Terminal blocks

# Power Transmission & Distribution

## Klippon® Connect TTB Range for instrument transformer wiring


Weidmüller

Data sheet

Weidmüller

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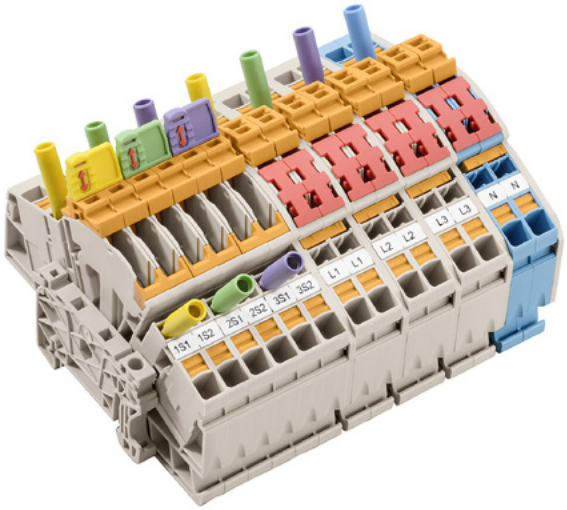
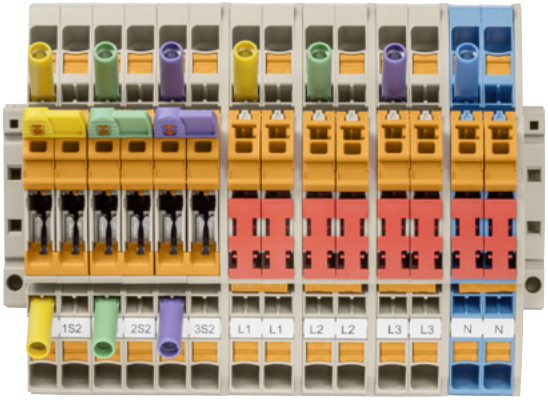
# TTB Range
## TABNSNORD14




### Pre-assembled terminal strip according to the specifications of TAB NS Nord 2019

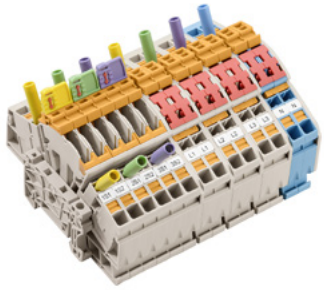
The „TABNSNORD14“ terminal strip is structured in accordance with the standard wording for technical connection conditions under the title „TAB NS NORD 2019“ (TAB 2019). It is responsible for the connection and operation of plants on the low-voltage grid in the BDEW regional group Northern Germany together with the BDEW regional group Berlin/Brandenburg. The terminal blocks are designed with the PUSH IN connection technology. Please always refer to the supplementary sheets of the respective grid operator.

**Item list**

| Qty. | Designation | Type | Order No. |
|---|---|---|---|
| 12 x | Measuring transducer terminal block with PUSH IN connection technology | ATTB 6 | **2710070000** |
| 2 x | Measuring transducer terminal block with PUSH IN connection technology (color: blue) | ATTB 6 BL | **2740010000** |
| 3 x | Angled and fingersafe test sockets, for test plugs Ø 4 mm (color: yellow) | TS TTB 6 YL | **2710500000** |
| 3 x | Angled and fingersafe test sockets, for test plugs Ø 4 mm (color: green) | TS TTB 6 GN | **2710490000** |
| 3 x | Angled and fingersafe test sockets, for test plugs Ø 4 mm (color: violet) | TS TTB 6 VT | **2710530000** |
| 1 x | Angled and fingersafe test sockets, for test plugs Ø 4 mm (color: blue) | TS TTB 6 BL | **2710480000** |
| 1 x | Lever link for mechanical connection of two levers (color: yellow) | LL TTB 6/2 CM YL | **2710400000** |
| 1 x | Lever link for mechanical connection of two levers (color: green) | LL TTB 6/2 CM GN | **2710390000** |
| 1 x | Lever link for mechanical connection of two levers (color: violett) | LL TTB 6/2 CM VT | **2710430000** |
| 3 x | 2-fold short-circuit bridge for the electrical connection of „S1“ and „S2“ (in combination with lever link and desired short-circuit position of the levers) | SCCB TTB 6/2 | **2710190000** |
| 8 x | Switching lock for mechanical locking of the separation area | SL TTB 6 | **2710220000** |
| 4 x | 2-pole cross-connection for the electrical connection of „L1“, „L2“, „L3“ and „N“ | ZQV 6N/2 | **1985740000** |
| 5 x | End plate for finger safety at the end of the terminal strip | EP TTB 6 | **2710170000** |
| 28 x | Pre-labeled markers with „S1“ or „S2“ depending on potential | DEK 5/8-11.5 MC NE WS | **1341630000** |
| 2 x | screwless end bracket with integrated marking surfaces | AEB 35 SCL/1 V0 | **2661280000** |

# Data sheet

| TABNSNORD14 | 6 mm² |
|---|---|



| | | |
|---|---|---|
| Width / Height / Depth | mm | 135.9 x 100 x 79.1 |
| max. current / max. conductor | A/mm² | **30 / 10** |
| max. clamping range | mm² | **0,5...10** |

## Technical data

IEC 60947-7-1

| Rated data | IEC | UL | CSA | EN 60079-7 |
|---|---|---|---|---|
| Rated voltage V | 500 | | | |
| Rated current A | 30 | | | |
| for wire cross-section mm² | 6 | | | |
| Kurzzeitstromfestigkeit | | | | |
| Rated impulse withstand voltage / Pollution severity | | | 6 kV / 3 | |
| Lehrdorn IEC 60-947-1 / Brennbarkeitsklasse nach UL 94 | | | A4 / V-0 | |
| Approvals | | | | |

| Clamped conductors (H05V/H07V) | Rated connection |
|---|---|
| Solid / Stranded mm² | 0.5...10 / 0.5...6 |
| Flexible / Flexible with ferrule mm² | 0.5...10 / 0.5...6 |
| Tightening torque (clamping screw for copper conductor) | |
| Stripping length / Blade size mm/- | 12 / 0.8 x 4.0 mm |

| Note | |
|---|---|
| | |

## Ordering data

| Version | |
|---|---|
| beige | |

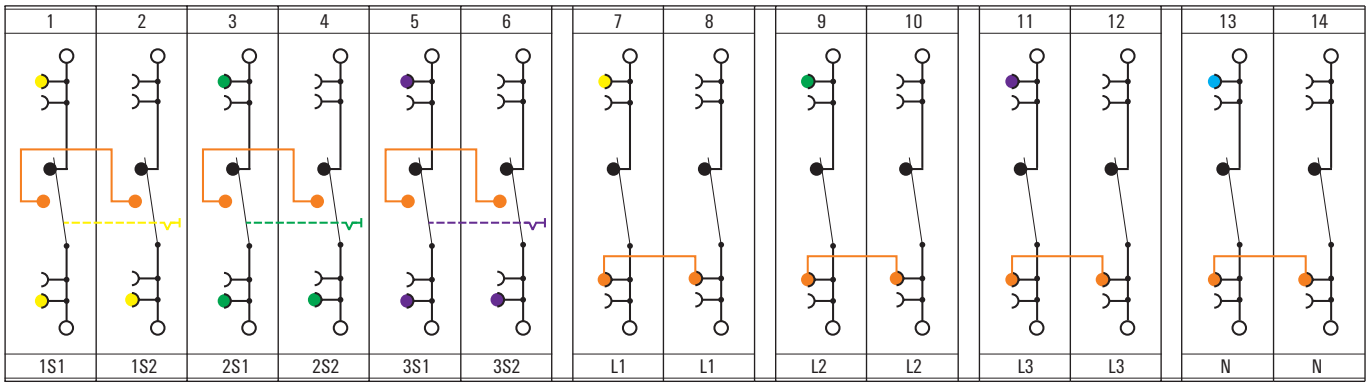
| Note | |
|---|---|
| | |

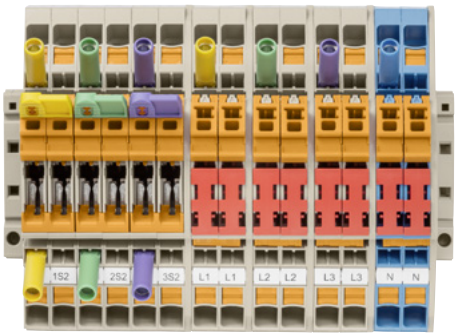
| Type | Qty. | Order no. |
|---|---|---|
| TABNSNORD14 | 1 | 8000145571 |

## Application area of the terminal strip:

- Celle-Uelzen electricity grid
- E.DIS electricity grid
- EVE electricity grid
- EWE electricity grid
- LSW electricity grid
- Schleswig-Holstein electricity grid
- Hamburg electricity grid
- Berlin electricity grid
- WEMAG electricity grid
- Bremen Weser electricity grid

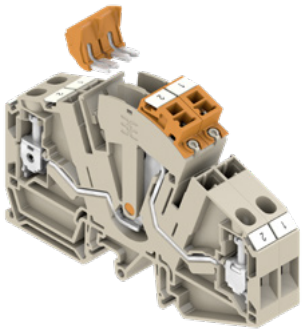
## Circuit diagram



# Klippon® Connect TTB Range

## Accessories for TTB 6 test-disconnect terminal block



### Short circuit bridge

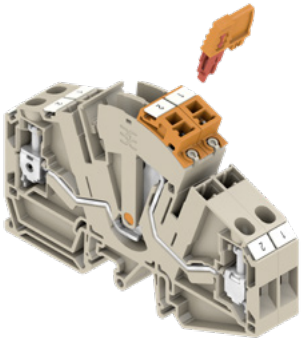
The short circuit bridge can be simply and quickly inserted into the terminal blocks. If several levers are connected simultaneously with the lever connector, the make before break can be realised. Once mounted, the short circuit bridge cannot be removed from the application.

| Type | Qty. | Order no. |
|---|---|---|
| SCCB TTB 6/2 | 25 | 2710190000 |
| SCCB TTB 6/3 | 25 | 2710200000 |
| SCCB TTB 6/4 | 25 | 2710210000 |

### Lever link

The lever link mechanically locks the connected disconnect levers of the terminal blocks. Switching the lever link together with the inserted short circuit bridge allows make before break functionality inside the application. Once mounted, the lever link cannot be removed from the application.

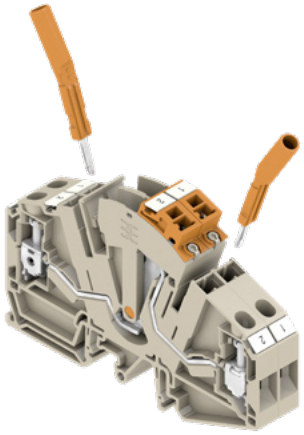
| Type | Qty. | Order no. |
|---|---|---|
| LL TTB 6/1 | 50 | 2710230000 |
| LL TTB 6/2 | 50 | 2710300000 |
| LL TTB 6/3 | 50 | 2710440000 |
| LL TTB 6/4 | 25 | 2710450000 |
| LL TTB 6/6 | 10 | 2710460000 |



### Comparative measurement lever link

The LL TTB 6 CM enables safe and fast comparative measurement. After lifting the LL TTB 6 CM, the two levers of the terminal blocks are mechanically separated from each other and can be switched independently. Once mounted, the lever link cannot be removed from the application.

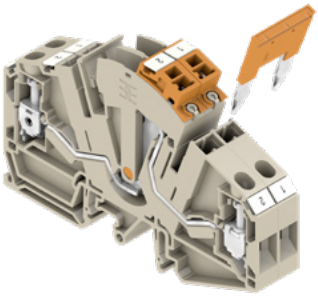
| Type | Qty. | Order no. |
|---|---|---|
| LL TTB 6/2 CM | 50 | 2710370000 |
| LL TTB 6/3 CM | 50 | 2726100000 |
| LL TTB 6/4 CM | 50 | 2726110000 |



### Test socket

The test socket is used to connect test devices with a standard 4.0 plug with widths up to 10 mm into the terminal. Test sockets are arranged at an angle, therefore all standard measurements (even adjoining) can be realised within the terminal width of 8.1 mm. Once mounted, the test socket cannot be removed from the application.

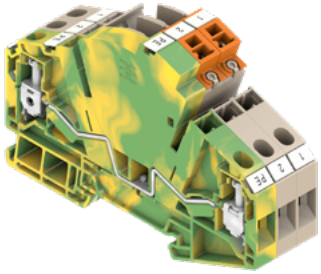
| Type | Qty. | Order no. |
|---|---|---|
| TS TTB 6 OR | 48 | 2710470000 |
| TS TTB 6 BL | 48 | 2710480000 |
| TS TTB 6 BK | 48 | 2710520000 |
| TS TTB 6 BR | 48 | 2715540000 |
| TS TTB 6 GN | 48 | 2710490000 |
| TS TTB 6 RD | 48 | 2710510000 |
| TS TTB 6 YL | 48 | 2710500000 |
| TS TTB 6 VT | 48 | 2710530000 |



## Cross-connection

The cross-connection enables potential multiplication or the realisation of a star connection within the application.

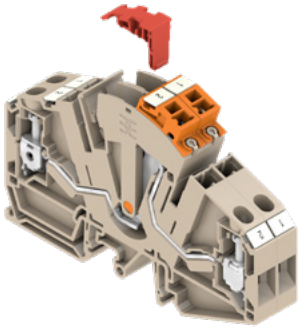
| Typ | Qty. | Order no. |
|---|---|---|
| ZQV 6N/4 | 60 | 1985780000 |
| ZQV 6N/6 | 60 | 2733950000 |
| ZQV 6N/7 | 60 | 2733960000 |
| ZQV 6N/10 | 60 | 2733970000 |



## Contour-like PE terminal block

A PE terminal block with identical contour (only for TH 35 rails) is a very useful component in a test-disconnect terminal block system, since it allows easy and safe realisation of star connection / reference points within the application.

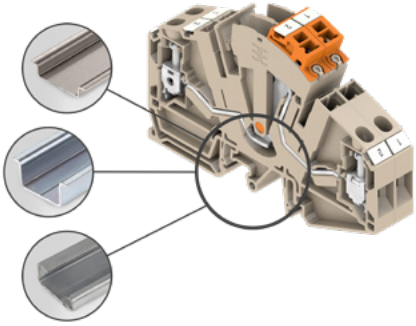
| Type | Qty. | Order no. |
|---|---|---|
| WTTB 6 PE | 50 | 2710100000 |
| ATTB 6 PE | 50 | 2710080000 |
| HTTB 6 PE | 50 | 2710120000 |



## Switch lock

The switch lock can be easily inserted into the terminal from above. The switch lock prevents unauthorised opening or closing of circuits as it blocks the disconnect lever in its respective position.

| Type | Qty. | Order no. |
|---|---|---|
| SL TTB 6 | 50 | 2710220000 |



## Combi-foot (for WTTB 6 and HTTB 6)

Integrated combi-foot allows easy and quick mounting onto all available TH 35 and G32 rails, thus allowing cost and time effective panel retrofit.

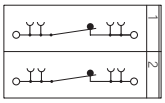
| Type | Qty. | Order no. |
|---|---|---|
| TS 35X15/LL 2M/ST/ZN | 2 | 0236500000 |
| TS 32X15 2M/ST/ZN | 2 | 0122800000 |
| TS 35X7.5/LL 2M/ST/ZN | 2 | 0514500000 |

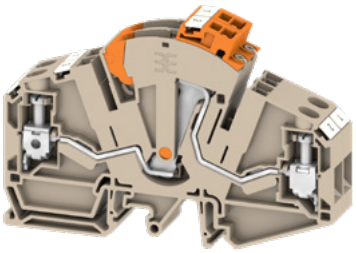
# Application examples*

## Changing a Protection/Metering device

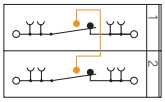
### Planning and installation: Equipping the terminal blocks with accessories

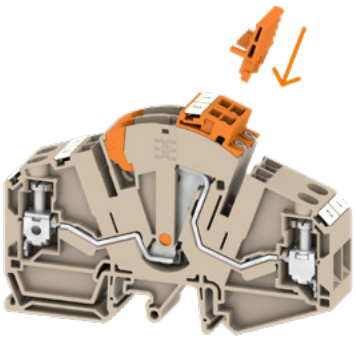
**1. SCCB TTB 6 short circuit bridge installation in progress**
The short circuit bridge is inserted quickly and easily on the transformer side of the terminal block in it´s deidcated channel. Once mounted, the short circuit bridge cannot be removed from the application.



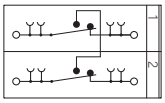


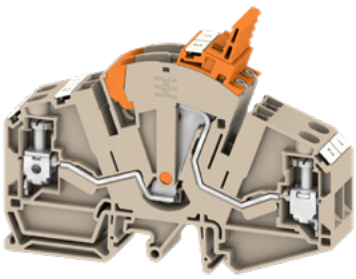
**2. SCCB TTB 6 short circuit bridge installation completed**
When inserted, depending on the position of the disconnect lever, an electrical connection (short circuit) between the two terminal blocks can be realised.



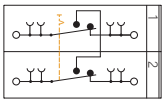


**3. LL TTB 6 lever link installation in progress**
The lever link is plugged into the housings of the disconnect lever of the respective terminal blocks from above and creates a mechanical connection between them. Once mounted, the lever link cannot be removed from the application.

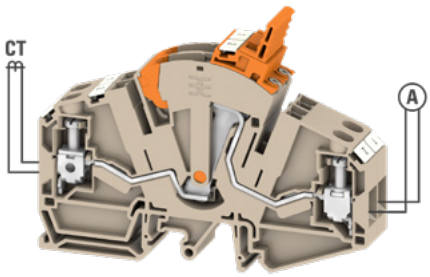




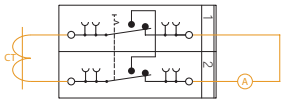
**4. LL TTB 6 lever link installation completed**
The mechanical connection between the lever mechanisms allows simultaneous opening or closing of two or more disconnect levers.



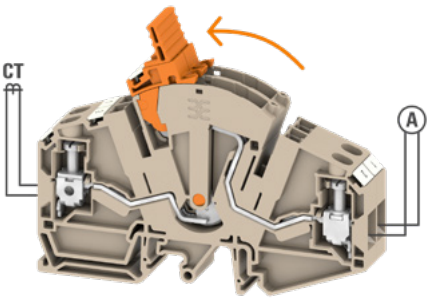
## Installation: Wiring transformer and ammeter wiring



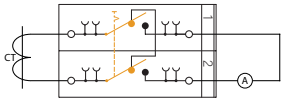

**Wiring of current transformer and ammeter**
The transformer will be connected in the clamping units usptream the disconnect lever and the ammeter will be connected in the clamping units downstream the disconnect lever.

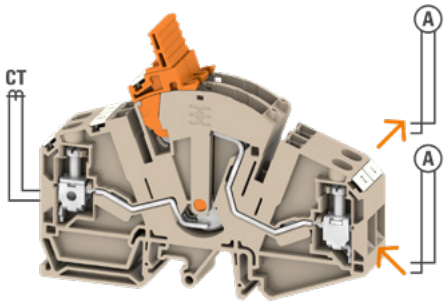


## Operation: Changing an ammeter

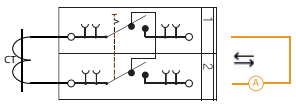


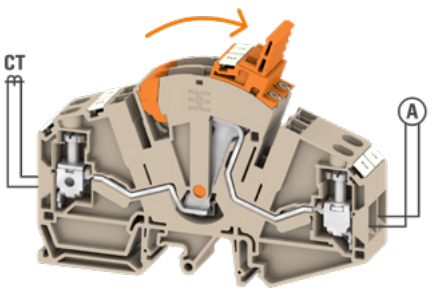

**1. Switching the lever link**
Switching the lever link causes an automatic short circuit (make before break mechanism) on the secondary wiring of the current transformer. This prevents the voltage on the current transformer from surging and protects it from damage leading to its destruction.



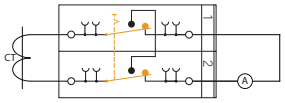



**2. Replacing the ammeter**
After short-circuiting the current transformer side and simultaneously disconnecting the circuit through the lever switching, the ammeter can be replaced easily and safely.



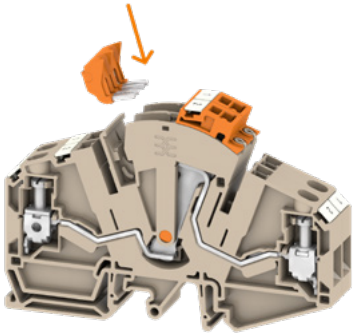



**3. Restoring the lever link back into original position**
Switching backwards the lever, restores the entire arrangement into its original status. The transition from the automatic short circuit back to the initial position is realised smoothly and safely.



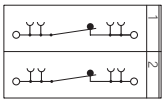
# Application examples*

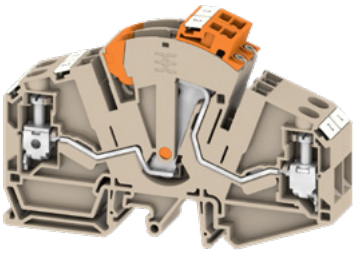
## Performing a comparative measurement



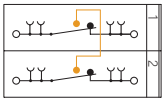
### Planning and installation: Equipping the terminal blocks with accessories

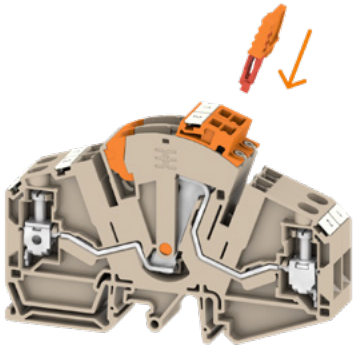
**1. SCCB TTB 6 short circuit bridge installation in progress**
The short circuit bridge is inserted quickly and easily on the transformer side of the terminal block in it´s deidcated channel. Once mounted, the short circuit bridge cannot be removed from the application.



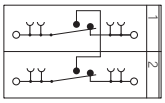


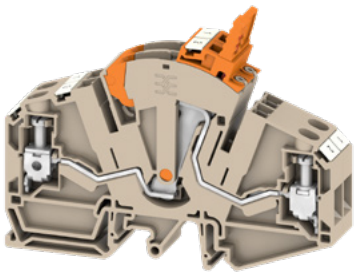
**2. SCCB TTB 6 short circuit bridge installation completed**
When inserted, depending on the position of the disconnect lever, an electrical connection (short circuit) between the two terminal blocks can be realised.



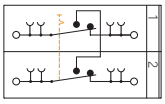


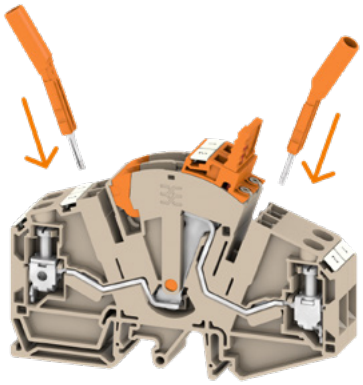
**3. LL TTB 6 CM lever link installation in progress**
The CM lever link (having long, asymmetrical, red coloured foot) is plugged into the housings of the disconnect lever of the respective terminal blocks from above and creates a mechanical connection between them. Once mounted, the lever link cannot be removed from the application.



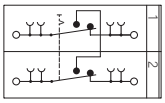


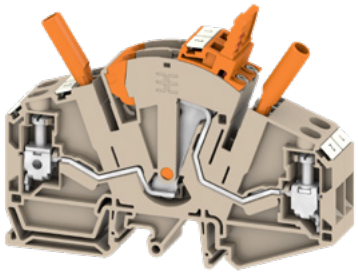
**4. LL TTB 6 CM lever link installation completed**
The mechanical connection of the lever mechanisms allows simultaneous opening or closing of two or more disconnect levers. By lifting the LL TTB 6 CM, the two (or more) disconnect levers of the terminal blocks are disengaged from each other and can be switched independently. Prior to any re-energising of the circuit, the CM needs to be pushed down into original position and the circuit closed.



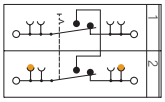


**5. TS TTB 6 test sockets installation in progress**
The TS TTB 6 test sockets are inserted into the bespoke housings provided in the terminal blocks from above. Once inserted, the test sockets cannot be removed from the installation.

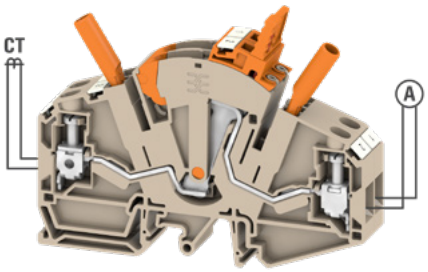




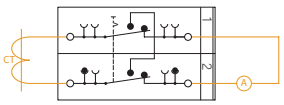
**6. TS TTB 6 test sockets installation completed**
The test sockets are used to connect test devices with a standard 4.0 plug with widths up to 10 mm into the terminal. Test sockets are arranged at an angle, therefore all standard measurements (even adjoining) can be realised within the terminal width of 8.1 mm. Once mounted, the test socket cannot be removed from the application.



## Installation: Wiring the transformer and the ammeter

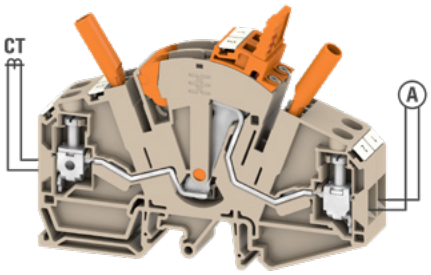



The transformer will be connected in the clamping unit usptream the disconnect lever and the ammeter will be connected in the clamping units downstream the disconnect lever.



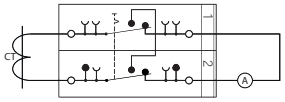
# Application examples*

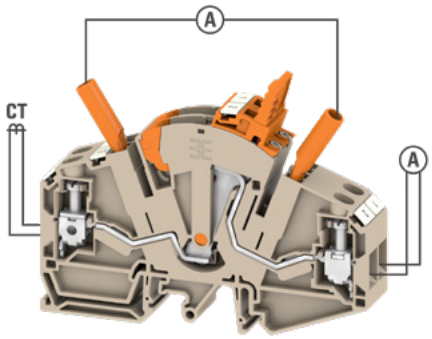
## Performing a comparative measurement



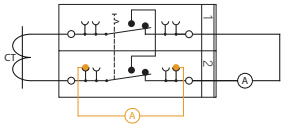

### Operation: Performing a comparative measurement

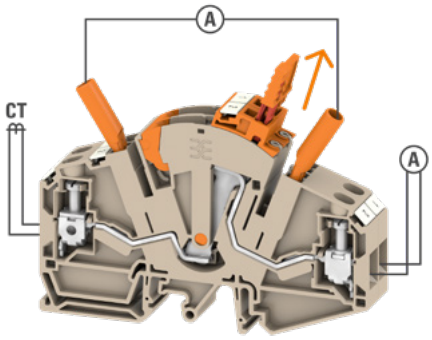
**1. Configuration correctly equipped**
The installation of the required accessories to equip the terminal arrangement for comparative measurement and also the wiring of the primary side as well as the secondary side, has already been carried out. The installation is correctly prepared to perform the required operations.



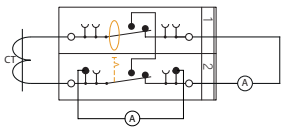


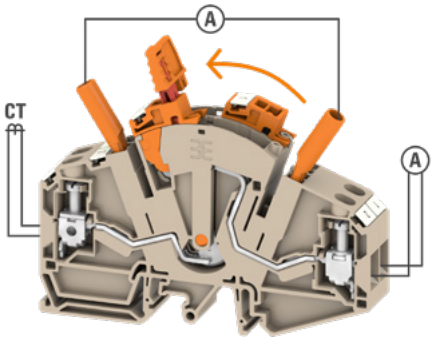

**2. Connection of a reference measuring (calibrated) instrument**
The reference measuring (calibrated) instrument is connected via standard 4.0 plugs to the test sockets on a terminal block. The connection is made inserting in parralel the calibrated instrument to the terminal block, where the disconnection will take place.



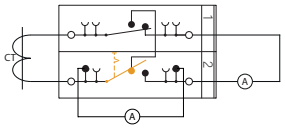


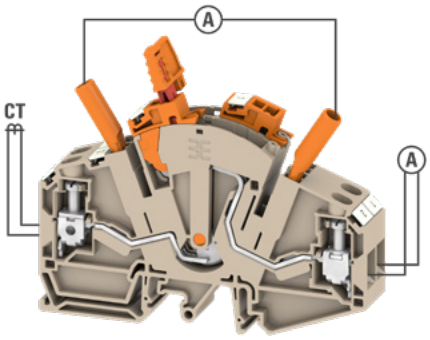

**3. Lifting up the LL TTB 6 CM lever link**
Lifting up the lever link LL TTB 6 CM causes a mechanical decoupling of the two disconnect levers. Now the two disconnect levers can be operated independently from each other within this application.



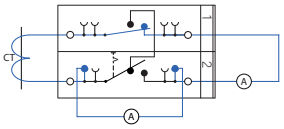


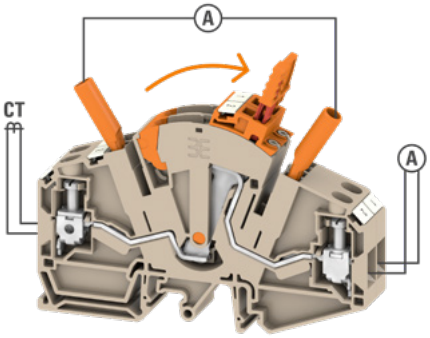

**4. Switching the LL TTB 6 CM lever link**
By switching the previously decoupled lever link, the current flow is diverted from the terminal block through the now parallel-connected reference measuring instrument.



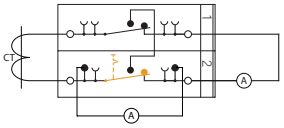


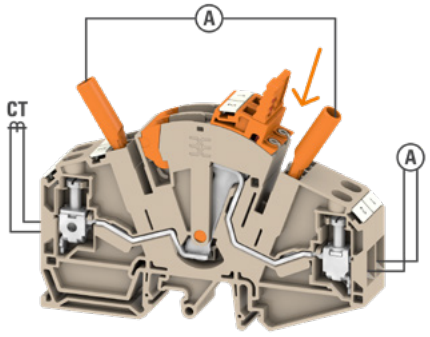

**5. Performing the comparative reading of the two ammeters**
The values measured by the ammeter connected downstream can now be compared with the values given by the reference meter since both instruments are reading the same current. The comparison measurement has now been successfully completed and the correct functional verification of the ammeter connected downstream the terminal has been carried out.



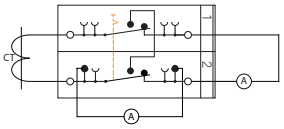


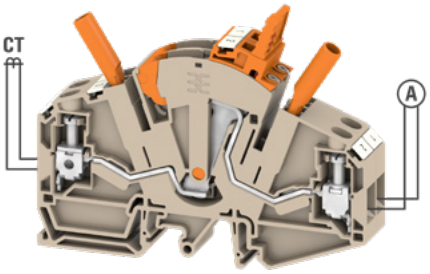

**6. Restoring the lever link back into original position**
Switching backwards the lever, restores the entire arrangement into its original status. The transition from the comparative measurement status back to the initial position is realised smoothly and safely.






**7. Pressing down the LL TTB 6 CM lever link**
Pressing down the LL TTB 6 CM lever link restores the mechanical connection of the two disconnect levers within the application.






**8. Disconnecting of the reference measuring instrument**
The reference measurement instrument is therefore disconnected from the installation by simply removing its plugs from the test sockets of the terminal block and the installation is restored in the initial status.