



# 電力設備綜合型錄

MV&LV Switchgear and Device



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## TYPE TEST CERTIFICATE OF COMPLETE TYPE TESTS

**APPARATUS** An air-insulated metal-enclosed switchgear unit, incorporating a three-phase vacuum circuit-breaker and an earthing switch

**DESIGNATION** SVIE **SERIAL No.** D9704-1, D9704-3

|                             |       |                      |        |
|-----------------------------|-------|----------------------|--------|
| Rated voltage               | 24 kV | Rated normal current | 1250 A |
| Rated short-circuit current | 25 kA | Rated frequency      | 50 Hz  |

**MANUFACTURER SWITCHGEAR** TECO Electric & Machinery Co., Ltd.,  
Hsinchu County 303, Taiwan

**MANUFACTURER CIRCUIT-BREAKER, EARTHING SWITCH** Xiamen Huadian Switchgear Co., Ltd.,  
Xiamen, China

**TESTED FOR** TECO Electric & Machinery Co., Ltd.,  
Hsinchu County 303, Taiwan

**TESTED BY** KEMA HIGH-POWER LABORATORY  
Utrechtseweg 310 - 6812 AR Arnhem - The Netherlands

**DATE(S) OF TESTS** 6 to 23 April 2010

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with

**IEC 62271-200** subclauses 6.6 (STC) and 6.101 (Verification of making and breaking).

This Type Test Certificate has been issued by KEMA following exclusively the STL Guides.

**The results are shown in the record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard and to justify the ratings assigned by the manufacturer as listed on pages 4 and 5.**

This Certificate applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the Manufacturer.

This Certificate consists of 57 sheets in total.

This Certificate falls under the scope of the accreditation certificate L 020 of the Dutch Council for Accreditation. See information sheet (page 2).

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The sealed and bound version of the Certificate is the only valid version.

KEMA Nederland B.V.



P. G. A. Bus  
KEMA T&D Testing Services  
Managing Director

Arnhem, 22 June 2010

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## 品質認證 Product Certification

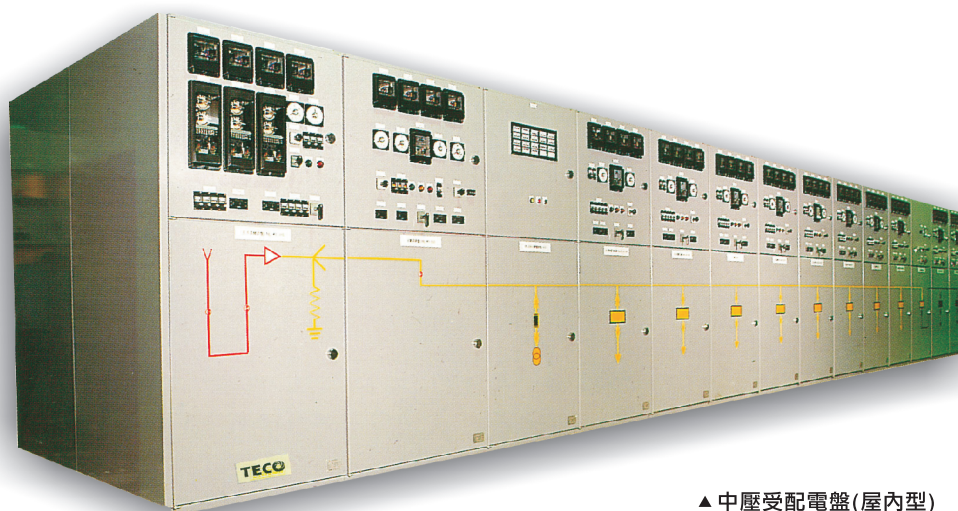
- 1.KEMA T&D Testing Services Type Test 24KV SWGR Certified  
荷蘭KEMA 24KV配電盤 型式試驗合格
- 2.TPC Type Test 13.8KV, 14.4KV, 23KV Metal-Clad Switchgear (MCSG) Certified.  
台電13.8KV、14.4KV、23KV 裝甲型開關箱(MCSG) 型式試驗合格
- 3.TPC Type Test 480V POWER CENTER Certified  
台電480V負載中心(Power Center) 型式試驗合格
- 4.TPC Type Test 480V Motor Control Center(MCC) Certified  
台電480V馬達控制中心(MCC) 型式試驗合格
- 5.TPC Type Test 23KV Gas Insulated Switchgear(C-GIS) Certified  
台電23KV氣體絕緣開關設備(C-GIS) 型式試驗合格
- 6.Xi An Hi-Power Laboratory(China) Type Test 12KV Metal-Clad Switchgear Certified  
中國西高所12KV開關櫃(SWGR) 型式試驗合格
- 7.Taiwan Electric Research & Testing Center Type Test 24KV Metal-Clad Switchgear Certified  
台灣大電力研究試驗中心 24KV開關櫃(SWGR) 型式試驗合格
- 8.Taiwan Accreditation Foundation (TAF) Switchgear Laboratory Assessed and Certified  
財團法人全國認證基金會(TAF) 配電盤實驗室認證合格
- 9.Certified Manufacturer Under Article 401 of Interior Power Wiring System Rules, Bureau of Energy, Ministry of Economic Affairs(R.O.C.)  
經濟部能源局屋內線路裝置規則第401條款 原製造廠家認可合格

## 中壓配電盤

### 3.6KV-36KV MEDIUM VOLTAGE SWITCHGEAR

在3.3KV~36KV受配電盤與監控盤的領域上，經過多年來持續不斷的經驗累積與研究改善，並藉助新科技、新材料的深入應用，使得東元電機的產品不但具有豐富的機種組合，以滿足不同用戶之需求外，更因擁有高品質與高可靠度，準確的交貨期、完善的服務，是東元電機持續不斷努力之目標。

Through continuous studies and improvement on our design of 3.3KV-36KV Medium Voltage Receiving-Distributing Switchgears and Panel Boards, such that providing optimum safety and wide range of applications in power plant, factories, public establishment, buildings, etc Our design not only possessing splendid appearance, they are also featuring high quality and excellent reliability. Our policy of punctual delivery and offering best service to our customer, has enable TECO switchgears to be widely welcomed and own a great reputation.



▲ 中壓受配電盤(屋內型)  
MEDIUM VOLTAGE SWITCHGEAR  
(INDOOR TYPE)

TABLE 1. SPECIFICATION

| Items              | Standard Specification   |
|--------------------|--|
| Standard           | CNS-3990; JEM-1425; IEC 62271-200., ANSI-C37   |
| Service Conditions | <ul style="list-style-type: none"> <li>• Altitude: MAX. 1000m, High Humidity Atmosphere</li> <li>• Ambient Temperature:<br/>-5°C~40°C (indoor application)/-20°C~40°C (outdoor application)</li> </ul> |

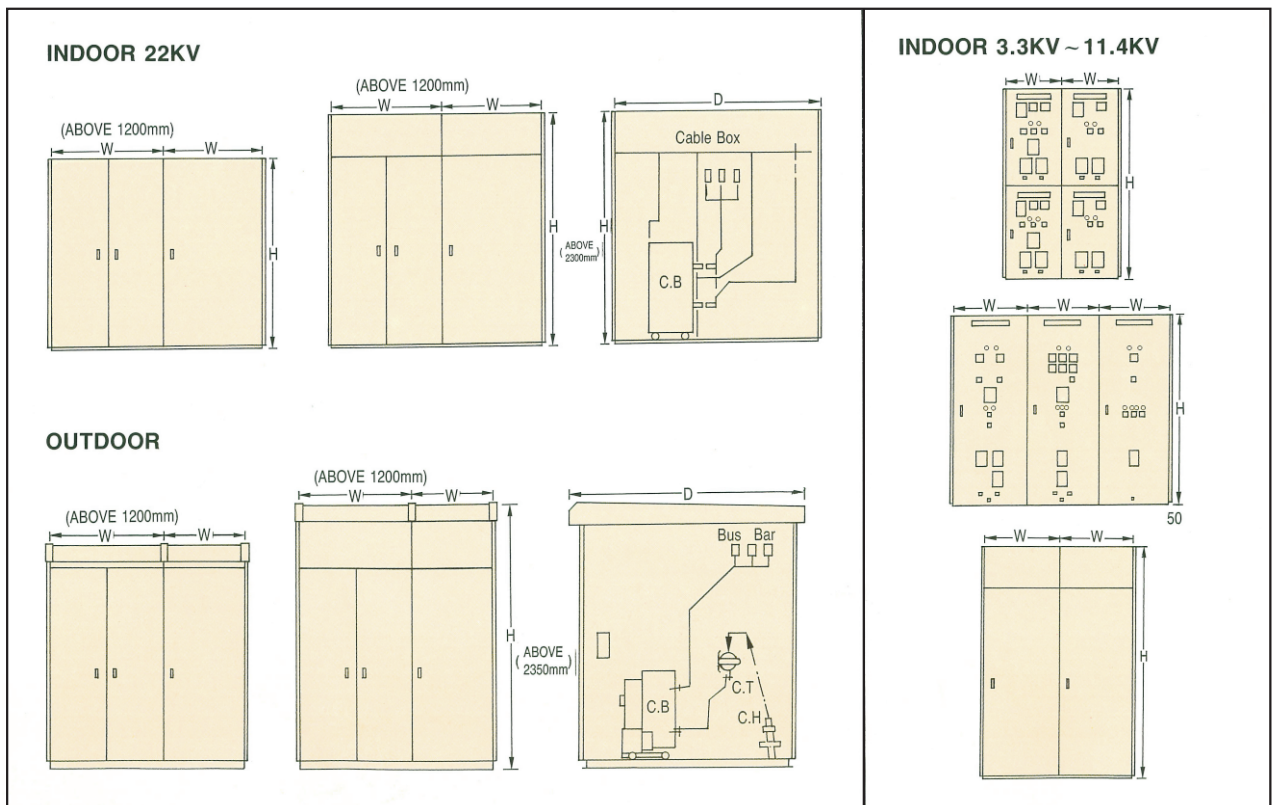
TABLE 2. RATING

|                 |    |                              |          |          |          |          |
|-----------------|----|------------------------------|----------|----------|----------|----------|
| Rated Voltage   | KV | 3.6                          | 7.2      | 12       | 24       | 36       |
| Rated Frequency | Hz | 50/60                        |          |          |          |          |
| Rated Current   | A  | 400~3150                     | 400~3150 | 600~3150 | 600~2500 | 600~2500 |
| Bus Bar Current | A  | 600,1000,1200,1600,2000,2500 |          |          |          |          |

TABLE 3. DIMENSIONS

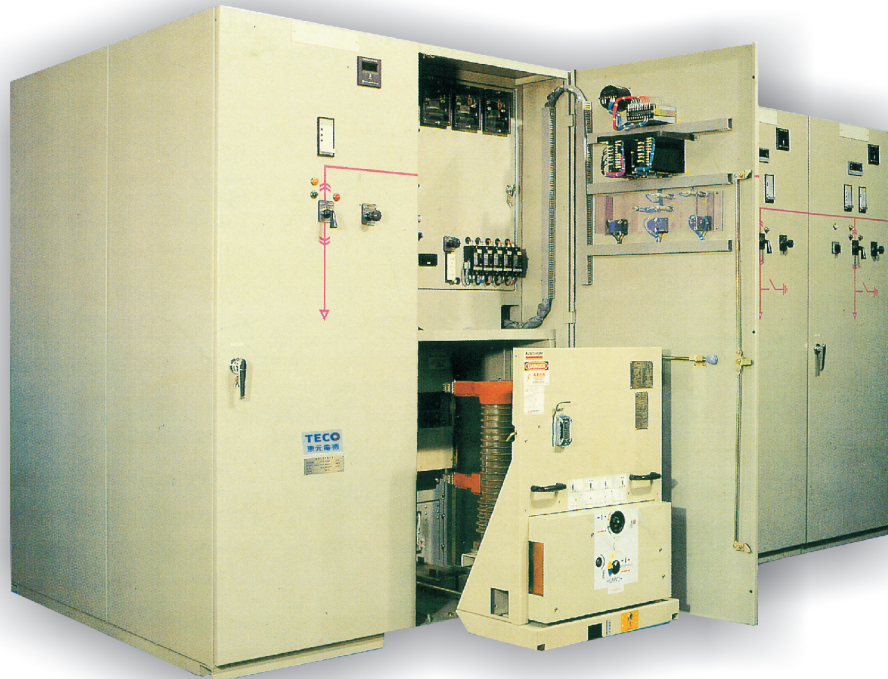
| Type             | Indoor      |           |           |      | Outdoor   |           |           |      |
|------------------|-------------|-----------|-----------|------|-----------|-----------|-----------|------|
| Rated Voltage    | 3.6KV/7.2KV | 12KV      | 24KV      | 36KV | 3.6KV     | 12KV      | 24KV      | 36KV |
| Width (W)<br>mm  | 700,800     | 900,1000  | 1000,1200 | 1500 | 700,800   | 900,1000  | 1000,1200 | 1500 |
| Height (H)<br>mm | 2100,2400   | 2400,2800 | 2400      | 2600 | 2350,2650 | 2650      | 2650      | 2850 |
| Depth (D)<br>mm  | 1400,1600   | 1800,2000 | 2000,2200 | 2600 | 1400,1600 | 1800,2000 | 2000,2200 | 2600 |

DIMENSIONS DIAGRAM



# 装甲型開關箱

## METAL-CLAD SWITCHGEAR UP TO 36KV



### FEATURES

The METAL-CLAD SWITCHGEAR with drawable design covers all the functions needed for a distribution system up to 36 kV with the following choices:

- Complete conformity with the national and international standards and recommendations of the IEC, taking account of UTE-BS-VDE-ANSI.
- Modular assembly by virtue of the adoption of industrial sub-assemblies so ensuring the flexibility as well as the quality of the equipments.
- Internal plugging for withdrawable and self-supporting frame for installation and operation under severe conditions.
- High degree of partitioning.
- Use of fire resistant insulation materials and highly reliable mechanical interlocks.

The cubicle complies with the definition of metal clad equipment having four compartments fitted with:

- a withdrawable circuit breaker on a movable portion and shutters.
- busbars with insulation
- connections for MV cables
- Low Voltage equipment

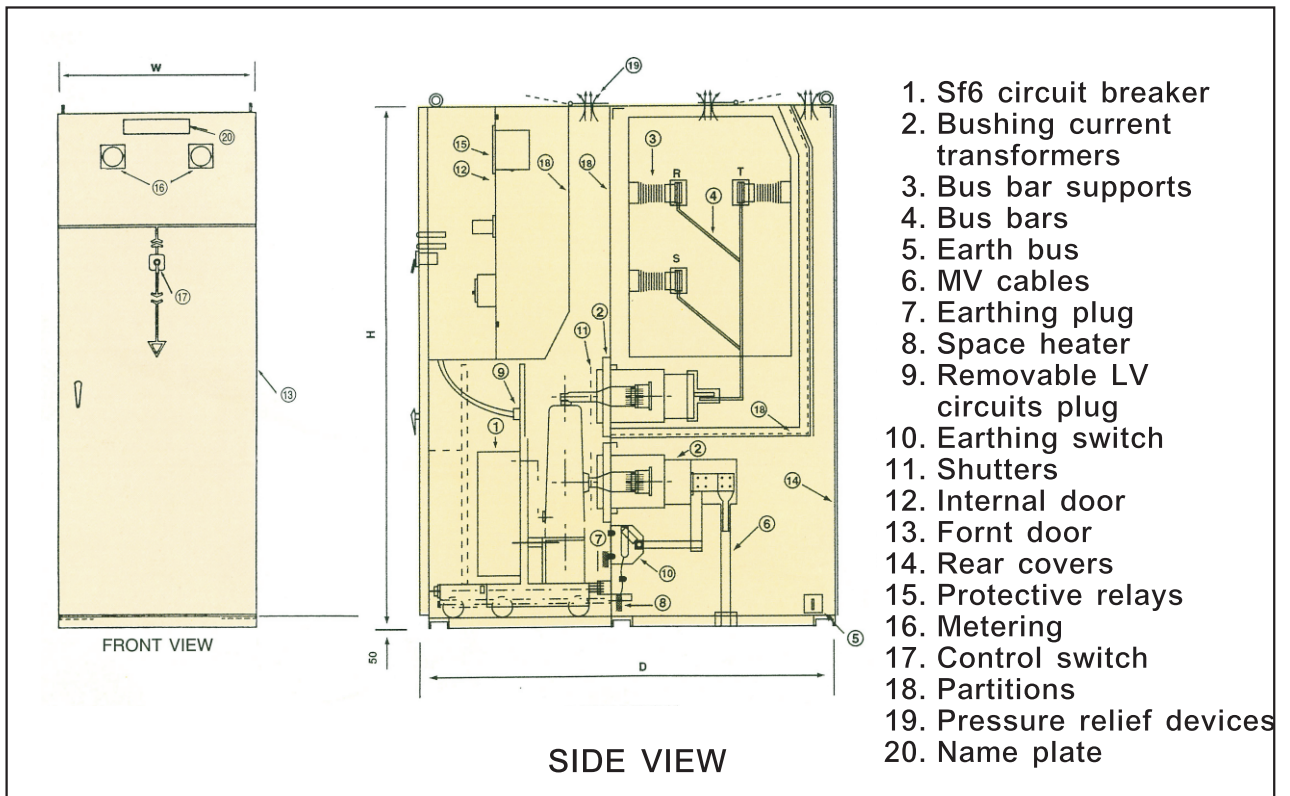
The continuity of the metallic cladding meets the IP 2X protection. For higher levels of protection, please consult us.

Pressure relief devices are provided for the evacuation of the gases and to limit overpressure in the event of internal ARC fault.

## GENERAL CHARACTERISTICS OF THE CUBICLE

| Rated voltage   | 12 kV                                       | 24 kV                | 36 kV                 |
|---|---|----------------------|-----------------------|
| Rated insulation level<br>• 60 Hz for 1 min<br>• impulse 1.2/50 $\mu$ s                 | 28 kV rms<br>75 kVp                         | 50 kV rms<br>125 kVp | 70 kV rms<br>170 kVp  |
| Rated currents for an equipment<br>• Circuit breaker<br>• load breaking switch          | 630, 1250, 1600, 2000, 2500 A<br>400, 630 A |                      |                       |
| Permissible shot time current<br>(1s or 3s)<br>• root mean square value<br>• peak value | 40 kA rms<br>100 kAp                        | 40 kA rms<br>100 kAp | 31.5 kA rms<br>80 kAp |
| Protection level  | IP 3<br>up to IP 5 on request               |                      |                       |
| Max.service ambient temperature   | 40°C  |                      |                       |
| Height(mm)  | 2000  | 2400                 | 2500                  |
| Width(mm)   | 800   | 900                  | 1500                  |
| Depth(mm)   | 1600  | 1850                 | 2500                  |

## CONSTRUCTION DIAGRAM



# 12/24KV中置式裝甲型開關箱

12/24KV Metal-Clad Switchgear SVIE Series

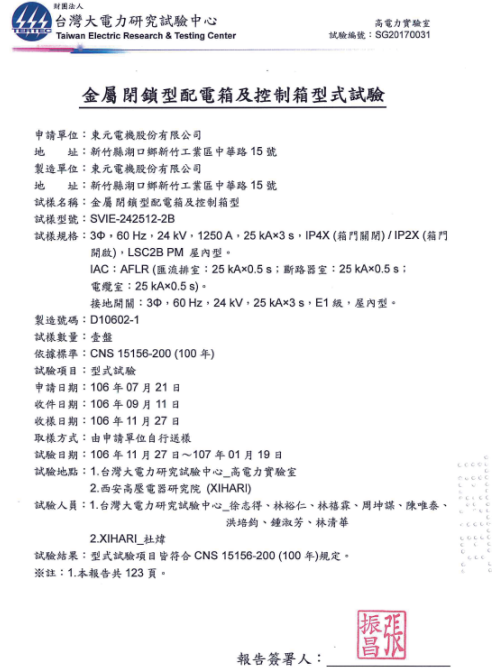


# 12/24KV中置式裝甲型開關箱 12/24kV Metal-Clad Switchgear

Won the KEMA and Taiwan Electric Research & Testing Center type testing certification



KEMA certificate



Taiwan Electric Research & Testing Center certificate

## SVIE TYPE

- Conforms to the newest quality standards of the CNS 15156-200 and IEC 62271-200.
- Design that can withstand internal arc to ensure operator safety.
- The enclosure utilizes galvanized steel sheet for superior rust prevention performance.
- Standardized design, assembly, and testing to ensure quality stability.
- Complete mechanical interlock design that prevents wrong operation by operators and improves operator protection and safety.
- Four independent compartments to ensure that operators will not accidentally come in contact with other electrified segregated compartments during operations.
- Each of the high voltage compartments have their own independent pressure relief device that can independently release pressure when internal arc occurs.



Busbar compartments



Circuit breaker compartments



Circuit breaker compartment metal shutter



Cable compartments

# 12/24KV中置式裝甲型開關箱

## 12/24kV Metal-Clad Switchgear

### Technology data

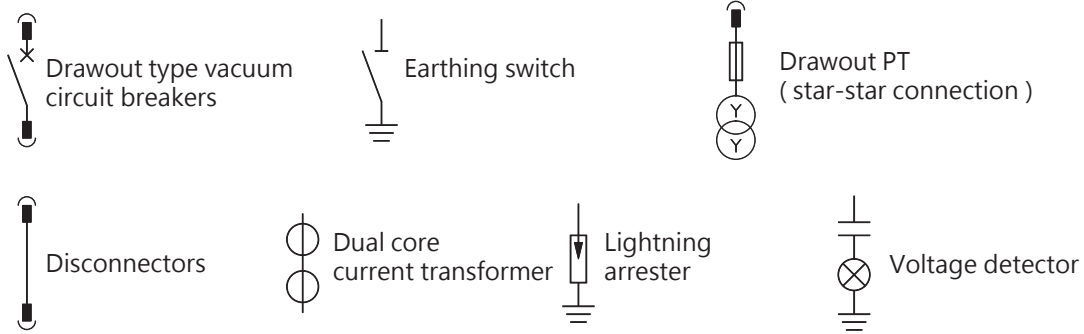
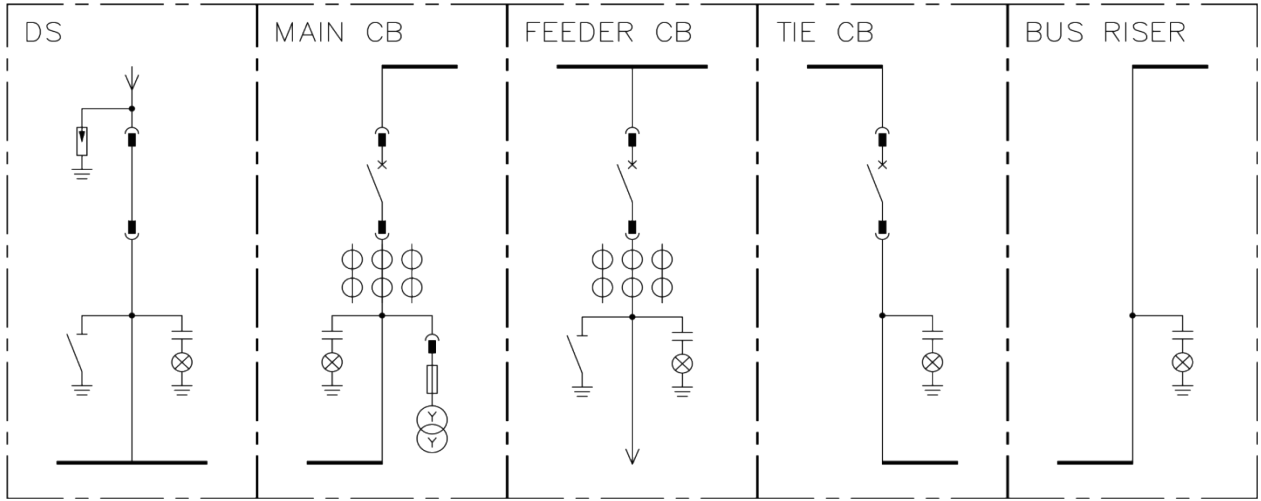
| Item   | Unit             | SVIE-122512-2B   | SVIE-242512-2B |
|--|------------------|--|----------------|
| Standards  |                  | CNS 15156-200 / IEC 62271-200                          |                |
| Rated voltage  | kV               | 12   | 24             |
| Rated normal current                                       | A                | 630、1250、2500  | 630、1250       |
| Rated frequency  | Hz               | 50 / 60  |                |
| Rated power frequency withstand voltage                    | kV               | 28   | 50             |
| Rated lightning impulse withstand voltage                  | kV               | 75   | 125            |
| Auxiliary circuit power frequency withstand voltage        | V                | 2000   |                |
| Rated short-time withstand current                         | Main circuit     | kA   | 25             |
|  | Earthing circuit | kA   | 25             |
|  | Earthing switch  | kA   | 25             |
| Rated peak withstand current                               | Main circuit     | kA   | 65             |
|  | Earthing circuit | kA   | 65             |
|  | Earthing switch  | kA   | 65             |
| Rated duration of short circuit                            | Main circuit     | s  | 3              |
|  | Earthing circuit | s  | 3              |
|  | Earthing switch  | s  | 3              |
| Internal arc   |                  | 25kA x 0.5s / Option 1s                                |                |
| Accessibility type   |                  | AFLR   |                |
| Loss of service continuity category                        |                  | LSC2B  |                |
| Partition class  |                  | PM   |                |
| Degree of protection                                       | The door close   |  | IP4x           |
|  | The door open    |  | IP2x           |
| Classification of electrical endurance for earthing switch |                  | E1 / Option E2   |                |
| Earthing switch mechanical endurance                       |                  | 1000 / Option 2000<br>1001(Number of operation cycles) |                |

Five preventive mechanical interlocks. The highest safety standard.

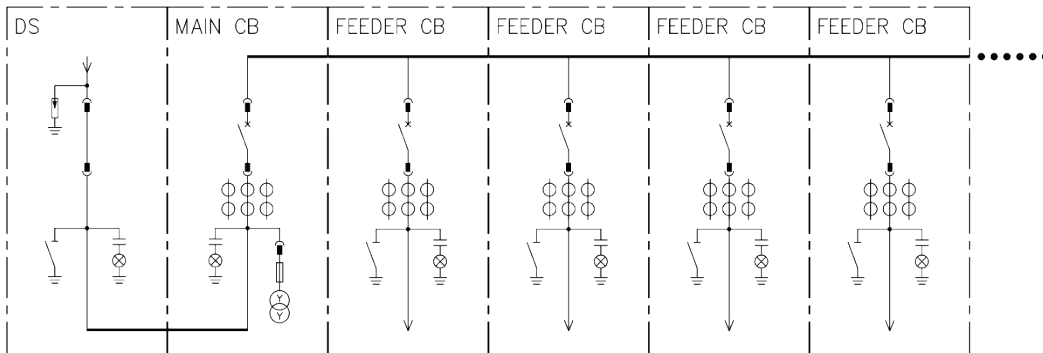
1. Prevent personnel from entering electrified compartments.
2. Prevent operation errors of circuit breakers.
3. Prevent earthing switch be closed while electrified.
4. Prevent circuit breakers be closed while earthing switch is closed.
5. Prevent racking trolley be racked in or out while the circuit breaker is closed.

# 12/24KV中置式裝甲型開關箱 12/24kV Metal-Clad Switchgear

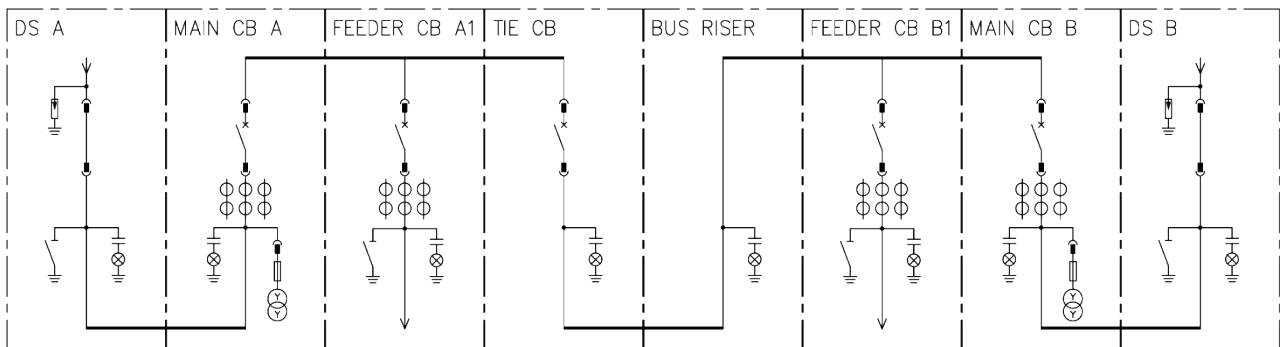
## Design solution



## Application example 1

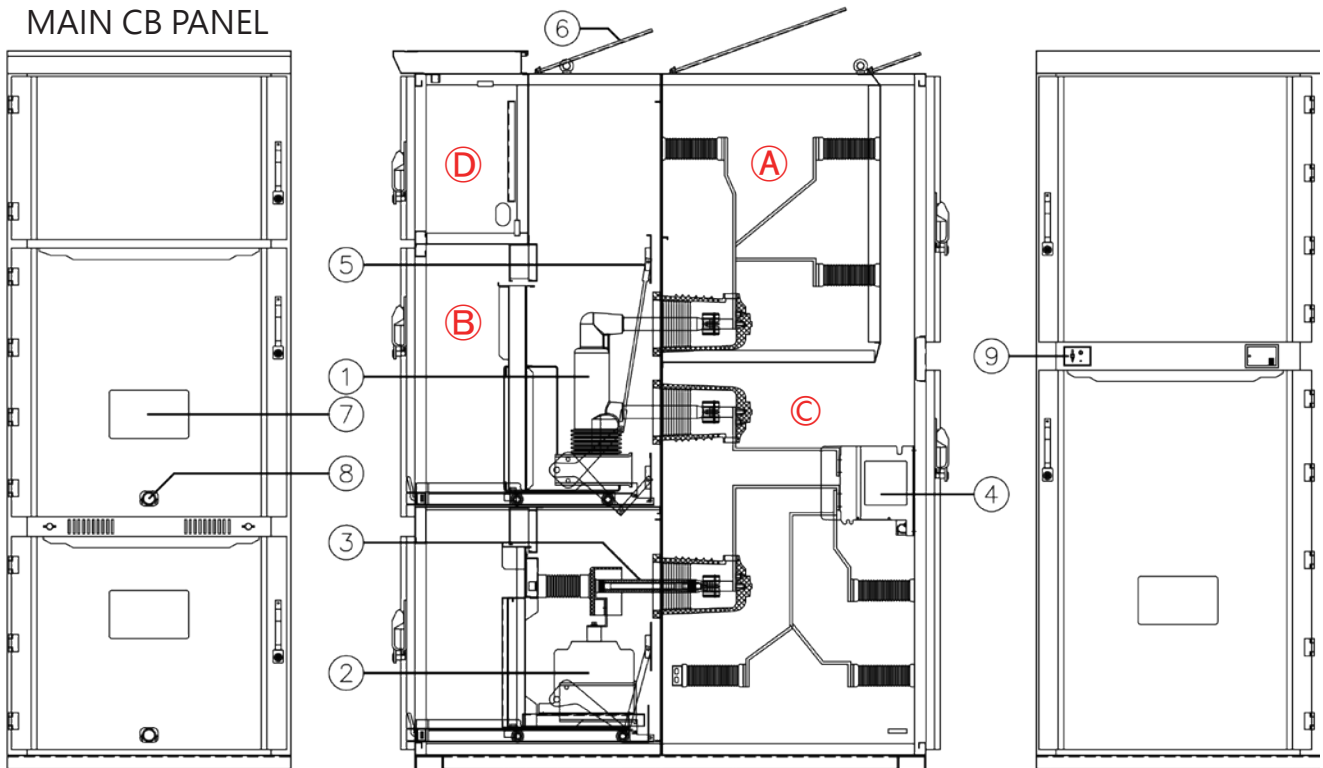


## Application example 2

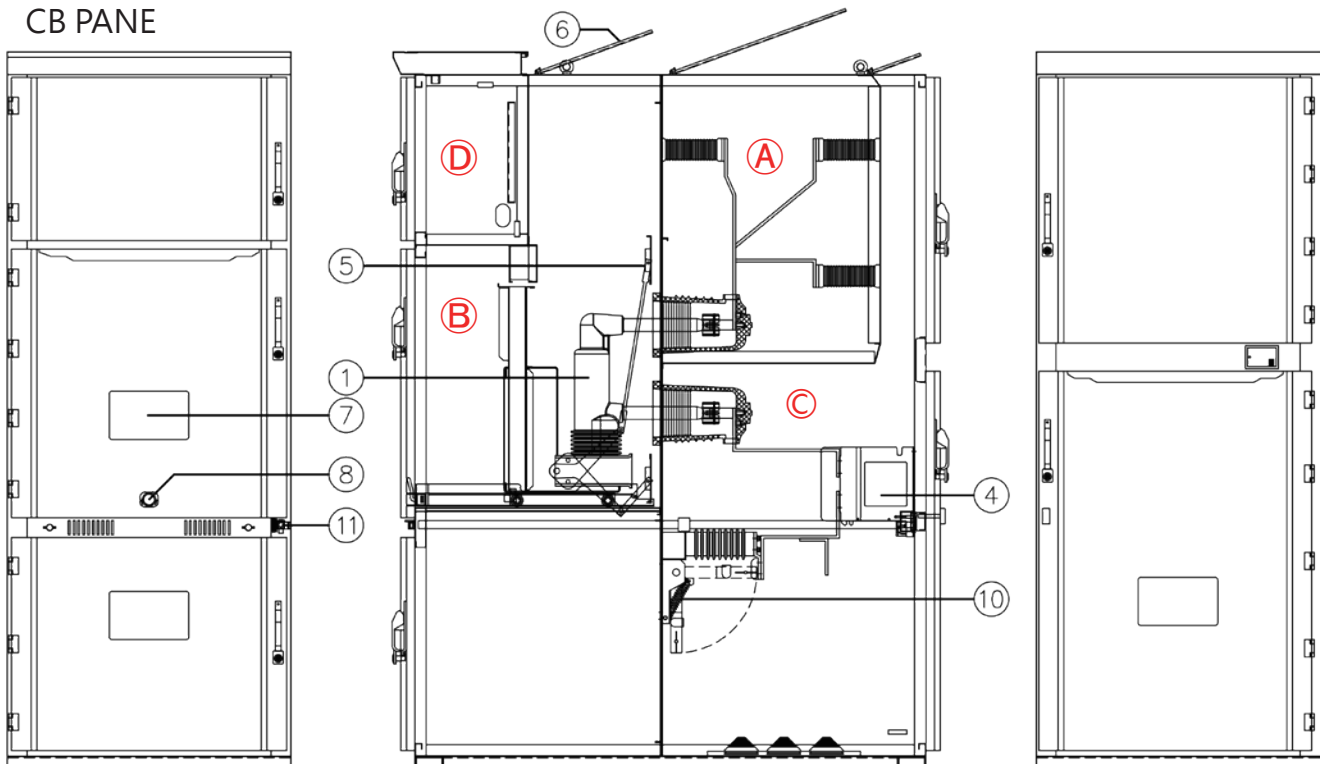


# 12/24KV中置式装甲型開關箱 12/24kV Metal-Clad Switchgear

## Construction MAIN CB PANEL



## CB PANE

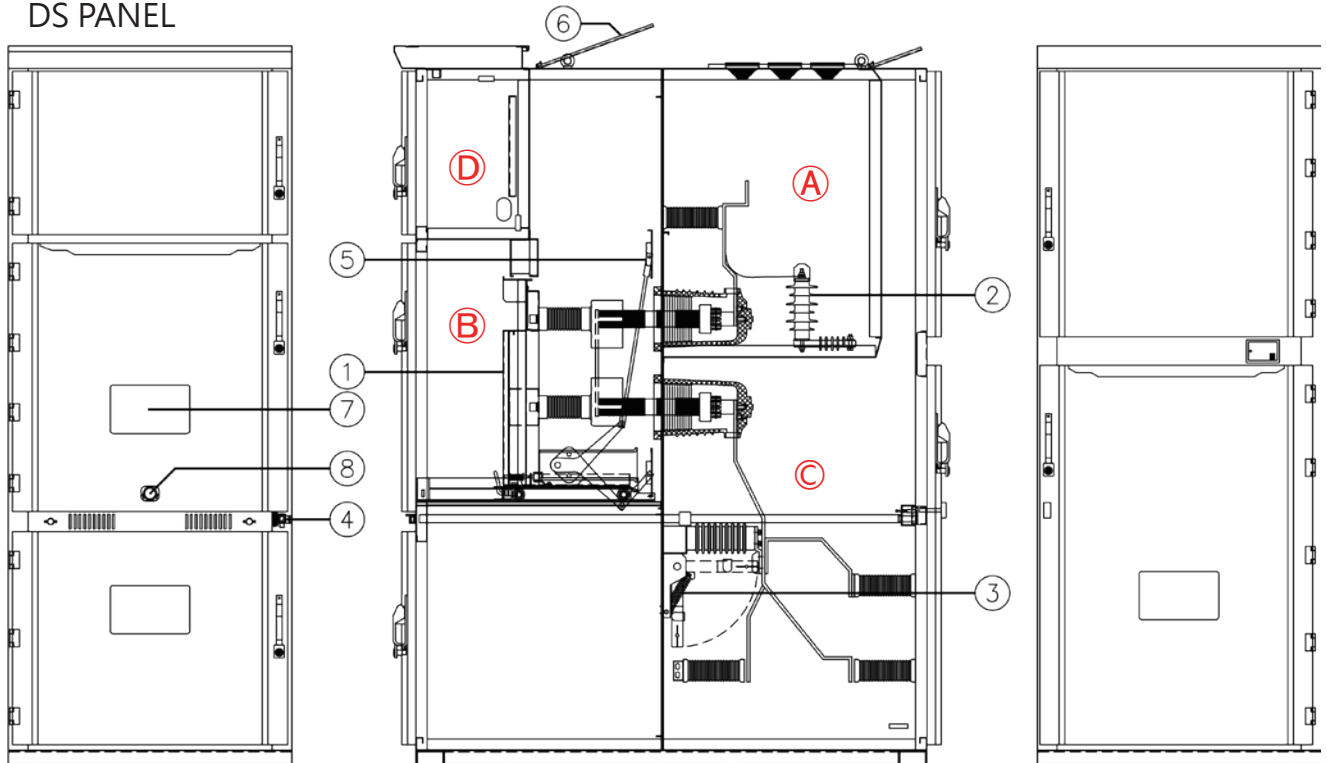


- |                                |                           |  |   |
|--------------------------------|---------------------------|--|---|
| ④ Busbar compartments          | ① Vacuum circuit breakers | ⑤ Metal shutter  | ⑨ Magnetic lock                                   |
| ⑧ Circuit breaker compartments | ② Drawout type PT         | ⑥ Pressure relief device   | ⑩ Earthing switch                                 |
| ③ Cable compartments           | ③ Power fuse              | ⑦ Explosion proof window   | ⑪ External operating hole for the earthing switch |
| ⑩ Low voltage compartments     | ④ Current transformer     | ⑧ External operating hole for racking in/out the circuit breaker |   |

# 12/24KV中置式裝甲型開關箱 12/24kV Metal-Clad Switchgear

Construction

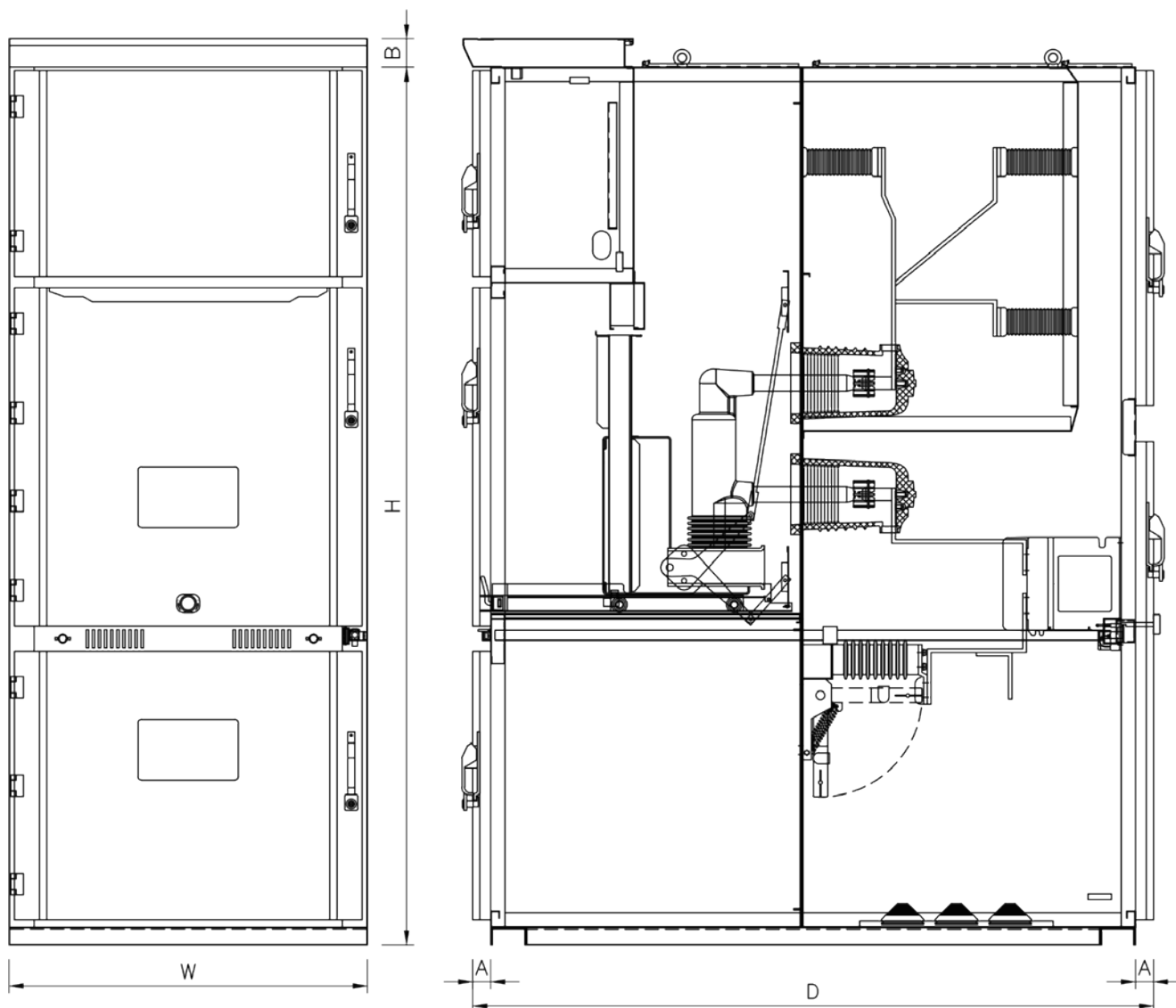
DS PANEL



- |                                |   |   |
|--------------------------------|---|---|
| Ⓐ Busbar compartments          | ① Disconnectors                                   | ⑤ Metal shutter                                   |
| Ⓑ Circuit breaker compartments | ② Lightning arrester                              | ⑥ Pressure relief device                          |
| Ⓒ Cable compartments           | ③ Earthing switch                                 | ⑦ Explosion proof window                          |
| Ⓓ Low voltage compartments     | ④ External operating hole for the earthing switch | ⑧ External operating hole for the earthing switch |

# 12/24KV中置式裝甲型開關箱

## 12/24kV Metal-Clad Switchgear



Dimensions

Unit : mm

| Rated voltage | Width ( W ) | Hight ( H ) | Depth ( D ) | Door ( A ) | Label ( B ) |
|---------------|-------------|-------------|-------------|------------|-------------|
| 24kV          | 800<br>1000 | 2450        | 1900        | 50         | 80          |
|               |             |             | 2000        |            |             |
|               |             |             | 2100        |            |             |
| 12kV          | 800         | 2450        | 1600        | 50         | 80          |
|               |             |             | 1700        |            |             |
|               |             |             | 1800        |            |             |

For other dimension and specifications that are not with the above, please contact us.

## 3.6KV/7.2KV中壓綜合型啟動開關

### MEDIUM VOLTAGE COMBINATION SWITCH

東元 中壓綜合型啟動開關，係採用小型輕量，具有優越切段能力之全樹脂膜型SF6旋轉消弧形式(HGR形)高壓電磁接觸器，並配合限流形電力熔線組，操作變壓器，計器變流器，起動電抗器，自藕變壓器，保護電驛及儀表等器材組合而成。適用於特殊環境，起動頻繁的各類型馬達的起動及變壓器，電容器之一次開關，標準化，組合多層式箱體結構之設計，具有擴充容易，經濟、簡便、耐用，短交期的特色。

TECO's medium-voltage combination switches have been developed with special emphasis on compactness, light weight, easy maintenance, reliability, efficiency, economy, and reduced product time. They can be stacked up to three-high in the vertical sections. These high-voltage switches incorporate a new total mold Sf6 rotary-arc(HGR)high voltage magnetic contactor that is featuring extra compactness and high operation reliability.

#### STANDARD

#### 中壓綜合啟動開關

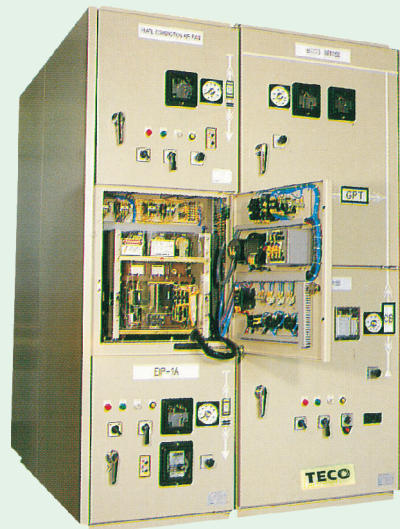
#### M.V. COMBINATION SWITCH

• CNS 3994 • JEM 1225 • IEC 62271-200

▼ HH系列 開關箱 二層式(固定型)  
(HH FIXED TYPE)



▼ HH系列 開關箱 三層式(抽出型)  
(HH DRAW-OUT TYPE)



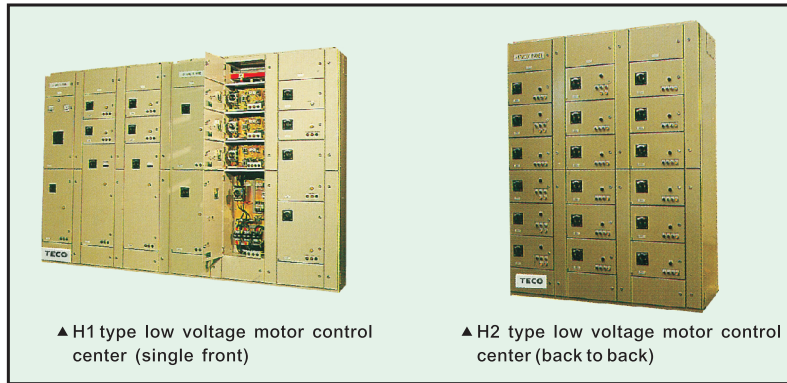


# 低壓馬達控制中心 H系列

## LOW VOLTAGE MOTOR CONTROL CENTER H SERIES

東元H系列低壓馬達控制中心提供了一種將馬達控制與相關控制設備集中化管理的理想方法，彈性的設計系統提供高安全性、具互換性、維修簡易及可彈性組合的特色以滿足用戶不同之需求。

TECO electric H series, motor control centers offer an ideal means of quickly providing centralized motor control and other related control equipment, the flexible design system offers high safety, interchangeable, maintenance free and flexible combination features to meet customer's different requirements.

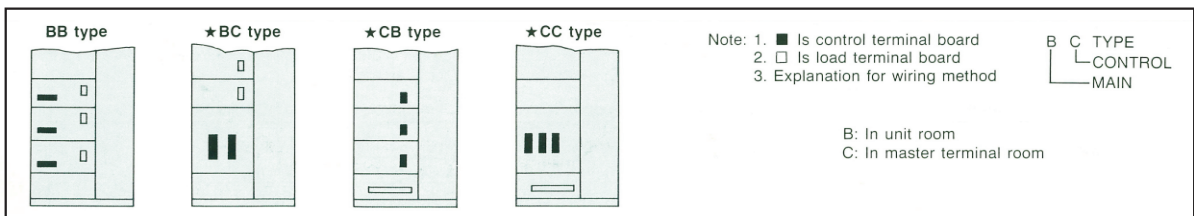
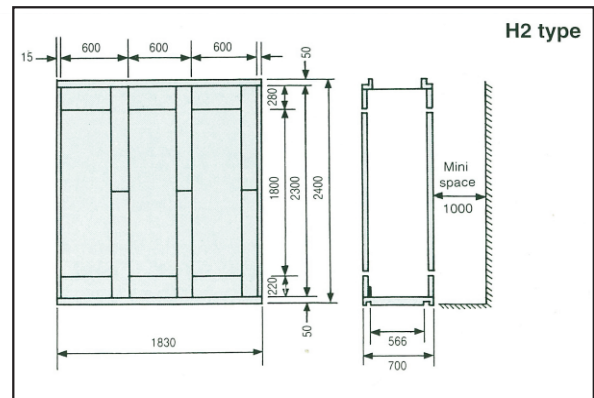
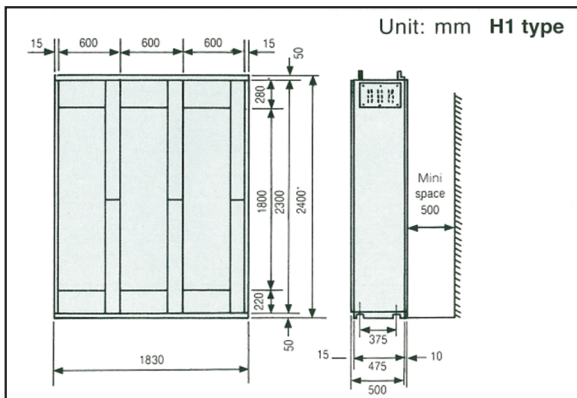


▲ H1 type low voltage motor control center (single front)

▲ H2 type low voltage motor control center (back to back)

### FEATURES:

- Flexible combination can meet different requirements.
- Common standard unit design offer interchangeable and ease installation between H1 type and H2 type.
- NEMA-B-B type wiring standard can offer an simple and correct connection in jobside.
- New Floating source plug using a new total enclosed reinforce glass fiber frame to offer a high safety, high strength insulation construction, and a special copper alloy connectors provide an excellent connection with auto-align function.
- The operation handle of MCCB has mechanical interlock system with door to prevent the miss-operation.
- The overload relay is available to reset from the outside of door.
- Fixed with a lock-test-DRAWOUT 3 position locket system on each drawout unit.
- The single front and back to back design of cubicle offer a very compact and flexible application on the electrical room.



## Reference Standards

● CNS3989 ● JEM 1195 ● NEMA ICS 2-322 ● IEC 60439

### ■ Specifications

| Items                            |   | Specification   | H1 Type   | H2 Type   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|----------------------------------|---|---|---|---|---|----------|-------|-------------|------|------------------|-----------|--|---------|---|-----------------|----|----|----|----|---------------|----|----|----|----|----------------|----|----|----|----|---|
| Construction                     | Protection  | ●   | Enclosed type, or Dust-proof type   | Enclosed type, or Dust-proof type                     |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Access front  | ●   | Single front  | Back to back  |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Horizontal busbar   |   | On the top  |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Vertical busbar   |   | On rear side of cabinet   | On medium   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Unit number   |   | Max 6x300mm   | Max 12x300mm  |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Rating                           | Main insulation voltage   |   | AC 600V   |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Main rated voltage  | ●   | Under AC 600V   |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Control rated voltage   | ●   | AC 110V, 220V ( ● AC 100V, 200V, 380V )   |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Frequency   | ●   | 50 or 60 HZ   |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Busbar current  | Horizontal  |   | 600A, 800A, 1000A, 1200A, 1600A, 2000A, 2500A, 3200A, | 600A, 800A, 1000A, 1200A, 1600A, 2000A, 2500A, 3200A, |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  |   | Vertical  |   | 350A, 400A, 600A                                      | 350A, 400A, 600A                                      |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Short time current (0.5 sec)  | ●   | 30, 42, 50KA ( ● 100KA )  | 30, 42, 50KA ( ● 100KA )                              |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Interrupting capacity   | ●   | 10-50KA ( ● 100KA )   |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Switching capacity of contactors |   | CNS C4084, JEM 1038, IEC60947-4-1   |   |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Door                             | Front door  |   | Independent of each unit  |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Rear door   |   | 2 Sheets  | Independent of each unit                              |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Opening direction   |   | Vertical wiring room; Right, Others : Left  |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Source                           | Main source   | ●   | 3φ 3W, 3φ 4w  |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  | Connection for external wiring  | ●   | <table border="1"> <thead> <tr> <th>Type</th> <th colspan="2">STANDARD</th> <th colspan="2">OPTION</th> </tr> <tr> <th>CONN-<br/>-ECTION</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Source incoming</td> <td>BT</td> <td>TD</td> <td>TD</td> <td>BT</td> </tr> <tr> <td>Load outgoing</td> <td>BT</td> <td>BT</td> <td>TD</td> <td>TD</td> </tr> <tr> <td>Control Wiring</td> <td>BT</td> <td>BT</td> <td>TD</td> <td>TD</td> </tr> </tbody> </table> |   | Type  | STANDARD |       | OPTION      |      | CONN-<br>-ECTION | 1         | 2  | 3       | 4   | Source incoming | BT | TD | TD | BT | Load outgoing | BT | BT | TD | TD | Control Wiring | BT | BT | TD | TD | Note : BT : Bottom to top<br>TD : Top to down |
|                                  |   | Type  | STANDARD  |   | OPTION  |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  |   | CONN-<br>-ECTION  | 1   | 2   | 3   | 4        |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Source incoming                  |   | BT  | TD  | TD  | BT  |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Load outgoing                    | BT  | BT  | TD  | TD  |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Control Wiring                   | BT  | BT  | TD  | TD  |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Unit construction                | ●   | <ul style="list-style-type: none"> <li>Fixed type</li> <li>Draw-out type ( Max 600mm )</li> </ul> |   |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Unit                             | Wiring connection type  | ●   | <table border="1"> <thead> <tr> <th></th> <th>Draw out</th> <th>Fixed</th> </tr> </thead> <tbody> <tr> <td>Source side</td> <td>plug</td> <td rowspan="3">Terminal Board</td> </tr> <tr> <td>Load side</td> <td> <ul style="list-style-type: none"> <li>Terminal board</li> <li>Plug</li> </ul> </td> </tr> <tr> <td>Control</td> <td> <ul style="list-style-type: none"> <li>Terminal board</li> <li>Manual Plug</li> </ul> </td> </tr> </tbody> </table>                                  |   |   | Draw out | Fixed | Source side | plug | Terminal Board   | Load side | <ul style="list-style-type: none"> <li>Terminal board</li> <li>Plug</li> </ul> | Control | <ul style="list-style-type: none"> <li>Terminal board</li> <li>Manual Plug</li> </ul> |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  |   |   | Draw out  | Fixed   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  |   | Source side   | plug  | Terminal Board  |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
|                                  |   | Load side   | <ul style="list-style-type: none"> <li>Terminal board</li> <li>Plug</li> </ul>  |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |
| Control                          | <ul style="list-style-type: none"> <li>Terminal board</li> <li>Manual Plug</li> </ul> |   |   |   |   |          |       |             |      |                  |           |  |         |   |                 |    |    |    |    |               |    |    |    |    |                |    |    |    |    |   |

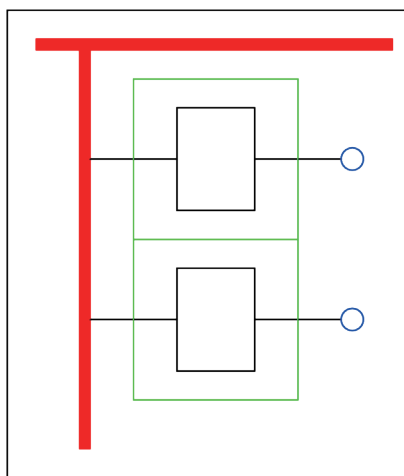
( ● While placing your orders, please confirm the points marked above )

# IEC 61439-2 低壓配電盤

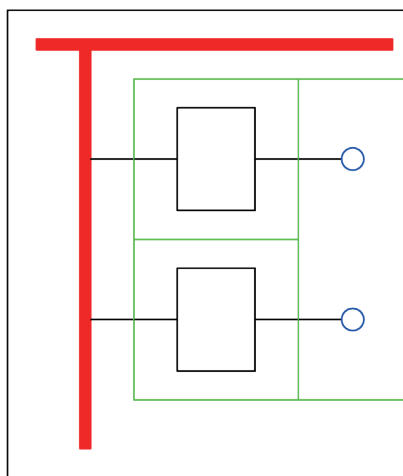
## IEC 61439-2 LOW VOLTAGE SWITCHGEAR

符合IEC 61439-2、Form 3a 和 Form 3b，可選配至Form 4b，完善的標準化設計，防止人員在操作時不會誤觸帶電部，確保操作人員安全無虞。

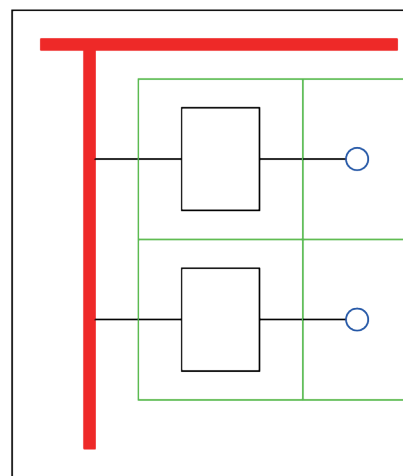
- a) 母線與功能單元隔離
- b) 所有功能單元單獨隔離
- c) 終端接線端子與功能單元組隔離
- d) 所有終端接線端子單獨隔離 (選配)



Form 3a



Form 3b

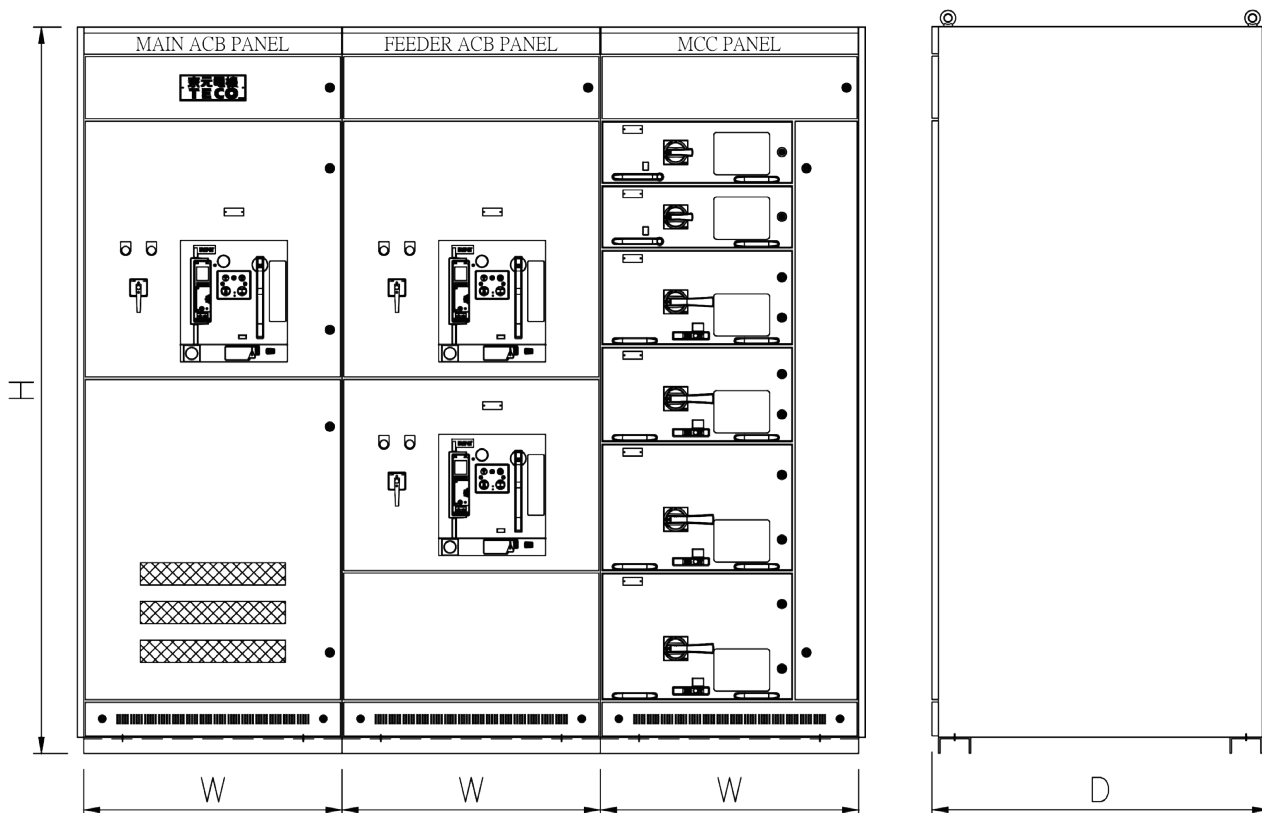


Form 4b



### 技術規格

|          |                         |
|----------|-------------------------|
| 依據標準     | IEC 61439-2、CNS 61439-2 |
| 型式       | 屋內垂直自立型                 |
| 額定絕緣電壓   | AC690V / AC1000V        |
| 額定商頻耐受電壓 | AC2200V 1min            |
| 額定衝擊耐受電壓 | 8kV / 12kV (1.2×50μ s)  |
| 額定電壓     | AC480V                  |
| 額定頻率     | 50Hz / 60Hz             |
| 水平母線額定電流 | 630A ~ 6300A            |
| 垂直母線額定電流 | 370A ~ 1200A            |
| 額定短時間耐電流 | 65kA 1sec               |
| 保護等級     | IP40                    |
| 機械衝擊防護等級 | IK10                    |



Dimension Unit : mm

|   |               |
|---|---------------|
| W | 800、1000、1200 |
| H | 2250          |
| D | 1040、1240     |

# 低壓動力中心

## LOW VOLTAGE POWER CENTER

東元低壓電力控制中心係針對國內各產業界在追求高品質，及高安全性之前提研發成功之產品，其中已經台電評審合格，並推廣至各電廠使用中。

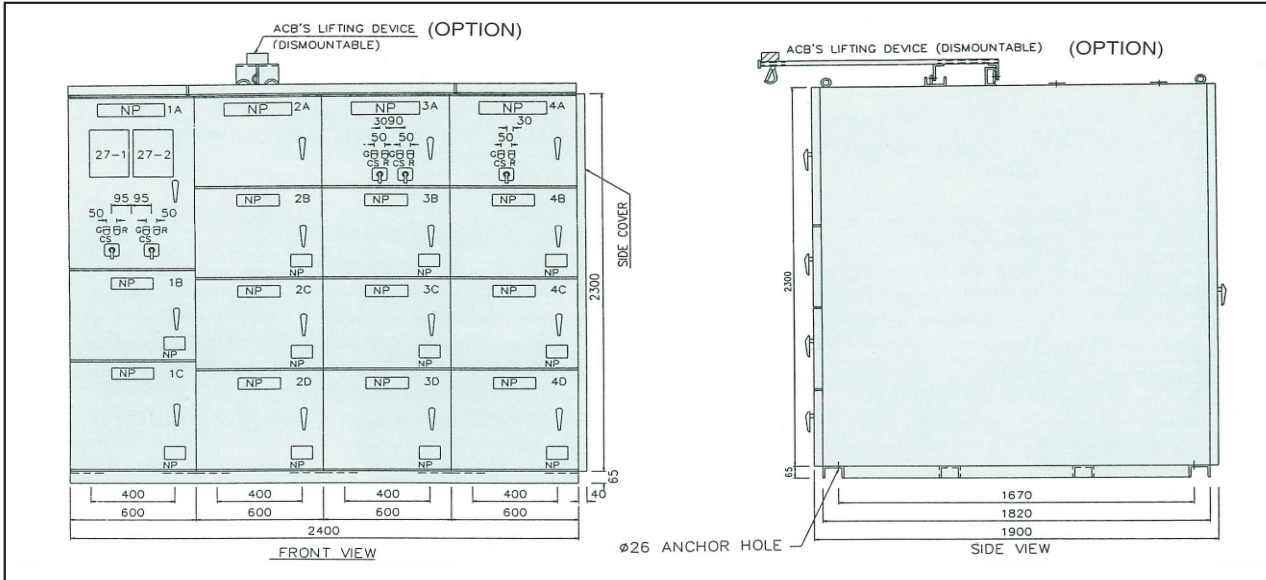
TECO Low Voltage Power Center is successfully developed under the prerequisite to provide co-traders of all sectors in pursuit of high quality and safety. Such a low tension power control center has satisfactorily passed the Type test of Taiwan power Company and is being introduced to power plants for use.

### FEATURES

- Power center consists of several sets of air circuit breaker vertical panels and each set of vertical panel is separated with metal partition into three(3) independent rooms. Facing the front of switch gear in the order from front to rear, these independent rooms are divided into three zones, namely, "Air Circuit Breaker Zone", "Bus Bar Zone" and "Cable Zone". "Air Circuit Breaker Zone" is subdivided into four(4) chambers and the highest chamber is "Low Voltage Compartment Chamber" while the other three(3) chambers are all "Air Circuit Breaker Chamber".
- Every air circuit breaker chamber shall be provided with a handle for open and close of the cubicle door. When the cubicle door is opened, circuit breaker is operated from the front. Also, Operation panel of the circuit breaker is provided with safety shielding thus preventing direct touch of any live part.
- Bus Bar Zone is used for connection of the bus bar of the main circuit with that of the Branch circuit. All the power side and load side terminals are fixed in the bus bar zone and all the fixing and continuity of the bus bar are completed in this bus bar zone.
- Bus bar zone, air circuit breaker zone and the cable zone are all separated with metal plates. When bus bar and its components parts are inspected or maintenance, access shall be made from the cable zone in the rear with all the metal partition plates removed.
- Junction bus bar which passes through the bus bar zone from the load side of circuit breaker are provided in the cable zone for connection of the cables between circuit breaker and the load. The terminal board for remote control circuits is provided in the same zone.
- A door with handle shall be provided in the cable zone. A movable shielding plate with proper size transparent, and excellent insulation material shall be provided in the cable zone to prevent touching of the live parts.
- In the power center, all control circuits required for the outside circuits shall be provided with raceways for connecting with the terminal board in cable zone.
- Ventilation shall be provided on the top and bottom of the cubicle rear door for heat dissipation and de-humidity. Also, sufficient ventilation ports shall be provided in the circuit breaker zone, bus bar zone and cable zone for convection and heat dissipation. Cap type ventilation ports with insect proof net shall also be provided at the top of bus bar zone.

### RATING:

|                                      |   |
|--------------------------------------|---|
| Standard:                            | ANSI C3720, JEM1265, IEC 60439, CNS 13542 |
| Rated Insulation Voltage:            | AC 600V                                   |
| Rated Frequency:                     | 50/60HZ                                   |
| Rated Current:                       | 630~6300A                                 |
| Rated Short Time With Stand Current: | 25KA, 42KA, 50KA, 65KA, 1sec              |



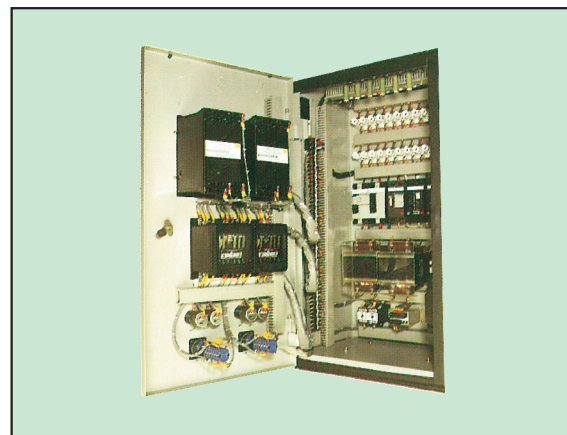
Power Center Layout



Draw-Out Unit For ACB



ACB Zone、Busbar Zone and Cable Zone



Low Voltage Compartment

# 環路開關與架空開關

## Ring Main unit And Pole Switch

### Power Distribution Devices of High Reliability & Free Maintenance

The three phase three wire load break switches manufactured by TECO have two models as installation: Overhead(Pole-Mounted)model and Padmounted model. The product which is developed in SF6 gas for insulation and arc interruption can achieve optimum performance of reliability, long life time and free-maintenance. The operating mechanisms of the products comprise two kinds of manual-operating type and latch type.(The products can also be installed step-by-step from manual to latch and from FTU system to DAS system as customer demands , in order to reduce the initial invest cost and increase the invest profit.)Besides the above advantages, the switch can also provide safety, reliability and energy-saving characteristics and is helpful for the reliability of power distribution system.

### Application

- For distribution network
- For opening/closing of sections of loop system
- As sectionalisers

### Structures

- Weather-proof and anti-corrosion cubicle
- High insulation characteristics
- Excellent arc resistant of multi contacts
- Rotating arc quenching mechanism
- Fast closing and tripping mechanism
- Pressure-release Safety device

### Characteristics:

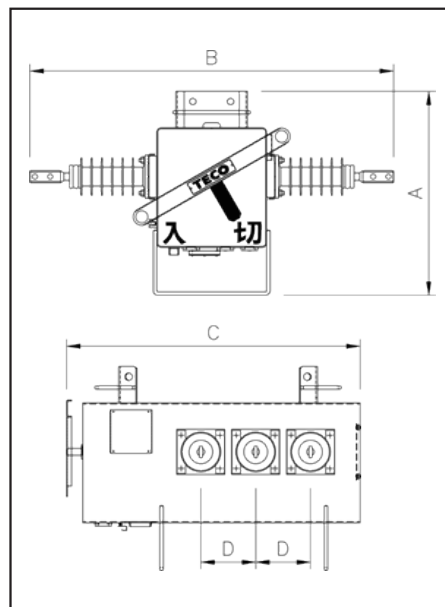
- Small dimensions, light weight Using SF6 gas as the insulating and arc quenching media, the product has the advantages of the small dimensions, low weight and easy installation.
- Excellent arc interruption, long electrical life
- The contacts are developed with multiple touching points and ROTARY-ARC quenching so that the switches have the stability characteristics of closing and interrupting. The arc quenching won't hurt its inner insulation which affects its insulating effects. Especially, the inner has the dryer, which can absorb the bad gas that is decomposed from SF6 at high temperature, it can avoid the insulation being degraded which affects the normal on/off function so this product can achieve high reliability and long electrical life.



## Overhead Line Load Break Switch (Manual Type)



Dimensions



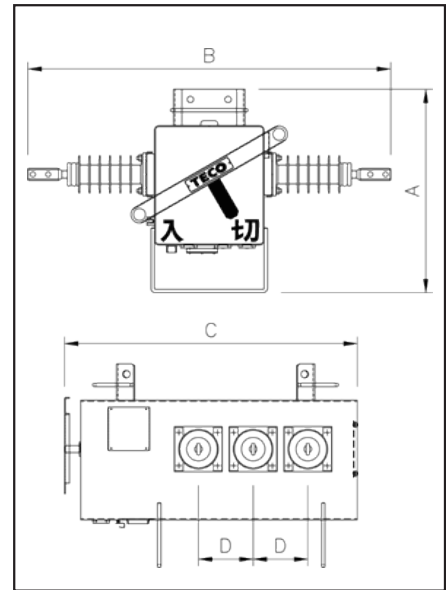
### ★ Specifications

|  |                      |       |       |
|--|----------------------|-------|-------|
| Type                                     | LFG—□□               | 15EH  | 25EH  |
| Rated Max. Voltage                       | kV                   | 15    | 25.8  |
| Rated Continuous Current                 | A                    | 600   |       |
| Rated Short-time Withstand Current (rms) | kA · 1sec            | 12.5  |       |
| Rated Peak Withstand Current             | kA                   | 31.5  |       |
| Impulse Withstand Voltage(1.2×50μs)      | kV                   | 110   | 150   |
| Power-Frequency Withstand Voltage        | kV · 1min            | 50    | 70    |
| Electrical endurance                     | times                | 1,000 |       |
| Mechanical endurance                     | times                | 5,000 |       |
| Operation Strength                       | kgf                  | 20~25 |       |
| Inter Pressure (at 20℃)                  | kg/cm <sup>2</sup> G | 0.7   |       |
| Weights                                  | kg                   | 85    | 110   |
| Dimensions (mm)                          | A                    | 596.5 | 606.5 |
|  | B                    | 1060  | 1292  |
|  | C                    | 869   | 1030  |
|  | D                    | 160   | 270   |

※1.For other specification,please contact us.

## Overhead Line Load Break Switch (Mechanism Latch Type)

Dimensions



### ★ Specifications

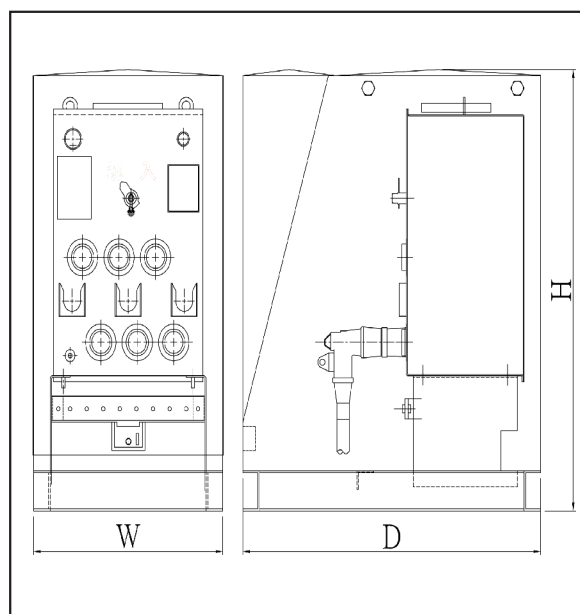
|  |                      |        |       |
|--|----------------------|--------|-------|
| Type                                     | LFG-□□               | 15ER   | 25ER  |
| Rated Max. Voltage                       | kV                   | 15     | 25.8  |
| Rated Continuous Current                 | A                    | 600    |       |
| Rated Short-time Withstand Current (rms) | kA · 1sec            | 12.5   |       |
| Rated Peak Withstand Current             | kA                   | 31.5   |       |
| Impulse Withstand Voltage (1.2×50μs)     | kV                   | 110    | 150   |
| Power-Frequency Withstand Voltage        | kV · 1min            | 50     | 70    |
| Electrical endurance                     | times                | 1,000  |       |
| Mechanical endurance                     | times                | 5,000  |       |
| Control Voltage                          |                      | DC 24V |       |
| Operation Strength                       | kgf                  | 20~25  |       |
| Inter Pressure (at 20°C)                 | kg/cm <sup>2</sup> G | 0.7    |       |
| Weights                                  | kg                   | 115    | 145   |
| Dimensions (mm)                          | A                    | 596.5  | 606.5 |
|  | B                    | 1060   | 1292  |
|  | C                    | 969    | 1130  |
|  | D                    | 160    | 270   |

※1. For other specification, please contact us.

## Padmounted Load Break Switch (Motor Spring-Energy Charged, Mechanism Latch Type/Manual Type)



Dimensions



### ★ Specifications

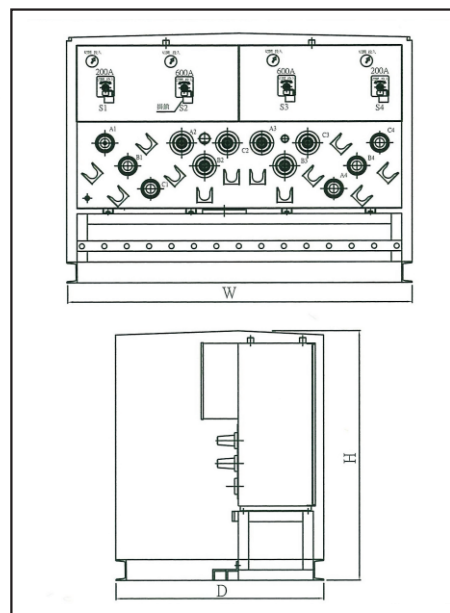
| 2WAY Padmounted Line Load Break Switch      |         |              |                     |
|---|---------|--------------|---------------------|
| Type  | LSG-□□  | 22BHGN       | 22ERGC              |
| Circuit                                     |         | Main×1       | Main×1              |
| Rated Max. Voltage                          | KV      | 27           | 27                  |
| Rated Continuous Current                    | A       | 200          | 600                 |
| Rated Short-time Current (1sec)             | KA rms  | 12.5         | 12.5                |
| Rated Making Current                        | KA peak | 31.5         | 31.5                |
| Low Frequency Withstand Voltage             | KV      | 60           | 60                  |
| Rated DC Withstand Voltage                  | KV      | 78           | 78                  |
| Partial Discharge Voltage                   | KV      | 19           | 19                  |
| Impulse Withstand Voltage                   | KV      | 125          | 125                 |
| Current Transformer                         |         | -----        | 600/1A              |
| Operation Method                            |         | Manual       | Manual / Electrical |
| Inner Pressure kg/cm <sup>2</sup> G at 20°C |         | 0.6          | 0.6                 |
| Weights                                     | Kg      | 130          | 150                 |
| Cubic Dimensions (W×H×D) mm                 |         | 570×1100×900 | 1000×1200×950       |

※1. For other specifications, please contact us.

## Padmounted Load Break Switch (Motor Spring-Energy Charged, Mechanism Latch Type/Manual Type)



Dimensions



### ★ Specifications

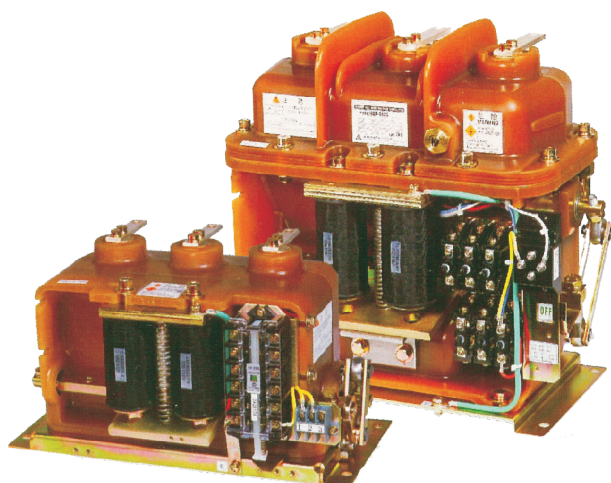
| 4WAY Padmounted Line Load Break Switch      |         |                   |          |                |          |
|---|---------|-------------------|----------|----------------|----------|
| Type  | LSG-□   | 22ERJC            |          | 22EHJN         |          |
| Circuit                                     |         | Main×2            | Branch×2 | Main×2         | Branch×2 |
| Rated Max. Voltage                          | KV      | 15/27             |          |                |          |
| Rated Continuous Current                    | A       | 600               | 200      | 600            | 200      |
| Rated Short-time Current (1sec)             | KA rms  | 12.5              |          |                |          |
| Rated Making Current                        | KA peak | 31.5              |          |                |          |
| Low Frequency Withstand Voltage             | KV      | 60                |          |                |          |
| Rated DC Withstand Voltage                  | KV      | 78                |          |                |          |
| Partial Discharge Voltage                   | KV      | 19                |          |                |          |
| Impulse Withstand Voltage                   | KV      | 125               |          |                |          |
| Current Transformer                         |         | 600/1A            | 200/1A   | -----          |          |
| Operation Method                            |         | Manual/Electrical |          | Manual         |          |
| Inner Pressure kg/cm <sup>2</sup> G at 20°C |         | 0.5               |          |                |          |
| Weights                                     | Kg      | 520               |          | 490            |          |
| Cubic Dimensions (W×H×D) mm                 |         | 1660×1200×1000    |          | 1660×1200×1000 |          |

※1. For other specifications, please contact us.

# 中壓電磁接觸器

## MEDZUM-Voltage Magnetic Contactors

### A Wide Choice of Models to Meet Every Requirement

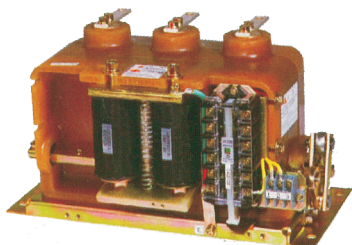


Highly evaluated molded type high-voltage electromagnetic contactors have been used in many fields of industry as switches for motors, transformers and capacitors. These contactors have enjoyed an enviable reputation attested by a great number of users for their outstanding characteristics such as stable switching performance, high dielectric strength, high reliability and properties even under the most extreme temperature and environmental conditions.

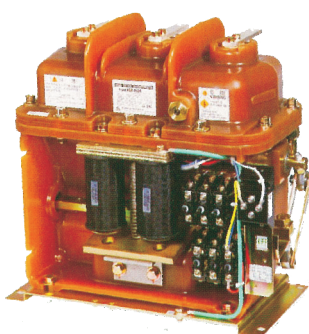
The most suitable selection for a variety of applications has become possible as a result of commercialization for a special model for 3.3 kV, 100A.

This new model will meet your requirements for reducing space and cost as well as increasing reliability.

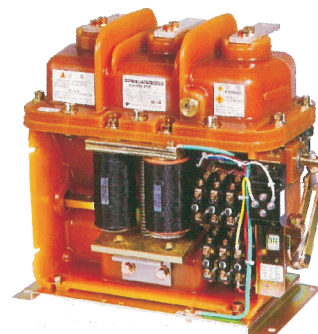
### Rotary-Arc-High-Voltage Magnetic Contactor (Stationary Type)



▲ Type HGR-851C,  
3.6kV, 100A

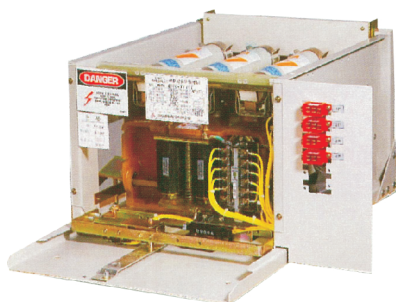


▲ Type HGR-862C(863C)  
3.6/7.2kV, 200A

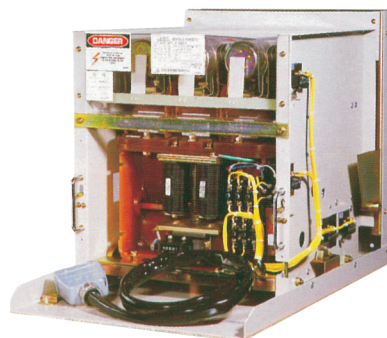


▲ Type HGR-873C(974C)  
3.6/7.2kV, 400A

### Rotary-Arc-High-Voltage Magnetic Contactor with Power Fuses (Drawout Type)



▲ Type HGFO-857C-F  
3.6kV, 100A, 40kA



▲ Type HGFO-867C-F  
3.6kV, 200A, 40kA

## RATINGS AND SPECIFICATIONS Standard

### ● Magnet Holding

| Item   | Mounting Type                 | Stationary Type   |       |      |           |      | Drawout Type |       |      |           |      |           |       |      |           |      |
|--|-------------------------------|---|-------|------|-----------|------|--------------|-------|------|-----------|------|-----------|-------|------|-----------|------|
|  |                               | Unfused   |       |      |           |      | Unfused      |       |      |           |      | Fused     |       |      |           |      |
| Power Fuse                                   |                               | Unfused   |       |      |           |      | Unfused      |       |      |           |      | Fused     |       |      |           |      |
| Rated Insulation Voltage                     | KV                            | 3.6   | 3.6   | 7.2  | 3.6       | 7.2  | 3.6          | 3.6   | 7.2  | 3.6       | 7.2  | 3.6       | 3.6   | 7.2  | 3.6       | 7.2  |
| Rated Thermal Current                        | A                             | 100   | 200   |      | 400       |      | 100          | 200   |      | 400       |      | 100       | 200   |      | 400       |      |
| Contactor Type                               |                               | HGR-□   |       |      |           |      | HGR(O)-□     |       |      |           |      | HGR(O)-□  |       |      |           |      |
|  |                               | 851C  | 862C  | 963C | 873C      | 974C | 851C         | 862C  | 963C | 873C      | 974C | 857C      | 867C  | 968C | 877C      | 978C |
| Rated Operational Voltage                    | kV                            | 3.6   | 3.6   | 7.2  | 3.6       | 7.2  | 3.6          | 3.6   | 7.2  | 3.6       | 7.2  | 3.6       | 3.6   | 7.2  | 3.6       | 7.2  |
| Rated Frequency                              | Hz                            | 50 / 60   |       |      |           |      | 50 / 60      |       |      |           |      |           |       |      |           |      |
| Rated Interrupting Current                   | kA                            | 2.5   | 4     |      | 6.3       |      | 2.5          | 4     |      | 6.3       |      | 40        |       |      |           |      |
| Rated Short-Time Current<br>(2 s e c)        | kA                            | 2.5   | 4     |      | 6.3       |      | 2.5          | 4     |      | 6.3       |      | 2.5       | 4     |      | 6.3       |      |
| Insulation Class                             | *4                            | 3A  | 3A/6A |      |           |      | 3B           | 3B/6B |      |           |      | 3B        | 3B/6B |      |           |      |
| Making Current Capacity                      |                               | Class AC4 : 10 times rated current,                         |       |      |           |      |              |       |      |           |      |           |       |      |           |      |
| Breaking Current Capacity                    |                               | Class AC4 : 8 times rated current                           |       |      |           |      |              |       |      |           |      |           |       |      |           |      |
| Switching Frequency                          |                               | 1200 operations per hour                                    |       |      |           |      |              |       |      |           |      |           |       |      |           |      |
| Mechanical Endurance<br>(Number of times)    |                               | 2,500,000   |       |      | 1,000,000 |      | 2,500,000    |       |      | 1,000,000 |      | 2,500,000 |       |      | 1,000,000 |      |
| Electrical Endurance *1<br>(Number of times) |                               | 250,000   |       |      | 100,000   |      | 250,000      |       |      | 100,000   |      | 250,000   |       |      | 100,000   |      |
| Overcurrent Class                            |                               | —   |       |      |           |      | —            |       |      |           |      | C         |       |      |           |      |
| Control Circuit                              | Rated Insulation Voltage (V)  | 250   |       |      |           |      | 250          |       |      |           |      |           |       |      |           |      |
|  | Rated Operational Voltage (V) | 100 / 110 VAC, 200 / 220 VAC ; 100 / 110 VDC, 200 / 220 VDC |       |      |           |      |              |       |      |           |      |           |       |      |           |      |
| Auxiliary Contact Arrangement *2             |                               | 3NO, 2NC  |       |      |           |      | 3NO, 2NC     |       |      |           |      |           |       |      |           |      |
| Maximum Load Capacity                        | Motor KW                      | 375   | 750   | 1500 | 1500      | 3000 | 375          | 750   | 1500 | 1500      | 3000 | 375       | 750   | 1000 | 1500      | 2000 |
|  | Transformer kVA               | 500   | 1000  | 2000 | 2000      | 4000 | 500          | 1000  | 2000 | 2000      | 4000 | 500       | 1000  | 1500 | 2000      | 3000 |
|  | Capacitor*3 kVA               | 500   | 1000  | 2000 | 2000      | 4000 | 500          | 1000  | 2000 | 2000      | 4000 | 300       | 700   | 1000 | 1400      | 2000 |
| Approx. Mass (kg)                            |                               | 11  | 23    |      | 26        |      | 52           | 100   |      | 110       |      | 56        | 110   |      | 120       |      |
| Standard                                     |                               | JEM-1167  |       |      |           |      | JEM-1225     |       |      |           |      |           |       |      |           |      |

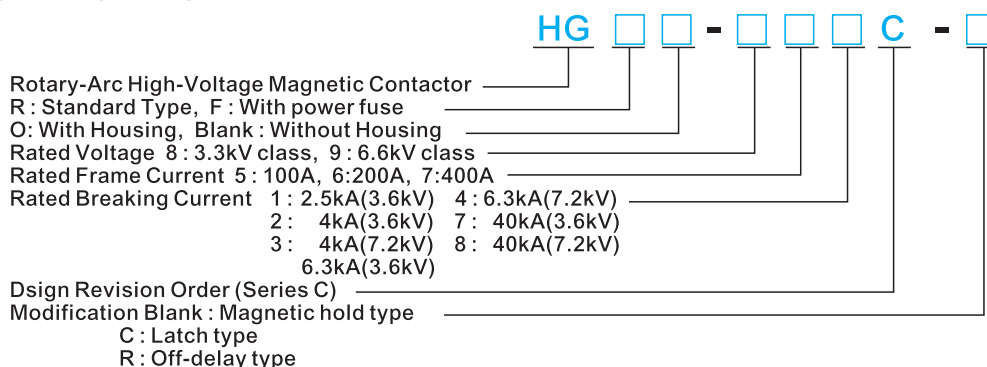
\*1 : The electrical endurance was tested at class Ac3 switching frequency.  
(600% of the rated current was input to check if more than 100%  
of the breaking current would flow.)

\*2 : The contact number of the auxiliary contactor is the number of contacts  
available for external use.

\*3 : When used on capacitor application, Reactor will need to be installed.

\*4 : rated withstand voltage : 3A/3B : 16/10kV , 6A/6B : 22/16kV  
rated impulse voltage : 3A/3B : 45/30kV , 6A/6B : 60/45kV

### NOMENCLATURE



## RATINGS AND SPECIFICATIONS Standard

### ● Magnet Holding(Off Delay : 2 secretary)

| Item                                      | Mounting Type                       |       | Stationary Type   |           |      |             |       | Drawout Type |           |      |             |       |       |           |      |      |
|---|-------------------------------------|-------|---|-----------|------|-------------|-------|--------------|-----------|------|-------------|-------|-------|-----------|------|------|
|   |                                     |       | Unfused   |           |      |             |       | Unfused      |           |      |             |       | Fused |           |      |      |
| Power Fuse                                |                                     |       | Unfused   |           |      |             |       | Unfused      |           |      |             |       | Fused |           |      |      |
| Rated Insulation Voltage KV               | 3.6                                 | 3.6   | 7.2   | 3.6       | 7.2  | 3.6         | 3.6   | 7.2          | 3.6       | 7.2  | 3.6         | 3.6   | 7.2   | 3.6       | 7.2  |      |
| Rated Thermal Current A                   | 100                                 | 200   | 400   | 100       | 200  | 400         | 100   | 200          | 400       | 100  | 200         | 400   | 100   | 200       | 400  |      |
| Contactor Type                            | HGR-□ -R                            |       |   |           |      | HGR(O)-□ -R |       |              |           |      | HGR(O)-□ -R |       |       |           |      |      |
|   | 851C                                | 862C  | 963C  | 873C      | 974C | 851C        | 862C  | 963C         | 873C      | 974C | 857C        | 867C  | 968C  | 877C      | 978C |      |
| Rated Operational Voltage kV              | 3.6                                 | 3.6   | 7.2   | 3.6       | 7.2  | 3.6         | 3.6   | 7.2          | 3.6       | 7.2  | 3.6         | 3.6   | 7.2   | 3.6       | 7.2  |      |
| Rated Frequency Hz                        | 50 / 60                             |       |   |           |      | 50 / 60     |       |              |           |      |             |       |       |           |      |      |
| Rated Interrupting Current kA             | 2.5                                 | 4     | 6.3   | 2.5       | 4    | 6.3         | 40    |              |           |      |             |       |       |           |      |      |
| Rated Short-Time Current kA (2 sec)       | 2.5                                 | 4     | 6.3   | 2.5       | 4    | 6.3         | 2.5   | 4            | 6.3       | 2.5  | 4           | 6.3   |       |           |      |      |
| Insulation Class *4                       | 3A                                  | 3A/6A |   |           |      | 3B          | 3B/6B |              |           |      | 3B          | 3B/6B |       |           |      |      |
| Making Current Capacity                   | Class AC4 : 10 times rated current, |       |   |           |      |             |       |              |           |      |             |       |       |           |      |      |
| Breaking Current Capacity                 | Class Ac4 : 8 times rated current   |       |   |           |      |             |       |              |           |      |             |       |       |           |      |      |
| Switching Frequency                       | 1200 operations per hour            |       |   |           |      |             |       |              |           |      |             |       |       |           |      |      |
| Mechanical Endurance (Number of times)    | 2,500,000                           |       |   | 1,000,000 |      | 2,500,000   |       |              | 1,000,000 |      | 2,500,000   |       |       | 1,000,000 |      |      |
| Electrical Endurance *1 (Number of times) | 250,000                             |       |   | 100,000   |      | 250,000     |       |              | 100,000   |      | 250,000     |       |       | 100,000   |      |      |
| Overcurrent Class                         | —                                   |       |   |           |      | —           |       |              |           |      | C           |       |       |           |      |      |
| Control Circuit                           | Rated Insulation Voltage (V)        |       | 250   |           |      |             |       | 250          |           |      |             |       |       |           |      |      |
|   | Rated Operational Voltage (V)       |       | 100 / 110 VAC, 200 / 220 VAC ; 100 / 110 VDC, 200 / 220 VDC |           |      |             |       |              |           |      |             |       |       |           |      |      |
| Auxiliary Contact Arrangement *2          | 2NO, 2NC                            |       |   |           |      | 2NO, 2NC    |       |              |           |      |             |       |       |           |      |      |
| Maximum Load Capacity                     | Motor KW                            | 375   | 750   | 1500      | 1500 | 3000        | 375   | 750          | 1500      | 1500 | 3000        | 375   | 750   | 1000      | 1500 | 2000 |
|   | Transformer kVA                     | 500   | 1000  | 2000      | 2000 | 4000        | 500   | 1000         | 2000      | 2000 | 4000        | 500   | 1000  | 1500      | 2000 | 3000 |
|   | Capacitor*3 kVA                     | 500   | 1000  | 2000      | 2000 | 4000        | 500   | 1000         | 2000      | 2000 | 4000        | 300   | 700   | 1000      | 1400 | 2000 |
| Approx. Mass (kg)                         | 11                                  | 23    | 26  | 52        | 100  | 110         | 56    | 110          | 120       |      |             |       |       |           |      |      |
| Standard                                  | JEM-1167                            |       |   |           |      | JEM-1225    |       |              |           |      |             |       |       |           |      |      |

\*1 : The electrical endurance was tested at class Ac3 switching frequency. (600% of the rated current was input to check if more than 100% of the breaking current would flow.)

\*2 : The contact number of the auxiliary contactor is the number of contacts available for external use.

\*3 : When used on capacitor application, Reactor will need to be installed.

\*4 : rated withstand voltage : 3A/3B : 16/10kV , 6A/6B : 22/16kV  
rated impulse voltage : 3A/3B : 45/30kV , 6A/6B : 60/45kV

### NORMAL SERVICE CONDITION

1. Altitude : Less than 1000m.
2. Ambient temperature : -5°C to 40°C
3. Humidity : 45% to 85%

#### Notes :

1. Short-time current, making current capacity, breaking current capacity, and switching capacity are performed by the magnetic contactor without a current limiting power fuse(PF).
2. The weight of the drawing type is the total weight including the housing , 2 each potential transformers(Pts),

## RATINGS AND SPECIFICATIONS Standard

### ● Latch Type

| Mounting Type                                |                               | Stationary Type   |       |         |      |      | Drawout Type |      |      |         |       |             |      |      |         |      |
|--|-------------------------------|---|-------|---------|------|------|--------------|------|------|---------|-------|-------------|------|------|---------|------|
| Item   |                               | Unfused   |       |         |      |      | Unfused      |      |      |         |       | Fused       |      |      |         |      |
| Power Fuse                                   |                               | Unfused   |       |         |      |      | Unfused      |      |      |         |       | Fused       |      |      |         |      |
| Rated Insulation Voltage                     | KV                            | 3.6   | 3.6   | 7.2     | 3.6  | 7.2  | 3.6          | 3.6  | 7.2  | 3.6     | 7.2   | 3.6         | 3.6  | 7.2  | 3.6     | 7.2  |
| Rated Thermal Current                        | A                             | 100   | 200   |         | 400  |      | 100          | 200  |      | 400     |       | 100         | 200  |      | 400     |      |
| Contactor Type                               |                               | HGR-□ -C  |       |         |      |      | HGR(O)-□ -C  |      |      |         |       | HGR(O)-□ -C |      |      |         |      |
|  |                               | 851C  | 862C  | 963C    | 873C | 974C | 851C         | 862C | 963C | 873C    | 974C  | 857C        | 867C | 968C | 877C    | 978C |
| Rated Operational Voltage                    | kV                            | 3.6   | 3.6   | 7.2     | 3.6  | 7.2  | 3.6          | 3.6  | 7.2  | 3.6     | 7.2   | 3.6         | 3.6  | 7.2  | 3.6     | 7.2  |
| Rated Frequency                              | Hz                            | 50 / 60   |       |         |      |      | 50 / 60      |      |      |         |       |             |      |      |         |      |
| Rated Interrupting Current                   | kA                            | 2.5   | 4     |         | 6.3  |      | 2.5          | 4    |      | 6.3     |       | 40          |      |      |         |      |
| Rated Short-Time Current<br>(2 s e c)        | kA                            | 2.5   | 4     |         | 6.3  |      | 2.5          | 4    |      | 6.3     |       | 2.5         | 4    |      | 6.3     |      |
| Insulation Class                             | *4                            | 3A  | 3A/6A |         |      | 3B   | 3B/6B        |      |      | 3B      | 3B/6B |             |      |      |         |      |
| Making Current Capacity                      |                               | Class AC4 : 10 times rated current,                         |       |         |      |      |              |      |      |         |       |             |      |      |         |      |
| Breaking Current Capacity                    |                               | Class Ac4 : 8 times rated current                           |       |         |      |      |              |      |      |         |       |             |      |      |         |      |
| Switching Frequency                          |                               | 300 operations per hour                                     |       |         |      |      |              |      |      |         |       |             |      |      |         |      |
| Mechanical Endurance<br>(Number of times)    |                               | 250,000   |       | 250,000 |      |      | 250,000      |      |      | 250,000 |       | 250,000     |      |      | 250,000 |      |
| Electrical Endurance *1<br>(Number of times) |                               | 100,000   |       | 50,000  |      |      | 100,000      |      |      | 50,000  |       | 100,000     |      |      | 50,000  |      |
| Overcurrent Class                            |                               | —   |       |         |      |      | —            |      |      |         |       | C           |      |      |         |      |
| Control Circuit                              | Rated Insulation Voltage (V)  | 250   |       |         |      |      | 250          |      |      |         |       |             |      |      |         |      |
|  | Rated Operational Voltage (V) | 100 / 110 VAC, 200 / 220 VAC ; 100 / 110 VDC, 200 / 220 VDC |       |         |      |      |              |      |      |         |       |             |      |      |         |      |
| Auxiliary Contact Arrangement *2             |                               | 2NO, 2NC  |       |         |      |      | 2NO, 2NC     |      |      |         |       |             |      |      |         |      |
| Maximum Load Capacity                        | Motor KW                      | 375   | 750   | 1500    | 1500 | 3000 | 375          | 750  | 1500 | 1500    | 3000  | 375         | 750  | 1500 | 1500    | 2000 |
|  | Transformer kVA               | 500   | 1000  | 2000    | 2000 | 4000 | 500          | 1000 | 2000 | 2000    | 4000  | 500         | 1000 | 1500 | 2000    | 3000 |
|  | Capacitor*3 kVA               | 500   | 1000  | 2000    | 2000 | 4000 | 500          | 1000 | 2000 | 2000    | 4000  | 300         | 700  | 1000 | 1400    | 2000 |
| Approx. Mass (kg)                            |                               | 11.5  | 23    |         | 26   |      | 52           | 100  |      | 110     |       | 56          | 110  |      | 120     |      |
| Standard                                     |                               | JEM-1167  |       |         |      |      | JEM-1225     |      |      |         |       |             |      |      |         |      |

\*1 : The electrical endurance was tested at class Ac3 switching frequency. (600% of the rated current was input to check if more than 100% of the breaking current would flow.)

\*2 : The contact number of the auxiliary contactor is the number of contacts available for external use.

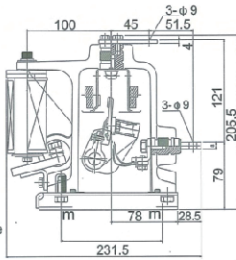
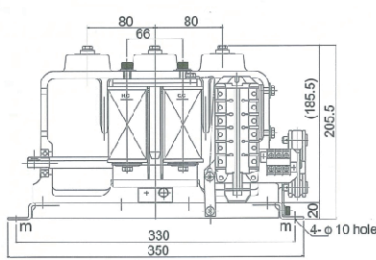
\*3 : When used on capacitor application, Reactor will need to be installed.

\*4 : rated withstand voltage : 3A/3B : 16/10kV , 6A/6B : 22/16kV  
rated impulse voltage : 3A/3B : 45/30kV , 6A/6B : 60/45kV

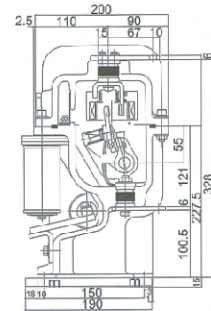
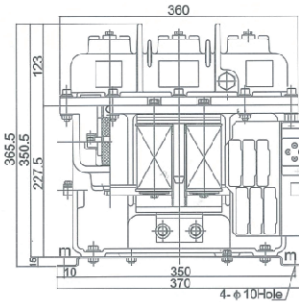
Dimensions

● Stationary Type HGR

· 3.6kV 100A



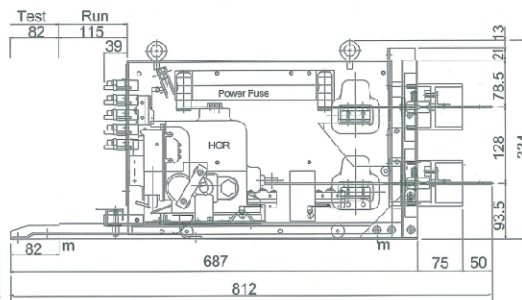
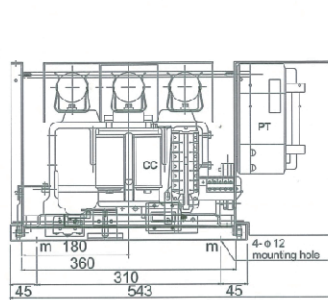
· 3.6kV 200/400A  
· 7.2kV 200/400A



in mm

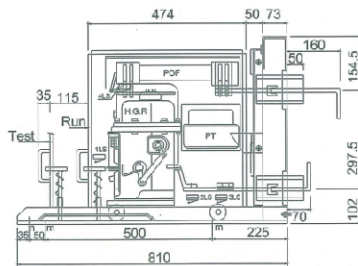
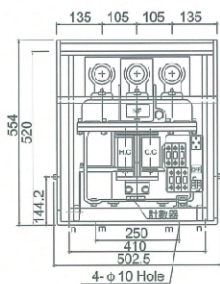
● Drawout Type HGRO / Type HGFO (with power-fuse and housing)

· 3.6kV 100A

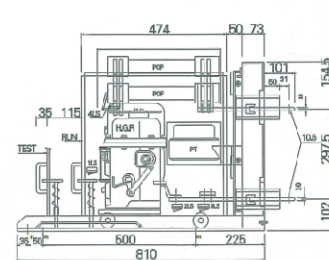
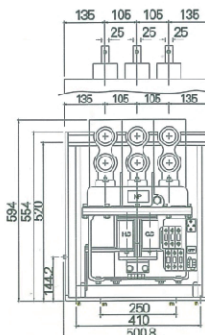


in mm

· 3.6/7.2kV 200/400A



· 3.6/7.2kV 200/400A







# Main Global Operations

business to business to sustainability

TECO Westinghouse



1995  
Texas Austin | US

Motovario S.p.A



2015  
Formigine | Italy

Wuxi

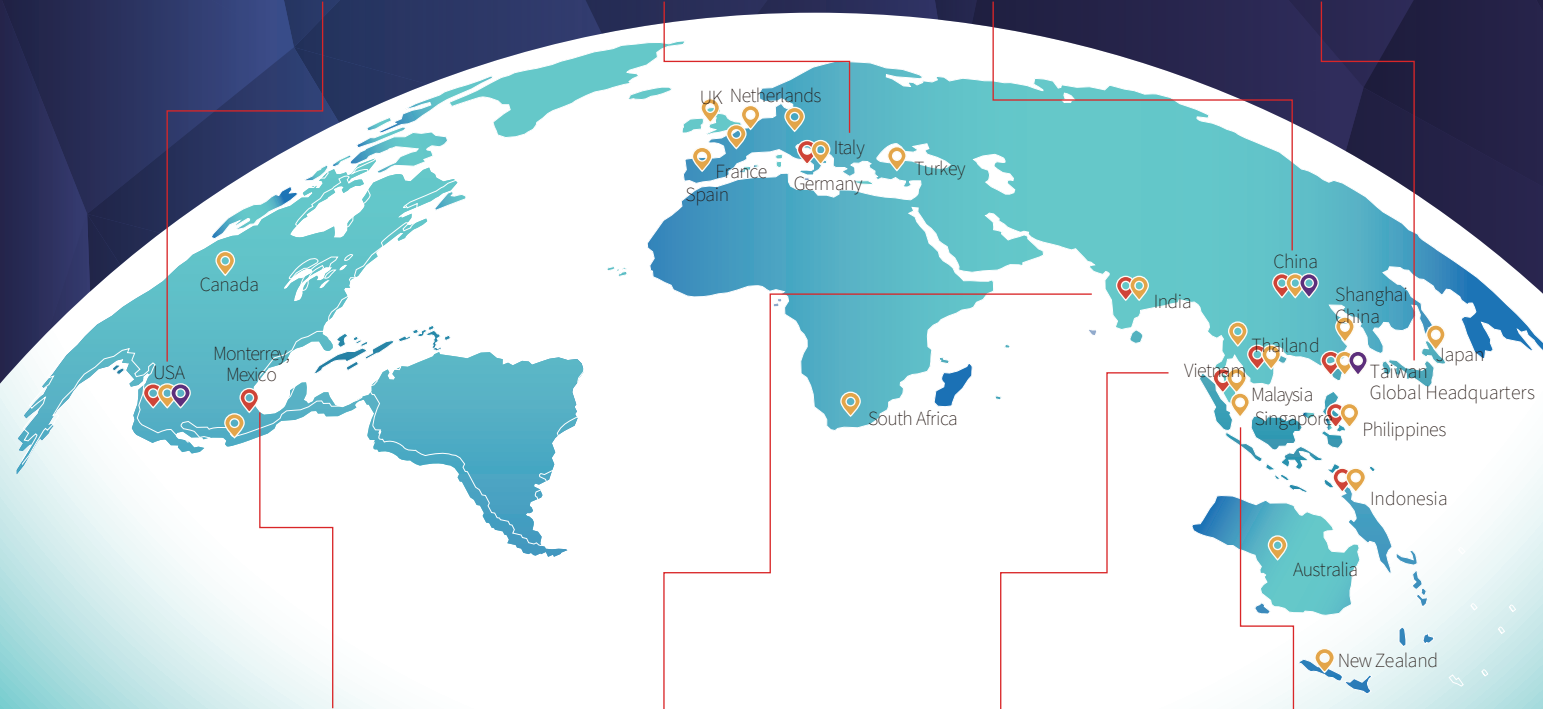


2004  
Wuxi | China

Headquarter



1956  
Taipei | Taiwan



TECO Mexico S.A.



2023  
Ciénega de Flores | Mexico

TEMICO



2023  
Bangalore | India

Vietnam



2019  
Binh Duong | Vietnam

Malaysia



1988  
Johor Bahru | Malaysia

📍 Production    📍 Sales Office    📍 R & D Center

電力能源事業群官網  
Power & Energy Business Group



Google Play

App Store

公司保有修改規格之權利  
恕不另行通知顧客