

# Accessories for Ex9B and Ex9PN



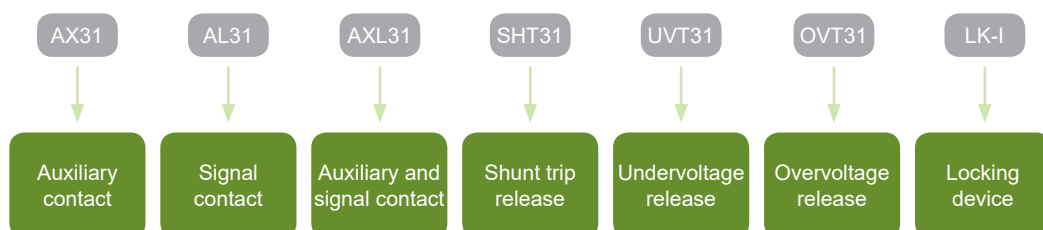
- Accessories for installation devices Ex9B (Ex9BH, Ex9BN, Ex9B125, Ex9BD, Ex9BP, Ex9BL), Ex9PN, Ex9BI, Ex9IP
- Auxiliary contacts synchronous with main contacts of the device
- Signal contacts active on electrical tripping of the circuit breaker
- Shunt trip releases
- Locking devices
- Undervoltage releases
- Overvoltage release
- According to IEC/EN 60947-1 and IEC/EN 60947-5-1

Accessories are designed in the way to be possible to combine different types with one installation device. It can be used up to two releases plus up to three units of auxiliary or signal contacts (two units in case of AX3122 with two pairs of contacts) plus one unit of RCD-block (only for Ex9B MCBs).

Release units are mounted from the left to the installation device.

Auxiliary and signal contact units must be mounted from the left to the device or to the release unit(s) when installed. Contact units are equipped with changeover (CO) combination(s) of contacts.

## Type Key



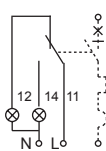
# Accessories for Ex9B and Ex9PN

## Auxiliary and signal contact units

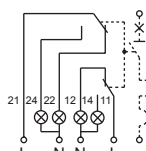


| Function           | Contacts    | Article No. | Type   | Packing |
|--------------------|-------------|-------------|--------|---------|
| Auxiliary          | 1 CO        | 100540      | AX3111 | 1/96    |
| Auxiliary          | 2 CO        | 100542      | AX3122 | 1/96    |
| Signal             | 1 CO        | 100541      | AL3111 | 1/96    |
| Auxiliary + signal | 1 CO + 1 CO | 100543      | AXL31  | 1/96    |

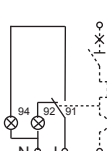
### Wiring diagrams



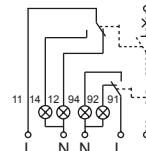
AX3111



AX3122



AL3111



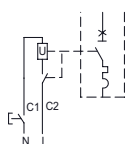
AXL31

## Shunt trip releases

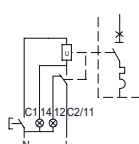


| Aux. cont. | AC Op. Volt. | DC Op. Volt. | Article No. | Type                              | Packing |
|------------|--------------|--------------|-------------|-----------------------------------|---------|
| -          | 110 — 415    | 110 — 130    | 100544      | SHT31 110V-415V AC/110V-130V DC   | 1/96    |
| -          | 48           | 48           | 100545      | SHT31 48V AC/DC                   | 1/96    |
| -          | 12 — 24      | 12 — 24      | 100546      | SHT31 12-24V AC/DC                | 1/96    |
| 1 CO       | 110 — 415    | 110 — 130    | 100547      | SHT3111 110V-415V AC/110V-130V DC | 1/96    |
| 1 CO       | 48           | 48           | 100548      | SHT3111 48V AC/DC                 | 1/96    |
| 1 CO       | 12 — 24      | 12 — 24      | 100549      | SHT3111 12-24V AC/DC              | 1/96    |

### Wiring diagrams



SHT31



SHT3111

## Locking devices

- Possibility of locking installation devices in ON or OFF position
- Suitable for devices - Ex9BH, Ex9BN, Ex9BD, Ex9BP, Ex9BL, Ex9BI, Ex9PN, Ex9IP, Ex9I125, Ex9I40, Ex9BT, SHT31, UVT31, OVT31
- Padlock is not included



| Function           | Article No. | Type | Packing  |
|--------------------|-------------|------|----------|
| Locking by padlock | 110193      | LK-I | 1/16/240 |

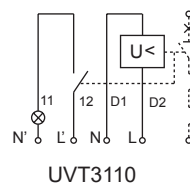
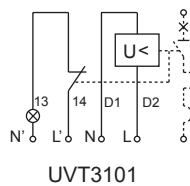
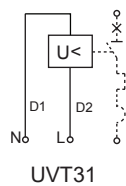
# Accessories for Ex9B and Ex9PN

## Undervoltage releases



| Aux. cont. | AC Op. Volt. | DC Op. Volt. | Article No. | Type                | Packing |
|------------|--------------|--------------|-------------|---------------------|---------|
| -          | 220 — 240    | -            | 100550      | UVT31 220-240V AC   | 1/96    |
| -          | 48           | 48           | 100551      | UVT31 48V AC/DC     | 1/96    |
| 1 NC       | 220 — 240    | -            | 100552      | UVT3101 220-240V AC | 1/96    |
| 1 NC       | 48           | 48           | 100553      | UVT3101 48V AC/DC   | 1/96    |
| 1 NO       | 220 — 240    | -            | 100554      | UVT3110 220-240V AC | 1/96    |
| 1 NO       | 48           | 48           | 100555      | UVT3110 48V AC/DC   | 1/96    |

### Wiring diagrams



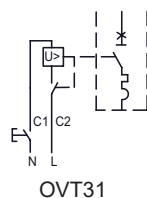
## Overvoltage releases

- Overvoltage release is not a protection against transient overvoltage and does not supersede surge protection devices



| Aux. cont. | AC Op. Volt. | DC Op. Volt. | Article No. | Type             | Packing |
|------------|--------------|--------------|-------------|------------------|---------|
| -          | 280V AC±5%   | -            | 100556      | OVT31 280V AC±5% | 1/96    |

### Wiring diagram



# Technical Data Accessories

## Accessories for Ex9B, Ex9PN, Ex9BI, Ex9IP devices

### Auxiliary and signal contact units AX31, AL31, AXL31

#### General parameters

|                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------|
| With one device, there can be used up to three contact units with single CO contact or up to two contact units with 2 CO |
| Contact units can be combined in an arbitrary way                                                                        |
| Contact units are mounted to the device from the left                                                                    |
| In case of installed release unit(s), contact modules are mounted left to the release(s)                                 |
| Auxiliary contacts synchronous with main contacts of the device                                                          |
| Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)                          |

#### Electrical parameters

|                                                                | <b>AX3111</b>                       | <b>AX3122</b>     | <b>AL3111</b>     | <b>AXL31</b>       |
|----------------------------------------------------------------|-------------------------------------|-------------------|-------------------|--------------------|
| Contacts                                                       | 1 changeover (CO)                   | 2 changeover (CO) | 1 changeover (CO) | 1 CO + 1 CO        |
| Contact function                                               | auxiliary                           | auxiliary         | signal            | auxiliary + signal |
| Tested according to                                            | IEC/EN 60947-1, IEC/EN 60947-5-1    |                   |                   |                    |
| Rated op. voltage                                              | 240/415 V AC, 24/48/130 V DC        |                   |                   |                    |
| Min. op. voltage per contact $U_{min}$                         | 24 V AC/DC                          |                   |                   |                    |
| Rated frequency                                                | 50/60 Hz                            |                   |                   |                    |
| Rated op. current $I_e$ AC                                     | 6 A (240 V), 3 A (415 V)            |                   |                   |                    |
| Rated op. current $I_e$ DC                                     | 6 A (24 V), 2 A (48 V), 1 A (130 V) |                   |                   |                    |
| Rated thermal current $I_{th}$                                 | 6 A                                 |                   |                   |                    |
| Rated op. current $I_e$ , ut. cat. AC-12                       | 6 A (240 V), 3 A (415 V)            |                   |                   |                    |
| Rated op. current $I_e$ , ut. cat. DC-12                       | 6 A (24 V), 2 A (48 V), 1 A (130 V) |                   |                   |                    |
| Rated impulse withstand voltage $U_{imp}$                      | 4 kV (1.2/50 $\mu$ s)               |                   |                   |                    |
| Rated insulation voltage $U_i$                                 | 500 V                               |                   |                   |                    |
| Max. back-up fuse                                              | 10 A gG                             |                   |                   |                    |
| Conditional short circuit current $I_k$ with max. back-up fuse | 1 kA                                |                   |                   |                    |

#### Mechanical parameters

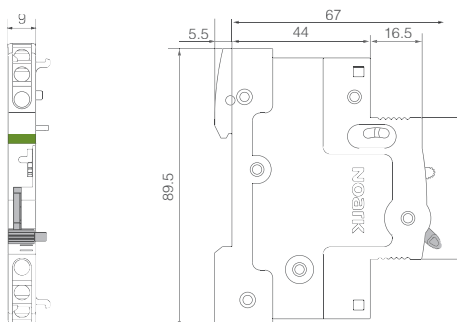
|                               | <b>AX3111</b>                               | <b>AX3122</b> | <b>AL3111</b> | <b>AXL31</b> |
|-------------------------------|---------------------------------------------|---------------|---------------|--------------|
| Tripping indicator            | ON-OFF-RESET                                | ON-OFF-RESET  | ON-OFF-RESET  | ON-OFF-RESET |
| Device width                  | 9 mm                                        |               |               |              |
| Device height                 | 89 mm                                       |               |               |              |
| Frame size                    | 45 mm                                       |               |               |              |
| Mounting                      | easy fastening onto 35 mm device rail (DIN) |               |               |              |
| Degree of protection          | IP20                                        |               |               |              |
| Terminals                     | lift                                        |               |               |              |
| Terminal capacity             | 1 — 6 mm <sup>2</sup>                       |               |               |              |
| Fastening torque of terminals | 0.8 — 1 Nm                                  |               |               |              |

# Technical Data Accessories

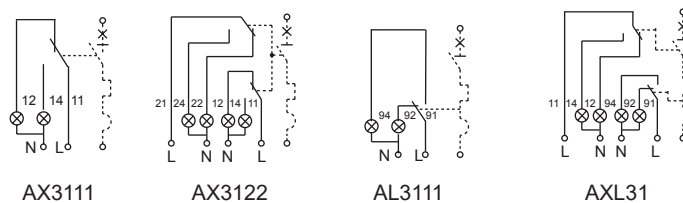
Accessories for Ex9B, Ex9PN, Ex9BI, Ex9IP devices

Auxiliary and signal contact units AX31, AL31, AXL31

## Dimensions



## Wiring diagrams



# Technical Data Accessories

## Accessories for Ex9B, Ex9PN, Ex9BI, Ex9IP devices

### Shunt trip releases SHT31

#### General parameters

|                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------|
| With one device, there can be used up to two units of release (shunt trip, undervoltage, overvoltage)              |
| Release units can be combined in an arbitrary way                                                                  |
| Release units are mounted to the device from the left                                                              |
| In case of installed contact module(s), release units are mounted left to the device, right to the contact unit(s) |
| Can be used for remote switch off                                                                                  |

#### Electrical parameters

|                                                                         | SHT31 110V-415V AC/110V-130V DC<br>SHT3111 110V-415V AC/110V-130V DC | SHT31 48V AC/DC<br>SHT3111 48V AC/DC | SHT31 12-24V AC/DC<br>SHT3111 12-24V AC/DC |
|-------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------|--------------------------------------------|
| Contacts                                                                | -<br>1 changeover (CO)                                               | -<br>1 changeover (CO)               | -<br>1 changeover (CO)                     |
| Contact function                                                        | auxiliary                                                            | auxiliary                            | auxiliary                                  |
| Tested according to                                                     | IEC/EN 60947-1, IEC/EN 60947-5-1                                     |                                      |                                            |
| Rated operating voltage                                                 | 110-415 V AC, 110-130 V DC                                           | 48 V AC/DC                           | 12-24 V AC/DC                              |
| Rated frequency                                                         | 50/60 Hz                                                             |                                      |                                            |
| Rated impulse withstand voltage $U_{imp}$                               | 4 kV (1.2/50 $\mu$ s)                                                |                                      |                                            |
| Rated insulation voltage                                                | 500 V                                                                |                                      |                                            |
| Tripping time                                                           | < 10 ms                                                              | < 10 ms                              | < 10 ms                                    |
| Min. duration of control pulse                                          | 8 ms                                                                 | 8 ms                                 | 8 ms                                       |
| Max. back-up fuse                                                       | 10 A gG                                                              | 10 A gG                              | 10 A gG                                    |
| Min. op. voltage per AX contact $U_{min}$                               | 24 V AC/DC                                                           |                                      |                                            |
| Rated op. current $I_e$ AC of AX contact                                | 6 A (240 V), 3 A (415 V)                                             |                                      |                                            |
| Rated op. current $I_e$ DC of AX contact                                | 6 A (24 V), 2 A (48 V), 1 A (130 V)                                  |                                      |                                            |
| Rated thermal current $I_{th}$ of AX cont.                              | 6 A                                                                  |                                      |                                            |
| Rated op. current $I_e$ , AC-12 of AX                                   | 6 A (240 V), 3 A (415 V)                                             |                                      |                                            |
| Rated op. current $I_e$ , DC-12 of AX                                   | 6 A (24 V), 2 A (48 V), 1 A (130 V)                                  |                                      |                                            |
| Max. back-up fuse of AX                                                 | 10 A gG                                                              |                                      |                                            |
| Conditional short circuit current $I_k$<br>with max. back-up fuse of AX | 1 kA                                                                 |                                      |                                            |

#### Mechanical parameters

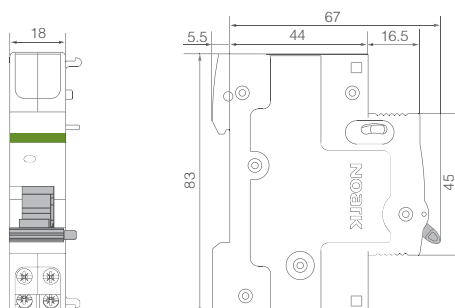
|                               | SHT31 110V-415V AC/110V-130V DC<br>SHT3111 110V-415V AC/110V-130V DC | SHT31 48V AC/DC<br>SHT3111 48V AC/DC | SHT31 12-24V AC/DC<br>SHT3111 12-24V AC/DC |
|-------------------------------|----------------------------------------------------------------------|--------------------------------------|--------------------------------------------|
| Tripping indicator            | red-white                                                            | red-white                            | red-white                                  |
| Device width                  | 18 mm                                                                |                                      |                                            |
| Device height                 | 83 mm                                                                |                                      |                                            |
| Frame size                    | 45 mm                                                                |                                      |                                            |
| Mounting                      | easy fastening onto 35 mm device rail (DIN)                          |                                      |                                            |
| Degree of protection          | IP20                                                                 |                                      |                                            |
| Terminals                     | lift                                                                 |                                      |                                            |
| Terminal capacity             | 1 — 6 mm <sup>2</sup>                                                |                                      |                                            |
| Fastening torque of terminals | 0.8 — 1 Nm                                                           |                                      |                                            |

# Technical Data Accessories

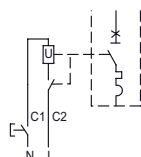
Accessories for Ex9B, Ex9PN, Ex9BI, Ex9IP devices

## Shunt trip releases SHT31

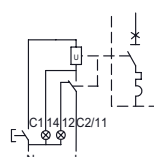
### Dimensions



### Wiring diagrams



SHT31



SHT3111

# Technical Data Accessories

## Accessories for Ex9B, Ex9PN, Ex9BI, Ex9IP devices

### Undervoltage releases UVT31

#### General parameters

|                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------|
| With one device, there can be used up to two units of release (shunt trip, undervoltage, overvoltage)              |
| Release units can be combined in an arbitrary way                                                                  |
| Release units are mounted to the device from the left                                                              |
| In case of installed contact module(s), release units are mounted left to the device, right to the contact unit(s) |
| To switch connected device off in case of voltage drop                                                             |

#### Electrical parameters

|                                                                      | UVT31 220-240V AC<br>UVT3101 220-240V AC<br>UVT3110 220-240V AC | UVT31 48V AC/DC<br>UVT3101 48V AC/DC<br>UVT3110 48V AC/DC |
|----------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------|
| Contacts                                                             | -<br>1 normally closed (NC)<br>1 normally open (NO)             | -<br>1 normally closed (NC)<br>1 normally open (NO)       |
| Contact function                                                     | auxiliary                                                       | auxiliary                                                 |
| Tested according to                                                  | IEC/EN 60947-1, IEC/EN 60947-5-1                                |                                                           |
| Rated operating voltage $U_n$                                        | 220-240 V AC                                                    | 48 V AC/DC                                                |
| Rated frequency                                                      | 50/60 Hz                                                        |                                                           |
| Rated impulse withstand voltage $U_{imp}$                            | 4 kV (1.2/50 $\mu$ s)                                           |                                                           |
| Rated insulation voltage                                             | 500 V                                                           |                                                           |
| Tripping time                                                        | < 10 ms                                                         | < 10 ms                                                   |
| Making threshold                                                     | 85 % $U_n$                                                      | 85 % $U_n$                                                |
| Tripping threshold                                                   | 35 % $U_n$                                                      | 35 % $U_n$                                                |
| Min. op. voltage per AX contact $U_{min}$                            | 24 V AC/DC                                                      |                                                           |
| Rated op. current $I_e$ AC of AX contact                             | 6 A (240 V), 3 A (415 V)                                        |                                                           |
| Rated op. current $I_e$ DC of AX contact                             | 6 A (24 V), 2 A (48 V), 1 A (130 V)                             |                                                           |
| Rated thermal current $I_{th}$ of AX cont.                           | 6 A                                                             |                                                           |
| Rated op. current $I_e$ , AC-12 of AX                                | 6 A (240 V), 3 A (415 V)                                        |                                                           |
| Rated op. current $I_e$ , DC-12 of AX                                | 6 A (24 V), 2 A (48 V), 1 A (130 V)                             |                                                           |
| Max. back-up fuse of AX                                              | 10 A gG/gL                                                      |                                                           |
| Conditional short circuit current $I_k$ with max. back-up fuse of AX | 1 kA                                                            |                                                           |

#### Mechanical parameters

|                               | UVT31 220-240V AC<br>UVT3101 220-240V AC<br>UVT3110 220-240V AC | UVT31 48V AC/DC<br>UVT3101 48V AC/DC<br>UVT3110 48V AC/DC |
|-------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------|
| Tripping indicator            | red-white                                                       | red-white                                                 |
| Device width                  | 18 mm                                                           |                                                           |
| Device height                 | 83 mm                                                           |                                                           |
| Frame size                    | 45 mm                                                           |                                                           |
| Mounting                      | easy fastening onto 35 mm device rail (DIN)                     |                                                           |
| Degree of protection          | IP20                                                            |                                                           |
| Terminals                     | lift                                                            |                                                           |
| Terminal capacity             | 1 — 6 mm <sup>2</sup>                                           |                                                           |
| Fastening torque of terminals | 0.8 — 1 Nm                                                      |                                                           |

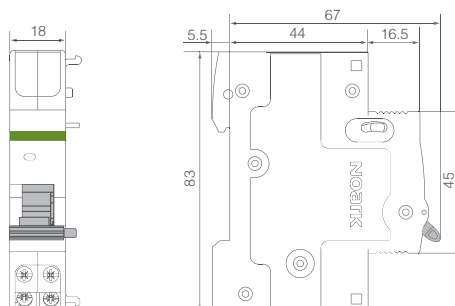


# Technical Data Accessories

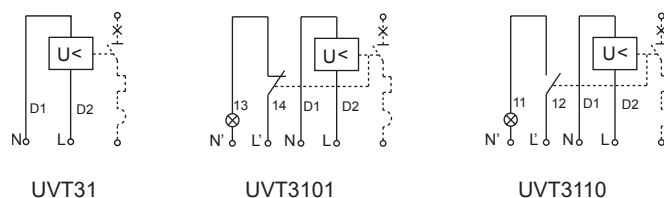
## Accessories for Ex9B, Ex9PN, Ex9BI, Ex9IP devices

### Undervoltage releases UVT31

#### Dimensions



#### Wiring diagrams



# Technical Data Accessories

## Accessories for Ex9B, Ex9PN, Ex9BI, Ex9IP devices

### Overvoltage releases OVT31

#### General parameters

|                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------|
| With one device, there can be used up to two units of release (shunt trip, undervoltage, overvoltage)                 |
| Release units can be combined in an arbitrary way                                                                     |
| Release units are mounted to the device from the left                                                                 |
| In case of installed contact module(s), release units are mounted left to the device, right to the contact unit(s)    |
| Overvoltage release is not a protection against transient overvoltage and does not supersede surge protection devices |
| To switch connected device off in case of increased voltage                                                           |

#### Electrical parameters

|                                           | OVT31 280V AC±5%                 |
|-------------------------------------------|----------------------------------|
| Contacts                                  | -                                |
| Tested according to                       | IEC/EN 60947-1, IEC/EN 60947-5-1 |
| Rated operating voltage $U_n$             | 280 V AC ±5 %                    |
| Rated frequency                           | 50/60 Hz                         |
| Rated impulse withstand voltage $U_{imp}$ | 4 kV (1.2/50 µs)                 |
| Rated insulation voltage                  | 500 V                            |
| Tripping time                             | < 1 s (290 V), < 0,1 s (380 V)   |

#### Mechanical parameters

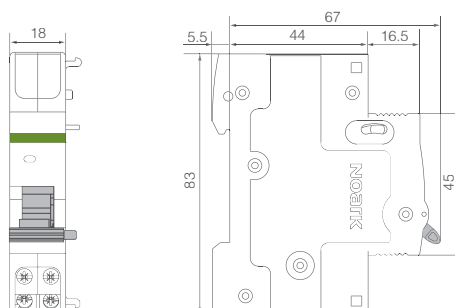
|                               | OVT31 280V AC±5%                            |
|-------------------------------|---------------------------------------------|
| Tripping indicator            | red-white                                   |
| Device width                  | 18 mm                                       |
| Device height                 | 83 mm                                       |
| Frame size                    | 45 mm                                       |
| Mounting                      | easy fastening onto 35 mm device rail (DIN) |
| Degree of protection          | IP20                                        |
| Terminals                     | lift                                        |
| Terminal capacity             | 1 — 6 mm <sup>2</sup>                       |
| Fastening torque of terminals | 0.8 — 1 Nm                                  |

# Technical Data Accessories

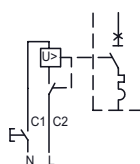
Accessories for Ex9B, Ex9PN, Ex9BI, Ex9IP devices

## Overvoltage releases OVT31

### Dimensions



### Wiring diagram



OVT31