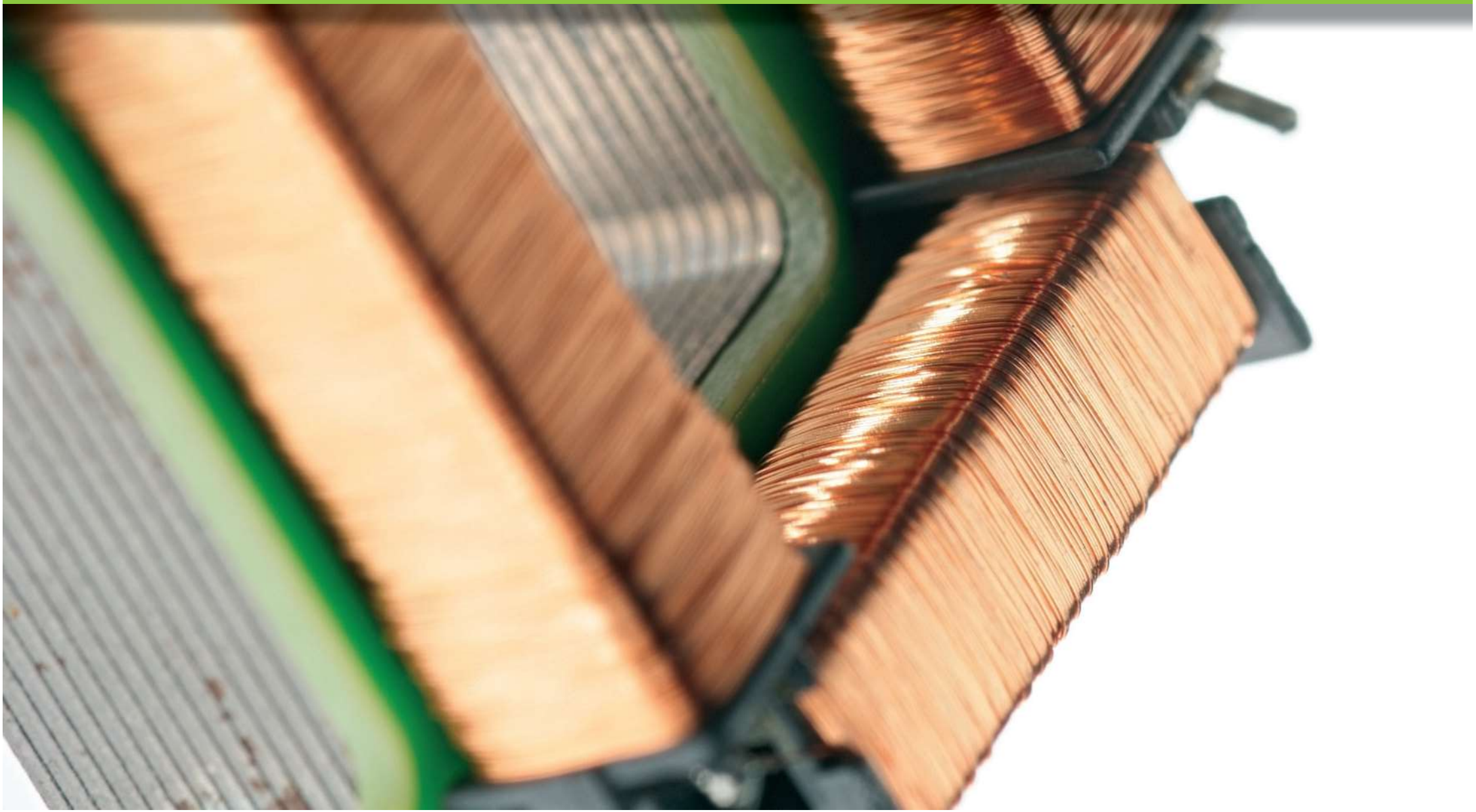
Accumulated experience

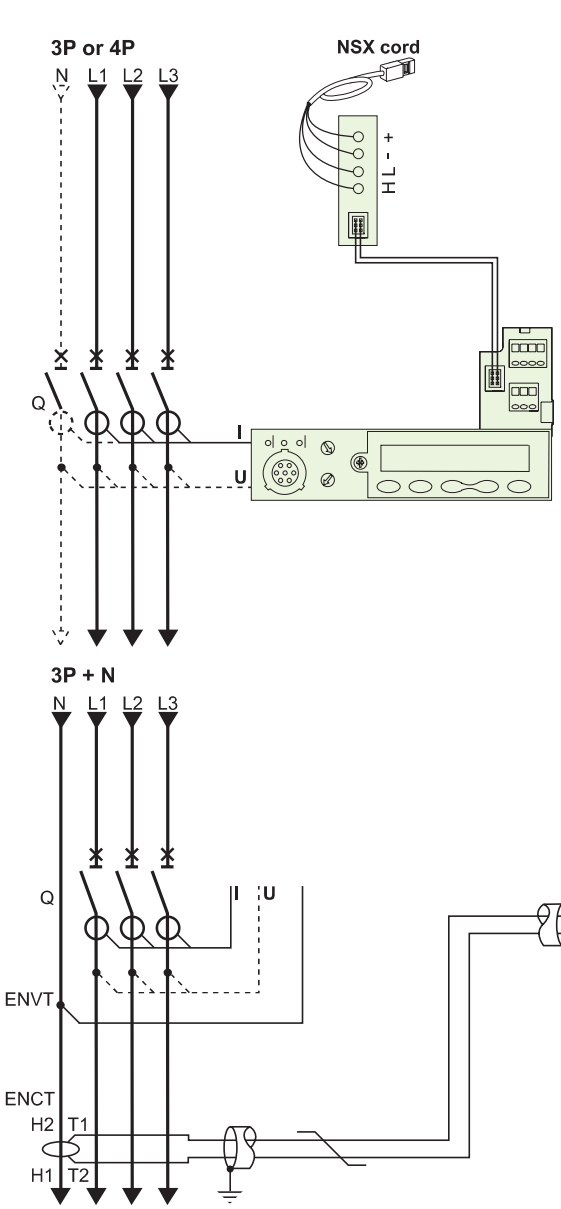


Wiring diagrams
Contents

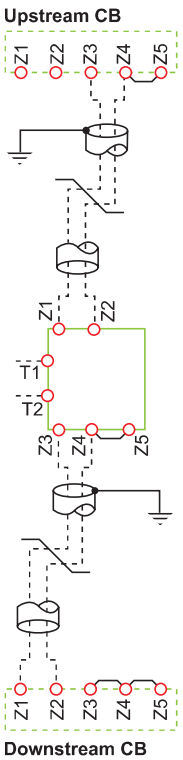
Compact NSX100 to 630
Fixed circuit breakers

DB115707.eps

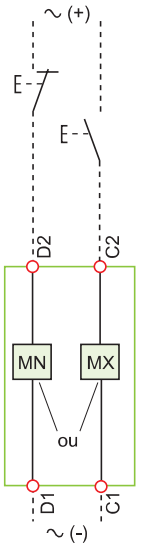
Power

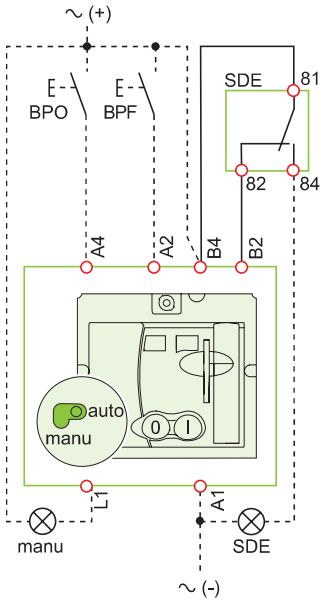


Micrologic

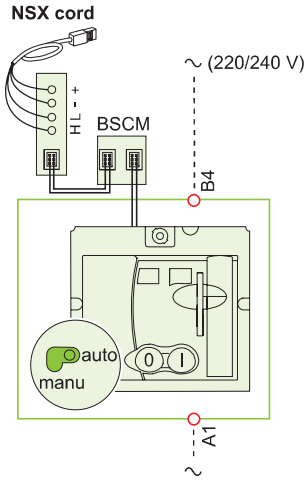


Remote operation





Motor mechanism (MT)



Communicating motor mechanism (MTc)

Micrologic A or E

A/E **Communication**
H(WH), L(BL): data
- (BK), + (RD): 24 V DC power supply

A/E ZSI (Zone Selective Interlocking)
Z1: ZSI OUT SOURCE
Z2: ZSI OUT
Z3: ZSI IN SOURCE
Z4: ZSI IN ST (short time)
Z5: ZSI IN GF (ground fault)
Note: Z3, Z4, Z5 for NSX400/630 only.

A/E ENCT: external neutral current transformer:
- shielded cable with 1 twisted pair (T1, T2)
- shielding earthed at one end only (CT end).
Connection L = 30 cm max.
- maximum length of 10 metres
- cable size 0.4 to 1.5 mm^2
- recommended cable: Belden 8441 or equivalent.

E ENVT: external neutral voltage tap for connection to the neutral via a 3P circuit breaker.

Remote operation

MN: undervoltage release
or
MX: shunt release

Motor mechanism (MT)

A4: opening order
A2: closing order
B4, A1: power supply to motor mechanism
L1: manual position (manu)
B2: SDE interlocking (mandatory for correct operation)

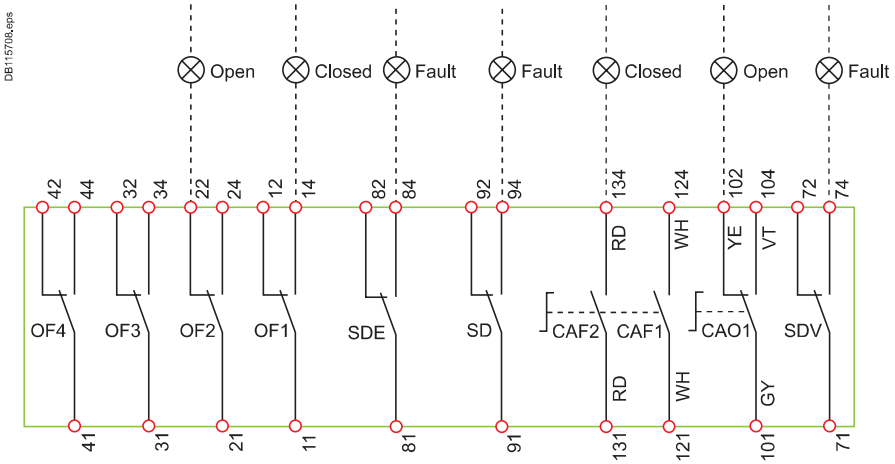
BPO: opening pushbutton
BPF: closing pushbutton

Communicating motor mechanism (MTc)

B4, A1: motor mechanism power supply
BSCM: breaker status and control module

Compact NSX100 to 630
Fixed circuit breakers

Indication contacts



The diagram is shown with circuits de-energised, all devices open, connected and charged and relays in normal position.

Terminals shown in red **O** *must be connected by the customer.*

Indication contacts

OF2 / OF1:	device ON/OFF indication contacts
OF4 / OF3:	device ON/OFF indication contacts (NSX400/630)
SDE:	fault-trip indication contact (short-circuit, overload, ground fault, earth leakage)
SD:	trip-indication contact
CAF2/CAF1:	early-make contact (rotary handle only)
CAO1:	early-break contact (rotary handle only)
SDV:	earth leakage fault trip indication contact (add-on Vigi module)

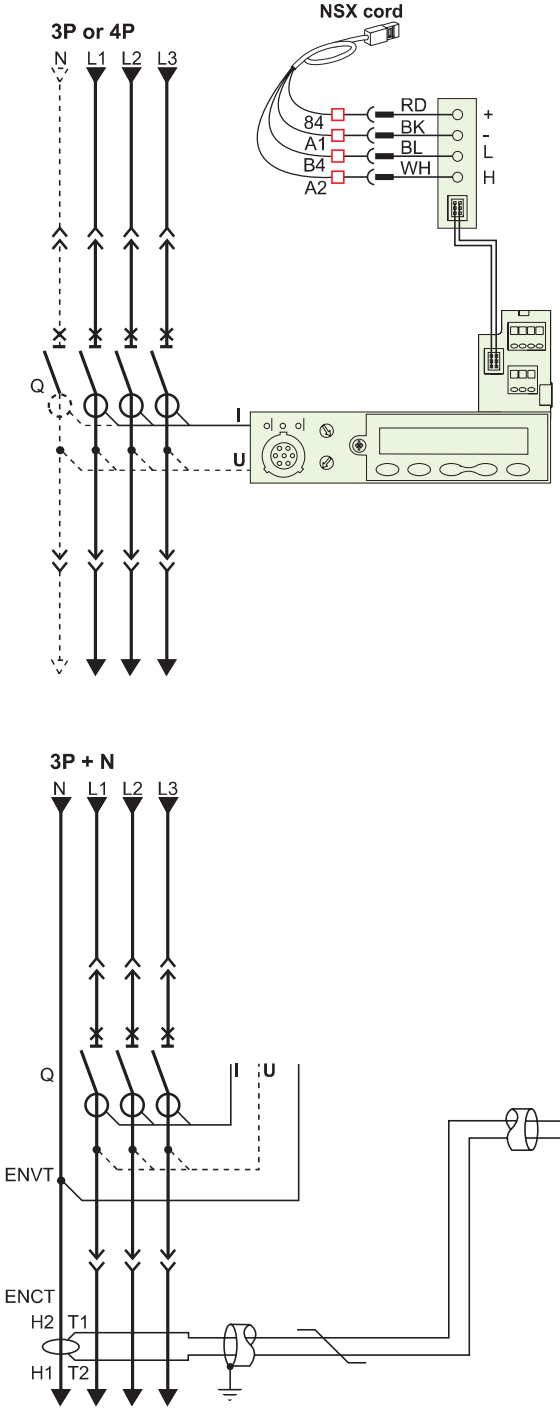
Colour code for auxiliary wiring

RD:	red	**VT:**	violet
WH:	white	**GY:**	grey
YE:	yellow	**OR:**	orange
BK:	black	**BL:**	blue
GN:	green		

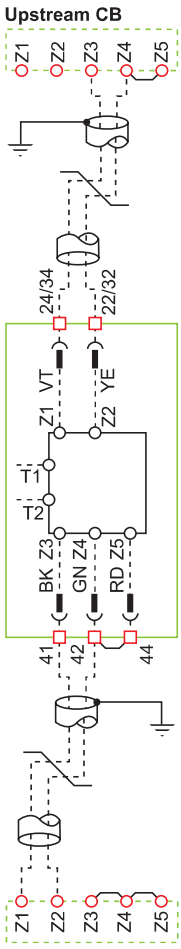
Compact NSX100 to 630
Plug-in / withdrawable circuit breakers

DB402277.eps

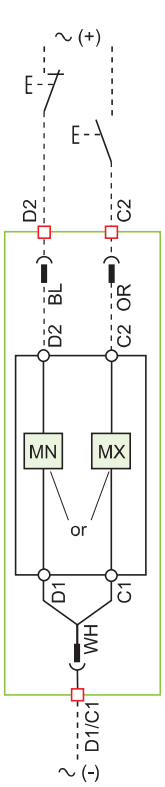
Power

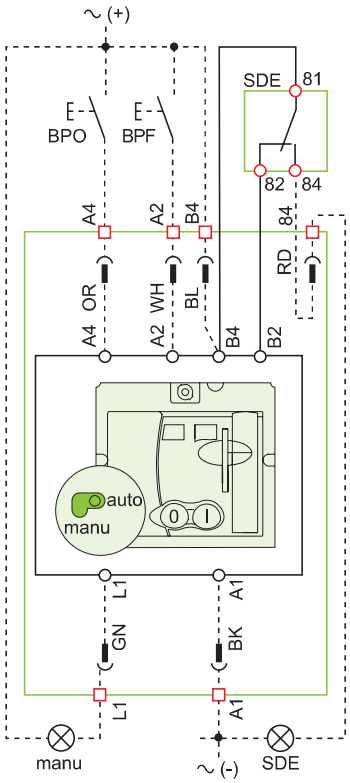


Micrologic

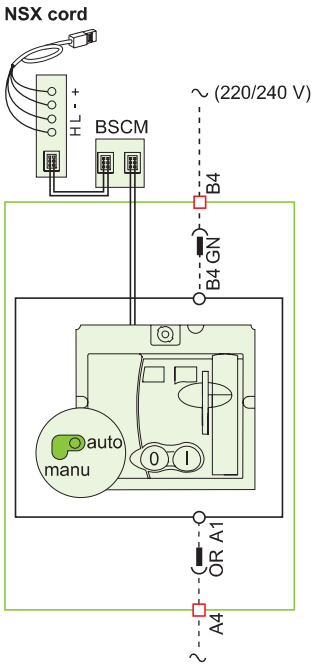


Remote operation





Motor mechanism (MT)



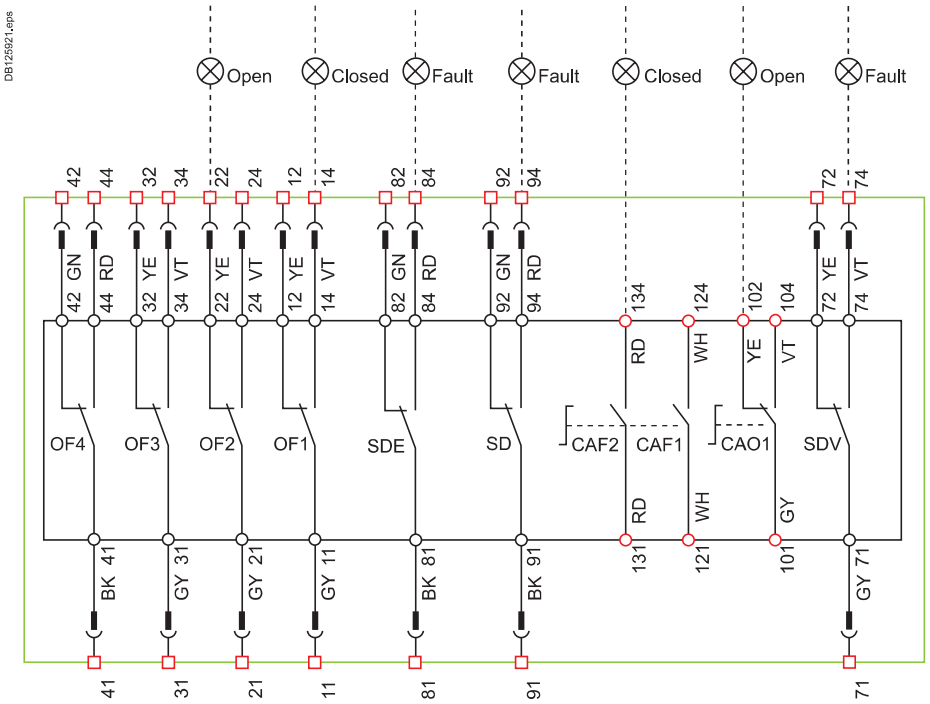
Communicating motor mechanism (MTc)

The diagram is shown with circuits de-energised, all devices open, connected and charged and relays in normal position.

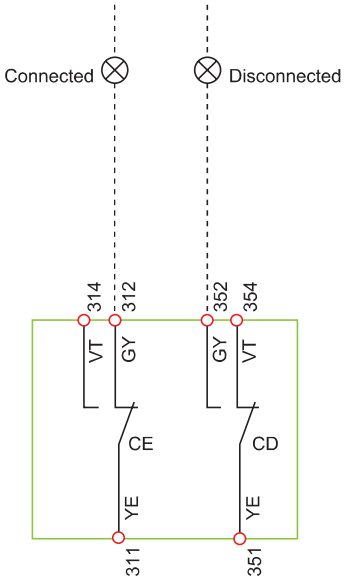
Schneider Electric

Compact NSX100 to 630
Plug-in / withdrawable circuit breakers

Indication contacts



Carriage switches



Micrologic A or E

A/E	**Communication** H(WH), L(BL): data - (BK), + (RD): 24 V DC power supply
A/E	ZSI (Zone Selective Interlocking) Z1: ZSI OUT SOURCE Z2: ZSI OUT Z3: ZSI IN SOURCE Z4: ZSI IN ST (short time) Z5: ZSI IN GF (ground fault) *Note: Z3, Z4, Z5 for NSX400/630 only.*
A/E	ENCT: external neutral current transformer: - shielded cable with 1 twisted pair (T1, T2) - shielding earthed at one end only (CT end). Connection L = 30 cm max. - maximum length of 10 metres - cable size 0.4 to 1.5 mm^2 - recommended cable: Belden 8441 or equivalent.
E	ENVT: external neutral voltage tap for connection to the neutral via a 3P circuit breaker.

Colour code for auxiliary wiring

RD:	red	**VT:**	violet
WH:	white	**GY:**	grey
YE:	yellow	**OR:**	orange
BK:	black	**BL:**	blue
GN:	green		

Terminals shown in red □ / ○ must be connected by the customer.

Remote operation

MN:	undervoltage release
or	
MX:	shunt release

Motor mechanism (MT)

A4:	opening order
A2:	closing order
B4, A1:	motor mechanism power supply
L1:	manual position (manu)
B2:	SDE interlocking (mandatory for automatic or remote recharging)
BPO:	opening pushbutton
BPF:	closing pushbutton

Communicating motor mechanism (MTc)

B4, A1:	motor mechanism power supply
BSCM:	breaker status and control module

Indication contacts

OF2 / OF1:	device ON/OFF indication contacts
OF4 / OF3:	device ON/OFF indication contacts (NSX400/630)
SDE:	fault-trip indication contact (short-circuit, overload, ground fault, earth leakage)
SD:	trip-indication contact
CAF2/CAF1:	early-make contact (rotary handle only)
CAO1:	early-break contact (rotary handle only)
SDV:	earth leakage fault trip indication contact (add-on Vigi module)

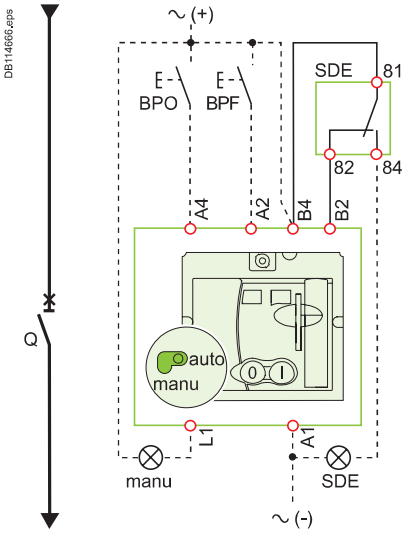
Compact NSX100 to 630
Motor mechanism

The diagram is shown with circuits de-energised, all devices open, connected and charged and relays in normal position.

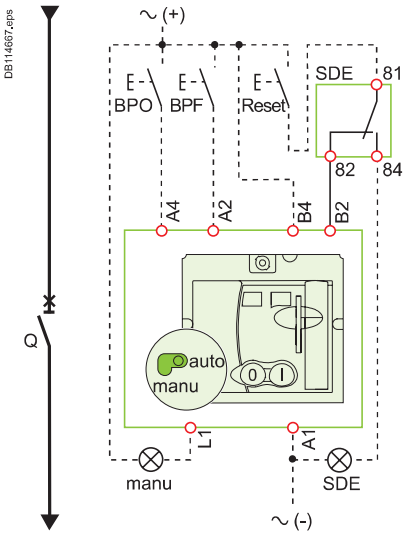
After tripping initiated by the "Push to trip" button or by the undervoltage (MN) release or the shunt (MX) release, device reset can be automatic, remote or manual.

Following tripping due to an electrical fault (with an SDE contact), reset must be carried out manually.

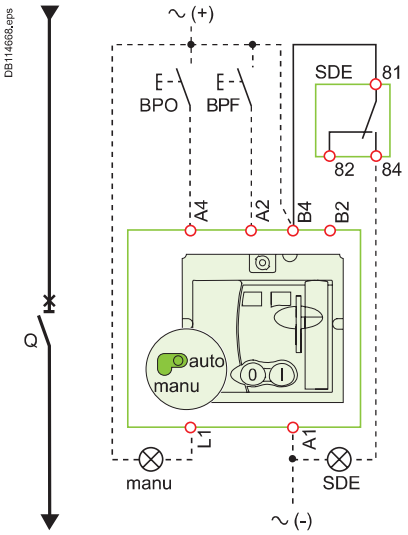
Motor mechanism (MT) with automatic reset



Motor mechanism (MT) with remote reset



Motor mechanism (MT) with manual reset

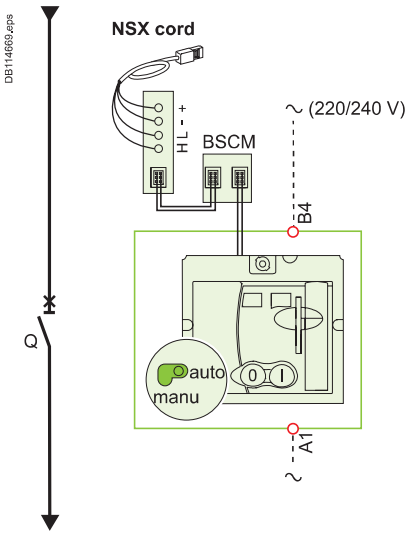


Symbols

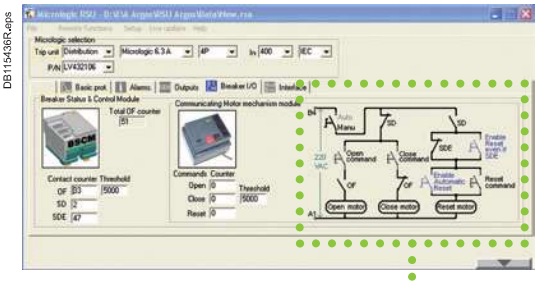
Q:	circuit breaker
A4 :	opening order
A2:	closing order
B4, A1:	motor mechanism power supply
L1:	manual position (manu)
B2:	SDE interlocking (mandatory for correct operation)
BPO:	opening pushbutton
BPF:	closing pushbutton
SDE:	fault-trip indication contact (short-circuit, overload, ground fault, earth leakage)

Compact NSX100 to 630
Motor mechanism

Communicating motor mechanism (MTc)

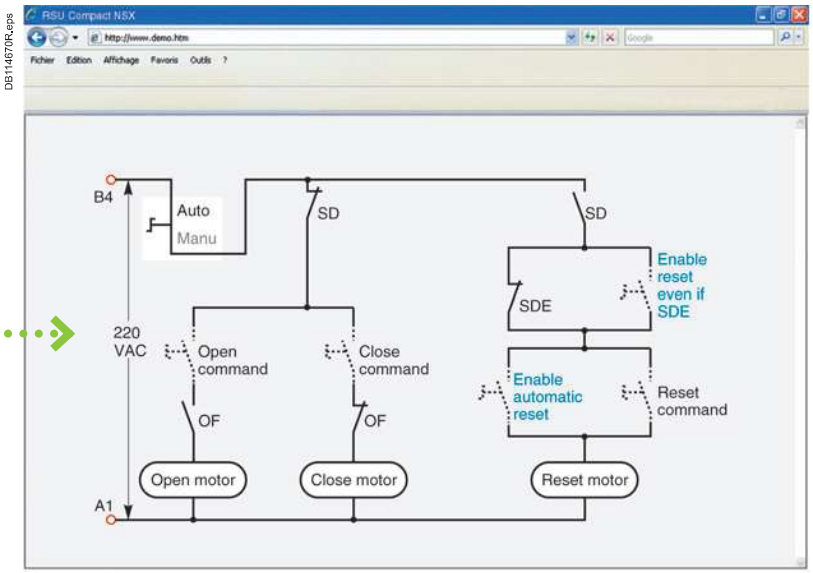


Schematic representation of the communicating motor mechanism (MT).



RSU utility setup screen for the communicating motor mechanism.

RSU screen for the communicating motor mechanism (MTc)



Single-line diagram of communicating motor mechanism
Opening, closing and reset orders are transmitted via the communication network. The "Enable automatic reset" and "Enable reset even if SDE" parameters must be set using the RSU software via the screen by clicking the blue text.

"**Auto/manu**" is a switch on the front of the motor mechanism.

Symbols

Q:	circuit breaker
B4, A1:	motor mechanism power supply
BSCM:	breaker status and control module

Terminals shown in red O must be connected by the customer.

Compact NSX100 to 630
SDx module with Micrologic

The diagram is shown with circuits de-energised, all devices open, connected and charged and relays in normal position.

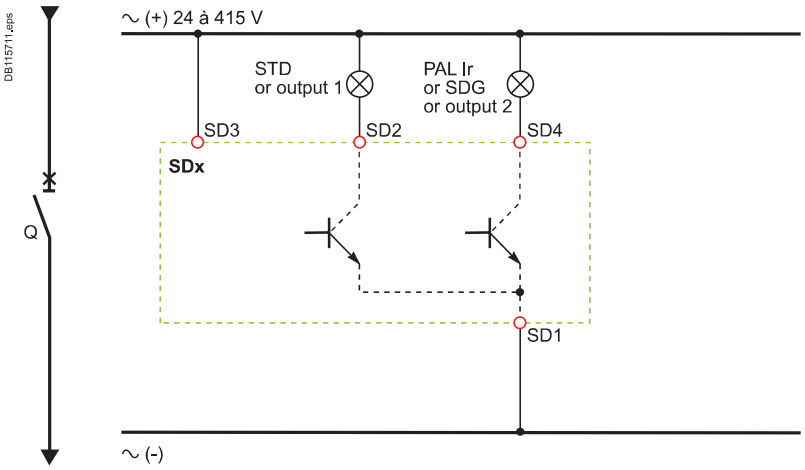
Symbols

SD1, SD3: SDx-module power supply
SD2: output 1 (80 mA max.)
SD4: output 2 (80 mA max.)

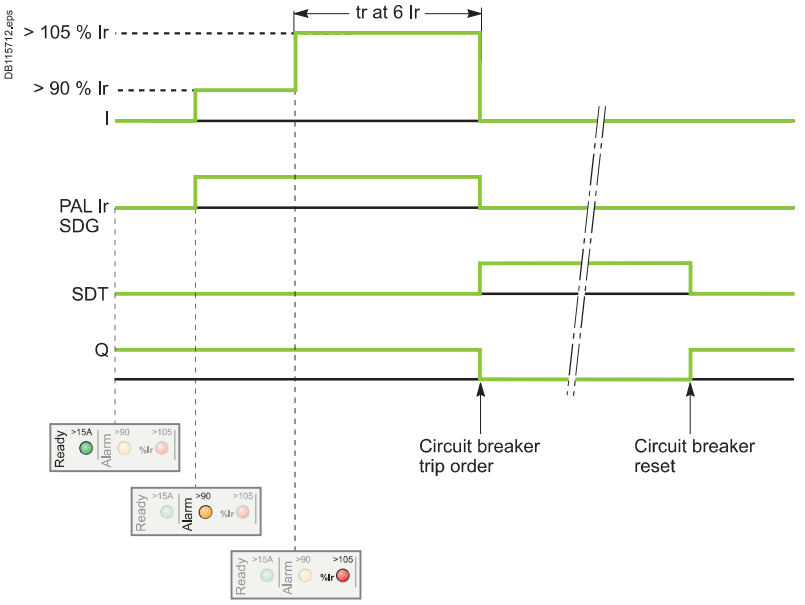
	SD2	SD4
Micrologic 2	SDT	-
Micrologic 5	SDT or output 1	PAL Ir or output 2
Micrologic 6	SDT or output 1	SDG or output 2

Terminals shown in red O must be connected by the customer.

Connection



Operation



I: *charge current*
PAL Ir: *thermal overload pre-alarm*
SDG: *ground-fault signal*
SDT: *thermal-fault signal*
Q: *circuit breaker*

Compact NSX100 to 630
SDTAM module with Micrologic M

The diagram is shown with circuits de-energised, all devices open, connected and charged and relays in normal position.

Symbols

SD1, SD3: SDTAM-module power supply

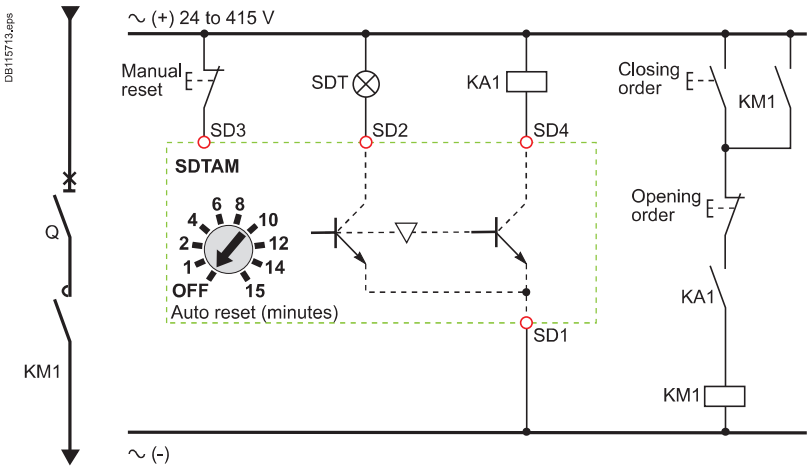
SD2: thermal-fault signal output (80 mA max.)

SD4: contactor-control output (80 mA max.)

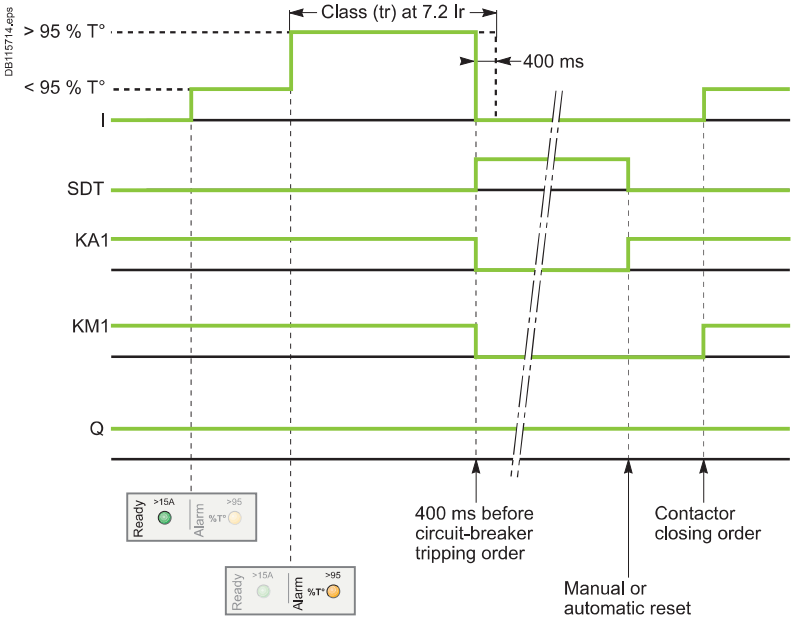
	SD2	SD4
Micrologic 2-M	SDT	KA1
Micrologic 6 E-M	SDT	KA1

Terminals shown in red O must be connected by the customer.

Connection



Operation



I: *charge current*

SDT: *thermal-fault signal*

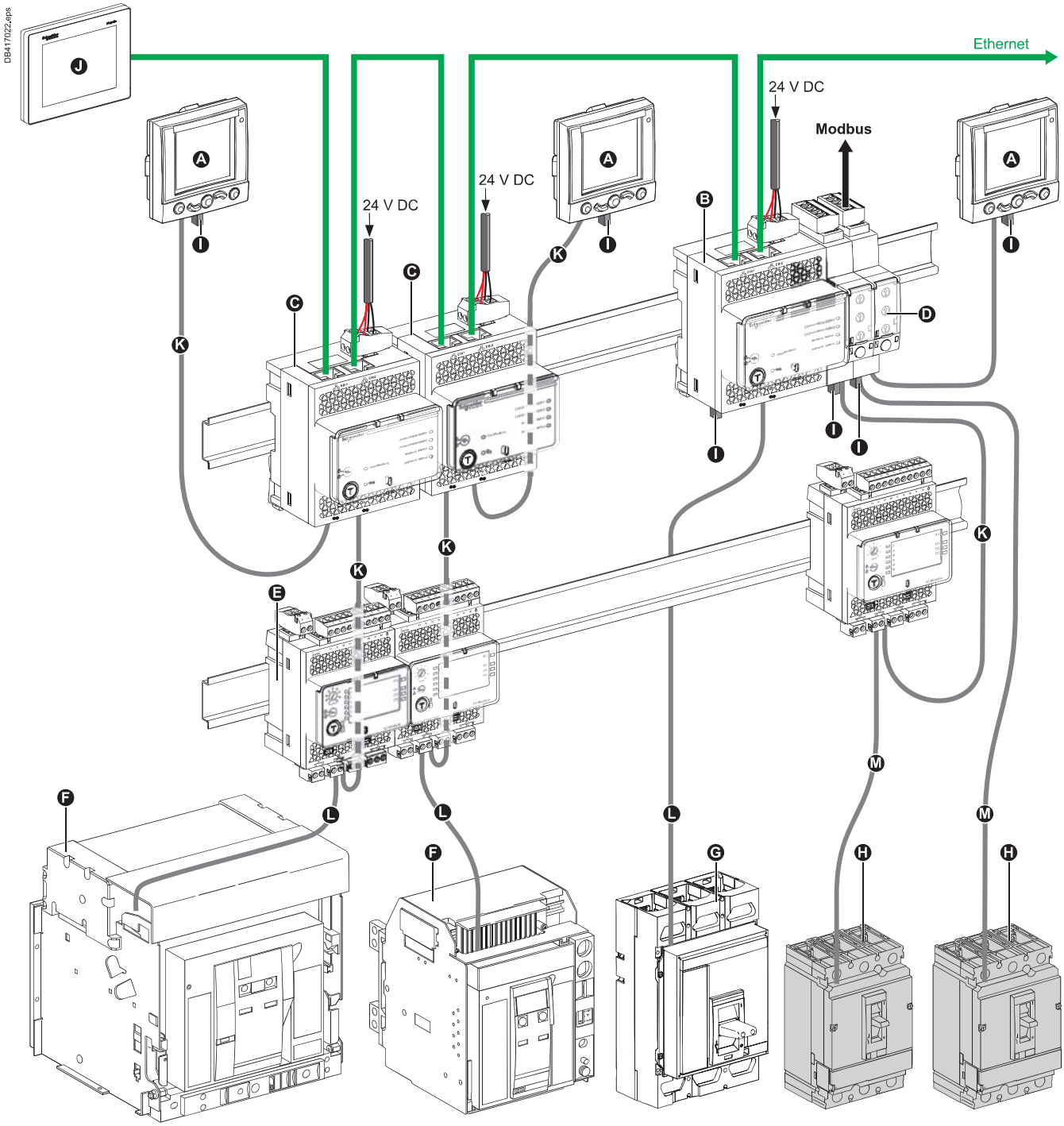
KA1: *auxiliary relay (e.g. RBN or RTBT relay)*

KM1: *motor contactor*

Q: *circuit breaker*

Compact NSX100 to 630
Communication

Connection of circuit breakers to the Modbus communication network



- A FDM121 (TRV00121)
- B IFE master (LV434011)
- C IFE (LV434010)
- D IFM (TRV00210)
- E IO application module (LV434063)
- F Masterpact NT/NW
- G Compact NS630b-3200
- H Compact NSX
- I ULP termination (TRV00880)
- J FDM128 (LV434128)

- K ULP cable
- L Breaker ULP cord
- M NSX cord
- Ethernet
- Modbus

Compact NSX100 to 630
Communication

DB417106.eps