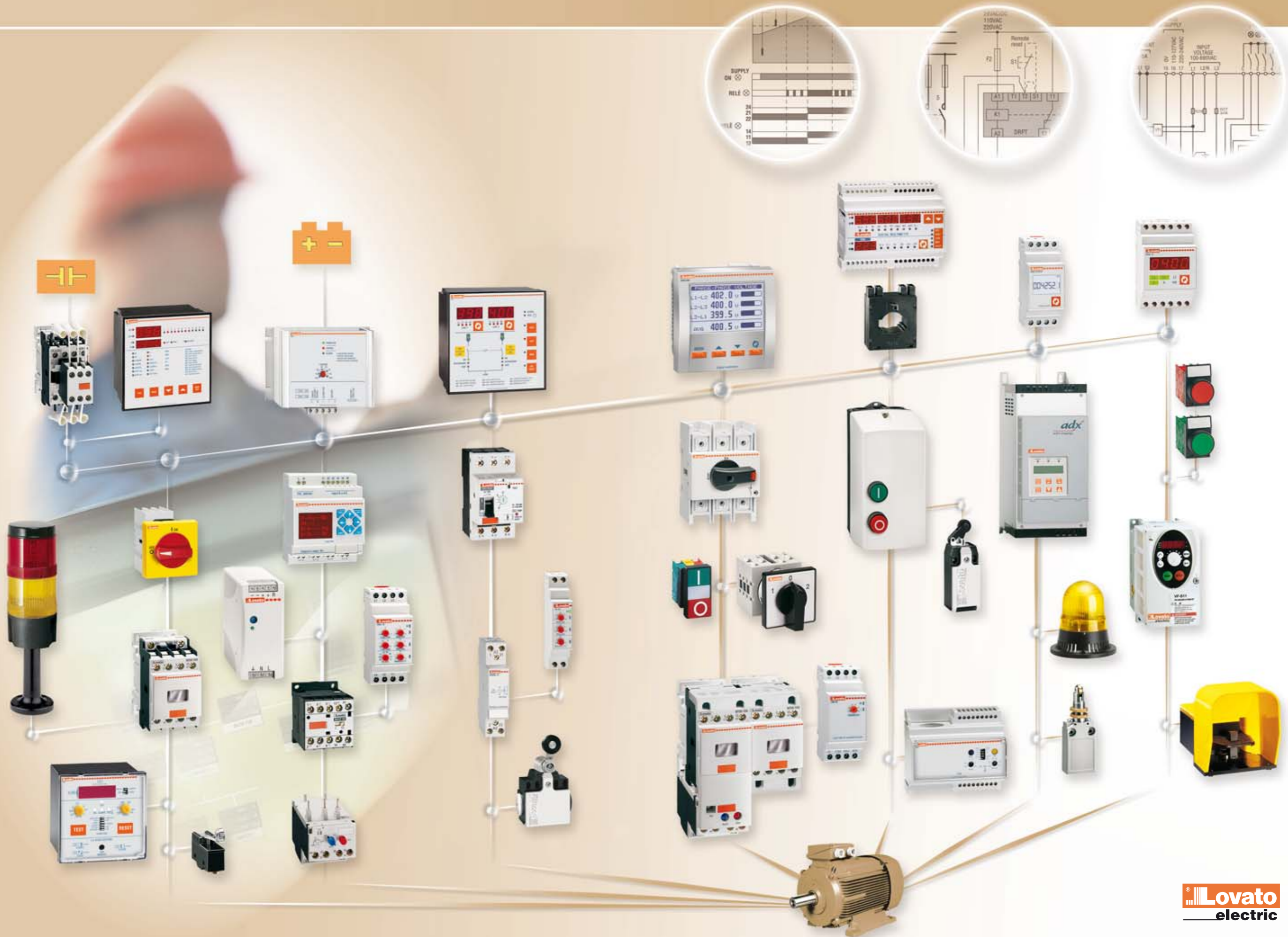
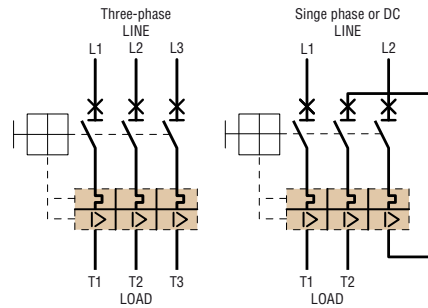


WIRING DIAGRAMS

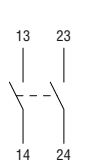


SM1 - SM2 - SM3 - LMS25

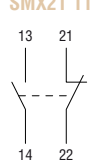


- ① Change in event of magnetic and/or thermal tripping.
 - ② Change in event of magnetic tripping.
 - ③ Mounting of left side of breakers.
 - ④ Mounting of right side of breakers.
- NOTE: During breaker testing, contacts 57-58 and 65-66 switch only.

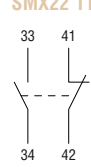
SMX11 20



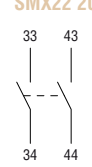
SMX11 11
SMX21 11



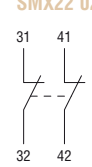
SMX12 11
SMX22 11



SMX12 20
SMX22 20



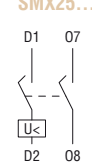
SMX12 02
SMX22 02



SMX13 11



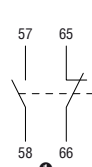
SMX15...
SMX25...



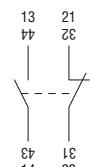
SMX20 11



SMX23 11



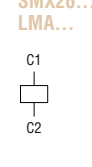
LMH11...



SMX14...
SMX24...
LMU...



SMX16...
SMX26...
LMA...

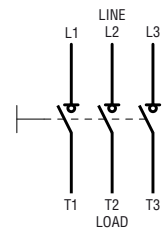


Switch disconnectors

16 TO 125A SWITCH DISCONNECTORS

Three-pole disconnectors

GA...



Fourth pole

GAX42...

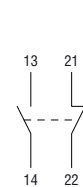


GAX41...



Auxiliary contacts

GAX10...



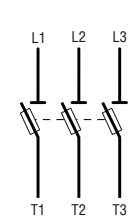
Neutral/Earth terminal

GAX3...



Fuse holder

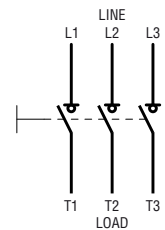
GAX39 1



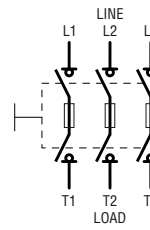
160 TO 1250A SWITCH DISCONNECTORS

Three-pole disconnectors

GE...

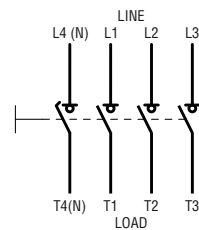


GE...N - GE...B

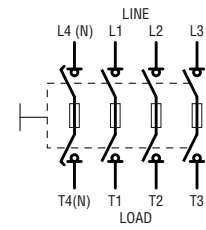


Four-pole disconnectors

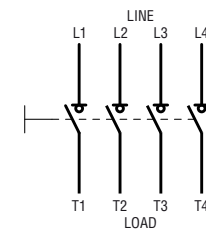
GE...T4



GE...NT4 - GE...BT4



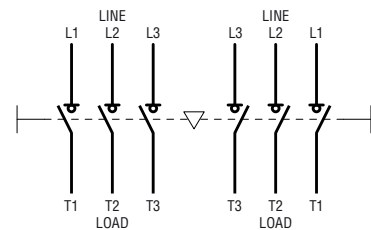
GE...DT4



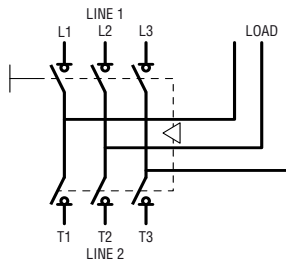
160 TO 1250A CHANGEOVER SWITCHES

Three-pole switches

GE160 E - GE250 E

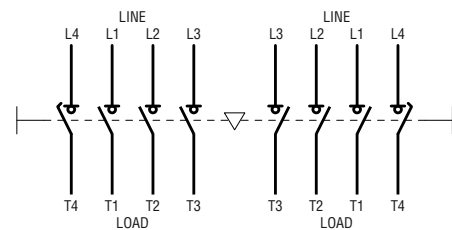


GE315 E - GE1250 E

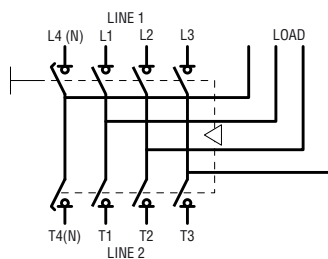


Four-pole switches

GE160 ET4 - GE250 ET4



GE315 ET4 - GE1250 ET4



ADD-ON BLOCKS AND ACCESSORIES

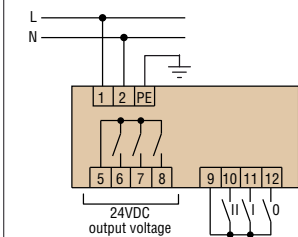
Auxiliary contacts

GE10 11



Motorised control unit

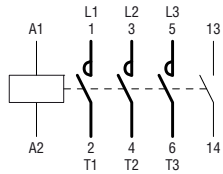
GE69...



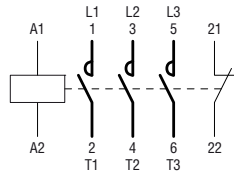
THREE-POLE CONTACTORS IN AC

BG06 A - BG09 A - BGF09 A - BGP09 A - BG12 A
BF09 A - BF12 A - BF18 A - BF25 A

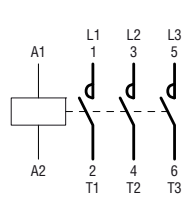
...10



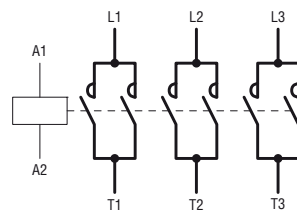
...01



BF26 A - BF32 A - BF38 A
BF50 - BF110
B115 - B630 1000



B1250 24 - B1600 24...

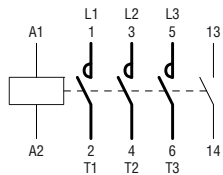


① The input electronic circuit of the contactor coil is designed and tested according to IEEEC 62.41 standards and can withstand a 10kV impulse voltage (1.2/50µs) with 50 Joule energy. The use of an auxiliary reduced voltage transformer is recommended for higher values.

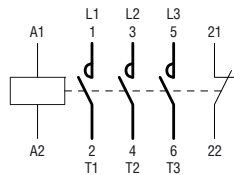
THREE-POLE CONTACTORS IN DC

BG06 D - BG09 D - BGF09 D - BGP09 D - BG12 D
BG06 L - BG09 L - BGF09 L - BGP09 L - BG12 L

...10

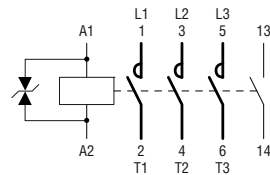


...01

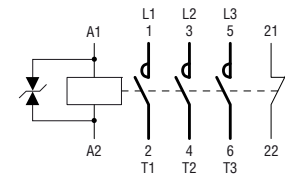


BF09 D - BF12 D - BF18 D - BF25 D
BF09 L - BF12 L - BF18 L - BF25 L

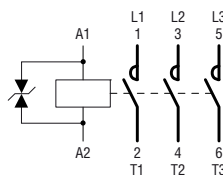
...10



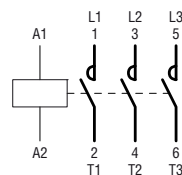
...01



BF26 D - BF32 D - BF38 D
BF26 L - BF32 L - BF38 L

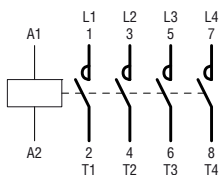


BF50C - BF110C

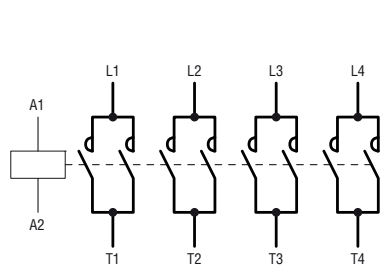


FOUR-POLE CONTACTORS IN AC

BG09 T4 A - BGF09 T4 A - BGP09 T4 A
BF09 T4 A - BF38 T4 A
BF50 40 - BF65 40 - BF80 40
B115 4 - B630 1000 4

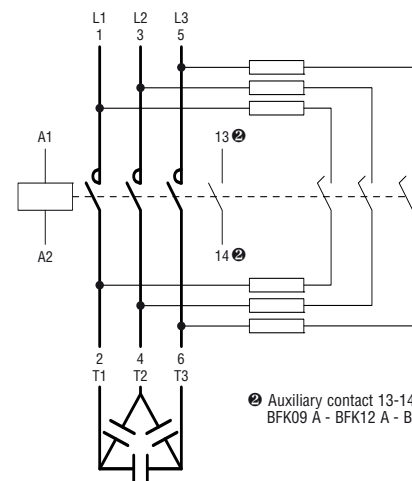


B1250 4 - B1600 4



CONTACTORS FOR POWER FACTOR CORRECTION

BFK09 A - BFK12 A - BFK18 A
BFK26 A - BFK32 A - BFK38 A - BF50K - BF65K - BF70K - BF80K

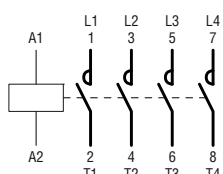


② Auxiliary contact 13-14 is found on BFK09 A - BFK12 A - BFK18 A types only.

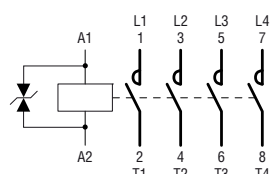
① The input electronic circuit of the contactor coil is designed and tested according to IEEEC 62.41 standards and can withstand a 10kV impulse voltage (1.2/50µs) with 50 Joule energy. The use of an auxiliary reduced voltage transformer is recommended for higher values.

FOUR-POLE CONTACTORS IN DC

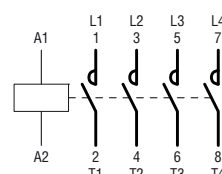
BG09 T4 D - BGF09 T4 D - BGP09 T4 D



BF09 T4 D - BF38 T4 D
BF09 T4 L - BF38 T4 L

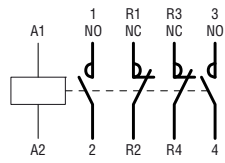


BF65C 40 - BF80C 40

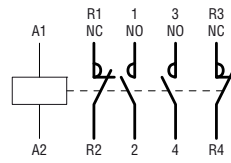


FOUR-POLE CONTACTORS IN AC WITH 2NO+2NC MAIN POLES

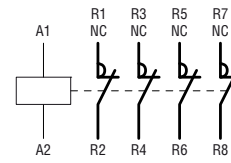
BG09 T2 A



BF09 T2 A - BF18 T2 A - BF26 T2 A - BF38 T2 A

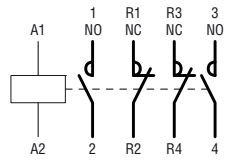


BF18 T0 A - BF26 T0 A

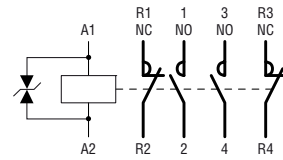


FOUR-POLE CONTACTORS IN DC WITH 2NO+2NC MAIN POLES

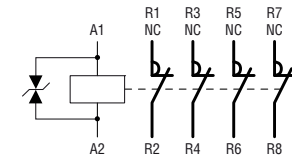
BG09 T2 D



BF18 T2 D - BF26 T2 D - BF38 T2 D
BF18 T2 L - BF26 T2 L - BF38 T2 L

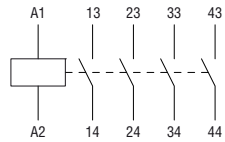


BF18 T0 D - BF26 T0 D
BF18 T0 L

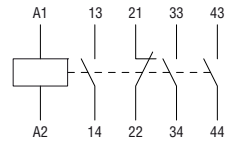


CONTROL RELAYS IN AC

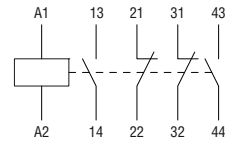
BG00 40 A - BGF00 40 A
BF00 40 A



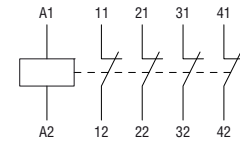
BG00 31 A - BGF00 31 A
BF00 31 A



BG00 22 A - BGF00 22 A
BF00 22 A

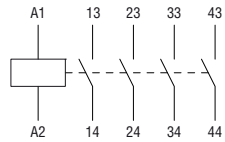


BF00 04 A

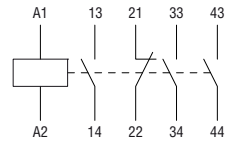


CONTROL RELAYS IN DC

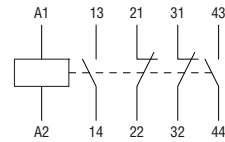
BG00 40 D - BGF00 40 D
BG00 40 L - BGF00 40 L



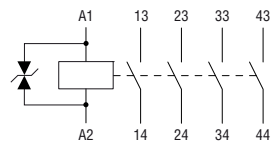
BG00 31 D - BGF00 31 D
BG00 31 L - BGF00 31 L



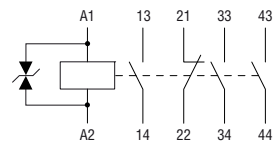
BG00 22 D - BGF00 22 D
BG00 22 L - BGF00 22 L



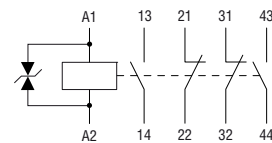
BF00 40 D
BF00 40 L



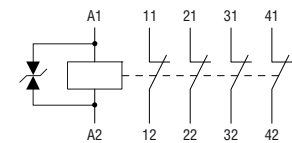
BF00 31 D
BF00 31 L



BF00 22 D
BF00 22 L

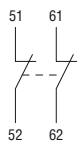


BF00 04 D
BF00 04 L

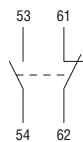


ADD-ON BLOCKS FOR BG MINI-CONTACTORS

BGX10 02
BGXF10 02



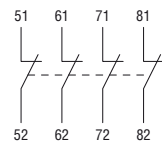
BGX10 11
BGXF10 11



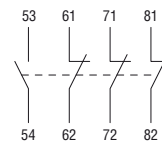
BGX10 20
BGXF10 20



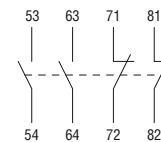
BGX10 04
BGXF10 04



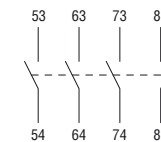
BGX10 13
BGXF10 13



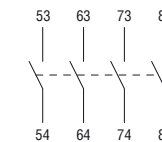
BGX10 22
BGXF10 22



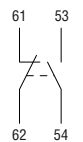
BGX10 31
BGXF10 31



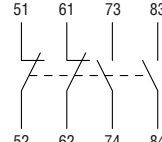
BGX10 40
BGXF10 40



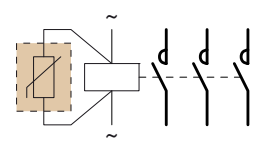
BGX11 11



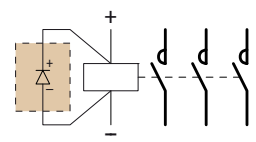
BGX11 22



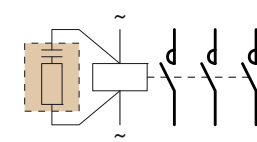
BGX77...



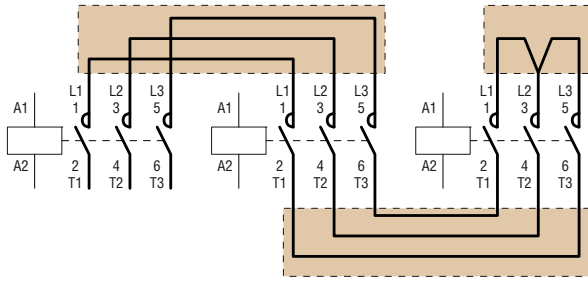
BGX78...



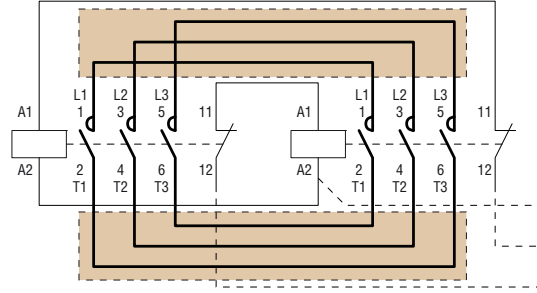
BGX79...



SMX90 21

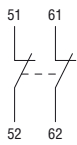


SMX90 22

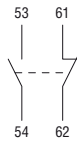


ADD-ON BLOCKS FOR BF CONTACTORS

BFX10 02
BFX12 02
G484 02



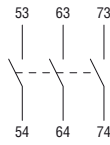
BFX10 11
BFX12 11
G484 11



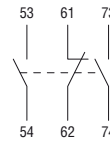
BFX10 20
BFX12 20
G484 20



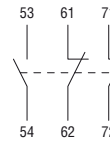
G484 30



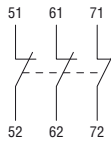
G484 21



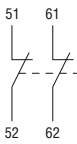
G484 12



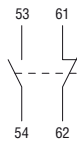
G484 03



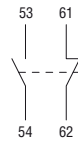
BFX10 04



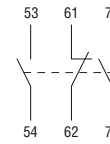
BFX10 13



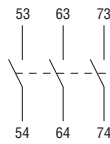
BFX10 22



BFX10 31



BFX10 40



G418 10
G428 10



G418 10A
G428 10A



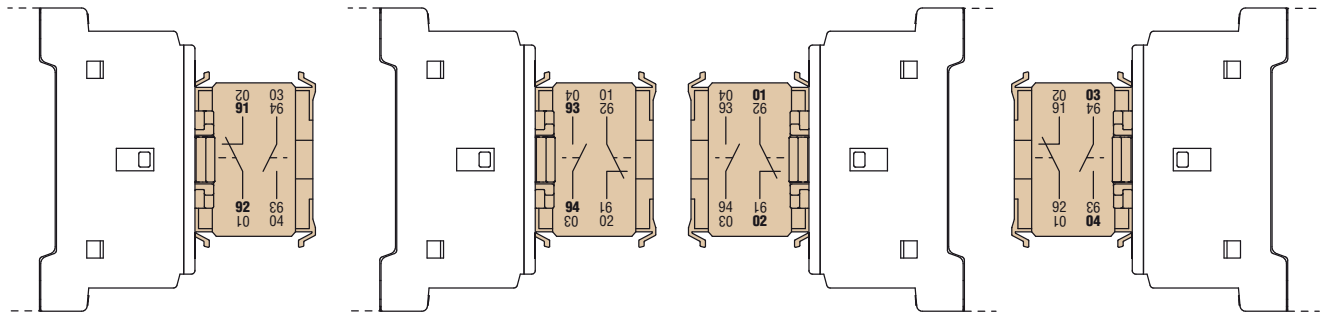
G418 01
G428 01



G418 01A
G428 01A

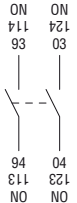


G218

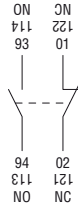


The termination of the G218 auxiliary block has more than one numbering due to the fact that the block can assume various mounting positions. See the numbering in boldface and larger digits for a correct interpretation.

G481 20



G481 11



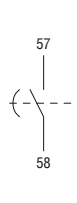
G481 02



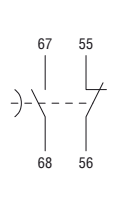
G482



G485...



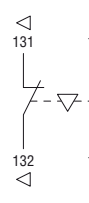
G486... - G487



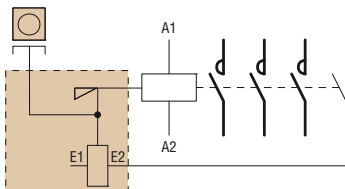
BFX42
BFXD42



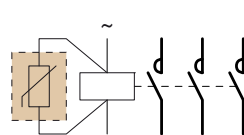
BFX50 01



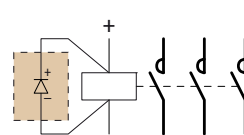
G222... - G272...



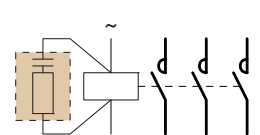
G318... - BFX77...



G319 225

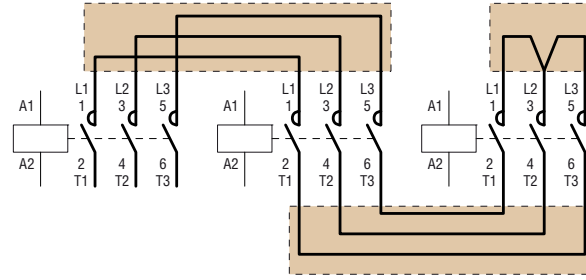
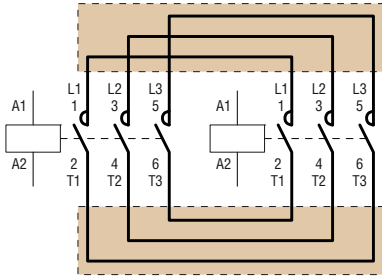


G322... - BFX79...



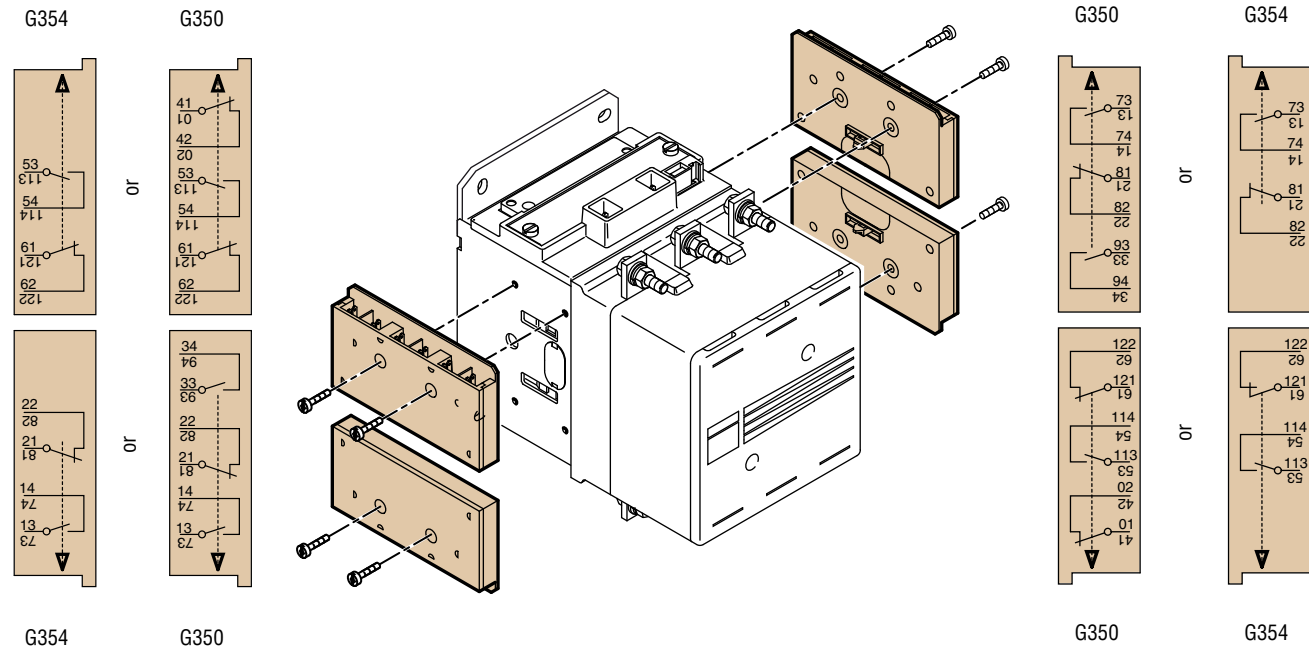
BFX31 01 - BFX31 02 - BFX32 01

BFX31 31 - BFX32 31 - BFX32 32

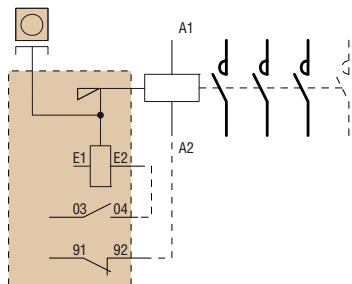


ADD-ON BLOCKS FOR B CONTACTORS

G350 - G354

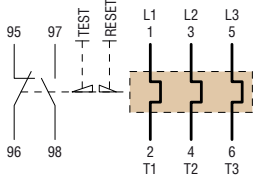


G495

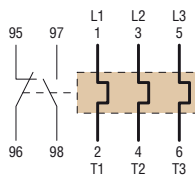


THERMAL OVERLOAD RELAYS FOR BG MINI-CONTACTORS

RF9 - RFN9

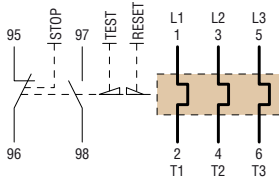


RFA9 - RFNA9

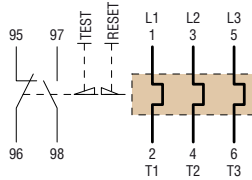


THERMAL OVERLOAD RELAYS FOR BF CONTACTORS

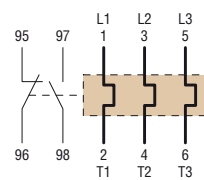
RF38 - RFN38



RF95 - RFN95



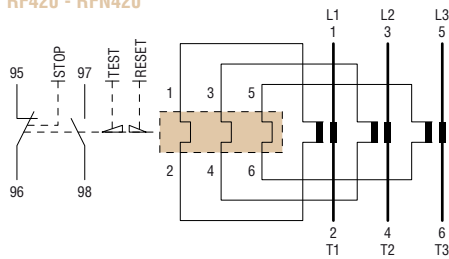
RFA95 - RFNA95



THERMAL OVERLOAD RELAYS FOR B CONTACTORS

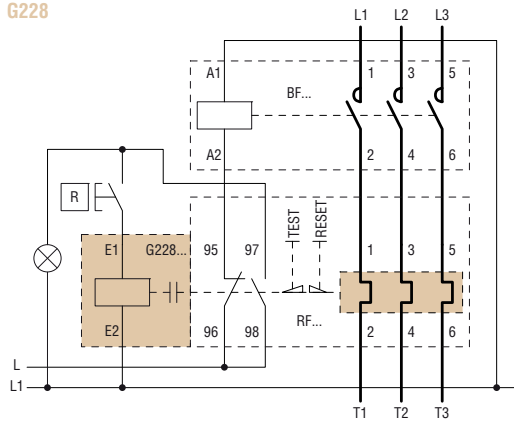
RF200 - RFN200

RF420 - RFN420



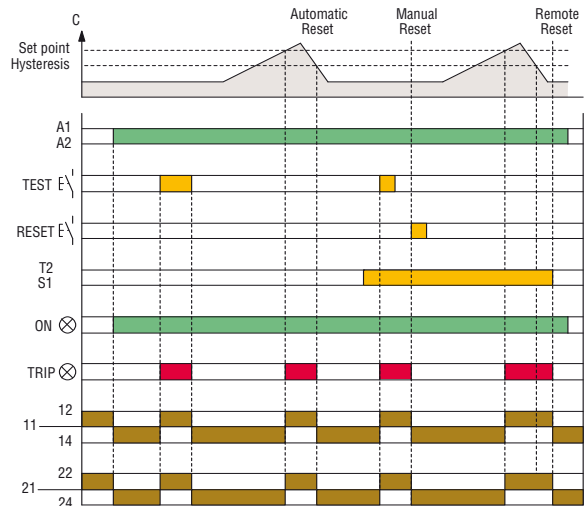
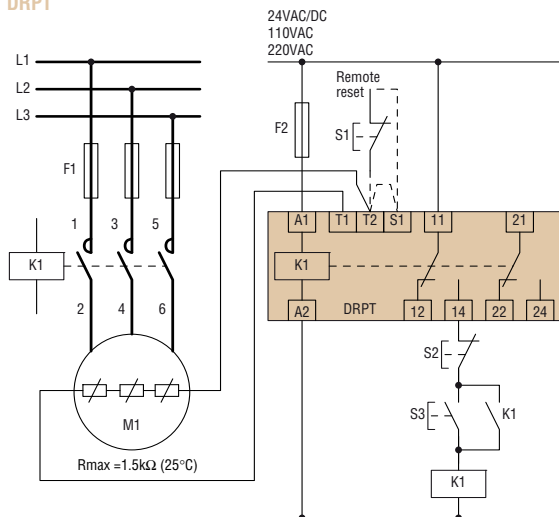
ADD-ON BLOCKS FOR THERMAL OVERLOAD RELAYS RF9 - RF95

G228



THERMISTOR PROTECTION RELAY

DRPT



DIRECT-ON-LINE STARTERS IN INSULATED ENCLOSURE

M...P M...R

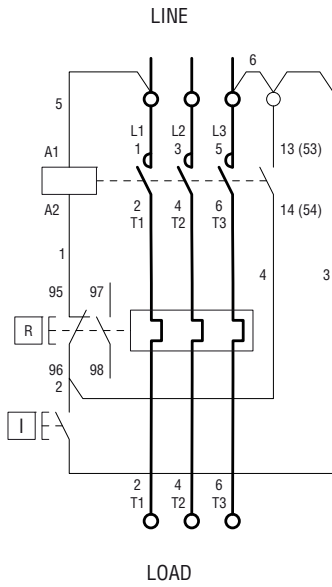


Diagram 1 - Incorporated button control

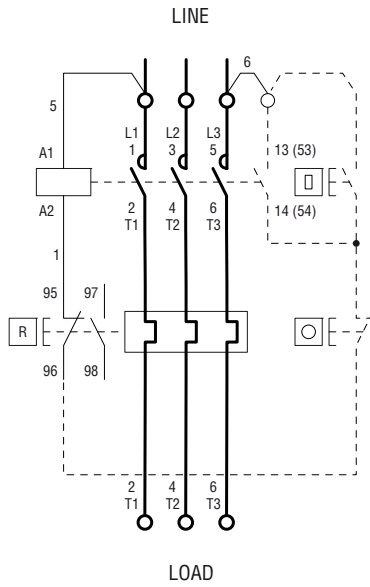


Diagram 2 - External button control

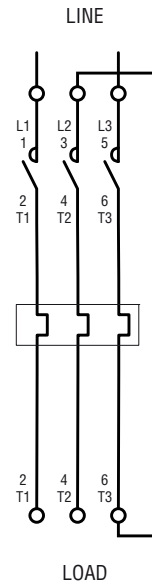


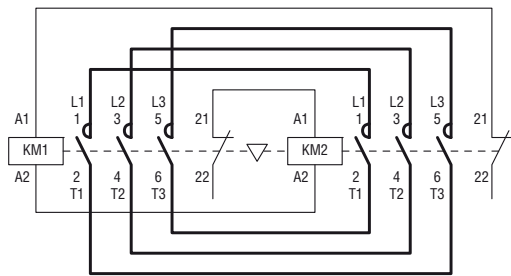
Diagram 3 - Power connection for 1-phase motors

DIAGRAM 2
Connect the eventual two-wire control (e.g. automatism) between terminal .3 of the contactor and terminal 96 of the thermal overload relay.

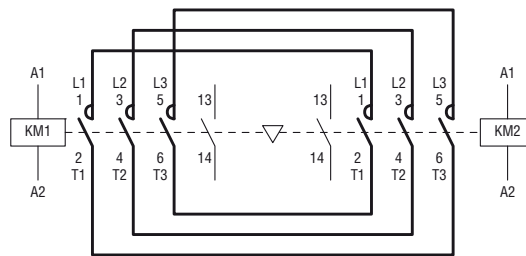
- IMPORTANT**
- Remove jumpers 5 and 6 and connect the auxiliary to terminals A1 and .3 for a control circuit with a voltage value different than the supply.
 - Remove jumper 5 and connect the neutral to terminal A1 for a control circuit between phase and neutral.
 - **SINGLE-PHASE SUPPLY**
The main circuit must be configured according to Diagram 3 in the case of a single-phase line or motor.
 - **FUSES**
A set of three fuses must be connected upstream of the starter in the event no appropriate protection is included in the system.

REVERSING CONTACTOR ASSEMBLY

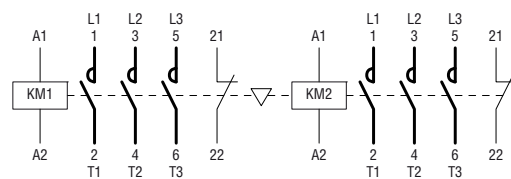
BGR...



BGT...

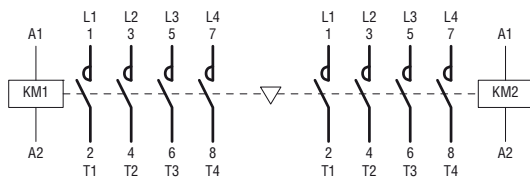


BGTP09...
BFA...42

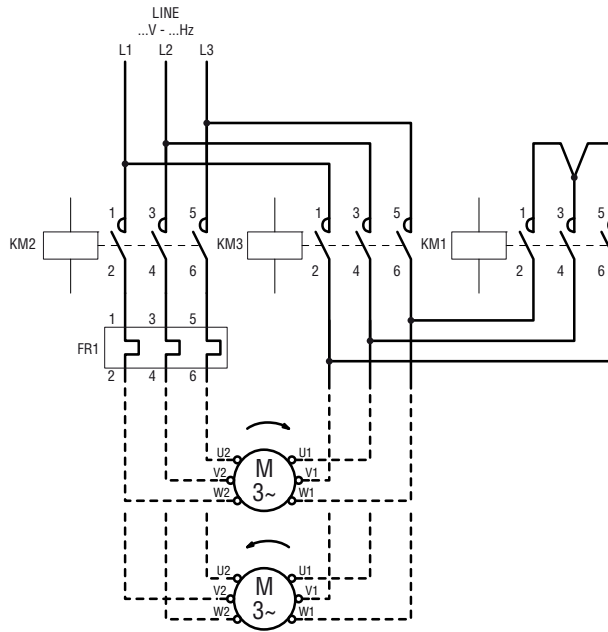


CHANGEOVER CONTACTOR ASSEMBLY

BGC09...

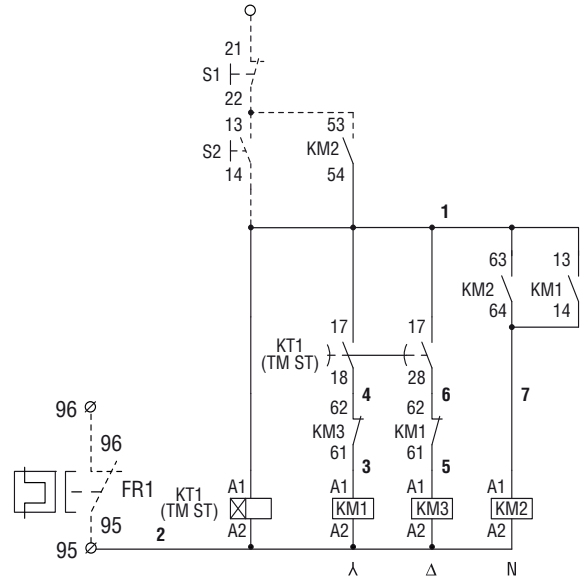
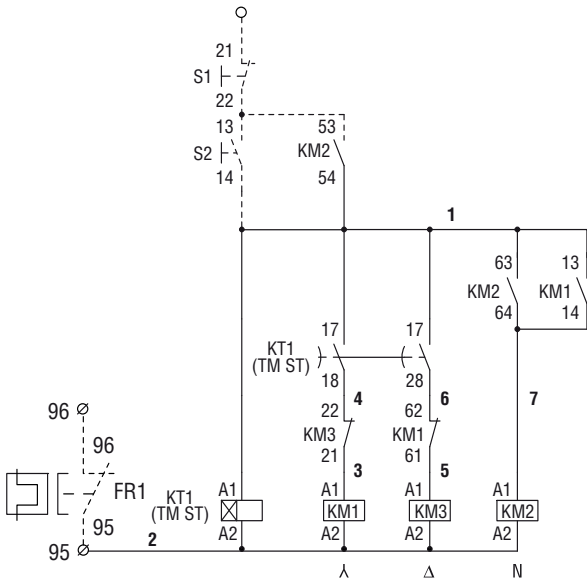


STAR-DELTA STARTERS, OPEN FRAME

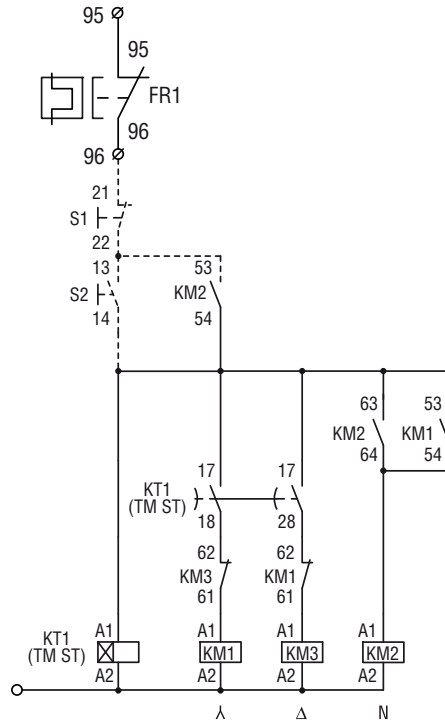
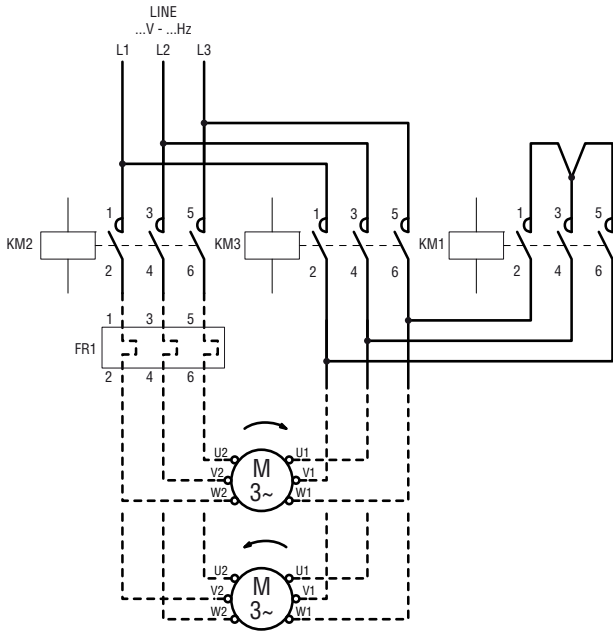


BFA009 70... BFA025 70
M3P009 70...M3P025 70

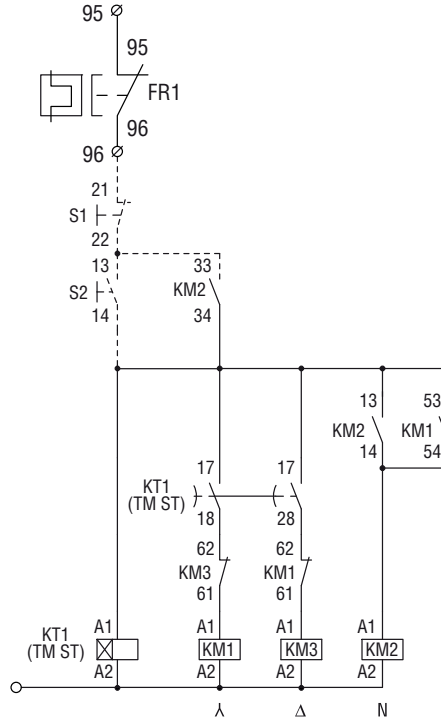
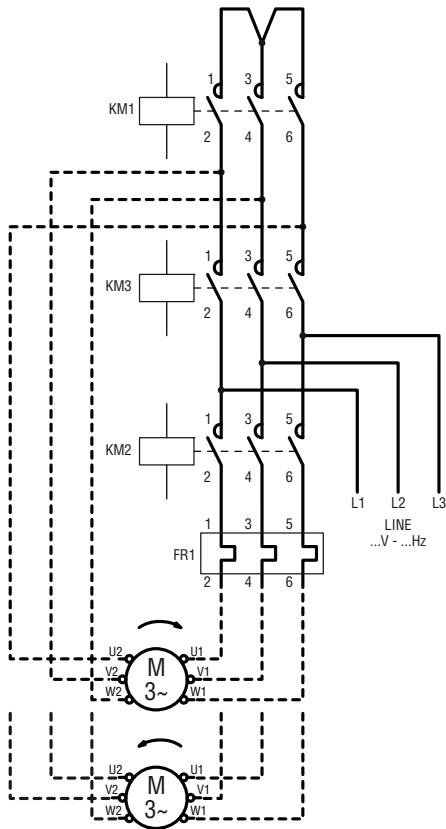
BFA26 70...BFA038 70
M3P026 70...M3P038 70



DYF50... DYF95



NYF...



FOR PUSH BUTTONS AND SELECTORS

LM2T C10

LM2T C10A

LM2T C01

LM2T C01D

LM2T EL400
LM2T DL400

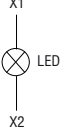
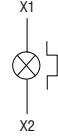
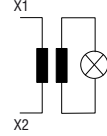
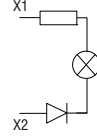
LM2T ZL230
LM2T VL230

LM2T YL...
LM2T XL...

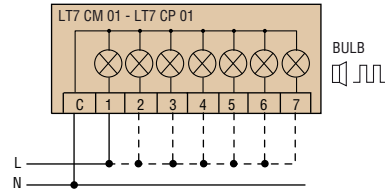
LM2T GL...
LM2T FL...

LM2T T100

LM2T L...
LM2T M...

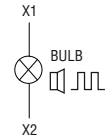


SIGNAL TOWERS Ø 70mm
LT7...



Connect terminals C and 1 as indicated to power the first module. If other modules are fitted, the respective terminals must be connected.

SIGNAL BEACONS Ø 62mm
LB6...



Limit, micro and foot switches

LIMIT SWITCHES, KB - KM - KC - KN TYPE

K...S11

K...L11

K...L02

K...S02
K...D02

K...L20

K...A11

K...L03

K...L12

K...L21

Snap action

Slow break

Slow break

Snap action

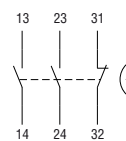
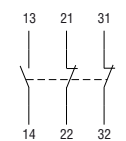
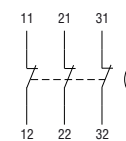
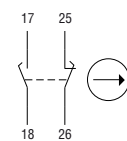
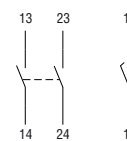
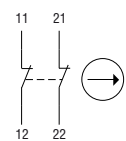
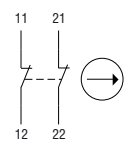
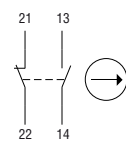
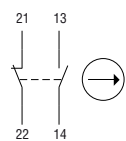
Slow break

Slow break

Slow break

Slow break

Slow break



1NO + 1NC

1NO + 1NC

2NC

2NC

2NO

1NO + 1NC

3NC

1NO + 2NC

2NO + 1NC

make before break

LIMIT SWITCHES, KP TYPE

KP...S11

KP...L11

LIMIT SWITCH, T TYPE

TS...

TL...

LIMIT SWITCHES, PL TYPE

PLN A1...

PLN A2...

PLN C1...

PLN C2...

PLN U1...

Snap action

Slow break

Snap action

Slow break

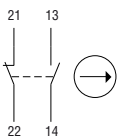
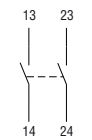
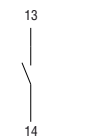
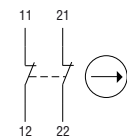
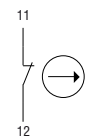
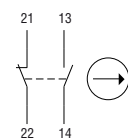
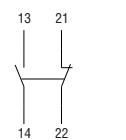
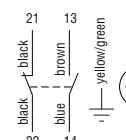
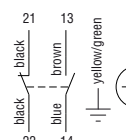
Snap action

Slow break

Snap action

Slow break

Snap action



1NO + 1NC

1NO + 1NC

1NO + 1NC

1NO + 1NC

1NC

2NC

1NO

2NO

1NO + 1NC

LIMIT SWITCHES FOR NORMAL STOPPING

RS1...

RS2...

RS3...

PLN U1...

P2L10...

TS1...

TL1...

TS2...

PLN U1...

P2L8...

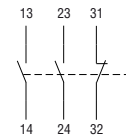
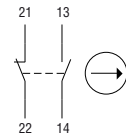
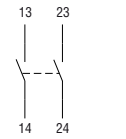
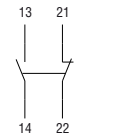
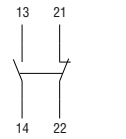
Snap action

Slow break

Slow break

Snap action

Slow break



1NO + 1NC

1NO + 1NC

1NO + 1NC

1NO + 1NC

2NO + 2NC

LIMIT SWITCHES FOR EMERGENCY STOPPING

RS13...

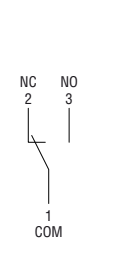
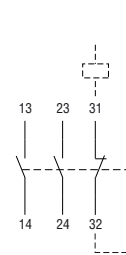
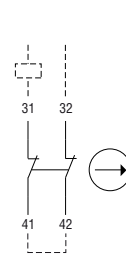
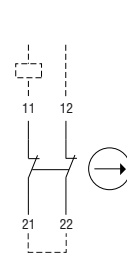
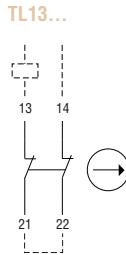
PLN13...

P2L13...

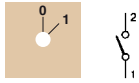
P2L15...

MICRO SWITCHES, KS TYPE

KS...

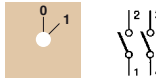


90 - One-pole ON/OFF switch



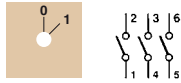
Number of wafers: 1
Switching angle: 60°

91 - Two-pole ON/OFF switch



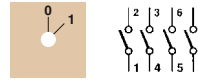
Number of wafers: 1
Switching angle: 60°

10 - Three-pole ON/OFF switch



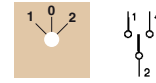
Number of wafers: 2
Switching angle: 60°

92 - Four-pole ON/OFF switch



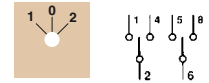
Number of wafers: 2
Switching angle: 60°

51 - 1-pole changeover switch with 0



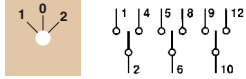
Number of wafers: 1
Switching angle: 60°

52 - 2-pole changeover switch with 0



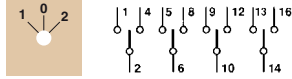
Number of wafers: 2
Switching angle: 60°

53 - 3-pole changeover switch with 0



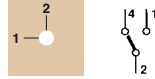
Number of wafers: 3
Switching angle: 60°

75 - 4-pole changeover switch with 0



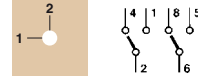
Number of wafers: 4
Switching angle: 60°

54 - 1-pole changeover without 0



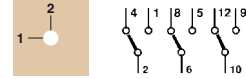
Number of wafers: 1
Switching angle: 90°

55 - 2-pole changeover without 0



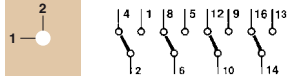
Number of wafers: 2
Switching angle: 90°

56 - 3-pole changeover without 0



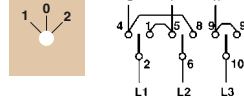
Number of wafers: 3
Switching angle: 90°

69 - 4-pole changeover without 0



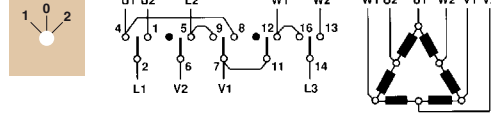
Number of wafers: 4
Switching angle: 90°

11 - 3-pole reversing switch



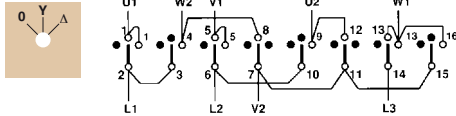
Number of wafers: 3
Switching angle: 60°

13 - Pole-changing switch with 0 (Dahlander)



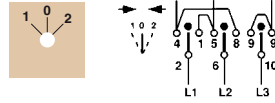
Number of wafers: 4
Switching angle: 60°

12 - Star-delta switch



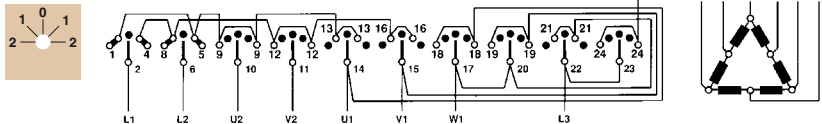
Number of wafers: 4
Switching angle: 60°

26 - Reversing switch, spring return to 0



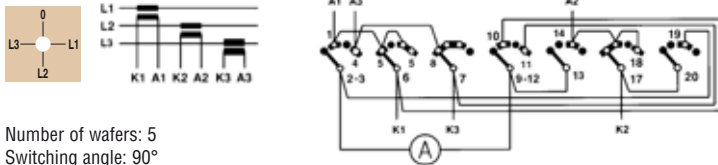
Number of wafers: 3
Switching angle: 30°

20 - Pole-changing switch with reversing (Dahlander)



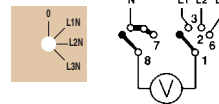
Number of wafers: 6
Switching angle: 30°

97 - Ammeter switch direct reading or via current transformer



Number of wafers: 5
Switching angle: 90°

68 - Phase-neutral voltmeter switch



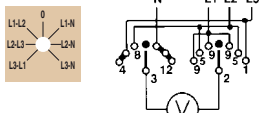
Number of wafers: 2
Switching angle: 30°

67 - Phase-phase voltmeter switch



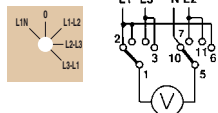
Number of wafers: 2
Switching angle: 30°

66 - Phase-phase phase-neutral voltmeter changeover



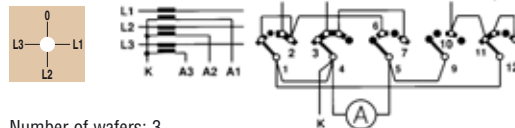
Number of wafers: 3
Switching angle: 30°

60 - Changeover switch 1 phase phase-neutral, 3 phase-phase voltages



Number of wafers: 3
Switching angle: 30°

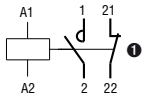
98 - L1-L2-L3 current changeover switch



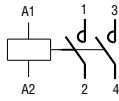
Number of wafers: 3
Switching angle: 90°

Two-pole modular contactors

CN20 11

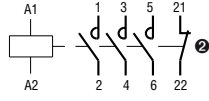


CN20 20

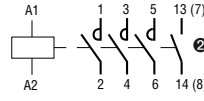


Three and four-pole modular contactors

CN25 01
CN40 01
CN63 01



CN25 10
CN40 10
CN63 10



Add-on auxiliary contacts

CNH11



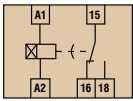
CNH20



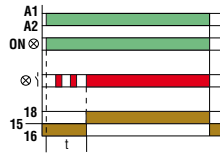
- ① The second NC contact has the same characteristics as the power pole contact. Therefore, it can be used indifferently as an auxiliary or as a NC power pole contact.
- ② The fourth pole NO or NC has the same characteristics as the power poles. Therefore, it can be used indifferently as auxiliary or as power pole contact.

Time relays

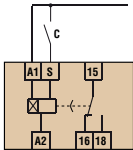
TM P



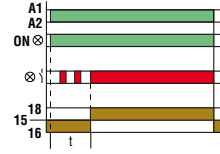
On delay. Delay on make, with start at relay energising.



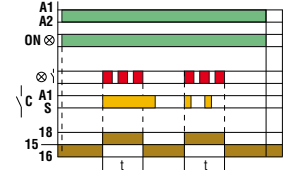
TM M1



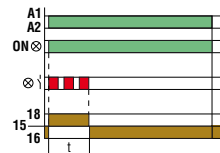
On delay. Delay on make, with start at relay energising



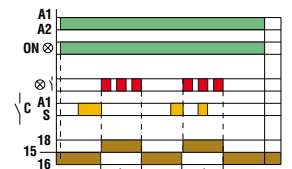
Pulse on relay energising with start at external contact closing



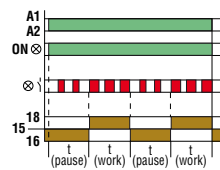
Pulse on relay energising with start on energising



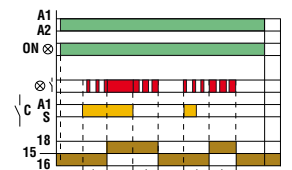
Pulse on relay energising with start at external contact opening



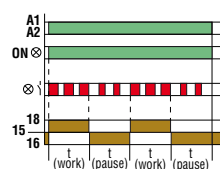
Flasher, starting with OFF (pause) interval. Equal timing recycle.



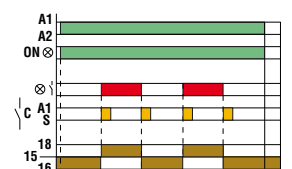
On-Off delay. Delay on make, with start at external contact closing, and delay at break, with start at external contact opening.



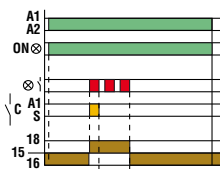
Flasher, starting with ON (work) interval. Equal timing recycle.



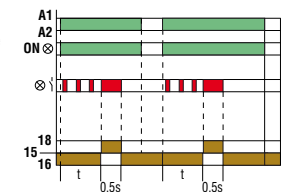
Step relay at each closing of an external contact.



Off delay. Relay energising at external contact closing with start on break

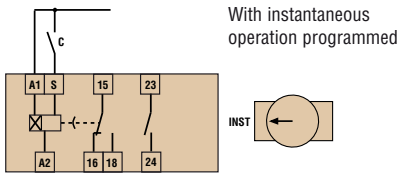


Pulse generator. Unequal timing recycle, starting with OFF pulse time and 0.5sec ON time.

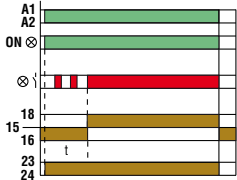


TM M2

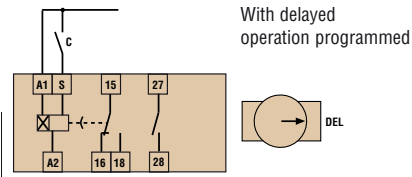
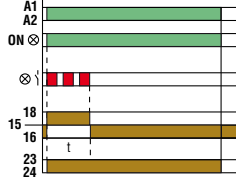
W



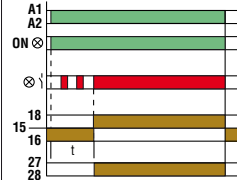
On delay. Delay on make, with start at relay energising



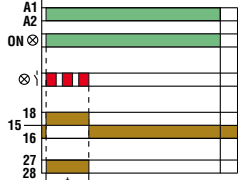
Pulse on relay energising with start on energising



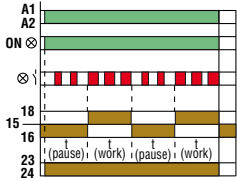
On delay. Delay on make, with start at relay energising



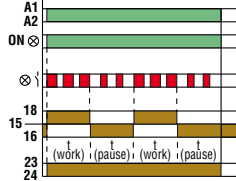
Pulse on relay energising with start on energising



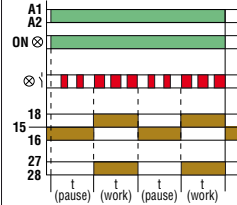
Flasher, starting with OFF (pause) interval. Equal timing recycle



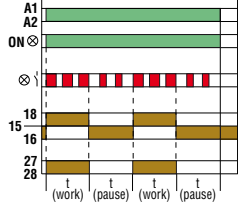
Flasher, starting with ON (work) interval. Equal timing recycle



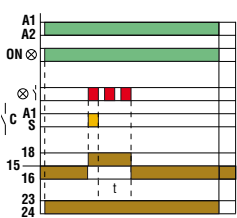
Flasher, starting with OFF (pause) interval. Equal timing recycle



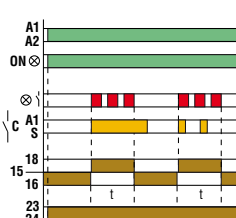
Flasher, starting with ON (work) interval. Equal timing recycle



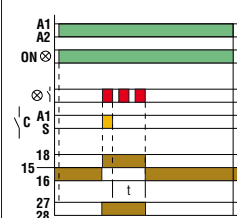
Off delay. Relay energising at external contact closing with start on break



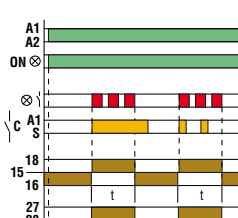
Pulse on relay energising with start on external contact closing



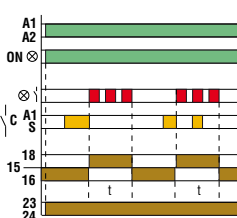
Off delay. Relay energising at external contact closing with start on break



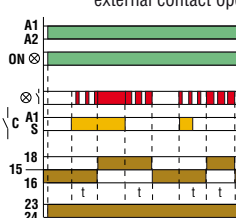
Pulse on relay energising with start on external contact closing



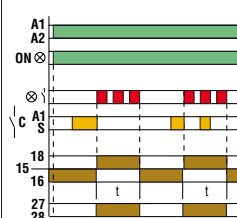
Pulse on relay energising with start on external contact opening



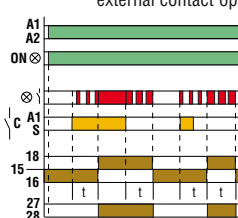
On-off delay. Delay make, with start at external contact closing and delay at break, with start at external contact opening



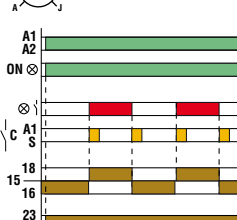
Pulse on relay energising with start on external contact opening



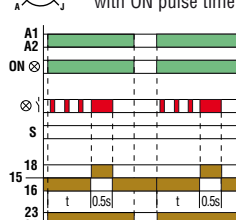
On-off delay. Delay make, with start at external contact closing and delay at break, with start at external contact opening



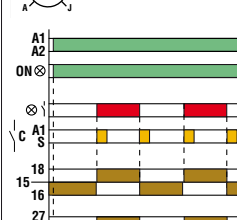
Step relay at each closing of an external contact



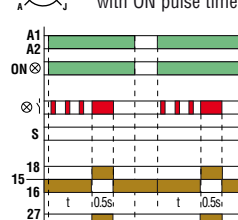
Pulse generator. Unequal timing recycle, starting with ON pulse time



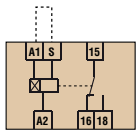
Step relay at each closing of an external contact



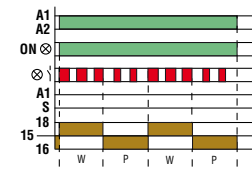
Pulse generator. Unequal timing recycle, starting with ON pulse time



TM PL

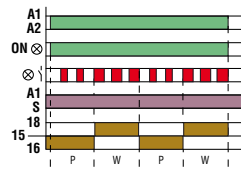


Flasher, starting with ON interval.
Equal timing recycle, ON first



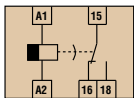
W = Work (ON)
P = Pause (OFF)

Flasher, starting with OFF interval.
Equal timing recycle, OFF first

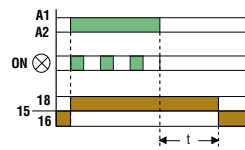


W = Work (ON)
P = Pause (OFF)

TM D

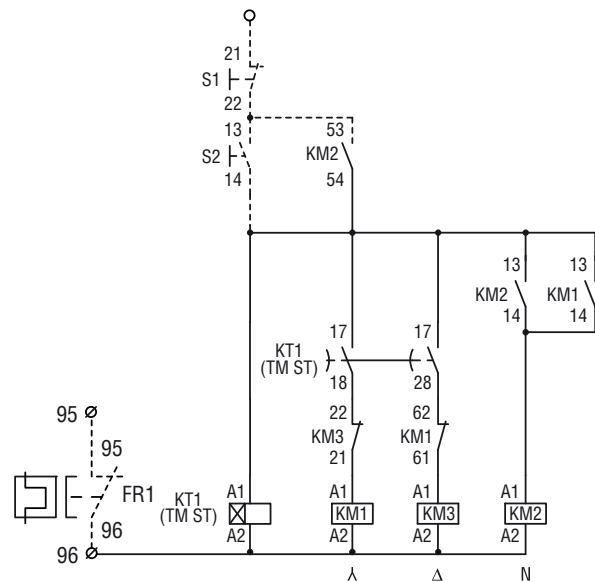
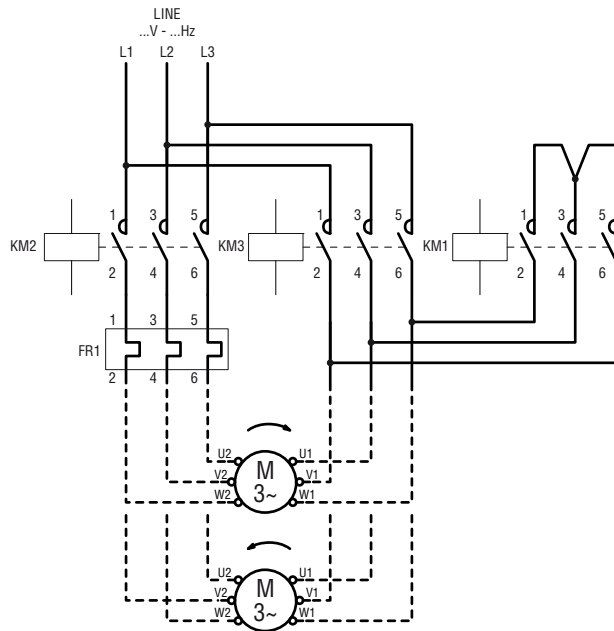
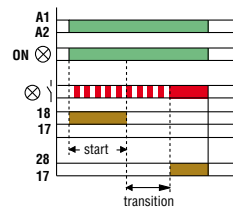
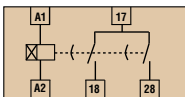


True off delay. Delay on break, starting at
relay de-energising



TM ST

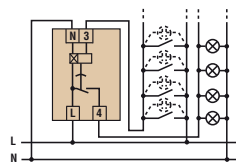
For starting



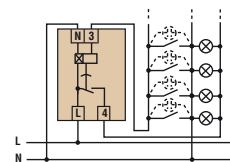
TM LS

Staircase lighting

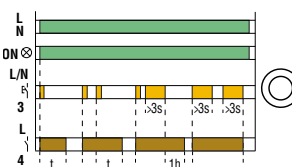
4-wire connection



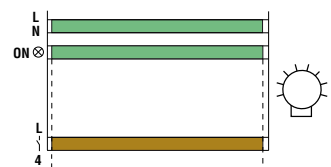
3-wire connection



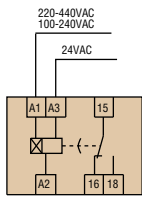
Timed lighting



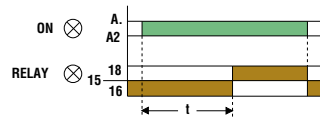
Constant lighting



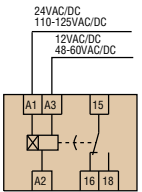
AT1P



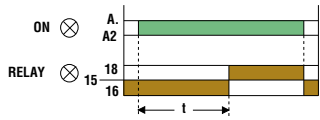
On delay. Delay on make, with start at relay energising



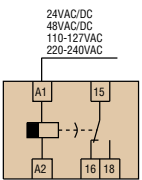
AT1CP



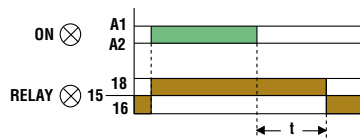
On delay. Delay on make, with start at relay energising



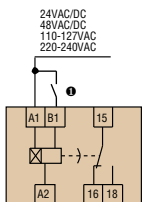
ATD



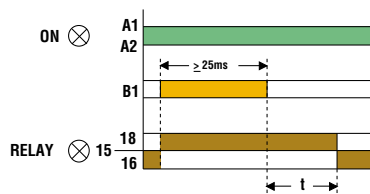
True off delay. Delay on break, starting at relay de-energising



AT1DP



Off delay. Relay energising at external contact closing.
Delay at break, with start at de-energising, auxiliary supply



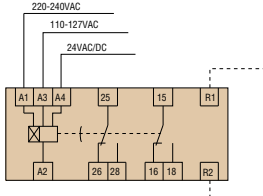
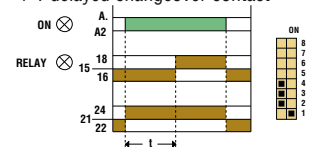
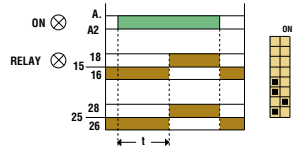
● B1 terminal must be simultaneously supplied with terminal A1 or there after.
CAUTION: With DC supply, the "-" polarity must be connected to A2 terminal.

BTPM

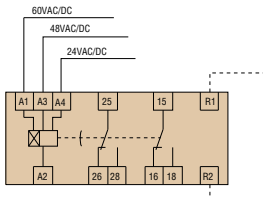
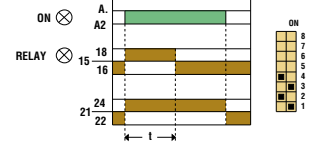
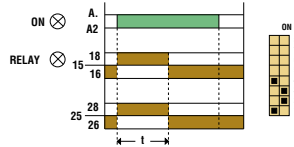
2 changeover contacts, both delayed

1 instantaneous changeover contact + 1 delayed changeover contact

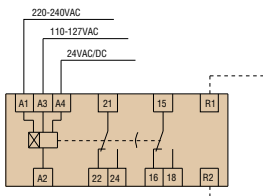
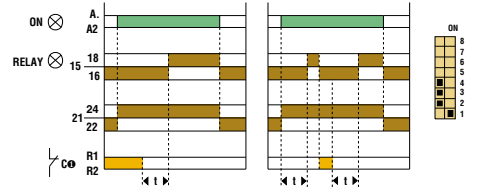
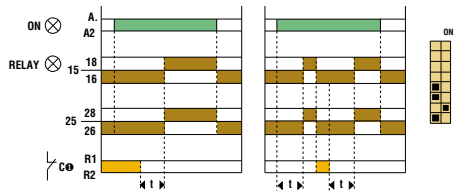
On delay.
Delay on make,
with start at
relay energising



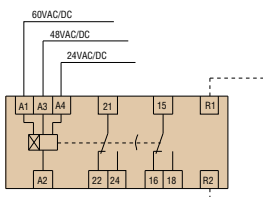
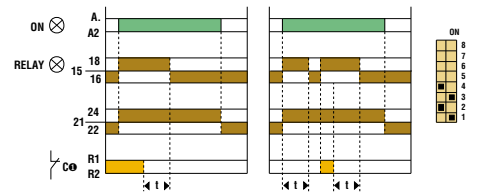
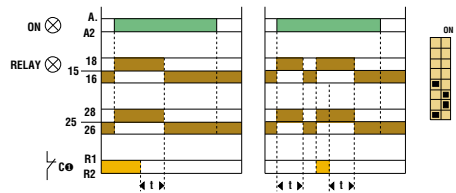
On delay.
Delay on make with
start when
energised



On delay.
Delay on make with
start at
external
contact opening

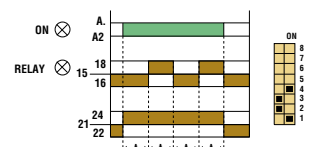
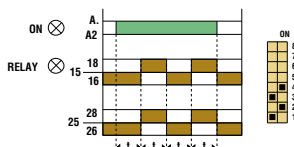


Off delay.
Delay at break,
with start at
external
contact opening



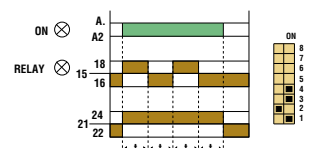
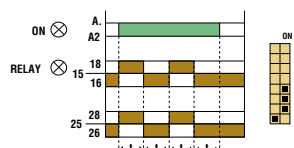
Flasher

Starting with
OFF interval.
Equal timing



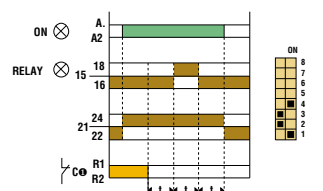
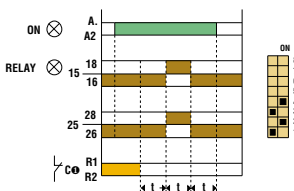
① "C" contact must be volt free (dry).

Starting with
ON interval.
Equal timing

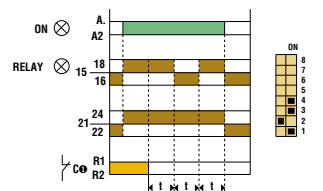
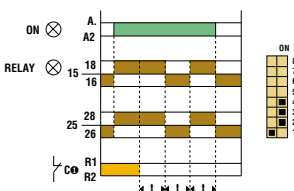


Flasher at external
contact "C"
opening

Starting with
OFF interval.
Equal timing



Starting with
ON interval.
Equal timing

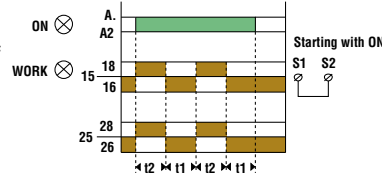
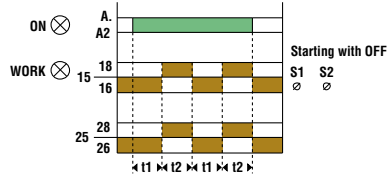
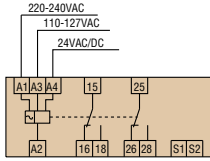


DRPL

W

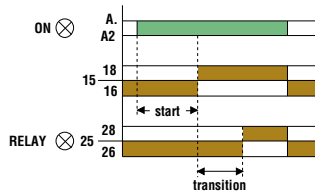
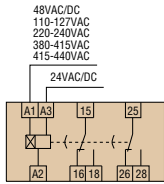
Flasher, starting with OFF (pause) interval.
Independent timing

Flasher, starting with ON (work) interval.
Independent timing

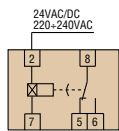


BT2N

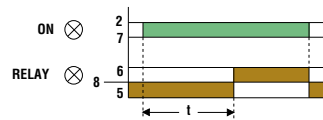
For starting



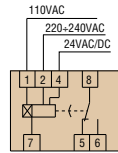
L48T...



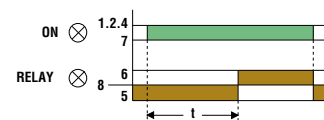
On delay



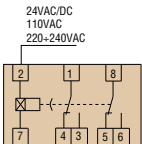
L48TP...



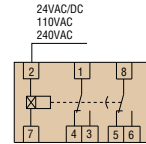
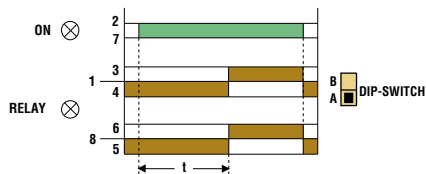
On delay



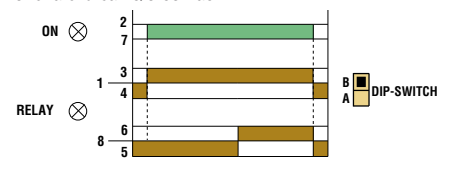
L48TPB...



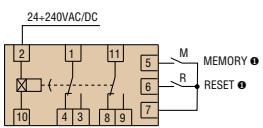
On delay



On delay with one instantaneous c/o contact and one late-break c/o contact

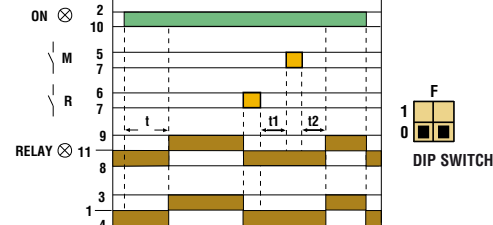


L48M...

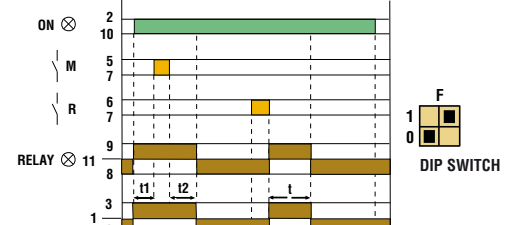


T (preset time) = T1+T2
 ● Contacts "M" and "R" are to be volt free (dry).

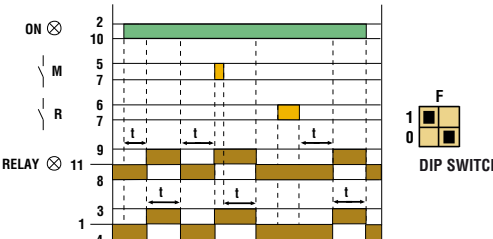
On delay



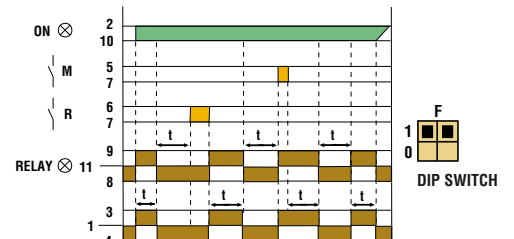
Pulse on relay energising with start on energising



Flasher starting with OFF

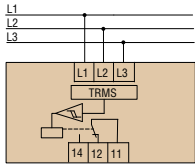


Flasher starting with ON

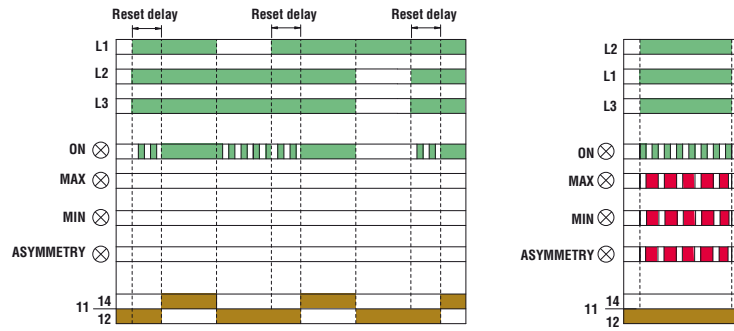


Voltage monitoring for three-phase systems

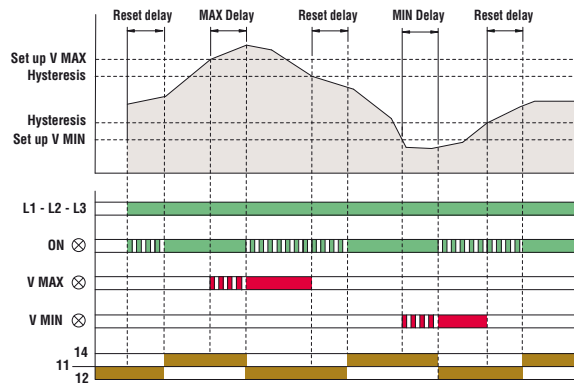
PMV10 - PMV20 - PMV30 - PMV40
PMV50 - PMV60 - PMV70



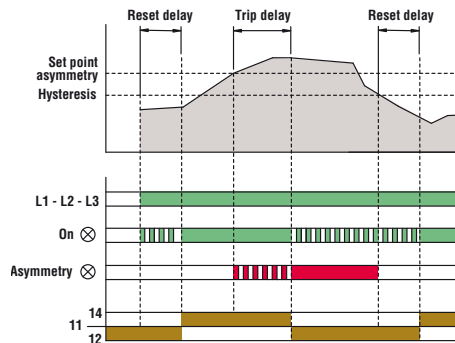
Phase loss and phase sequence (PMV10 - PMV20 - PMV30 - PMV40 - PMV50 - PMV60 - PMV70)



High and low voltage (PMV30 - PMV50 - PMV60 - PMV70)

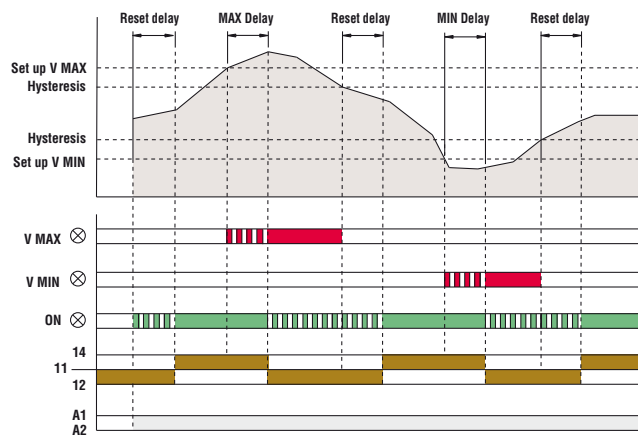
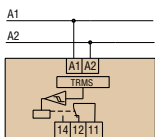


Asymmetry (PMV40 - PMV60 - PMV70)

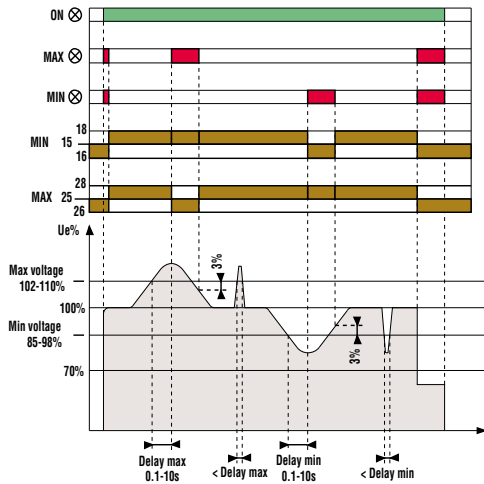
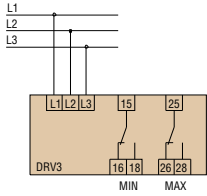


Voltage monitoring for single-phase systems

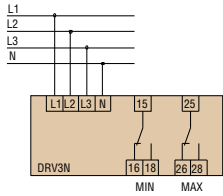
PMV55



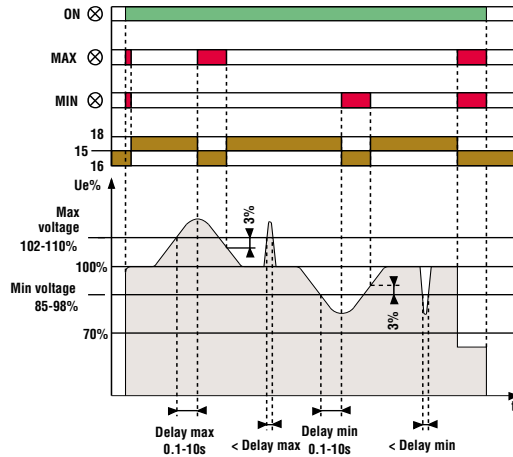
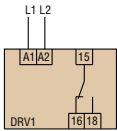
DRV3 - Voltage monitoring for three-phase systems



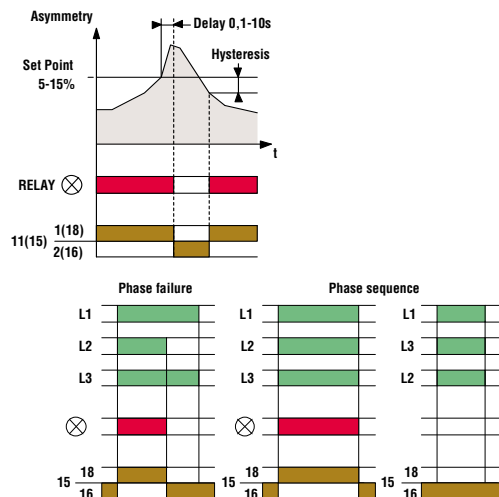
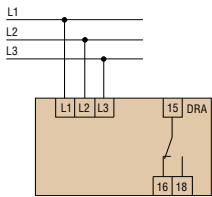
DRV3N



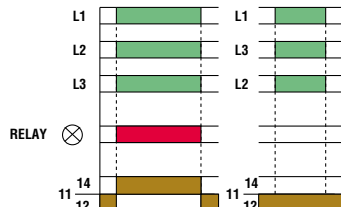
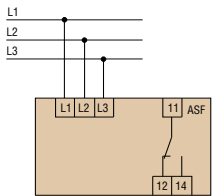
DRV1 - Voltage monitoring for single-phase systems



DRA - Voltage monitoring for three-phase systems



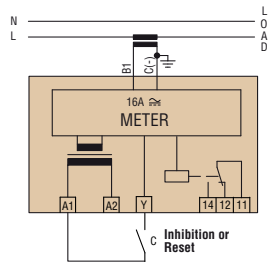
ASF



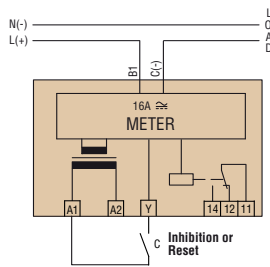
Current monitoring of single-phase systems

PMA20

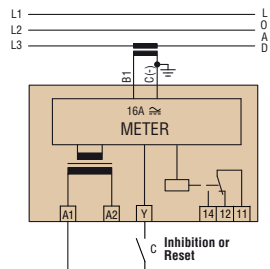
1-phase connection by CT



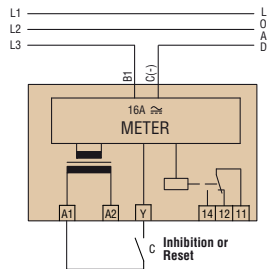
1-phase direct connection



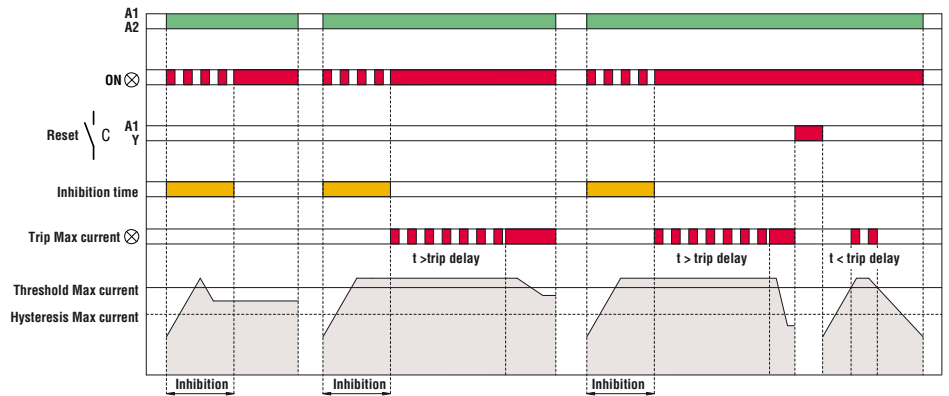
3-phase connection by CT



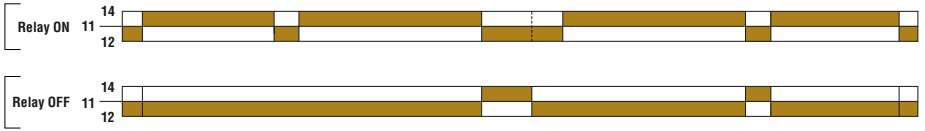
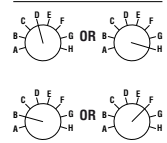
3-phase direct connection



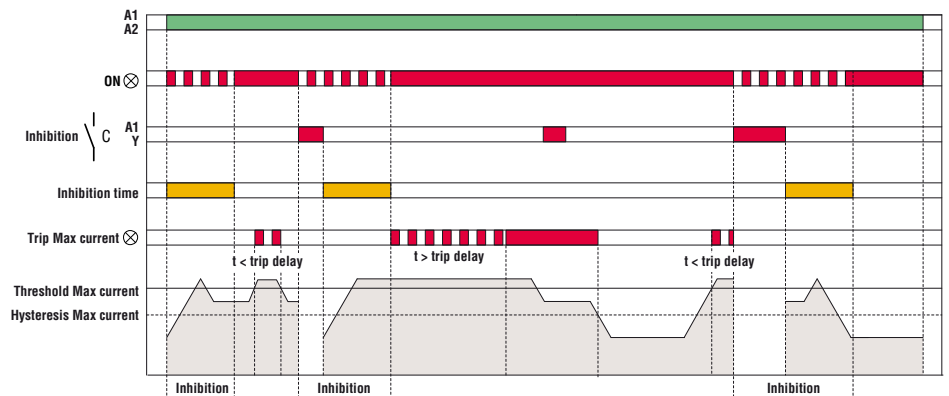
Operation with tripping latch (Latch ON)



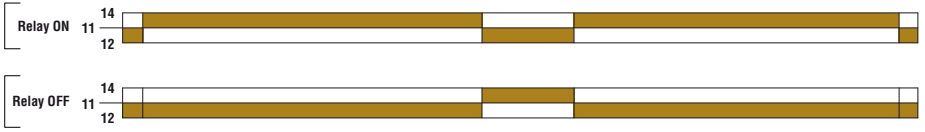
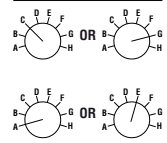
Positions



Operation with no tripping latch (Latch OFF)

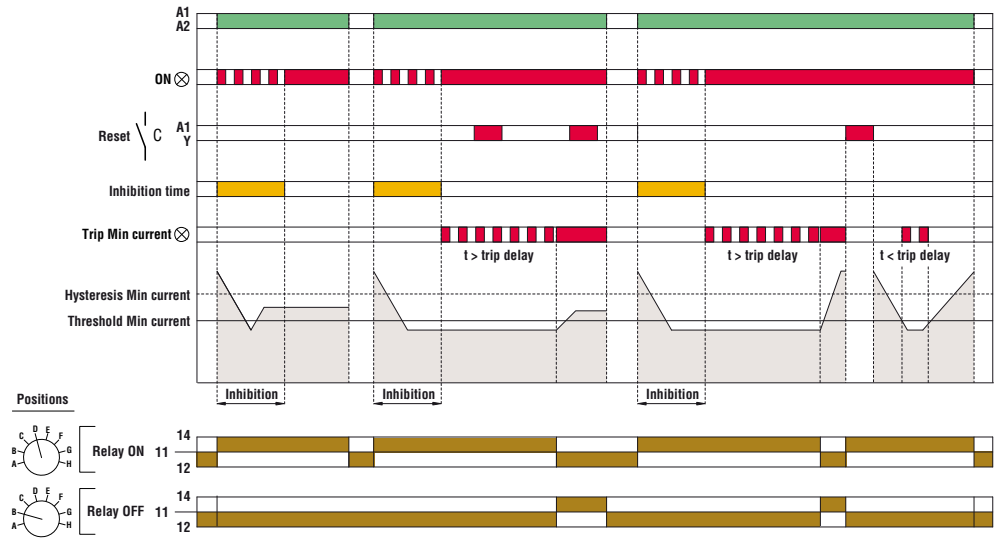


Positions

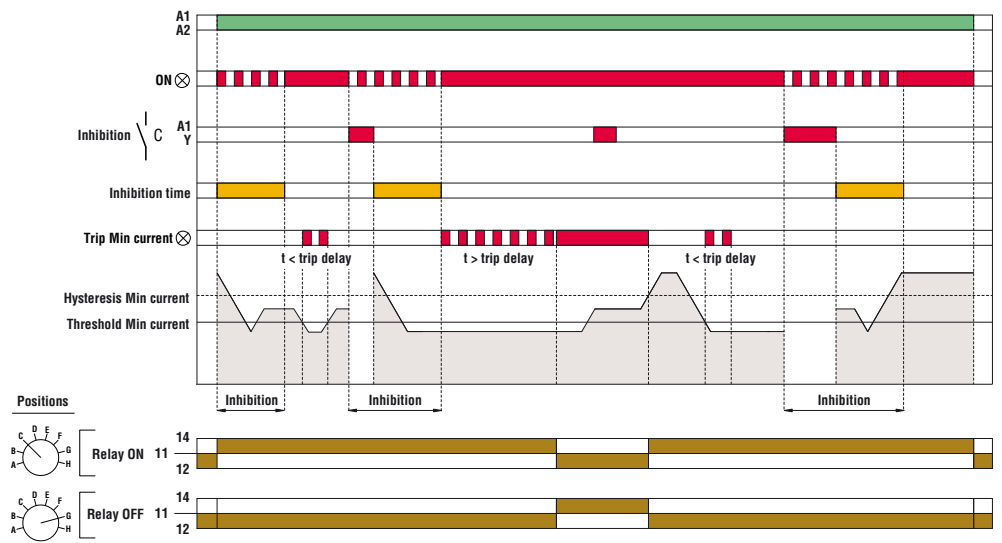


| Operation | | | |
|-----------|-----|-------|-------|
| Positions | Ie | Relay | Latch |
| A | 5A | OFF | OFF |
| B | | ON | ON |
| C | | ON | OFF |
| D | | ON | ON |
| E | 16A | OFF | OFF |
| F | | ON | ON |
| G | | ON | OFF |
| H | | ON | ON |

Minimum current function, operation with tripping latch (Latch ON)

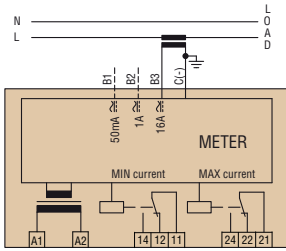


Minimum current function, operation with no tripping latch (Latch OFF)

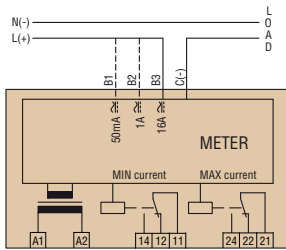


PMA40

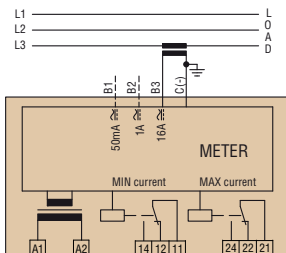
1-phase connection by CT



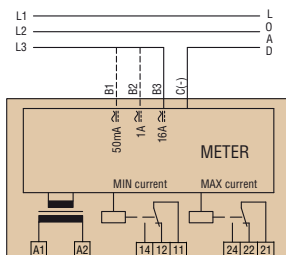
1-phase direct connection



3-phase connection by CT

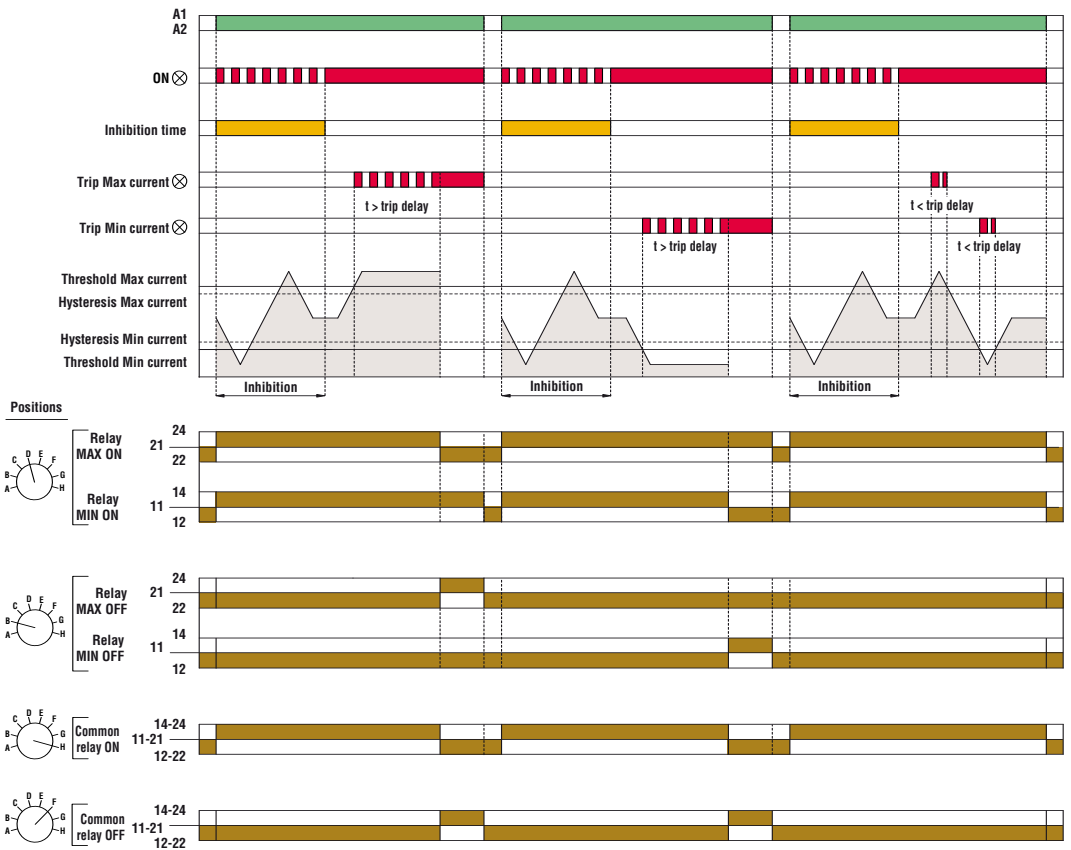


3-phase direct connection

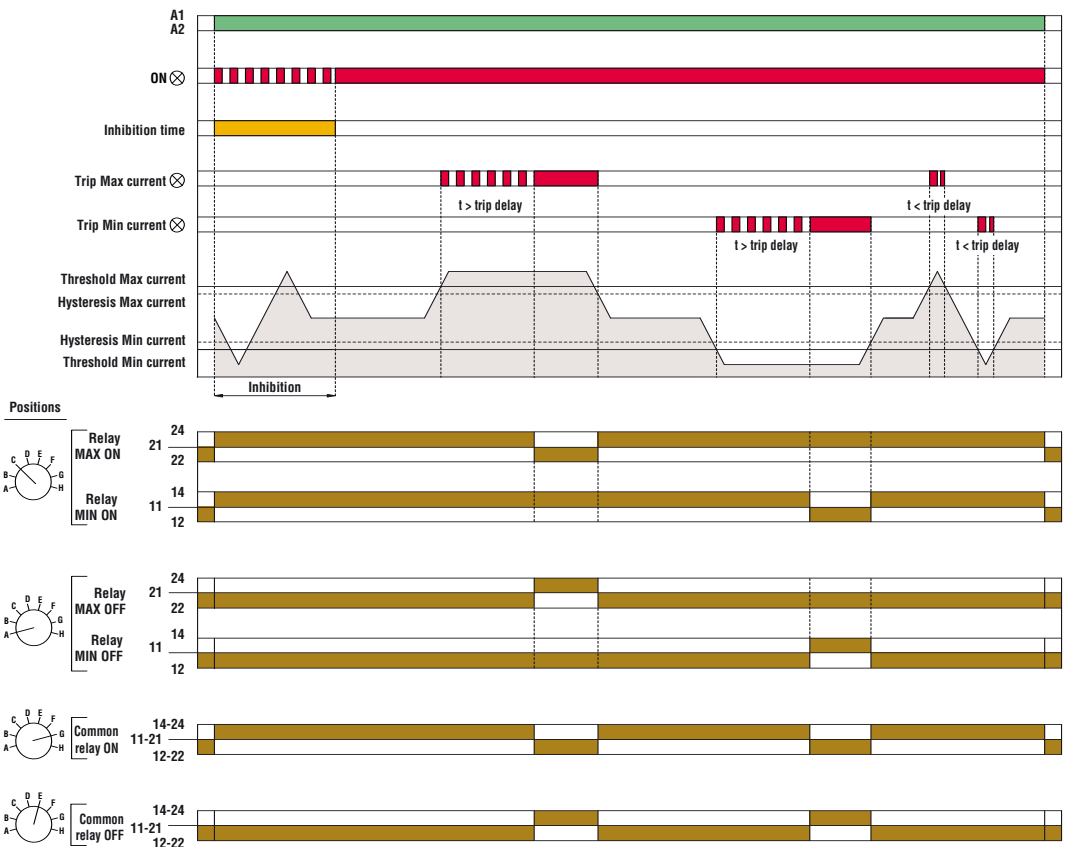


| Operation | | | |
|-----------|-----------------|-------|-------|
| Positions | Ie | Relay | Latch |
| A | Separate relays | OFF | OFF |
| B | | ON | ON |
| C | | OFF | OFF |
| D | | ON | ON |
| E | Common relays | OFF | OFF |
| F | | ON | ON |
| G | | OFF | OFF |
| H | | ON | ON |

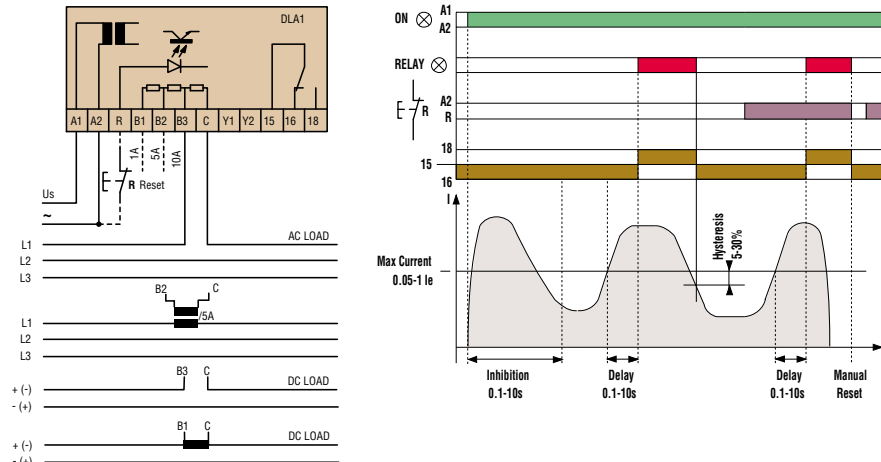
Operation with tripping latch (Latch ON)



Operation with no tripping latch (Latch OFF)



DLA1 - Current monitoring for single-phase systems

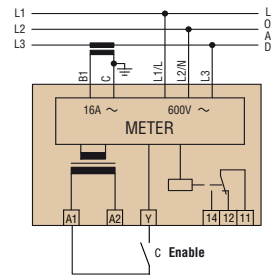


Pump protection - motor overload/overcurrent monitoring

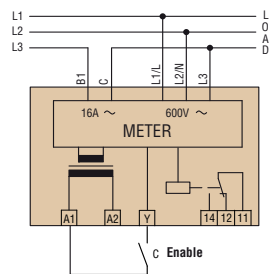
PMA50

External reset disabled (OFF)

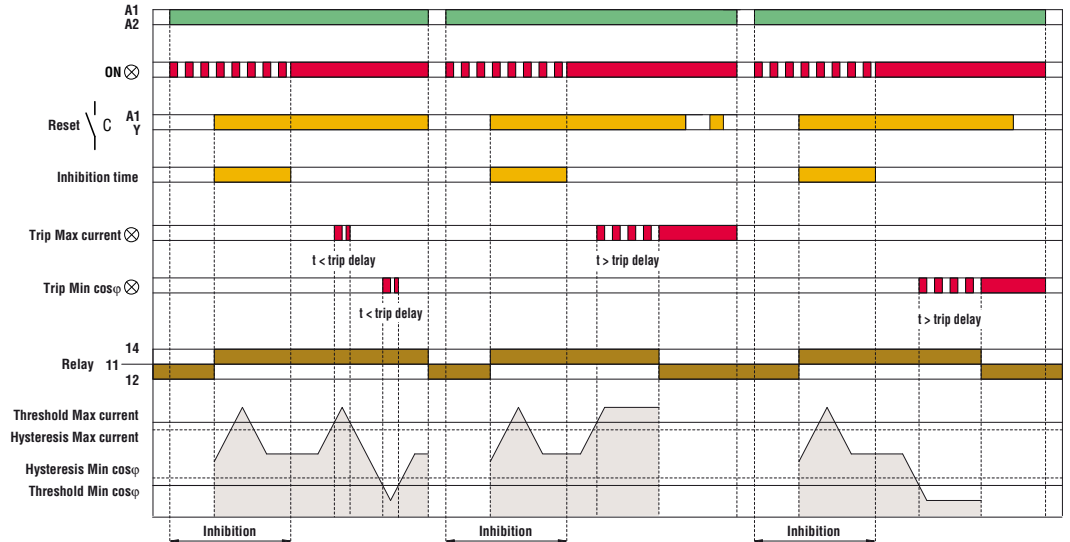
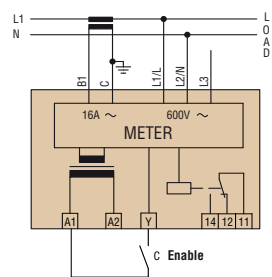
3-phase connection by CT



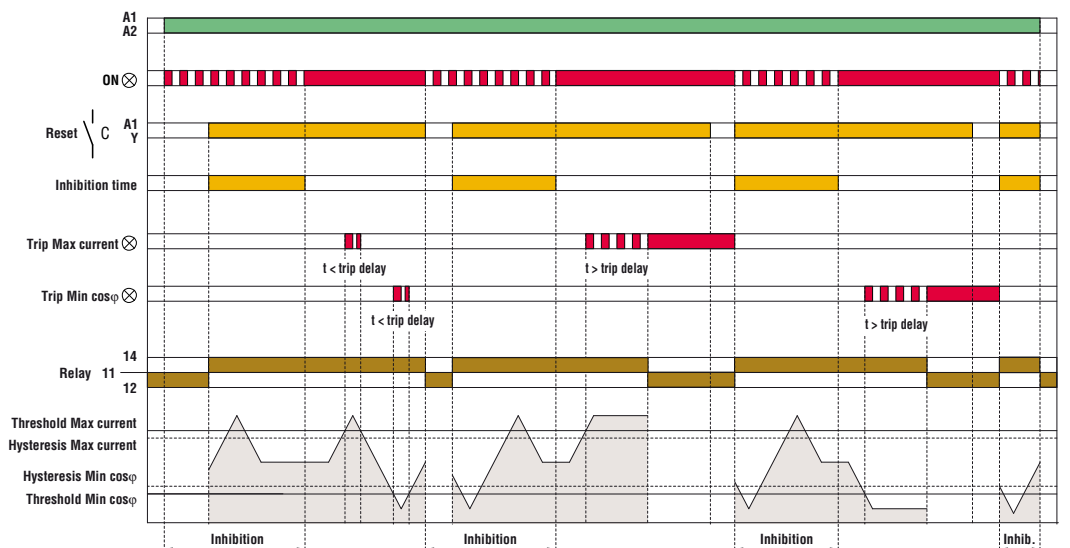
3-phase direct connection



1-phase connection by CT



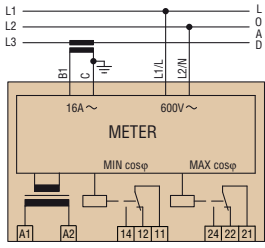
External reset enabled (ON)



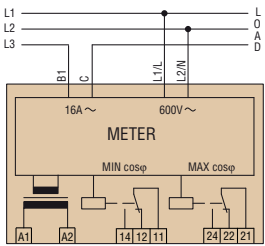
| Operation | | | |
|-----------|-----|---------|----------------|
| Positions | Ie | Wiring | External reset |
| A | 5A | 1-phase | OFF |
| B | | 3-phase | ON |
| C | | 3-phase | OFF |
| D | 16A | 1-phase | ON |
| E | | 1-phase | OFF |
| F | | 3-phase | ON |
| G | | 3-phase | OFF |
| H | | | ON |

Phase shift monitoring
PMA60

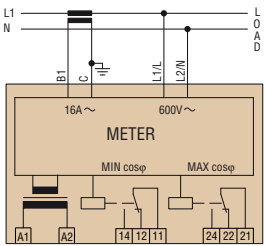
3-phase connection by CT



3-phase direct connection

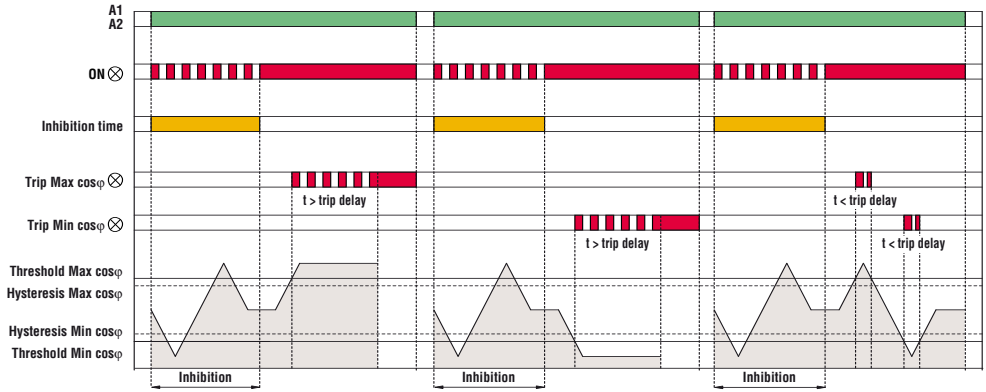


1-phase connection by CT

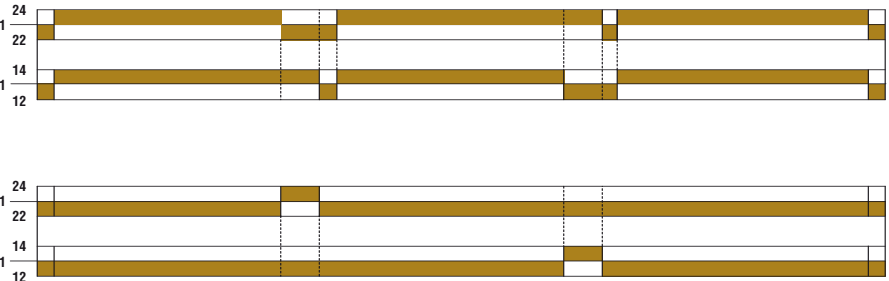
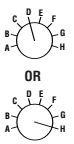


| Operation | | | |
|-----------|---------|-------|-------|
| Positions | le | Relay | Latch |
| A | 1-phase | OFF | OFF |
| B | | ON | ON |
| C | | ON | OFF |
| D | 3-phase | OFF | ON |
| E | | OFF | OFF |
| F | | ON | ON |
| G | | ON | OFF |
| H | | ON | ON |

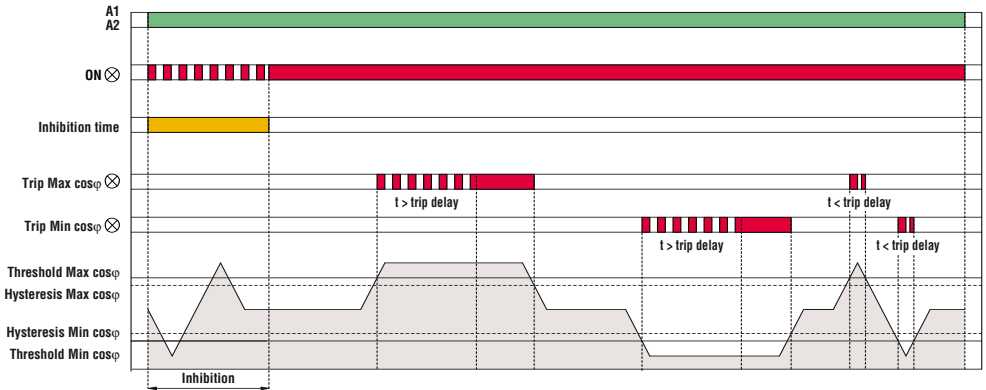
Operation with tripping latch (Latch ON)



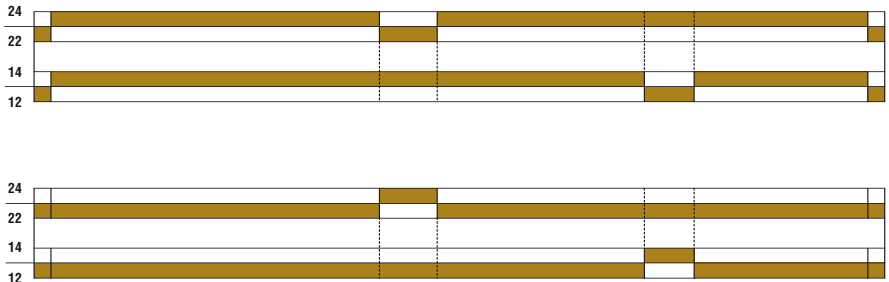
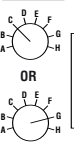
Positions



Operation with no tripping latch (Latch OFF)

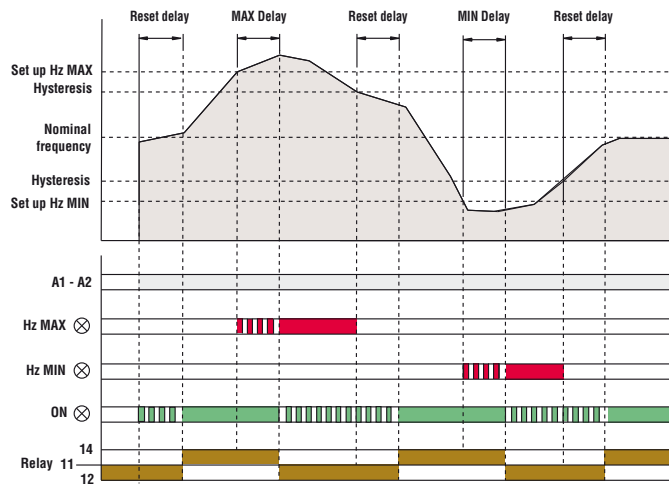
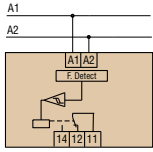


Positions

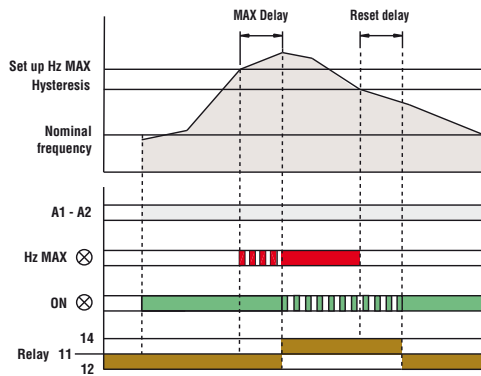


Frequency monitoring
PMF20

MAX-MIN, MAX or MIN function

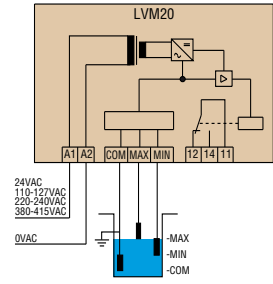


MAX function (NOT function)

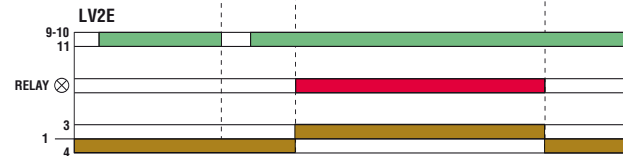
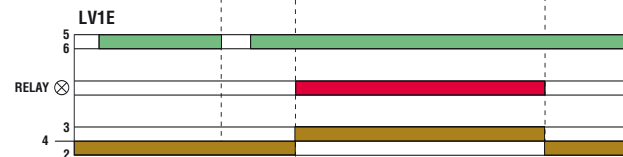
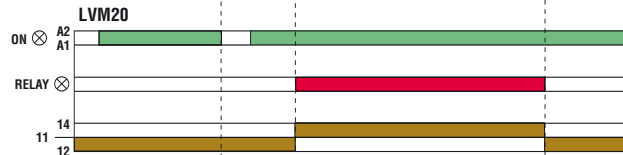
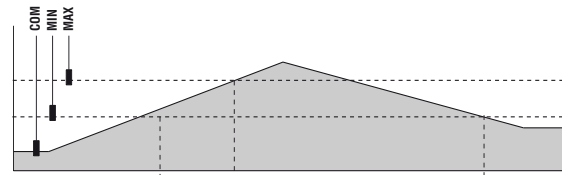


Emptying function

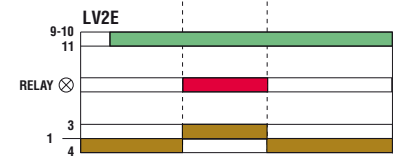
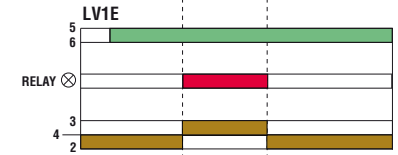
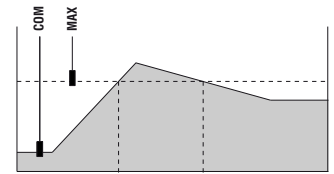
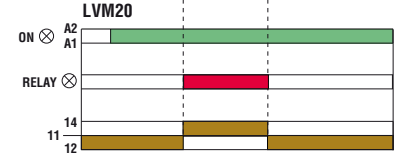
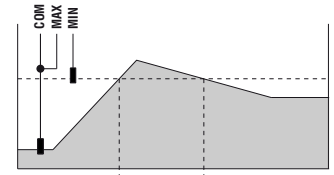
LVM20



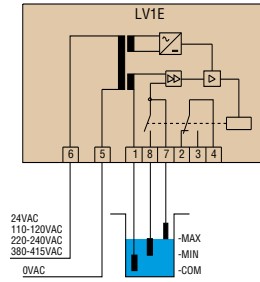
Emptying function with 3 electrodes



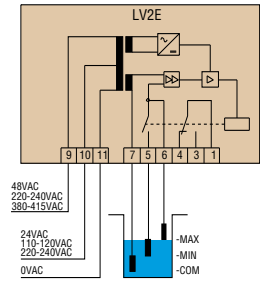
Emptying function with 2 electrodes



LV1E

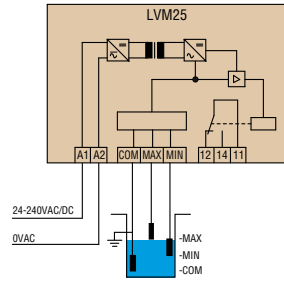


LV2E

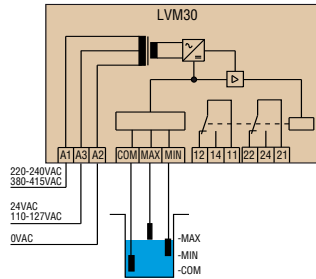


Emptying or filling functions

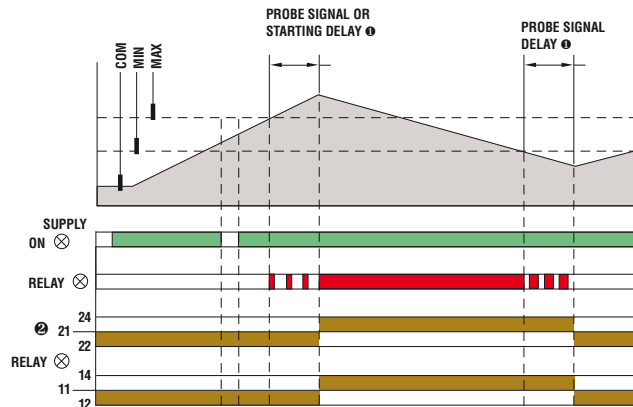
LVM25



LVM30

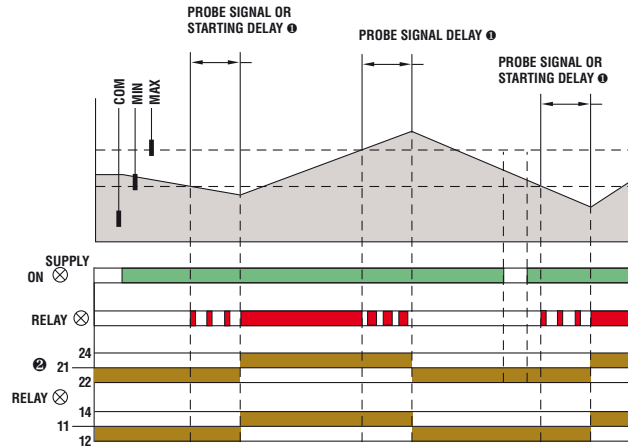


Emptying function (DOWN) Connection with 3 electrodes



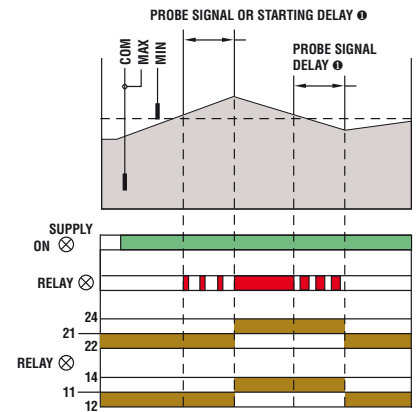
- 1 Delay for LVM30 only.
- 2 Changeover contact for LVM30 only.

Filling function (UP) Connection with 3 electrodes

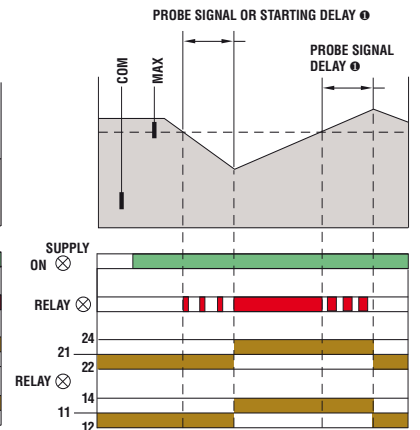


- 1 Delay for LVM30 only.
- 2 Changeover contact for LVM30 only.

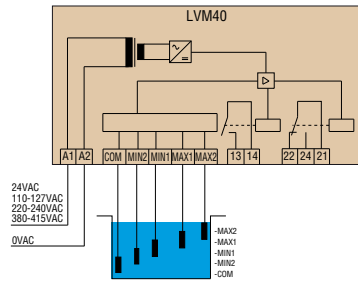
Connection with 2 electrodes



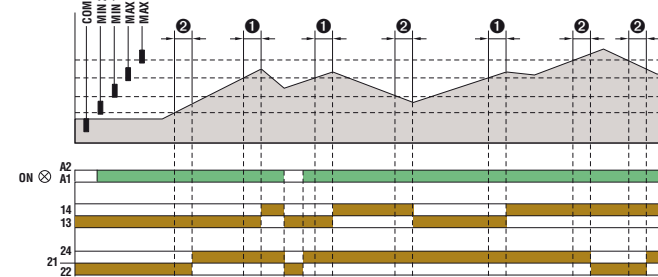
Connection with 2 electrodes



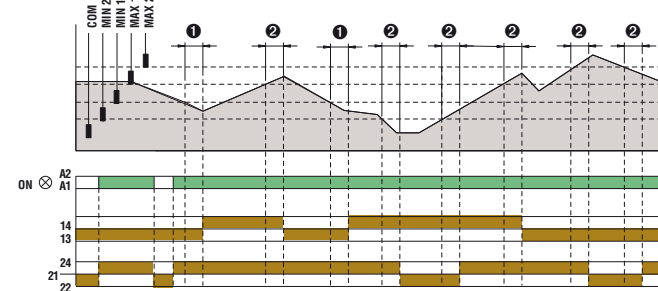
Multiple functions
LVM40



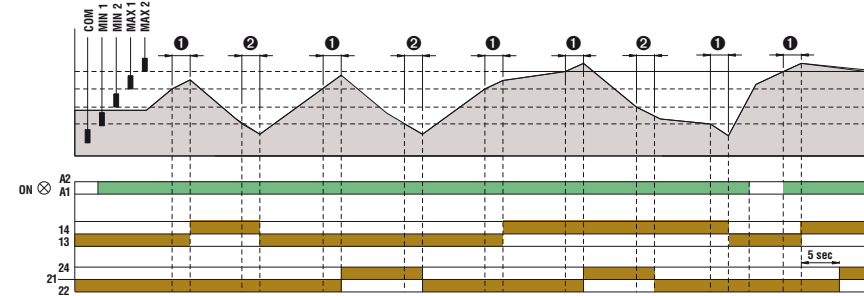
Emptying function + alarms



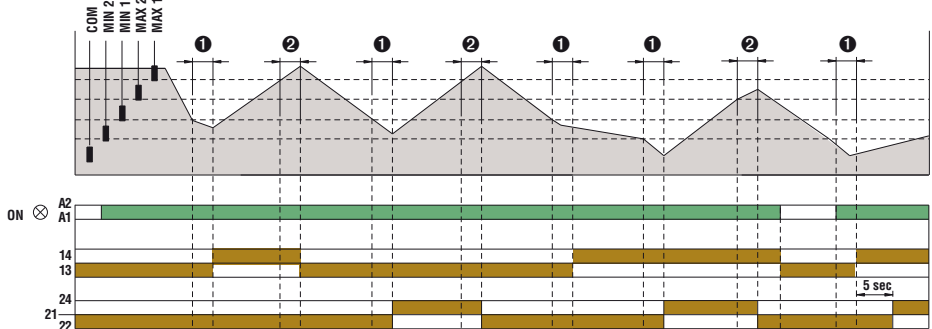
Filling function + alarms



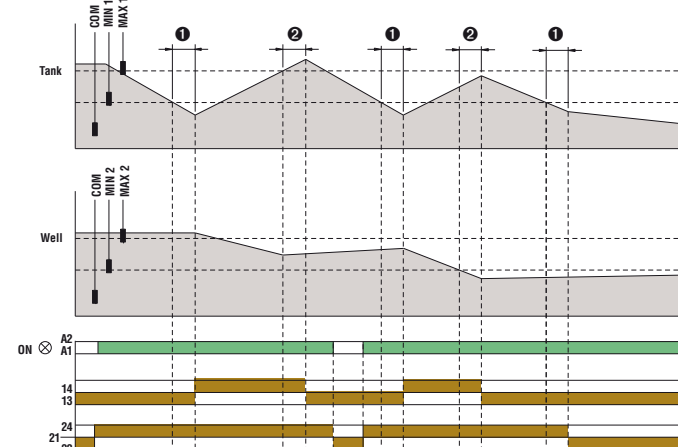
Filling function + pump start change



Filling function + pump start change



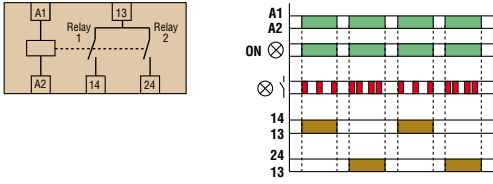
Filling tank and draining well function + alarm



① Probe signal and starting delay
② Probe signal delay

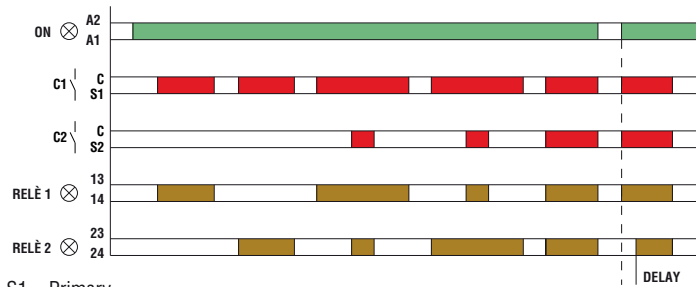
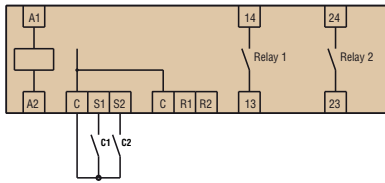
Start-up priority change monitoring

LVMP05



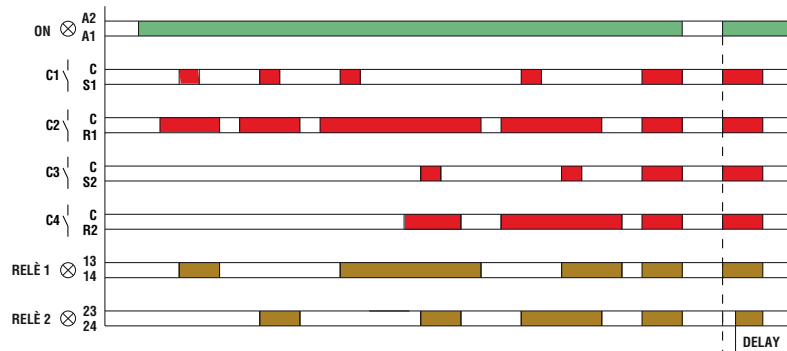
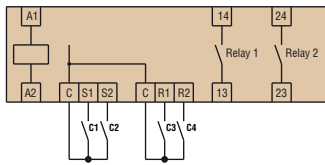
LVMP10

2-wire connection



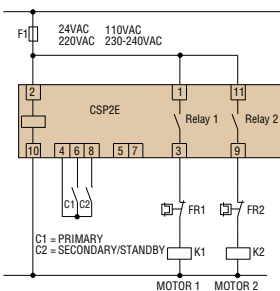
S1 = Primary
S2 = Secondary / Standby

3-wire connection

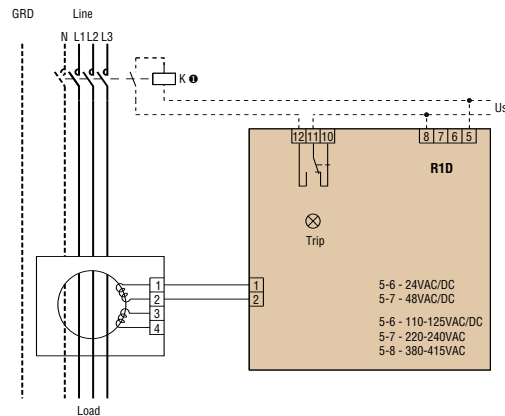


S1 = Primary
S2 = Secondary / Standby

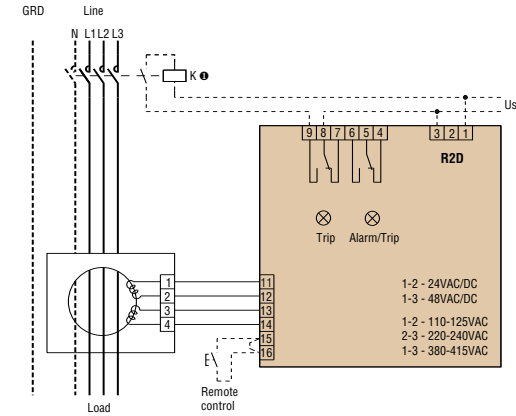
CSP2E



R1D

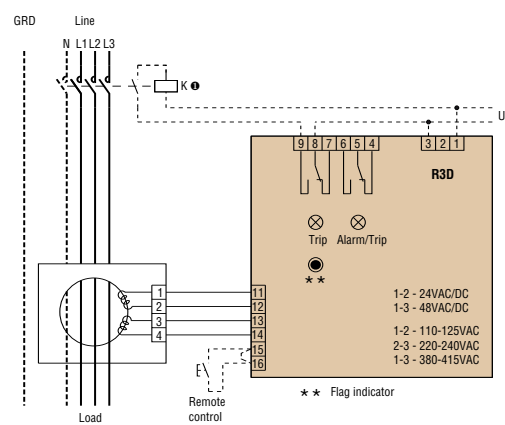


R2D



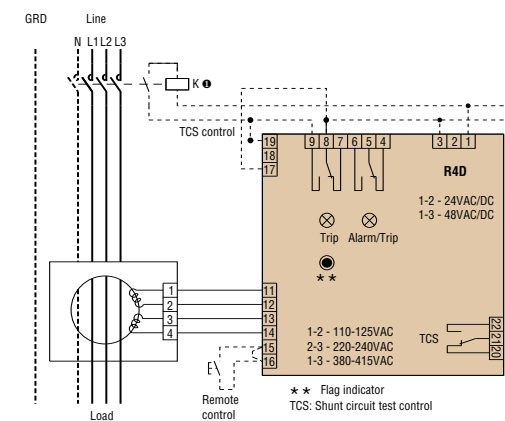
❶ The coil connection can vary depending on the connected type of device (contactor, breaker with shunt trip release or breaker with undervoltage trip release).

R3D



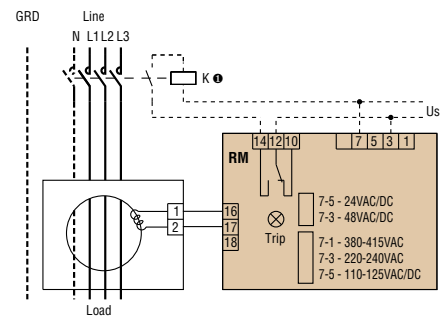
❶ The coil connection can vary depending on the connected type of device (contactor, breaker with shunt trip release or breaker with undervoltage trip release).

R4D



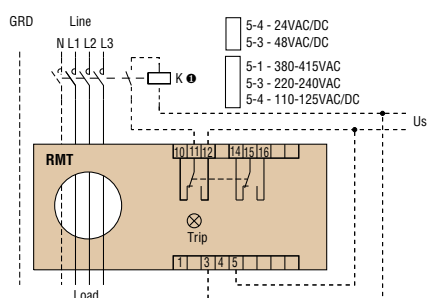
| Type | Us | Us Wiring | TCS Wiring |
|---------|------------|-----------|------------|
| R4D 48 | 24VAC/DC | 1-2 | 17-18 |
| | 48VAC/DC | 1-3 | 17-19 |
| R4D 415 | 110-125VAC | 1-2 | 17-18 |
| | 220-240VAC | 2-3 | 17-18 |
| | 380-415VAC | 1-3 | 17-19 |

RM - RM1

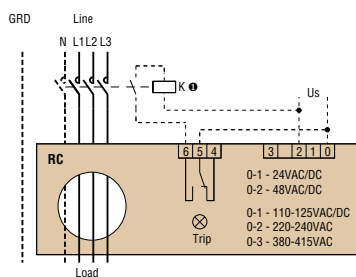


❶ The coil connection can vary depending on the connected type of device (contactor, breaker with shunt trip release or breaker with undervoltage trip release).

RMT

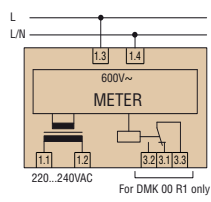


RC

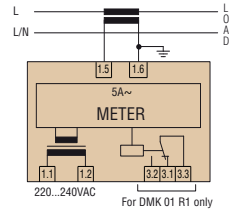


❶ The coil connection can vary depending on the connected type of device (contactor, breaker with shunt trip release or breaker with undervoltage trip release).

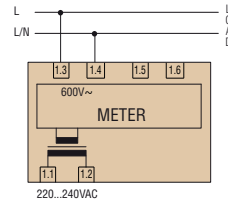
DMK 00 - DMK 00 R1



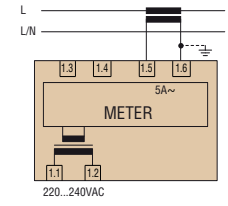
DMK 01 - DMK 01 R1



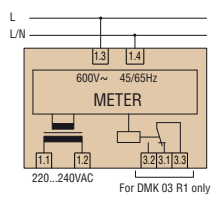
DMK 02
Voltmeter



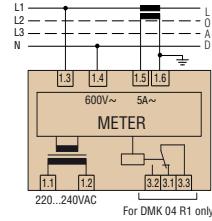
Ammeter



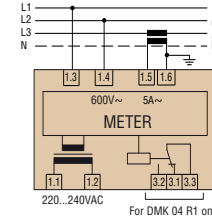
DMK 03 - DMK 03 R1



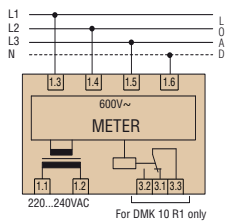
DMK 04 - DMK 04 R1
Single phase



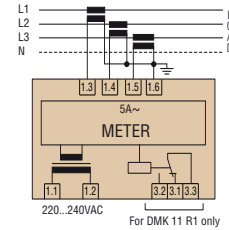
Three phase



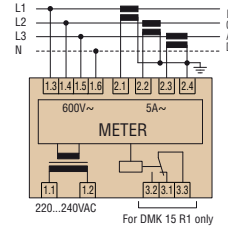
DMK 10 - DMK 10 R1



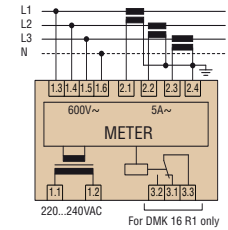
DMK 11 - DMK 11 R1



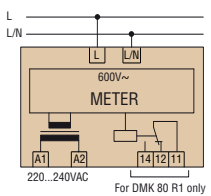
DMK 15 - DMK 15 R1



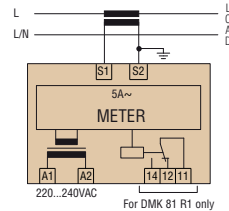
DMK 16 - DMK 16 R1



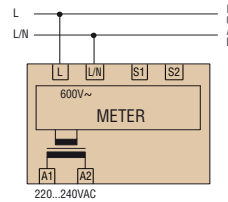
DMK 80 - DMK 80 R1



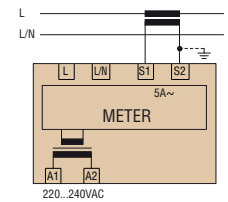
DMK 81 - DMK 81 R1



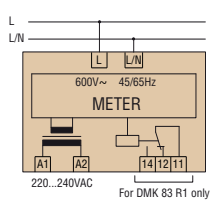
DMK 82
Voltmeter



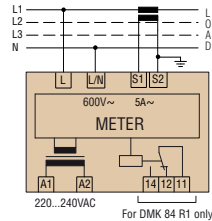
Ammeter



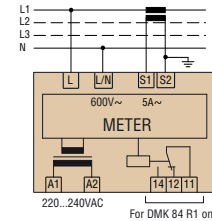
DMK 83 - DMK 83 R1



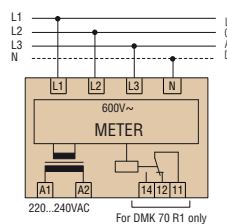
DMK 84 - DMK 84 R1
Single phase



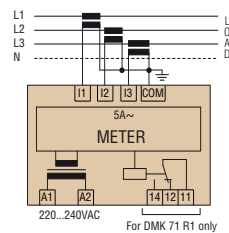
Three phase



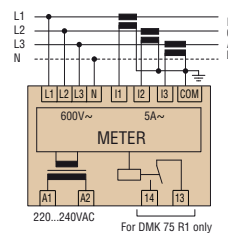
DMK 70 - DMK 70 R1



DMK 71 - DMK 71 R1

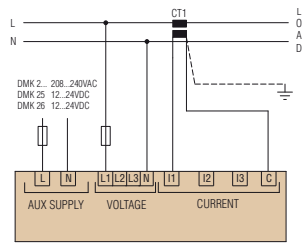


DMK 75 - DMK 75 R1

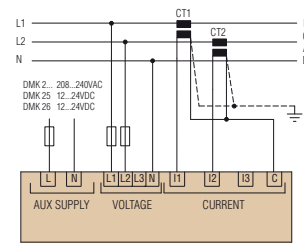


DMK2...

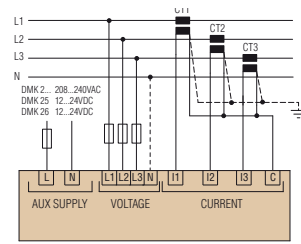
Single phase



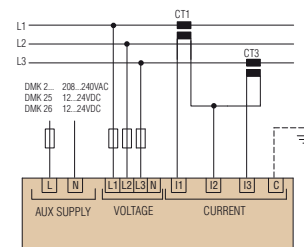
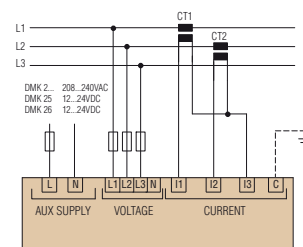
Two phase



Three phase with or without neutral

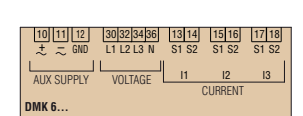
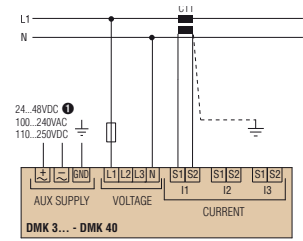


Three phase without neutral with ARON connection

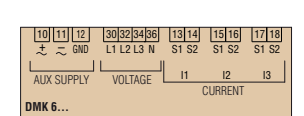
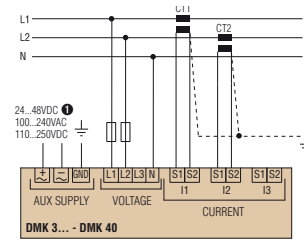


DMK3... - DMK40 - DMK6...

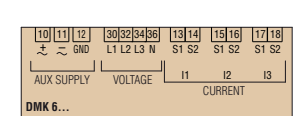
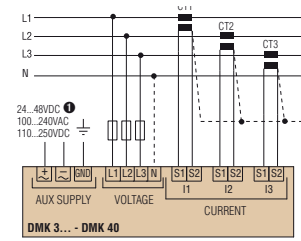
Single phase



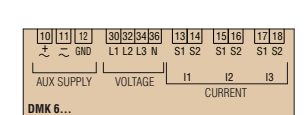
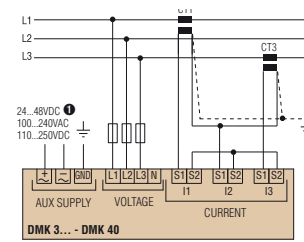
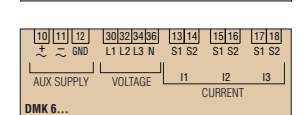
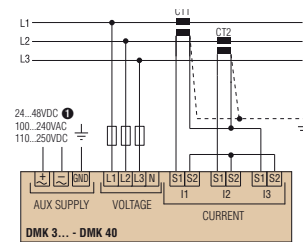
Two phase



Three phase with or without neutral



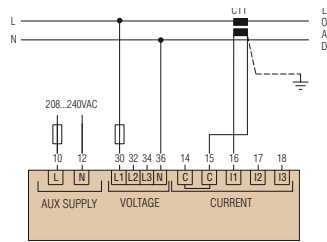
Three phase without neutral with ARON connection



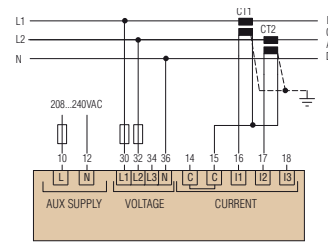
● For DMK 32 D048 only.

DMK5...

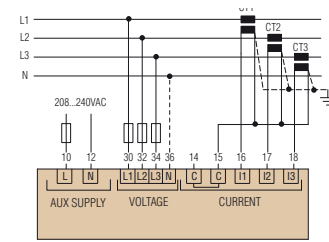
Single phase



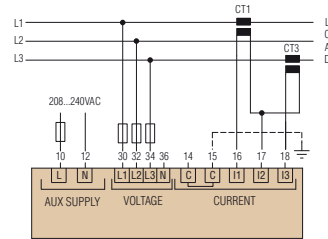
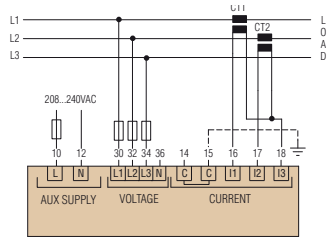
Two phase



Three phase with or without neutral

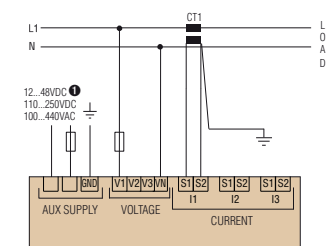


Three phase without neutral with ARON connection

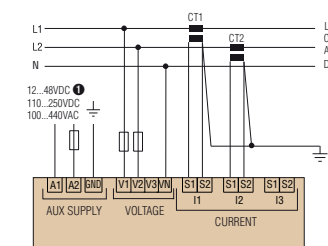


DMG 700 - DMG 800...

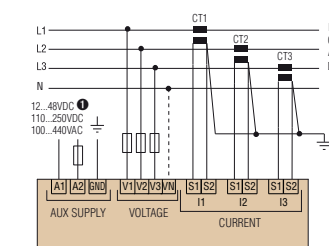
Single phase



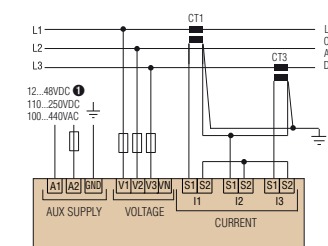
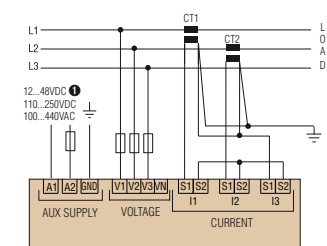
Two phase



Three phase with or without neutral



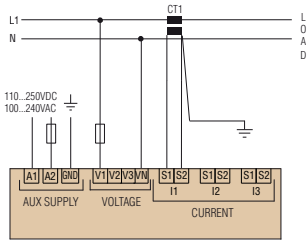
Three phase without neutral with ARON connection



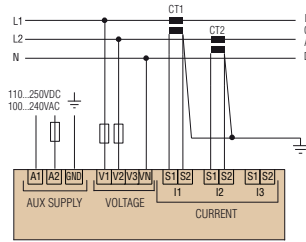
● For DMG 800 D048 only.

DMG 200 - DMG 210 - DMG 300

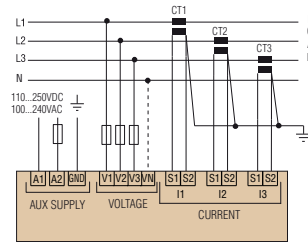
Single phase



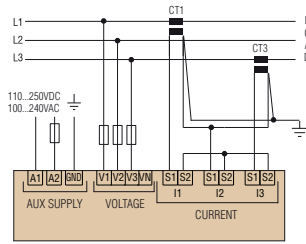
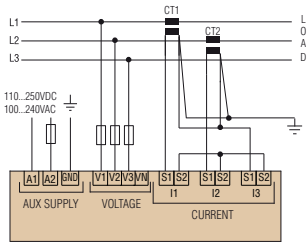
Two phase



Three phase with or without neutral

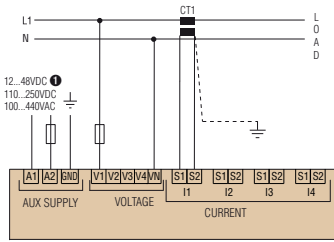


Three phase without neutral with ARON connection

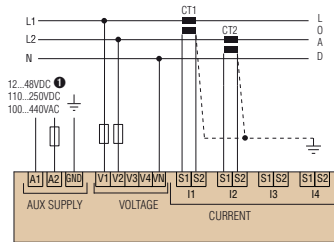


DMG 900...

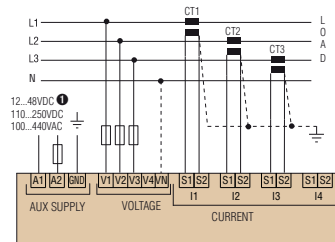
Single phase



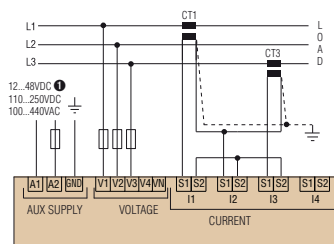
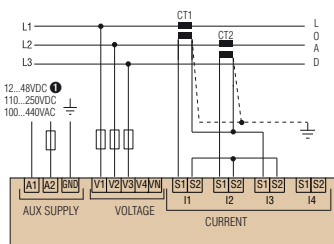
Two phase



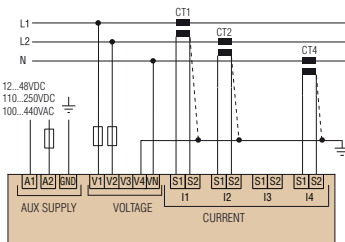
Three phase with or without neutral



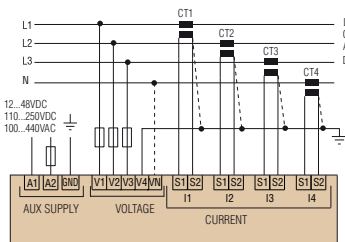
Three phase without neutral with ARON connection



Two phase with neutral. Measurement of neutral current and neutral-earth voltage

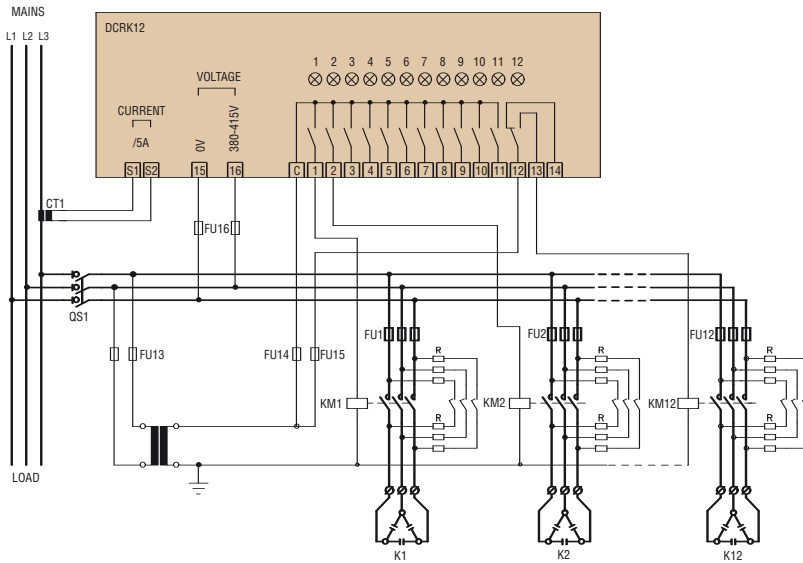


Three phase with neutral. Measurement of neutral current and neutral-earth voltage



● For DMG 900... D048 only.

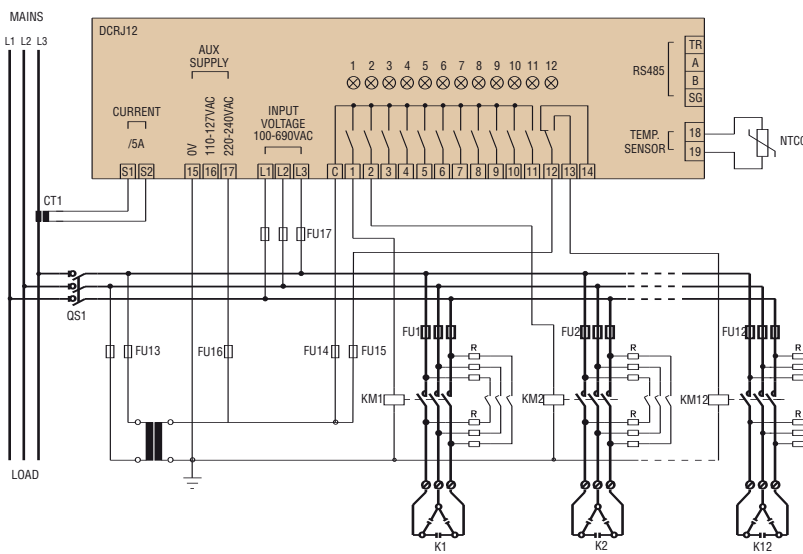
DCRK... with BF...K contactors



IMPORTANT!

- a. For three-phase connection, the voltage input must be connected between two phases only; the line current transformer must be connected on the remaining free phase.
 - b. The polarity of the current input is irrelevant.
- CAUTION!** Always remove the power supply before operating on the terminals.

DCRJ... with BF...K contactors

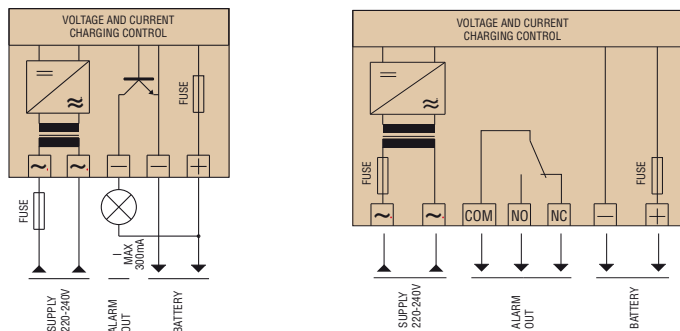


IMPORTANT!

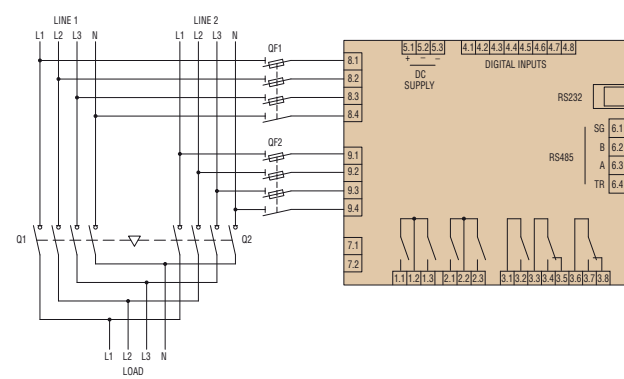
- a. For three-phase connection, the voltage input must be connected between two phases only; the line current transformer must be connected on the remaining free phase.
 - b. The polarity of the current input is irrelevant.
- CAUTION!** Always remove the power supply before operating on the terminals.

Automatic battery chargers

BCE...



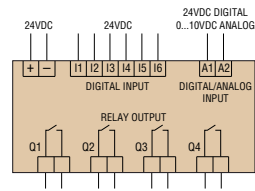
ATL 20 - ATL 30



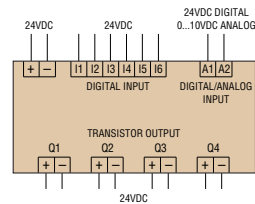
Programmable logic relays

Base relay unit

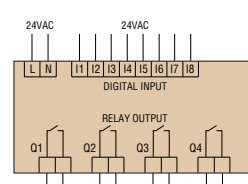
LRD12R D024



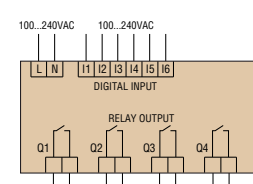
LRD12T D024



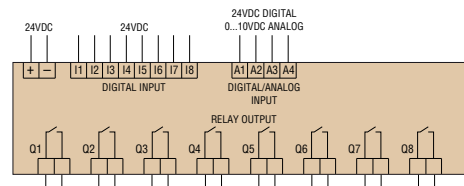
LRD12R A024



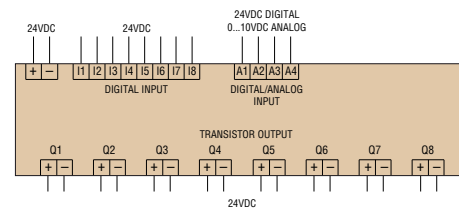
LRD10R A240



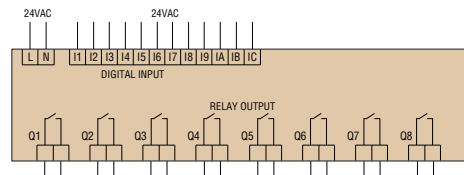
LRD20R D024



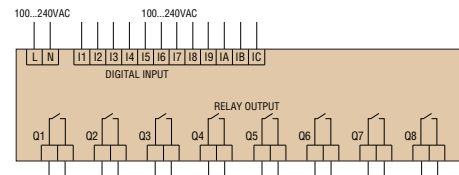
LRD20T D024



LRD20R A024

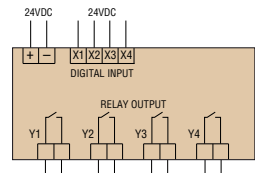


LRD20R A240

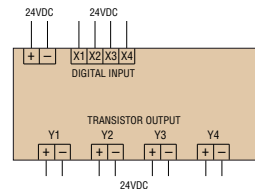


Expansion modules

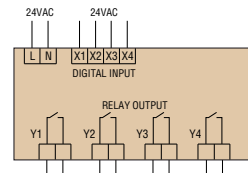
LRE08R D024



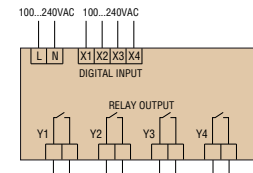
LRE08T D024



LRE8R A024

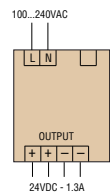


LRE8R A240



Power supply unit

LRX 1V3 D024



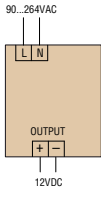
Communication modules

LRE P00

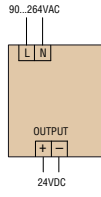


MODULAR SWITCHING POWER SUPPLIES

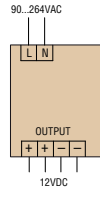
PSL1M 010 12



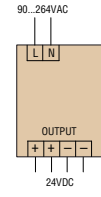
PSL1M 010 24



PSL1M 024 12 - PSL1M 033 12
PSL1M 054 12 - PSL1M 072 12

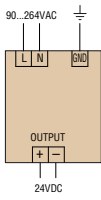


PSL1M 024 24 - PSL1M 036 24
PSL1M 060 24 - PSL1M 100 24

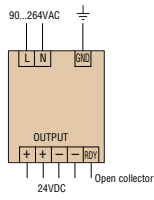


DIN RAIL MOUNT SWITCHING POWER SUPPLIES

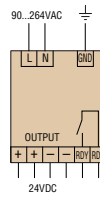
PSL1 005 24 - PSL1 010 24
PSL1 018 24



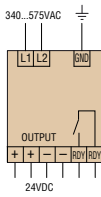
PSL1 030 24 - PSL1 060 24



PSL1 100 24 - PSL1 120 24 - PSL1 240 24
PSL1 300 24 - PSL1 480 24



PSL2 100 24



PSL3 120 24 - PSL3 240 24
PSL3 480 24 - PSL3 900 24

