[A]	5	
Rated breaking capacity of inductive current	[A]	1	

DIMENSIONS

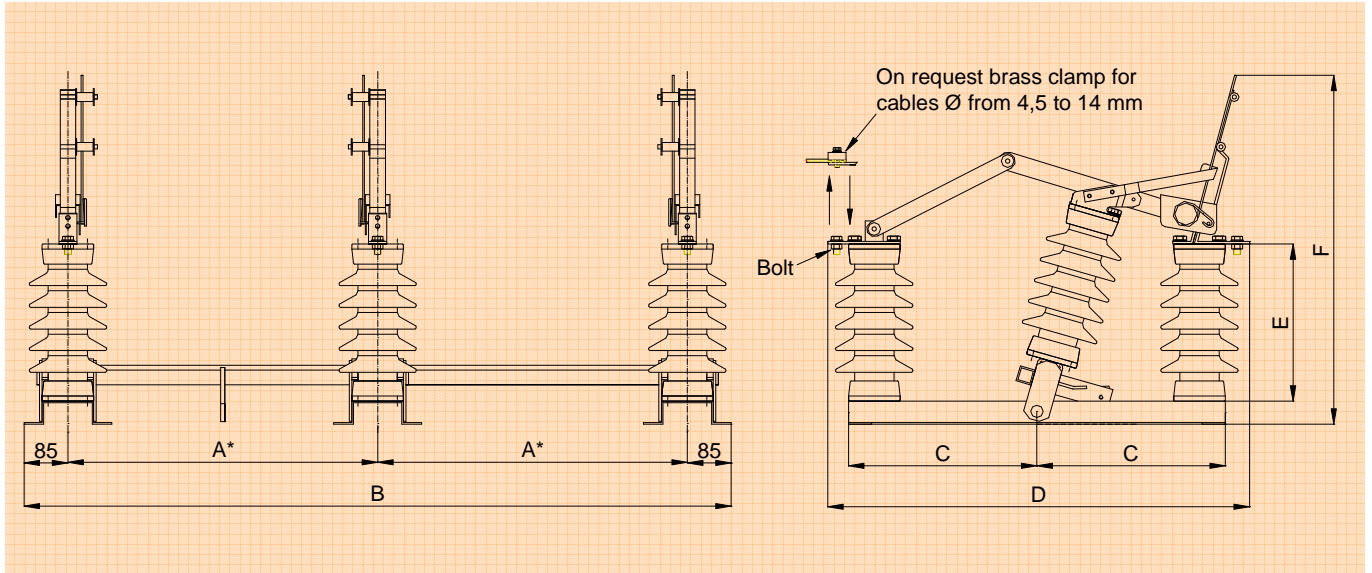
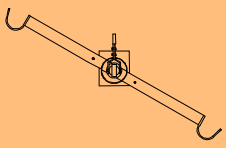


Fig.1

Overall dimensions (mm)	A*	B	C	D	E	F
kV 24	600	1370	365	820	305	680
kV 36	700	1570	465	1020	445	820

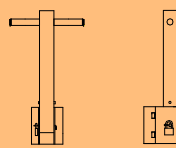
* Different centre pole available

OPERATING DEVICES AND ACCESSORIES



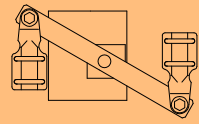
Operating balancer suitable for concrete, metal or timber poles. Band-it fixing

2.a



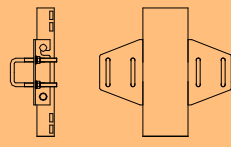
Handle control suitable for concrete, metal or timber poles. Band-it fixing

2.b



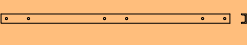
Transmitting rod joint suitable for concrete, metal or timber poles. Band-it fixing

2.c



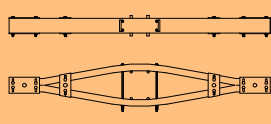
Vertical switch disconnecter support base. Band-it fixing

2.d



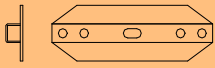
Steel crossbar for poles (mounted on 2.d or 2.f)

2.e



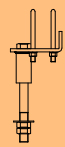
ENEL standard steel crossbar overhead lines for top pole switch disconnecter mounting (2.h and 2.e coupling), suitable for concrete, metal or timber poles having top diameter from 130 to 310 mm

2.f



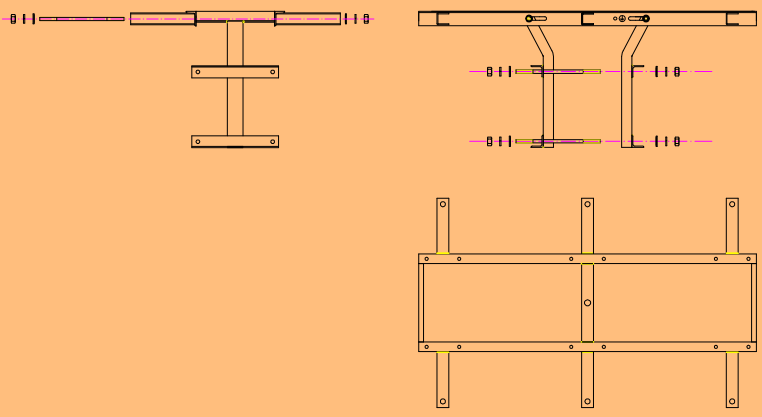
ENEL standard pole top steel crossbar

2.g



Horizontal switch disconnecter support base on steel crossbar (for steel crossbar 2.f)

2.h




Pole top switch disconnecter support base suitable for concrete, metal or timber poles having top diameter from 180 to 270 mm

2.i



Transmitting rods

2.l

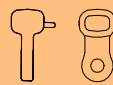


Insulated rod

2.m

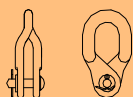


2.n

Band-it size $\frac{3}{4}$ " (19mm) for
device fixing.

2.o

Socket – eye



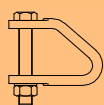
2.p

90° shackle



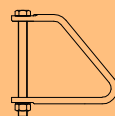
2.q

Ball - eye



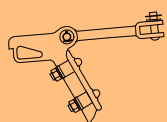
2.r

Tower fitting light 70mm



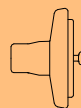
2.s

Tower fitting light 172mm



2.t

Tension clamp



2.u

Glass or composite fibre
glass and silicon rubber
suspension insulator

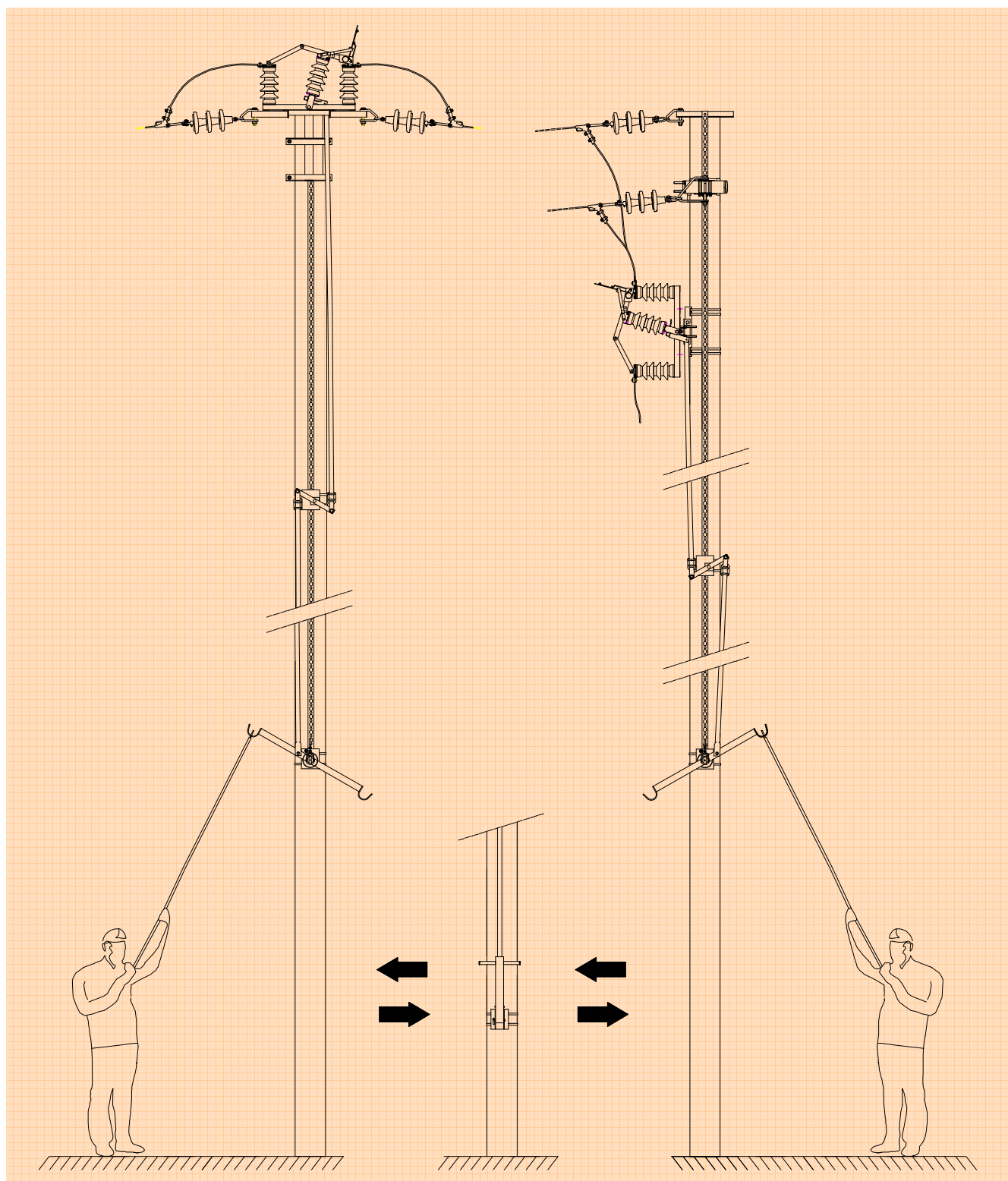
TYPICAL INSTALLATION ON POLE

Fig.3

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