

Medium Voltage Distribution

VEIVACUUM-L

up to 24 kV – 1250 A – 25 kA

Operation Maintenance Instruction



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Operations and maintenance may only be carried out by personnel who have received suitable authorisation for the operations and manoeuvres they are responsible for performing.
If this is not the case, please refer to our Service Unit or Training Centre.
All locking out operations must be performed according to the safety regulations currently being in force.

Our Service Unit: our specialists, and suitably adapted services

- Guarantee extension contracts in relation to the selling of new equipment,
- Supervision of switch disconnecter installation,
- Technical advice, diagnoses of the facilities, expertise,
- Maintenance contracts adapted to operational constraints,
- Systematic or conditional preventive maintenance,
- Corrective maintenance in case of partial or complete failure,
- Supply of spare parts.

Contact the Service Unit for diagnoses and advice:
Phone No: +39 0377 417 351 (office hours)
Fax: +39 0377 451133



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Responsibilities

Our devices are quality controlled and tested at the factory in accordance with the standards and the regulations currently in force.
Apparatus efficiency and apparatus life depend on the compliance with the installation, commissioning and operation instructions described in this user manual. Non respect of these instructions is likely to invalidate any guarantee.
Local requirements especially about safety and which are in accordance with the indications given in this document, must be observed.
Schneider Electric declines any responsibility for the consequences:

- due to the non respect of the recommendations in this manual which make reference to the international regulations in force.
- due to the non respect of the instructions by the suppliers of cables and connection accessories during installation and fitting operations,
- of any possible aggressive climatic conditions (humidity, pollution, etc.) acting in the immediate environment of the materials that are neither suitably adapted nor protected for these effects.

This user manual does not list the locking out procedures that must be applied. The interventions described are carried out on de-energized equipment (in the course of being installed) or locked out (non operational).

Particular instructions for operations and interventions on energized equipment

When commissioning and operating the equipment under normal conditions, the general safety instructions for electrical applications must be respected, (protective gloves, insulating tool, etc.), in addition to standard operating instructions.

All operations must be completed once started.

The durations (for completing the operations mentioned) given in the maintenance tables are purely an indication and depend on onsite conditions.

Other technical notices to be consulted

- Products-L4PS-Flusarc-PLA-71920-V1-EN - Technical Characteristics

Tools (not supplied) required for the operations described in this user manual

- Flat, thin screwdriver (4) + medium
- Leather gloves

Symbols & conventions



Code for a product recommended and marketed by Schneider Electric



Tightening torque value
Example: 1.6 daN.m



Mark corresponding to a key



CAUTION! Remain vigilant!
Precautions to be taken in order to avoid accidents or injury

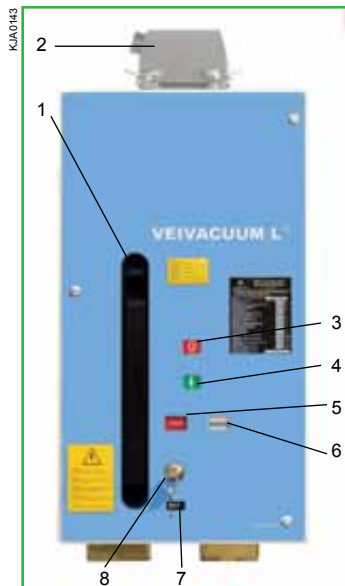


FORBIDDEN! Do not do it!
Compliance with this indication is compulsory, non compliance with this stipulation may damage the equipment



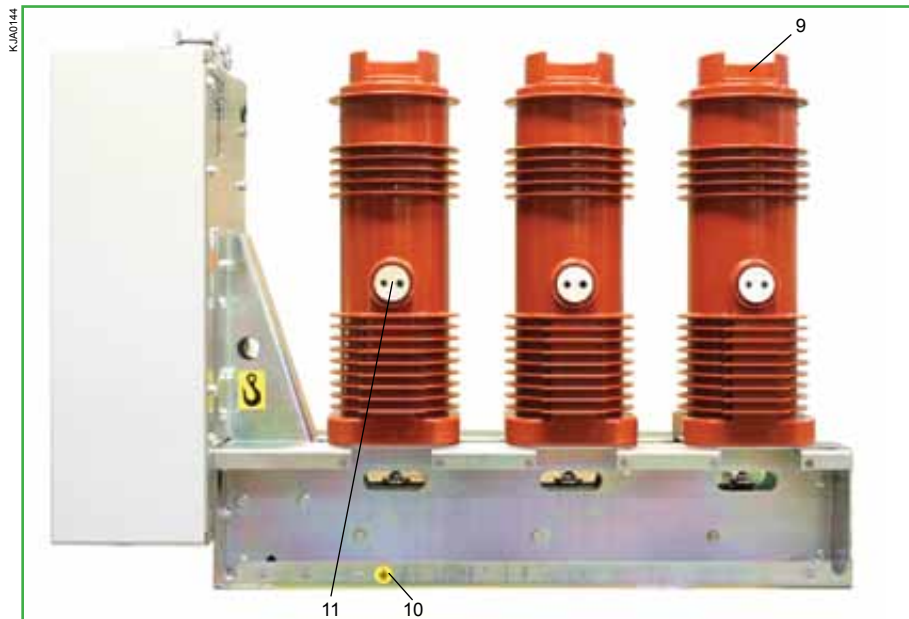
INFORMATION – ADVICE
Your attention is drawn to a specific point or operation

Basic Configuration



Frontal view

1. Lever for manual charging spring
2. Connector
3. Open pushbutton (red)
4. Close pushbutton (green)
5. Open (green) /Close (red) circuit-breaker signalling status
6. Charged (yellow) /Discharged (white) signalling spring status
7. Operation counter
8. Keylock
9. Upper terminal
10. Earthing screw
11. Lower terminal



Side view



Rear view

Reminder for Manual Operations

All movements of the lever must be frank and complete.

Interlocks

It is used to prevent any possible wrong operations during the operation.



Keylock

Keylock function

The open keylock inhibits the closing of the circuit breaker.


- Grasp the key.
- Rotate the key counterclockwise.
- Extract the key. In this condition the closing of the circuit breaker is locked (manual or motorized version).



Charged operation (manual version)

- Extract and grasp the charging lever.
- Activate repeatedly the charging lever until a click is heard. Charged/Discharged indicator will change its colour from white to yellow indicating that the closing spring is fully charged.
- Release the charging lever.



 In the motorized version the spring charging operation is performed by means of a motor.

Closing the circuit-breaker

- Close the circuit-breaker, by acting on the closing pushbutton (I).



- The indicators will read CLOSED (red) and DISCHARGED (white) from the previous positions OPEN (green) and CHARGED (yellow).

Opening the circuit-breaker

- Open the circuit-breaker, by acting on the opening pushbutton (O).



- The indicator will read OPEN (green) from the previous positions CLOSED (red).

Mechanical override for undervoltage release (OPT)

For circuit breakers equipped with mechanical override for undervoltage release, the operations outlined below must be followed before an intervention inside the operating mechanism:

with a screwdriver for slotted screws rotate the operating pin clockwise in order to mechanically override the undervoltage coil, in this condition it is possible to close the circuit breaker if there is a (lack or drop of voltage) to the undervoltage coil. Once the intervention is concluded and the enclosure is mounted, bring the operating pin to the "NOT EXCLUDED" undervoltage coil states position.



Levels of maintenance


Description	Levels
Operations recommended in the instructions manual "installation - operation - maintenance", carried out by suitably qualified personnel having received training allowing them to intervene whilst respecting the safety rules.	1
Complex operations, requiring specific expertise and the implementation of support equipment in accordance with Schneider Electric's procedures. These must be carried out by Schneider Electric or by a specialised technician trained by Schneider Electric when starting the procedures, with the appropriate specific equipment.	2
All preventive and corrective maintenance, all renovation and reconstruction work is carried out by Schneider Electric.	3


Preventive maintenance

Preventive Maintenance	Frequency	Levels		
		1	2	3
Recommended operations	6 Years			
Verification of the presence and condition of accessories (levers, etc.)	■	■	■	■
Visual inspection of the exterior (cleanliness, absence of oxidation, etc.)	■	■	■	■
Cleaning of external elements, with a clean, dry cloth	■	■	■	■
Verification of the positioning of the status indicators (open and closed)	■	■	■	■
Verification of the functioning of the mechanical control mechanism by making several manoeuvres	■	■	■	■
Visual surveillance of the general appearance of connections	■	■	■	■

The spare part

Describes a part that is designed to replace a corresponding one with a view to re-establishing the original function.

 The replacement of these parts can only be carried out by a person who is suitably qualified and trained for this operation.

 For an explanation of the levels of maintenance, please refer to "Levels of Maintenance."

Exceptional replacement	Denomination	Levels		
		1	2	3
Describes the spare parts or assemblies whose foreseeable service life is at least equal to that of the equipment. Use: Spare parts or subassemblies conserved in a safety stock.	Operation counter	■	■	■
	Undervoltage release (UVR)	■	■	■
	Undervoltage release control card	■	■	■
	Loaded or unloaded closing springs signalling contact	■	■	■
	Shunt closing release	■	■	■
	Shunt opening release	■	■	■
	Demagnetisation opening solenoid	■	■	■
	Geared motor for loading springs	■	■	■
	Auxiliary contacts	■	■	■
	Voltage presence signal lamp	■	■	■
	Key locks	■	■	■

Identification of materials

For all orders for spare parts, it is necessary to enclose the equipment characteristics form.

Storage conditions

The components should be stored away from dust, humidity or the sun. In order to facilitate the search, they must be marked by the Schneider Electric reference number. Certain components are fragile, they should preferably be stored in their original packaging



Safety instructions



Do not dismantle the mechanical control mechanism springs without releasing the device.

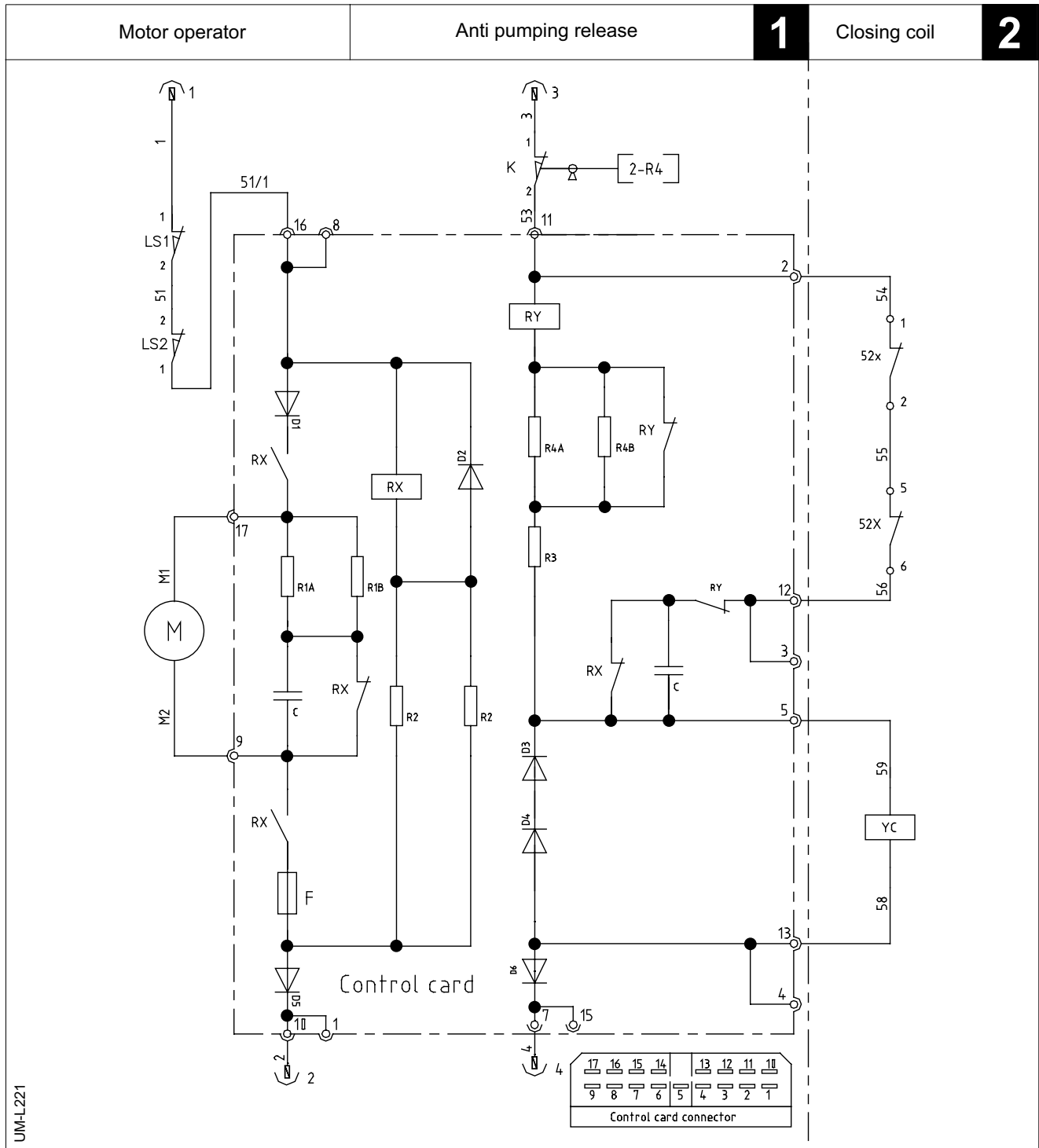
Dismantling of the equipment service

Consult Schneider Electric for all decommissioning services.

- Remove all electrical equipment (coils, motors, etc.).
- On disassembly, the materials must be sorted and sent on via the appropriate recycling channels.

Wiring diagram

The labels **1 2 3 6** show the STD circuit motorized version.
 Labels **3 6** show the circuits of the manual charge system version. In any case, to take product updating into account, it is necessary to refer to the circuit diagram supplied with each circuit-breaker.



1 Circuit motor
 2 Closing coil

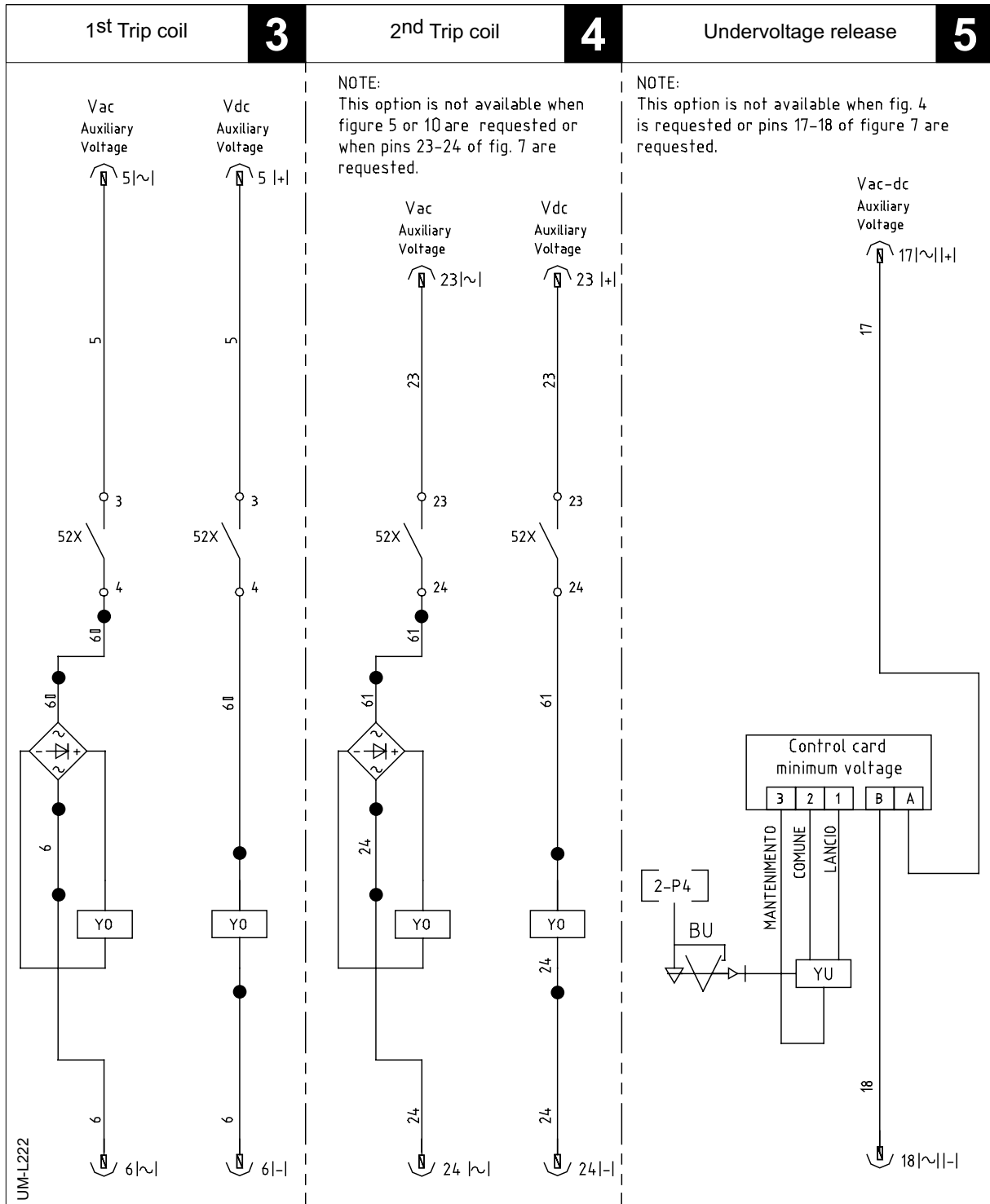
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Wiring diagram

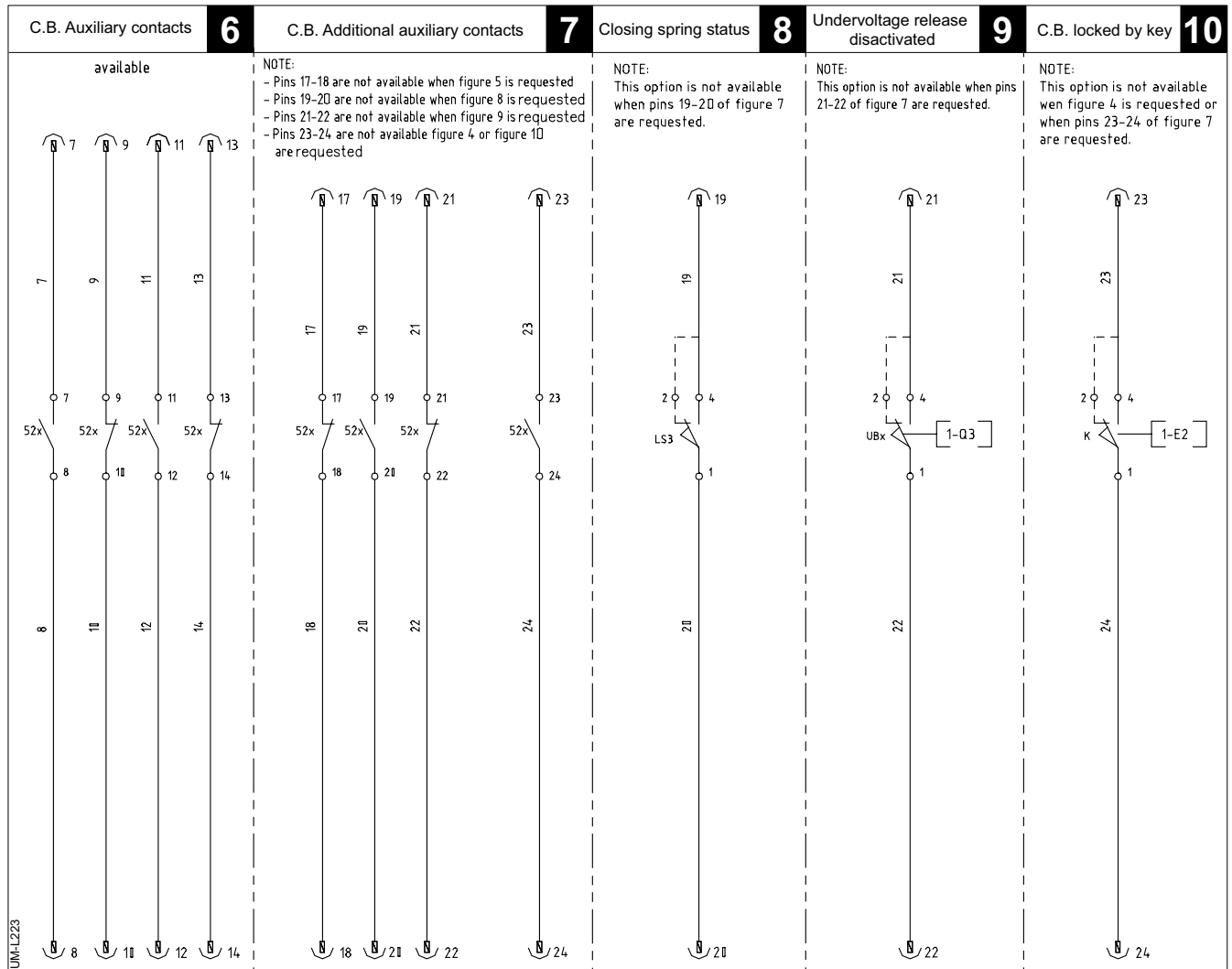
Labels - 4 - 5 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 18 - are OPT.

Incompatibility

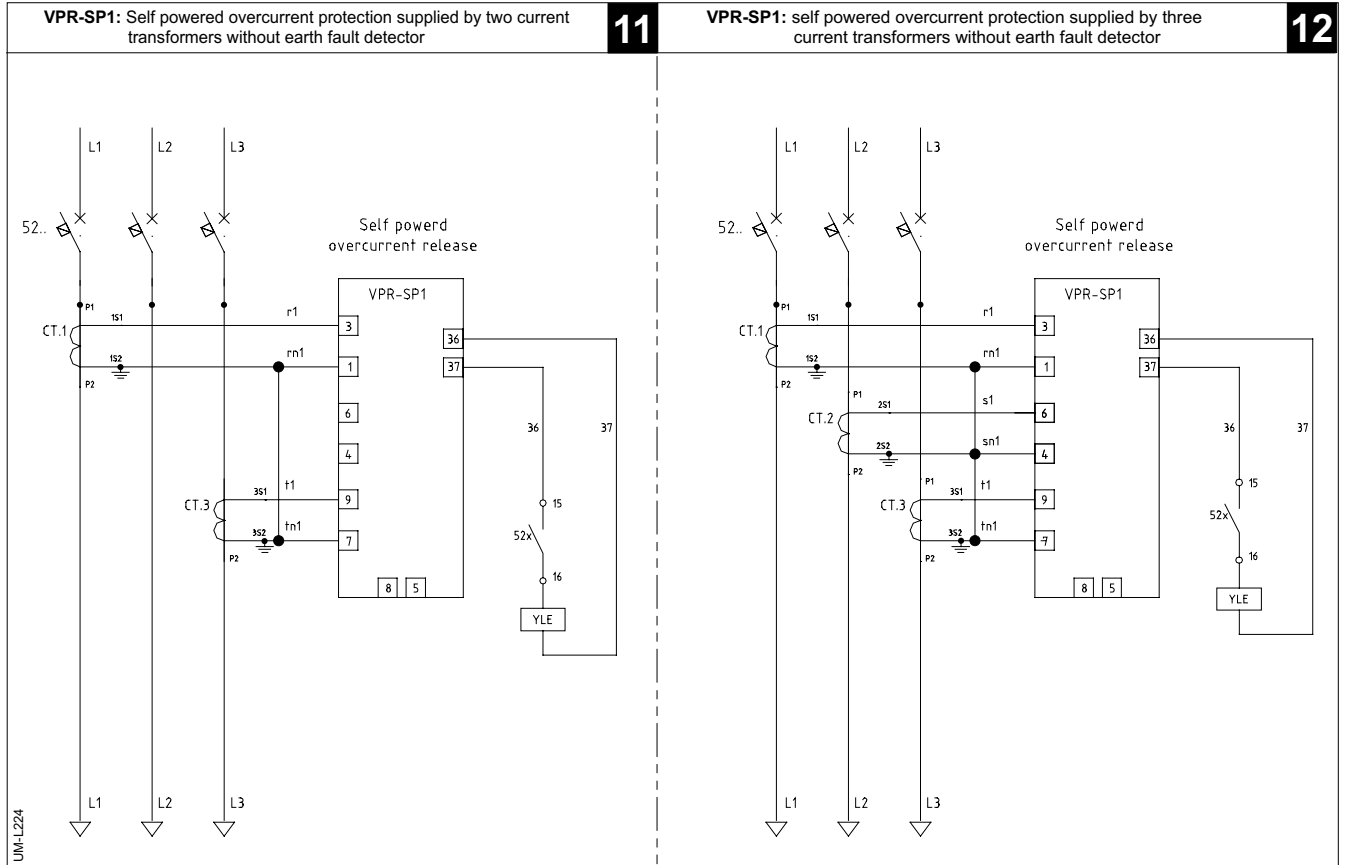
The incompatibility are described inside the figure.



- 3 Trip coil
- 4 Second trip coil
- 5 Undervoltage release

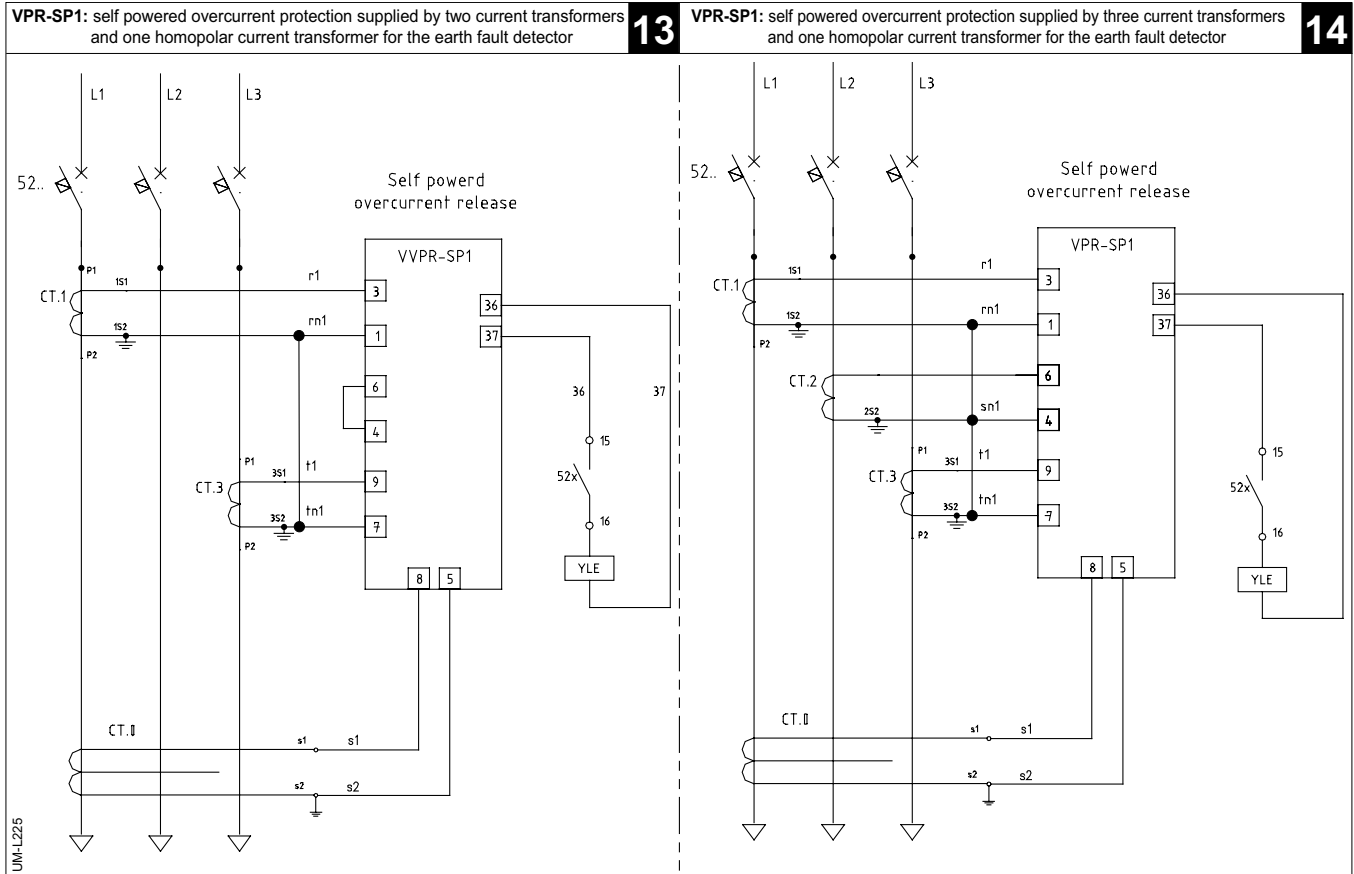


- 6 Available STD auxiliary contacts
- 7 Additional auxiliary contacts
- 8 Closing spring status
- 9 Undervoltage release disactivated/activated
- 10 Key lock



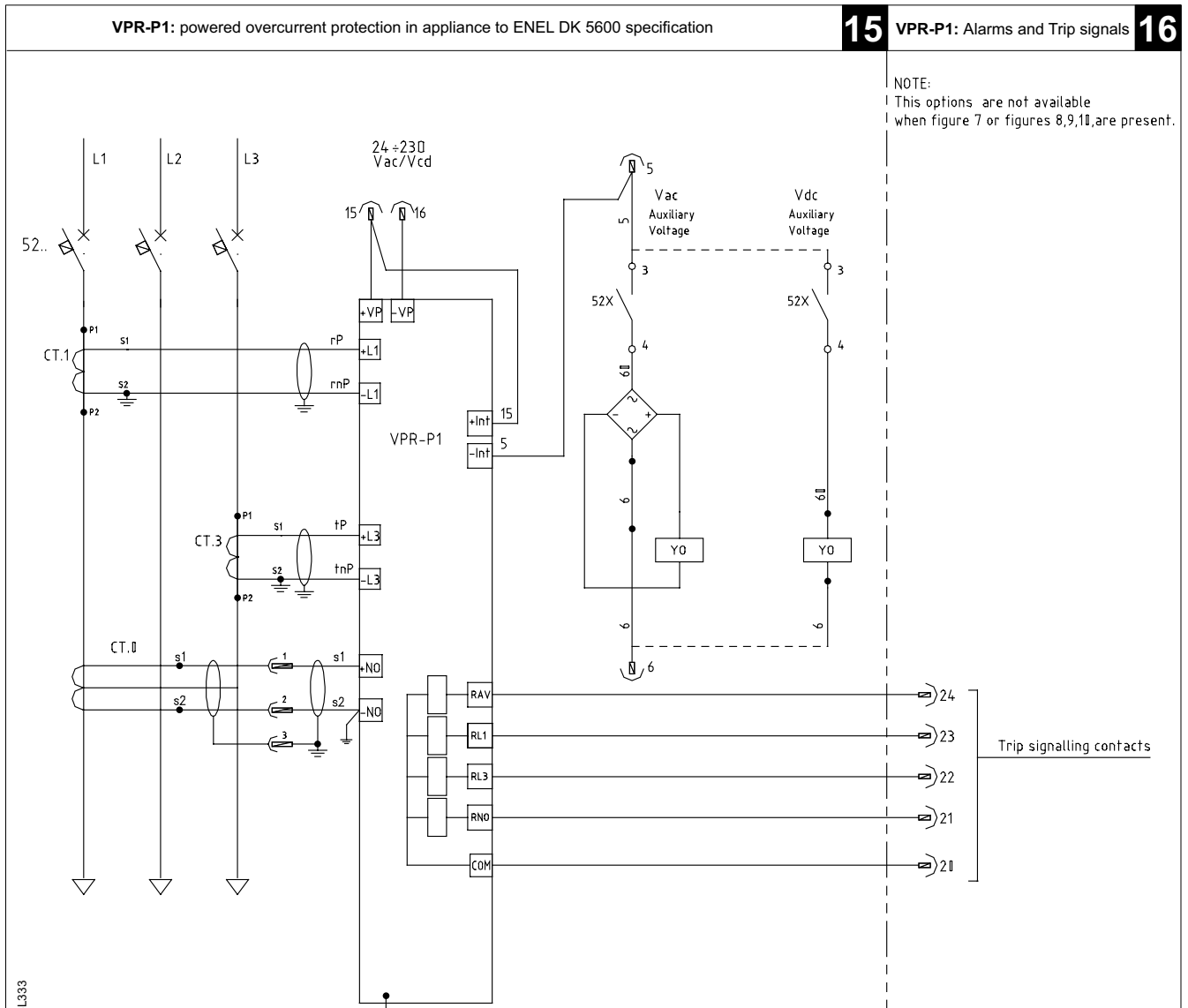
11 Overcurrent protection supplied by two current transformer (ANSI code 50 - 51- 51N)

12 Overcurrent protection supplied by three current transformer (ANSI code 50 - 51- 51N)



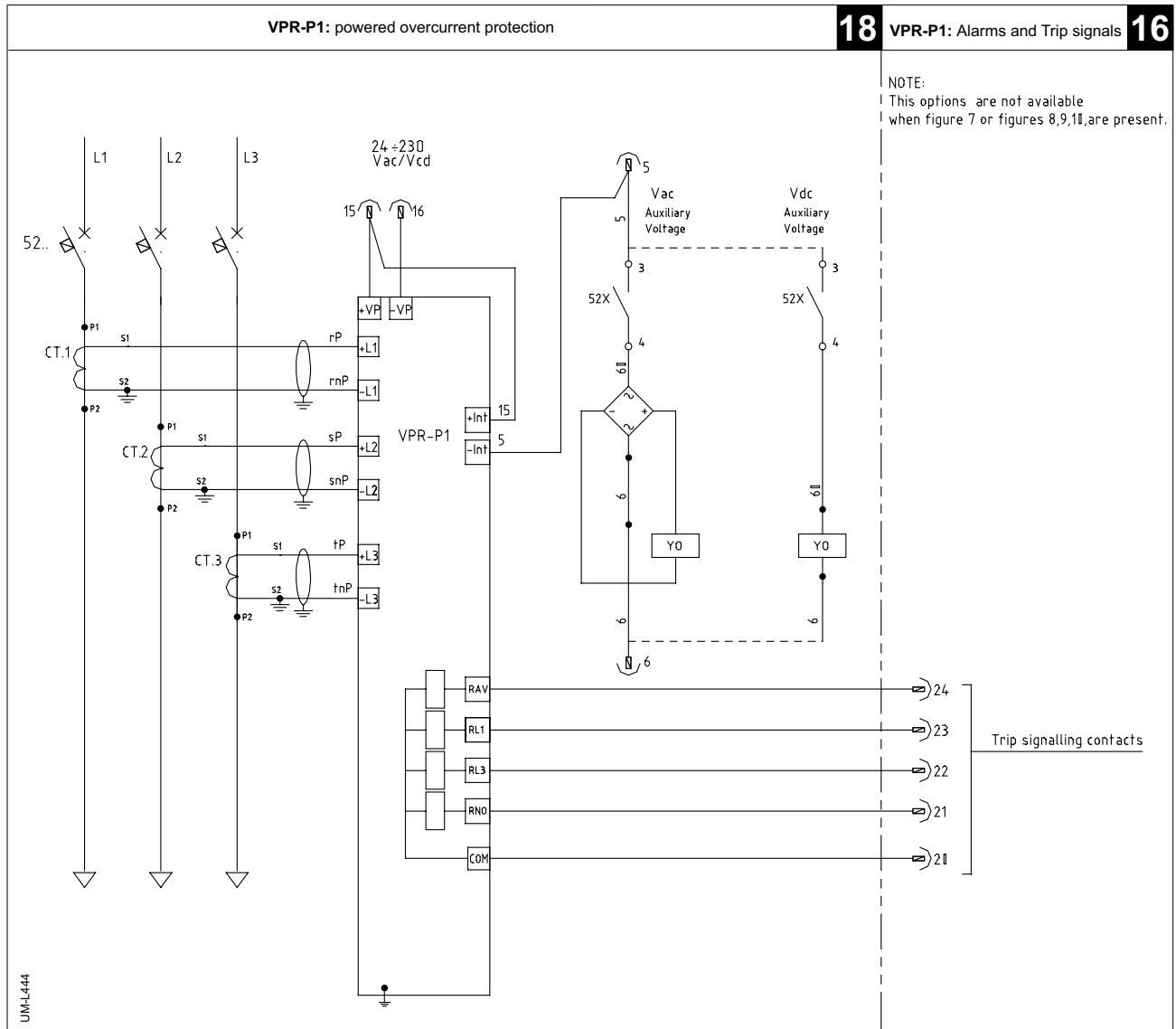
13 Overcurrent protection supplied by two current transformer (ANSI code 50 - 51- 51N)

14 Overcurrent protection supplied by three current transformer (ANSI code 50 - 51- 51N)



15 Overcurrent protection supplied by two current transformer (ANSI code 50 - 51 - 50N - 51N)

16 Alarm and trip signals



18 Overcurrent protection supplied by three current transformer
ANSI code 50 - 51 - 50N - 51N)

16 Alarm and trip signals

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