RJ45 CONNECTORS
up to 10 Gbit/s
## RJ45 connector Cat. 6 Class EA

### CJK 8FT technical data:
- RJ45 female insert, Cat. 6 Class EA
- shielding housing: zinc diecast
- housing finish: nickel-plated
- current carrying capacity at 50 °C: 1A
- adequate for Power over Ethernet: PoE according to IEEE 802.3af
- connectors: IEC 60603-7-5
- adequate for 10 Gigabit Ethernet: 10 Gigabit Ethernet acc. to IEEE 802.3an
- custom-designed cabling systems: PROFINET Installation Guideline
- generic cabling systems: ANSI/TIA/EIA-568-C.2
  - ISO/IEC 11801
  - EN50173-1
  - ISO/IEC 24702
  - EN 61918
- class EA (channel): ISO/IEC 11801; EN 50173-1

### CX 8 J6M technical data:
- RJ45 male crimp connectors Cat. 6A
- Cu-conductor diameter
  - solid: 0.40 - 0.51 mm (AWG 26/1 - 24/1)
  - stranded: 0.46 - 0.61 mm (AWG 27/7 - 24/7)
- insulation diameter: 0.85 - 1.05 mm
- cable diameter: 5.0 - 7.0 mm
- connectors: IEC 60603-7-5
- 10 Gigabit Ethernet acc. to IEEE 802.3an:
  - category 6A: ISO/IEC 11801; EN 50173-1
  - category 6A: ANSI/TIA/EIA-568-C.2
  - wrenches pliers for CX 8 J6IM: CJPW K
  - 10 Gigabit Ethernet acc. to IEEE 802.3an:
    - category 6A: ISO/IEC 11801; DIN EN 50173-1
    - category 6A: ANSI/TIA/EIA-568-C.2
    - custom-designed cabling systems:
      - according to PROFINET Installation Guideline

### CJK 8IM technical data:
- RJ45 male IDC connectors Cat. 6 Class EA
- Cu-conductor diameter
  - solid: 0.41 - 0.64 mm (AWG 26/1 - 22/1)
  - stranded: 0.48 - 0.76 mm (AWG 26/7 - 22/7)
- insulation diameter: 0.85 - 1.6 mm
- cable diameter: 5.5 - 8.5 mm
- connectors: IEC 60603-7-5
- category 6A: ISO/IEC 11801; DIN EN 50173-1
- wrenches pliers for CX 8 J6IM: CJPZ T
- 10 Gigabit Ethernet acc. to IEEE 802.3an:
  - category 6A: ISO/IEC 11801; EN 50173-1
  - category 6A: ANSI/TIA/EIA-568-C.2

### Adapter types:
- CJK 8FT - RJ45 female connectors, CJK 8IMT - RJ45 male IDC connectors, CJK 8IMT - RJ45 female-female connectors

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**How to use CR KC coding pins (cannot be used with IP68 enclosures)**

1. Insert the CR KC coding pin into the corresponding hole on the female connector.
2. Push the CR KC coding pin fully into the hole.
3. Ensure the pin is seated securely.
4. Repeat steps 1-3 for other connectors as needed.

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**Dimensions**:
- CJK 8FT: 21 x 21 mm
- CJK 8IMT: 21 x 21 mm
- CX 8 J6M: 21 x 21 mm
- CX 8 J6IM: 21 x 21 mm

**Characteristics**:
- 1A 50V 0,8kV 3
- insulation resistance: ≥ 10 GΩ
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- temperature range: from -40 °C to +70 °C
- we recommend to fix the cable with cable tie

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**Enclosures**:
- dimensions shown are not binding and may be changed without notice
- characteristics according to EN 61984:
  1A 50V 0,8kV 3
  - insulation resistance: ≥ 10 GΩ
  - made of self-extinguishing thermoplastic resin UL 94 V0
  - mechanical life: ≥ 500 cycles
  - temperature range: from -40 °C to +70 °C
  - we recommend to fix the cable with cable tie

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**Reference**:
- refer to catalogue page CN.16

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**Models**:
- CJK 8FT
- CJK 8MT
- CJK 8IMT
- CX 8 J6M
- CX 8 J6IM

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**Technical specifications**:
- Insulating type
- Metallic type
- IP68

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**New**
CJ adaptors

RJ45 IDC connector Cat. 6 Class EA

adapters for RJ45 male connectors, RJ45 female - cable IDC connectors

RJ45 male connectors, IDC termination

- socket insert with 1 RJ45 female connector, - plug insert for 1 RJ45 male IDC connector, to be ordered separately

- RJ45 male IDC connector, 8 data contacts

CJK 8IFT technical data:
- RJ45 female insert, Cat. 6A
- shielding housing: zinc diecast
- housing finish: nickel-plated
- current carrying capacity at 50 °C: 1A
- adequate for Power over Ethernet: PoE according to IEEE 802.3af
- connectors: IEC 60603-7-5
- adequate for 10 Gigabit Ethernet: 10 Gigabit Ethernet acc. to IEEE 802.3an
- custom-designed cabling systems: PROFINET Installation Guideline
- generic cabling systems: ANSI/TIA/EIA-568-C.2, ISO/IEC 11801, EN50173-1
- category 6A: ISO/IEC 11801; DIN EN 50173-1

CX 8 J6IM technical data:
- RJ45 male IDC connectors Cat. 6 Class EA
- Cu-conductor diameter: solid: 0,41 - 0,64 mm (AWG 26/1 - 22/1) stranded: 0,48 - 0,76 mm (AWG 26/7 - 22/7)
- insulation diameter: 0,85 - 1,6 mm
- cable diameter: 5,5 - 8,5 mm
- connectors: IEC 60603-7-5
- category 6a: ISO/IEC 11801; DIN EN 50173-1
- wrences pliers for CX8 J6IM: CJPW K
- 10 Gigabit Ethernet acc. to IEEE 802.3an: adequate for 10 Gigabit Ethernet
- class EA: ISO/IEC 11801; EN 50173-1
- category 6: ANSI/TIA/EIA-568-C.2
- custom-designed cabling systems: according to PROFINET Installation Guideline

dimensions in mm

CJK 8IFT

dimensions in mm

CX 8 J6IM (can be used with CJK 8IMT)

- characteristics according to EN 61984:
  1A 50V 0,8kV 3
- insulation resistance: ≥ 10 GΩ
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life: ≥ 500 cycles
- temperature range: from -40 °C to +70 °C
- we recommend to fix the cable with cable tie

How to use CR KC coding pins (cannot be used with IP68 enclosures)

dimensions shown are not binding and may be changed without notice
RJ45 CONNECTORS

Field-assembly without any tools

**CJ 8 V6iM**
Full-metal RJ45 field-assembly plug featuring four-step cable relief.

**CJ 8 V6iMP**
Full-metal RJ45 field-assembly plug featuring metallic cable strain relief for cable outer diameter up to 10 mm.

**CJ 8 VA6iM**
Full-metal RJ45 field-assembly plug featuring right-angle cable entry from four directions and metallic cable strain relief. Most suited in confined spaces like switch or control cabinets.
### RJ45 IPC connector Cat. 6 Class E_A

#### RJ45 male connectors, crimp IPC termination

<table>
<thead>
<tr>
<th>RJ45 male connectors, crimp IPC termination</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="RJ45 male connectors, crimp IPC termination" /></td>
</tr>
</tbody>
</table>

#### RJ45 male connectors, IPC termination cable entry in 4 different directions

<table>
<thead>
<tr>
<th>RJ45 male connectors, IPC termination cable entry in 4 different directions</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="RJ45 male connectors, IPC termination cable entry in 4 different directions" /></td>
</tr>
</tbody>
</table>

### Description

- **Part No.**
  - **CJ 8 V6IM**
  - **CJ 8 V61MP**
  - **CJ 8 VA6IM**

#### CJ 8 V61M technical data:
- Full-metal RJ45 field-assembly plug featuring four-step cable relief.
- Most suited for data center, enterprise and residential cabling.
- Category 6A acc. to ISO/IEC 11801
- Plug: IEC 60603-7-51 compliant
- Life: ≥ 750 mating cycles
- Shielding housing material: die-cast nickel-plated zinc
- Cu conductor diameter:
  - Solid 0,51 - 0,64 mm (AWG 24/1 - 22/1)
  - Stranded 0,46 - 0,76 mm (AWG 27/7 - 22/7)
  - Stranded 0,61 - 0,78 mm (AWG 24/19 - 22/19)
- Core diameter: 1,0 - 1,6 mm
- Outer diameter: 5,0 - 9,0 mm
- Reusable IPC: ≤ 4 cycles
- Temperature range: -40 °C to 85 °C
- Power over Ethernet plus (PoE+) acc. to IEEE 802.3at
- IP20; UL listed
- According to PROFINET Installation Guideline

#### CJ 8 V61MP technical data:
- Full-metal RJ45 field-assembly plug featuring metallic cable strain relief for cable outer diameter up to 10 mm.
- Category 6A acc. to ISO/IEC 11801
- Plug: IEC 60603-7-51 compliant
- Life: ≥ 750 mating cycles
- Shielding housing material: die-cast nickel-plated zinc
- Cu conductor diameter:
  - Solid 0,51 - 0,64 mm (AWG 24/1 - 22/1)
  - Stranded 0,46 - 0,76 mm (AWG 27/7 - 22/7)
  - Stranded 0,61 - 0,78 mm (AWG 24/19 - 22/19)
- Core diameter: 1,0 - 1,6 mm
- Outer diameter: 5,5 - 10,0 mm
- Reusable IPC: ≤ 4 cycles
- Temperature range: -40 °C to 85 °C
- Power over Ethernet plus (PoE+) acc. to IEEE 802.3at
- IP20
- Cable strain relief: AF13

#### CJ 8 VA61M technical data:
- Full-metal RJ45 field-assembly plug featuring four-step cable relief.
- Cable entry from 4 directions (4x90°)
- Category 6A acc. to ISO/IEC 11801
- Plug: IEC 60603-7-51 compliant
- Life: ≥ 750 cycles
- Shielding housing material: die-cast nickel-plated zinc
- Cu conductor diameter:
  - Solid 0,51 - 0,64 mm (AWG 24/1 - 22/1)
  - Stranded 0,46 - 0,76 mm (AWG 27/7 - 22/7)
  - Stranded 0,61 - 0,78 mm (AWG 24/19 - 22/19)
- Core diameter: 1,0 - 1,6 mm
- Outer diameter: 5,5 - 10,0 mm
- Reusable IDC: ≤ 4 cycles
- Temperature range: -40 °C to 85 °C
- Power over Ethernet plus (PoE+) acc. to IEEE 802.3at
- IP20; UL listed
- Cable strain relief: AF13

### Additional Information

- Can be used in bulkhead enclosures only, with RJ45 adaptors in the rear RJ45 female entry (internal housings cabling)
  - **MIXO RJ45**
- Full-metal RJ45 field-assembly plug featuring right-angle cable entry from four directions and metallic cable strain relief.
  - **CJK 8FT adaptors**
CJ adaptors for 1 USB connector

- female insert with USB 2.0 female - female connector
- female insert with USB 3.0 female - female connector
patch cable USB-A / USB-A, 2 m **

** 5 m on request

USB connector features:
- USB-A / USB-A Hi-Speed - 2.0 or 3.0 insert
- temperature range: from -25 °C to +80 °C

dimensions shown are not binding and may be changed without notice
### Technical Data

#### Mechanical Characteristics

<table>
<thead>
<tr>
<th>Materials</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>PA UL94 V0 - black</td>
</tr>
<tr>
<td>Nut</td>
<td>PA UL94 V0 - black</td>
</tr>
<tr>
<td>Bulkhead protective cap</td>
<td>EPDM</td>
</tr>
<tr>
<td>Elastic band / Seal</td>
<td>EPDM</td>
</tr>
<tr>
<td>EC Directive</td>
<td>2002/95/EC (RoHS) RoHS-compliant</td>
</tr>
</tbody>
</table>

#### Environmental Requirements

**Protection against ingress**
- Particulate ingress: IP6X
- Water / Immersion: IPX5

**Degrees of protection provided by enclosures (IP code)**: IEC 60529

**Climatical and chemical**
- Ambient temperature: -40 °C bis / to + 70 °C

### description  

<table>
<thead>
<tr>
<th>part No.</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATR C22</td>
<td>communication interface bulkhead IP65</td>
</tr>
</tbody>
</table>

#### Mounting dimensions

- RJ45 jack A Cat.6A *
- RJ45 coupler Cat.6
- USB 2.0 coupler F-F Type A
- USB 3.0 coupler F-F Type A
- LC-Duplex adapter MM
- LC-Duplex adapter SM

* Jack B and jack P on request

#### dimensions in mm

- Ø 23.5 ± 0.1 (0.92 in. ± 0.004)
- Ø 22.5 ± 0.2 (0.89 in. ± 0.008 DIA)
- 53 (2.08 in.)
- 34.7 (1.37 in.)
- 23.95 ± 0.1 (0.94 in. ± 0.004)
- 3.3 ± 0.1 (0.13 in. ± 0.004)

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*Dimensions shown are not binding and may be changed without notice.*
tools and accessories for bulkhead housing

<table>
<thead>
<tr>
<th>Description</th>
<th>Part No.</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulic punching tool (excluding punching die)</td>
<td>CCW CT</td>
<td></td>
</tr>
<tr>
<td>Punching unit - for M25 hole</td>
<td></td>
<td>CCW M25 2)</td>
</tr>
<tr>
<td>Punching units for panel cut out of bulkhead mounting housings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- for size 21.21 CK/CKA</td>
<td>CCW PD 03</td>
<td></td>
</tr>
<tr>
<td>- for size 21.21 CKG IP68</td>
<td>CCW PD 03G</td>
<td></td>
</tr>
<tr>
<td>- for size 49.16</td>
<td>CCW PD 06</td>
<td></td>
</tr>
<tr>
<td>- for size 66.16</td>
<td>CCW PD 10</td>
<td></td>
</tr>
<tr>
<td>- for size 44.27</td>
<td>CCW PD 12</td>
<td></td>
</tr>
<tr>
<td>- for size 57.27</td>
<td>CCW PD 16</td>
<td></td>
</tr>
<tr>
<td>- for size 77.27</td>
<td>CCW PD 24</td>
<td></td>
</tr>
<tr>
<td>- for size 104.27</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rectangular punch mm</th>
<th>ILME Product Number</th>
<th>Draw stud (3^)</th>
<th>Suggested</th>
<th>Sheet thickness pilot hole</th>
<th>Manual screw-wrench use</th>
<th>Hydraulic use</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.3 x 21.3</td>
<td>CCW PD 03</td>
<td>13.0/11.0 mm</td>
<td>14.5 mm</td>
<td>SL/Fe. 2 mm</td>
<td>x</td>
<td>x (*)</td>
</tr>
<tr>
<td>22.2 x 22.2</td>
<td>CCW PD 03 G</td>
<td>13.0/11.0 mm</td>
<td>14.5 mm</td>
<td>SL/Fe. 2 mm</td>
<td>x</td>
<td>x (*)</td>
</tr>
<tr>
<td>24.0 x 57.0</td>
<td>CCW PD 15</td>
<td>19.0/14.0 mm</td>
<td>20.4 mm M20</td>
<td>SL/Fe. 3 mm</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>24.0 x 73.0</td>
<td>CCW PD 25</td>
<td>19.0/14.0 mm</td>
<td>20.4 mm M20</td>
<td>SL/Fe. 3 mm</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>36.0 x 52.0</td>
<td>CCW PD 06</td>
<td>25.0/21.0 mm</td>
<td>25.4 mm M25</td>
<td>SL/Fe. 3 mm</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>36.0 x 65.0</td>
<td>CCW PD 16</td>
<td>25.0/21.0 mm</td>
<td>25.4 mm M25</td>
<td>SL/Fe. 3 mm</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>36.0 x 112.0</td>
<td>CCW PD 24</td>
<td>25.0/21.0 mm</td>
<td>25.4 mm M25</td>
<td>SL/Fe. 3 mm</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessory</th>
<th>ILME Product Number</th>
<th>Draw stud (3^)</th>
<th>Suggested</th>
<th>Sheet thickness</th>
<th>Manual screw-wrench use</th>
<th>Hydraulic use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punch and die 25.4 M25</td>
<td>CCW M25 ((**))</td>
<td>3/8&quot; (3^)</td>
<td>10 mm</td>
<td>SL/Fe. 2 mm</td>
<td>x ((**))</td>
<td></td>
</tr>
<tr>
<td>Hydraulic hand pump</td>
<td>CCW CT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*) Adaptor (delivered with CCW PD 03/03G) and spacer (delivered with CCW CT) needed.
(**) Adaptor M25 and spacer (delivered with CCW CT) needed.

LEGEND:

③ Draw stud 3/8"
⑥ Spacer
⑦ Adaptor 3/8" - 3/4" UNF

(**) CCW M25 can be used to drill M25 hole
Hydraulic operating instructions (CCW PD ..)
1. Screw the short thread of the 13,0/11,0 mm draw stud (3) into the ¾” UNF adaptor (7) (CCW PD 03/03 G only).
2. Screw the 13,0/11,0 mm draw stud (3) complete with the ¾” UNF adaptor (7) onto the hydraulic cylinder or screw the short thread of any of the larger draw studs (3) (without the adaptor) directly onto the hydraulic cylinder (CCW PD 03/03 G only).
3. Put the die (4) onto the draw stud (3) and move it towards the hydraulic cylinder. If necessary, place the spacer (6) between the hydraulic cylinder and die (4).
4. Insert draw stud (3) with pre-mounded die through the pilot hole in the sheet until the die abuts the sheet.
5. Place the punch (2) onto the draw stud and move it towards the sheet until it abuts the sheet.
6. Screw the counter nut (1) onto the thread of the draw stud (3).
7. Adjust punch rectangularly (4 marks on die) and tighten counter nut manually.

Punching
8. Operate hydraulic punch CCW CT driver until punch is drawn through sheet.
10. Remove the counter nut (1) and punch (2) from the draw stud (3).
11. Remove the die (4) from the draw stud (3) and remove slugs from the die (4).

Drilling mounting holes
When punching, the position of mounting holes are marked. Use suitable spiral drill to drill mounting holes.

Manual operating instructions (CCW PD 03 / 03G only)

Knockout punch mounting
1. Screw the ball-bearing nut (5) onto the long thread of the draw stud 13,0/11,0 mm (3). Put the die (4) onto the draw stud (3) and move it towards the ball bearing nut (5).
2. For further steps refer to hydraulic operating instructions steps 4 to 7.

Punching
3. Use screw wrench SW 24 to rotate ball-bearing nut (5) until punch is drawn through sheet.
4. For further steps refer to hydraulic operating instructions steps 10 to 11.

Prior to commisioning please read operating instructions
Components under voltage must not be machined. Prior to operating ensure tensionless state of the work environment (e.g. switch cabinet) or the material to be machined.
## Accessories

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<tr>
<th>Bulkhead housings</th>
<th>Punching die</th>
<th>Pilot hole</th>
<th>Mounting configuration</th>
<th>Draw stud</th>
<th>Adaptor</th>
<th>Spacer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td>Delivered with</td>
<td>Delivered with</td>
<td>Delivered with</td>
</tr>
<tr>
<td>21.21</td>
<td>CCW PD 03 G</td>
<td>Ø 14.5 mm</td>
<td><strong>Hydraulic tool operation CCW CT</strong> with adaptor and with spacer</td>
<td>CCW PD 03 G</td>
<td>CCW PD 03 G</td>
<td>CCW CT</td>
</tr>
<tr>
<td>21.21 (IP68)</td>
<td>CCW PD 03 G</td>
<td>Ø 14.5 mm</td>
<td><strong>Manual operation</strong> with screw ballbearing nut (no adaptor and spacer)</td>
<td>CCW PD 03 G</td>
<td>CCW PD 03 G</td>
<td>CCW CT</td>
</tr>
<tr>
<td>49.16</td>
<td>CCW PD 15</td>
<td>Ø 20.4 mm</td>
<td><strong>Hydraulic tool operation CCW CT</strong> without adaptor and without spacer</td>
<td>CCW PD 15</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>66.16</td>
<td>CCW PD 25</td>
<td>Ø 20.4 mm</td>
<td><strong>Hydraulic tool operation CCW CT</strong> without adaptor and without spacer</td>
<td>CCW PD 25</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>44.27</td>
<td>CCW PD 06</td>
<td>Ø 25.4 mm</td>
<td><strong>Hydraulic tool operation CCW CT</strong> without adaptor and without spacer</td>
<td>CCW PD 06</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>57.27</td>
<td>CCW PD 10</td>
<td>Ø 25.4 mm</td>
<td><strong>Hydraulic tool operation CCW CT</strong> without adaptor and without spacer</td>
<td>CCW PD 10</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>77.27</td>
<td>CCW PD 16</td>
<td>Ø 25.4 mm</td>
<td><strong>Hydraulic tool operation CCW CT</strong> without adaptor and without spacer</td>
<td>CCW PD 16</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>104.27</td>
<td>CCW PD 24</td>
<td>Ø 25.4 mm</td>
<td><strong>Hydraulic tool operation CCW CT</strong> without adaptor and without spacer</td>
<td>CCW PD 24</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>M25 hole</td>
<td>CCW M25</td>
<td>Ø 10 mm</td>
<td><strong>Hydraulic tool operation CCW CT</strong> with adaptor and with spacer</td>
<td>CCW CT</td>
<td>CCW CT</td>
<td>CCW CT</td>
</tr>
<tr>
<td>or MKA IAF25</td>
<td></td>
<td>Ø 25 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ND = Not Needed

### Panel cut-out (in mm)

#### for size 21.21

- Ø 3.3 *
- 21.3 30
- 21.3

#### for size 21.21 (IP68)

- Ø 4.2 **
- 22.2 30
- 22.2

** the fixing holes are not indicated

#### for size 49.16

- Ø 3.4 *
- 57 70
- 17.5 24

#### for size 66.16

- Ø 3.4 *
- 74 86
- 17.5 24

* fixing holes (to be pierced)
Panel cut-out (in mm)

For size **44.27**

For size **57.27**

For size **77.27**, in mm

For size **104.27**

For size **21.21** (MKA IAF25)

* Fixing holes (to be pierced)