

power your future



TPM Air

SF₆-free Ring Main Unit (RMU) up to 24kV



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Introduction

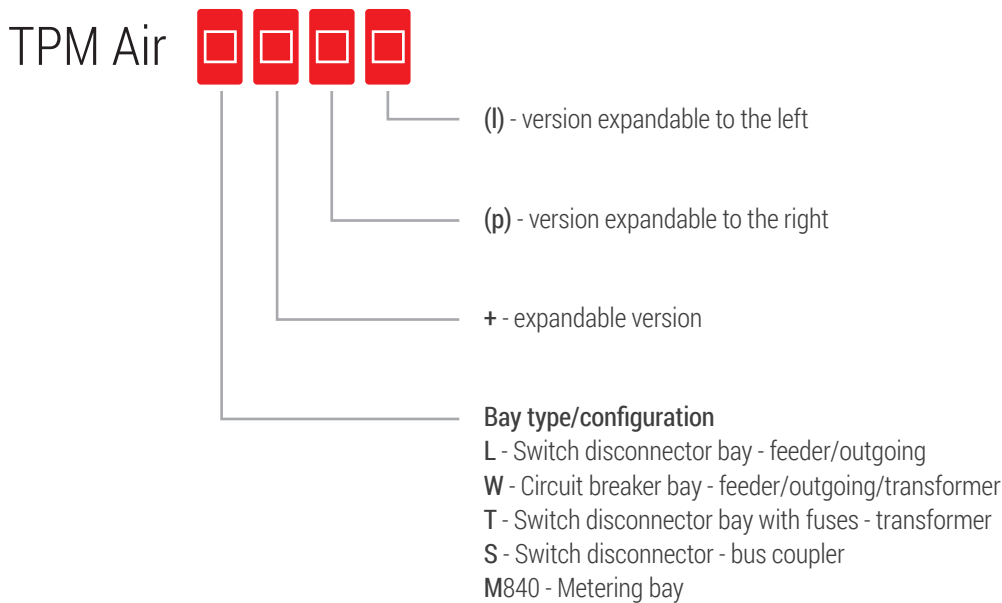
TPM Air is a modern Ring Main Unit (RMU) designed for use in medium-voltage networks. **Its construction is based on dry air insulation and vacuum switching technology**, utilizing only natural components of atmospheric air. This ensures **full compliance with current environmental standards and future regulations concerning greenhouse gases**.

TPM Air meets the requirements for distribution switchgear, **combining ecological responsibility with the proven advantages of the TPM switchgear concept**. It is a breakthrough solution that guarantees safe, cost-effective, and long-term operation of medium-voltage networks.

Product overview

- compact dimensions of the switchgear while maintaining high technical performance,
- high level of operational safety thanks to arc-resistant design from all sides of the switchgear,
- flexible configuration using a range of functional bays: feeder, transformer, circuit breaker, bus coupler, and metering
- expandable design – the switchgear can be extended with additional units (must be specified when ordering); each unit can be manufactured as extendable,
- ready for integration with remote control and monitoring systems, e.g. SmartGrid networks,
- fast-acting earthing switch that grounds the fuse link on both sides in the transformer bay,
- stainless and acid-resistant steel tank, filled with dry air under overpressure; the sealed design ensures maintenance-free operation throughout the entire service life,
- insulating medium composed of natural atmospheric air components, with zero Global Warming Potential (GWP).

Possible markings/naming scheme



Compliance with standards

- PN-EN IEC 62271-1 - "High-voltage switchgear and controlgear. Common specifications",
- PN-EN IEC 62271-200 - "High-voltage switchgear and controlgear. AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV standard,"
- PN-EN IEC 62271-100 - "High-voltage switchgear and controlgear. Alternating-current circuit-breakers",
- PN-EN IEC 62271-102 - "High-voltage switchgear and controlgear. Alternating current disconnectors and earthing switches",
- PN-EN IEC 62271-103 - "High-voltage switchgear and controlgear. Switches for rated voltages above 1 kV up to and including 52 kV",
- PN-EN IEC 62271-105 - "High-voltage switchgear and controlgear. Alternating current switch-fuse combinations",
- PN-EN IEC 62271-213 - "High-voltage switchgear and controlgear . Voltage detecting and indicating system".

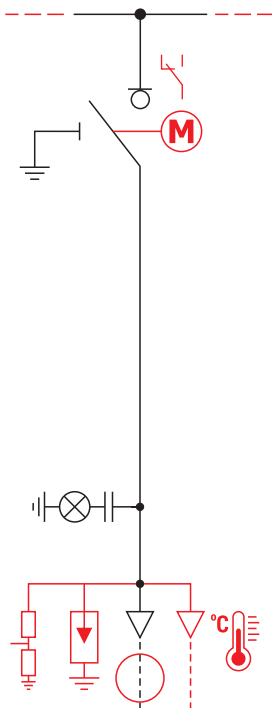
L - line feeder equipment

PARAMETERS

U_r	24 kV
f_r	50/60 Hz
U_d	50/60 kV
U_p	125/145 kV
I_r	630 A
I_k	up to 20 kA (1s)
I_p	up to 50 kA
I_{ma}	up to 50 kA
I_{cc2}	70 A
I_{ef1}	210 A
	switch disconnecter class M2, E3, C2
	earthing switch class M1, E2

STANDARD

- compliance with PN-EN 62271-103 – Switches rated above 1 kV up to and including 52 kV,
- compliance with PN-EN 62271-102 – High-voltage AC disconnectors and earthing switches,
- L bay as a single module with expansion option or as part of a multi-bay configuration within a common tank (up to four bays),
- integrated three-position switch-disconnector with earthing function, based on shared moving contacts and separated fixed contacts for switching and earthing,
- switch equipped with vacuum interrupter chambers for current interruption during switching operations,
- manual operating mechanism enabling intuitive, smooth handling and snap-action
- closing/opening of switching devices,
- mimic diagram showing the status of devices and the main circuit layout,
- type C bushings with M16 thread, equipped with capacitive voltage dividers for use with voltage indicators in the LRM system and for integration with electromagnetic interlocks,
- voltage presence indicator for cable-side voltage detection in the LRM system,
- pressure gauge with dual-zone scale, indicating absolute pressure of dry air (250 kPa / 0.25 MPa at 20°C) – one per tank,
- mechanical interlock system between switching devices and cable compartment covers,
- preventing incorrect switching operations – cover removal only possible when earthing switch is closed,
- safety valve (one per tank), activated by pressure increase due to internal arc, directing gases downward into the cable trench to eliminate risk to personnel,
- cable clamps.



OPTION

- 24V DC motor drive (other supply voltages available on request), can be retrofitted on site,
- pressure sensor (density monitor) with auxiliary contacts – for integration with motor
- auxiliary contacts for status indication of switching devices in SCADA systems,
- voltage sensors – low-power voltage transformers,
- current transformers, current sensors, Rogowski coils,
- earth fault current transformers,
- short-circuit current flow indicators,
- auxiliary circuit cabinet / integration with remote control systems,
- "ON" / "OFF" indication via signal lamps,
- anti-condensation heaters,
- expandable design – extension possible on both left and right sides,
- key interlock for switch or earthing switch socket,
- electromagnetic interlock for earthing switch socket,
- surge arresters,
- wireless temperature sensors AST-05, part of the eTemp monitoring system.

Note!

- ↳ Optional equipment is **marked in red** on the electrical diagram. Some optional features may be mutually exclusive or require the use of a deep cable compartment cover.

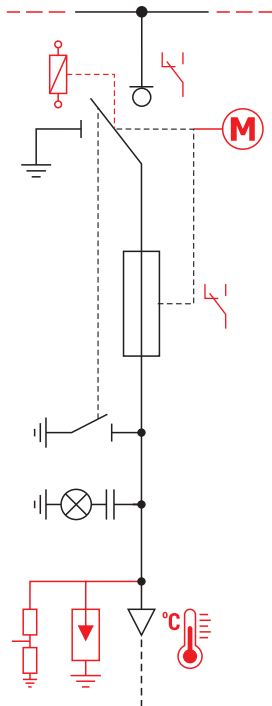
T - transformer feeder equipment

PARAMETERS

U_r	24 kV
f_r	50/60 Hz
U_d	50/60 kV
U_p	125/145 kV
I_r	250 A (125 A fuse link)
I_{ma}	5 kA (earthing switch)
$I_{transfer}$	1250 A
	switch disconnector class M2, E3
	earthing switch class M1, E2

STANDARD

- compliance with PN-EN 62271-105 – AC switch-fuse combinations,
- compliance with PN-EN 62271-102 – High-voltage AC disconnectors and earthing switches,
- T bay as a single module with expansion option or as part of a multi-bay configuration within a common tank (up to four bays),
- integrated three-position switch-disconnector with earthing function, based on shared moving contacts and separated fixed contacts for switching and earthing,
- bottom-mounted earthing switch ensuring grounding on both sides of the fuse links,
- switch equipped with vacuum interrupter chambers for current interruption during switching operations,
- manual operating mechanism enabling intuitive, smooth handling and snap-action closing/opening of switching devices,
- mimic diagram showing the status of devices and the main circuit layout,
- stored-energy mechanism enabling automatic contact opening in case of thermal protection (striker pin) or trip coil activation in MV fuse links,
- fuse status indicator,
- type A bushings with plug-in sockets, equipped with capacitive voltage dividers for use with voltage indicators in the LRM system,
- voltage presence indicator for cable-side voltage detection in the LRM system,
- pressure gauge with dual-zone scale, indicating absolute pressure of dry air (250 kPa / 0.25 MPa at 20°C) – one per tank,
- mechanical interlock system between switching devices and cable compartment covers,
- preventing incorrect switching operations – cover removal only possible when earthing switch is closed,
- safety valve (one per tank), activated by pressure increase due to internal arc, directing gases downward into the cable trench,
- cable clamps.



OPTION

- 24V DC motor drive (other supply voltages available on request),
- pressure sensor (density monitor) with auxiliary contacts – for integration with motor drive and SCADA systems,
- auxiliary contacts for status indication of switching devices in remote control systems,
- fuse links equipped with thermal release (striker pin) according to IEC 60282-1 and DIN 43625,
- voltage sensors – low-power voltage transformers,
- "ON" / "OFF" indication via signal lamps,
- anti-condensation heaters,
- type C bushings with M16 thread, equipped with capacitive voltage dividers for use with voltage indicators in the LRM system,
- expandable design – extension possible on both left and right sides,
- key interlock for switch or earthing switch socket,
- trip coil (DWN) – 24V DC, 230V AC/DC (other voltages available on request),
- wireless temperature sensors AST-05, part of the eTemp monitoring system.

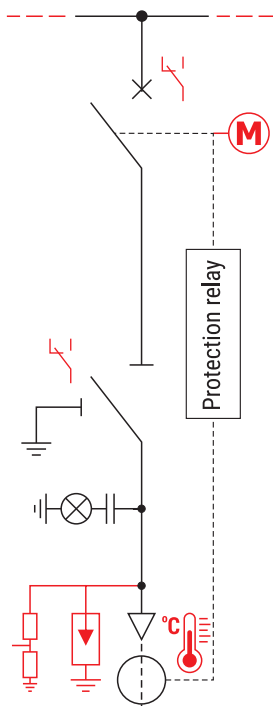
NOTE!

- ↘ Optional equipment is **marked in red** on the electrical diagram. Some optional features may be mutually exclusive or require the use of a deep cable compartment cover.

W - circuit breaker feeder

PARAMETERS

U_r	24 kV
f_r	50/60 Hz
U_d	50/60 kV
U_p	125/145 kV
I_r	630 A
I_k	up to 20 kA (1s)
I_{sc}	up to 20 kA
I_{eff}	up to 20 kA
I_{ma}	up to 50 kA
I_{cc2}	31,5 A
	Circuit breaker class M2, E2, C2 Operating sequence (0-0,3s-CO-15s-CO)
	Earthing switch class M1, E2



STANDARD

- Compliance with PN-EN 62271-100 – High-voltage AC circuit breakers,
- Compliance with PN-EN 62271-102 – High-voltage AC disconnectors and earthing switches,
- W bay as a single module with expansion option or as part of a multi-bay configuration within a common tank (up to four bays),
- Vacuum circuit breaker assembly, rated for 16 kA or 20 kA breaking current, enclosed in a tank filled with dry air,
- Three-position disconnector-earthing switch, based on shared moving contacts and separated fixed contacts for disconnector and earthing switch; the disconnector ensures a safe isolation gap,
- Manual spring-operated mechanism for the circuit breaker, enabling intuitive and smooth operation with snap-action closing/opening; includes a charging system for fast trip-close cycle,
- Manual operating mechanism for the three-position disconnector-earthing switch, ensuring intuitive and smooth handling,
- Mimic diagram showing the status of devices and the main circuit layout,
- Breaker charging status indicator,
- Autonomous protection system – preferred AZZ-4 (ITR) or WIC 1 (SEG), with dedicated current transformers,
- Type C bushings with M16 thread, equipped with capacitive voltage dividers for use with voltage indicators in the LRM system and for integration with electromagnetic interlocks,
- Voltage presence indicator for cable-side voltage detection in the LRM system,
- Pressure gauge with dual-zone scale, indicating absolute pressure of dry air (250 kPa / 0.25 MPa at 20°C) – one per tank,
- Mechanical interlock system between switching devices and cable compartment covers, preventing incorrect switching operations – cover removal only possible when earthing switch is closed,
- Safety valve (one per tank), activated by pressure increase due to internal arc, directing gases downward into the cable trench to eliminate risk to personnel,
- Voltage presence indicator,
- Cable clamps.

OPTION

- 24V DC motor drive for the circuit breaker (other supply voltages available on request),
- Pressure sensor (density monitor) with auxiliary contacts – for integration with motor drive and SCADA systems,
- Auxiliary contacts for status indication of switching devices in remote control systems,
- Protection systems other than preferred autonomous types, bay controllers, automatic transfer switching (ATS),
- Voltage sensors – low-power voltage transformers,
- Current transformers, current sensors, Rogowski coils, earth fault current transformers,
- Auxiliary circuit cabinet / integration with remote control systems,
- "ON" / "OFF" indication via signal lamps,
- Anti-condensation heaters,
- Expandable design – extension possible on both left and right sides,
- Surge arresters,
- Wireless temperature sensors AST-05, part of the eTemp monitoring system.

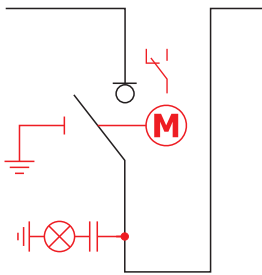
NOTE!

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Some optional features may be mutually exclusive or require the use of a deep cable compartment cover.

S - bus sectionalizer panel

PARAMETERS

U_r	24 kV
f_r	50/60 Hz
U_d	50/60 kV
U_p	125/145 kV
I_r	630 A
I_k	up to 20 kA (1s)
I_p	up to 50 kA
I_{ma}	up to 50 kA
	switch disconnecter class M2, E3, C2
	earthing switch class M1, E2



STANDARD

- Compliance with PN-EN 62271-103 – Switches rated above 1 kV up to and including 52 kV,
- Compliance with PN-EN 62271-102 – High-voltage AC disconnectors and earthing switches,
- S bay as a single module, expandable to the left and right,
- Switching device based on shared moving contacts and fixed contacts,
- Arc-quenching system for safe interruption during switching operations,
- Manual operating mechanism enabling intuitive and smooth handling with snap-action closing and opening of switching devices,
- Mimic diagram showing the status of devices and the main circuit layout,
- Pressure gauge with dual-zone scale, indicating absolute pressure of dry air (250 kPa / 0.25 MPa at 20°C),
- Safety valve (one per tank), activated by pressure increase due to internal arc, directing gases downward into the cable trench to eliminate risk to personnel.

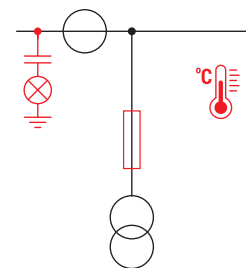
OPTION

- 24V DC motor drive (other supply voltages available on request), easily retrofittable on site,
- earthing switch for the main circuit of the right-hand section,
- voltage presence indicator for the main circuits before and after the switch,
- pressure sensor (density monitor) with auxiliary contacts – for integration with motor drive and SCADA systems,
- auxiliary contacts for status indication of switching devices in remote control systems,
- key interlock for switch or earthing switch socket.

M840 - metering panel equipment

PARAMETERS

U_r	24 kV
f_r	50/60 Hz
U_d	50/60 kV
U_p	125/145 kV
I_r	630 A
I_k	up to 20 kA (1s)
I_p	up to 50 kA



STANDARD

- compliance with PN-EN 62271-200 – Metal-enclosed AC switchgear rated above 1 kV up to and including 52 kV,
- M840 bay as a single module, expandable to the left and right,
- busbar system enclosed in a stainless steel tank,
- set of voltage and current transformers,
- voltage presence indicator for main circuits,
- mimic diagram showing the main circuit layout,
- pressure gauge with dual-zone scale, indicating absolute pressure of dry air (250 kPa / 0.25 MPa at 20°C),
- safety valve (one per tank), activated by pressure increase due to internal arc, directing gases downward into the cable trench to eliminate risk to personnel.

OPTION

- anti-condensation heaters,
- wireless temperature sensors AST-05, part of the eTemp monitoring system.

NOTE!

- Optional equipment is **marked in red** on the electrical diagram.
Some optional features may be mutually exclusive or require the use of a deep cable compartment cover.

Reliability and safety features

- robust construction of TPM Air switchgear ensures high operational reliability,
- tank made of stainless and acid-resistant steel, providing excellent resistance to environmental conditions,
- use of screened cable terminations ensures safety during maintenance work, even with the cover removed and voltage present on supply cables,
- gas pressure indicator (manometer) for monitoring the correct pressure of the insulating medium (dry air) inside the tank,
- internal arc withstand capability of 20 kA as standard,
- pressure increase caused by an internal arc is safely released through a safety valve located at the bottom of the tank, directing gases into the cable trench and eliminating risk to personnel,
- operating mechanisms allow for snap-action switching of devices,
- each bay is equipped with voltage indicators, allowing operators to verify the absence of voltage at the bushing terminals,
- clear mimic diagram improves intuitive operation and status reading of switching devices,
- mechanical interlock system allows cable compartment covers to be opened only when the earthing switch is closed,
- mechanical interlocks between devices prevent incorrect switching operations,
- optional electromagnetic interlocks prevent earthing switch closure if voltage is present on supply cables,
- auxiliary contact set provides status signals of switching devices, ensuring safe remote operation,
- pressure switch (presostat) is always included when motor drive is used, ensuring safe remote operation.

Switchgear compartment – TPM Air MV switchgear

➤ Switching compartment

The switching compartment is housed in a tank made of stainless and acid-resistant steel. The insulating medium used is dry air under overpressure, which provides very high dielectric strength. Inside the tank are busbars, insulators, and switching devices, which—depending on the configuration—may include a three-position switch-disconnector with vacuum interrupter chambers, a three-position disconnector-earthing switch, or a vacuum circuit breaker.

Each tank is equipped with a safety valve that releases pressure in the event of an internal arc. In TPM Air switchgear, the valve is located at the bottom of the tank, in the cable connection compartment of one of the feeder bays.

The bushing insulators contain capacitive voltage dividers, connected to voltage indicators mounted on the front panel of the switchgear. Both the switch itself and the operating mechanisms are highly durable and reliable devices.

➤ Fuse Compartment

In the fuse compartment of the switchgear, fuse links equipped with thermal protection (striker pin) are installed in special insulating tubes, in accordance with IEC 60282-1 and DIN 43625. These components prevent the occurrence of excessively high temperatures, regardless of their cause.

The design of the fuse compartment prevents access before the earthing switch is closed. In the transformer bay, the load break switch can only be operated after the fuse compartment cover has been closed.

In the event of a fuse link blowing, the built-in striker pin activates the automatic mechanism to open the switch in the transformer bay.

Reclosing the switch is only possible after the fuse links have been replaced.

↘ Drive Compartment

The drive compartment includes an integrated direct manual drive (motorized) for the switch-disconnector, earthing switch, or vacuum circuit breaker. Additionally, the transformer bay is equipped with a stored-energy mechanism, which enables automatic disconnection of the switch after fuse striker activation or when a trip coil is used.

The fuse burnout status is indicated on the front panel of the drive. A pressure gauge, calibrated according to nominal conditions depending on temperature, is located in the drive compartment to indicate the correct pressure of the insulating gas inside the tank. Voltage presence indicators for the cable side are located on the front part of the switchgear.

↘ Cable Compartment

The cable compartment is used to connect the switchgear to the power network cables via cable terminations. Each cable bay is separated by metal partitions, isolating one bay from another.

Each cable compartment is equipped with:

- type C bushings for feeder, outgoing, and transformer bays equipped with circuit breakers,
- type A bushings for transformer bays equipped with MV fuses,
- cable clamps,
- grounding terminals for return conductors.

Additionally, each bay allows for the installation of the following components:

- protection transformers, Rogowski coils,
- voltage sensors,
- surge arresters,
- combined configurations using deep covers, such as: two terminations per phase, termination + voltage sensor, termination + surge arrester, two terminations per phase + voltage sensor, two terminations per phase + surge arrester, termination + surge arrester + voltage sensor.

TPM Air switchgear is designed for connection of cables with cross-sections up to 240 mm², such as plastic-insulated cables like YHAKXS, YHKX, XUHAKXS, or XRUHKS.

Environmental service conditions	
AMBIENT TEMPERATURE	
- peak short-time	+40°C
- highest day average	+35°C
- minimum	
- without secondary circuits	-25°C
- with secondary circuits	-5°C / -15°C/-25°C1)
RELATIVE HUMIDITY OF AIR	
- Highest day average	95%
- Highest month average	90%
VIBRATIONS	vibrations caused by external factors or earthquakes negligible
INTERNAL PROTECTION	
- device compartment, stainless steel tank	IP 67
- drive mechanism and connections compartment	IP 4X
SOILING CONDITIONS	
- significant soiling with salt, vapour, dust, smoke, flammable gases	NONE
- corrosive	NONE
- icing, frosting and dewing	NONE

1) Unless the manufacturer of instrumentation & control and protection devices has specified otherwise.

Rated parameters

Rated Parameters – TPM Air Switchgear

Highest device voltage		25 kV
Rated voltage	U_r	24 kV
Rated frequency / number of phases	f_r	50 / 60 Hz / 3
Power-frequency withstand voltage	U_d	50 kV / 60 kV
Rated lightning impulse withstand voltage	U_p	125 kV / 145 kV
Rated continuous ac current	I_r	630 A
Rated short-time withstand current of main circuits	I_k	16 kA (1s) / 20 kA (1s)
Rated peak withstand current of main circuits	I_p	40 kA / 50 kA
Internal arc withstand current	I_A	20 kA (1s)
IAC Classification (Internal Arc Classification)		AFLR
Degree of protection		IP4X (IP54 option)
Resistance to Mechanical Impact		IK10

Rated Parameters – Three-Position Isolating Switch, Feeder Bay (L)

Rated continuous current	I_r	630 A
Rated short-circuit making current	I_{ma}	50 kA
Rated breaking current in mainly active load circuit	I_{load}	630 A
Rated closed-loop breaking current	I_{loop}	630 A
Rated cable-charging breaking current	I_{cc2}	70 A
Rated line-charging breaking current	I_{lc}	20 A
Rated earth fault breaking current	I_{ef1}	210 A
Rated cable- and line-charging breaking current under earth fault conditions	I_{ef2}	121 A
Switch-disconnector class		M2 (5 000 CO), E3, C2
Earthing switch class		M1, E2

Rated Parameters – Three-Position Isolating Switch with Fuses, Transformer Bay (T)

Rated continuous current	I_r	250 A
Maximum fuse link current with thermal protection		125 A
Transfer current	$I_{transfer}$	1250 A
Rated short-circuit making current of earthing switch	I_{ma}	5 kA
Switch-disconnector class		M2, E3
Maximum transformer power	6 kV	800 kVA
	10 kV	1000 kVA
	15 kV	1600 kVA
	20 kV	2000 kVA

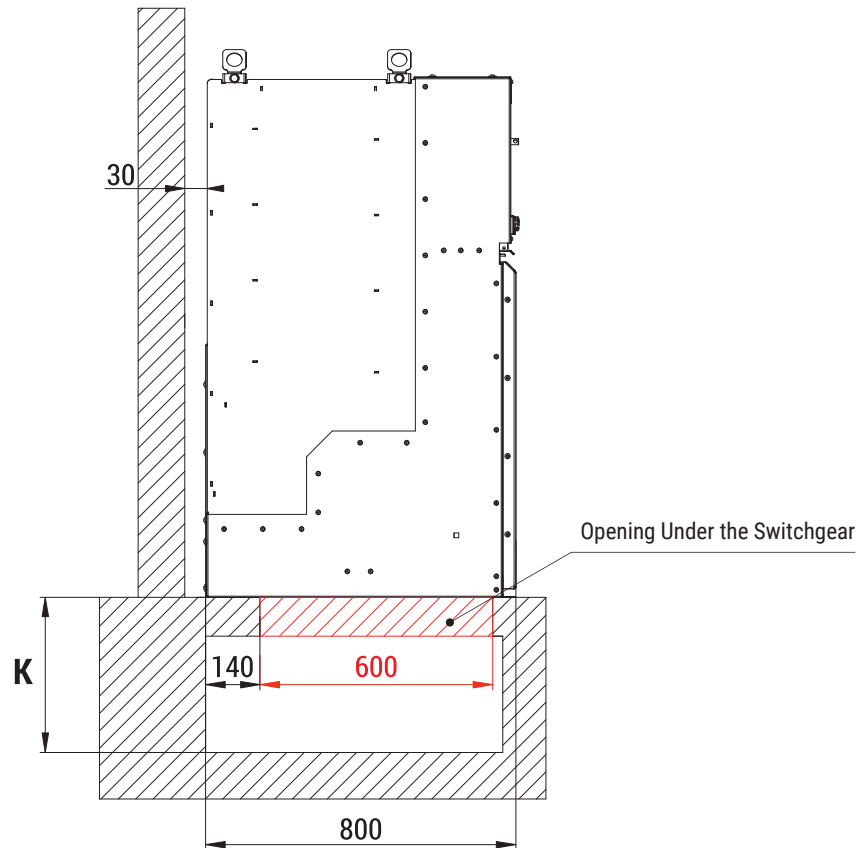
The rated currents of fuse links recommended by leading manufacturers for the protection of primary transformer circuits with rated voltages of 6 kV, 10 kV, 15 kV, and 20 kV should be selected according to IEC 60282-1 and DIN 43625, with thermal protection (striker pin).

Rated Parameters – Circuit Breaker, Circuit Breaker Bay (W)

Rated continuous current	I_r	630 A
Rated short-circuit making current	I_{ma}	40 kA / 50 kA
Rated short-circuit breaking current	I_{sc}	16 kA / 20 kA
Rated earth fault breaking current	I_{ef1}	16 kA / 20 kA
Rated cable-charging breaking current	I_{cc2}	31,5 A
Circuit breaker class		M2 (10 000 CO), E2, C2
Operation sequence		0-0,3s-CO-15s-CO

Cable trench construction

The depth of the cable trench for dry cables should be selected based on the minimum bending radius specified in the technical documentation for the given cable type, depending on its outer diameter. An example of the recommended cable trench depth is shown in the illustration below. The use of a raised base or a technical floor can reduce or completely eliminate the need for a deep trench, which is particularly useful in installations with limited mounting space.



Single-Core Dry Cable

Cable Cross-Section (mm ²)	Bending Radius (mm)	Trench Depth K (mm)
50	370	400
70	400	430
95	440	470
120	470	500
150	500	550
185	540	600
240	590	700

Cable terminations

The TPM Air switchgear is compatible with cable terminations from all leading manufacturers, including Cellpack, Nexans (Euromold), and TE Connectivity (Raychem). A detailed list of recommended terminations for use in medium-voltage switchgear is provided in the tables below.

Feeder bays (L) and circuit breaker bays (W) – Type C interface

Cable Type	Cable Termination					Remarks
	Manufacturer	Cable Cross-Section [mm ²]	Cable Termination	Surge Arrester	Voltage Sensor	
Single-core with plastic insulation e.g. YHAKXs, YHKX, XUHAKXs, XRUHKs, ...	Cellpack	25-240	CTS 630A	CTKSA	UR56 (ITR)	For cable cross-sections > 240 mm ² , multiple cables per phase, or other types of cable terminations, please consult the manufacturer.
	Nexans	25-240	K480TB	800PB-10SA	UR66 (ITR)	
	TYCO ELECTRONIC	25-240	RSTI	RSTI – CC	UR56 (ITR)	

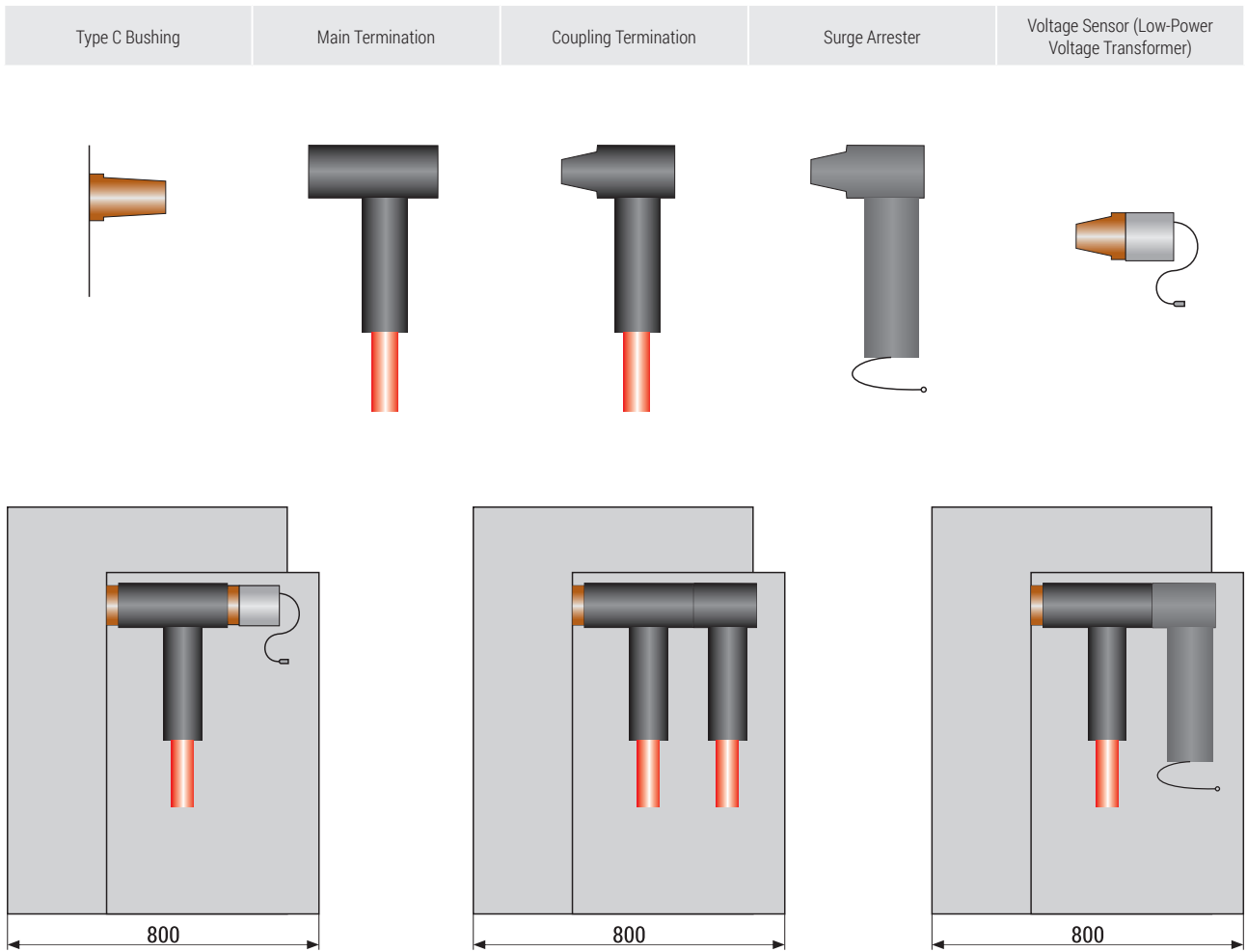
Transformer bays (T) – Type A interface

Cable Type	Cable Termination			Remarks
	Manufacturer	Cable Cross-Section [mm ²]	Cable Termination	
Single-core with plastic insulation e.g. YHAKXs, YHKX, XUHAKXs, XRUHKs, ...	Cellpack	16-150	CWS 250A	For cable cross-sections > 240 mm ² , multiple cables per phase, or other types of cable terminations, please consult the manufacturer.
	Nexans	25-150	K200LR	
	TYCO ELECTRONIC	35-70	RSES 525 – B	

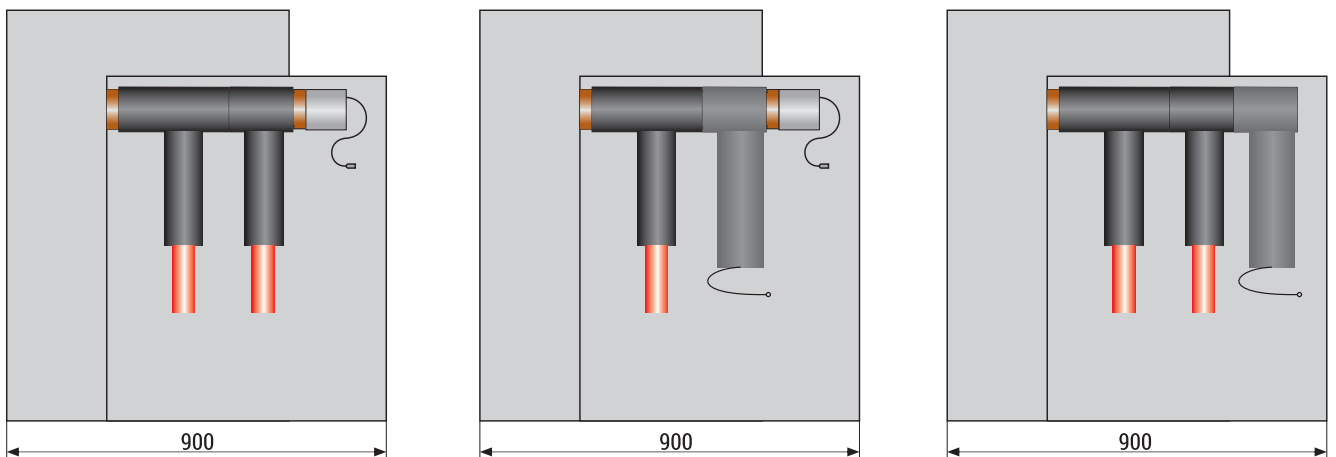
NOTE!

A cable trench is required beneath the switchgear in all cases. Alternatively, the switchgear may be installed on a pedestal or on a raised technical floor.

Connection options - standard cable cover



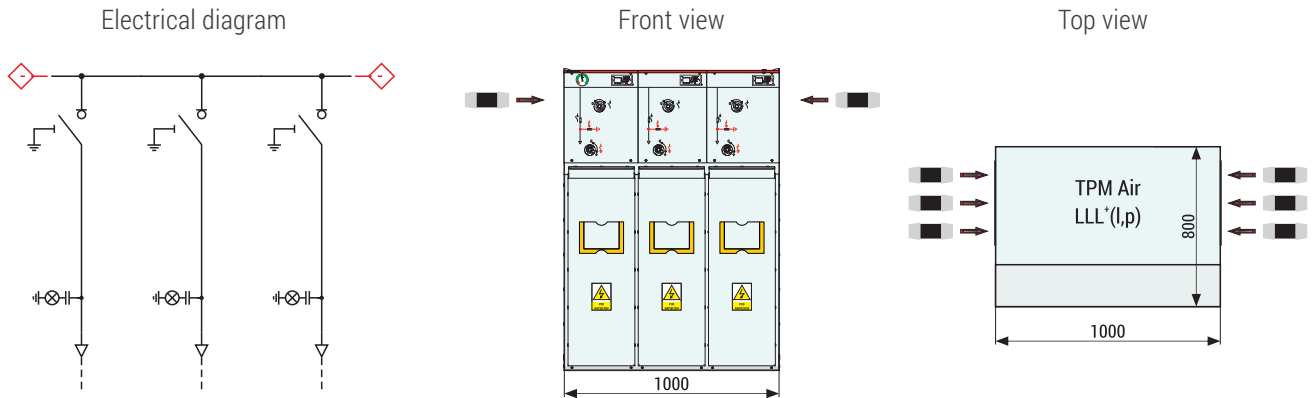
Connection options - deep cable cover



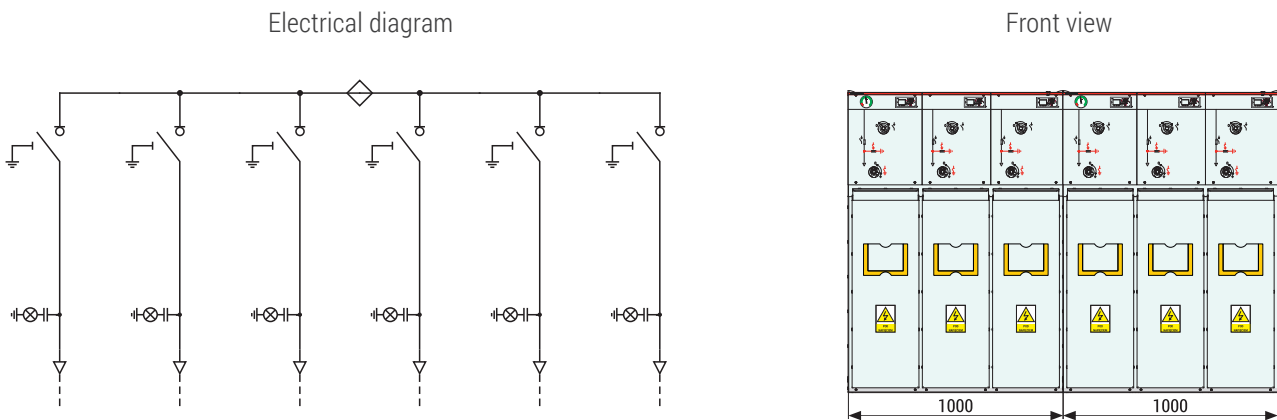
Method of connecting expandable sets

TPM Air switchgear offers the option of expansion with additional sets, provided this is agreed upon during the quotation and ordering stage. The connection methods are illustrated in the diagrams below. Detailed information can be found in the Technical-Operational Documentation of the switchgear.

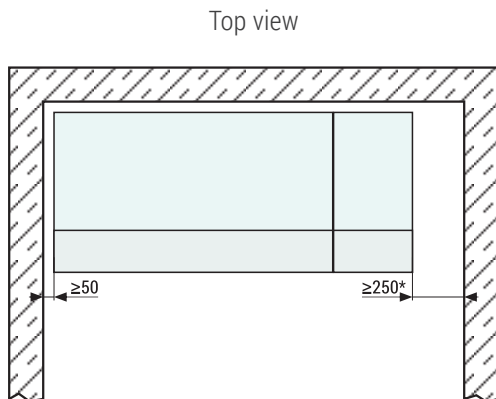
Example 1. Arrangement LLL + (l,)



Example 2. Side connection of switchgears LLL+ (p)+LLL+ (l)

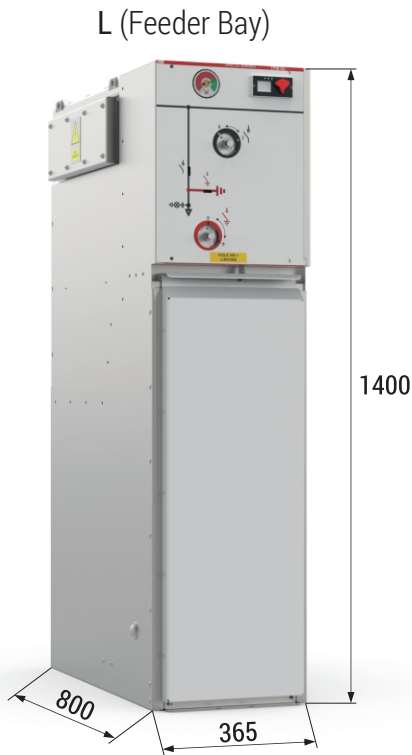


Example 3. Required area for proper switchgear connection



* Minimum space required for installing an additional module

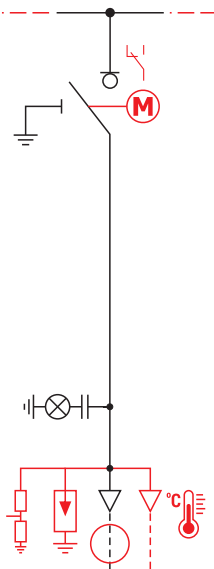
Typical configurations – single bays



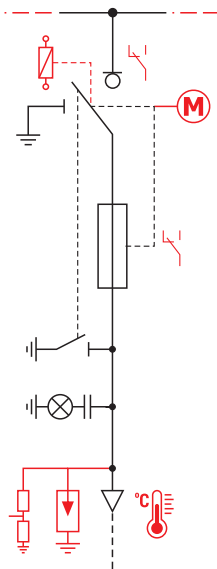
Configuration	Width [mm]	Depth [mm]		Height [mm]
L	360	800	900*	1400
T	410	800	900*	1400
W	510	800	900*	1400
S	500	800	900*	1400

* Deep cable compartment cover

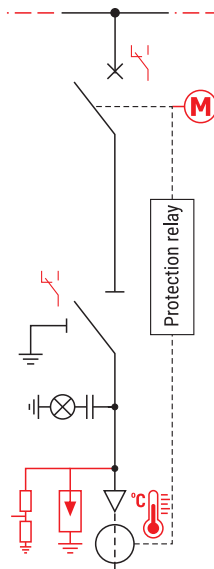
L (Feeder Bay)



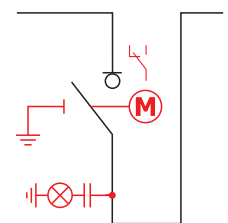
T (Transformer Bay)



W (Circuit Breaker Bay)



S (Bus Coupler Bay)



NOTE!

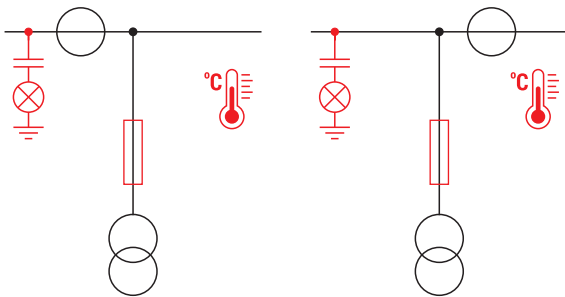
- Optional equipment is **marked in red** on the electrical diagram. Some optional features may be mutually exclusive or require the use of a deep cable compartment cover.

Typical configurations – single bays

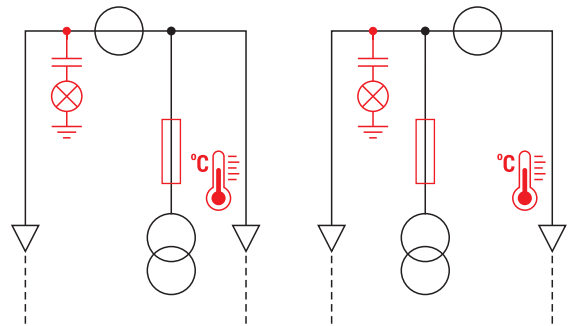
M840 (Metering bay)



M840 (Metering bay)



M840 KK (Metering bay – Cable connection)



Typical configurations – two-bay arrangement

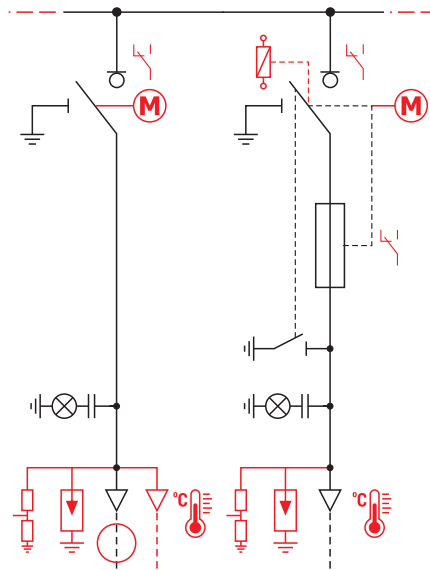
LT (feeder bay, transformer bay)



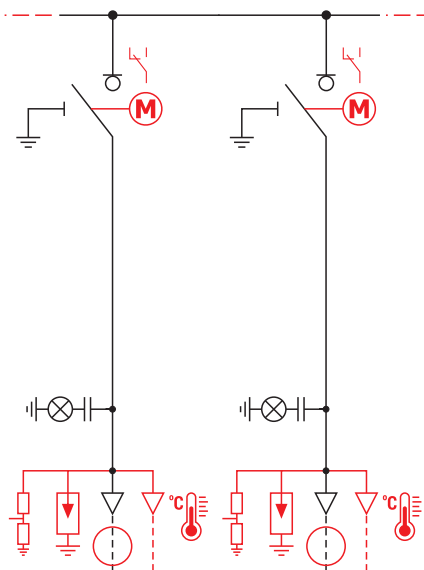
Configuration	Width [mm]	Depth [mm]		Height [mm]
LL	680	800	900*	1400
LT	740	800	900*	1400
LW	815	800	900*	1400

* Deep cable compartment cover

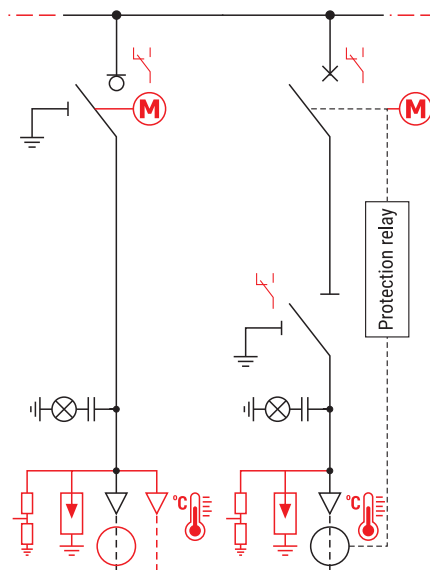
LT (feeder bay, transformer bay)



LL (2 feeder bays)



LW (feeder bay, circuit breaker bay)



NOTE!

- Optional equipment is **marked in red** on the electrical diagram. Some optional features may be mutually exclusive or require the use of a deep cable compartment cover.

Typical configurations – three-bay arrangement

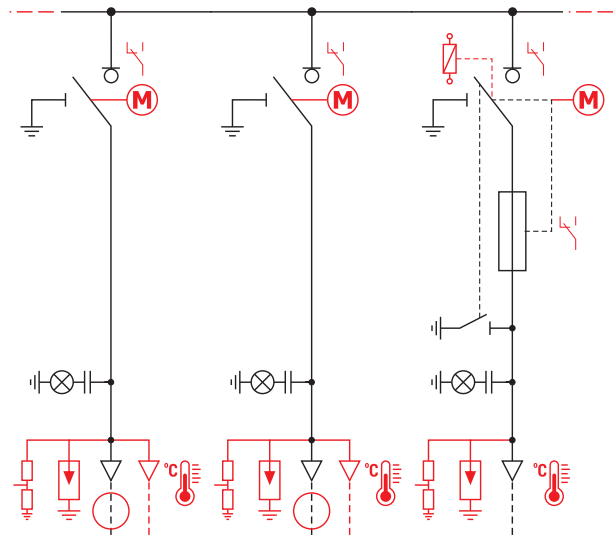
LLT (2 feeder bays, transformer bay)



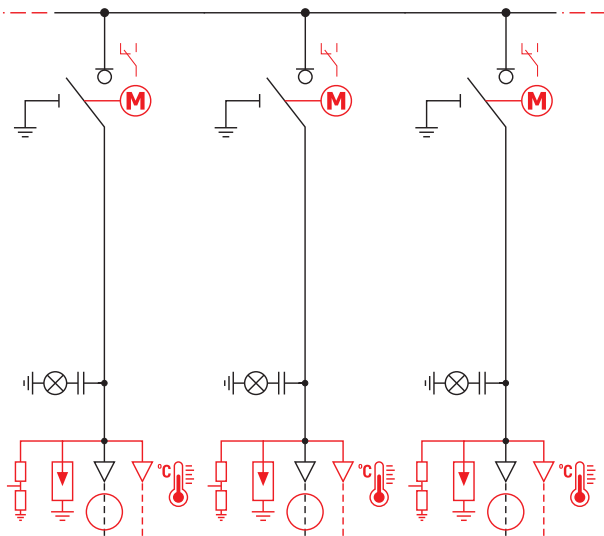
Configuration	Width [mm]	Depth [mm]	Height [mm]
LLL	1000	800	900* 1400
LLT	1060	800	900* 1400
LLW	1135	800	900* 1400

* Deep cable compartment cover

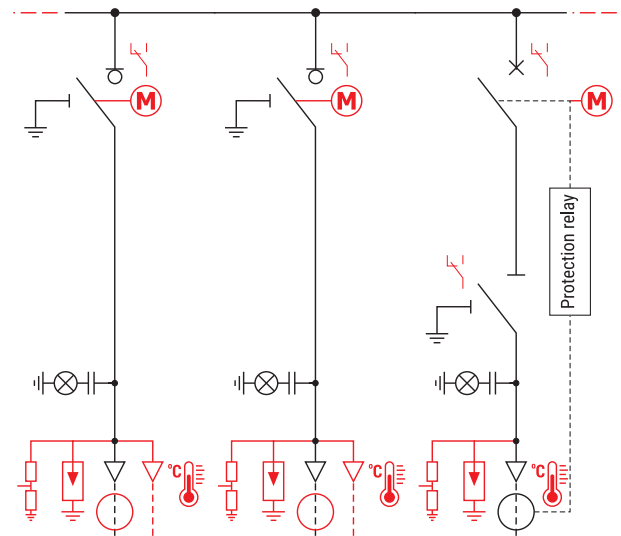
LLT (2 feeder bays, transformer bay)



LLL (3 feeder bays)



LLW (2 feeder bays, circuit breaker bay)

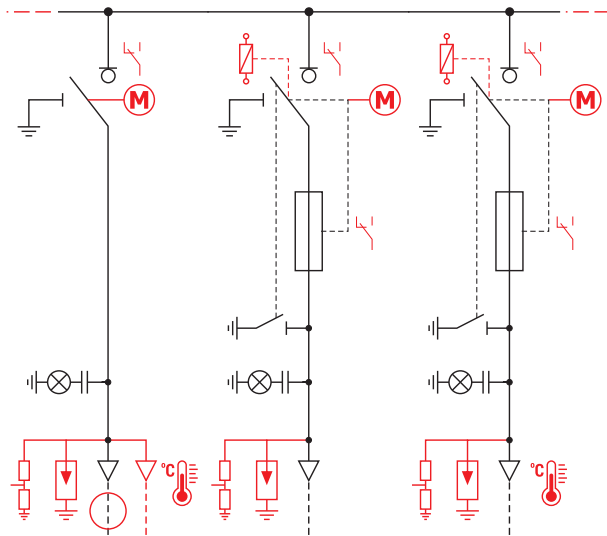


Typical configurations – three-bay arrangement

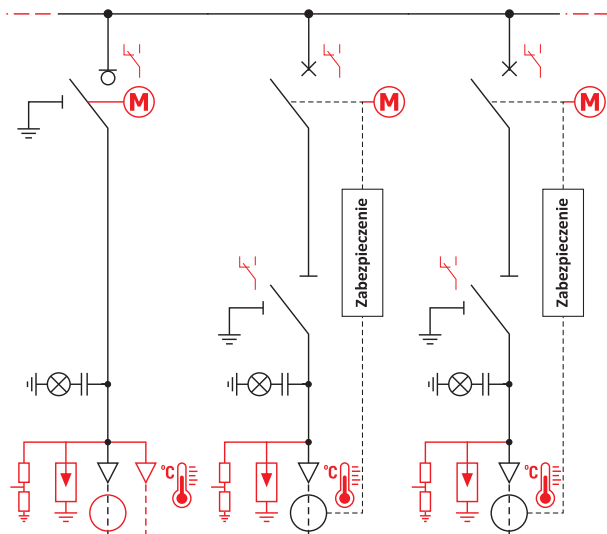
Configuration	Width [mm]	Depth [mm]		Height [mm]
LTT	1100	800	900*	1400
LWW	1200	800	900*	1400

* Deep cable compartment cover

LTT (feeder bay, 2 transformer bays)



LWW (feeder bay, 2 circuit breaker bays)

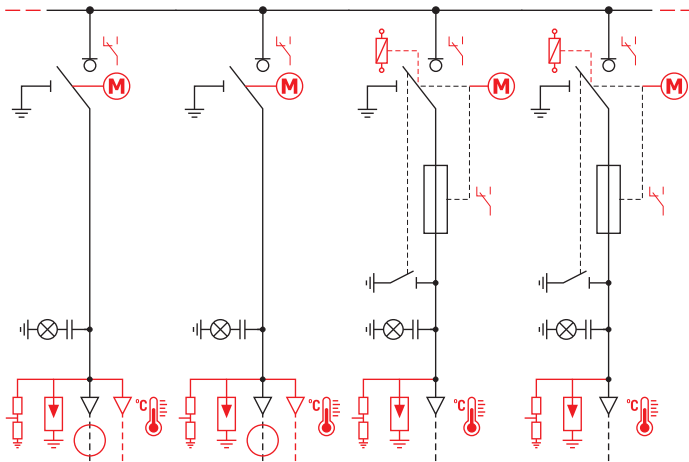


NOTE!

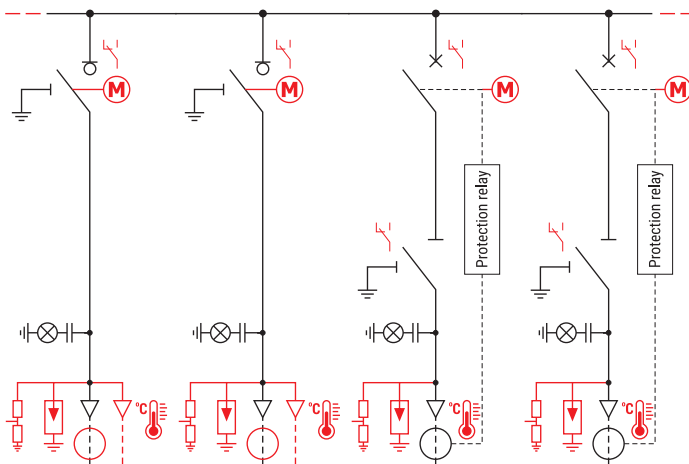
- Optional equipment is **marked in red** on the electrical diagram. Some optional features may be mutually exclusive or require the use of a deep cable compartment cover.

Typical configurations – four-bay arrangement

LLTT (2 feeder bays, 2 transformer bays)



LLWW (2 feeder bays, 2 circuit breaker bays)



Configuration	Width [mm]	Depth [mm]		Height [mm]
LLLL	1320	800	900*	1400
LLLT	1380	800	900*	1400
LLLW	1455	800	900*	1400
LLTT	1440	800	900*	1400
LLWW	1520	800	900*	1400

* Deep cable compartment cover

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