"SG-100D1" HV SWBD 6,6kV

OPERATION SEQUENCES AND KEY INTERLOCK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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2	08/08/2024	Santinelli	Giulietti	Sigismondi	As-Built (ASB)
1	02/07/2024	Santinelli	Giulietti	Sigismondi	Issued for review (IFR)
0	27/05/2024	Santinelli	Giulietti	Sigismondi	Issued for review (IFR)

DWG n° : 231151/SD/56
Item n° : PF1113279/4

CROSSWIND

ROSETTI MARINO

TITLE : "SG-100D1"
OPERATION SEQUENCES AND KEY INTERLOCK
Cover

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00056

SHEET 001

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

INDEX

Sheet	Description	Revision 0	1	2	3	4	5	6	7	8	Sheet	Description	Revision 0	1	2	3	4	5	6	7	8
001	Cover																				
002	Index																				
003	CAPTION KEY INTERLOCKS																				
004	GENERAL CIRCUIT BREAKER OPERATING SEQUENCE																				
005	GENERAL CONTACTOR OPERATING SEQUENCE																				
006	MEASURING AND BUS BAR OPERATING SEQUENCE																				
007	OPERATING SEQUENCES																				
008	OPERATING SEQUENCES																				
009	OPERATING SEQUENCES																				
010	OPERATING SEQUENCES																				
011	OPERATING SEQUENCES																				
012	OPERATING SEQUENCES																				
013	OPERATING SEQUENCES																				
014	OPERATING SEQUENCES																				
015	SINGLE LINE DIAGRAM (RINGED KEYS)																				

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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DWG n° : 231151/SD/56
Item n° : PF1113279/4

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK
Index

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00056

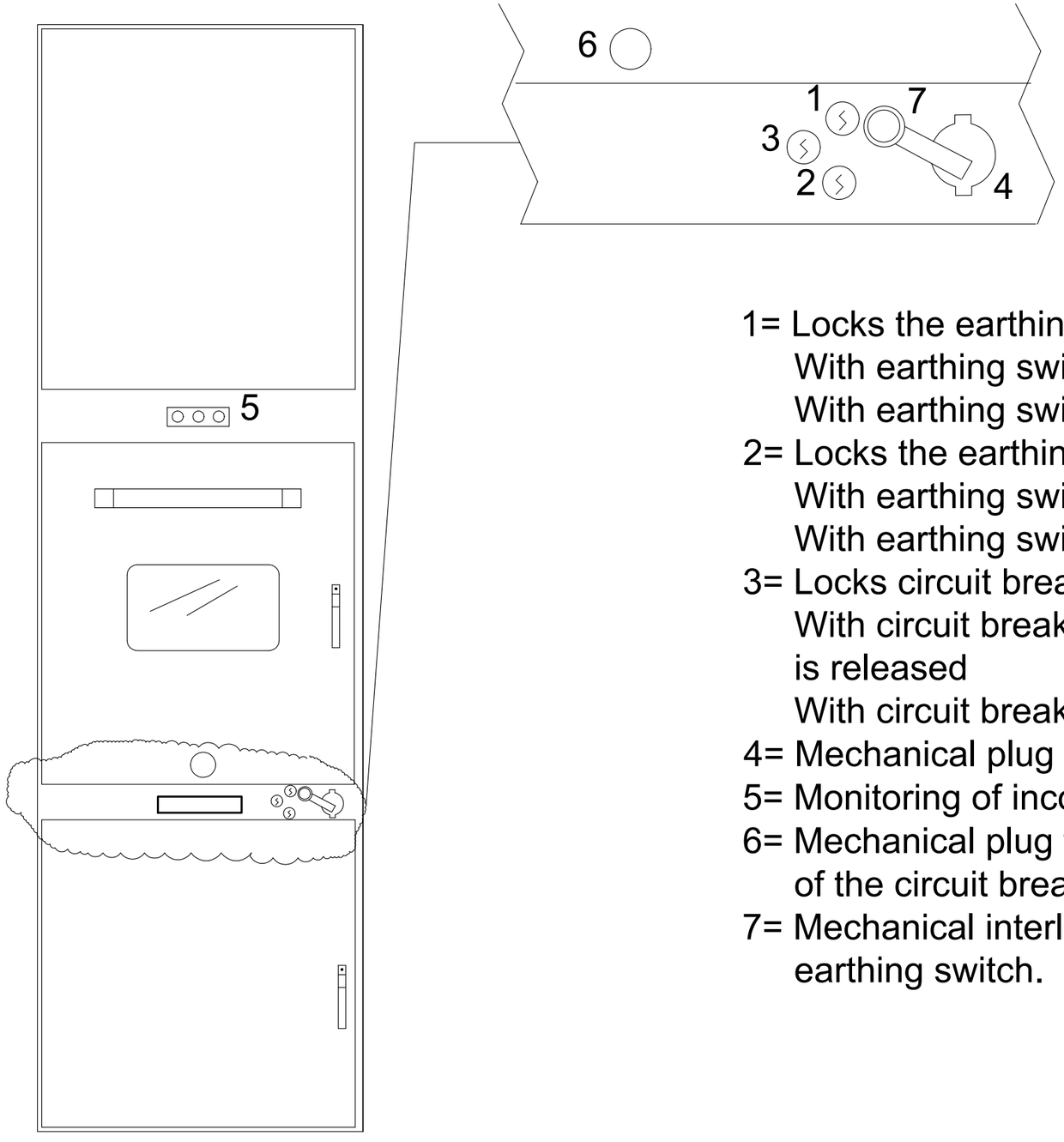
SHEET 002

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

CAPTION KEY INTERLOCKS



1= Locks the earthing switch in open position
With earthing switch open the key in released
With earthing switch closed the key in trapped

2= Locks the earthing switch in close position
With earthing switch closed the key in released
With earthing switch open the key in trapped

3= Locks circuit breaker truck in draw-out position
With circuit breaker truck locked in draw-out the key is released
With circuit breaker truck racked-in the key is trapped

4= Mechanical plug for lever operating the earthing switch

5= Monitoring of incoming/outgoing voltage

6= Mechanical plug for handle operating draw-out/rack-in of the circuit breaker truck

7= Mechanical interlock between circuit breaker truck and earthing switch.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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Item n° : PF1113279/4

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK
CAPTION KEY INTERLOCKS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00056

SHEET 003

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

OPERATING SEQUENCE

GENERAL CIRCUIT BREAKER OPERATING SEQUENCE

PUTTING OUT OF SERVICE

1 - OPEN THE CIRCUIT BREAKER.

2 - PRESS THE PUSH-BUTTON -P1 AND CARRY CIRCUIT BREAKER IN ISOLATED POSITION.

3 - LOCK THE CIRCUIT BREAKER IN EXTRACTED POSITION BY MEANS OF KEY "2".

4 - TO ACCESS THE CIRCUIT BREAKER COMPARTMENT PRESS THE -P1 PUSH-BUTTON AND OPEN THE DOOR.

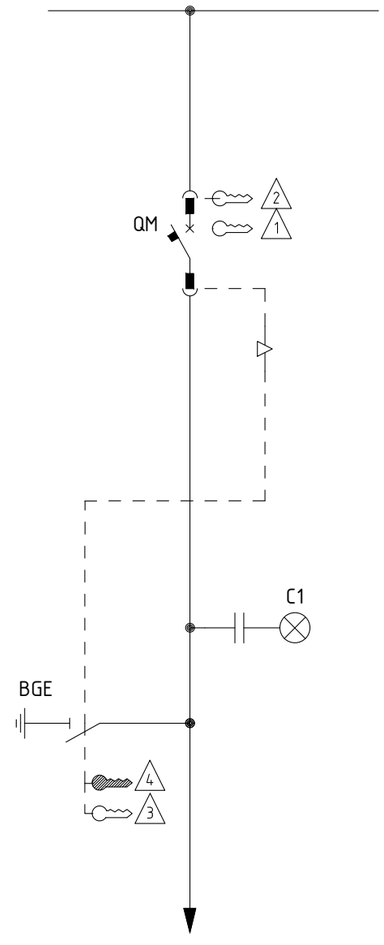
5 - UNLOCK THE EARTHING SWITCH OPEN POSITION THROUGH KEY (3).

6 - OPEN THE SHUTTER OF THE EARTHING SWITCH TURNING THE ACTUATOR ANTICLOCKWISE.

7 - PRESS THE PUSH-BUTTON -P1.
CLOSE EARTHING SWITCH BY TURNING THE OPERATING LEVER CLOCKWISE.

8 - LOCK THE CLOSED POSITION OF THE EARTHING SWITCH BY MEANS OF THE KEY (4)

9 - IT IS POSSIBLE TO ACCESS THE CABLE COMPARTEMENT ON THE BACK BY UNSCREWING THE BOLTS AND REMOVING THE REAR PANEL.



START UP

1 - CLOSE THE CABLE COMPARTMENT BY SCREWING THE REAR PANEL WITH THE BOLTS

2 - BRING BACK THE KEY (4)

3 - UNLOCK THE EARTHING SWITCH CLOSE POSITION THROUGH KEY (4) . PRESS THE PUSH-BUTTON -P1 OPEN EARTHING SWITCH BY TURNING THE OPERATING LEVER ANTICLOCKWISE.

4 -CLOSE THE EARTHING SWITCH COMMAND SHUTTER, TURN THE ACTUATOR CLOCKWISE.

5 - LOCK THE OPEN POSITION OF THE EARTHING SWITCH BY MEANS OF THE KEY (3)

6 - PRESS TIMING PUSH-BUTTON -P1 AND CLOSE THE DOOR OF THE CIRCUIT BREAKER.

7 - RECOVER THE KEY (2) AND UNLOCK THE ISOLATED POSITION OF THE CIRCUIT BREAKER.

8 - PRESS TIMING PUSH-BUTTON -P1 AND TO INSERT THE CIRCUIT BREAKER, CARRY IT IN THE CONNECT POSITION THROUGH THE OPERATING LEVER .

9 - CLOSE THE CIRCUIT BREAKER.

1 Free key with opened Circuit Breaker (Circuit Breaker locked in open position)

2 Free key with insolated Circuit Breaker (Circuit Breaker locked in isolated position)

3 Free key with opened Earthing Switch (Earthing Switch locked in open position)

4 Free key with closed Earthing Switch (Earthing Switch locked in close position)

WARNING DO NOT REMOVE OR MODIFY THE SAFETY INTERLOCKS WITHOUT PRIOR AUTHORISATION

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DWG n° : 231151/SD/56
Item n° : PF1113279/4

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK
GENERAL CIRCUIT BREAKER OPERATING SEQUENCE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00056 | SHEET 004 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

OPERATING SEQUENCE

GENERAL CONTACTOR OPERATING SEQUENCE

PUTTING OUT OF SERVICE

1 - OPEN THE CONTACTOR.

2 - PRESS THE PUSH-BUTTON -P1 AND CARRY CONTACTOR IN ISOLATED POSITION.

3 - LOCK THE CONTACTOR IN EXTRACTED POSITION BY MEANS OF KEY "2".

4 - TO ACCESS THE CONTACTOR COMPARTMENT PRESS THE -P1 PUSH-BUTTON AND OPEN THE DOOR.

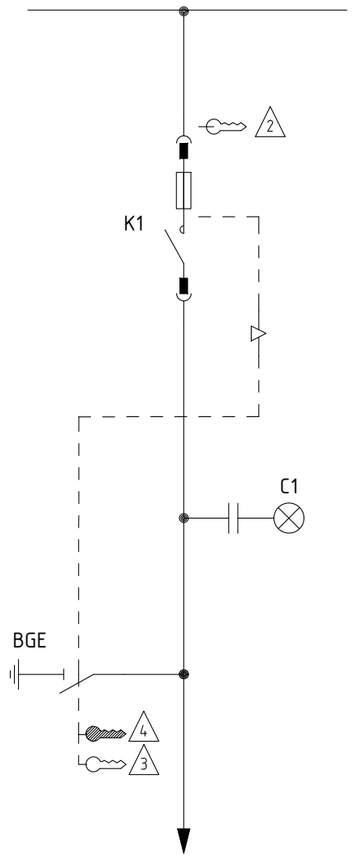
5 - UNLOCK THE EARTHING SWITCH OPEN POSITION THROUGH KEY (3).

6 - OPEN THE SHUTTER OF THE EARTHING SWITCH TURNING THE ACTUATOR ANTICLOCKWISE.

7 - PRESS THE PUSH-BUTTON -P1. CLOSE EARTHING SWITCH BY TURNING THE OPERATING LEVER CLOCKWISE.

8 - LOCK THE CLOSED POSITION OF THE EARTHING SWITCH BY MEANS OF THE KEY (4)

9 - IT IS POSSIBLE TO ACCESS THE CABLE COMPARTEMENT ON THE BACK BY UNSCREWING THE BOLTS AND REMOVING THE REAR PANEL.



START UP

1 - CLOSE THE CABLE COMPARTMENT BY SCREWING THE REAR PANEL WITH THE BOLTS

2 - BRING BACK THE KEY (4)

3 - UNLOCK THE EARTHING SWITCH CLOSE POSITION THROUGH KEY (4) . PRESS THE PUSH-BUTTON -P1 OPEN EARTHING SWITCH BY TURNING THE OPERATING LEVER ANTICLOCKWISE.

4 -CLOSE THE EARTHING SWITCH COMMAND SHUTTER, TURN THE ACTUATOR CLOCKWISE.

5 - LOCK THE OPEN POSITION OF THE EARTHING SWITCH BY MEANS OF THE KEY (3)

6 - PRESS TIMING PUSH-BUTTON -P1 AND CLOSE THE DOOR OF THE CONTACTOR.

7 - RECOVER THE KEY (2) AND UNLOCK THE ISOLATED POSITION OF THE CONTACTOR.

8 - PRESS TIMING PUSH-BUTTON -P1 AND TO INSERT THE CONTACTOR, CARRY IT IN THE CONNECT POSITION THROUGH THE OPERATING LEVER .

9 - CLOSE THE CONTACTOR.

2 Free key with insolated Contactor (Contactor locked in isolated position)

3 Free key with opened Earthing Switch (Earthing Switch locked in open position)

4 Free key with closed Earthing Switch (Earthing Switch locked in close position)

WARNING DO NOT REMOVE OR MODIFY THE SAFETY INTERLOCKS WITHOUT PRIOR AUTHORISATION

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DWG n° : 231151/SD/56
Item n° : PF1113279/4

CROSSWIND

ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK
GENERAL CONTACTOR OPERATING SEQUENCE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00056

SHEET 005

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

OPERATING SEQUENCE

MEASURING AND BUS BAR OPERATING SEQUENCE

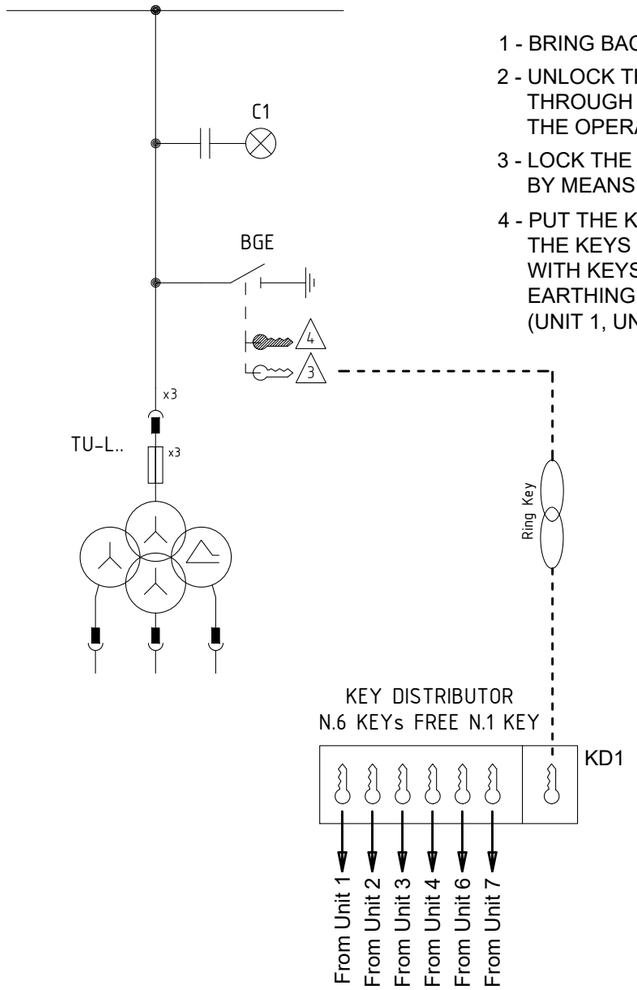
PUTTING OUT OF SERVICE

1 - OPEN AND CARRY IN ISOLATED POSITION ALL CIRCUIT BREAKERS AND CONTACTORS AND THEN CLOSE THE EARTHING SWITCH FOR THE FOLLOWING UNITS: (UNIT 1, UNIT 2, UNIT 3, UNIT 4, UNIT 6, UNIT 7). LOCK THE EARTHING SWITCH IN CLOSE POSITION BY MEANS OF THE RESPECTIVE KEYS (4).

2 - PUT THE KEYS "4" OF THE EARTHING SWITCHES IN THE KEYS-DISTRIBUTOR 'KD1'. WITH THE KEY THAT IS RELEASED FROM THE “KD1” KEY DISTRIBUTOR, UNLOCK THE OPENING POSITION OF THE EARTHING SWITCH

3 - OPEN THE COVER OF THE EARTHING SWITCH OPERATING SEAT BY TURNING THE ACTUATOR ANTICLOCKWISE, CLOSE EARTHING SWITCH BY TURNING THE OPERATING LEVER CLOCKWISE

5 - LOCK THE CLOSED POSITION OF THE EARTHING SWITCH BY MEANS OF THE KEY "4".



START UP

1 - BRING BACK THE KEY "4".

2 - UNLOCK THE EARTHING SWITCH CLOSE POSITION THROUGH KEY "4". OPEN EARTHING SWITCH BY TURNING THE OPERATING LEVER ANTICLOCKWISE

3 - LOCK THE OPEN POSITION OF THE EARTHING SWITCH BY MEANS OF THE KEY "3".

4 - PUT THE KEY "3" IN THE KEYS-DISTRIBUTOR "KD1", WILL BE RELEASE THE KEYS "4" OF ALL EARTHING SWITCHES . WITH KEYS "4" WILL BE POSSIBLE UNLOCKING THE CLOSE POSITION OF THE EARTHING SWITCHES OF THE FOLLOWING UNITS: (UNIT 1, UNIT 2, UNIT 3, UNIT 4, UNIT 6, UNIT 7) .

3 Free key with opened Earthing Switch (Earthing Switch locked in open position)

4 Free key with closed Earthing Switch (Earthing Switch locked in close position)

WARNING DO NOT REMOVE OR MODIFY THE SAFETY INTERLOCKS WITHOUT PRIOR AUTHORISATION

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DWG n° : 231151/SD/56
Item n° : PF1113279/4

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK
MEASURING AND BUS BAR OPERATING SEQUENCE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00056 | SHEET 006 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

OPERATING SEQUENCES
PUT OUT SERVICE

1. OPEN THE CIRCUIT BREAKER or CONTACTOR
MAKE SURE THAT THE C.B. or CONTACTOR IS OPEN.
CHECK THE INDICATOR IN THE "O" POSITION (Figure 1).



Figure 1: Circuit Breaker or Contactor status indicator

2. VERIFY THAT THE VOLTAGE PRESENCE LAMPS (Figure 2) ARE TURNED OFF.

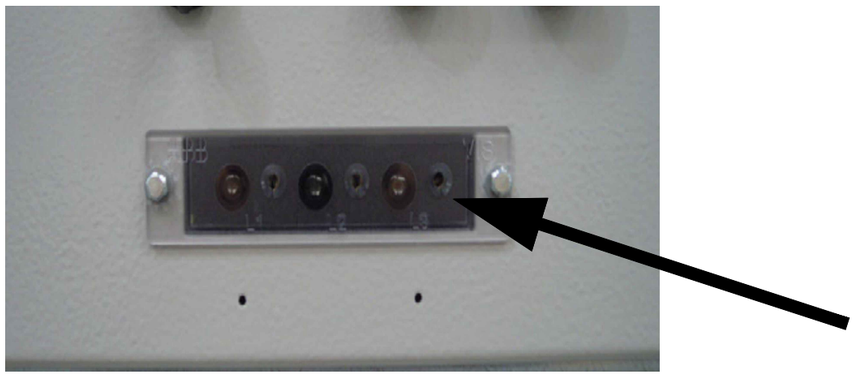


Figure 2: Voltage presence lamps

3. TAKE THE LEVER TO EXTRACT THE CIRCUIT BREAKER or CONTACTOR (Figure 3).

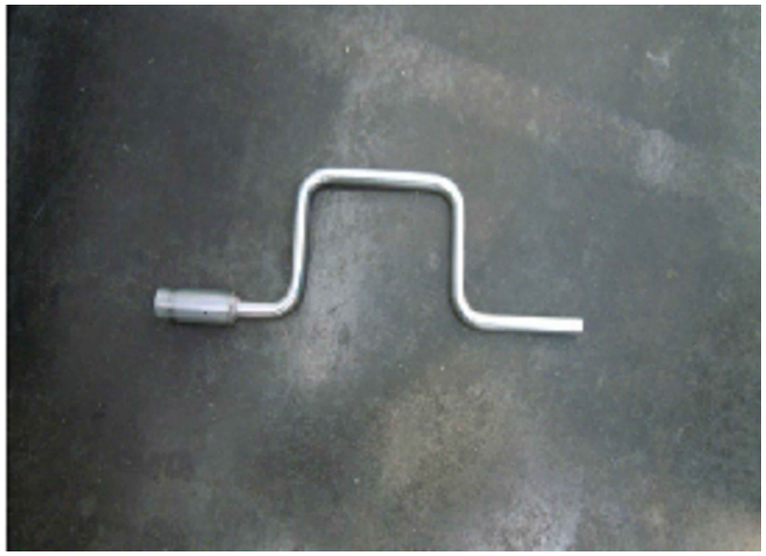


Figure 3: Circuit breaker or CONTACTOR operation lever

4 TO EXTRACT THE C.B. or CONTACTOR PRESS THE P1 PUSH-BUTTON (FIGURE 4).



Figure 4: Black push button. unlocking command extracting C.B. or Contactor

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : "SG-100D1"
OPERATION SEQUENCES AND KEY INTERLOCK
OPERATING SEQUENCES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00056 | SHEET 007 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

5 EXTRACT THE C.B. or CONTACTOR BY USING THE APPROPRIATE LEVER. ROTATE THE LEVER ANTICLOCKWISE (Figure 5) UNTIL THE C.B. or CONTACTOR STOPS.



Figure 5: Rotation of the operating lever anticlockwise

6 LOCK THE C.B. or CONTACTOR IN EXTRACTED POSITION BY ROTATING OF 90° CLOCKWISE THE "HIGHLIGHTED" KEY (Figure 6), THEN REMOVE THE KEY.

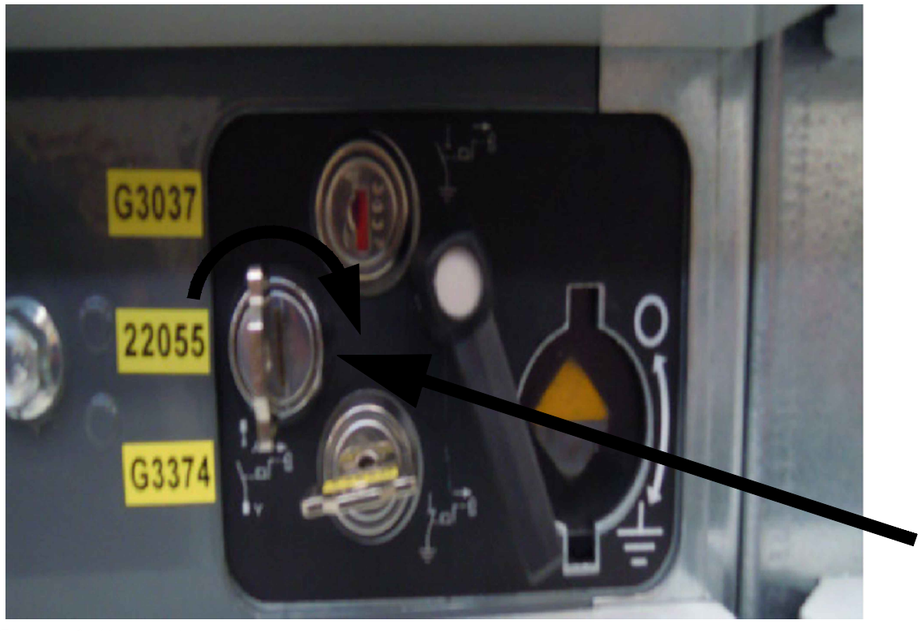


Figure 6: Key lock panel

7 TO ACCESS THE C.B. or CONTACTOR COMPARTMENT, PRESS THE PUSH BUTTON P1 (Figure 7) AND OPEN THE DOOR PULLING THE HANDLE UPWARDS.



Figure 7: Black push button command door compartment C.B. or CONTACTOR.

8 TO CLOSE THE EARTHING SWITCH, IT'S NECESSARY TO PUT THE "HIGHLIGHTED" KEY AND ROTATING IT ANTICLOCKWISE. THE KEY REMAINS FITTED IN THE LOCK (Figure 8).



Figure 8: Key lock panel

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IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231151/SD/56

Item n° : PF1113279/4

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK OPERATING SEQUENCES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00056

SHEET 008

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

9 OPEN THE SHUTTER (THAT OBSTRUCTS THE INSERTION OF THE OPERATING LEVER OF THE EARTHING SWITCH) BY ROTATING OF AROUND 100° ANTICLOCKWISE THE "HIGHLIGHTED" BLACK LEVER (Figure 9).

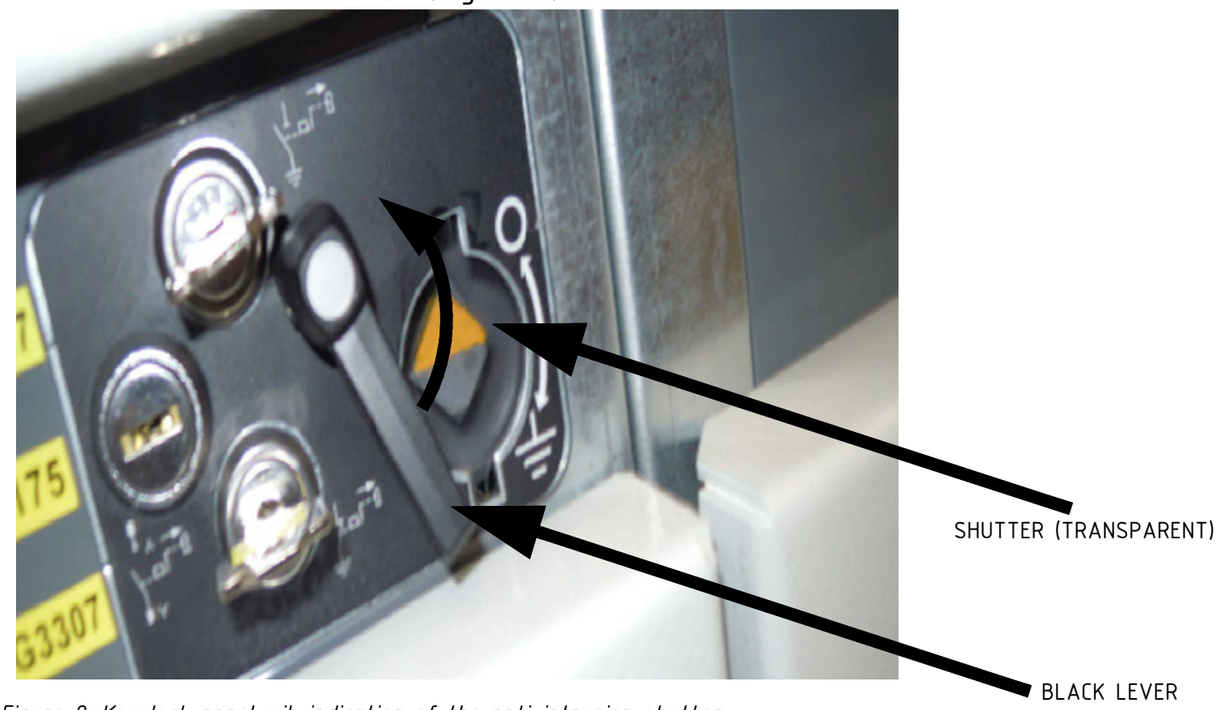


Figure 9: Key lock panel wih indication of the anti-intrusion shutter

10 TAKE THE LEVER SHOWN IN FIGURE 10 TO OPERATE THE EARTHING SWITCH.

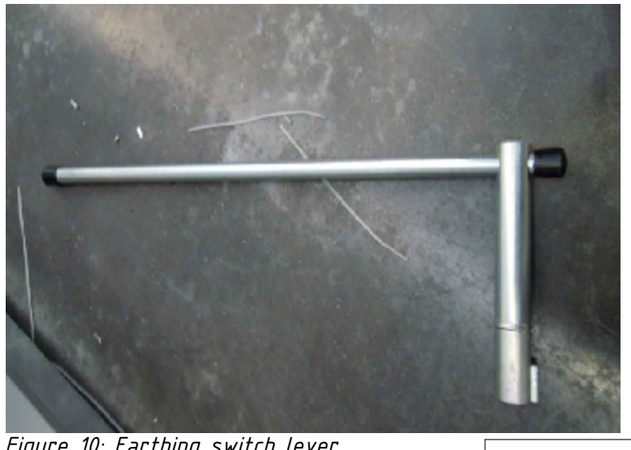


Figure 10: Earthing switch lever

11. PRESS THE PUSH-BUTTON P1 TO UNLOCKING THE COMMAND OF THE EARTHING SWITCH (Figure 11)



Figure 11: Black push button command earthing switch.

12 TO CLOSE THE EARTHING SWITCH, INSERT THE LEVER IN THE APPROPRIATE HOUSING AND ROTATING IT OF 180° CLOCKWISE (Figure 12).
THIS OPERATION MUST BE CARRIED OUT WITHIN 30" FROM THE PRESSING OF THE BUTTON "P1".



Figure 12: Closing operaton of the earthing switch

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DWG n° : 231151/SD/56
Item n° : PF1113279/4

CROSSWIND

ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK OPERATING SEQUENCES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00056 | SHEET 009 | REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

13. LOCK THE CLOSED POSITION OF THE EARTHING SWITCH BY USING THE "HIGHLIGHTED" KEY (Figure 13).
ROTATE THE KEY OF 90° ANTICLOCKWISE, THEN REMOVE THE KEY.

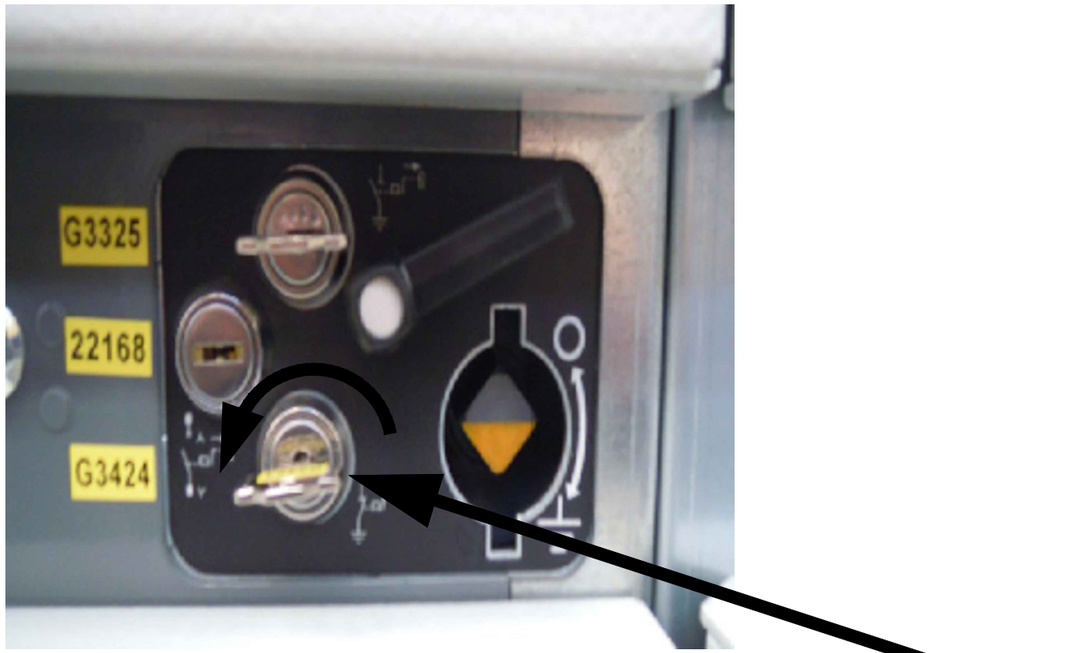


Figure 13: Key lock panel with indication of the key to lock the earthing switch in close position

14. IT IS POSSIBLE TO OPEN THE REAR PANEL REMOVING THE RELATIVE BOLTS.

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Item n° : PF1113279/4

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK OPERATING SEQUENCES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00056

SHEET 010

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

PUT IN SERVICE

1. ASSEMBLE THE REAR PANEL BY TIGHTENING THE RELATIVE BOLTS.

2. INSERT THE "HIGHLIGHTED" KEY IN THE LOCK AND ROTATE IT OF 90° CLOCKWISE, THEN THE KEY REMAINS FITTED IN THE LOCK (Figure 2A).

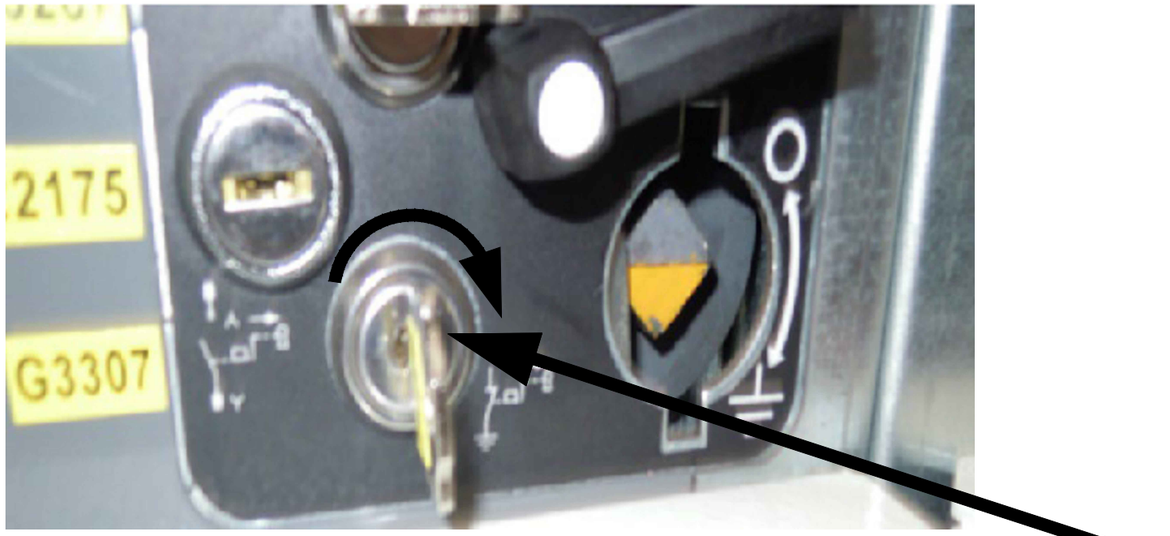


Figure 2A: Key lock panel with indication of the key to unlock the earthing switch in close position.

3. PRESS THE "P1" PUSH BUTTON TO ENABLE THE COMMAND OF THE EARTHING SWITCH. (Figure 11)

4 TO OPEN THE EARTHING SWITCH, INSERT THE OPERATING LEVER IN THE APPROPRIATE HOUSING AND ROTATE IT OF 180° ANTICLOCKWISE (Figure 4A)
THIS OPERATION MUST BE CARRIED OUT WITHIN 30" FROM THE PRESSING OF THE BUTTON "P1".



Figure 4A: Opening operaton of the earthing switch

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CROSSWIND

ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK OPERATING SEQUENCES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00056

SHEET 011

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

5 TO CLOSE THE SHUTTER (THAT OBSTRUCTS THE INSERTION OF THE OPERATING LEVER OF THE EARTHING SWITCH), ROTATE OF AROUND 100° CLOCKWISE THE "HIGHLIGHTED" BLACK LEVER (Figure 5A).

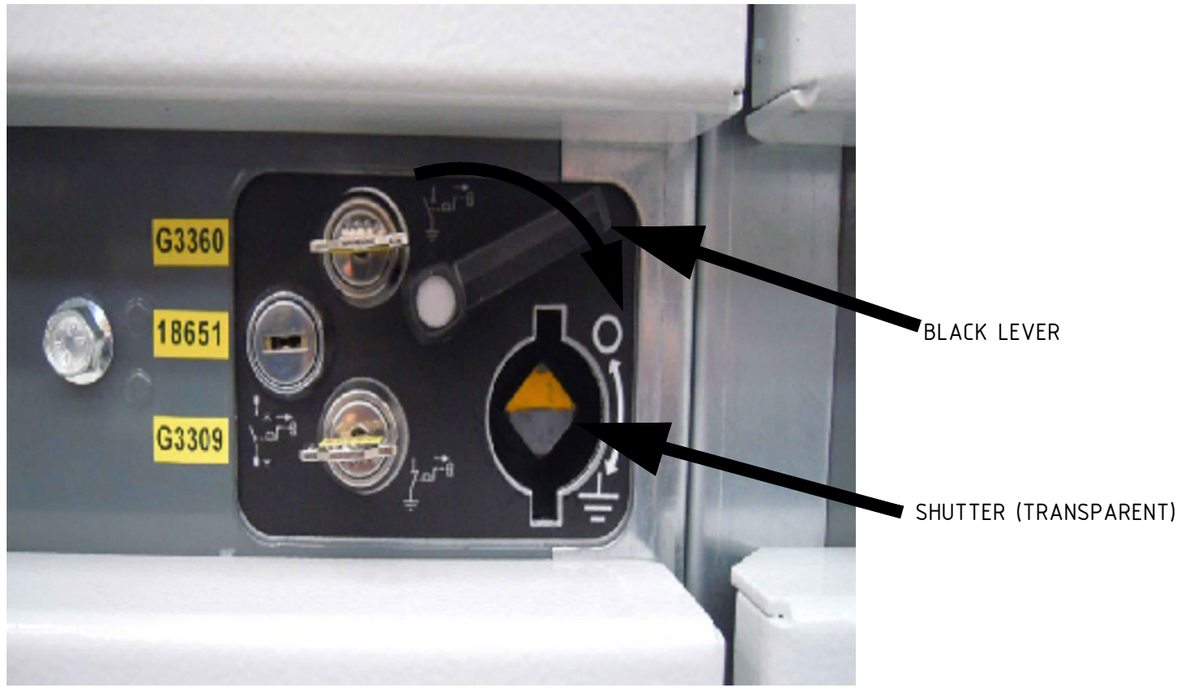


Figure 5A: Key lock panel wih indication to open of the anti-intrusion shutter

6 LOCK THE EARTHING SWITCH IN OPEN POSITION BY ROTATING THE HIGHLIGHTED KEY OF 90° CLOCKWISE (Figure 6A), THEN REMOVE THE KEY



Figure 6A: Key panel with the indication to lock the earthing switch in open position

7 PRESS THE PUSH THE BUTTON "P1" IN ORDER TO CLOSE THE DOOR OF THE CIRCUIT BREAKER (Figure 7).

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0	27/05/2024	Santinelli	Giulietti	Sigismondi	Issued for review (IFR)

DWG n° : 231151/SD/56
Item n° : PF1113279/4

CROSSWIND

ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK OPERATING SEQUENCES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00056

SHEET 012

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8 TO INSERT THE CIRCUIT BREAKER, TAKE THE "HIGHLIGHTED" KEY AND ROTATE IT OF 90° ANTICLOCKWISE (Figure 8A). THE KEY REMAINS FITTED IN THE LOCK.

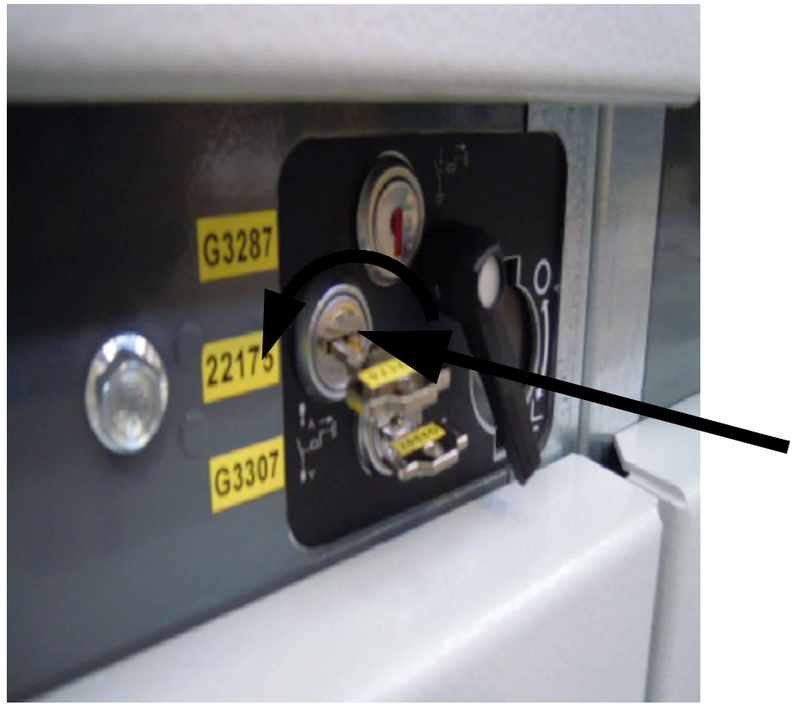


Figure 8A: Key panel with the indications to unlock the circuit breaker from isolated position.

9 TO INSERTED THE C.B. or CONTACTOR PRESS THE P1 PUSH-BUTTON (FIGURE 4).

10 INSERT THE CIRCUIT BREAKER or CONTACTOR BY USING THE APPROPRIATE LEVER. ROTATE THE LEVER CLOCKWISE UP TO THE LOCK OF THE CIRCUIT BREAKER (Figure 10A).



Figure 10A: Circuit breaker insertion operation

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CROSSWIND

ROSETTI MARINO

IMESA ELECTRICAL ENGINEERING

DWG n° : 231151/SD/56

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A3

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VT UNIT OPERATION SEQUENCES

CAUTION: PUTTING THE VT TRUCK IN AND OUT OF SERVICE MUST BE PERFORMED WITH DOOR CLOSED.

- PUTTING INTO SERVICE
  1 INSERT THE OPERATING LEVER (Figure 19) INTO THE SEAT MAKING THE RAISED PIECE OF THE LEVER COINCIDE WITH THE SLOT;
  2 TURN THE LEVER CLOCKWISE (Figure 19) AND PUSH HARD UNTIL IT IS FULLY INSERTED;
  3 FROM THE INSERTED POSITION, TURN THE LEVER ANTICLOCKWISE UNTIL THE REFERENCE INDICATORS COINCIDE AND THE OPERATING LEVER IS COUPLED (Figure 20);
  4 MAKE SURE THAT BY PULLING THE HANDLE UPWARDS THE DOOR DOES NOT OPEN.

- PUTTING OUT OF SERVICE
  1 TURN THE LEVER (Figure 20) CLOCKWISE AND PULL IT OUTWARDS UNTIL THE ISOLATED POSITION CLICK;
  2 WITHDRAW THE OPERATING LEVER FROM THE SEAT MAKING THE RAISED PIECE OF THE LEVER COINCIDE WITH THE SLOT.
  3 OPEN THE DOOR PULLING THE HANDLE UPWARDS. IN THIS CONDITION THE VT TRUCK IS ISOLATED AND EARTHED AND THE VT AUXILIARY CIRCUITS ARE ALSO ISOLATED.



Figure 19: Putting VT in/out of service



Figure 20: Putting VT in/out of service

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TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK OPERATING SEQUENCES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00056

SHEET 014

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00056 Rev. 02

SINGLE LINE DIAGRAM (RINGED KEYS)

ELECTROLYSER "A1" | SOLAR PACKAGE "A2" | BESS PACKAGE "A3" | TRANSFORMER TR-200DE1 "A4" | MEASURING "A5" | INCOMER "A6" | FUELL CELL "A7"

14742 · QM · G3327 · C1 · BGE · G3220 · G3477 · Ring Key · NOTA 1 · NOTA 2
T4 3,2MVA 6,6kV/0,4kV -0,4kV 7% - Dd0y11

14157 · Fn · K1 · C1 · BGE · G3114 · G3476 · Ring Key · NOTA 1
TR-200ED1 500KVA 6,6kV/800V 6% - Dyn11

19834 · Fn · K1 · C1 · BGE · G3120 · G3095 · Ring Key · NOTA 1 · NOTA 2
18T1 1,25MVA 7kV/620V 6% - Dyn5

19465 · Fn · K1 · C1 · BGE · G3135 · G3398 · Ring Key · NOTA 1
TR-200DE1 1,6MVA 6,6kV / 0,42kV 6% - Dyn11

C1 · BGE · G3150 · G3098 · x3 · TU-L.. · x3 · Ring Key

14466 · QM · G3260 · C1 · BGE · G3228 · G3355 · Ring Key · NOTA 1 · NOTA 2
TR-100AD1 7MVA 66kV/6,9kV 8% - Dyn11

Ring Key · NOTA 3

19163 · Fn · K1 · C1 · BGE · G3413 · G3223 · Ring Key · NOTA 1 · NOTA 2
TR-30 1410kVA 66kV/400V 6% - Dd0

Ring Key · Ring Key · Ring Key · Ring Key · Ring Key · Ring Key

KD1
KEY DISTRIBUTOR
N.6 KEYs FREE N.1 KEY

283 · 282 · 281 · 280 · 279 · 278 · 277

ELECTROLYSER · SOLAR · BESS · SG-200N1 · HNA6-AFA70 (66kV) · FUEL CELL

NOTE : 1
THE KEY 4 CAN ALSO BE RINGED WITH DOWNSTREAM DEVICES (DOOR TRANSFORMER).
NOTE : 2
THE KEY 3 IS AVAILABLE TO BE RINGED WITH DOWNSTREAM DEVICE (C.B.) IF NECESSARY.
NOTE : 3
THE KEY 2 IS AVAILABLE TO BE RINGED WITH THE UPSTREAM 66 kV GIS, IF NECESSARY

LEGEND :

1) Free key with opened Circuit Breaker (Circuit Breaker locked in open position)
2) Free key with insolated Circuit Breaker or Contactor (Circuit Breaker or Contactor locked in isolated position)
3) Free key with opened Earthing Switch (Earthing Switch locked in open position)
4) Free key with closed Earthing Switch (Earthing Switch locked in close position)

Mechanical interlock

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DWG n° : 231151/SD/56
Item n° : PF1113279/4

CROSSWIND · IMESA ELECTRICAL ENGINEERING · ROSETTI MARINO

TITLE : "SG-100D1"

OPERATION SEQUENCES AND KEY INTERLOCK
SINGLE LINE DIAGRAM (RINGED KEYS)

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723002197-EL-DG-00056 | SHEET 015 | REV. 01

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