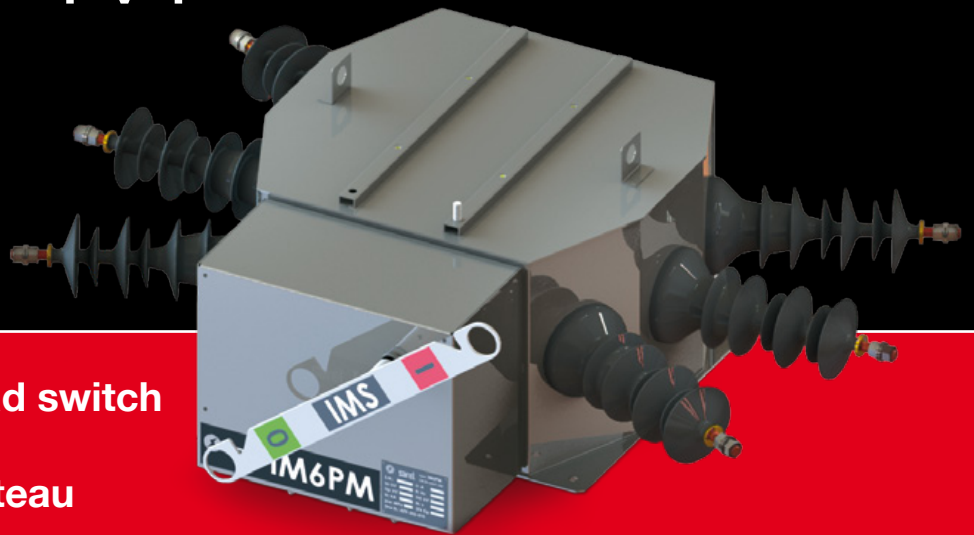


IM6-PM

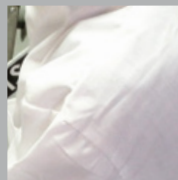
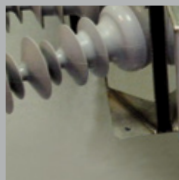
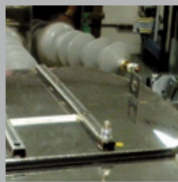
24÷36kV

Pole mounted on-load switch
Sezionatore da palo
Interrupteur pour poteau



IM6-PM

24÷36kV



Pole mounted on-load switch
Sezionatore da palo
Interrupteur pour poteau

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Generalities Generalità Généralités

The *on-load* outdoor switches **IM6-PM** series are made up of a stainless steel housing, filled with 130kPa abs. pressured SF6 gas, operative life sealed (Norms IEC 62271-103).

The movable contacts are set up on the insulated rotary shaft, inside the stainless steel body. The fixed contacts are mounted on a polycarbonate support. The system is in keeping with the IEC Standards annex EE, relating to sealed pressure systems.

The metal casing is equipped with a safety valve, which ensures safety in case of failure due to overpressure of the container; the pressure is constantly monitored by a proper manometer assembled inside the operating mechanism and visible from the outside.

The rotary motion of the shaft is made by an operating mechanism placed on the front.

The switch has two different positions: close and open, with an effective locking system that prevents incorrect operations.

The switch **IM6-PM** series doesn't require maintenance even if installed in harsh climatic conditions such as saline and corrosive environments, snow and ice.

Gli interruttori di manovra-sezionatori per esterno serie **IM6-PM** sono costituiti da un involucro in acciaio inox riempito di gas SF6 alla pressione di 130kPa assoluti, sigillati per la vita operativa (Norme IEC 62271-103).

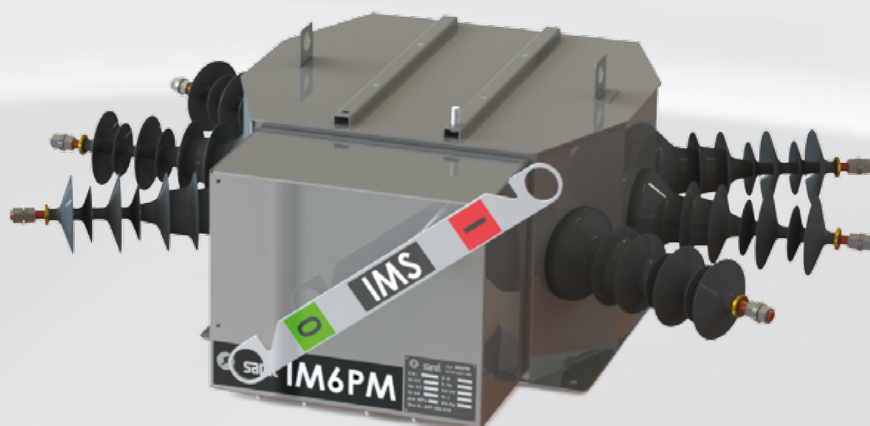
All'interno dell'involucro è posizionato un albero isolante sul quale sono assemblati i contatti mobili. I contatti fissi sono montati su un supporto in polycarbonato. Il sistema risponde alle normative CEI allegato EE, relative ai sistemi a pressione sigillata.

L'involucro metallico è corredato di una valvola di sicurezza che interviene in caso di sovra pressioni interne; la pressione è costantemente monitorata da un apposito manometro montato all'interno del comando e visibile dall'esterno.

Il movimento di rotazione dell'albero è ottenuto attraverso un comando meccanico posto sul fronte dello stesso.

L'apparecchio può assumere due posizioni, chiuso e aperto, presentando un efficace sistema di interblocco che previene manovre errate.

Il sezionatore serie **IM6-PM** non richiede alcuna manutenzione anche se installato nelle più gravose condizioni climatiche, quali ambienti salini, ambienti corrosivi, neve e ghiaccio.



Les interrupteurs pour extérieur série **IM6-PM** sont constitués par une enveloppe en acier inox rempli en SF6 à la pression de 130kPa absolus, scellés pour la vie opérationnelle (Normes IEC 62271-103).

A l'intérieur de l'enveloppe est positionné un arbre isolant sur lequel ont été assemblés les contacts mobiles. Les contacts fixes sont montés sur un support en polycarbonate. Le système est conforme aux Normes IEC annexe EE, concernant les systèmes à pression scellée.

L'enveloppe est équipé d'une valve de sûreté qui intervient dans le cas de surpressions internes ; la pression est régulièrement surveillée par un spécial manomètre monté sur la commande et visible à l'extérieur.

Le mouvement de rotation de l'arbre est obtenu par une commande mécanique placée sur le front de l'interrupteur même.

L'appareil peut avoir deux positions: fermé et ouvert, et il est doté d'un efficace naturel système de verrouillage qui prévient les manœuvres incorrectes.

L'interrupteur série **IM6-PM** ne nécessite aucune maintenance, même si installé en conditions climatiques extrêmes comme environnements salins et corrosifs, neige et glace.



Employment Impiego Emploi

The *on-load* outdoor switches **IM6-PM** series can be installed on the top or along the pole; they are employed for the disconnection of overhead lines.

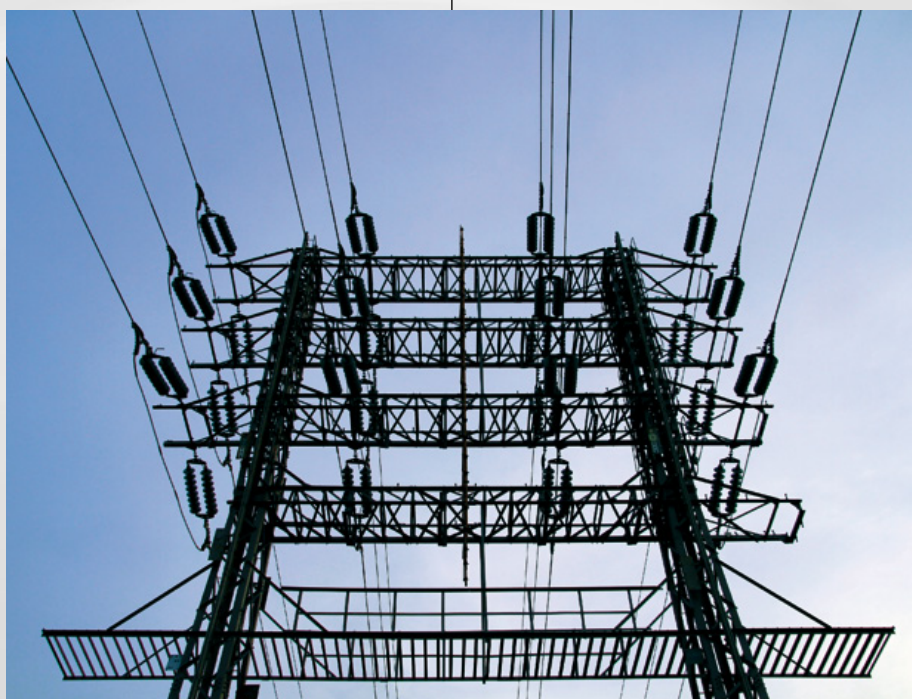
The particular design and the possibility of applying a motorized control make it interfaceable with the most modern automatic systems for the remote control.

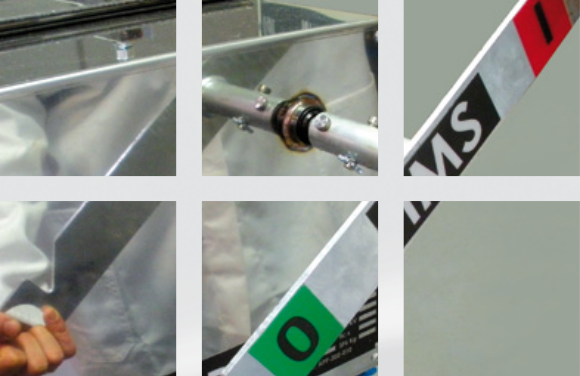
Gli interruttori di manovra-sezionatori per esterno serie **IM6-PM** sono installati in testa o lungo il palo; sono impiegati per il sezionamento delle linee aeree.

Lo specifico design e la possibilità di applicazione di un comando motorizzato lo rendono impiegabile con i più moderni sistemi automatici di telecomando.

Les interrupteurs pour extérieur série **IM6-PM** sont installés au sommet du poteau ou sur le poteau; sont utilisés pour le sectionnement des lignes aériennes.

Le design spécifique et la possibilité d'application d'une commande motorisée le rendent utilisable sur les plus modernes systèmes automatiques de la télécommande.

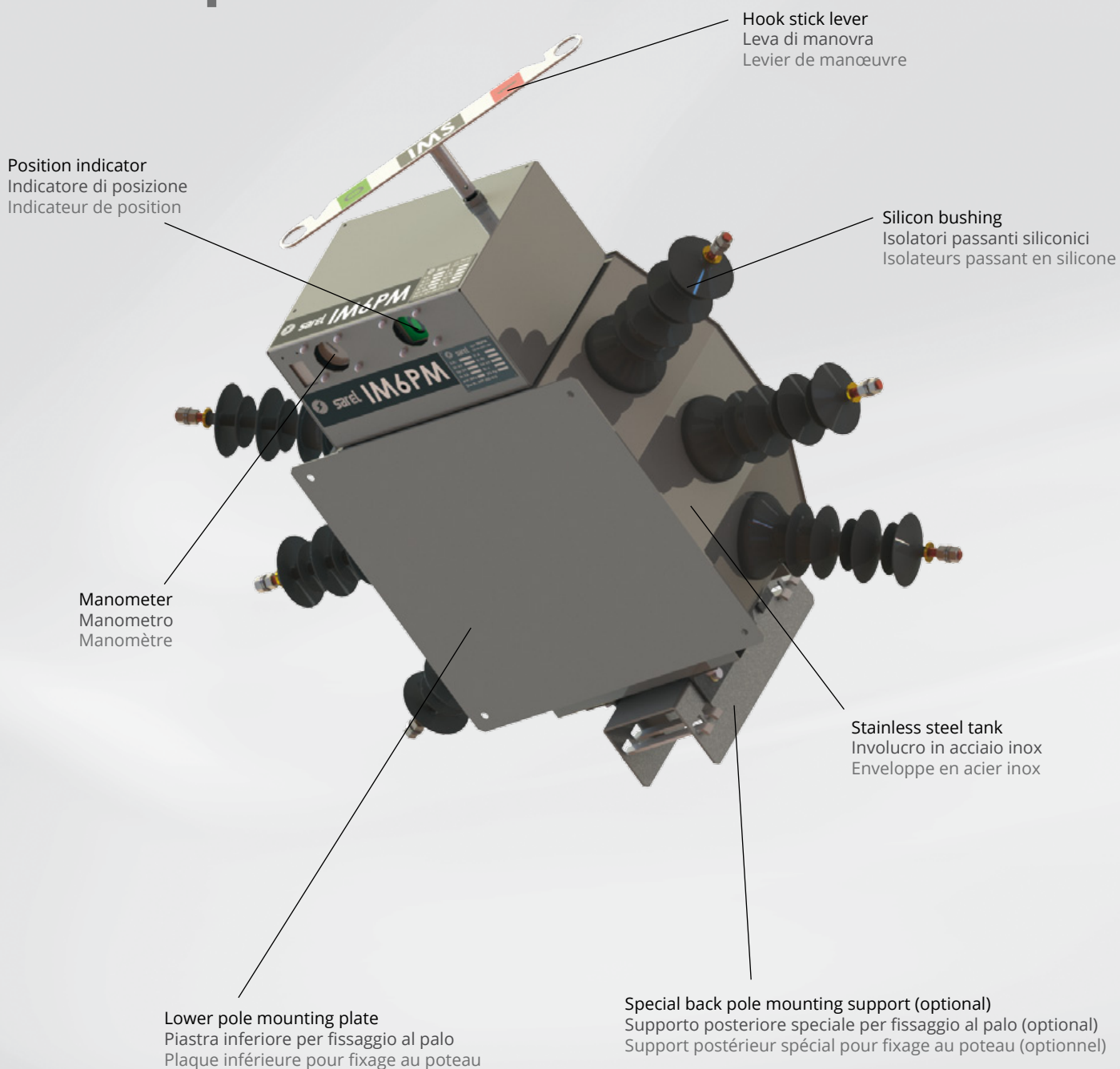




Description

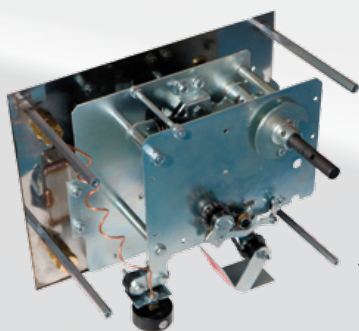
Descrizione

Description





KS Operating mechanism Comando KS Commande KS



Dead point passing standard manual operating mechanism.

The necessary effort to operate is obtained using a proper lever to compress a spring. Passed the dead point, the lever causes the closing of the switch.

The rotation of the lever in the opposite direction recharges the spring that, passing the dead point again, opens the switch.

Consequently the speeds of operations are unrelated from the operator.

Comando standard manuale a passaggio punto morto.

L'energia necessaria per la manovra è ottenuta comprimendo una molla, con l'aiuto di un'apposita leva, che al passaggio del punto morto provoca la chiusura dell'apparecchio.

La rotazione della leva nel senso inverso ricarica la molla e al passaggio del punto morto provoca l'apertura.

Di conseguenza la velocità della manovra di chiusura ed apertura è indipendente dall'operatore.

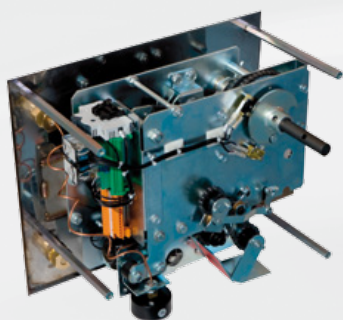
Commande standard manuelle à passage de point mort.

L'énergie nécessaire pour la manœuvre est obtenue par compression d'une ressort avec un levier, qui à passage de point mort provoque la fermeture de l'interrupteur.

La rotation du levier dans le sens contraire recharge le ressort, qui à passage de point mort provoque l'ouverture.

La vitesse des manœuvres de fermeture et d'ouverture est indépendante de l'opérateur.

KSM Operating mechanism Comando KSM Commande KSM



Dead point passing standard motorized operating mechanism.

Functioning concept is the same as manual KS operating mechanism, but it can operate both manually and remotely, by means of a motor.

The motor operating time to change the status of switch is lower than 7 seconds.

Comando standard motorizzato a passaggio punto morto.

Il principio di funzionamento è lo stesso del comando manuale KS, ma oltre alla manovra manuale è possibile effettuare la manovra a distanza grazie ad un motore.

Il tempo di funzionamento del motore per il cambio di stato è inferiore a 7 secondi.

Commande standard motorisée à passage de point mort.

Le principe de fonctionnement est le même de la commande KS, mais la manœuvre à distance est possible par un moteur.

Le temps de fonctionnement du moteur pour le changement d'état est inférieur à 7 secondes.



Norms and homologations

Norme e certificati

Normes et certificats

Test Report		CESI	Approved	Page 1
Client	SABIS S.p.A.			
Address of the Client	Tegoniato Sedi - Via. San Cristobal - 20090 Lodi (LO) - ITALY			
Tested equipment	Three-pole fixed vacuum circuit-breaker for grounded and ungrounded neutral systems, set in an insulated metal-enclosed switchgear and cubicle, equipped by 70 kV system, with remote and setting switch			
Test carried out	Short-circuit withstand and peak withstand current test Short-circuit test			
Standard/Specification	IEC 62271-200 (2004-11) IEC 62271-200 (2004-11)			
Test date	From: March 25, 2009 To: March 25, 2009			
No. of pages	22	No. of pages annexed	09	
Issue date	June 5, 2009			
Prepared	G. G. Giovanni Perugini			
Verified	G. G. Giovanni Perugini			
Approved	L. P. L. P. Nicola Belfanti			

Type Test Certificate		CESI	Approved	Page 1
Type Test Certificate of	Short-circuit performance			
Apparatus	Three-pole fixed vacuum circuit-breaker for grounded and ungrounded neutral systems, set in an insulated metal-enclosed switchgear and cubicle, equipped by 70 kV system, with remote and setting switch			
Designation	VLVCB			
Rated voltage	14.5 kV - Rated normal current (25 °C) - Rated frequency 50 Hz			
Manufacturer	SABIS S.p.A.			
Tested for	Tegoniato Sedi - Via. San Cristobal - 20090 Lodi (LO) - ITALY			
Issued on	From: March 25, 2009 To: March 25, 2009			
Tested by	CESI S.p.A. - Milano - ITALY			
The apparatus concerned is in accordance with the description, drawings and photographs incorporated in the reference documents, identified in the certificate, has been subjected to the series of proving tests in accordance with:				
IEC 62271-200 Edition 2 (2004-11)				
This Type Test Certificate has been issued by CESI following exclusively the IEC Guidelines.				
The results are shown in the report of Testing Test and the reference documents in the Test Report. The values obtained and the general performance are considered to comply with the above standards and to justify the ratings assigned by the Manufacturer as stated on page No. 2.				
The Certificate applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designation with that tested rests with the Manufacturer.				
Only original reproductions of this Certificate, or reproductions of this page accompanied by any page on which are stated the reference number of the apparatus tested, are permitted without written permission from CESI.				
No. of pages	3	No. of pages annexed	0	
Issue date	November 15, 2009			
Prepared	G. G. Giovanni Perugini			
Verified	G. G. Giovanni Perugini			
Approved	L. P. L. P. Nicola Belfanti			

IM6-PM switches have positively passed, at official laboratories, all type tests according to the International IEC Standard.

The control quality system assures that the whole production process maintains an high and steady quality level.

Before the supply, every switch is submitted to meticulous mechanical and electrical tests, included the previewed acceptance trials from IEC Standards below.

Gli apparecchi **IM6-PM** hanno positivamente superato in laboratori ufficiali tutte le prove di tipo in accordo alle Norme internazionali IEC.

Il sistema di controllo qualità assicura che l'intero processo di produzione mantenga un livello qualitativamente alto e costante.

Prima della fornitura, ciascun sezionatore è sottoposto in fabbrica a minuziose prove e controlli, sia di tipo meccanico sia di tipo elettrico, incluse le prove di accettazione previste dalle Norme IEC sottocitate.

Les interrupteurs **IM6-PM** ont positivement passé, dans laboratoires officiels, tous les essais de type en accord aux normes internationales IEC.

Le système de contrôle qualité assure que tout le procès de production garde un niveau qualitativement haut et constant.

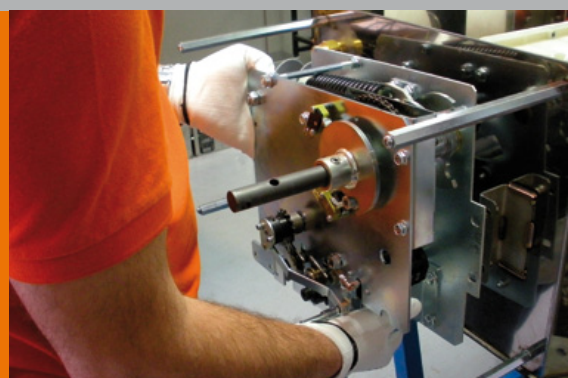
Avant la fourniture chaque interrupteur est soumis, directement à l'usine, à des contrôles, soit de type mécanique soit de type électrique, inclus les essais d'acceptation prévues par les normes IEC ci-dessous indiquées.

Standards
IEC 62271-102
IEC 62271-105
IEC 62271-103

Norme
IEC 62271-102
IEC 62271-105
IEC 62271-103

Normes
IEC 62271-102
IEC 62271-105
IEC 62271-103

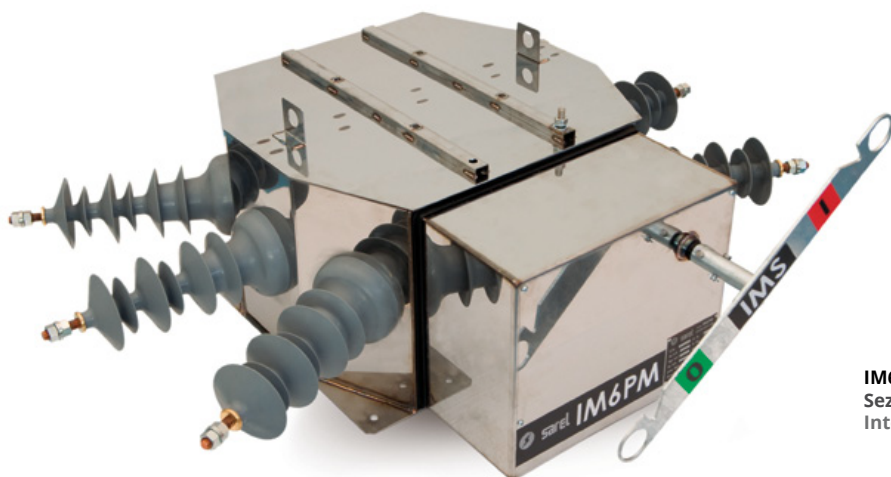
Technical features Caratteristiche tecniche Caractéristiques techniques



Due to continuous development of building materials and the updating of standards, reported data are not constricting and are subject to our revision.

Considerando l'evoluzione di materiali e norme, quanto riportato nel presente documento si potrà ritenere impegnativo solo dopo nostra conferma.

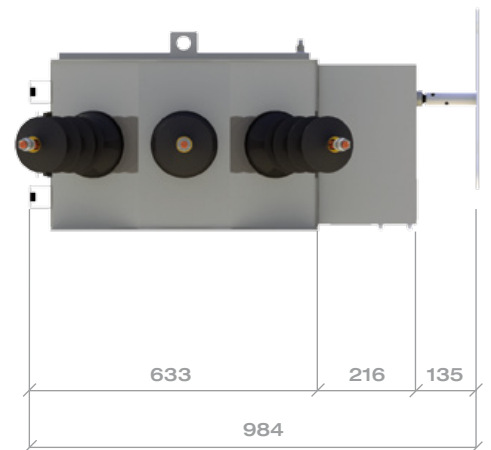
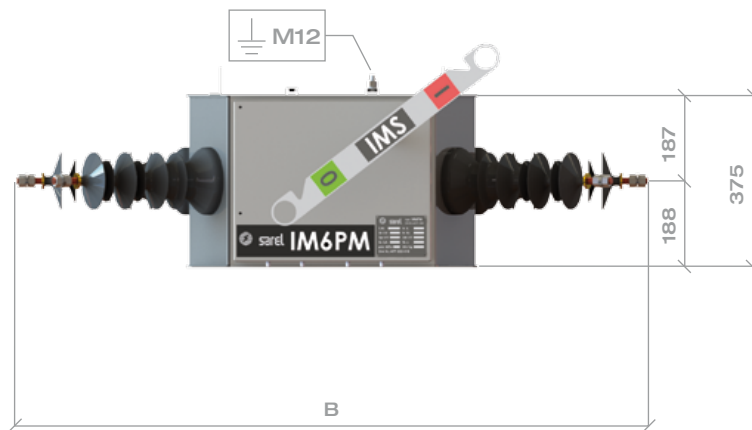
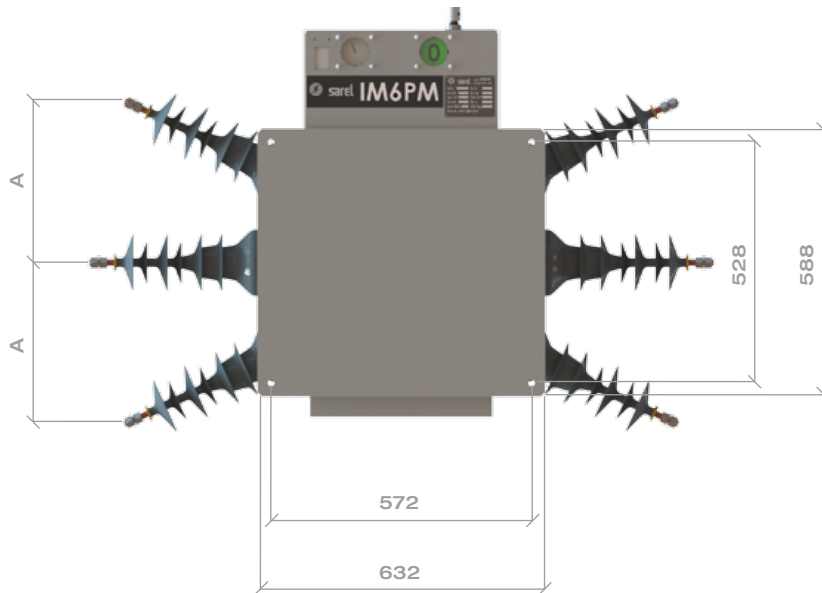
Etant donné l'évolution des matériels ainsi que des normes, les informations contenues dans le présent document, ne seront considérées comme étant valable qu'après confirmation de notre part.



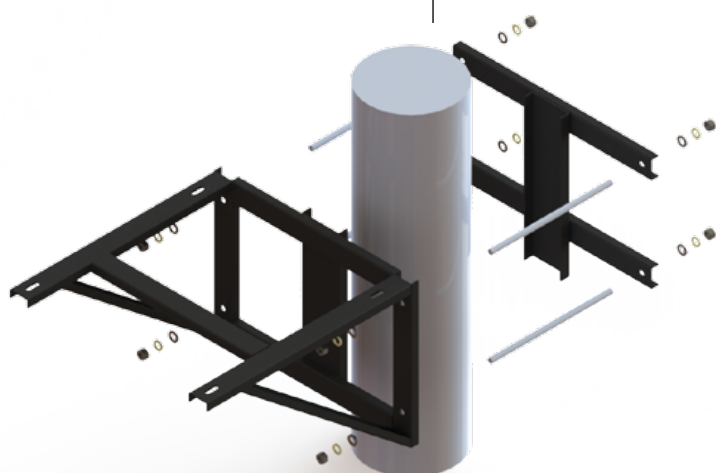
IM6-PM 24kV pole mounted on-load switch
Sezionatore da palo IM6-PM 24kV
Interrupteur pour poteau IM6-PM 24kV

IM6-PM

Rated voltage Tensione nominale Tension nominale		kV	24	36
Rated power-frequency withstand voltage 50Hz 1Min (kV r.m.s.) Tensione nominale di tenuta alla frequenza di esercizio 50Hz 1Min (kV eff.) Tension nominale à la fréquence industrielle 50Hz 1Min (kV eff.)	To earth and between phases Verso massa e tra le fasi Vers la terre et entre les phases	kV	50	70
	Across the isolating distance Sulla distanza di sezionamento Sur la distance de sectionnement		60	80
Rated lightning impulse withstand voltage (peak value) Tensione nominale di tenuta ad impulso atmosferico (valore di picco) Tension nominale de tenue au choc (valeur de crête)	To earth and between phases Verso massa e tra le fasi Vers la terre et entre les phases	kV	125	170
	Across the isolating distance Sulla distanza di sezionamento Sur la distance de sectionnement		145	195
Rated current Corrente nominale Courant nominale		A	630	
Short-time withstand current Corrente di breve durata ammissibile Courant de courte durée admissible		kA - s	20 - 3s	
Peak value Valore di picco Valeur de crête		kA	50	
Breaking capacity Potere di interruzione Pouvoir de coupure	Mainly active load Carico prevalentemente attivo Charge principalement actif	A	630	
	Closed-loop circuits Carico ad anello Charge de boucle		630	
	Line-charging breaking current Interruzione linea a vuoto Interruption ligne à vide		50	
	Cables-charging breaking current Cavi a vuoto Câbles à vide		50	
	No load transformer Trasformatore a vuoto Transformateur à vide		6.3	
Protection degree Grado di protezione Degré de protection		IP	67	
Altitude Altitudine Hauteur		m	≤1000	
Ambient temperature Temperatura ambiente Température ambiante		°C	-40÷60	



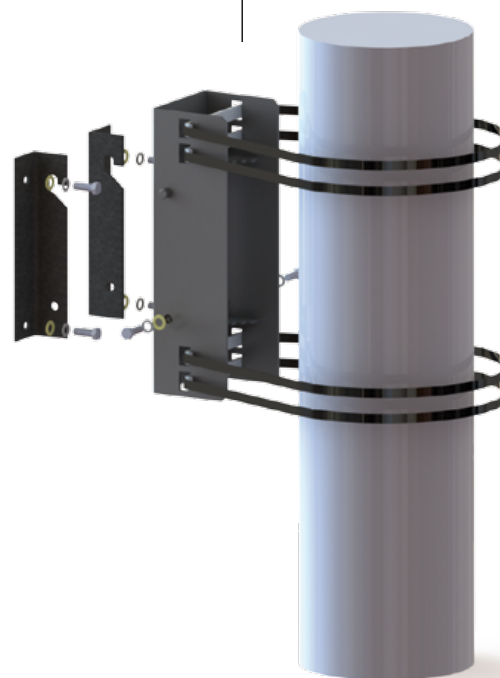
Dimension Dimensioni Dimensions		
kV	A	B
	mm	
24	361	1376
36	393	1522



**Typical lower pole
mounting support**

**Supporto tipico inferiore
per fissaggio al palo**

**Support typique inférieure
pour fixage au poteau**



Special back pole mounting support

The special back pole mounting support is directly hooked to the switch, as shown at pag. 4

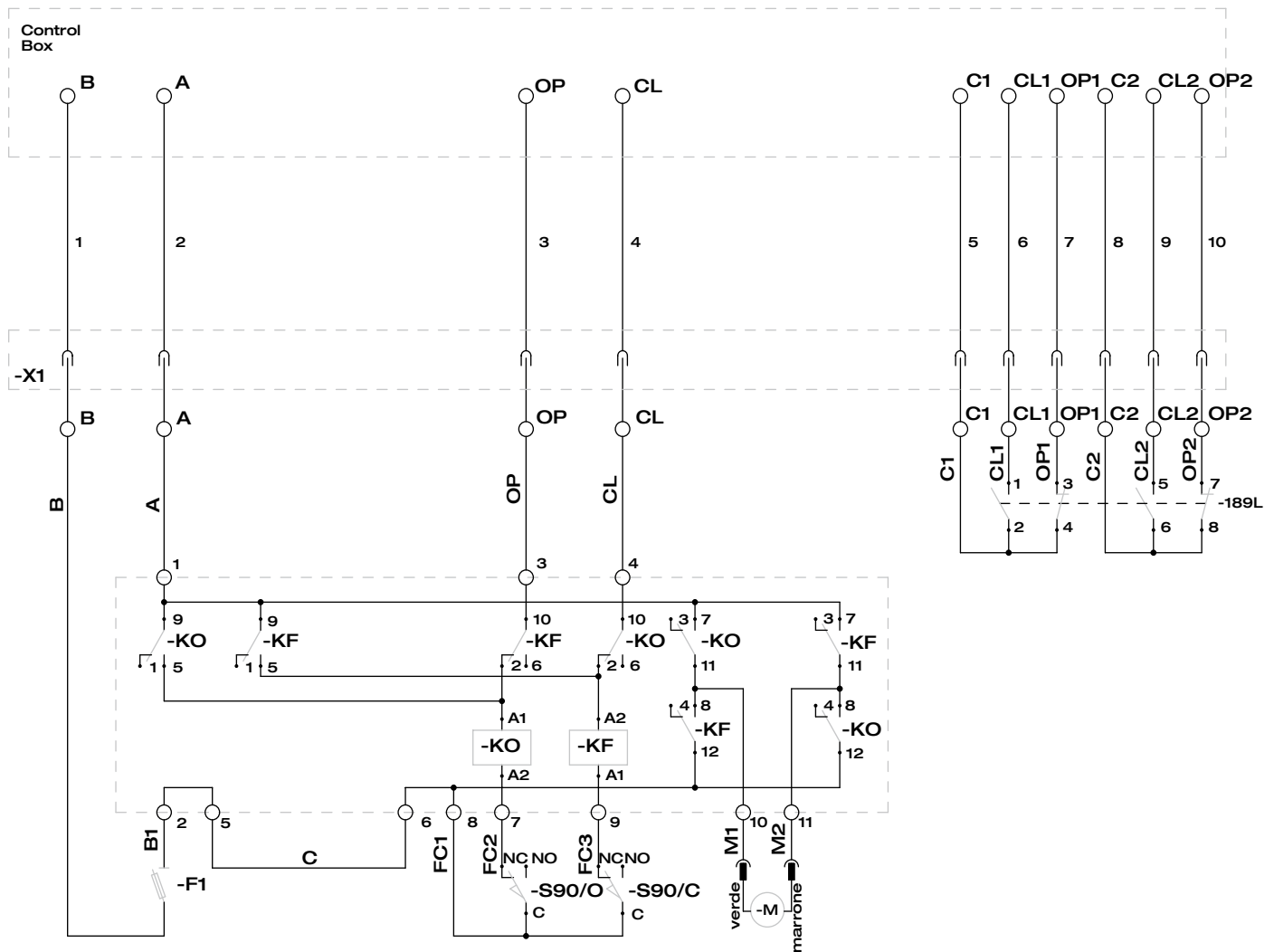
**Supporto posteriore speciale
per fissaggio al palo**

Il supporto di fissaggio posteriore viene agganciato direttamente al sezionatore, come mostrato a pag. 4

**Support postérieur spécial
pour fixage au poteau**

Le support postérieur spécial pour fixage au poteau est accroché directement à l'interrupteur, comme indiqué sur la pag. 4

Motorized command diagram
Schema comando a motore
Schéma de commande motorisée



S90/C : Closing operation position switch
Finecorsa in chiusura
Fin course de fermeture

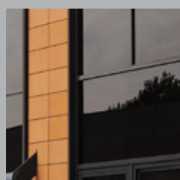
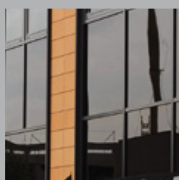
S90/O : Opening operation position switch
Finecorsa in apertura
Fin course d'ouverture

V AUX	-KO / -KF	-M	-F1
24 V cc	24 V cc	24 V cc	
48 V cc	48 V cc	48 V cc	6 A gG
110 V cc	110 V cc	110 V cc	4 A gG

* The diagram is represented with line switch OPEN
* Lo schema è rappresentato con sezionatore di linea APERTO
* Le schéma est représenté avec interrupteur OUVERT



For energizing the world





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