



# Small transformers



## Small disconnecter transformers TVTR

In these devices the primary coil is separated from the secondary coil by a basic insulator. They can be used for power transmission, control, signalling actuating or other low voltage electric circuits, e.g. to generate **functional low voltage (FELV)** according to the standard **HD 60364-4-41** or to perform electrical protection to a secondary consumer with simple insulation.

The transformers deliver one-phase power with eight different secondary voltage values ( $U_{\text{sec}}=3-6-12-18-24-42-110-230$  V).

The transformers are built in conformity to the requirements within **EN 60742** and **EN 61558**. Their degree of protection is IP00, i. e. they are meant to be built in as parts into another equipment. Connections are ensured by screwed connectors with IP 20 degree of protection. Rated powers range between 50 – 630 VA, depending on construction. The secondary coil has more wiretapping exits. The rated power refers to the highest secondary voltage value. At the other wire-tapping exits the transformer delivers proportionally lower power values (see table).



### Technical data

|                                                 |                                          |
|-------------------------------------------------|------------------------------------------|
| Nominal primary voltage ( $U_{\text{pr}}$ ):    | 230 V                                    |
| Nominal secondary voltage ( $U_{\text{sec}}$ ): | 3-6-12-18-24-42-110-230 V<br>(see table) |
| Nominal frequency:                              | 50/60 Hz                                 |
| Rated power:                                    | 50 – 630 VA                              |
| Protection class:                               | I.                                       |
| Degree of protection:                           | IP 00                                    |
| - at the connections:                           | IP 20                                    |
| Relative humidity limit:                        | 95 %                                     |
| Ambient temperature:                            | -5 °C – +40 °C                           |
| Heat-proof category:                            | E (+120 °C)                              |

#### RELEVANT STANDARD

**EN 60742**

#### RELEVANT STANDARD

**EN 61558**

## Type selection

| Tracon code       | Rated power | Primary voltage<br>$U_{\text{pr}}$ | Secondary voltage<br>values $U_{\text{sec}}$ | Secondary power<br>values * | Max. secondary<br>current |
|-------------------|-------------|------------------------------------|----------------------------------------------|-----------------------------|---------------------------|
| <b>TVTR-50-A</b>  | 50 VA       | 230 V                              | 3-6-12-18-24 V                               | 6,25-12,5-25-37,5-50 VA     | 2,08 A                    |
| <b>TVTR-50-B</b>  |             | 230 V                              | 6-12-18-24 V                                 | 12,5-25-37,5-50 VA          | 2,08 A                    |
| <b>TVTR-50-C</b>  |             | 230 V                              | 12-24-42 V                                   | 14,2-28,5-50 VA             | 1,19 A                    |
| <b>TVTR-50-D</b>  |             | 230 V                              | 24-42-110 V                                  | 10-19-50 VA                 | 0,45 A                    |
| <b>TVTR-50-F</b>  |             | 230 V                              | 24-230 V                                     | 5,2-50 VA                   | 0,21 A                    |
| <b>TVTR-100-A</b> | 100 VA      | 230 V                              | 3-6-12-18-24 V                               | 12,5-25-50-75-100 VA        | 4,16 A                    |
| <b>TVTR-100-B</b> |             | 230 V                              | 6-12-18-24 V                                 | 25-50-75-100 VA             | 4,16 A                    |
| <b>TVTR-100-C</b> |             | 230 V                              | 12-24-42 V                                   | 28,5-57,1-100 VA            | 2,38 A                    |
| <b>TVTR-100-D</b> |             | 230 V                              | 24-42-110 V                                  | 21,8-38,1-100 VA            | 0,90 A                    |
| <b>TVTR-100-F</b> |             | 230 V                              | 24-230 V                                     | 10,4-100 VA                 | 0,43 A                    |
| <b>TVTR-150-B</b> | 150 VA      | 230 V                              | 6-12-18-24 V                                 | 37,5-75-112,5-150 VA        | 6,25 A                    |
| <b>TVTR-150-C</b> |             | 230 V                              | 12-24-42 V                                   | 42,8-85,7-150 VA            | 3,57 A                    |
| <b>TVTR-150-D</b> |             | 230 V                              | 24-42-110 V                                  | 32,7-57,2-150 VA            | 1,36 A                    |
| <b>TVTR-150-E</b> |             | 230 V                              | 42-110-230 V                                 | 27,3-71,7-150 VA            | 0,65 A                    |
| <b>TVTR-150-F</b> |             | 230 V                              | 24-230 V                                     | 15,6-150 VA                 | 0,65 A                    |
| <b>TVTR-200-B</b> | 200 VA      | 230 V                              | 6-12-18-24 V                                 | 50-100-150-200 VA           | 8,30 A                    |
| <b>TVTR-200-C</b> |             | 230 V                              | 12-24-42 V                                   | 57,1-114,2-200 VA           | 4,76 A                    |
| <b>TVTR-200-D</b> |             | 230 V                              | 24-42-110 V                                  | 43,6-76,3-200 VA            | 1,81 A                    |
| <b>TVTR-200-E</b> |             | 230 V                              | 42-110-230 V                                 | 36,5-95,6-200 VA            | 0,86 A                    |
| <b>TVTR-200-F</b> |             | 230 V                              | 24-230 V                                     | 20,8-200 VA                 | 0,86 A                    |

\* depending on the secondary voltage at the tapping exit;



# Small transformers

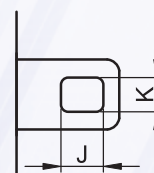
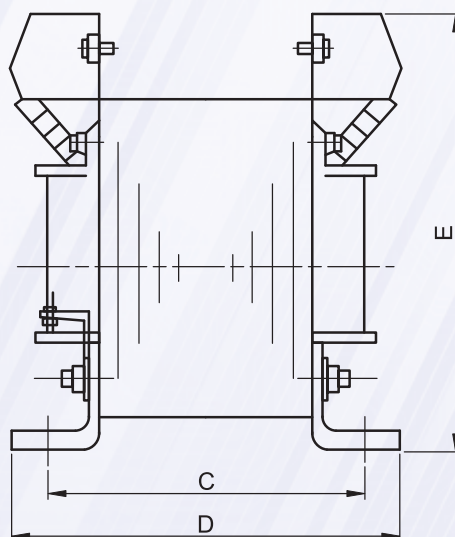
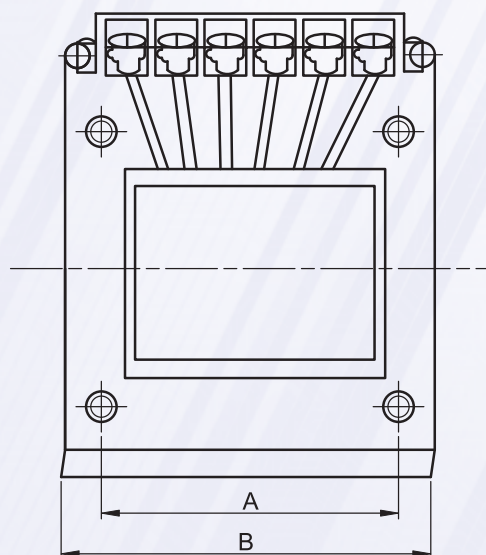


| Tracon code | Rated power | Primary voltage<br>$U_{pr}$ | Secondary voltage<br>values $U_{sec}$ | Secondary power<br>values * | Max. secondary<br>current |
|-------------|-------------|-----------------------------|---------------------------------------|-----------------------------|---------------------------|
| TVTR-250-B  | 250 VA      | 230 V                       | 6-12-18-24 V                          | 62,5-125-187,5-250 VA       | 10,41 A                   |
| TVTR-250-C  |             | 230 V                       | 12-24-42 V                            | 71,4-142,8-250 VA           | 5,95 A                    |
| TVTR-250-D  |             | 230 V                       | 24-42-110 V                           | 54,5-95,4-250 VA            | 2,27 A                    |
| TVTR-250-E  |             | 230 V                       | 42-110-230 V                          | 45,6-119,5-250 VA           | 1,08 A                    |
| TVTR-250-F  |             | 230 V                       | 24-230 V                              | 26-250 VA                   | 1,08 A                    |
| TVTR-300-B  | 300 VA      | 230 V                       | 6-12-18-24 V                          | 75-150-225-300 VA           | 12,50 A                   |
| TVTR-300-C  |             | 230 V                       | 12-24-42 V                            | 85,7-171,4-300 VA           | 7,14 A                    |
| TVTR-300-D  |             | 230 V                       | 24-42-110 V                           | 65,4-114,5-300 VA           | 2,72 A                    |
| TVTR-300-E  |             | 230 V                       | 42-110-230 V                          | 54,7-143,4-300 VA           | 1,30 A                    |
| TVTR-300-F  |             | 230 V                       | 24-230 V                              | 31,3-300 VA                 | 1,30 A                    |
| TVTR-400-B  | 400 VA      | 230 V                       | 6-12-18-24 V                          | 100-200-300-400 VA          | 16,66 A                   |
| TVTR-400-C  |             | 230 V                       | 12-24-42 V                            | 114,2-228,5-400 VA          | 9,52 A                    |
| TVTR-400-D  |             | 230 V                       | 24-42-110 V                           | 87,2-152,7-400 VA           | 3,63 A                    |
| TVTR-400-E  |             | 230 V                       | 42-110-230 V                          | 73-191,3-400 VA             | 1,73 A                    |
| TVTR-400-F  |             | 230 V                       | 24-230 V                              | 41,7-400 VA                 | 1,73 A                    |
| TVTR-500-C  | 500 VA      | 230 V                       | 12-24-42 V                            | 142,8-285,7-500 VA          | 11,90 A                   |
| TVTR-500-D  |             | 230 V                       | 24-42-110 V                           | 109-190,9-500 VA            | 4,54 A                    |
| TVTR-500-E  |             | 230 V                       | 42-110-230 V                          | 91,3-239,1-500 VA           | 2,17 A                    |
| TVTR-500-F  |             | 230 V                       | 24-230 V                              | 52,1-500 VA                 | 2,17 A                    |
| TVTR-630-C  | 630 VA      | 230 V                       | 12-24-42 V                            | 180-360-630 VA              | 15 A                      |
| TVTR-630-D  |             | 230 V                       | 24-42-110 V                           | 137,4-240,5-630 VA          | 5,72 A                    |
| TVTR-630-E  |             | 230 V                       | 42-110-230 V                          | 115-301,3-630 VA            | 5,73 A                    |
| TVTR-630-F  |             | 230 V                       | 24-230 V                              | 65,7-630 VA                 | 2,73 A                    |

\* depending on the secondary voltage at the tapping exit;

## Dimensions

| Type     | Dimensions (mm) |     |     | Distance between fixation holes (mm) |     | Dimensions of<br>holes (mm) |   | Weight<br>(kg) |
|----------|-----------------|-----|-----|--------------------------------------|-----|-----------------------------|---|----------------|
|          | B               | D   | E   | A                                    | C   | J                           | K |                |
| TVTR-50  | 76              | 80  | 77  | 56                                   | 50  | 7                           | 5 | 1,9            |
| TVTR-100 | 87              | 94  | 87  | 64                                   | 60  | 8                           | 6 | 2,7            |
| TVTR-150 | 102             | 88  | 100 | 83                                   | 70  | 8                           | 6 | 3,8            |
| TVTR-200 | 102             | 95  | 100 | 83                                   | 76  | 8                           | 6 | 4,8            |
| TVTR-250 | 102             | 102 | 96  | 75                                   | 85  | 11                          | 8 | 6,5            |
| TVTR-300 | 120             | 106 | 110 | 90                                   | 84  | 11                          | 8 | 6,9            |
| TVTR-400 | 120             | 110 | 110 | 90                                   | 88  | 11                          | 8 | 7,7            |
| TVTR-500 | 147             | 138 | 135 | 115                                  | 122 | 11                          | 8 | 9,6            |
| TVTR-630 | 147             | 145 | 135 | 115                                  | 125 | 11                          | 8 | 12,6           |





# Small transformers



## One-phase insulating transformers TVTRB

These products are meant for insulating separation in low-voltage power transmission, actuating, signalling, control and other circuits, to generate **shock-proof low voltage (SELV)** according to the standard **MSZ HD 60364-4-41**. A protective separation is built in between the primary and secondary coil. The safety insulating transformers deliver at the secondary side so-called safety low voltage below 50 V. The insulating transformers deliver at the secondary side low voltage above 50 V.

All our transformers satisfy the requirements set within **EN 60742** and **EN 61558**. Their degree of protection is IP00, i. e. they are meant to be built in as parts into another equipment. Connections are ensured by screwed connectors with IP 20 degree of protection. Rated powers range between 60 – 600 VA, depending on construction. The secondary coil has more wire-tapping exits.

The rated power refers to the highest secondary voltage value. At the other wire-tapping exits the transformer delivers proportionally lower power values (see table).



### Technical data

|                                          |                                     |
|------------------------------------------|-------------------------------------|
| Nominal primary voltage ( $U_{pr}$ ):    | 400, 230 V                          |
| Nominal secondary voltage ( $U_{sec}$ ): | 6, 12, 24, 42, 230 V<br>(see table) |
| Nominal frequency:                       | 50/60 Hz                            |
| Rated power:                             | 60 ... 600 VA                       |
| Protection class:                        | I.                                  |
| Degree of protection:                    | IP 00                               |
| - at the connections:                    | IP 20                               |
| Relative humidity limit:                 | 95 %                                |
| Ambient temperature:                     | -5 °C – +40 °C                      |
| Heat-proof category:                     | E (+120 °C)                         |



### RELEVANT STANDARD

**EN 60742**

### RELEVANT STANDARD

**EN 61558**

## Type selection

| Tracon code        | Rated power | Primary voltage<br>$U_{pr}$ | Secondary voltage<br>values $U_{sec}$ | Secondary power<br>values * | Max. secondary<br>current |
|--------------------|-------------|-----------------------------|---------------------------------------|-----------------------------|---------------------------|
| <b>TVTRB-60-A</b>  | 60 VA       | 230-400 V                   | 6-12-24 V                             | 15-30-60 VA                 | 2,5 A                     |
| <b>TVTRB-60-D</b>  |             | 230-400 V                   | 24-42 V                               | 34,3-60 VA                  | 1,43 A                    |
| <b>TVTRB-60-F</b>  |             | 230-400 V                   | 24-230 V                              | 6,2-60 VA                   | 0,26 A                    |
| <b>TVTRB-60-M</b>  |             | 230 V                       | 12 V                                  | 60 VA                       | 5 A                       |
| <b>TVTRB-60-O</b>  |             | 230 V                       | 42 V                                  | 60 VA                       | 1,43 A                    |
| <b>TVTRB-60-P</b>  |             | 230 V                       | 230 V                                 | 60 VA                       | 0,26 A                    |
| <b>TVTRB-100-A</b> | 100 VA      | 230-400 V                   | 6-12-24 V                             | 25-50-100 VA                | 4,17 A                    |
| <b>TVTRB-100-D</b> |             | 230-400 V                   | 24-42 V                               | 57,1-100 VA                 | 2,38 A                    |
| <b>TVTRB-100-F</b> |             | 230-400 V                   | 24-230 V                              | 10,4-100 VA                 | 0,43 A                    |
| <b>TVTRB-100-M</b> |             | 230 V                       | 12 V                                  | 100 VA                      | 8,33 A                    |
| <b>TVTRB-100-O</b> |             | 230 V                       | 42 V                                  | 100 VA                      | 2,38 A                    |
| <b>TVTRB-100-P</b> |             | 230 V                       | 230 V                                 | 100 VA                      | 0,43 A                    |

\* depending on the secondary voltage at the tapping exit;



# Small transformers



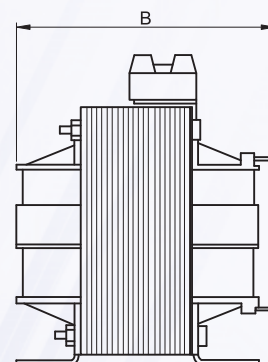
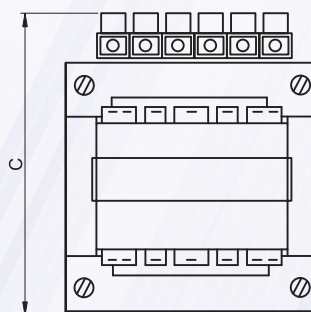
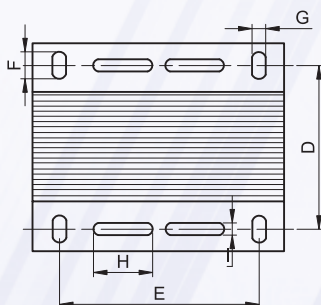
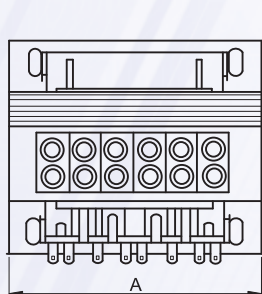
| Tracon code        | Rated power | Primary voltage<br>$U_{pr}$ | Secondary voltage<br>values $U_{sec}$ | Secondary power<br>values * | Max. secondary<br>current |
|--------------------|-------------|-----------------------------|---------------------------------------|-----------------------------|---------------------------|
| <b>TVTRB-160-B</b> | 160 VA      | 230-400 V                   | 6-12-24 V                             | 40-80-160 VA                | 6,67 A                    |
| <b>TVTRB-160-D</b> |             | 230-400 V                   | 24-42 V                               | 91,4-160 VA                 | 3,81 A                    |
| <b>TVTRB-160-F</b> |             | 230-400 V                   | 24-230 V                              | 16,7-160 VA                 | 0,70 A                    |
| <b>TVTRB-160-M</b> |             | 230 V                       | 12 V                                  | 160 VA                      | 13,34 A                   |
| <b>TVTRB-160-O</b> |             | 230 V                       | 42 V                                  | 160 VA                      | 3,81 A                    |
| <b>TVTRB-160-P</b> |             | 230 V                       | 230 V                                 | 160 VA                      | 0,70 A                    |
| <b>TVTRB-250-B</b> | 250 VA      | 230-400 V                   | 6-12-24 V                             | 62,5-125-250 VA             | 10,42 A                   |
| <b>TVTRB-250-D</b> |             | 230-400 V                   | 24-42 V                               | 142,9-250 VA                | 5,95 A                    |
| <b>TVTRB-250-F</b> |             | 230-400 V                   | 24-230 V                              | 26-250 VA                   | 1,09 A                    |
| <b>TVTRB-250-O</b> |             | 230 V                       | 42 V                                  | 250 VA                      | 5,95 A                    |
| <b>TVTRB-250-P</b> |             | 230 V                       | 230 V                                 | 250 VA                      | 1,09 A                    |
| <b>TVTRB-400-B</b> | 400 VA      | 230-400 V                   | 6-12-24 V                             | 100-200-400 VA              | 16,67 A                   |
| <b>TVTRB-400-D</b> |             | 230-400 V                   | 24-42 V                               | 228,6-400 VA                | 9,52 A                    |
| <b>TVTRB-400-F</b> |             | 230-400 V                   | 24-230 V                              | 41,74 VA                    | 1,74 A                    |
| <b>TVTRB-400-O</b> |             | 230 V                       | 42 V                                  | 400 VA                      | 9,52 A                    |
| <b>TVTRB-400-R</b> |             | 400 V                       | 24 V                                  | 400 VA                      | 16,67 A                   |
| <b>TVTRB-600-B</b> | 600 VA      | 230-400 V                   | 6-12-24 V                             | 150-300-600 VA              | 25 A                      |
| <b>TVTRB-600-D</b> |             | 230-400 V                   | 24-42 V                               | 342,9-600 VA                | 14,29 A                   |
| <b>TVTRB-600-O</b> |             | 230 V                       | 42 V                                  | 600 VA                      | 14,29 A                   |
| <b>TVTRB-600-P</b> |             | 230 V                       | 230 V                                 | 600 VA                      | 2,61 A                    |
| <b>TVTRB-600-R</b> |             | 400 V                       | 24 V                                  | 600 VA                      | 25 A                      |

\* depending on the secondary voltage at the tapping exit;

## Dimensions

| Type             | Dimensions [mm] |           |           | Distance between<br>fixation holes [mm] |           | Dimensions of holes [mm] |     |         |     | Weight<br>(kg) |
|------------------|-----------------|-----------|-----------|-----------------------------------------|-----------|--------------------------|-----|---------|-----|----------------|
|                  | A               | B         | C         | D                                       | E         | F                        | G   | H       | I   |                |
| <b>TVTRB-60</b>  | 78              | 56        | 93        | 44                                      | 56        | 9                        | 4,8 | 20      | 3,6 | 1,2            |
| <b>TVTRB-100</b> | 84              | 75        | 98        | 61                                      | 64        | 9                        | 4,8 | 24      | 3,6 | 1,9            |
| <b>TVTRB-160</b> | 96              | 80        | 108       | 70                                      | 84        | 11                       | 5,8 | 35      | 3,6 | 2,4            |
| <b>TVTRB-250</b> | 120 (130)**     | 88 (105)  | 108 (139) | 70 (72)                                 | 90 (104)  | 11                       | 5,8 | 35      | 3,6 | 3,7            |
| <b>TVTRB-400</b> | 120 (135)       | 118 (105) | 129 (144) | 102 (86)                                | 90 (104)  | 11                       | 5,8 | 35      | 3,6 | 6,2            |
| <b>TVTRB-600</b> | 135 (150)       | 125 (107) | 144 (159) | 106 (83)                                | 104 (122) | 11                       | 5,8 | 35 (44) | 3,6 | 8              |

\*\* Values between parentheses refer to the versions with -R or -S as the last character of the code.



## SCAN THE QR CODE!

- Check our new products
- Be updated

Our assortment is expanding quickly and continuously! This catalogue reflects the status in November 2013.  
Be up to date by our web page!