

KETO – The new generation NH-fuse-switch-disconnector

KETO-disconnectors can be combined regardless of the size. Different dimensions are adjusted to an uniform cover cutout with the available components for touch protection. Many functions are integrated across all construction sizes, e. g. four cover support levels at 32, 60, 70 and 90mm above top of busbar. This ensures an optimal system integration. Versions for baseplate mounting, busbar- and DIN rail mounting offer the suitable solution for each application.

Note: Product colour may vary depending on stock available.



KETO size 00

$I_e = 160A$
Overall width: 106mm
System size: 195mm

KETO size 1

$I_e = 250A$
Overall width: 184mm
System size: 300mm

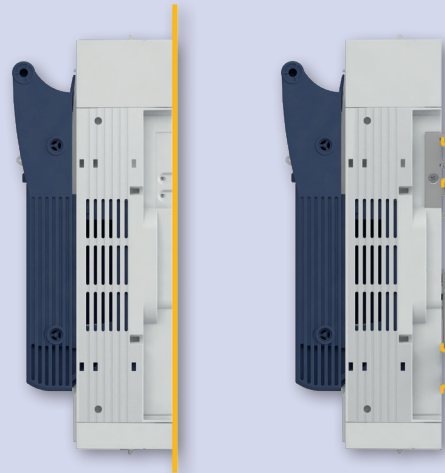
KETO size 2

$I_e = 400A$
Overall width: 210mm
System size: 300mm



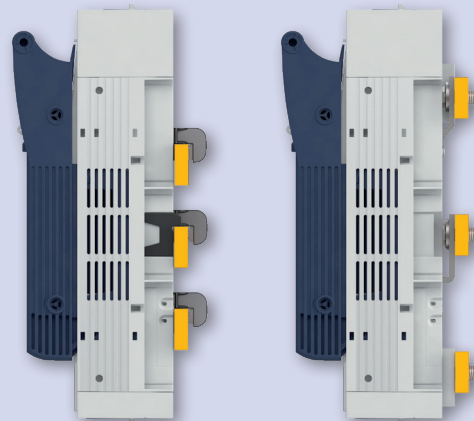


KETO size 3
 $I_e = 630A$
 Overall width: 250mm
 System size: 300mm



Baseplate mounting

Multiple mounting hole pattern allow a variable installation and quick replacement. KETO-00 and KETO-1 can optionally be built on two parallel DIN-rails.



Busbar mounting

KETO-00 to KETO-3 are easy to fit onto busbar systems with 60mm centre distance – without any drilling.

Terminal cover
Variable extendable, cable
entry customizable

Extension terminal cover
For touch-protection of
the busbar system from
above

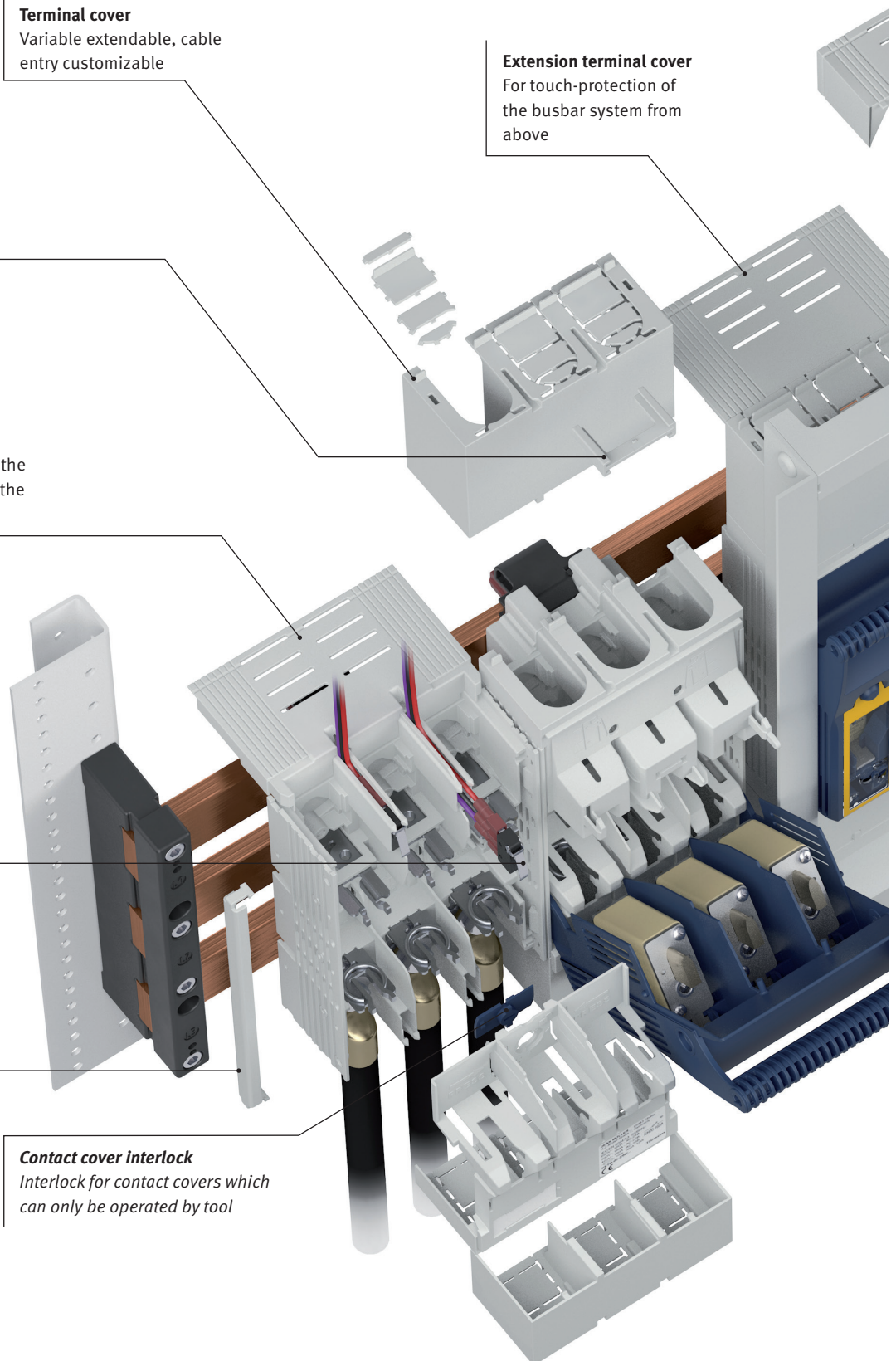
**Cover support for top and
bottom side KETO-00**
Variable mountable on
60mm- and 70mm-level

Overlap protection
For touch-protected covering of the
busbar system from top side at the
device level (KETO-00)

Switch position indicator
2 changeover, AC250V,
10/3A (resistive/ind.)

Lateral cover support
Variable mountable on
32mm-, 60mm- or
70mm-level (KETO-00)

Contact cover interlock
*Interlock for contact covers which
can only be operated by tool*





Overlap protection

For touch-protected covering of the busbar system from top side at the device level (KETO-1, -2, -3)

**Lateral cover support
KETO-00**

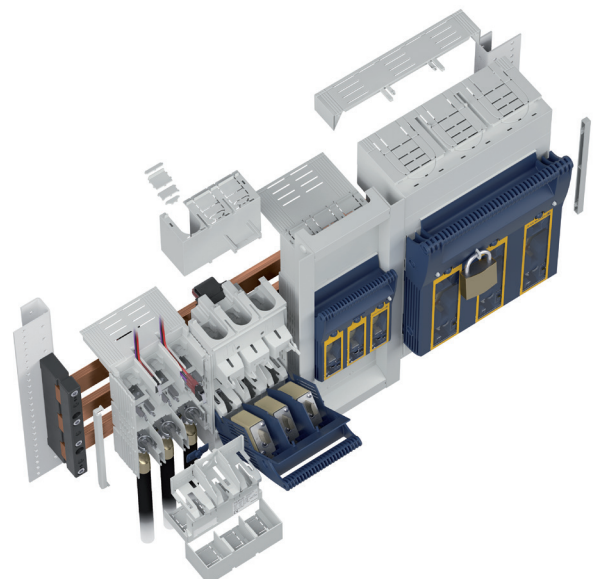
Variable mountable on 32mm-, 60mm-, 70mm- or 90mm-level (KETO-1, -2, -3)

Locking device

For holding of one padlock with max. 6mm shackle diameter

**Height adjustment adapter
20mm, 3-pole**

For adaption of KETO-00 at 90mm installation level

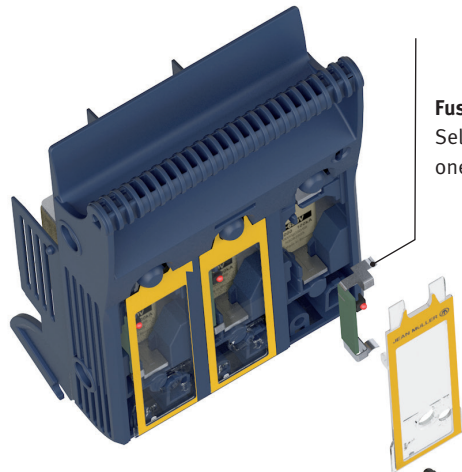
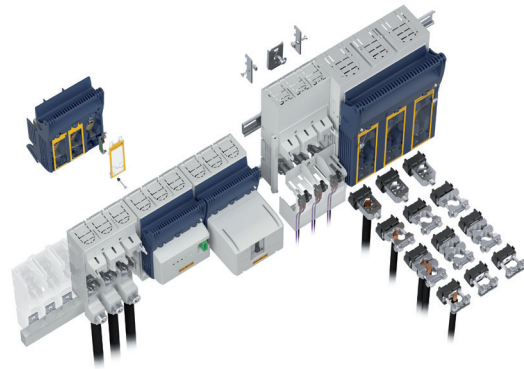


Focus on user safety

At KETO is safety always at the highest level. Even under voltage ensure features like overlap-protectors, status indicators, easy to use measuring access but also special touch protection covers at any time for maximum user safety.

Options for all conditions

Depending on the installation situation the specifications vary, options are required. Various types of terminals, four different clamping systems and many further equipment options – KETO is the solution for all installation conditions.



Fuse-monitoring ESlight
Selective fault indication – one red LED per phase

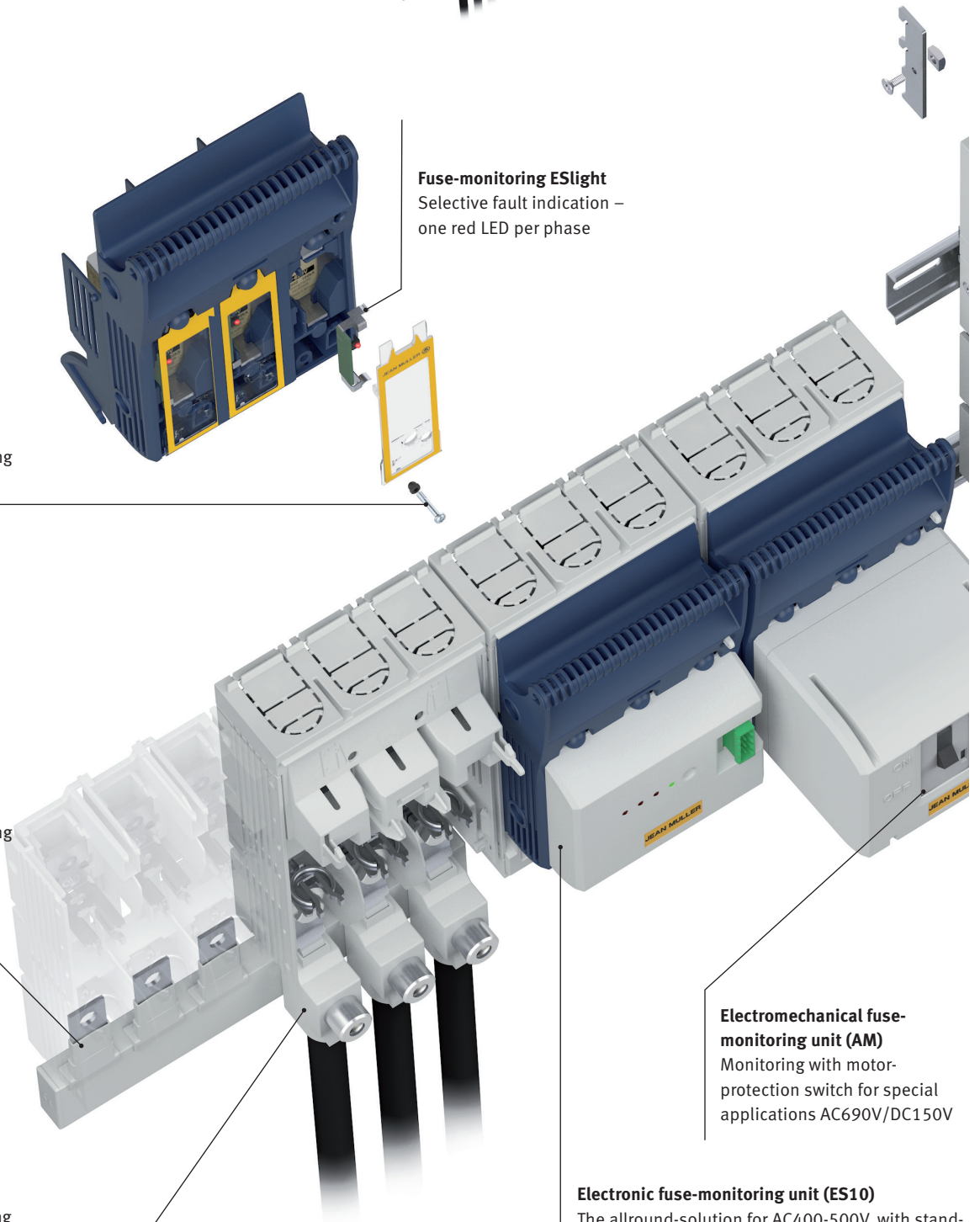
Power theft protection
For tamper-proof locking of the windows

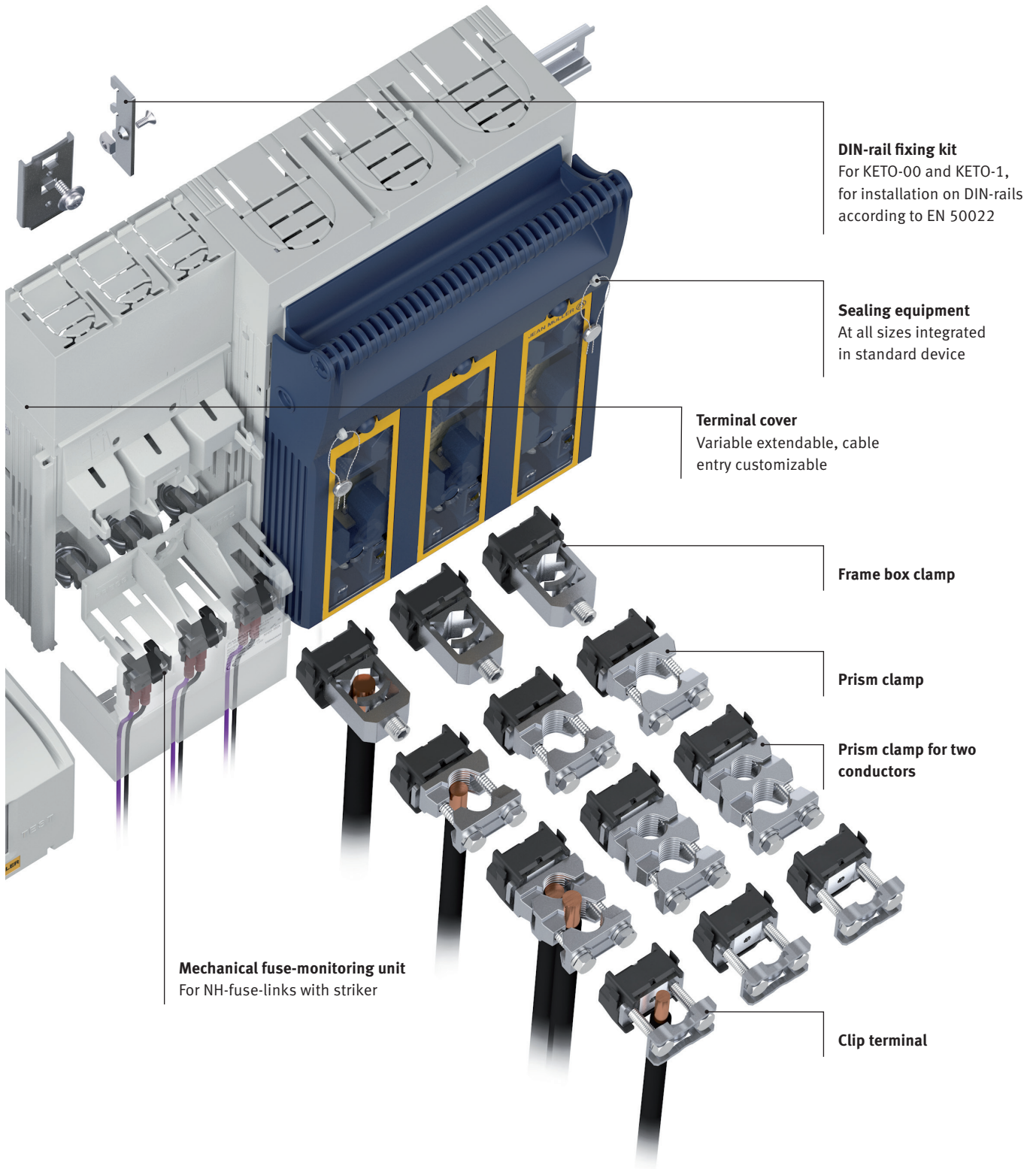
Phase busbar 3-phase
Touch-protected feeding system for up to five KETO-00

Feeding clamp
Touch-protected feeding clamps 25-95mm² for KETO-00, terminal M8

Electromechanical fuse-monitoring unit (AM)
Monitoring with motor-protection switch for special applications AC690V/DC150V

Electronic fuse-monitoring unit (ES10)
The allround-solution for AC400-500V, with stand-by indicator, fault simulation and selective fault indicator for fuse failure





DIN-rail fixing kit
For KETO-00 and KETO-1,
for installation on DIN-rails
according to EN 50022

Sealing equipment
At all sizes integrated
in standard device

Terminal cover
Variable extendable, cable
entry customizable

Frame box clamp

Prism clamp

**Prism clamp for two
conductors**

Mechanical fuse-monitoring unit
For NH-fuse-links with striker

Clip terminal

The terminal clamps can be retrofitted for connection type "F" and can be found in the accessories section page 59.

KETO RANGE

With composite terminal covers

5-10mm thick 60mm spacing busbar system disconnects**1-pole horizontal fuse disconnects****Busbar mount Fixing via bolt**

| Size | For Fuses | Current Rating (A) | Terminals | Connection Capacity (mm) | Part No. |
|------|----------------|--------------------|------------------|--------------------------|-----------------|
| 00 | DIN00 & DIN000 | 160 | Flat terminal M8 | max. 95 | KETO-00-1/AOU/F |

1-pole horizontal fuse disconnects**Busbar mount Fixing via bolt**

| Size | For Fuses | Current Rating (A) | Terminals | Connection Capacity (mm) | Part No. |
|------|----------------|--------------------|-----------|--------------------------|--------------------|
| 00 | DIN00 & DIN000 | 160 | Box clamp | max. 95 | KETO-00-1/AOU/F/SK |

5-10mm thick 60mm spacing busbar system disconnects

Top or bottom feed

3-pole horizontal fuse disconnects**Busbar mount Fixing via bolt**

| Size | For Fuses | Current Rating (A) | Terminals | Connection Capacity (mm) | Part No. |
|------|----------------|--------------------|-------------------|--------------------------|--------------------|
| 00 | DIN00 & DIN000 | 160 | Flat terminal M8 | max. 95 | KETO-00-3/60/AOU/F |
| 00 | DIN00 & DIN000 | 160 | Box clamp | 1.5-95 Al/Cu | KETO-00-3/AOU/R95 |
| 1 | DIN1 | 250 | Flat terminal M10 | max. 150 | KETO-1-3/AOU/F |
| 1 | DIN1 | 250 | Box clamp | 35-150 Al/Cu | KETO-1-3/AOU/R150 |
| 2 | DIN2 | 400 | Flat terminal M10 | max. 240 | KETO-2-3/AOU/F |
| 2 | DIN2 | 400 | Box clamp | 95-300 Al/Cu | KETO-2-3/AOU/R300 |
| 3 | DIN 2 & 3 | 630 | Flat terminal M10 | max. 300 | KETO-3-3/AOU/F |
| 3 | DIN 2 & 3 | 630 | Box clamp | 95-300 Al/Cu | KETO-3-3/AOU/R300 |

5-10mm thick 60mm spacing busbar system disconnects

Top or bottom feed

Dual feed 3-pole horizontal fuse disconnects**Busbar mount Fixing via bolt**

| Size | For Fuses | Current Rating (A) | Terminals | Connection Capacity (mm) | Part No. |
|------|----------------|--------------------|-------------------|--------------------------|----------------------|
| 00 | DIN00 & DIN000 | 160 | Flat terminal M8 | max. 95 | KETO-3/60/AOU/F/EST |
| 1 | DIN1 | 250 | Flat terminal M10 | max. 150 | KETO-1-3/60/AU/F/EST |
| 2 | DIN2 | 400 | Flat terminal M10 | max. 240 | KETO-2-3/AO/F/EST |
| 3 | DIN 2 & 3 | 630 | Flat terminal M10 | max. 300 | KETO-3-3/AO/F/EST |

1-pole horizontal fuse disconnects

Base mount

| Size | For Fuses | Current Rating (A) | Terminals | Connection Capacity (mm) | Part No. |
|------|----------------|--------------------|-------------------|--------------------------|---------------|
| 00 | DIN00 & DIN000 | 160 | Flat terminal M8 | max. 95 | KETO-00-1/F |
| 00 | DIN00 & DIN000 | 160 | Box clamp | 1.5-95 Al/Cu | KETO-00-1/R95 |
| 1 | DIN1 | 250 | Flat terminal M10 | max. 150 | KETO-1-1/F |
| 3 | DIN 2 & 3 | 630 | Flat terminal M10 | max. 300 | KETO-3-1/F |

2-pole horizontal fuse disconnects

Base mount

| Size | For Fuses | Current Rating (A) | Terminals | Connection Capacity (mm) | Part No. |
|------|----------------|--------------------|-------------------|--------------------------|-------------|
| 00 | DIN00 & DIN000 | 160 | Flat terminal M8 | max. 95 | KETO-00-2/F |
| 1 | DIN1 | 250 | Flat terminal M10 | max. 150 | KETO-1-2/F |
| 3 | DIN 2 & 3 | 630 | Flat terminal M10 | max. 300 | KETO-3-2/F |

3-pole horizontal fuse disconnects

Base mount

| Size | For Fuses | Current Rating (A) | Terminals | Connection Capacity (mm) | Part No. |
|------|----------------|--------------------|-------------------|--------------------------|---------------|
| 00 | DIN00 & DIN000 | 160 | Flat terminal M8 | max. 95 | KETO-00-3/F |
| 00 | DIN00 & DIN000 | 160 | Box clamp | 1.5-95 Al/Cu | KETO-00-3/R95 |
| 1 | DIN1 | 250 | Flat terminal M10 | max. 150 | KETO-1-3/F |
| 1 | DIN1 | 250 | Box clamp | 35-150 Al/Cu | KETO-1-3/R150 |
| 2 | DIN2 | 400 | Flat terminal M10 | max. 240 | KETO-2-3/F |
| 2 | DIN2 | 400 | Box clamp | 95-300 Al/Cu | KETO-2-3/R300 |
| 3 | DIN 2 & 3 | 630 | Flat terminal M10 | max. 300 | KETO-3-3/F |
| 3 | DIN 2 & 3 | 630 | Box clamp | 95-300 Al/Cu | KETO-3-3/R300 |

4-pole horizontal fuse disconnects

Base mount

| Size | For Fuses | Current Rating (A) | Terminals | Connection Capacity (mm) | Part No. |
|------|----------------|--------------------|-------------------|--------------------------|-------------|
| 00 | DIN00 & DIN000 | 160 | Flat terminal M8 | max. 95 | KETO-00-4/F |
| 1 | DIN1 | 250 | Flat terminal M10 | max. 150 | KETO-1-4/F |
| 3 | DIN 2 & 3 | 630 | Flat terminal M10 | max. 300 | KETO-3-4/F |

Base mount only accessories - DIN rail fixing kits

| Description | Part No. |
|---|--------------------|
| For KETO-00 | KETO-Z-00 100-15MM |
| For KETO-1 | KETO-Z-1 100-150MM |
| Ganging kits (For making pole & 4 pole units) | Part No. |
| For KETO-00 | KETO-VBS-00/2+4P |
| For KETO-1, 2 & 3 | KETO-VBS-123/2+4P |

| Description | Part No. |
|--|--------------------|
| Extension terminal covers if extra touch protection required. | |
| 1-pole for KETO-00-1, Top & bottom, 36mm long | KETO-AA-00-1/36 |
| 1-pole for KETO-00-1, Top & bottom, 66mm long | KETO-AA-00-1/66 |
| 1-pole for KETO-1-1, Top & bottom, 42mm long | KETO-AA-1-1 |
| 1-pole for KETO-3-1, Top & bottom, 42mm long | KETO-AA-3-1 |
| 3-pole for KETO-00-3, Top & bottom, 36mm long | KETO-AA-00-3/36 |
| 3-pole for KETO-00-3, Top & bottom, 66mm long | KETO-AA-00-3/66 |
| 3-pole for KETO-1-3, Top & bottom, 42mm long | KETO-AA-1-3 |
| 3-pole for KETO-2-3, Top & bottom, 42mm long | KETO-AA-2-3 |
| 3-pole for KETO-3-3, Top & bottom, 42mm long | KETO-AA-3-3 |
| Busbar series busbar covers if extra touch protection required. | |
| For KETO-00-3-AOU, Top & bottom, 32 long | KETO-UGS-00-3/32 |
| For KETO-1-3-AOU, Top & bottom, 32 long | KETO-UGS-1-3/32 |
| For KETO-2-3-AOU, Top & bottom, 32 long | KETO-UGS-2-3/32 |
| For KETO-3-3-AOU, Top & bottom, 32 long | KETO-UGS-3-3/32 |
| Integral contact/terminal cover interlock | |
| For KETO-00,1,2 & 3 3P (Interlocks to cover needs a tool to remove) | KETO-VKA-00123-3 |
| Padlock device | |
| For KETO-00,1,2 & 3 3P (6mm hole, allows to padlock closed) | KETO-ASV-00123-3 |
| Switch position indicator (Micro-switch) | |
| For KETO-00 1 Pole - 1 micro-switch per pack (part) | KETO-EV-00/1 |
| For KETO-00 3 Pole - 1 micro-switch per pack (part) | KETO-EV-00/3 |
| For KETO-1, 2 & 3 Pole - 1 micro-switch per pack (part) | KETO-EV-123 |
| Fuse blow indicator (Micro-switch) | |
| For KETO-00 - 3 micro-switch per pack (part) | KETO-K-00 |
| For KETO-1, 2 & 3 - 3 micro-switch per pack (part) | KETO-K-123 |
| Phase combi bars for KETO-00-3 | |
| 2 way 35mm ³ 200Amp | KETO-PHS-00-3/2/35 |
| 2 way 50mm ² 200Amp | KETO-PHS-00-3/2/50 |
| 3 way 35mm ² 200Amp | KETO-PHS-00-3/3/35 |
| 3 way 50mm ² 200Amp | KETO-PHS-00-3/3/50 |
| 4 way 35mm ² 200Amp | KETO-PHS-00-3/4/35 |
| 4 way 50mm ² 200Amp | KETO-PHS-00-3/4/50 |
| 5 way 35mm ⁵ 200Amp | KETO-PHS-00-3/5/35 |
| 5 way 50mm ² 200Amp | KETO-PHS-00-3/5/50 |
| Feed connection clamp terminal lug | |
| For KETO-00, M8 fixing hole, 25-95mm ² Cu/Al | KETO-ESK-00/95 |

| Description | Part No. |
|--|---------------|
| Clip terminals to modify KETO with bolt connections | |
| For KETO-00, 1.5-70mm ² Cu | 500-Z |
| For KETO-1, 25-150mm ² Cu | S1 |
| For KETO-2, 25-240mm ² Cu | S2 |
| For KETO-3, 11x21mm Band Cu | S3 |
| Prism clamp terminals to modify KETO with bolt connections | |
| For KETO-00, 10-70mm ² Al/Cu | P0070-Z |
| For KETO-1, 70-150mm ² Al/Cu | P1 |
| For KETO-2, 120-240mm ² Al/Cu | P2 |
| For KETO-3, 120-300mm ² Al/Cu | P3 |
| Double Prism clamp terminals to modify KETO with bolt connections. Two cables | |
| For KETO-1, 2 x 70-150mm ² Al/Cu | P12 |
| For KETO-2, 2 x 120-240mm ² Al/Cu | P22 |
| For KETO-3, 2 x 120-300mm ² Al/Cu | P32 |
| Frame (Box) clamp terminals to modify KETO with bolt connections | |
| For KETO-1, 35-150mm ² Al/Cu | KETO-R150 |
| For KETO-2 & 3, 95-300mm ² Al/Cu | KETO-R300-2+3 |

TECHNICAL INFORMATION

NH fuse-switch-disconnectors KETO – Technical data

| Type | | KETO-00 | | KETO-00 | | | |
|---------------------------------------|---|--------------------|----|--|------------|-----------|-----------|
| | | Baseplate mounting | | Busbar mounting | | | |
| Electrical characteristics | According to standard | DIN EN 60947-3 | | | | | |
| | For NH fuse-links acc. to DIN VDE 0636-2 | Size | | 000/00 | | | |
| | Rated operational voltage | U_e | V | AC690 DC440 | | | |
| | Rated operational current ¹⁾ | I_e | A | 160 | | | |
| | Conv. free air thermal current with fuse-links ¹⁾ | I_{th} | A | 160 | | | |
| | Conv. free air thermal current with solid-links ¹⁾ | I_{th} | A | 210 | On request | | |
| | Rated frequency | f | Hz | 50-60 | | | |
| | Rated insulation voltage | U_i | V | AC800 | | | |
| | | | | 1P | 3P | 1P | 3P |
| | Total power loss at I_{th} (without fuse-links) | P_v | W | 3 | 9 | 5 | 14 |
| | Power loss at 80% I_{th} (without fuse-links) ²⁾ | P_v | W | 1.9 | 5.8 | 3 | 9 |
| | Rated impulse withstand voltage | U_{imp} | kV | 8 | | | |
| | Utilization category ³⁾ | - | - | AC-23B (400V/160A) AC-22B (500V/160A) AC-21B (690V/160A) DC-22B (250V/160A) | | | |
| | Rated conditional short-circuit current ^{3) 4)} | - | kA | 120 (500V) 100 (690V) | | | |
| | Rated short-time withstand current | I_{cw} | kA | 5/1s | | | |
| Max. permis. power loss per fuse-link | P_a | W | 12 | | | | |

1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to DIN EN 61439.

2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.

3) It must be considered a minimum distance to earthed, conductive parts: Lateral: 20mm/Above: 50mm.

4) Type tested with NH fuse-links characteristic gG.

| Type | | | KETO-00 Baseplate mounting | | KETO-00 Busbar mounting | |
|-----------------------------|-----------------------------------|------------------|-------------------------------|----------------|----------------------------|--|
| Cable terminal | Flat terminal | | Bolt diameter | - | - | M8 |
| | Clip terminal | S00-70 | Clamping cross-section | - | mm ² | ○ : 1.5-70 Cu □ : 6 x 9 x 0.8 Cu |
| | | | Tightening torque | M _a | Nm | 2.6 |
| | Clamp | P00-70 P00-95 | Clamping cross-section | - | mm ² | 10-70 Al/Cu 35-95 Al/Cu |
| | | | Tightening torque | M _a | Nm | 2.6 |
| | Clamp | R95 | Clamping cross-section | - | mm ² | 1.5-95 Al/Cu (Al 95: max. 125A) ⁶⁾ |
| | | | Tightening torque | M _a | Nm | 4.5 |
| Degree of protection | Front side Device fitted | | Operating condition | - | - | IP20 |
| | | | With clamp- and lateral cover | - | - | IP2XC |
| | | | Switching element open | - | - | IP10 |
| Operating conditions | Ambient temperature ⁵⁾ | | T _{amb} | °C | -25 up to +70 | |
| | Rated operating mode | | - | - | Uninterrupted duty | |
| | Actuation | | - | - | Dependent manual operation | |
| | Mounting position | | - | - | vertical /horizontal | |
| | Altitude | | - | m | Up to 2000 | |
| | Pollution degree | | - | - | 3 | |
| | Overvoltage category | | - | - | III | |

Annotation: ○ = Round conductor □ = Strip conductor

5) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.

6) Pretread Al-conductors mechanically! Cleaning and greasing!

NH fuse-switch-disconnectors KETO – Technical data

| Type | | KETO-1 Baseplate mounting | | KETO-1 Busbar mounting | | | |
|---------------------------------------|---|------------------------------|----|--|-----------|-----------|-----------|
| Electrical characteristics | According to standard | | | DIN EN 60947-3 | | | |
| | For NH fuse-links acc. to DIN VDE 0636-2 | Size | | 1 | | | |
| | Rated operational voltage | U_e | V | AC690 DC440 | | | |
| | Rated operational current ¹⁾ | I_e | A | 250 | | | |
| | Conv. free air thermal current with fuse-links ¹⁾ | I_{th} | A | 250 | | | |
| | Conv. free air thermal current with solid-links ¹⁾ | I_{th} | A | 325 | | | |
| | Rated frequency | - | Hz | 50-60 | | | |
| | Rated insulation voltage | U_i | V | AC800 | | | |
| | | | | 1P | 3P | 1P | 3P |
| | Total power loss at I_{th} (without fuse-links) | P_v | W | 5 | 15 | 7 | 22 |
| | Power loss at 80% I_{th} (without fuse-links) ²⁾ | P_v | W | 3.2 | 9.6 | 4.7 | 14.1 |
| | Rated impulse withstand voltage | U_{imp} | kV | 8 | | | |
| | Utilization category ³⁾ | - | - | AC-23B (400V/250A) AC-22B (500V/250A) AC-21B (690V/250A) DC-22B (250V/250A) 3P: DC-21B (440V/250A) | | | |
| | Rated conditional short-circuit current ^{3) 4)} | - | kA | 120 (500V) 100 (690V) | | | |
| | Rated short-time withstand current | I_{cw} | kA | 8.6/1s | | | |
| Max. permis. power loss per fuse-link | P_a | W | 23 | | | | |

1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to DIN EN 61439.

2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.

3) It must be considered a minimum distance to earthed, conductive parts: Lateral: 20mm/Above: 50mm.

4) Type tested with NH fuse-links characteristic gG.

| Type | | | KETO-1 Baseplate mounting | | KETO-1 Busbar mounting | |
|-----------------------------|-----------------------------------|------|-------------------------------|-------|---------------------------|--------------------------------------|
| Cable terminal | Flat terminal | | Bolt diameter | - | - | M10 |
| | | | Tightening torque | M_a | Nm | 30-35 |
| | Clip terminal | S1 | Clamping cross-section | - | mm ² | ○ : 25-150 Cu □ : 6 x 16 x 0.8 Cu |
| | | | Tightening torque | M_a | Nm | 9.5 |
| | Clamp | P1 | Clamping cross-section | - | mm ² | 10-150 Al/Cu |
| | | | Tightening torque | M_a | Nm | 4.5 |
| | Clamp | P12 | Clamping cross-section | - | mm ² | 2 x (10-150) Al/Cu |
| | | | Tightening torque | M_a | Nm | 4.5 |
| | | R150 | Clamping cross-section | - | mm ² | 35-150 Al/Cu |
| | | | Tightening torque | M_a | Nm | 12 |
| Degree of protection | Front side Device fitted | | Operating condition | - | - | IP20 |
| | | | With clamp- and lateral cover | - | - | IP2XC |
| | | | Switching element open | - | - | IP10 |
| Operating conditions | Ambient temperature ⁵⁾ | | T_{amb} | °C | | -25 up to +70 |
| | Rated operating mode | | - | - | | Uninterrupted duty |
| | Actuation | | - | - | | Dependent manual operation |
| | Mounting position | | - | - | | vertical /horizontal |
| | Altitude | | - | m | | Up to 2000 |
| | Pollution degree | | - | - | | 3 |
| | Overvoltage category | | - | - | | III |

Annotation: ○ = Round conductor □ = Strip conductor

5) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.

NH fuse-switch-disconnectors KETO – Technical data

| Type | | KETO-2 Baseplate mounting | | KETO-2 Busbar mounting | |
|---------------------------------------|---|------------------------------|----|--|----|
| Electrical characteristics | According to standard | DIN EN 60947-3 | | | |
| | For NH fuse-links acc. to DIN VDE 0636-2 | Size | | 2 | |
| | Rated operational voltage | U_e | V | AC690 DC440 | |
| | Rated operational current ¹⁾ | I_e | A | 400 | |
| | Conv. free air thermal current with fuse-links ¹⁾ | I_{th} | A | 400 | |
| | Conv. free air thermal current with solid-links ¹⁾ | I_{th} | A | 520 | |
| | Rated frequency | f | Hz | 50-60 | |
| | Rated insulation voltage | U_i | V | AC1000 | |
| | Total power loss at I_{th} (without fuse-links) | P_v | W | 28 | 36 |
| | Power loss at 80% I_{th} (without fuse-links) ²⁾ | P_v | W | 17.9 | 23 |
| | Rated impulse withstand voltage | U_{imp} | kV | 8 | |
| | Utilization category ³⁾ | - | - | AC-23B (400V/400A) AC-22B (500V/400A) AC-21B (690V/400A) DC-22B (440V/400A) | |
| | Rated conditional short-circuit current ^{3) 4)} | - | kA | 120 (500V) 100 (690V) | |
| | Rated short-time withstand current | I_{cw} | kA | 15/1s | |
| Max. permis. power loss per fuse-link | P_a | W | 34 | | |

1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to DIN EN 61439.

2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.

3) It must be considered a minimum distance to earthed, conductive parts: Lateral: 20mm/Above: 50mm.

4) Type tested with NH fuse-links characteristic gG.

| Type | | | KETO-2 Baseplate mounting | | KETO-2 Busbar mounting | |
|-----------------------------|-----------------------------------|----------------------------------|------------------------------|-----------------|----------------------------|---------------------------------------|
| Cable terminal | Flat terminal | | Bolt diameter | - | - | M10 |
| | | | Tightening torque | M_a | Nm | 30-35 |
| | Clip terminal | S2 | Clamping cross-section | - | mm ² | ○ : 25-185 Cu □ : 10 x 16 x 0.8 Cu |
| | | | Tightening torque | M_a | Nm | 23 |
| | Clamp | P2 | Clamping cross-section | - | mm ² | 120-240 Al/Cu |
| | | | Tightening torque | M_a | Nm | 11 |
| | Clamp | P22 | Clamping cross-section | - | mm ² | 2 x (120-150) Al/Cu |
| | | | Tightening torque | M_a | Nm | 11 |
| | R300 | Clamping cross-section | - | mm ² | 95-300 Al/Cu | |
| | | Tightening torque | M_a | Nm | 20 | |
| Degree of protection | Front side Device fitted | Operating condition | - | - | IP20 | |
| | | With clamp- and lateral cover | - | - | IP2XC | |
| | | Switching element open | - | - | IP10 | |
| Operating conditions | Ambient temperature ⁵⁾ | | T_{amb} | °C | -25 up to +70 | |
| | Rated operating mode | | - | - | Uninterrupted duty | |
| | Actuation | | - | - | Dependent manual operation | |
| | Mounting position | | - | - | vertical /horizontal | |
| | Altitude | | - | m | Up to 2000 | |
| | Pollution degree | | - | - | 3 | |
| | Overvoltage category | | - | - | III | |

Annotation: ○ = Round conductor □ = Strip conductor

5) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.

NH fuse-switch-disconnectors KETO – Technical data

| Type | | KETO-3 Baseplate mounting | | KETO-3 Busbar mounting | | |
|---------------------------------------|---|------------------------------|----|--|------------|---------------------|
| Electrical characteristics | According to standard | | | DIN EN 60947-3 | | |
| | For NH fuse-links acc. to DIN VDE 0636-2 | Size | | 3 | | |
| | Rated operational voltage | U_e | V | AC690 DC440 | | |
| | Rated operational current ¹⁾ | I_e | A | 630 | | |
| | Conv. free air thermal current with fuse-links ¹⁾ | I_{th} | A | 630 | | |
| | Conv. free air thermal current with solid-links ¹⁾ | I_{th} | A | 910 | On request | |
| | Rated frequency | f | Hz | 50-60 | | |
| | Rated insulation voltage | U_i | V | AC1000 | | |
| | | | | 1P | 3P | 1P 3P |
| | Total power loss at I_{th} (without fuse-links) | P_v | W | 17 | 51 | 7 86 |
| | Power loss at 80% I_{th} (without fuse-links) ²⁾ | P_v | W | 10.9 | 32.6 | 18.3 55 |
| | Rated impulse withstand voltage | U_{imp} | kV | 8 | | |
| | Utilization category ³⁾ | - | - | AC-23B (400V/630A) AC-22B (500V/630A) AC-21B (690V/630A) DC-21B (250V/630A) 3P: DC-22B (440V/630A) | | |
| | Rated conditional short-circuit current ^{3) 4)} | - | kA | 120 (500V) 100 (690V) | | |
| | Rated short-time withstand current | I_{cw} | kA | 15kA/1s | | |
| Max. permis. power loss per fuse-link | P_a | W | 48 | | | |

1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to DIN EN 61439.

2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.

3) It must be considered a minimum distance to earthed, conductive parts: Lateral: 20mm/Above: 50mm.

4) Type tested with NH fuse-links characteristic gG.

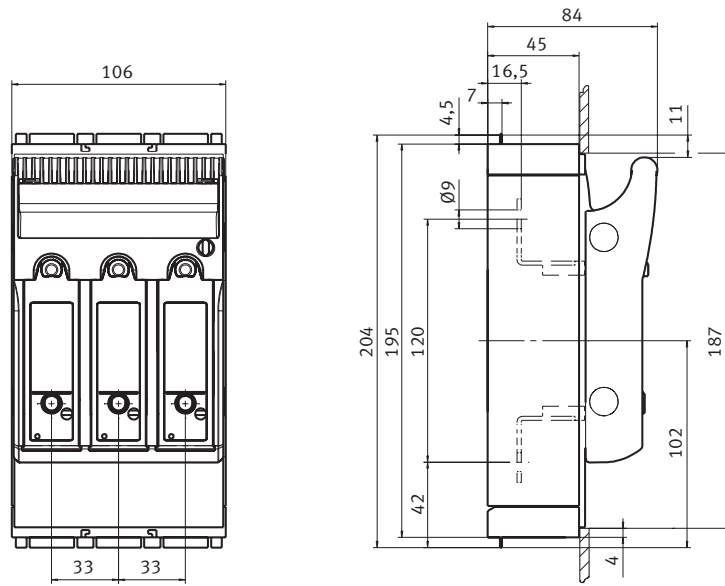
| Type | | | KETO-3 Baseplate mounting | | KETO-3 Busbar mounting | |
|-----------------------------|-----------------------------------|----------------------------------|------------------------------|-----------------|----------------------------|---------------------|
| Cable terminal | Flat terminal | | Bolt diameter | - | - | M10/12 |
| | | | Tightening torque | M_a | Nm | 30-35 |
| | Clip terminal | S ₃ | Clamping cross-section | - | mm ² | □: 11 x 21 x 1 Cu |
| | | | Tightening torque | M_a | Nm | 23 |
| | Clamp | P ₃ | Clamping cross-section | - | mm ² | 120-300 Al/Cu |
| | | | Tightening torque | M_a | Nm | 11 |
| | Clamp | P ₃₂ | Clamping cross-section | | mm ² | 2 x (120-240) Al/Cu |
| | | | Tightening torque | M_a | Nm | 11 |
| R ₃₀₀ | | Clamping cross-section | | mm ² | 95-300 Al/Cu | |
| | | Tightening torque | M_a | Nm | 20 | |
| Degree of protection | Front side Device fitted | Operating condition | - | - | IP20 | |
| | | With clamp- and lateral cover | - | - | IP2XC | |
| | | Switching element open | - | - | IP10 | |
| Operating conditions | Ambient temperature ⁵⁾ | | T_{amb} | °C | -25 up to +70 | |
| | Rated operating mode | | - | - | Uninterrupted duty | |
| | Actuation | | - | - | Dependent manual operation | |
| | Mounting position | | - | - | vertical /horizontal | |
| | Altitude | | - | m | Up to 2000 | |
| | Pollution degree | | - | - | 3 | |
| | Overvoltage category | | - | - | III | |

Annotation: ○ = Round conductor □ = Strip conductor

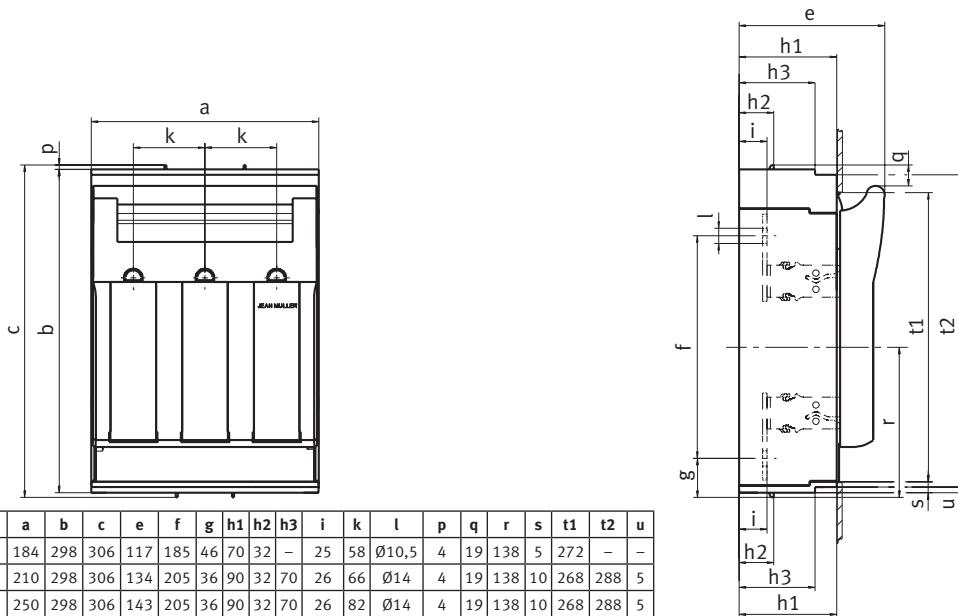
5) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.

DIMENSIONS

| Part No. | Part No. |
|---------------|-------------------|
| KETO-00-3/F | KETO-00-3/F/ESL |
| KETO-00-3/R95 | KETO-00-3/R95/ESL |



| Part No. | Part No. |
|---------------------|---------------------|
| KETO-1-3/F/(ESL) | KETO-2-3/R300/(ESL) |
| KETO-1-3/R150/(ESL) | KETO-3-3/F/(ESL) |
| KETO-2-3/F/(ESL) | KETO-3-3/R300/(ESL) |



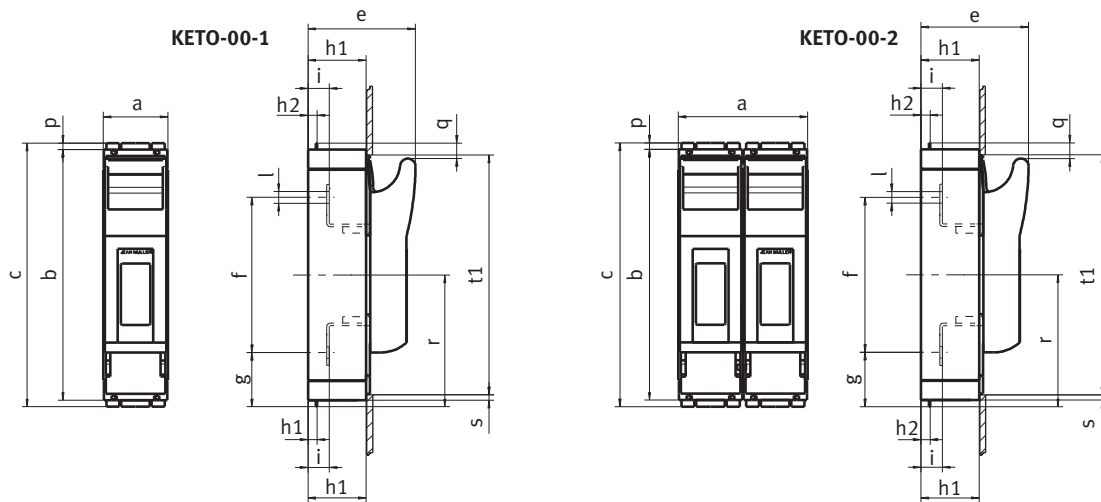
| Type | a | b | c | e | f | g | h1 | h2 | h3 | i | k | l | p | q | r | s | t1 | t2 | u |
|----------|-----|-----|-----|-----|-----|----|----|----|----|----|----|-------|---|----|-----|----|-----|-----|---|
| KETO-1-3 | 184 | 298 | 306 | 117 | 185 | 46 | 70 | 32 | - | 25 | 58 | Ø10,5 | 4 | 19 | 138 | 5 | 272 | - | - |
| KETO-2-3 | 210 | 298 | 306 | 134 | 205 | 36 | 90 | 32 | 70 | 26 | 66 | Ø14 | 4 | 19 | 138 | 10 | 268 | 288 | 5 |
| KETO-3-3 | 250 | 298 | 306 | 143 | 205 | 36 | 90 | 32 | 70 | 26 | 82 | Ø14 | 4 | 19 | 138 | 10 | 268 | 288 | 5 |

Part No.

KETO-00-1/F

KETO-00-2/F

KETO-00-1/R95



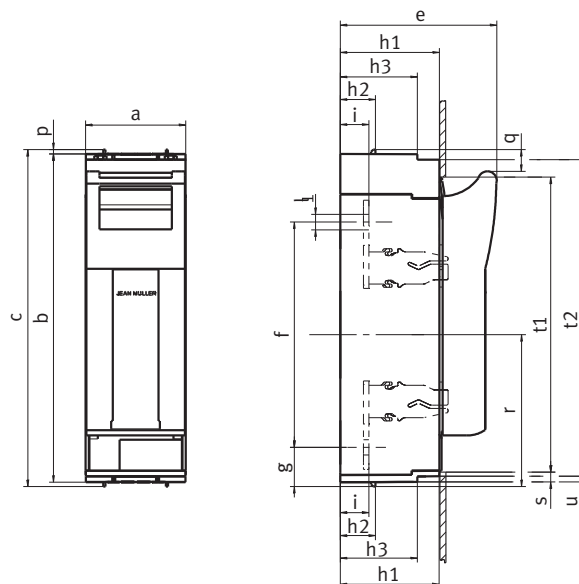
| Type | a | b | c | e | f | g | h1 | h2 | h3 | i | l | p | q | r | s | t1 |
|-----------|-----|-----|-----|----|-----|----|----|----|----|------|----|-----|----|-----|---|-----|
| KETO-00-1 | 50 | 195 | 204 | 84 | 120 | 42 | 45 | 7 | - | 16,5 | ∅9 | 4,5 | 12 | 102 | 5 | 187 |
| KETO-00-2 | 100 | 195 | 204 | 84 | 120 | 42 | 45 | 7 | - | 16,5 | ∅9 | 4,5 | 12 | 102 | 5 | 187 |

Part No.

KETO-1-1/F

Part No.

KETO-3-1/F



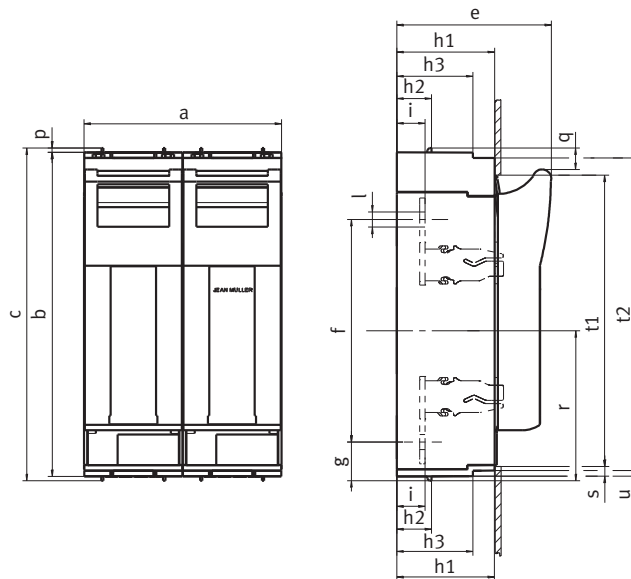
| Type | a | b | c | e | f | g | h1 | h2 | h3 | i | l | p | q | r | s | t1 | t2 | u |
|----------|----|-----|-----|-----|-----|----|----|----|----|----|-------|---|----|-----|----|-----|-----|---|
| KETO-1-1 | 69 | 298 | 306 | 117 | 185 | 46 | 70 | 32 | - | 25 | ∅10,5 | 4 | 19 | 138 | 5 | 272 | - | - |
| KETO-3-1 | 91 | 298 | 306 | 143 | 205 | 36 | 90 | 32 | 70 | 26 | ∅14 | 4 | 19 | 138 | 10 | 268 | 288 | 5 |

Part No.

KETO-1-2/F

Part No.

KETO-3-2/F

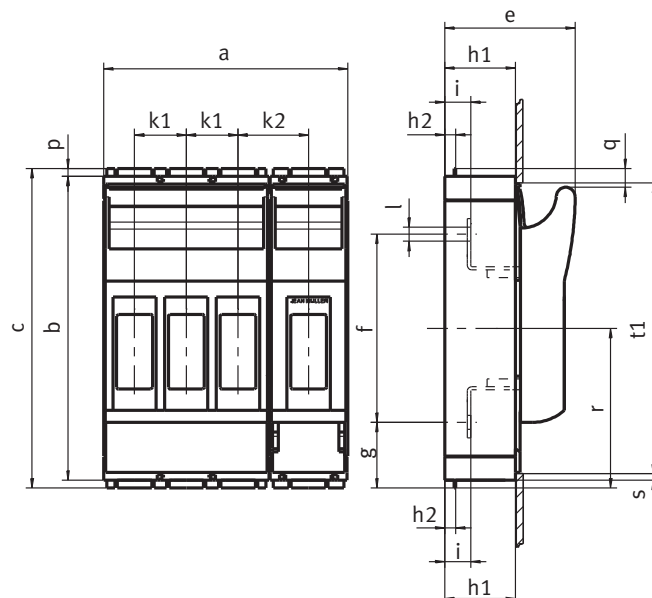


| Type | a | b | c | e | f | g | h1 | h2 | h3 | i | l | p | q | r | s | t1 | t2 | u |
|----------|-----|-----|-----|-----|-----|----|----|----|----|----|-------|---|----|-----|----|-----|-----|---|
| KETO-1-2 | 138 | 298 | 306 | 117 | 185 | 46 | 70 | 32 | - | 25 | Ø10,5 | 4 | 19 | 138 | 5 | 272 | - | - |
| KETO-3-2 | 182 | 298 | 306 | 143 | 205 | 36 | 90 | 32 | 70 | 26 | Ø14 | 4 | 19 | 138 | 10 | 268 | 288 | 5 |

Part No.

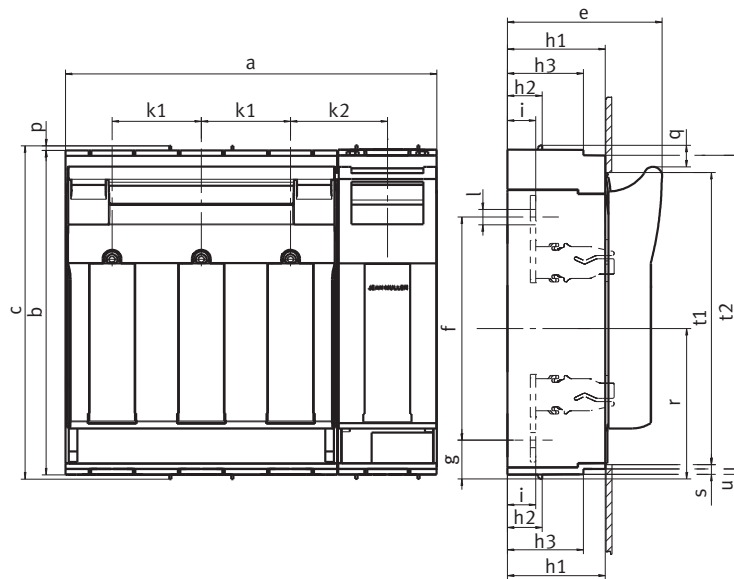
KETO-00-4/F

| Type | a | b | c | e | f | g | h1 | h2 | h3 | k1 | k2 | i | l | p | q | r | s | t1 | t2 | u |
|-----------|-----|-----|-----|----|-----|----|----|----|----|----|----|------|----|-----|----|-----|---|-----|----|---|
| KETO-00-4 | 156 | 195 | 204 | 84 | 120 | 42 | 45 | 7 | - | 33 | 45 | 16,5 | Ø9 | 4,5 | 12 | 102 | 5 | 187 | - | - |

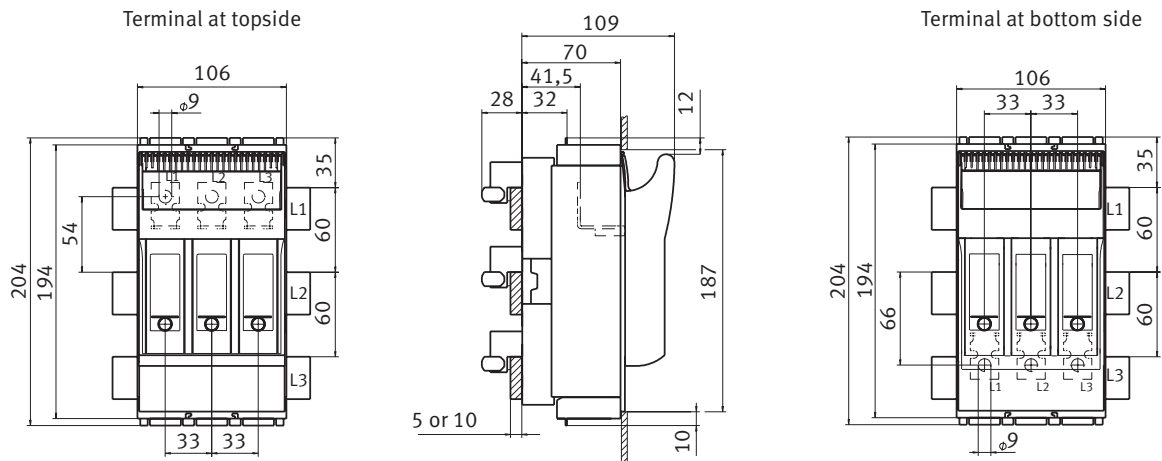


| Part No. | Part No. |
|------------|------------|
| KETO-1-4/F | KETO-3-4/F |

| Type | a | b | c | e | f | g | h1 | h2 | h3 | k1 | k2 | i | l | p | q | r | s | t1 | t2 | u |
|----------|-------|-----|-----|-----|-----|----|----|----|----|----|----|----|-------|---|----|-----|----|-----|-----|---|
| KETO-1-4 | 254 | 298 | 306 | 117 | 185 | 46 | 70 | 32 | - | 58 | 69 | 25 | ∅10,5 | 4 | 19 | 138 | 5 | 272 | - | - |
| KETO-3-4 | 341,5 | 298 | 306 | 143 | 205 | 36 | 90 | 32 | 70 | 82 | 89 | 26 | ∅14 | 4 | 19 | 138 | 10 | 268 | 288 | 5 |

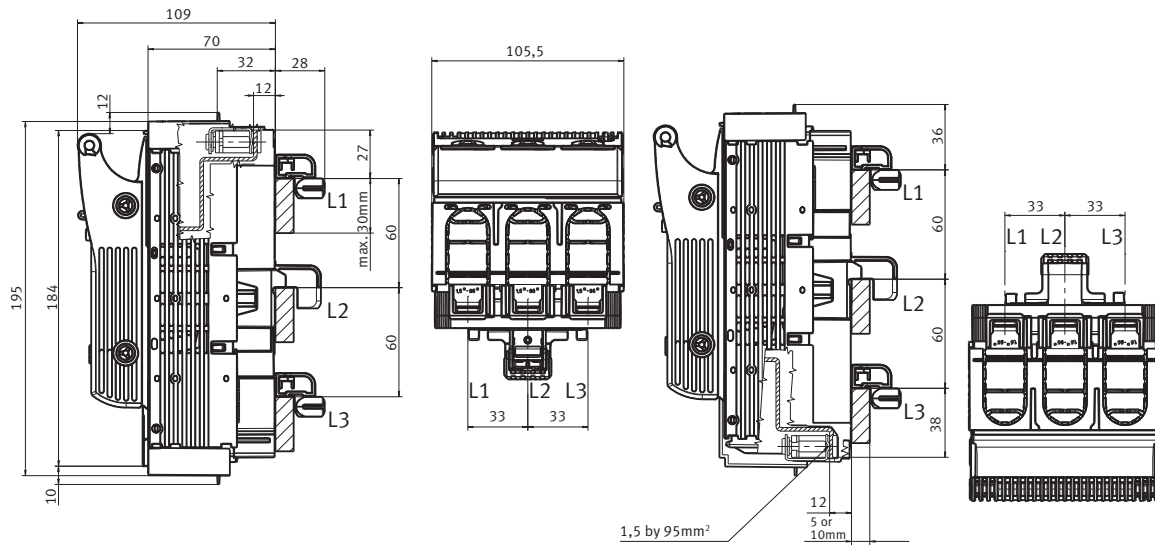


| Part No. |
|---------------------------------|
| KETO-00-3/60/AOU/F/(ESL, EST) |
| KETO-00-3/60/AOU/R95/(ESL, EST) |



Part No.

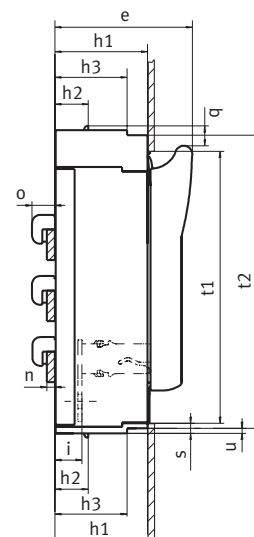
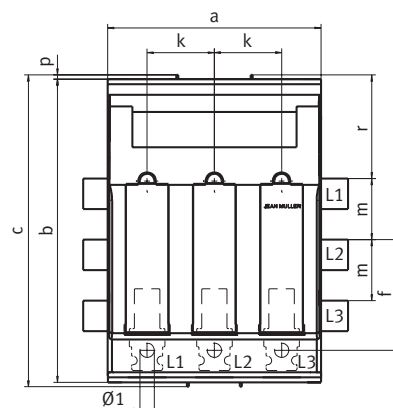
KETO-00-3/60/AOU/R95T/(ESL)



| Part No. | Part No. |
|---------------------------------|---------------------------------|
| KETO-1-3/60/AOU/F/(ESL, EST) | KETO-2-3/60/AOU/R300/(ESL, EST) |
| KETO-1-3/60/AOU/R150/(ESL, EST) | KETO-3-3/60/AOU/F/(ESL, EST) |
| KETO-2-3/60/AOU/F/(ESL, EST) | KETO-3-3/60/AOU/R300/(ESL, EST) |

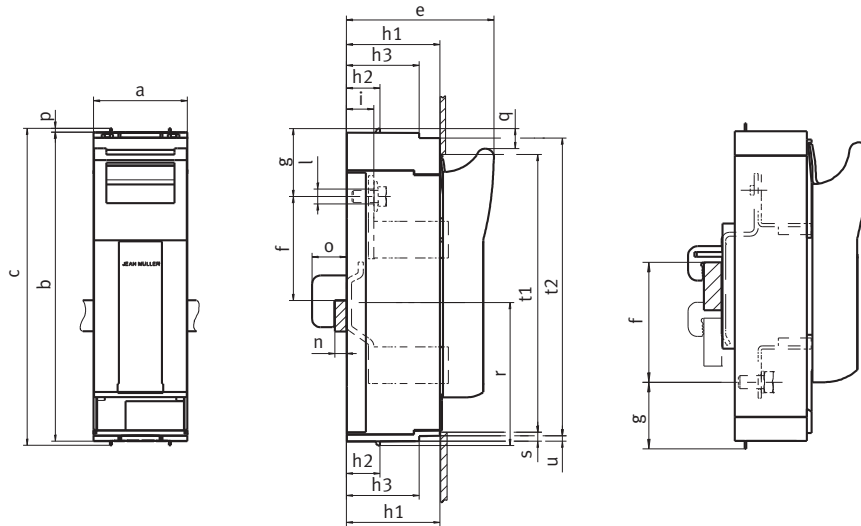
Terminal at bottom side

Terminal at bottom side



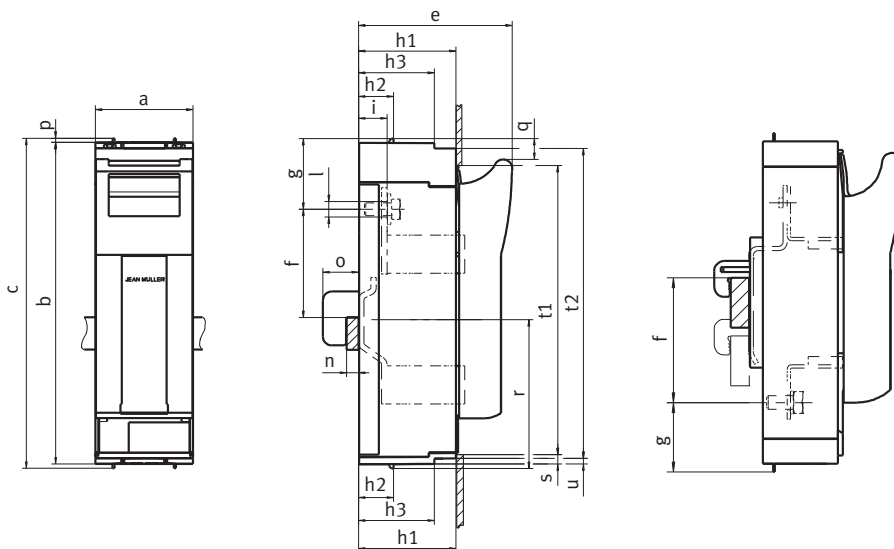
| Type | a | b | c | e | f-Au | a-Ao | h1 | h2 | h3 | i | k | l | m | n | o | p | q | r | s | t1 | t2 | u |
|----------|-----|-----|-----|-----|------|------|----|----|----|------|----|-------|----|------|----|---|----|-----|----|-----|-----|---|
| KETO-1-3 | 184 | 298 | 306 | 117 | 98 | 87 | 70 | 32 | - | 25,5 | 58 | Ø10,5 | 60 | 4-10 | 25 | 4 | 19 | 102 | 5 | 272 | - | - |
| KETO-2-3 | 210 | 298 | 306 | 135 | 109 | 96 | 90 | 32 | 70 | 26,5 | 66 | Ø14 | 60 | 4-10 | 25 | 4 | 19 | 102 | 10 | 268 | 289 | 5 |
| KETO-3-3 | 250 | 298 | 306 | 143 | 109 | 96 | 90 | 32 | 70 | 26,5 | 82 | Ø14 | 60 | 4-10 | 25 | 4 | 19 | 102 | 10 | 268 | 289 | 5 |

| Part No. | Part No. |
|-------------------|----------------------|
| KETO-00-1/AOU/F | KETO-00-1/AOU/F/SK |
| KETO-00-1/AOU/R95 | KETO-00-1/AOU/R95/SK |



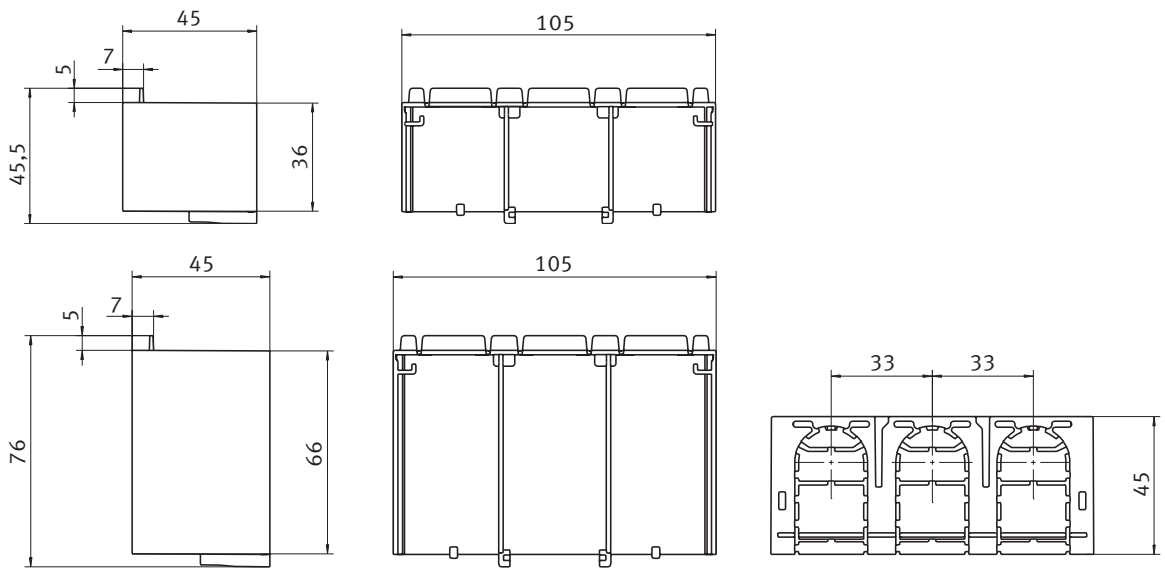
| Type | a | b | c | e | f-Ao | f-Au | g-Ao | g-Au | h1 | h2 | i | l | n | o | p | q | r | s | t1 |
|-----------|----|-----|-----|----|-----------------|-----------------|------|------|----|----|------|----|------|----|-----|----|-----|---|-----|
| KETO-00-1 | 50 | 195 | 204 | 92 | 45,50,55 ... 75 | 75,70,65 ... 45 | 42 | 42 | 53 | 15 | 24,5 | Ø9 | 4-10 | 22 | 4,5 | 12 | 102 | 5 | 187 |

| Part No. | Part No. |
|----------------|-------------------|
| KETO-1-1/AOU/F | KETO-1-1/AOU/F/SK |
| KETO-3-1/AOU/F | KETO-3-1/AOU/F/SK |

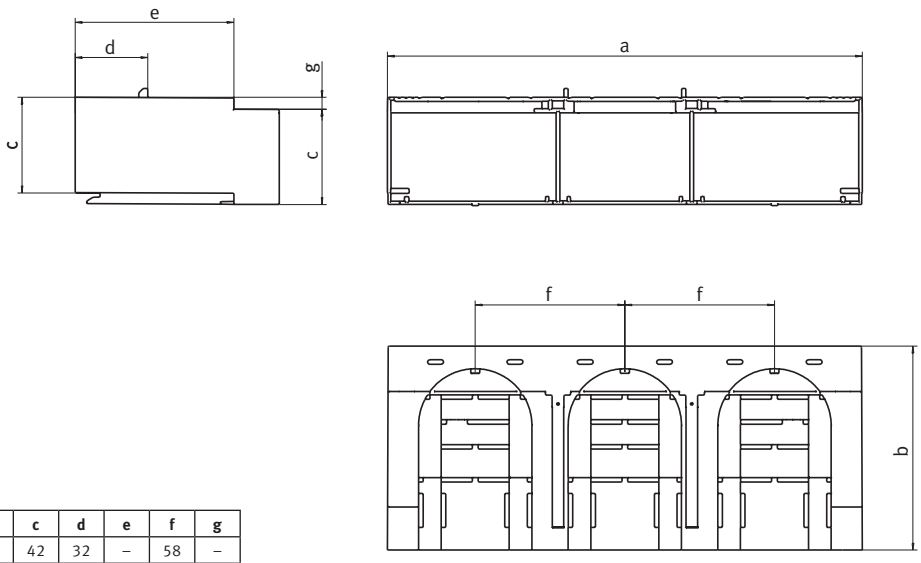


| Type | a | b | c | e | f-Ao | f-Au | g-Ao | g-Au | h1 | h2 | h3 | i | l | n | o | p | q | r | s | t1 | t2 | u |
|----------|----|-----|-----|-----|------|------|------|------|----|----|----|------|-------|------|----|---|----|-----|----|-----|-----|---|
| KETO-1-1 | 69 | 298 | 306 | 117 | 93 | 93 | 76 | 44 | 70 | 32 | - | 25,5 | Ø10,5 | 5-10 | 33 | 4 | 19 | 138 | 5 | 272 | - | - |
| KETO-3-1 | 91 | 298 | 306 | 143 | 100 | 104 | 66 | 36 | 90 | 32 | 70 | 26,5 | Ø14 | 5-10 | 33 | 4 | 19 | 138 | 10 | 268 | 289 | 5 |

| Part No. | Part No. |
|-----------------|-----------------|
| AA-KETO-00-3/36 | AA-KETO-00-3/66 |

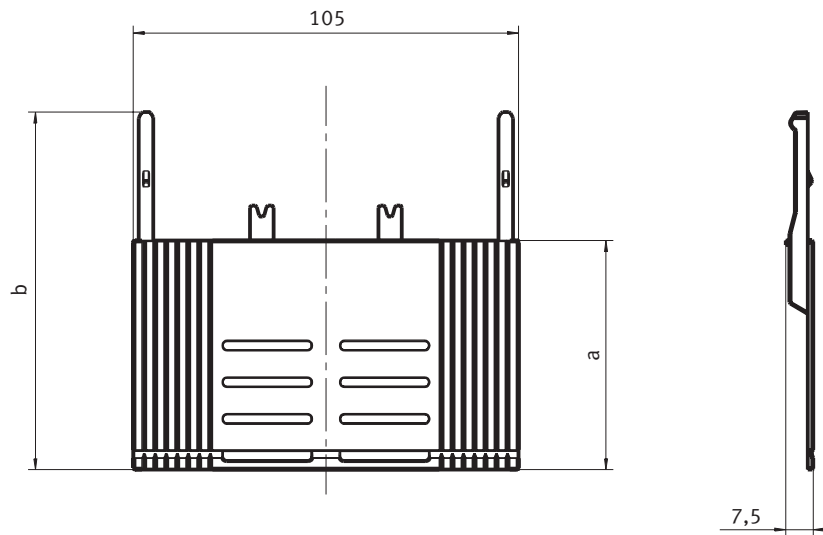


| Part No. |
|-------------|
| AA-KETO-1-3 |
| AA-KETO-2-3 |
| AA-KETO-3-3 |



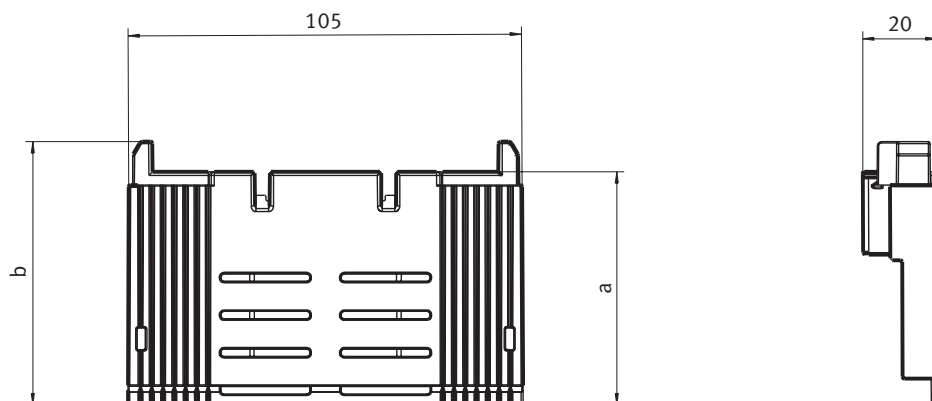
| Type | a | b | c | d | e | f | g |
|-------------|-----|----|----|----|----|----|---|
| AA-KETO-1-3 | 184 | 70 | 42 | 32 | - | 58 | - |
| AA-KETO-2-3 | 210 | 90 | 42 | 32 | 70 | 66 | 5 |
| AA-KETO-3-3 | 250 | 90 | 42 | 32 | 70 | 82 | 5 |

| | |
|---------------------|------------------|
| Part No. | Part No. |
| ARV-KETO-00-3/39-34 | ARV-KETO-00-3/32 |



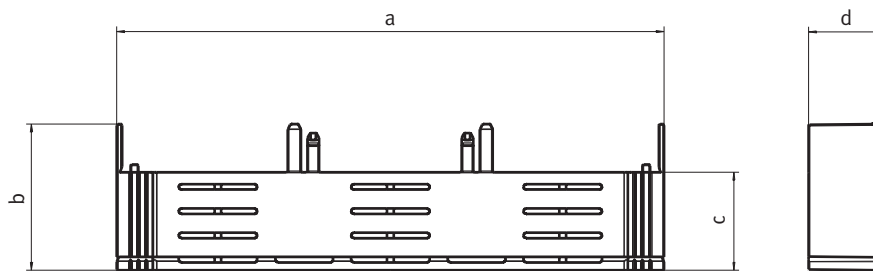
| Type | a | b |
|---------------------|------|------|
| ARV-KETO-00-3/39-34 | 62,5 | 97,5 |
| ARV-KETO-00-3/32 | 55,5 | 90,5 |

| | |
|---------------------|------------------|
| Part No. | Part No. |
| UGS-KETO-00-3/39-34 | UGS-KETO-00-3/32 |



| Type | a | b |
|---------------------|----|----|
| UGS-KETO-00-3/39-34 | 62 | 70 |
| UGS-KETO-00-3/32 | 55 | 63 |

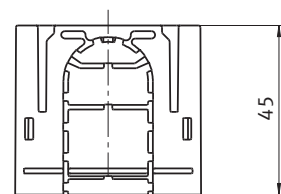
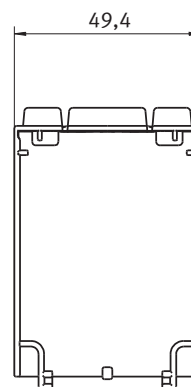
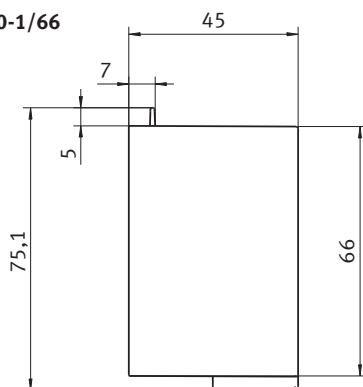
| Part No. | Part No. |
|--------------------|--------------------|
| UGS-KETO-1-3/32 | UGS-KETO-2-3/39-34 |
| UGS-KETO-1-3/39-34 | UGS-KETO-3-3/32 |
| UGS-KETO-2-3/32 | UGS-KETO-3-3/39-34 |



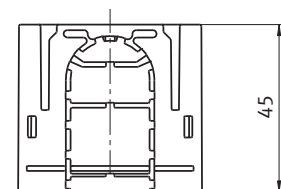
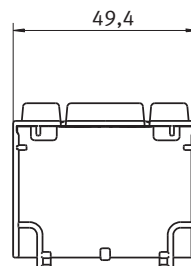
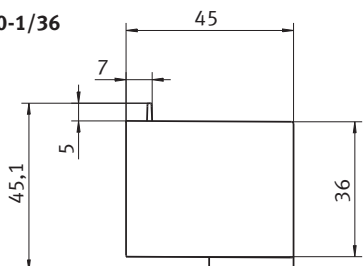
| Type | a | b | c | d |
|--------------------|-----|------|------|------|
| UGS-KETO-1-3/32 | 184 | 51,5 | 30,5 | 16 |
| UGS-KETO-1-3/39-34 | 184 | 58,5 | 37,5 | 16 |
| UGS-KETO-2-3/32 | 210 | 49 | 30,5 | 28,5 |
| UGS-KETO-2-3/39-34 | 210 | 56 | 37,5 | 28,5 |
| UGS-KETO-3-3/32 | 250 | 49 | 30,5 | 28,5 |
| UGS-KETO-3-3/39-34 | 250 | 56 | 37,5 | 28,5 |

| Part No. | Part No. |
|-----------------|-----------------|
| AA-KETO-00-1/66 | AA-KETO-00-1/36 |

AA-KETO-00-1/66

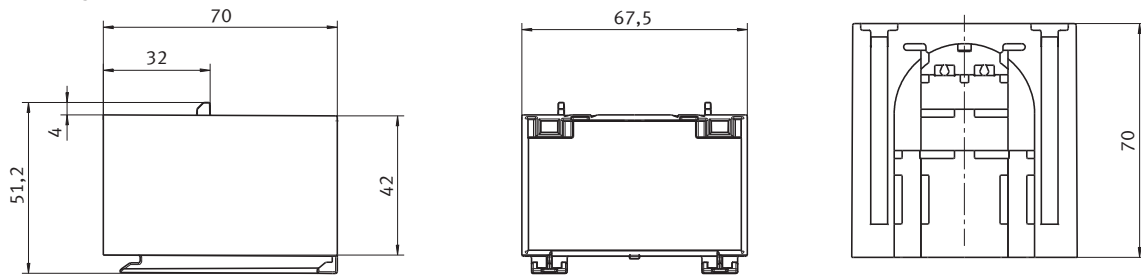


AA-KETO-00-1/36

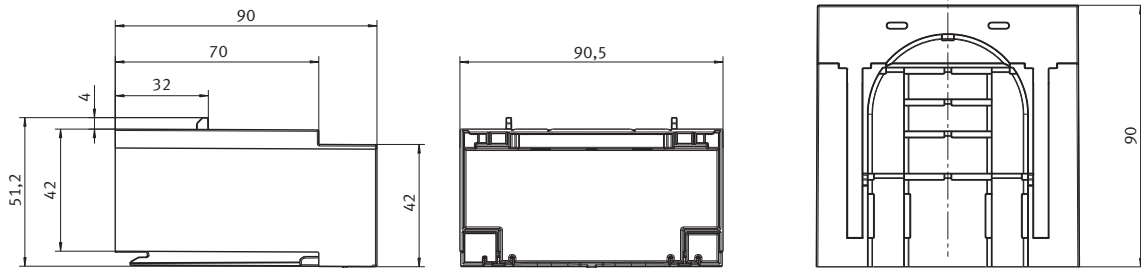


| Part No. | Part No. |
|-------------|-------------|
| AA-KETO-1-1 | AA-KETO-3-1 |

AA-KETO-1-1



AA-KETO-3-1



Horizontal fuse disconnects



Horizontal fuse disconnects

Horizontal fuse Disconnects are used in building installations, switchgear and controlgear as well as in power utility networks. The contact system enables safe load break operation using the fuse-links as moving contacts.

The product is safe against finger-touch in closed position and provides a safe and visible isolating distance in open position. Different versions for baseplate mounting, DIN-rail or busbar mounting are available to fit a variety of applications.

Product definition

Horizontal fuse disconnect according to EN60947-3 are single-pole or multipole NH fuse-bases arranged horizontally and equipped with a common fuse-carrier.

Incoming and outgoing contacts are accessible from outside and fitted with terminals for the connection of cables or bars. The feeder side of fuse-switches for busbar mounting is designed to provide mechanical and electrical connection to standardised busbar systems.

Applications

Its compact design makes the horizontal fuse disconnect a perfect feeder switch in low voltage distribution panels, as well as a protective device mounted on standardized busbar systems having 40mm, 60mm or 100mm busbar distance or for meter protection in domestic buildings. Single-pole and two-pole fuse-switches are used for UPS battery protection or in telecom power supplies e.g. 4-pole fuse-switches can be used to disconnect secondary power generators from public networks.

Product advantages

JEAN MÜLLER offers NH fuse-switches in sizes 000 and 4a. The switch size 4a is available in single-pole up to 4-pole design. Executions for baseplate mounting as well as for busbar mounting are available in all sizes. Thanks to the wide product range, tailor-made solutions with respect to current rating, voltage rating and mode of installation can be found for nearly every application.

Insulation parts

Similar to the vertical fuse disconnects all products from size 1 and above, contain only thermosetting materials for insulators supporting live parts because of their high dimensional stability and superior resistance to tracking.

Current carrying parts

Products having rated currents of 400A and above, are equipped with Q-contacts for quasi-independent operation. Q-contacts ensure high short-circuit capability up to 80kA and safe load-break operation. Particularly NH fuse-switches for busbar mounting without separate adapters exhibit very low values for power loss due to their short connecting bars.

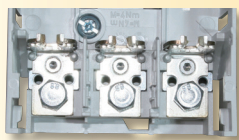
Versions/Accessories

Monitoring components allow remote monitoring of switch-position as well as of fuse-links. Microswitches or electronic components will be used for fuse monitoring, depending on the application.

Special executions enable size 00 fuse-switches up to 800A rated current in combination with the corresponding fuse-links, thus providing significant savings in space.

1-pole and 3-pole disconnectors up to 1200V, protected against direct access to live parts and safe in operation, provide electric protection of solar power installations.

Horizontal fuse disconnects for panel mounting



General-purpose terminal

- All sizes are equipped with general-purpose flat terminals for cable lugs and direct terminal clamps

Reliable overreach protection

- Optimum touch protection including when feeding from bottom side by retrofit overreach protector

High short-circuit capability

- Fuse protected conditional short-circuit current up to 80kA
- 35kA/1s short-circuit withstand when equipped with solid links

Terminal covers (sold separately) are required for all disconnects (refer to page 86)

1 pole horizontal fuse disconnects

| Size | For Fuses | Current Rating (A) | Terminal | Connection Capacity(mm ²) | Part No. |
|------|-----------|--------------------|----------------------|---------------------------------------|----------------|
| 000 | DIN 000 | 100 | Flat terminal M8 | max. 95 | LTL000-1/9 |
| 4A | DIN4A | 1250 | Flat terminal M16 | max. 400 | LTL4A-1/9/1250 |
| 4A | DIN4A | 1600 | Flat terminal 2x M12 | | LTL4A-1/9/1600 |

3 pole and 4 pole horizontal fuse disconnects

| Size | For Fuses | Current Rating (A) | Terminal | Connection Capacity(mm ²) | Part No. |
|------|-----------|--------------------|---------------------|---------------------------------------|------------------|
| 000 | DIN000 | 160 | Flat terminal M8 | max. 95 | LTL000-3/9 |
| 4A | DIN4A | 1250 | Flat terminal 1xM16 | max. 400 | LTL4A-3x3/9/1250 |
| 4A | DIN4A | 1600 | Flat terminal 2xM12 | | LTL4A-3x3/9/1600 |

Note: for sizes 00 (160A), 1 (250A), 2 (400A), and 3 (630A), refer Keto.

Horizontal fuse disconnects for busbar mounting



Adaptor free installation

- Small installation depth and direct busbar connection ensure low power loss

Compact size 000 fuse-switch

- Space saving 63mm width
- Easy snap-on technique without screws
- For busbars having 5mm or 10mm thickness

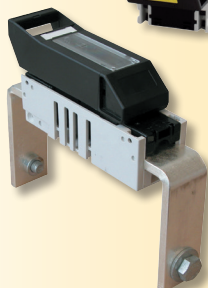
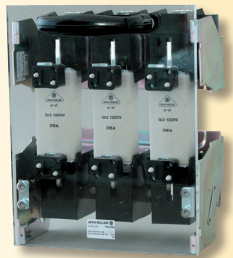
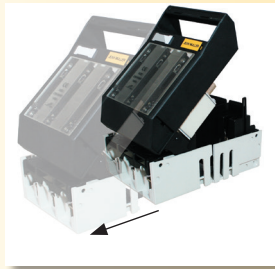
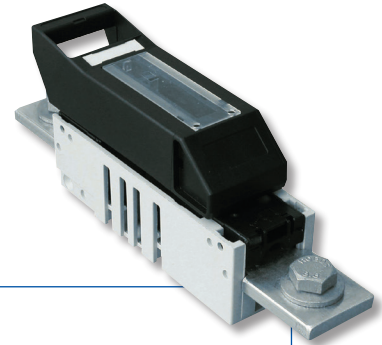
Terminal covers (sold separately) are required for all disconnects (refer to page 86)

3 pole horizontal fuse disconnects - 60mm centres busbar mount

| Size | For Fuses | Current Rating (A) | Cable Connection | Connection Capacity(mm ²) | Connection to Busbars | Part No. |
|------|-----------|--------------------|------------------|---------------------------------------|-----------------------|----------------------------|
| 000 | DIN000 | 100 | Bottom clamp | 1.5 - 50 | Snap-on | LTL000-3/9/60/ AU/F57/5 |

Note: for sizes 00 (160A), 1 (250A), 2 (400A), and 3 (630A), refer Keto.

Horizontal fuse disconnects - Special versions



Fuse-switch-disconnectors for baseplate monitoring

- For fuse-protected feeding of plug-in modules
- Fast module changing without cable disconnecting

Disconnectors rated 1000V and above

- Proven technology for reliable operation of switchgear rated 1000V and above

Space-saving protection of DC-systems up to 1000V

- 1-pole disconnecter for safe feeding of photovoltaic installations

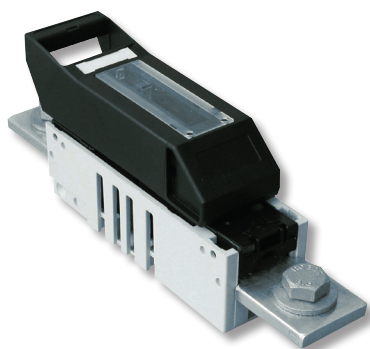
Compact switching devices up to DC 250V rating

- Minimum space required for fuse protection up to 800A with LTT size 00
- Versions for baseplate and busbar mounting as well as feeding on rear side

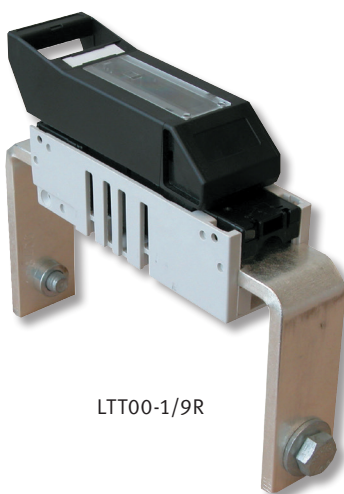
Terminal covers (sold separately) are required for all disconnects (refer to page 86)

1 pole horizontal fuse disconnects for telecom supplies up to 250V DC base mounting

| Size | For Fuses | Current Rating (A) | Connection | Terminal | Part No. |
|------|-----------|--------------------|--------------------------|-------------------|------------|
| 00 | DC | 800 | Top and bottom | Flat Terminal M12 | LTT00-1/9 |
| 00 | DC | 800 | Rear | Flat Terminal M12 | LTT00-1/9R |
| 00 | DC | 800 | Top and Bottom 2 Pole | Flat Terminal M12 | LTT00-2/9 |



LTT00-1/9




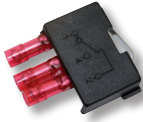






LTT00-1/9R



LTT00-2/9

Accessories

| Description | Size | Part No. |
|--|--------|-----------------|
| Clamp terminal | | |
|  1,5-70 mm ² Cu | LTL00 | S00 |
| 25-150 mm ² Cu | LTL1 | S1 |
| 25-240 mm ² Cu | LTL2 | S2 |
| Bar 11 x 21 | LTL3 | S3 |
| Prism clamp | | |
|  10-70 mm ² Al/Cu | LTL00 | P0070 |
| 70-150 mm ² Al/Cu | LTL1 | P1 |
| 120-240 mm ² Al/Cu | LTL2 | P2 |
| 120-300 mm ² Al/Cu | LTL3 | P3 |
| Prism clamp for 2-conductors connection | | |
|  2 x 70-150 mm ² Al/Cu | LTL1 | P12 |
| 2 x 120-240 mm ² Al/Cu | LTL2 | P22 |
| 2 x 120-300 mm ² Al/Cu | LTL3 | P32 |
| Switch position indicator | | |
|  1- and 3- pole | LTL00 | EV-LTL00 |
| 1- and 2-pole | LTL1-3 | EV-LTL123-1 |
| 3-pole | LTL1-3 | EV-LTL123-3 |
| Switch position indicator or fuse blown indicating microswitch | | |
|  1- and 3- pole | LTL4a | K/EV-LTL/SLTL4A |
| Fuse blown indicating microswitch (use with striker fuses) | | |
|  1-pole | LTL00 | K-LTL00-1/H |
| 1-pole | LTL1 | K-LTL1-1/H |
| 1-pole | LTL3 | K-LTL3-1/H |
| 3-pole | LTL00 | K-LTL00-3/H |
| 3-pole | LTL1 | K-LTL1-3/H |
| 3-pole | LTL2 | K-LTL2-3/H |
| 3-pole | LTL3 | K-LTL3-3/H |
| Protective cover, 3-pole, baseplate mounting | | |
|  Top and bottom side | LTL000 | GOU-LTL000-3 |
| Top and bottom side | LTL4 | GOU-LTL4-3 |
| DIN Rail Mounting Kit | | |
|  For mounting of NH fuse-switch-disconnectors on DIN rails acc. to EN 50022 | LTL00 | Z-LTL00-3 |

TECHNICAL INFORMATION

LTL NH fuse switch-disconnector specification

| | | Unit | LTL000 | LTL000 Busbar | LTL4a-1250 | LTL4a-1600 |
|--|-------------------|-----------------|-------------------------------------|------------------|------------|------------|
| Accord to standard | | | EN60947-3 | | | |
| For NH fuse link | | | 000 | 000 | 4a | |
| Rated operational Voltage | | V | AC690 DC220 | AC500 DC220 | AC690 | AC690 |
| Rated operational Current | | A | 160 | 125 | 1250 | 1600 |
| Thermal rating with fuse links | | A | 160 | 125 | 1250 | 1600 |
| Thermal rating with solid links | | A | 160 | 160 | 1250 | 1600 |
| Rated frequency | | Hz | 40-60 | | | |
| Rated AC insulation | | V | AC690 | AC500 | AC800 | |
| Power loss at max current not including fuse or link | | W | 7 | 18 | 32 | 52 |
| Power loss at 80% max current not including fuse or link | | W | 4.5 | 11.5 | 20.5 | 33.3 |
| Rated withstand voltage | | kV | 8 | | | |
| Utilisation category | AC-22B 400V | | 160A | | | |
| | AC-22B 500V | | 100A | 125A | 1250A | 1600A |
| | AC-22B 690V | | | | | |
| | AC-21B 690V | | 125A | | 1000A | 1000A |
| | DC-21B 440V | | | | | |
| | DC-22B 220V | | | 100A | | |
| No switching under load | DC-20B 1000V | | | | 1250A | 1600A |
| Rated conditional short circuit current | | kA | 63 | 50 | 35 | 35 |
| Max. power loss per fuse link | | W | 10 | 8 | 110 | 164 |
| Flat Bolt terminal | Bolt Diameter | | M8 | | M16 | 2xM12 |
| | Cable lug | mm ² | 1x10-70 | | 400 | 400 |
| | Flat bar | mm | | | 80x30 | 80x30 |
| | Tightening Torque | Nm | 12-15 | | 50-60 | 35-40 |
| Clamp S type copper | | | S000-16 S000-50 | F50 | | |
| Cu | Cross Section | mm ² | 6-16 25-50 | 1.5-50 | | |
| Tightening torque | | Nm | 2.6 | 2.6 | | |
| Clamp P type copper & aluminium | Single | | P000-35 P000-70 | | | |
| | Double | | P000-2-35 P000-2-50 | | | |
| Cu/Al | Cross section | mm ² | 10-35 50-70 2x25-35Cu 2x50 Cu | | | |
| | Double Clamp | | | | | |
| Tightening torque | | Nm | 4.5 | | | |
| Front side IP | Closed Position | | IP20 | | | |
| | Open position | | IP10 | | | |
| Operating temperature | | C | -25/+70 | | | |
| Actuation | | | Dependent manual operation | | | |
| Mounting position | | | Vertical or horizontal | | | |
| Altitude | | M | Up to 2000 | | | |
| Pollution degree | | | 3 | | | |
| Overvoltage category | | | III | | | |

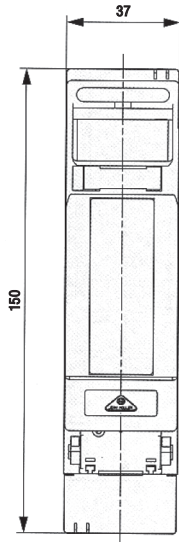
| Accessories - Micro switches | | | |
|--|---|-------------------------------------|---|
| Switch Position Indicator Fuse Blown Position Indicator | | EV-LT00, EV-LTL123-1 K-LTL**-1/H | EV-LTL123-3, EV-LTL4A K-LTL**-3/H, K-LTL4A |
| Rated Current @ 250V AC | A | 5 | 5 |
| Rated Current @ 110V DC | A | 0.35 | 0.35 |

| Terminal with connecting lug | | | | | | |
|------------------------------|--------------------------------|-----------------|--------------|---------------|-----------|------------------------|
| | AL/Cu Cable [mm ²] | | | | Allen Key | Tightening Torque (Nm) |
| | Rounded Stranded | Sector Stranded | Round Solid | Sector Solid | | |
| K2G/A | 50-185 | 70-240 | 50-185 | 70-240 | 6 mm | 40 |
| KM2G/AF3040 | 25-300 | 25-240 | 25-150 | 25-240 | 6 mm | 32 |
| K2HG/2/AF30 | 2 x 25-120 | 2 x 35-120 | 2 x 25-50 | 2 x 50-120 | 6 mm | 40 |
| KV2HG/2/AF30 | 2 x 12-185 | 2 x 12-185 | - | - | 6 mm | 40 |

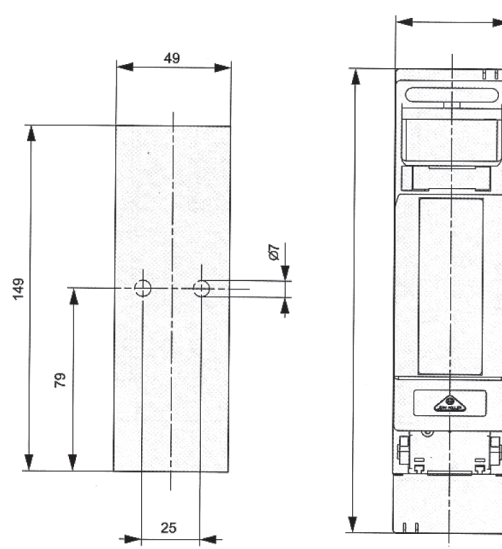
| Fuse switches DIN-Rail mount | | | |
|---|--|--|--------------------------|
| | | WH-AMB1/10 WH-AMB3/10 | WH-AMB1/22 WH-AMB3/22 |
| Rated Current @ 690V AC @ 440V DC | | 32A 32A | 125A 125A |
| Application Category | | AC-22B (400V) | AC-20B (690V) |
| Conditional Rated Short Circuit Current | | 50kA (400V) | 100kA (500V) |
| Terminal Capacity | | 1x 0.75 - 25mm ² 2x 0.75 - 10mm ² | 1x 4 - 50mm ² |

DIMENSIONS

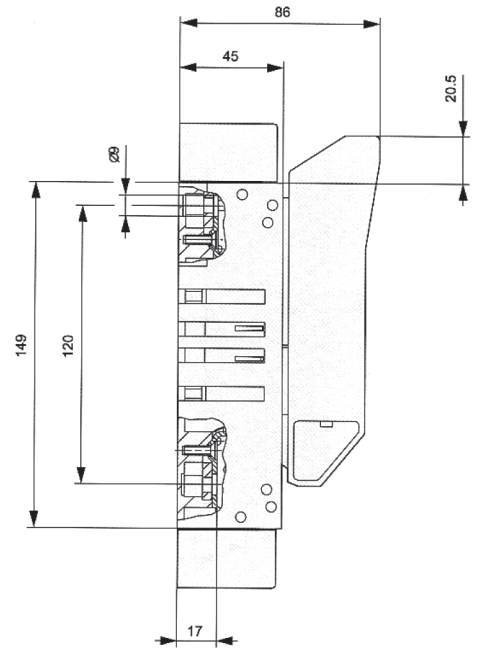
LTL000-1/9



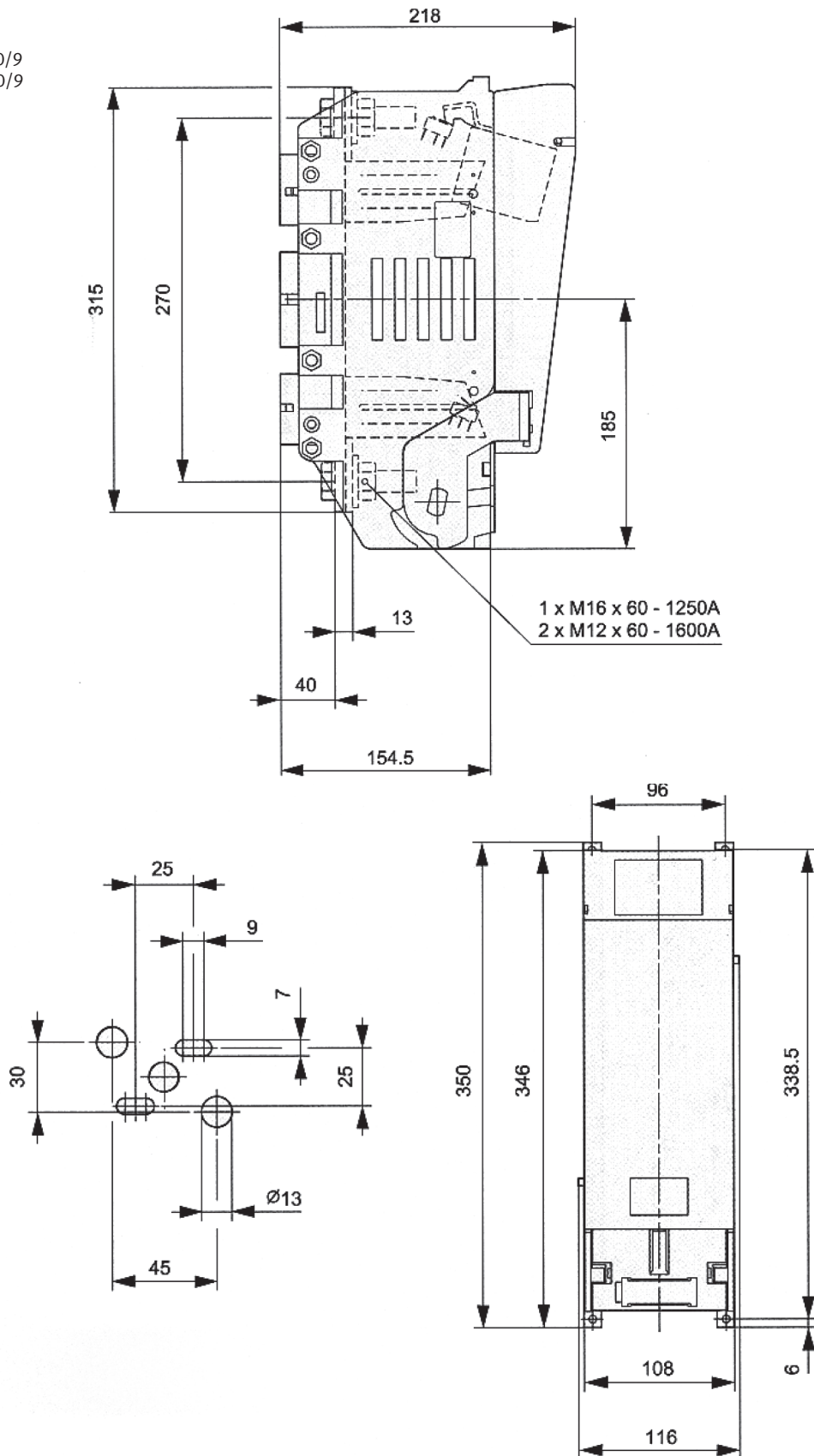
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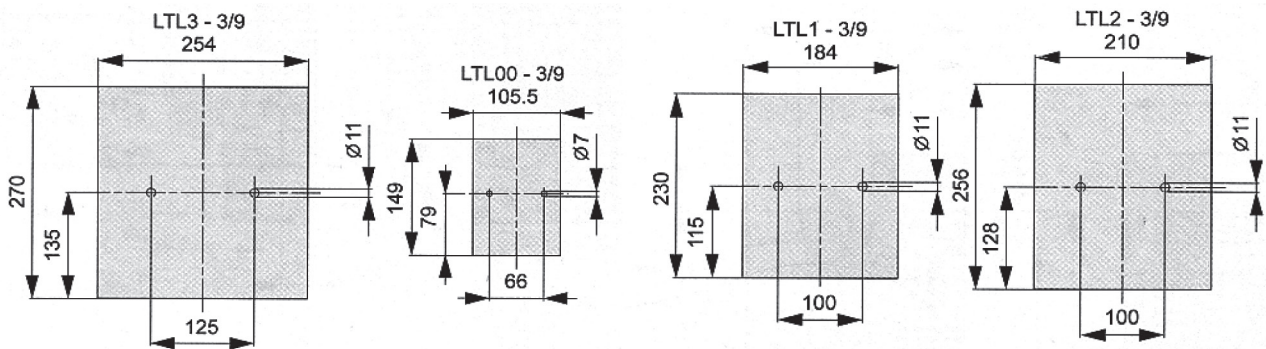
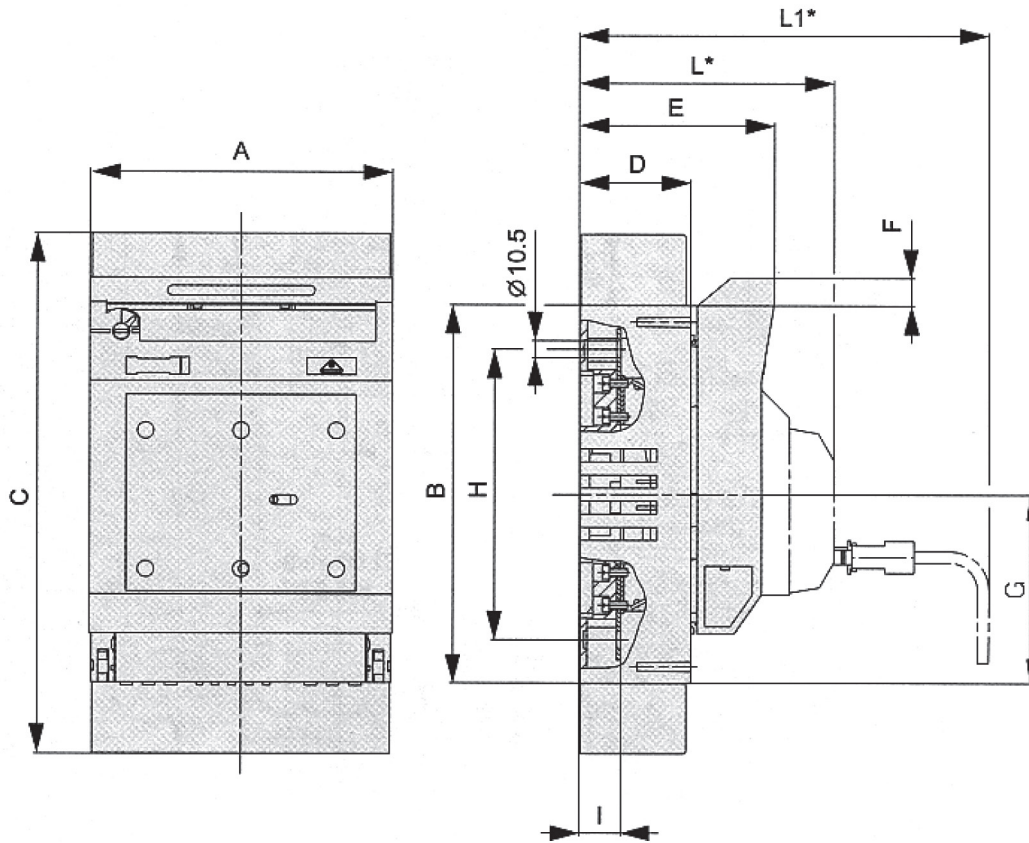
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LTL4a-1/1250/9
LTL4a-1/1600/9

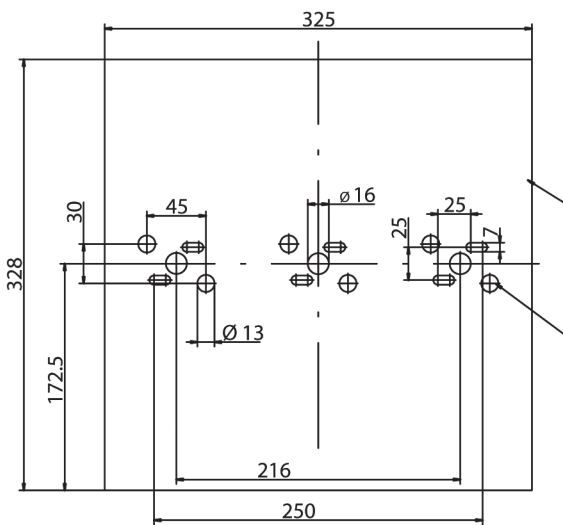
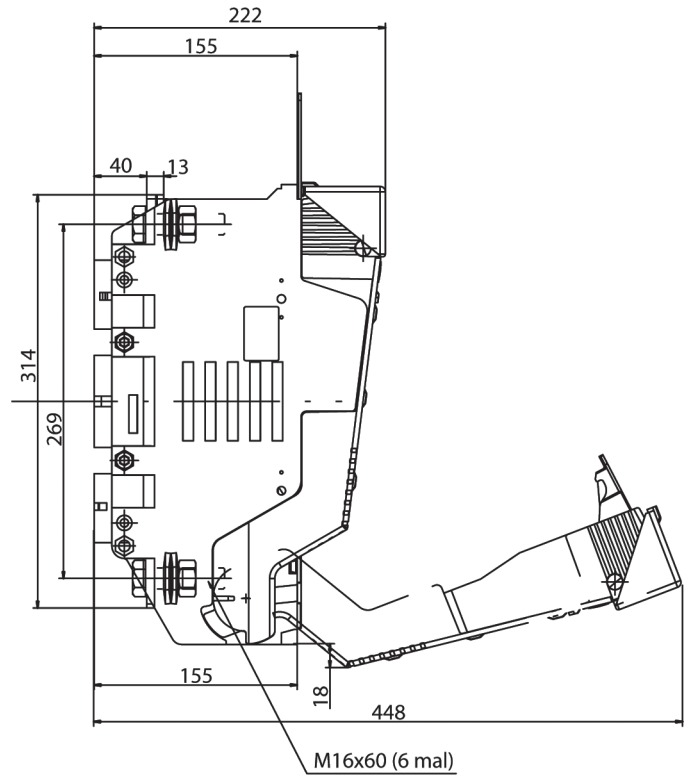
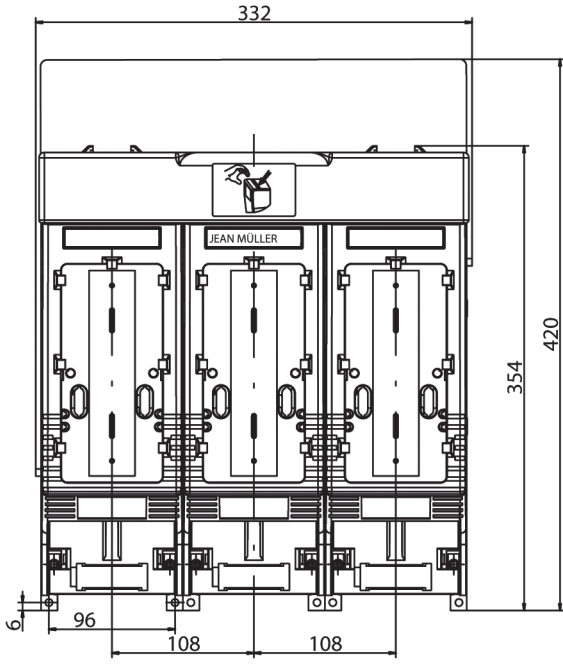


LTL00-3/9
LTL1-3/9
LTL2-3/9
LTL3-3/9



| | A | B | C | D | E | F | G | H | I |
|------------|-------|-----|-----|----|------|------|------|-------|------|
| LTL000-3/9 | 89 | 139 | 150 | 48 | 78.5 | 0 | 70 | 112 | 15 |
| LTL00-3/9 | 105.5 | 149 | 200 | 45 | 86 | 20.5 | 74.5 | 120 | 17 |
| LTL1-3/9 | 184 | 230 | 317 | 68 | 119 | 16.5 | 115 | 177 | 25 |
| LTL2-3/9 | 210 | 256 | 397 | 81 | 133 | 16.5 | 128 | 205 | 25 |
| LTL3-3/9 | 254 | 270 | 430 | 96 | 147 | 9 | 135 | 220.5 | 30.5 |

LTL4A-3X3/1250/9
LTL4A-3X3/1600/9



LTL000-3/9/60/F57/F5

