

## Undervoltage protection switch, rocker or push button actuated, 2-pole



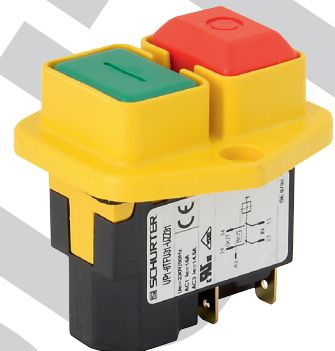
UP1-1WF ...



UP1-3TF ...



UP1-5TF ...



UP1-8TF ...



### Description

- 2-pole switch with undervoltage release and restart protection
- Remote trip version
- Rocker and push button types
- Snap-in or screw-on version
- Protection covers for IP 54 or IP 65

### Approvals

IEC 60947-4-1  
UL 508  
CSA 22.2 No. 14-95

### References

- Last order Date: **31.03.2014**
- Availability: On request
- This type is Phase-Out without alternate type.

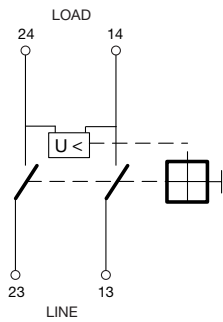
### Applications

- Electric power tools such as circular saw, band saw, band grinder, miter-box saw, drilling machine, stone/masonry saw
- Chain grinder
- Floor grinder
- Floor cleaning equipments
- Concrete mixers

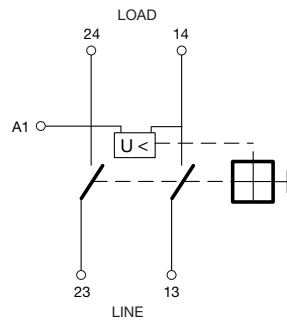
### Technical Data

|                                                |                                                                                       |                                  |                                                                                                                   |
|------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Rated voltage                                  | AC 240 V / 50/60 Hz<br>AC 230 V / 50/60 Hz<br>AC 120 V / 60 Hz<br>AC 115 V / 50/60 Hz | Endurance                        | 50 000 cycles mechanical<br>50 000 cycles 16 A / AC-1<br>50 000 cycles 10 A / AC-3<br>35 000 cycles 14.5 A / AC-3 |
| Rated current                                  | 16 A (AC-1)<br>14.5 A (AC-3)<br>10 A (1.5 HP)                                         | Ambient temperature<br>Operation | –10 °C ... +60 °C                                                                                                 |
| Conditional short circuit<br>Capacity $I_{nc}$ | AC 2000 A @ PC 1                                                                      | Storage                          | –20 °C ... +80 °C                                                                                                 |
| Fuse                                           | CB 16 A, char. B                                                                      | Resistance to vibration          | IEC 60068-2-6, Test Fc<br>10 ... 60 Hz: 0.75 mm<br>60 ... 500 Hz: 10 G                                            |
| Dielectric strength                            | 50 Hz: 1500 V<br>Impulse: 2500 V                                                      | Shock resistance                 | IEC 60068-2-27, Test Ea<br>30 G/18 ms (half-sine)                                                                 |
| Overvoltage category                           | II                                                                                    | Degree of protection:            |                                                                                                                   |
| Method of operation                            | Switch type (S)                                                                       | Accessible range:                | Rocker types IP 40<br>Push button types IP 54                                                                     |
| Mode of tripping                               | Undervoltage release (UV)                                                             | Terminals side:                  | IP 00                                                                                                             |
| – Manual ON:                                   | 35% ... 85% $U_n$ (and higher)                                                        |                                  |                                                                                                                   |
| – Automatic release:                           | 35% ... 70% $U_n$ (and lower)                                                         |                                  |                                                                                                                   |
| Type of tripping                               | Non-trip-free                                                                         |                                  |                                                                                                                   |

## Wiring Diagram



Sub-type U  
coil fix wired



Sub-type E  
coil with external connection  
for remote trip release

## Approvals

| Relay wiring        | AC voltage<br>[V] | Frequency<br>[Hz] | <br>IEC 60947-4-1 | <br>UL 508<br>CSA 22.2 No. 14-95 |
|---------------------|-------------------|-------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Type U              | 115               | 50                | •                                                                                                    | •                                                                                                                   |
| Type U              | 115               | 60                | •                                                                                                    | •                                                                                                                   |
| Type U              | 120               | 60                | •                                                                                                    | •                                                                                                                   |
| Type U              | 230               | 50                | •                                                                                                    | •                                                                                                                   |
| Type U              | 230               | 60                | •                                                                                                    | •                                                                                                                   |
| Type U              | 240               | 50–60             | •                                                                                                    | •                                                                                                                   |
| Type E, remote trip | 115               | 50                | •                                                                                                    | •                                                                                                                   |
| Type E, remote trip | 115               | 60                | •                                                                                                    | •                                                                                                                   |
| Type E, remote trip | 120               | 60                | •                                                                                                    | •                                                                                                                   |
| Type E, remote trip | 230               | 50                | •                                                                                                    | •                                                                                                                   |
| Type E, remote trip | 230               | 60                | •                                                                                                    | •                                                                                                                   |
| Type E, remote trip | 240               | 50–60             | •                                                                                                    | •                                                                                                                   |

Actual information about approvals can be found on: [www.schurter.com/approvals](http://www.schurter.com/approvals)

## Preference Types

| Actuation   | Mounting | Remote trip | Voltage<br>[V] | Frequency<br>[Hz] | Cover<br>IP 54 | Cover<br>IP 65 | Order Code       | Part<br>Number |
|-------------|----------|-------------|----------------|-------------------|----------------|----------------|------------------|----------------|
| Rocker      | Snap-in  |             | 230            | 50                |                |                | UP1-1WFU31       | 4431.1001      |
| Rocker      | Snap-in  |             | 230            | 50                | •              |                | UP1-1WFU31-UZZ11 | 4431.1010      |
| Rocker      | Snap-in  | •           | 230            | 50                |                |                | UP1-1WFE31       | 4431.1004      |
| Rocker      | Snap-in  |             | 120            | 60                |                |                | UP1-1WFU42       | 4431.1003      |
| Rocker      | Snap-in  |             | 120            | 60                | •              |                | UP1-1WFU42-UZZ11 | 4431.1036      |
| Rocker      | Snap-in  |             | 115            | 50                |                |                | UP1-1WFU51       | 4431.1002      |
| Rocker      | Snap-in  |             | 115            | 50                | •              |                | UP1-1WFU51-UZZ11 | 4431.1031      |
| Rocker      | Snap-in  |             | 115            | 60                | •              |                | UP1-1WFU52-UZZ11 | 4431.1012      |
| Push button | Snap-in  |             | 230            | 50                |                |                | UP1-3TFU31       | 4431.1009      |
| Push button | Snap-in  |             | 230            | 50                |                | •              | UP1-3TFU31-UZZ31 | 4431.1011      |
| Push button | Snap-in  | •           | 230            | 50                |                | •              | UP1-3TFE31-UZZ31 | 4431.1007      |
| Push button | Snap-in  |             | 120            | 60                |                | •              | UP1-3TFU42-UZZ31 | 4431.1035      |
| Push button | Snap-in  |             | 115            | 50                |                | •              | UP1-3TFU51-UZZ31 | 4431.1032      |
| Push button | Snap-in  |             | 115            | 60                |                | •              | UP1-3TFU52-UZZ31 | 4431.1015      |
| Push button | Flange   |             | 230            | 50                |                |                | UP1-5TFU31       | 4431.1005      |
| Push button | Flange   |             | 230            | 50                |                | •              | UP1-5TFU31-UZZ51 | 4431.1024      |
| Push button | Flange   | •           | 230            | 50                |                |                | UP1-5TFE31       | 4431.1016      |
| Push button | Flange   | •           | 230            | 50                |                | •              | UP1-5TFE31-UZZ61 | 4431.1034      |
| Push button | Flange   |             | 120            | 60                |                |                | UP1-5TFU42       | 4431.1030      |
| Push button | Flange   |             | 115            | 60                |                |                | UP1-5TFU52       | 4431.1006      |
| Push button | Flange   |             | 115            | 60                |                | •              | UP1-5TFU52-UZZ51 | 4431.1025      |
| Push button | Flange   |             | 230            | 50                |                |                | UP1-8TFU31       | 4431.1041      |
| Push button | Flange   |             | 230            | 50                |                | •              | UP1-8TFU31-UZZ81 | 4431.1013      |
| Push button | Flange   |             | 115            | 60                |                | •              | UP1-8TFU52-UZZ81 | 4431.1014      |

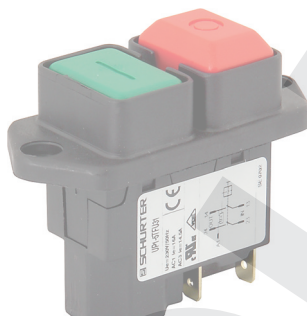
## Protection Covers



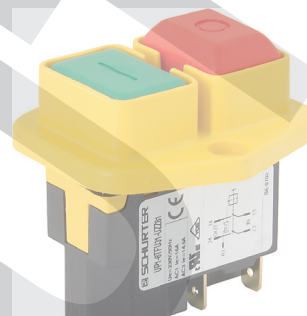
UP1-1WF ...



UP1-3TF ...



UP1-5TF ...



UP1-7/8TF ...



UZZ11  
IP 54 for types UP1-1WF ...  
(factory mounted)



UZZ31  
IP 65 for types UP1-3TF ...  
(factory mounted)



UZZ51  
IP 65 for types UP1-5TF ...



UZZ71  
IP 65 for types UP1-7TF ...  
or UP1-8TF ...



UZZ61  
IP 65 for types UP1-5TF ...

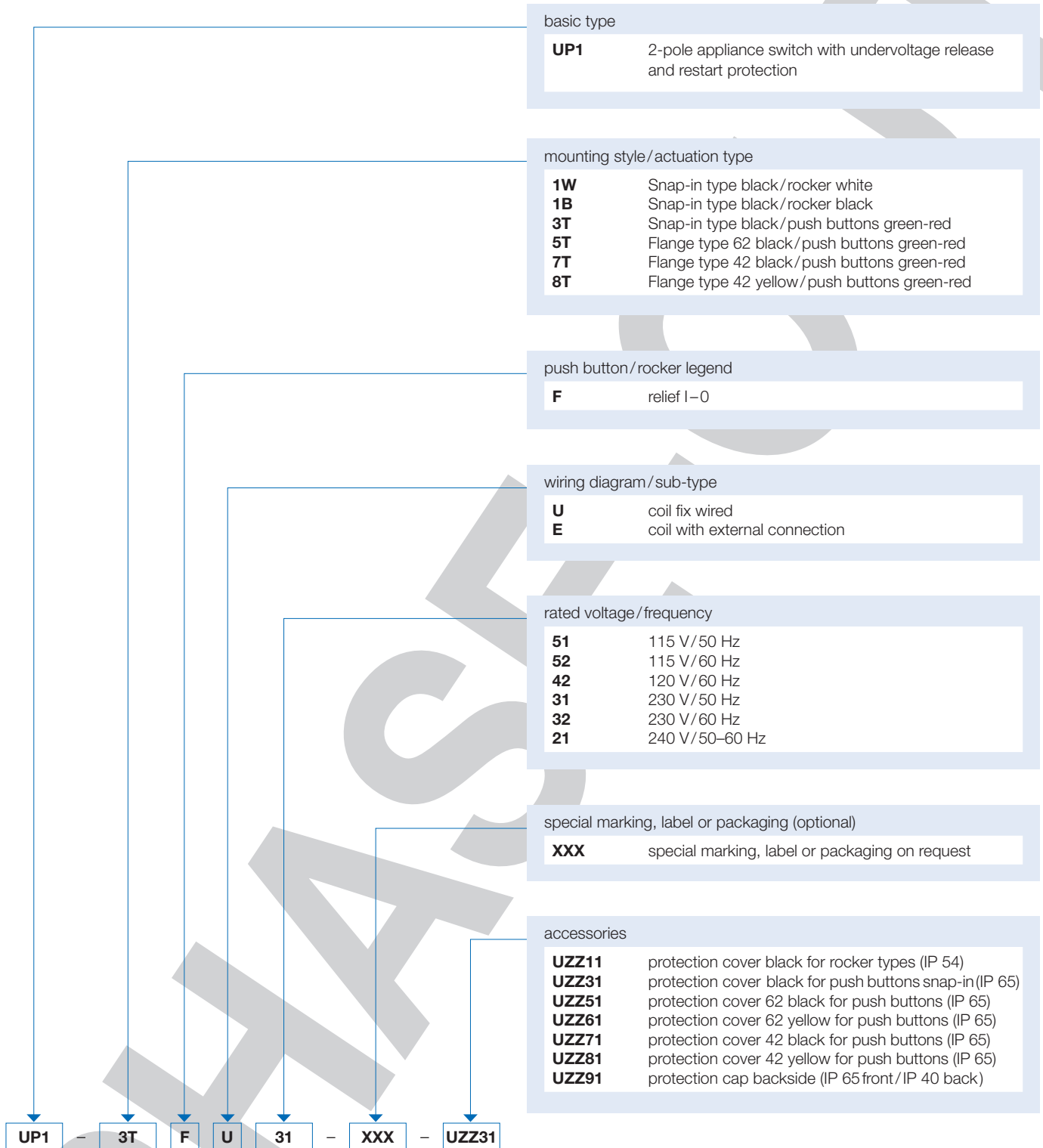


UZZ81  
IP 65 for types UP1-7TF ...  
or UP1-8TF ...



UZZ91  
Frontside IP 65, backside IP 40,  
for types UP1-7TF ...  
or UP1-8TF ...

## Order Code



### basic type

**UP1** 2-pole appliance switch with undervoltage release and restart protection

### mounting style/actuation type

**1W** Snap-in type black/rocker white  
**1B** Snap-in type black/rocker black  
**3T** Snap-in type black/push buttons green-red  
**5T** Flange type 62 black/push buttons green-red  
**7T** Flange type 42 black/push buttons green-red  
**8T** Flange type 42 yellow/push buttons green-red

### push button/rocker legend

**F** relief I–0

### wiring diagram/sub-type

**U** coil fix wired  
**E** coil with external connection

### rated voltage/frequency

**51** 115 V/50 Hz  
**52** 115 V/60 Hz  
**42** 120 V/60 Hz  
**31** 230 V/50 Hz  
**32** 230 V/60 Hz  
**21** 240 V/50–60 Hz

### special marking, label or packaging (optional)

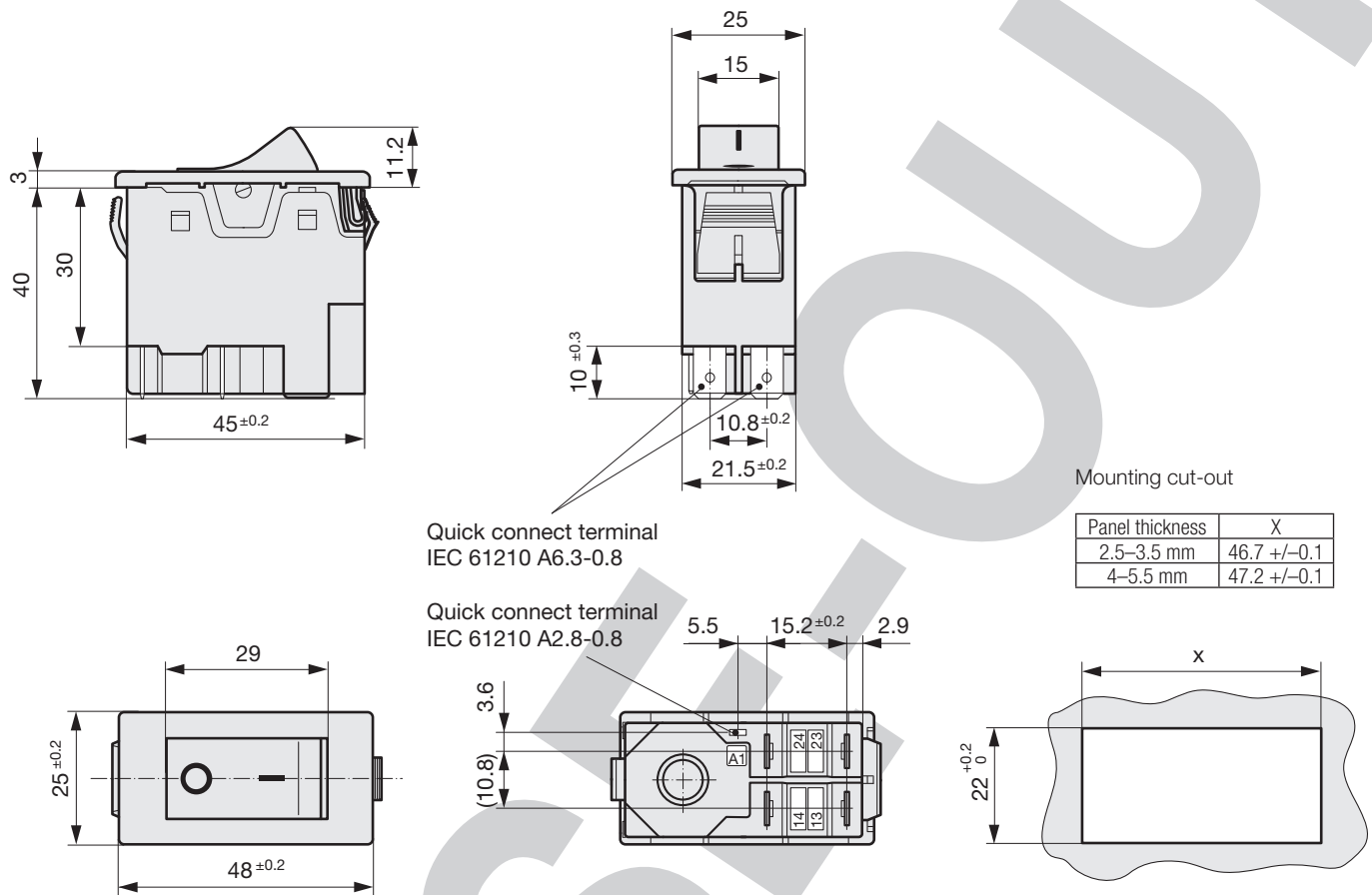
**XXX** special marking, label or packaging on request

### accessories

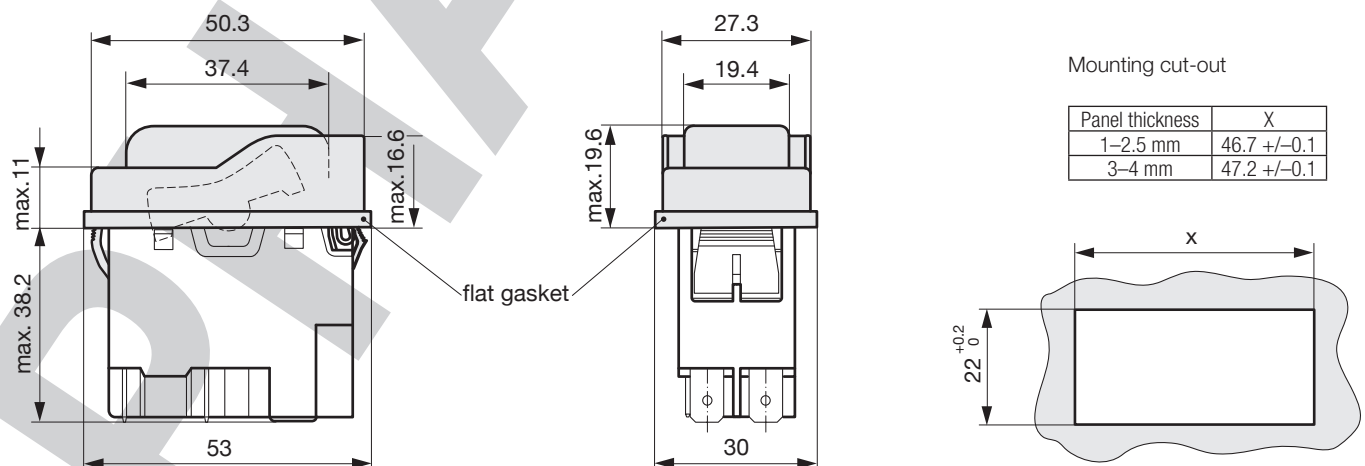
**UZZ11** protection cover black for rocker types (IP 54)  
**UZZ31** protection cover black for push buttons snap-in (IP 65)  
**UZZ51** protection cover 62 black for push buttons (IP 65)  
**UZZ61** protection cover 62 yellow for push buttons (IP 65)  
**UZZ71** protection cover 42 black for push buttons (IP 65)  
**UZZ81** protection cover 42 yellow for push buttons (IP 65)  
**UZZ91** protection cap backside (IP 65 front/IP 40 back)

## Dimensions

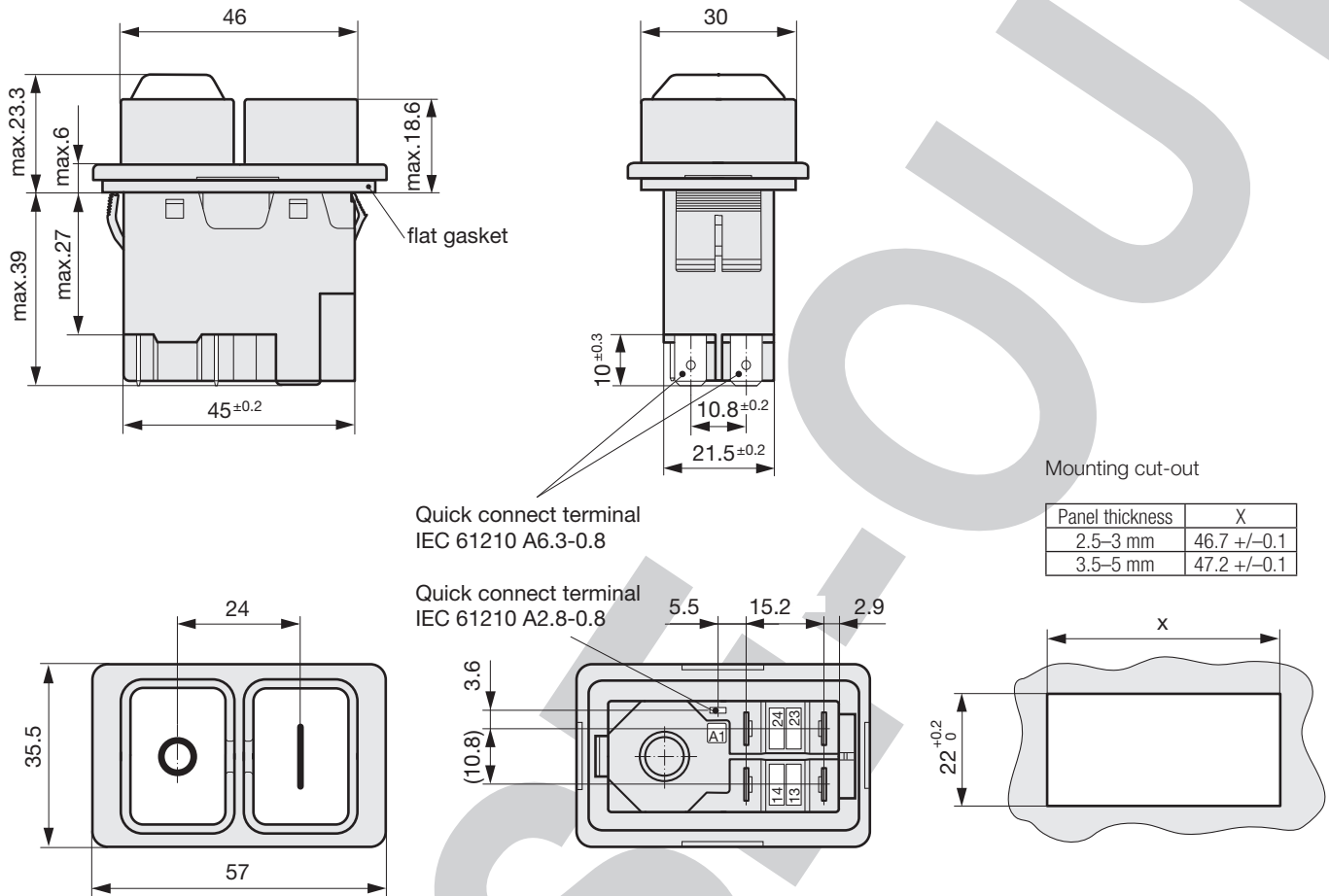
## UP1-1WF...



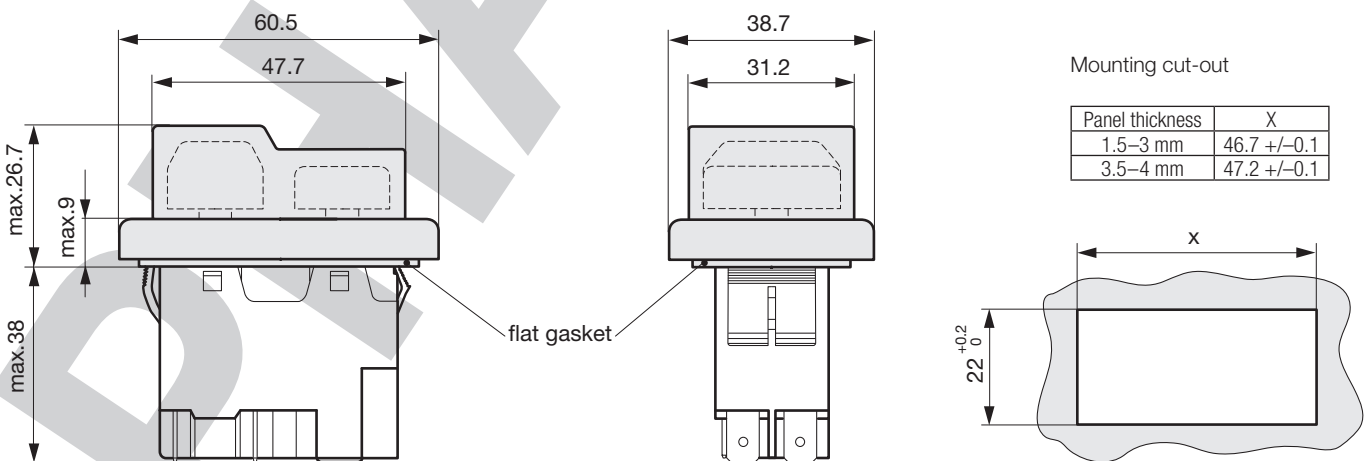
## UP1-1WF... with UZZ11



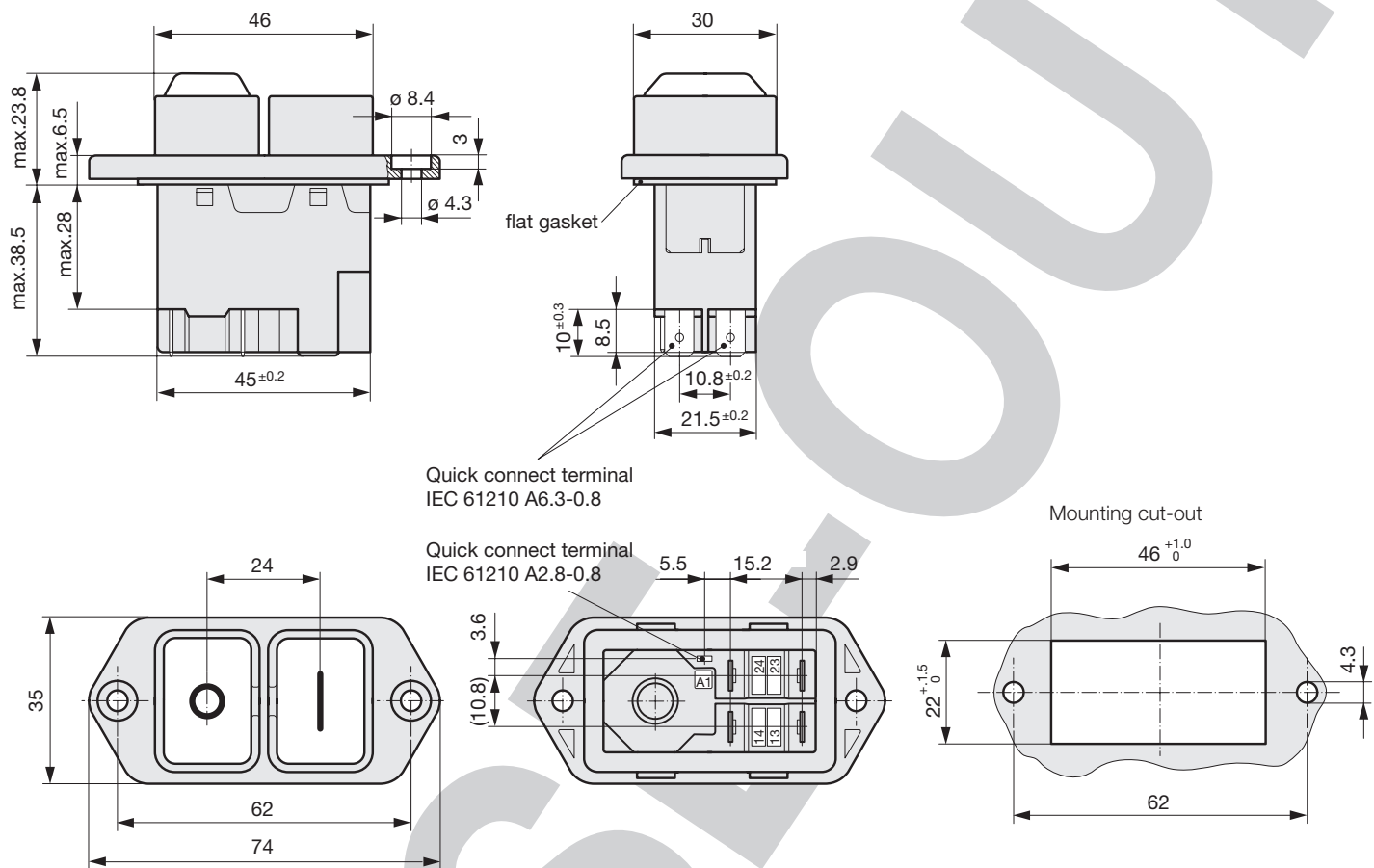
## UP1-3TF...



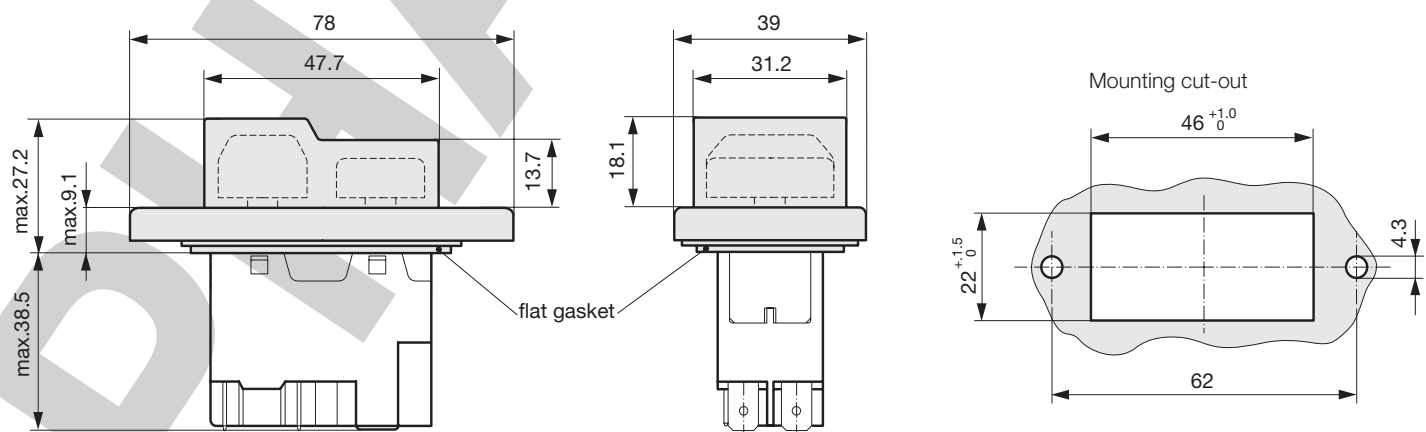
## UP1-3TF... with UZZ31



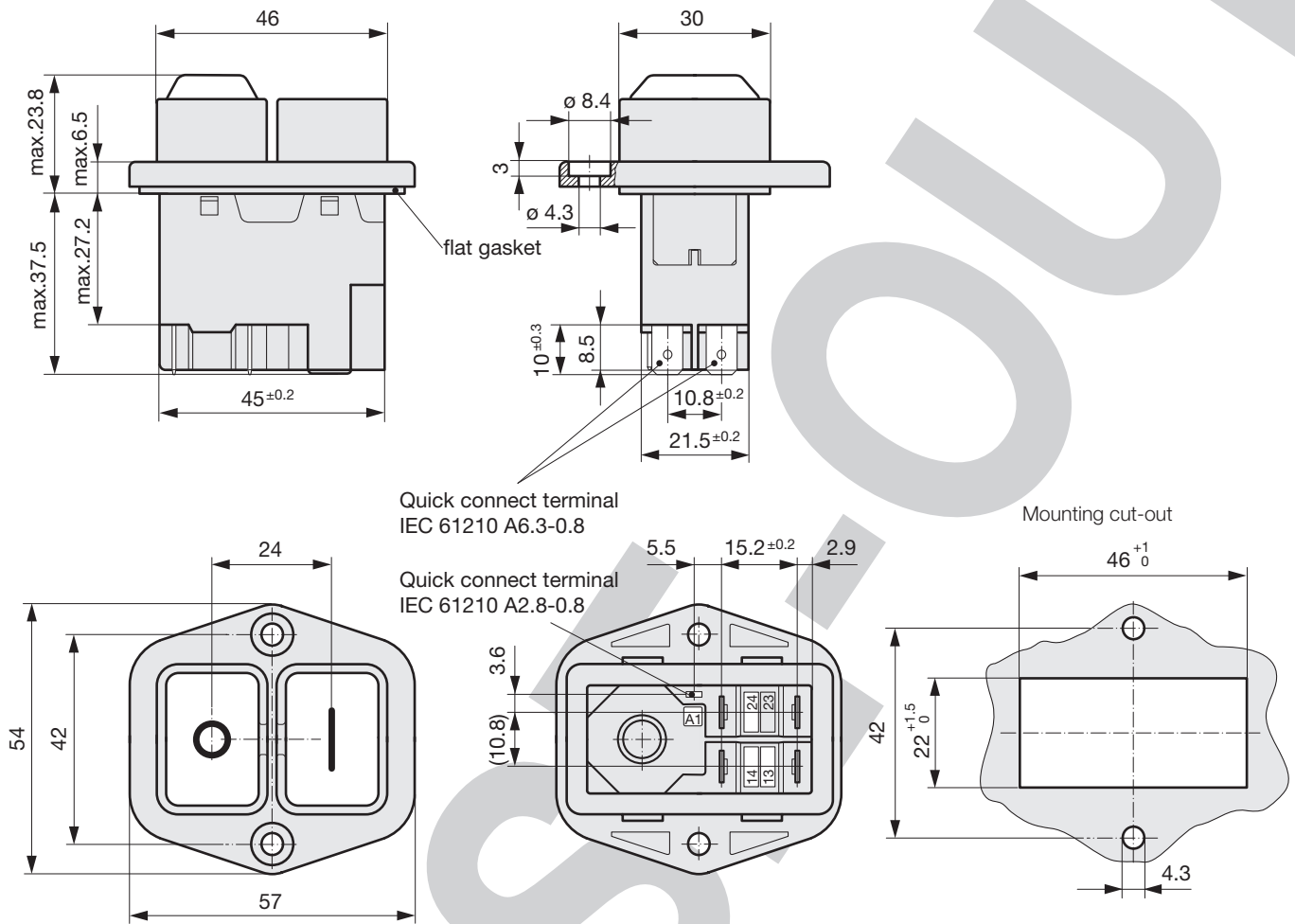
## UP1-5TF...



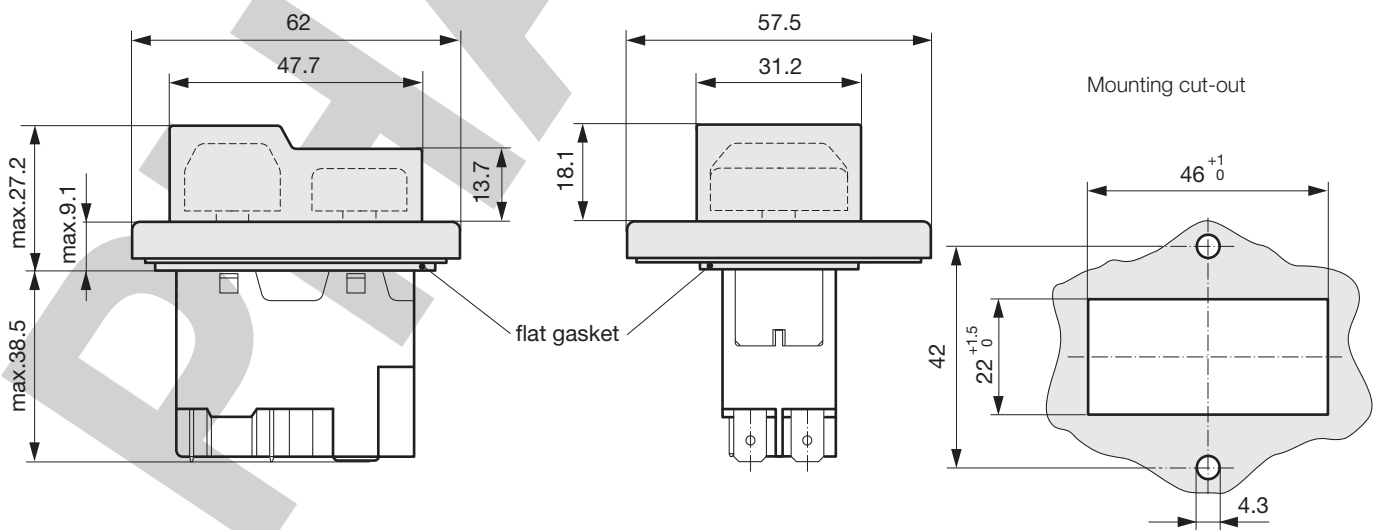
## UP1-5TF... with UZZ51/UZZ61



## UP1-7TF ... /UP1-8TF ...



## UP1-7TF ... /UP1-8TF ... with UZZ71/UZZ81



## UP1-7TF... /UP1-8TF... with UZZ91

