

# TransferPacT -Transfer Switching Equipment



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# TransferPacT Automatic Product Family



## Codes and standard

- IEC 60947-1 General rules
- IEC 60947-6-1 Transfer switching equipment
- GB 14048.1 General rules
- GB/T 14048.11 Transfer switching equipment



## Certifications and declarations

- CB certification
- CE certification
- CCC certification
- UKCA declaration
- EAC declaration

## Certifications and declarations

- TransferPacT ATSE can operate in an ambient temperature of -25 °C ~ +70 °C
- The altitude of the installation site shall not exceed 2000 m
- When the highest temperature is +55 °C, the relative humidity in air shall not exceed 95%
- Storage temperature: -35 °C ~ +85 °C



## Vibration and Shock

- Tests are carried out in compliance with IEC 60068-2-6 and IEC 60068-2-27

## Electromagnetic compatibility (EMC)

- EMC Class A
- EMI Class B

| | |
|---|---|
| • Electrostatic discharge | Level 4 |
| • Radio-frequency electromagnetic fi¬eld | Level 3 |
| • Fast transient bursts | Level 4 |
| • Surges | Level 4 |
| • Harmonic wave | Level 3 |
| • Voltage dips and short-time interruptions | Level 3 |



## Degree of Pollution

- Pollution degree 3 as defined by IEC standard 60947

| TA | 16 | D | 4 | S | 160 | 4 | T | P | E |
|---|---|---|---|---|---|---|---|---|---|
| TA: TransferPacT Auto<br>TR: TransferPacT Remote | **Frame rating**<br>10: 100A (32-100A)<br>16: 160A (80-160A)<br>25: 250A (100-250A)<br>63: 630A (320-630A) | **Off delay** | **Number of poles**<br>2: 2 poles<br>3: 3 poles<br>4: 4 poles | **Controller**<br>L: Active automatic HMI<br>S: Automatic HMI<br>R: Remote | **Rated current (A)**<br>032: 32A<br>040: 40A<br>050: 50A<br>063: 63A<br>080: 80A<br>100: 100A<br>125: 125A<br>160: 160A<br>200: 200A<br>250: 250A<br>320: 320A<br>400: 400A<br>500: 500A<br>630: 630A | **Rated voltage (V)**<br>2: 230 V*<br>3: 230 V**<br>4: 400 V*<br><br>factory default value<br>* L to L<br>** L to N | Top entry<br>PC type<br>IEC | | |

# TransferPacT Functions and Characteristic

| Frame | | 100A | 160A | 250A | 630A |
|---|---|---|---|---|---|
| Type of device | | Non-derived TSE PC type | Non-derived TSE PC type | Non-derived TSE PC type | Non-derived TSE PC type |
| Suitable for isolation | | ■ | ■ | ■ | ■ |
| **Electrical Characteristics** | | | | | |
| Current rating (Ampere) | | 32,40,50,63,80*,100*<br>*: AC-32B for 80A and 100A | 80,100,125,160 | 100,160,200,250 | 320,400,500,630 |
| Rated operational voltage | | 2P:220/230/240/250V<br>3P,4P:380/400/415/440V | 3P,4P:380/400/415/440V | 3P,4P: 208/220/230/240V 380/400/415/440V | 3P,4P: 208/220/230/240V 380/400/415/440V |
| Number of poles | | 2,3,4 | 3,4 | 3,4 | 3,4 |
| Frequency | | 50 Hz/60Hz | 50Hz/60Hz | 50Hz/60Hz | 50Hz/60Hz |
| Insulating voltage Ui (V AC) switch only | | 800V | 800V | 800V | 800V |
| Impulse withstand voltage Uimp (V AC) switch only | | 6kV | 8kV | 8kV | 12kV |
| Rated short-circuit making capacity Icm (kA) | Switch alone | 15kA | 20kA | 30kA | 40kA |
| | with Upstream Circuit Breaker | 75kA | 154kA | 330kA | 330kA |
| Rated short-time withstand current Icw (kA) | | 5 kA/0.1s | 10kA/0.1s | 10kA/0.5s, 15kA/0.1s | 20kA/0.5s, 25kA/0.1s |
| Utilization category | | AC-33B | AC-33B | AC-33B | AC-33B |
| Operating temperature | | -25ºC to +70ºC | -25ºC to +70ºC | -25ºC to +70ºC | -25ºC to +70ºC |
| **Operational Characteristics** | | | | | |
| Overvoltage category | | III | III | III | III |
| Maintenance Mechanical durability | | 8000 cycles | 1000 cycles | 10000 cycles | 10000 cycles |
| **Additional Indication and Control Auxiliaries** | | | | | |
| Auxiliary contacts for N and A position | | □ | □ | □ | □ |
| Auxiliary contacts for OFF position | | □ | □ | □ | □ |
| **Installation and Connection** | | | | | |
| Fixed top connection | | ■ | ■ | ■ | ■ |
| Installation method | | DIN Rail/Base Plate | DIN Rail/Base Plate | Base Plate | Base Plate |
| **Installation and Connection Accessories** | | | | | |
| Terminal shields | | □ | □ | □ | □ |
| Inter-phase barriers | | - | □ | □ | □ |
| Power Connections | | □ | □ | □* | □* |
| **Shipping Information** | | | | | |
| Net weight kg | | 3.4 | 5.6 | 13 | 19 |
| Dimension L*W*D mm | | 155* 310* 94.3 | 164* 351* 95 | 370* 341* 186 | 467* 341* 186 |

NOTE:
* : Solid green square represents standard function.
* : Hollow square represents optional function.

# TransferPacT Controller

| Controller type | | Active Automatic version with LCD display | Automatic version with rotary switch | Remote version without HMI |
|---|---|---|---|---|
| Installation | | Embedded controller | Embedded controller | Not Applicable |
| **Controller Functional Characteristics** | | | | |
| 2P | | 230V: can be set at 220V/240V/ 250V(Line to Neutral voltage. Available for Frame 100) | 230V: can be set at 220V/ 240V/ 250V(Line to Neutral voltage. Available for Frame 100) | |
| 3P / 4P | | 230V: can be set at 208V/220V/ 240V(line to line voltage. Available for Frame 250 and 630) | 400V: Can be set at 380V/ 415V/440V | 230V: can be set at 208 V /220V/ 240V (line to line voltage. Available for Frame 250 and 630) |
| | | 400V: Can be set at 380V/415V/ 440V | | 400V: Can be set at 380V/415V/ 440V |
| Rated operating frequency (Hz) | | 50/60 | 50/60 | 50/60 |
| Rated insulation voltage (V) | | 500 | 500 | 500 |
| Impulse withstand voltage (KV) | | 6kV | 6kV | 6kV |
| Operating temperature | | -25°C to +70°Ca'a | -25°C to +70°C | -25°C to +70°C |
| Operating altitude | | ≤2000m | ≤2000m | ≤2000m |
| Protection degree | | IP20 | IP20 | IP20 |
| Pollution degree | | 3 | 3 | 3 |
| Accuracy (for power deviation) | Voltage | 1% | 1% | Not Applicable |
| | Frequency | 0.1% | 0.1% | Not Applicable |
| Electrostatic discharge | | Level 4 | Level 4[1] | Level 4 |
| Radio-frequency electromagnetic field | | Level 3 | Level 3 | Level 3 |
| Fast transient bursts | | Level 4 | Level 4 | Level 4 |
| Surges | | Level 4 | Level 4 | Level 4 |
| Harmonic wave | | Class 3 | Class 3 | Class 3 |
| Voltage dips and short-time interruptions | | Class 3 | Class 3 | Class 3 |
| Vibration | | IEC 60068-2-6 | IEC 60068-2-6 | IEC 60068-2-6 |
| Shock | | IEC 60068-2-27 | IEC 60068-2-27 | IEC 60068-2-27 |
| **Display of Controller** | | | | |
| Display mode | | LCD+LED+Indicator | Rotary switch+DIP switch+LED +Indicator | LED+Indicator |
| Single line diagram | | ■ | ■ | ■ |
| Language | | English/Chinese/French/Russian/ Spanish/Italian/German/Portuguese | Not Applicable | Not Applicable |
| Power status | | ■ | ■ | ■ power/mode display |
| Position for contact | | ■ | ■ | Not Applicable |
| Set value | | Button | Rotary switch+DIP switch | Not Applicable |
| **Control Mode** | | | | |
| Auto | Auto return | ■ | ■ | Not Applicable |
| | Non return | ■ | ■ | Not Applicable |
| Non-Auto | Handle | ■ | ■ | Not Applicable |
| | Force | □ | □ | Not Applicable |
| | Fire | □ | □ | Not Applicable |
| | Inhibit | □ | □ | Not Applicable |
| | Local | ■ | - | Not Applicable |
| | Voluntary | □ | □ | Not Applicable |
| | communication | ■ | - | Not Applicable |
| | Test | ■ | □ | Not Applicable |

# TransferPacT Controller

| | | | | |
|---|---|---|---|---|
| Auto Control | | | | |
| Sampling | | Three Phase for both normal and alternate | Three Phase for both normal and alternate | Not Applicable |
| Voltage loss | | <36V | <36V | <36V |
| Phase loss | | L1, L2, L3 | L1, L2, L3 | Not Applicable |
| Under voltage | Set value | 70% to 95% | 4%,6%,8%,10%,12%,14%,16%, 18%,20% | Not Applicable |
| Over voltage | Set value | 105% to 135% | 4%,6%,8%,10%,12%,14%,16%, 18%,20% | Not Applicable |
| Under frequency | Set value | 80% to 98% | 2%,3%,4%,5%,6%,7%,8%,9%, 10% | Not Applicable |
| Over frequency | Set value | 101% to 120% | 2%,3%,4%,5%,6%,7%,8%,9%, 10% | Not Applicable |
| Unbalance of three phase voltage | | 2% to 30% | - | - |
| Phase rotation | | Yes | - | - |
| Time Delay | | | | |
| Transfer delay | | 0 to 30 minutes | U-U: 0,1,2,3,5,10,20,30,60 s. U-G: 5 s | - |
| Retransfer delay | | 0 to 60 minutes | 0,1,2,3,5,10,20,30,60 min | - |
| Center of delay | | 0 to 30 s | 0 or 5 s | - |
| Genset start delay | | 0 to 120 s | 0,1,2,3,5,10,20,30,60 s | - |
| Genset cooldown delay | | 0 to 60 minutes | - | - |
| Loadshedding delay | | 0 to 15 s | - | - |
| Genset ready alarm delay | | 15-300 s | 300 s | - |
| Test delay:on load | | 1-1800 s | - | - |
| Test delay:off load | | 1-1800 s | - | - |
| Other Functions | | | | |
| Calender time | | ■ | - | - |
| Position feedback | | □ | □ | □ |
| Event log | | ■ | - | - |
| Source priority | | ■ | ■ | - |
| Communication | | Modbus RTU | - | - |
| Transfer Inhibit | | □ | □ | - |
| Password protection | | ■ | - | - |
| Gen start-stop | | □ | □ | - |
| Test | | ■ | □ | - |
| Load shedding | | □ | □ | - |
| Fire protection | | □ | □ | - |
| Failure lock | | ■ | ■ | ■ |
| Alarm indication | | ■ | ■ | ■ |
| External power supply port | | ■ | - | - |
| Wrong connection of neutral alarm | | ■ | - | - |

1. Close the plastic cover.

# Electrical and mechanical accessories

## TransferPacT Automatic Function modules



| | |
|---|---|
| For Active Automatic and Automatic HMI | |
| Load shedding and Availability warning | TPCDIO05 |
| Transfer inhibit and Remote testing | TPCDIO07 |
| Voluntary Remote control | TPCDIO08 |
| Fire Protection 24 Vdc pulse | TPCDIO10 |
| Fire Protection 24 Vdc constant | TPCDIO11 |
| Fire Protection 230 Vac constant | TPCDIO13 |
| Fire Protection Dry contact | TPCDIO14 |
| Genset start and Alarm | TPCDIO17 |
| For Active Automatic HMI only (* Native equipped for TransferPacT active automatic. no need to order except for renewal or replace) | |
| BUS Extension and 24 VDC auxiliary supply | TPCDIO15 |
| Modbus RTU (Serial Port) | TPCCOM16 |

## TransferPacT Active Automatic External HMI







| | | |
|---|---|---|
| 1x | External HMI | TPCCIF04 |
| | | |
| | | |
| 1x | HMI Cable 1 m | TRV00810 |
| | HMI Cable 2 m | TRV00820 |
| | HMI Cable 3 m | TRV00830 |
| 1x | IP54 cover (for outdoor installation) | TPCOTH37 |

## TransferPacT Automatic spare part





| | |
|---|---|
| Active Automatic HMI | TPCCIF01 |
| Automatic HMI | TPCCIF02 |

## Auxiliary contacts





| | |
|---|---|
| OF for Source position for frame 100& frame 160 | TPSAUX32 |
| OF for OFF position for frame 100& frame 160 | TPSAUX33 |
| OF for Source position for frame 250& frame 630 | TPSAUX43 |
| OF for OFF position for frame 250& frame 630 | TPSAUX44 |

# Electrical and mechanical accessories

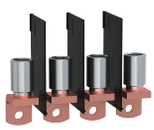
| Insulation accessory | | |
|---|---|---|
|  | Interphase barrier frame 160 (set of 3) | TPSISO29 |
| | Interphase barriers for frame 250 (100-250 A) and frame 630 (320-630A) (set of 3) | TPSISO65 |
|  | Terminal Shield for frame 100 (32-100 A) (set of 1) | TPSISO30 |
| | Terminal Shield for frame 160 (80-160 A) (set of 1) | TPSISO31 |
| | Terminal Shield for frame 250 (100-250 A) (set of 1) | LV429518 |
| | Terminal Shield for frame 630 (320-630 A) (set of 1) | TPSISO42 |
|  | Insulating screen for frame 250 (100-250 A) (set of 1). | TPSISO66 |
| | Insulating screen for frame 630 (320-630 A) (set of 1). | TPSISO67 |

| Connection accessory-bare cable connector | | |
|---|---|---|
| | 1 cable 25 mm² to 95 mm², frame 250 (set of 3). | LV429227 |
| | 1 cable 25 mm² to 95 mm², frame 250 (set of 4). | LV429228 |
| | 1 cable 120mm² to 185mm², frame 250 (set of 3). | LV429259 |
| | 1 cable 120mm² to 185mm², frame 250 (set of 4). | LV429260 |
| | 1 cable 120 to 240 mm², frame 250 (set of 3). | TPSCON49 [b] |
| | 1 cable 120 to 240 mm², frame 250 (set of 4). | TPSCON50 [b] |
|  | 1 cable 35 to 300 mm², frame 630 (set of 3). | TPSCON53 [b] |
| | 1 cable 35 to 300 mm², frame 630 (set of 4). | TPSCON54 [b] |
| | 2 cables 50 to 120 mm², frame 250 (set of 3). | TPSCON51 [a,b] |
| | 2 cables 50 to 120 mm², frame 250 (set of 4). | TPSCON52 [a,b] |
| | 6 cables 1.5 to 35 mm², frame 250 (set of 3). | TPSCON47 [b] |
| | 6 cables 1.5 to 35 mm², frame 250 (set of 4). | TPSCON48 [b] |
| | 9 cables for frame 250(set of 3). | LVS04033 |
| | 9 cables for frame 250(set of 4). | LVS04034 |
|  | 1 cable 1.5 to 95 mm², frame 250 (set of 3). | LV429242 |
| | 1 cable 1.5 to 95 mm², frame 250 (set of 4). | LV429243 |

a) Applicable for downstream only
b) Must select terminal shield to ensure incoming and output terminal protection.

# Electrical and mechanical accessories

## Connection accessory-crimp lug

| | | |
|---|---|---|
|  | 150 mm², frame 250 (set of 3). | LV429504 |
| | 150 mm², frame 250 (set of 4). | LV429505 |
| | 185 mm², frame 250 (set of 3). | LV429506 |
| | 185 mm², frame 250 (set of 4). | LV429507 |
| | 240 mm², frame 630 (set of 3). | TPSCON61 |
| | 240 mm², frame 630 (set of 4). | TPSCON62 |
| | 300 mm², frame 630 (set of 3). | TPSCON63 |
| | 300 mm², frame 630 (set of 4). | TPSCON64 |
|  | 120 mm², frame 250 (set of 3). | LV429252 |
| | 120 mm², frame 250 (set of 4). | LV429256 |
| | 150 mm², frame 250 (set of 3). | LV429253 |
| | 150 mm², frame 250 (set of 4). | LV429257 |
| | 185 mm², frame 250 (set of 3). | LV429254 |
| | 185 mm², frame 250 (set of 4). | LV429258 |
| | 240 mm², frame 630 (set of 3). | TPSCON57 |
| | 240 mm², frame 630 (set of 4). | TPSCON58 |
| | 300 mm², frame 630 (set of 3). | TPSCON59 |
| | 300 mm², frame 630 (set of 4). | TPSCON60 |

## Connection accessory-terminal extensions

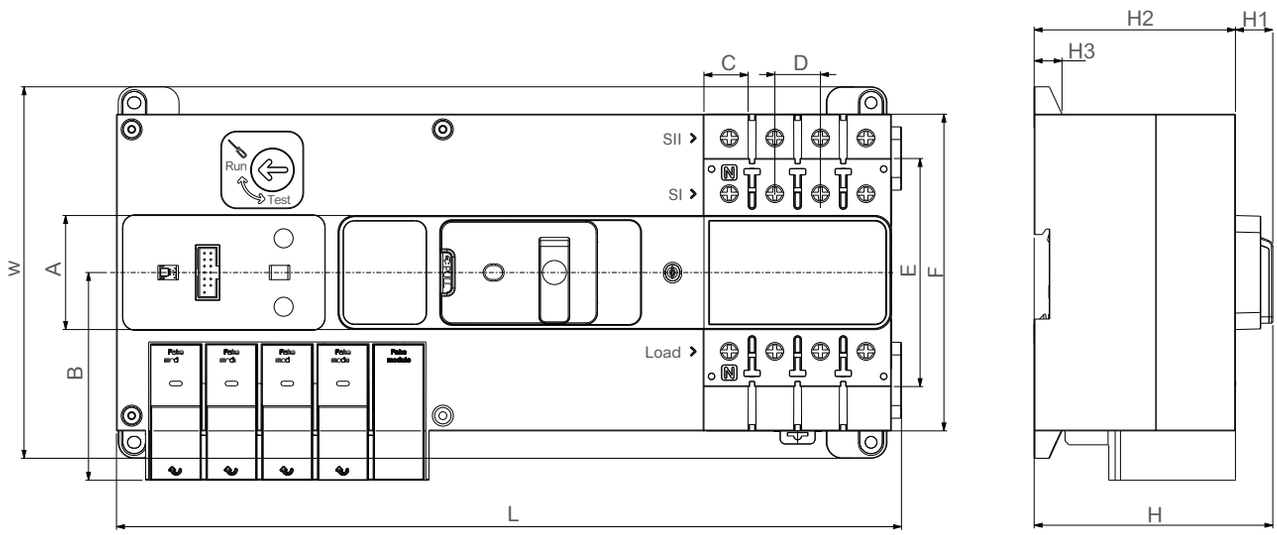
| | | |
|---|---|---|
|  | edgewise terminal extensions for frame 250( set of 3) | LV429308 |
| | edgewise terminal extensions for frame 250( set of 4) | LV429309 |
| | edgewise terminal extensions for frame 630( set of 3) | TPSCON55 |
| | edgewise terminal extensions for frame 630( set of 4) | TPSCON56 |
|  | Straight terminal extensions for frame 250( set of 3) | LV429263 |
| | Straight terminal extensions for frame 250( set of 4) | LV429264 |
|  | Spreader for frame 100( set of 4) | TPSCON35 |
| | Spreader for frame 160( set of 4) | TPSCON36 |
| | 35mm-45mm Spreader for frame 250( set of 3) | LV431563 |
| | 35mm-45mm Spreader for frame 250( set of 4) | LV431564 [b] |
| | 35mm-45mm Spreader for frame 250( set of 4) | TPSCON39 [a] |
| | 45mm-55mm Spreader for frame 630( set of 3) | TPSCON40 |
| | 45mm-55mm Spreader for frame 630( set of 4) | TPSCON41 [a] |
| | 45mm-55mm Spreader for frame 630( set of 4) | TPSCON68 [b] |

a) For incomings only
b) For load only

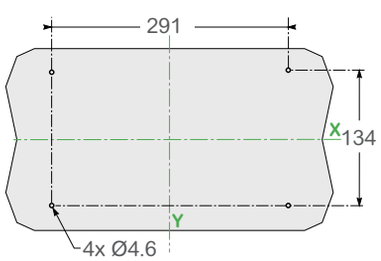
# TransferPacT Dimensions

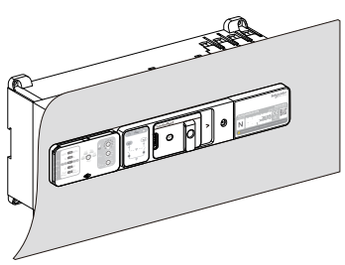
Frame 100/2P, 3P, 4P

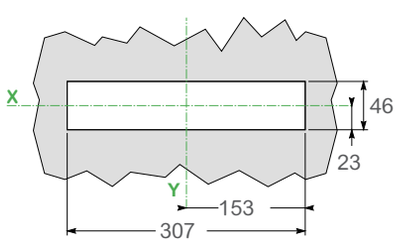
## Dimensions




## Panel and Front panel cut



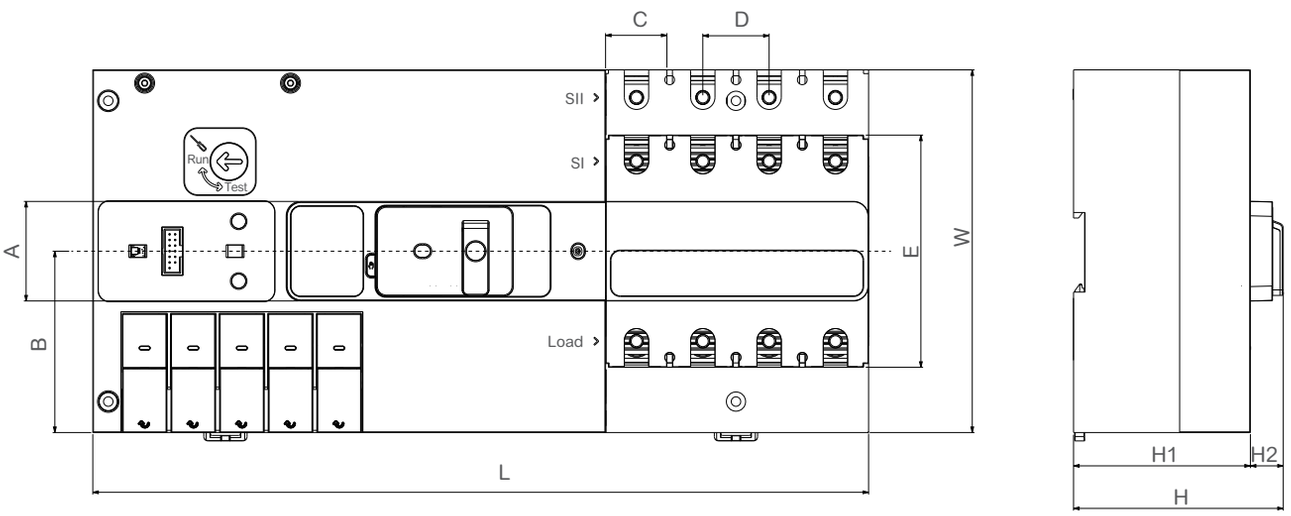



| Frame | L | W | H | A | B | C | D | E | F | H1 | H2 | H3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 310 | 147 | 94 | 45 | 82 | 17.5 | 18 | 90 | 125 | 15 | 79.5 | 11 |

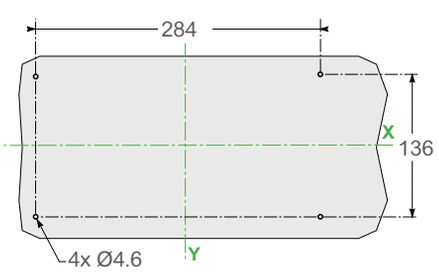
# TransferPacT Dimensions

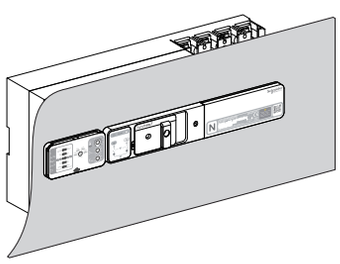
Frame 160 / 3P, 4P

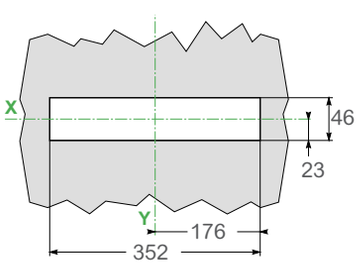
## Dimensions




## Panel and Front panel cut



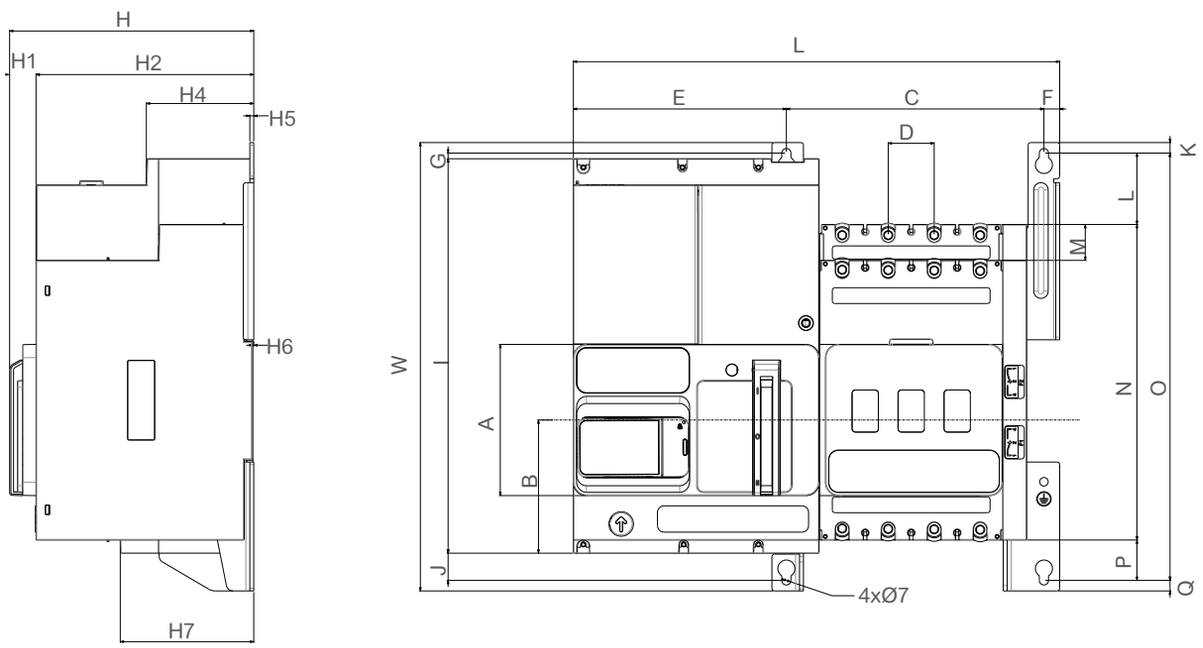



| Frame | L | W | H | A | B | C | D | E | F | H1 | H2 | H3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 160 | 351 | 164 | 95 | 45 | 82 | 28 | 30 | 105 | | 80 | 15 | |

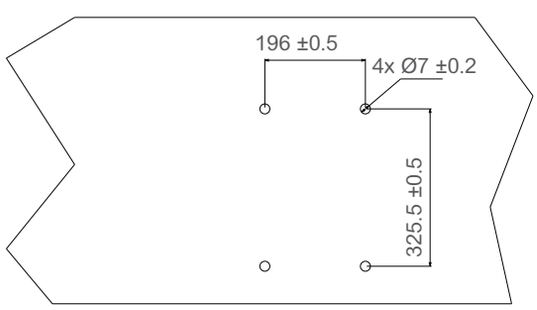
# TransferPacT Dimensions

Frame 250/3P, 4P

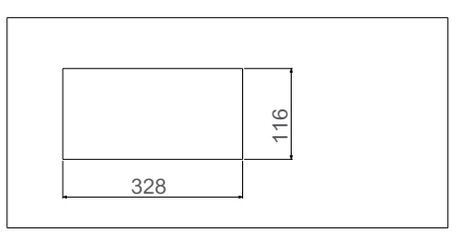
## Dimensions




## Panel and Front panel cut




Backplane




Cutout

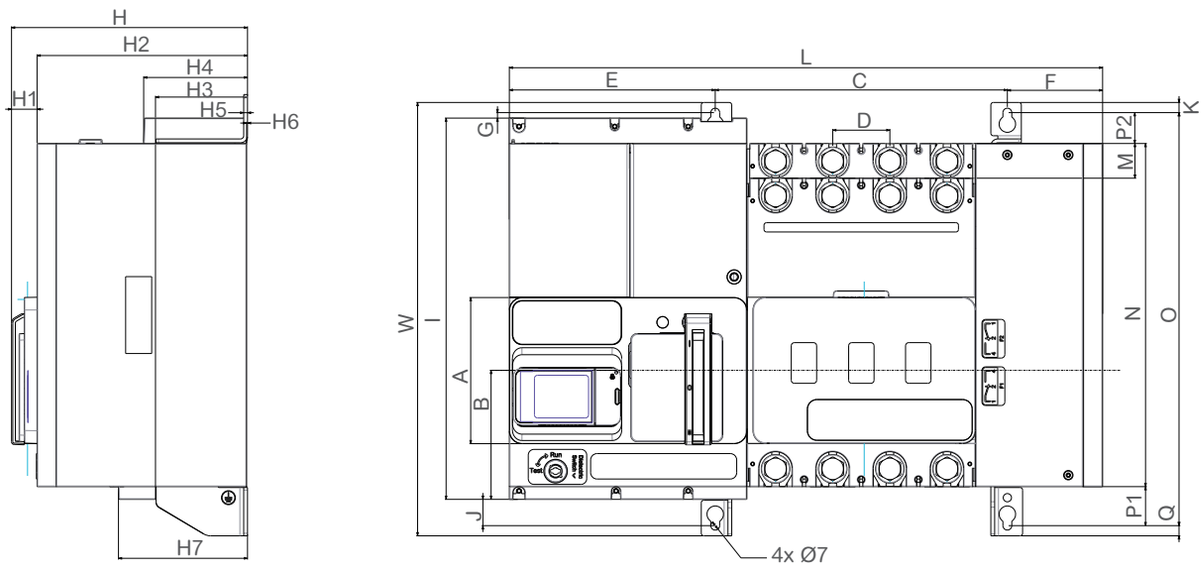
| Frame | L | W | H | A | B | C | D | E | F | G | H | H1 | H2 | H4 | H5 | H6 | H7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 250 | 341 | 300 | 185.8 | 115 | 101.3 | 196 | 35 | 162 | 12 | 4.3 | 185.8 | 20.1 | 185.7 | 81.75 | 3 | 0.7 | 101.7 |

| Frame | I | J | K | M | N | O | P | Q |
|---|---|---|---|---|---|---|---|---|
| 250 | 300 | 20.7 | 8 | 27.3 | 240 | 325 | 30.7 | 8 |

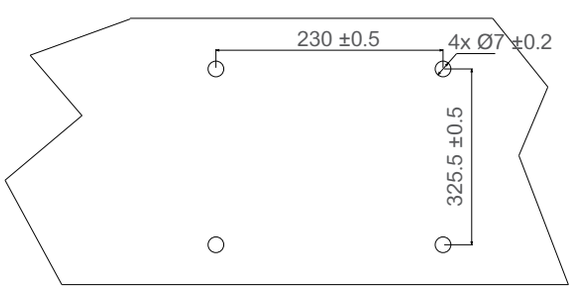
# TransferPacT Dimensions

## Frame 630/3P, 4P

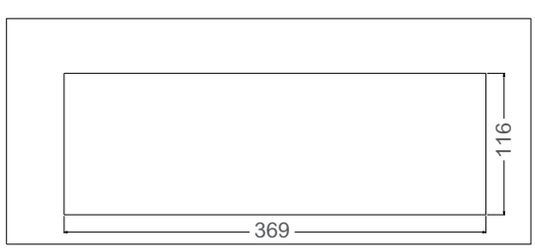
### Dimensions




### Panel and Front panel cut




Backplane




Cutout

| Frame | L | W | H | A | B | C | D | E | F | G | H1 | H2 | H3 | H4 | H5 | H6 | H7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 630 | 467 | 341 | 185.8 | 115 | 101.5 | 230 | 45 | 162 | 75 | 4.3 | 20.1 | 165.7 | 72.45 | 81.7 | 3 | 0.7 | 101.6 |

| Frame | I | J | K | M | N | O | P1 | P2 | Q |
|---|---|---|---|---|---|---|---|---|---|
| 630 | 300 | 20.7 | 8 | 27.3 | 270 | 325 | 30.7 | 24.3 | 8 |

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