

## Auto transformers – Spartransformatoren – Classic Range – EN60076 – Chapter/Kapitel 6.4

| Ps VA  | Type       |  | Upri 230V Y+N |         |        | Upri 400V Y+N |         |        | Usec 230V Y+N |         | Usec 400V Y+N |         | Kast/Boitier IP20 |
|--------|------------|--|---------------|---------|--------|---------------|---------|--------|---------------|---------|---------------|---------|-------------------|
|        |            |  | Ipri          | Type C  | Type D | Ipri          | Type C  | Type D | Isec          | Type C  | Isec          | Type C  | Type              |
|        |            |  | A             | A       | A      | A             | A       | A      | A             | A       | A             | A       |                   |
| 2750   | ATT 2750   |  | 6,97          | 20      | 10     | 4,01          | 16      | 8      | 6,90          | 8       | 3,97          | 4       | K20E1190          |
| 4400   | ATT 4400   |  | 11,2          | 32      | 20     | 6,46          | 20      | 13     | 11,0          | 12      | 6,35          | 8       | K20E1190          |
| 6800   | ATT 6800   |  | 17,2          | 50      | 25     | 9,87          | 32      | 16     | 17,1          | 20      | 9,81          | 10      | K20E1220          |
| 11000  | ATT 11000  |  | 27,8          | –       | 40     | 16,0          | 50      | 25     | 27,6          | 32      | 15,9          | 16      | U 222 752         |
| 17500  | ATT 17500  |  | 44,1          | –       | 63     | 25,4          | 63      | 32     | 43,9          | 50      | 25,3          | 25      | U 222 752         |
| 25000  | ATT 25000  |  | 63,0          | –       | 80     | 36,2          | –       | 40     | 62,8          | 63      | 36,1          | 40      | U 2222 720        |
| 40000  | ATT 40000  |  | 101           | –       | 125    | 58,2          | –       | 63     | 100           | 100     | 57,7          | 63      | U 2222 721        |
| 50000  | ATT 50000  |  | 126           | 160 (*) |        | 72,5          | –       | 80     | 125           | 125     | 72,2          | 80      | U 2222 721        |
| 63000  | ATT 63000  |  | 158           | 200 (*) |        | 90,9          | –       | 100    | 158           | 160 (*) | 90,9          | 100     | U 2222 721        |
| 95000  | ATT 95000  |  | 241           | 250 (*) |        | 139           | 160 (*) |        | 238           | 250 (*) | 137           | 160 (*) | U 2222 722        |
| 120000 | ATT 120000 |  | 304           | 400 (*) |        | 175           | 200 (*) |        | 301           | 320 (*) | 173           | 200 (*) | U 2222 723        |
| 145000 | ATT 145000 |  | 368           | 500 (*) |        | 212           | 250 (*) |        | 364           | 400 (*) | 209           | 250 (*) | U 2222 723        |

## Separating-transformers – Transformatoren mit getrennten Wicklungen – Classic Range – EN60076 – Chapter/Kapitel 6.1 – 6.2

| Ps VA  | Type       |              | Upri 230V Δ |         |        | Upri 400V Y+N |         |        | Usec 230V Δ |         | Usec 400V Y+N |         | Kast/Boitier IP20 |
|--------|------------|--------------|-------------|---------|--------|---------------|---------|--------|-------------|---------|---------------|---------|-------------------|
|        |            |              | -           |         |        | Upri 400V Δ   |         |        | Usec 230V Δ |         | Usec 400V Y+N |         | Kast/Boitier IP20 |
|        |            |              | Ipri        | Type C  | Type D | Ipri          | Type C  | Type D | Isec        | Type C  | Isec          | Type C  | Type              |
| A      | A          | A            | A           | A       | A      | A             | A       | A      | A           |         |               |         |                   |
| 1000   | SPT 1000   | SPT 1000/D   | 2,68        | 10      | 6      | 1,52          | 6       | 3      | 2,51        | 3       | 1,44          | 2       | K20E1150          |
| 1600   | SPT 1600   | SPT 1600/D   | 4,26        | 16      | 8      | 2,43          | 10      | 6      | 4,02        | 4       | 2,31          | 3       | K20E1190          |
| 2500   | SPT 2500   | SPT 2500/D   | 6,57        | 25      | 13     | 3,80          | 16      | 8      | 6,28        | 8       | 3,61          | 4       | K20E1220          |
| 4000   | SPT 4000   | SPT 4000/D   | 10,6        | 32      | 16     | 6,10          | 20      | 10     | 10,0        | 10      | 5,77          | 6       | U 222 752         |
| 6300   | SPT 6300   | SPT 6300/D   | 16,5        | 63      | 32     | 9,50          | 40      | 20     | 15,8        | 16      | 9,09          | 10      | U 222 752         |
| 10000  | SPT 10000  | SPT 10000/D  | 26,1        | –       | 50     | 15,0          | 63      | 32     | 25,1        | 25      | 14,4          | 16      | U 2222 720        |
| 16000  | SPT 16000  | SPT 16000/D  | 42,3        | –       | 63     | 24,3          | –       | 40     | 40,2        | 40      | 23,1          | 25      | U 2222 720        |
| 20000  | SPT 20000  | SPT 20000/D  | 52,5        | –       | 80     | 30,2          | –       | 50     | 50,2        | 50      | 28,9          | 32      | U 2222 720        |
| 25000  | SPT 25000  | SPT 25000/D  | 65,1        | –       | 100    | 37,4          | –       | 63     | 62,8        | 63      | 36,1          | 40      | U 2222 720        |
| 31500  | SPT 31500  | SPT 31500/D  | 81,5        | –       | 125    | 46,9          | –       | 80     | 79,1        | 80      | 45,5          | 50      | U 2222 722        |
| 40000  | SPT 40000  | SPT 40000/D  | 102         | 160 (*) |        | 59,1          | –       | 100    | 100         | 100     | 57,7          | 63      | U 2222 722        |
| 50000  | SPT 50000  | SPT 50000/D  | 129         | 200 (*) |        | 74,4          | –       | 125    | 126         | 125     | 72,2          | 80      | U 2222 723        |
| 63000  | SPT 63000  | SPT 63000/D  | 162         | 250 (*) |        | 93,1          | 160 (*) |        | 158         | 160 (*) | 90,9          | 100     | U 2222 723        |
| 80000  | SPT 80000  | SPT 80000/D  | 206         | 320 (*) |        | 118           | 200 (*) |        | 200         | 200 (*) | 115           | 125     | K20E1500/004      |
| 100000 | SPT 100000 | SPT 100000/D | 258         | 400 (*) |        | 148           | 250 (*) |        | 251         | 250 (*) | 144           | 160 (*) | K20E1500/003      |

## Isolating-transformers – Energy Efficient – Energieeffiziente Trenntransformatoren (BTE) – EN61558-2-4 – Chapter/Kapitel 6.3

| Ps VA | Type          |                 | Upri 230V Δ |        |        | Upri 400V Y+N |        |        | Usec 230V Δ |        | Usec 400V Y+N |        | Kast/Boitier IP20 |
|-------|---------------|-----------------|-------------|--------|--------|---------------|--------|--------|-------------|--------|---------------|--------|-------------------|
|       |               |                 | -           |        |        | Upri 400V Δ   |        |        | Usec 230V Δ |        | Usec 400V Y+N |        | Kast/Boitier IP20 |
|       |               |                 | Ipri        | Type C | Type D | Ipri          | Type C | Type D | Isec        | Type C | Isec          | Type C | Type              |
| A     | A             | A               | A           | A      | A      | A             | A      | A      | A           |        |               |        |                   |
| 1000  | SPT 1000/BTE  | SPT 1000/D/BTE  | 2,63        | 10     | 6      | 1,52          | 6      | 3      | 2,51        | 3      | 1,44          | 2      | K20BTE/005        |
| 1600  | SPT 1600/BTE  | SPT 1600/D/BTE  | 4,17        | 16     | 8      | 2,41          | 10     | 6      | 4,02        | 4      | 2,31          | 3      | K20BTE/010        |
| 2500  | SPT 2500/BTE  | SPT 2500/D/BTE  | 6,5         | 25     | 13     | 3,75          | 16     | 8      | 6,28        | 8      | 3,61          | 4      | K20BTE/020        |
| 4000  | SPT 4000/BTE  | SPT 4000/D/BTE  | 10,4        | 32     | 16     | 5,99          | 20     | 10     | 10,0        | 10     | 5,77          | 6      | K20BTE/030        |
| 6300  | SPT 6300/BTE  | SPT 6300/D/BTE  | 16,3        | 63     | 32     | 9,41          | 40     | 20     | 15,8        | 16     | 9,09          | 10     | K20BTE/030        |
| 10000 | SPT 10000/BTE | SPT 10000/D/BTE | 25,9        | –      | 50     | 14,9          | 63     | 32     | 25,1        | 25     | 14,4          | 16     | K20BTE/040        |
| 11000 | ECT 11000/IRC | ECT 11000/D/IRC | 28,6        | 32     | 32     | 16,5          | 16     | 16     | –           | –      | 16            | 16     | K20ECT/040        |
| 16000 | SPT 16000/BTE | SPT 16000/D/BTE | 41,2        | –      | 63     | 23,7          | –      | 40     | 40,2        | 40     | 23,1          | 25     | K20BTE/040        |
| 20000 | SPT 20000/BTE | SPT 20000/D/BTE | 51,4        | –      | 80     | 29,5          | –      | 50     | 50,2        | 50     | 28,9          | 32     | K20BTE/050        |
| 22000 | ECT 22000/IRC | ECT 22000/D/IRC | 57,2        | 63     | 63     | 33,0          | 32     | 32     | –           | –      | 32            | 32     | K20ECT/050        |
| 25000 | SPT 25000/BTE | SPT 25000/D/BTE | 64,1        | –      | 100    | 36,9          | –      | 63     | 62,8        | 63     | 36,1          | 40     | K20BTE/050        |
| 31500 | SPT 31500/BTE | SPT 31500/D/BTE | 80,6        | –      | 125    | 46,4          | –      | 80     | 79,1        | 80     | 45,5          | 50     | K20BTE/060        |
| 44000 | ECT 44000/IRC | ECT 44000/D/IRC | 112,0       | 125    | 125    | 64,8          | 63     | 63     | –           | –      | 63            | 63     | K20ECT/060        |

(\*) = MCCB = Moulded Case Circuit Breaker



Transforming since 1933

## TS – 1 Phase Safety Transformers – Einphasen-Sicherheitstransformatoren – EN 61558-2-6 – Chapter/Kapitel 1.2 – 1.3

| IP20  |              |      |            |          |  |
|---|--------------|------|------------|----------|--|
| Ps VA   | types        | code | Upri       | Usec     |  |
| <b>Transformers 12V or 24V – Transformatoren 12V oder 24V</b> |              |      |            |          |  |
| 30  | EDR 212TS30  | 2785 | 0-230-400V | 2x 0-12V |  |
| 63  | EDR 212TS63  | 2786 | 0-230-400V | 2x 0-12V |  |
| 100   | EDR 212TS100 | 2787 | 0-230-400V | 2x 0-12V |  |
| 160   | EDR 212TS160 | 2788 | 0-230-400V | 2x 0-12V |  |
| 250   | E 212TS250   | 2789 | 0-230-400V | 2x 0-12V |  |
| 400   | E 212TS400   | 2790 | 0-230-400V | 2x 0-12V |  |
| <b>Transformers 24V – Transformatoren 24V</b>                 |              |      |            |          |  |
| 10  | EDR 24TS10   | 2408 | 0-230-400V | 0-24V    |  |
| 30  | EDR 24TS30   | 2409 | 0-230-400V | 0-24V    |  |
| 63  | EDR 24TS63   | 2401 | 0-230-400V | 0-24V    |  |
| 100   | EDR 24TS100  | 2402 | 0-230-400V | 0-24V    |  |
| 160   | EDR 24TS160  | 2403 | 0-230-400V | 0-24V    |  |
| 250   | E 24TS250    | 2404 | 0-230-400V | 0-24V    |  |
| 400   | E 24TS400    | 2642 | 0-230-400V | 0-24V    |  |
| 630   | E 24TS630    | 2643 | 0-230-400V | 0-24V    |  |

| IP54  |             |      |            |          |  |
|---|-------------|------|------------|----------|--|
| Ps VA   | types       | code | Upri       | Usec     |  |
| <b>Transformers 12V or 24V – Transformatoren 12V oder 24V</b> |             |      |            |          |  |
| 100   | EF 212SC100 | 2047 | 0-230V     | 2x 0-12V |  |
| 160   | EF 212SC160 | 2048 | 0-230V     | 2x 0-12V |  |
| 250   | EF 212SC250 | 2049 | 0-230V     | 2x 0-12V |  |
| 400   | EF 212SC400 | 2050 | 0-230V     | 2x 0-12V |  |
| <b>Transformers 24V or 48V – Transformatoren 24V oder 48V</b> |             |      |            |          |  |
| 100   | EF 224SB100 | 2051 | 0-230-400V | 2x 0-24V |  |
| 160   | EF 224SB160 | 2052 | 0-230-400V | 2x 0-24V |  |
| 250   | EF 224SB250 | 2053 | 0-230-400V | 2x 0-24V |  |
| 400   | EF 224SB400 | 2054 | 0-230-400V | 2x 0-24V |  |
| 630   | EF 224SB630 | 2055 | 0-230-400V | 2x 0-24V |  |

For higher power ranges – see below: TC series – für höhere Leistung: TC serie

## TC – 1 Phase Control Transformers – Einphasen-Steuertansformatoren – EN 61558-2-2 – Ch/K 3

| IP20   |                |       |               |           |                                    |           |  |
|--|----------------|-------|---------------|-----------|------------------------------------|-----------|--|
| Ps VA  | types          | code  | Upri          | Usec      | Inrush power VA / Anrufleistung VA |           |  |
| <b>Transformers 24V (IP20) – Transformatoren 24V (IP20)</b>  |                |       |               |           |                                    |           |  |
| 40   | EDR 24TC40     | 2220  | 15-0-230-400V | 0-0-24V   | 90                                 |           |  |
| 63   | EDR 24TC63     | 2221  | 15-0-230-400V | 0-0-24V   | 160                                |           |  |
| 100  | EDR 24TC100    | 2222  | 15-0-230-400V | 0-0-24V   | 260                                |           |  |
| 160  | EDR 24TC160    | 2223  | 15-0-230-400V | 0-0-24V   | 430                                |           |  |
| 250  | E 24TC250      | 2224  | 15-0-230-400V | 0-0-24V   | 680                                |           |  |
| 400  | E 24TC400      | 2225  | 15-0-230-400V | 0-24V     | 1100                               |           |  |
| 630  | E 24TC630      | 2226  | 15-0-230-400V | 0-24V     | 1800                               |           |  |
| <b>Transformers 24V or 48V (IP00) – Transformatoren 24V oder 48V (IP00) Gehäuse IP20 cover</b>     |                |       |               |           |                                    |           |  |
| 1000   | 224TC1000      | 2227  | 15-0-230-400V | 2x 0-24V  | 3200                               | U 22 763  |  |
| 1600   | 224TC1600      | 2228  | 15-0-230-400V | 2x 0-24V  | 5300                               | U 22 757  |  |
| 2500   | 224TC2500      | 2229  | 15-0-230-400V | 2x 0-24V  | 8200                               | U 22 757  |  |
| <b>Transformers 230V (IP20) – Transformatoren 230V (IP20)</b>                                      |                |       |               |           |                                    |           |  |
| 40   | EDR 230TC40    | 2200  | 15-0-230-400V | 0-0-230V  | 90                                 |           |  |
| 63   | EDR 230TC63    | 2201  | 15-0-230-400V | 0-0-230V  | 160                                |           |  |
| 100  | EDR 230TC100   | 2202  | 15-0-230-400V | 0-0-230V  | 260                                |           |  |
| 160  | EDR 230TC160   | 2203  | 15-0-230-400V | 0-0-230V  | 430                                |           |  |
| 250  | E 230TC250     | 2204  | 15-0-230-400V | 0-0-230V  | 680                                |           |  |
| 400  | E 230TC400     | 2205  | 15-0-230-400V | 0-0-230V  | 1100                               |           |  |
| 630  | E 230TC630     | 2206  | 15-0-230-400V | 0-0-230V  | 1800                               |           |  |
| <b>Transformers 115V or 230V (IP00) – Transformatoren 115V oder 230V (IP00) Gehäuse IP20 cover</b> |                |       |               |           |                                    |           |  |
| 1000   | 230TC1000      | 2207  | 15-0-230-400V | 2x 0-115V | 3200                               | U 22 763  |  |
| 1600   | 230TC1600      | 2208  | 15-0-230-400V | 2x 0-115V | 5300                               | U 22 757  |  |
| 2500   | 230TC2500      | 2209  | 15-0-230-400V | 2x 0-115V | 8200                               | U 22 757  |  |
| 3700   | 230EC3700/IRC  | 11536 | 15-0-230V     | 0-0-230V  | 11000                              | K20EC/030 |  |
| 4000   | 230TC4000      | 2210  | 15-0-230-400V | 2x 0-115V | 11000                              | U 222 751 |  |
| 6300   | 230TC6300      | 2211  | 15-0-230-400V | 2x 0-115V | 17000                              | U 222 748 |  |
| 7400   | 230EC7400/IRC  | 11537 | 15-0-230V     | 0-0-230V  | 20000                              | K20EC/035 |  |
| 10000  | 230TC10000     | 2212  | 15-0-230-400V | 2x 0-115V | 27000                              | U 222 748 |  |
| 11000  | 230EC11000/IRC | 11580 | 15-0-230V     | 0-0-230V  | 30000                              | K20EC/045 |  |

## Gehäuse IP20-23-65 cover – Ch/K 7



### Legend

- E Encapsulated with synthetic resin
- EDR DIN-rail mountable
- EF IP54
- 0-0 Double zero-terminal
- 15-0... Terminal +15V primary side
- EN European Norm
- Ps Apparent Power
- IRC Low inrush current transformer
- Compatible charging point e-vehicle
- Primary protection type C or D: depending from network impedance

### Abkürzungen

- E mit Kunstharz vakuumvergossen
- EDR auf DIN-Schiene
- EF IP54 - Spritzwassergeschützt
- 0-0 Doppel-Null-Anschluss
- 15-0... Primärseite Klemme +15 V
- EN Europäische Norm
- Ps Scheinleistung
- IRC Einschaltstrom niedrige Transformator
- Ladepunkt kompatibel Elektroauto
- Primärschutz Typ C oder D: abhängig von der Netzimpedanz

## TI – 1 Phase Isolating Transformers – Einphasen-Trenntransformatoren – EN 61558-2-4 – Chapter/Kapitel 2.2 – 2.3

| IP20  |               |      |            |           |  |
|---|---------------|------|------------|-----------|--|
| Ps VA   | types         | code | Upri       | Usec      |  |
| <b>Transformers 115V or 230V – Transformatoren 115V oder 230V</b> |               |      |            |           |  |
| 63  | EDR 2115TI63  | 3980 | 0-230-400V | 2x 0-115V |  |
| 100   | EDR 2115TI100 | 3981 | 0-230-400V | 2x 0-115V |  |
| 160   | EDR 2115TI160 | 3982 | 0-230-400V | 2x 0-115V |  |
| 250   | E 2115TI250   | 3983 | 0-230-400V | 2x 0-115V |  |
| 400   | E 2115TI400   | 3984 | 0-230-400V | 2x 0-115V |  |
| 630   | E 2115TI630   | 3985 | 0-230-400V | 2x 0-115V |  |
| <b>Transformers 230V – Transformatoren 230V</b>                   |               |      |            |           |  |
| 63  | EDR 230TI63   | 2301 | 0-230-400V | 0-0-230V  |  |
| 100   | EDR 230TI100  | 2302 | 0-230-400V | 0-0-230V  |  |
| 160   | EDR 230TI160  | 2303 | 0-230-400V | 0-0-230V  |  |
| 250   | E 230TI250    | 2304 | 0-230-400V | 0-0-230V  |  |
| 400   | E 230TI400    | 2635 | 0-230-400V | 0-0-230V  |  |
| 630   | E 230TI630    | 2636 | 0-230-400V | 0-0-230V  |  |

| IP54  |          |      |            |           |  |
|---|----------|------|------------|-----------|--|
| Ps VA   | types    | code | Upri       | Usec      |  |
| <b>Transformers 115V or 230V – Transformatoren 115V oder 230V</b> |          |      |            |           |  |
| 100   | EFSP 100 | 2065 | 0-230-400V | 2x 0-115V |  |
| 160   | EFSP 160 | 2066 | 0-230-400V | 2x 0-115V |  |
| 250   | EFSP 250 | 2067 | 0-230-400V | 2x 0-115V |  |
| 400   | EFSP 400 | 2068 | 0-230-400V | 2x 0-115V |  |
| 630   | EFSP 630 | 2069 | 0-230-400V | 2x 0-115V |  |



For higher power ranges – see above: TC series – für höhere Leistung: TC serie

edition 2020-03/BE-EN-DE



since 1933  
Transforming