



# Selection Guide 2019/2020

High Power Thyristors & Diodes

[www.ifbip-shop.com](http://www.ifbip-shop.com)



Infineon Technologies Bipolar



Infineon Technologies Bipolar

## Eco Line

straight, efficient, functional

Modules  
Eco Block



Solder Bond



Pressure Contact

## Power Line

reliable, powerful, valuable

Modules  
Power Block



Diodes  
Power Chip



Soft Starters  
Power Start



Studs  
Power Stud



Discs  
Power Disc



## Prime Line

unique, optimized, leading

Modules  
Prime Block



Solder Bond

Pressure Contact

Diodes  
Prime Soft



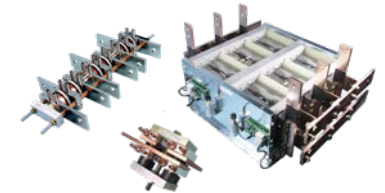
Discs  
Prime Disc



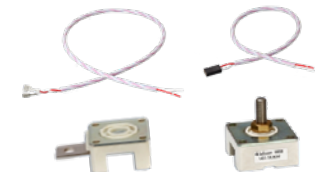
## System Line

specific, complete, versatile

Stacks/Assemblies  
Power Stack



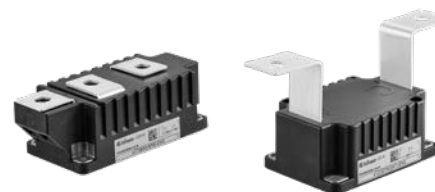
Fittings  
Power Fit



Eco Line

# Reduced to pure function. With proven reliability.

Infineon® Eco Block – Pressure Contact Technology



Complete re-design of 60 mm and 70 mm package

- › Proven pressure contact technology with short-on-fail feature
- › Best-in-class DC blocking capability
- › Best power-to-price ratio
- › Reduced failure and system costs

Infineon® Eco Block – Solder Contact Technology



Benefit from

Cost effective solder bond technology for increased competitiveness

- › Predictably high performance and lifetime due to 100% x-ray monitoring
- › Solid base plate for fast and easy mounting

[www.infineon.com/ecoline](http://www.infineon.com/ecoline)



Order directly

# Focus on application

Most complete product portfolio for  
Low Voltage Soft Starters (<2200V)

Choose from different technologies scaling from 30 kW up to 1 MW  
to suit your individual design

## Infineon® Power Block

- › Pressure Contact  
Modules: 20-70mm



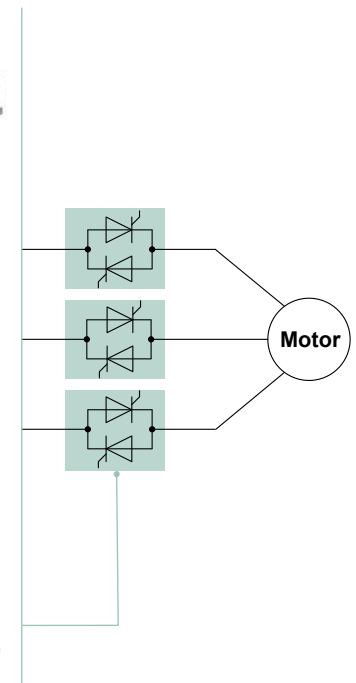
## Infineon® Power Start

- › Soft Starter  
Modules: 55 mm



## Infineon® Power Disc

- › Ceramic Discs  
ø 42-111 mm



Order directly

Prime Line

# Designed for highest performance

Infineon® Prime Block



Solder Bond Technology



Pressure Contact Technology

Benefit from

- › Best-in-class power density in 50 mm & 60 mm housing
- › Predictable performance over entire lifetime
- › Ready for safety applications
- › Easy mounting & Faster time-to-market



Order directly

Prime Line

# Hard switching. Soft landing.

Infineon® Prime Soft Family



The new ultra-soft freewheeling diodes for IGBTs built on our existing IGCT freewheeling diode family. A big improvement is the turn-off capability, which has been upgraded to 5 kA/μs. These new diodes are the perfect fit for modern IGBT applications such as HVDC voltage source converters and medium voltage drives.

#### System approach:

- › Double-digit percentage reduction in footprint
- › Turn-off capability up to 5 kA/μs
- › Increased system robustness thanks to extreme overcurrent capability of 80 kA@10 ms

#### Your benefits:

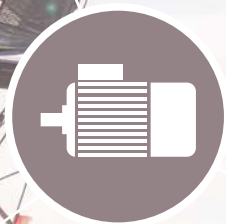
- › Simplified mechanical stack construction with series stacking of press-pack IGBTs and freewheeling diodes
- › 50% time savings in stack design
- › Fewer safety devices required thanks to high overload capability
- › Ideal for building gigawatt HVDC installations with low power losses

[www.infineon.com/primesoft](http://www.infineon.com/primesoft)



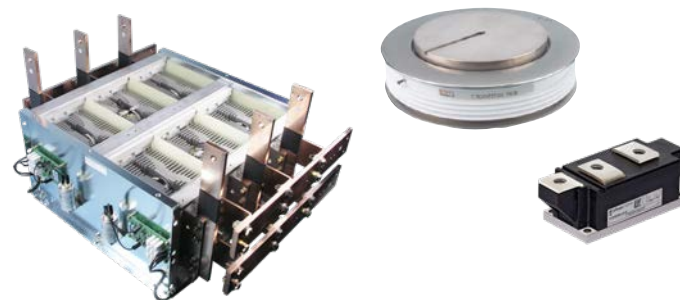
Order directly

System Line



# In perfect harmony – with Infineon® Power Stacks

Heatsink & mounting concepts  
for bipolar semiconductors



Infineon® Power Stacks with bipolar power semiconductors are used in most varied applications in a power range from a few kilowatts up to several megawatts. The modular portfolio of our System Line covers solutions with thyristors and diodes and is optimized to the respective requirements.

The Block Design Lines are based on more than 22 heatsink concepts and offer a suitable design variant for every semiconductor package and for each application. Whether natural air cooling, forced air cooling or liquid cooling, all known requirements are supported.



[www.infineon.com/powerstacks](http://www.infineon.com/powerstacks)

Order directly

# Ready for Infineon® Power Stacks?

Infineon® Power Stacks with bipolar power semiconductors are used in most varied applications in a power range from a few kilowatts up to several megawatts. The modular portfolio of our System Line covers solutions with thyristors and diodes and is optimized to the respective requirements.

## 4 steps to your individual Power Stack

We support your requests flexible with building blocks:

1. Find a module or disc which supports your application needs
2. Choose one of the building blocks for basic circuits
3. Define the stack from blocks according the applications needs
4. Add accessories according the applications needs

### Your possible choice

22

heatsink designs

75

block designs

over

8,600

block variants

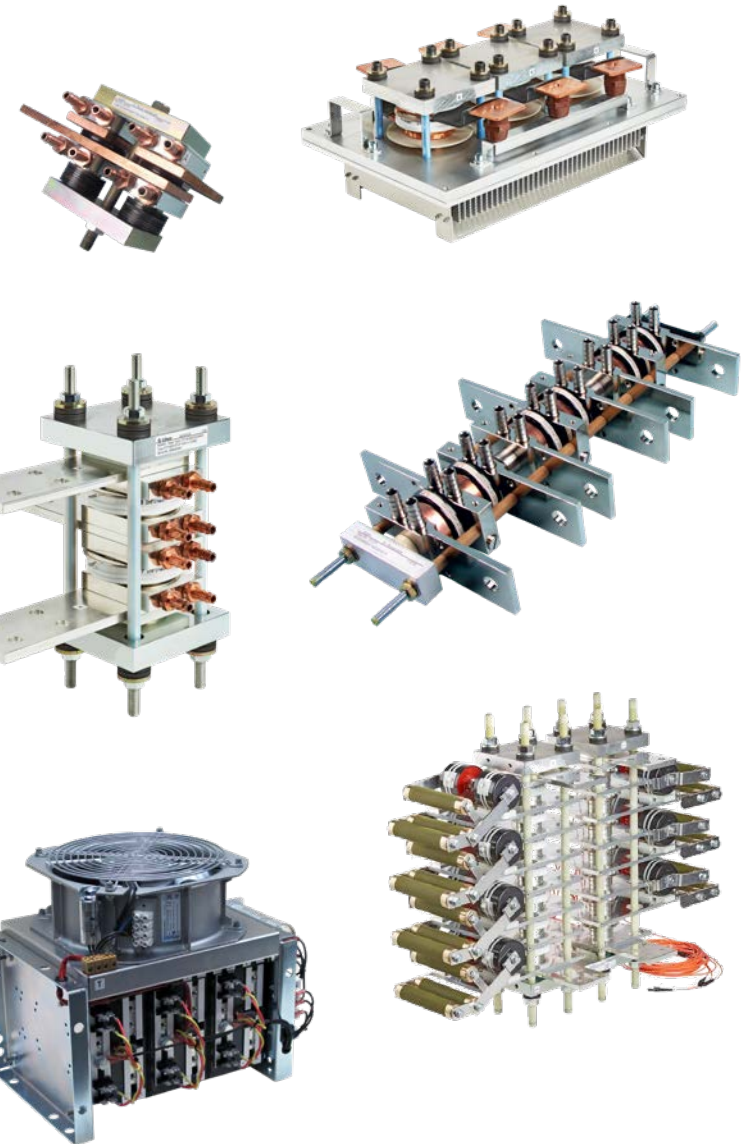
over

25,700

stack designs

### Applications

- › Industrial AC and DC drives
- › Soft starters, STATS
- › Rectifiers and static by-passes in UPS
- › Wind energy systems
- › Welding, plating
- › Electrolysis
- › Electric heat
- › High voltage direct current (HVDC) transmission systems
- › Flexible AC transmission systems (FACTS)
- › TAP changers for transformers
- › Controllable transformers
- › Pulsed Power, Crowbars
- › Freewheeling and clamping circuits
- › Exiter devices
- › Rectifiers for VSI

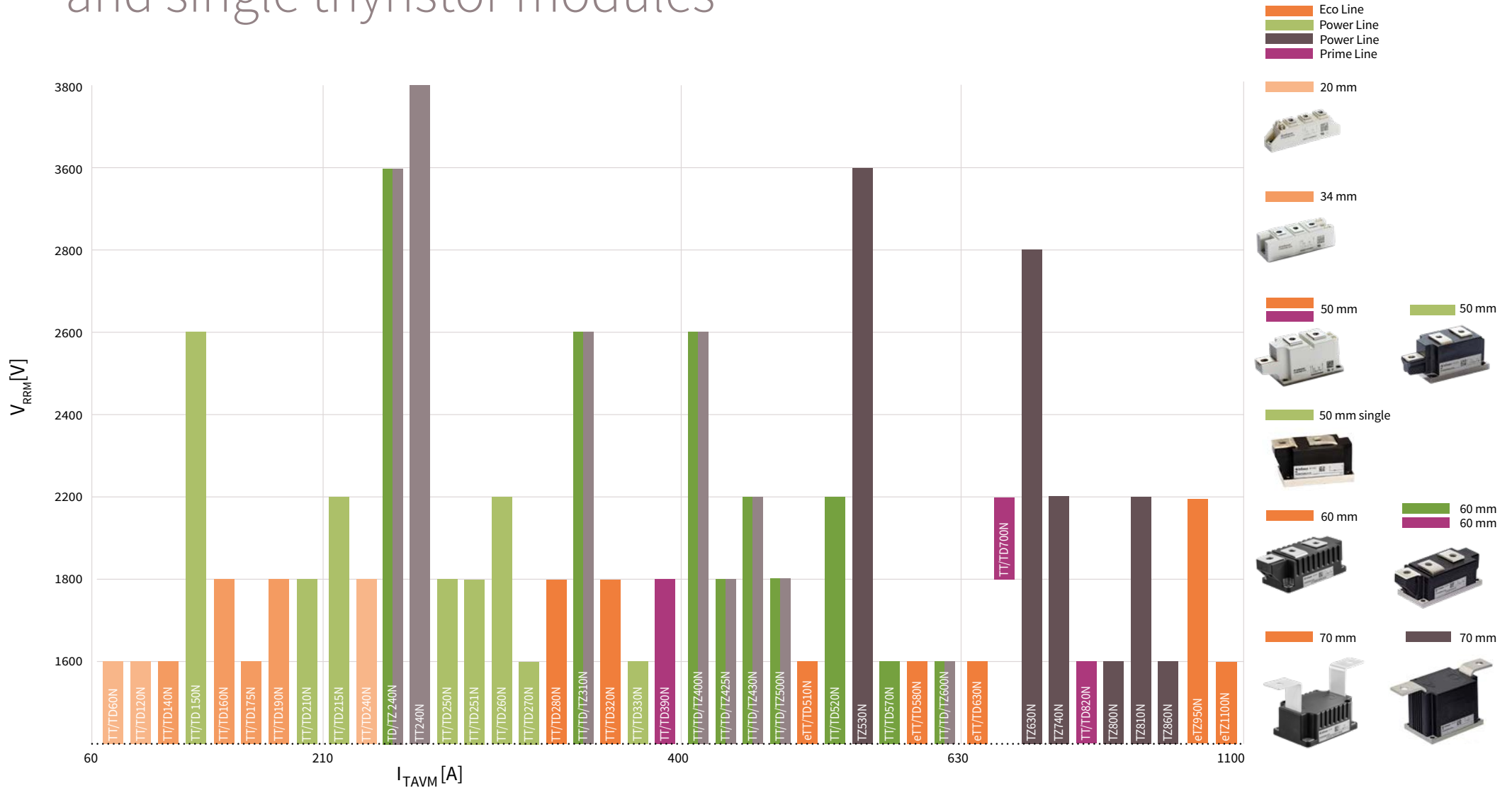


Personal service and support:

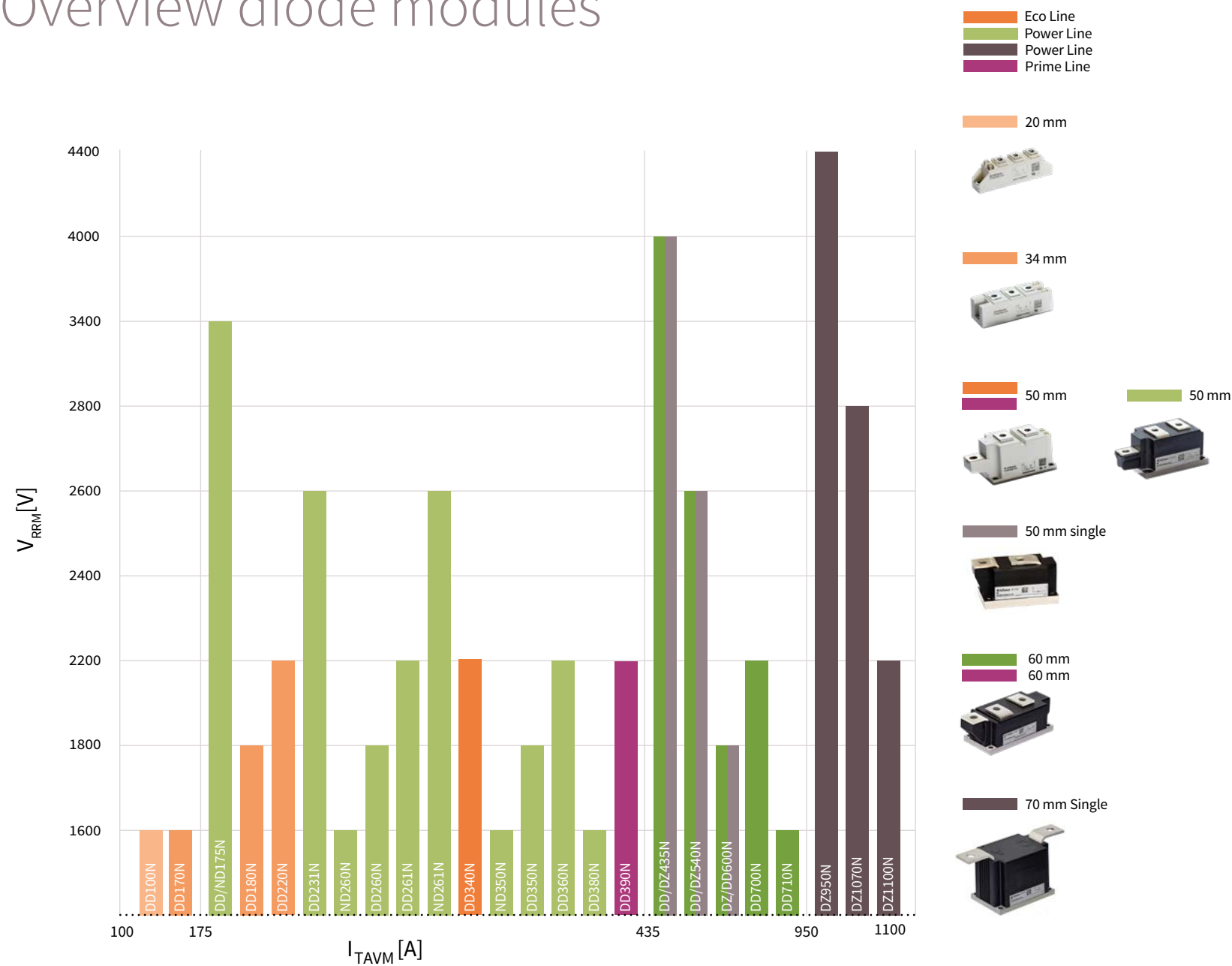
support@infineon-bip.com | Phone: +49 2902 9899-1766

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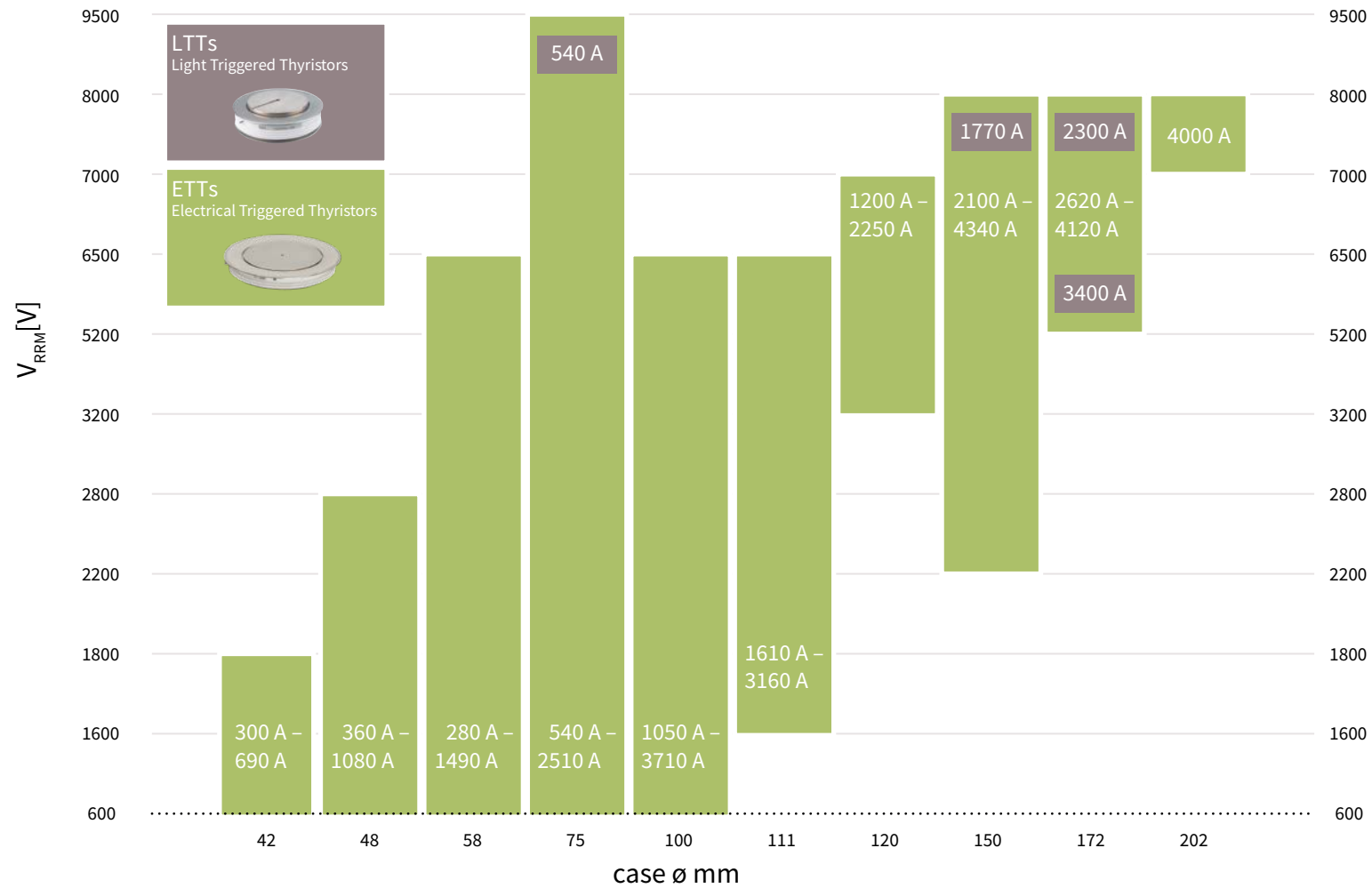
# Overview thyristor/thyristor, thyristor/diode and single thyristor modules



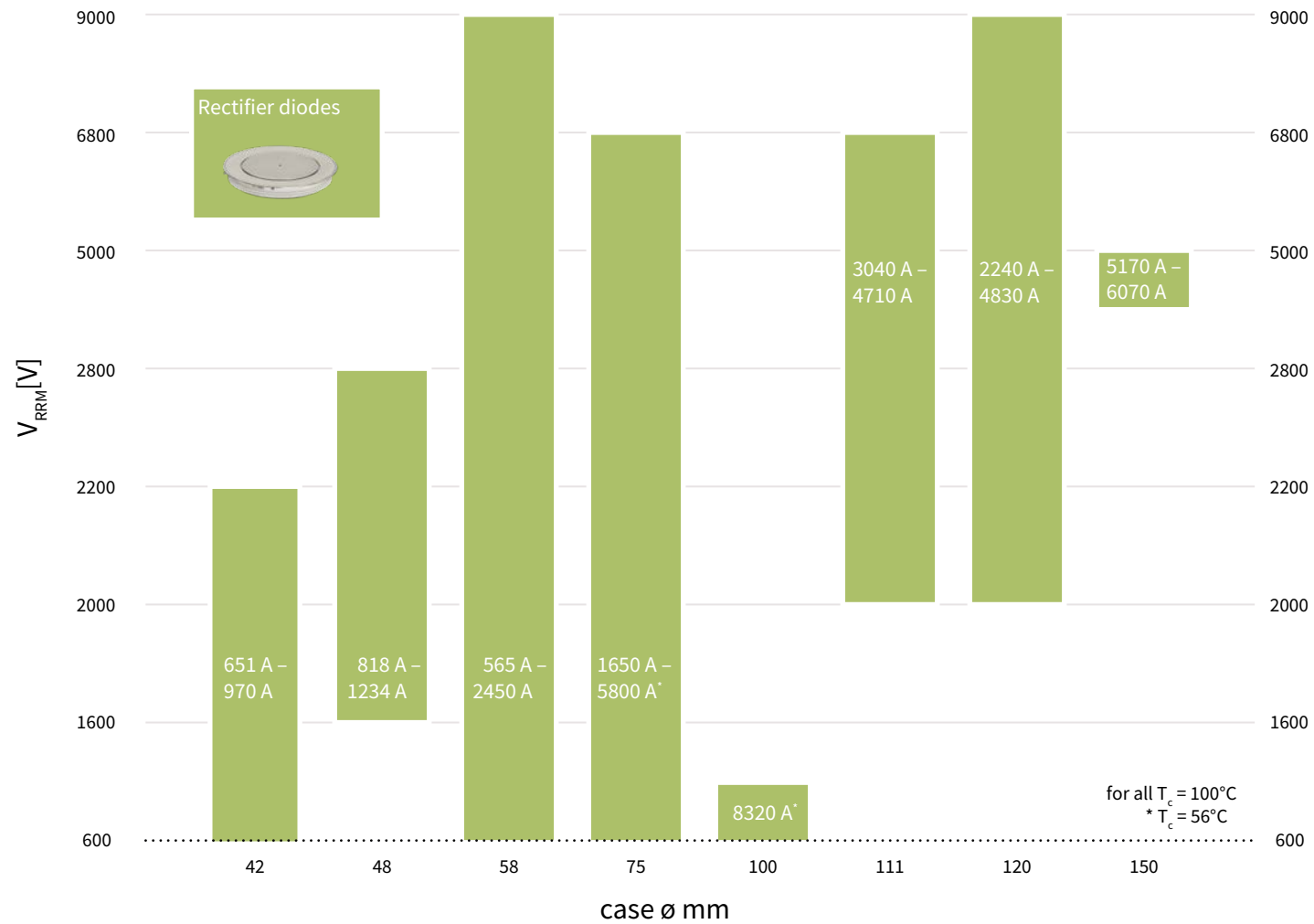
# Overview diode modules



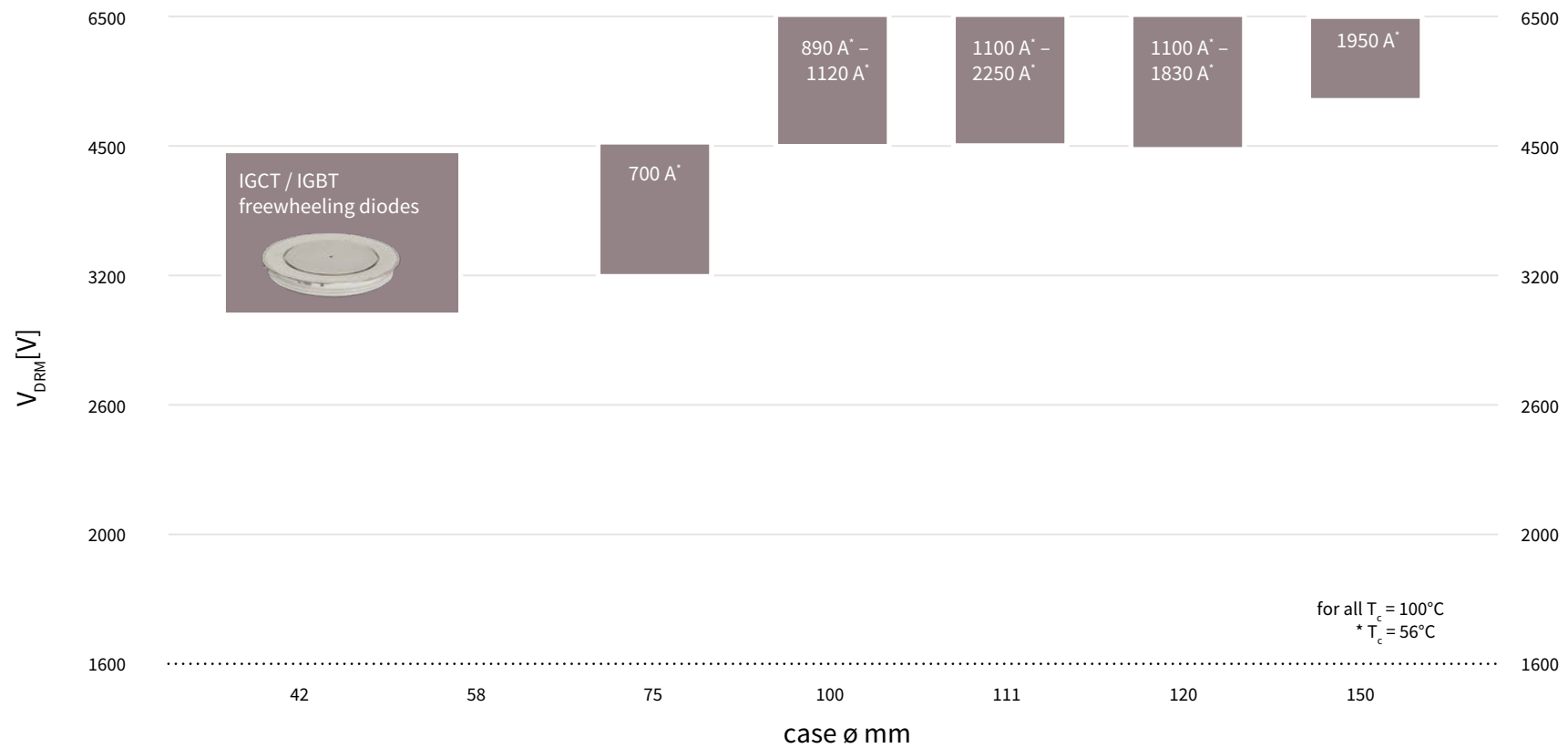
# Overview thyristors in disc housings



# Overview diodes in disc housings

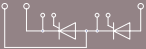


# Overview IGCT/IGBT freewheeling diodes in disc housings



# Thyristor / Thyristor Modules



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/°C]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj\ max}$ | $[I^2dt]$<br>[A²·s · 10³]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
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## Eco Line - thyristor modules - baseplate 20 mm - solder bond

|                |      |  |        |      |       |      |      |      |     |           |
|----------------|------|--|--------|------|-------|------|------|------|-----|-----------|
| TT60N16SOF     | 1600 |  | 55/85  | 1200 | 7.20  | 1.00 | 4.80 | 0.49 | 130 | TS20 / 39 |
| TT60N16SOFB01  | 1600 |  | 55/85  | 1200 | 7.20  | 1.00 | 4.80 | 0.49 | 130 | TS20 / 39 |
| TT120N16SOF    | 1600 |  | 119/85 | 2250 | 18.05 | 0.90 | 3.35 | 0.20 | 130 | TS20 / 39 |
| TT120N16SOFB01 | 1600 |  | 119/85 | 1900 | 18.05 | 0.90 | 3.35 | 0.20 | 130 | TS20 / 39 |

## Power Line - thyristor modules - baseplate 20 mm - pressure contact

|             |      |      |        |      |       |      |      |      |     |           |
|-------------|------|------|--------|------|-------|------|------|------|-----|-----------|
| TT61N16KOF  | 1600 | 1400 | 60/85  | 1400 | 9.80  | 0.80 | 3.40 | 0.52 | 125 | TP20 / 39 |
| TT92N16KOF  | 1600 |      | 92/85  | 1800 | 16.20 | 0.85 | 2.15 | 0.37 | 130 | TP20 / 39 |
| TT104N14KOF | 1400 | 1200 | 104/85 | 1800 | 16.20 | 0.85 | 2.15 | 0.37 | 130 | TP20 / 39 |

## Eco Line - thyristor modules - baseplate 34 mm - solder bond

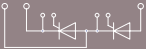
|             |      |      |        |      |        |      |      |       |     |                   |
|-------------|------|------|--------|------|--------|------|------|-------|-----|-------------------|
| TT140N16SOF | 1600 |      | 140/85 | 4000 | 80.00  | 1.00 | 1.60 | 0.19  | 125 | TS34 / 39         |
| TT160N16SOF | 1600 |      | 160/85 | 4500 | 101.30 | 1.10 | 0.99 | 0.145 | 125 | TS34 2nd Gen / 39 |
| TT175N16SOF | 1600 |      | 175/85 | 5400 | 125.00 | 0.83 | 1.30 | 0.164 | 125 | TS34 / 39         |
| TT190N18SOF | 1800 | 1600 | 190/85 | 4500 | 101.30 | 0.85 | 0.90 | 0.145 | 125 | TS34 2nd Gen / 39 |
| TT240N18SOF | 1800 | 1600 | 240/85 | 4400 | 96.80  | 0.85 | 0.90 | 0.165 | 140 | TS34 2nd Gen / 39 |

## Power Line - thyristor modules - baseplate 34 mm - pressure contact

|             |      |      |        |      |       |      |      |      |     |           |
|-------------|------|------|--------|------|-------|------|------|------|-----|-----------|
| TT122N22KOF | 2200 | 1800 | 122/85 | 2950 | 43.50 | 1.00 | 2.15 | 0.20 | 125 | TP34 / 39 |
| TT140N22KOF | 2200 | 1800 | 140/85 | 3200 | 51.20 | 0.90 | 1.75 | 0.06 | 125 | TP34 / 39 |
| TT142N16KOF | 1600 |      | 142/85 | 4100 | 84.00 | 0.90 | 1.10 | 0.22 | 125 | TP34 / 39 |
| TT162N16KOF | 1600 | 1400 | 162/85 | 4400 | 97.00 | 0.85 | 0.95 | 0.20 | 125 | TP34 / 39 |
| TT180N16KOF | 1600 | 1200 | 180/85 | 4100 | 84.00 | 0.85 | 0.90 | 0.20 | 130 | TP34 / 39 |

# Thyristor / Thyristor Modules



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj\ max}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
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## Eco Line - thyristor modules - baseplate 50 mm - solder bond

|                 |      |      |        |      |       |      |      |      |     |           |
|-----------------|------|------|--------|------|-------|------|------|------|-----|-----------|
| TT280N18SOF     | 1800 | 1600 | 280/85 | 7800 | 304.2 | 1.77 | 0.82 | 0.11 | 130 | TS50 / 40 |
| TT320N16SOF TIM | 1600 |      | 320/85 | 8200 | 335.0 | 0.77 | 0.58 | 0.11 | 130 | TS50 / 40 |
| TT320N18SOF     | 1800 | 1600 | 320/85 | 8200 | 335.0 | 0.77 | 0.58 | 0.11 | 130 | TS50 / 40 |

## Prime Line - thyristor modules - baseplate 50 mm - solder bond

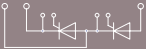
|             |      |      |        |      |       |      |      |      |     |           |
|-------------|------|------|--------|------|-------|------|------|------|-----|-----------|
| TT390N18SOF | 1800 | 1600 | 380/85 | 8100 | 328.0 | 0.77 | 0.58 | 0.11 | 140 | TS50 / 40 |
|-------------|------|------|--------|------|-------|------|------|------|-----|-----------|

## Power Line - thyristor modules - baseplate 50 mm - pressure contact

|                 |      |                  |        |       |       |      |      |       |     |            |
|-----------------|------|------------------|--------|-------|-------|------|------|-------|-----|------------|
| TT150N26KOF     | 2600 | 2200             | 150/85 | 4000  | 80.0  | 1.20 | 2.30 | 0.13  | 125 | TP50 / 40  |
| TT170N18KOF     | 1800 |                  | 170/85 | 4600  | 106.0 | 0.95 | 1.00 | 0.17  | 125 | TP50A / 40 |
| TT210N18KOF     | 1800 |                  | 210/85 | 5800  | 168.0 | 1.00 | 0.85 | 0.13  | 125 | TP50A / 40 |
| TT215N22KOF     | 2200 | 2000, 1800       | 215/85 | 6300  | 198.0 | 0.95 | 0.92 | 0.13  | 125 | TP50A / 40 |
| TT250N18KOF     | 1800 | 1600, 1400       | 250/85 | 7000  | 245.0 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 40 |
| TT250N16KOF TIM | 1600 |                  | 250/85 | 7000  | 245.0 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 40 |
| TT251N18KOF     | 1800 | 1600, 1400, 1200 | 250/85 | 8000  | 320.0 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 40 |
| TT260N22KOF     | 2200 |                  | 260/85 | 8000  | 320.0 | 0.85 | 0.64 | 0.12  | 125 | TP50A / 40 |
| TT270N16KOF     | 1600 |                  | 270/92 | 9000  | 400.0 | 0.80 | 0.58 | 0.12  | 125 | TP50A / 40 |
| TT285N16KOF     | 1600 |                  | 285/92 | 10000 | 781.0 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 40 |
| TT330N16KOF     | 1600 | 1400, 1200       | 330/85 | 10000 | 500.0 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 40 |
| TT330N16KOF TIM | 1600 |                  | 330/85 | 10000 | 500.0 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 40 |

# Thyristor / Thyristor Modules



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/°C]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj\ max}$ | $\int I^2 dt$<br>[A²·s · 10³]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
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| Eco Line - thyristor modules - baseplate 60 mm - pressure contact |      |  |        |       |      |      |       |       |     |           |
|-------------------------------------------------------------------|------|--|--------|-------|------|------|-------|-------|-----|-----------|
| ETT420N22P60                                                      | 2200 |  | 420/85 | 11400 | 650  | 0.85 | 0.548 | 0.076 | 135 | TE60 / 41 |
| ETT480N22P60                                                      | 2200 |  | 480/85 | 12000 | 720  | 0.85 | 0.484 | 0.076 | 135 | TE60 / 41 |
| ETT510N16P60                                                      | 1600 |  | 510/85 | 12800 | 819  | 0.80 | 0.375 | 0.076 | 135 | TE60 / 41 |
| ETT540N22P60                                                      | 2200 |  | 540/85 | 13300 | 884  | 0.85 | 0.425 | 0.076 | 135 | TE60 / 41 |
| ETT580N16P60                                                      | 1600 |  | 580/85 | 13600 | 925  | 0.80 | 0.327 | 0.064 | 135 | TE60 / 41 |
| ETT630N16P60                                                      | 1600 |  | 630/85 | 14700 | 1080 | 0.80 | 0.289 | 0.063 | 135 | TE60 / 41 |

| Power Line - thyristor modules - baseplate 60 mm - pressure contact |      |                  |        |       |      |      |      |       |     |            |
|---------------------------------------------------------------------|------|------------------|--------|-------|------|------|------|-------|-----|------------|
| TT240N38KOF                                                         | 3800 | 3600             | 240/85 | 5500  | 151  | 1.17 | 1.70 | 0.078 | 125 | TP60 / 41  |
| TT310N26KOF                                                         | 2600 | 2000             | 310/85 | 9000  | 405  | 1.00 | 0.86 | 0.078 | 125 | TP60 / 41  |
| TT400N26KOF                                                         | 2600 | 2400             | 400/85 | 11000 | 605  | 1.00 | 0.50 | 0.065 | 125 | TP60 / 41  |
| TT425N18KOF                                                         | 1800 | 1600, 1400, 1200 | 425/85 | 12500 | 1051 | 0.90 | 0.35 | 0.065 | 125 | TP60A / 41 |
| TT430N22KOF                                                         | 2200 |                  | 430/85 | 12000 | 1051 | 0.95 | 0.45 | 0.065 | 125 | TP60A / 41 |
| TT500N16KOF TIM                                                     | 1600 |                  | 500/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 41 |
| TT500N18KOF                                                         | 1800 | 1600, 1400, 1200 | 500/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 41 |
| TT520N22KOF                                                         | 2200 |                  | 520/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 41 |
| TT570N16KOF                                                         | 1600 |                  | 570/87 | 14000 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 41 |
| TT600N16KOF                                                         | 1600 |                  | 600/85 | 17500 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 41 |
| TT600N16KOF TIM                                                     | 1600 |                  | 600/85 | 17500 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 41 |

| Prime Line - thyristor modules - baseplate 60 mm - pressure contact |      |  |        |       |      |      |      |       |     |            |
|---------------------------------------------------------------------|------|--|--------|-------|------|------|------|-------|-----|------------|
| TT700N22KOF                                                         | 2200 |  | 700/85 | 20400 | 1462 | 0.85 | 0.35 | 0.049 | 135 | TP60A / 41 |
| TT820N16KOF                                                         | 1600 |  | 820/85 | 24800 | 2020 | 0.80 | 0.23 | 0.048 | 135 | TP60A / 41 |

# Single Thyristor Modules



| Product<br> | $V_{DRM} / V_{RRM}$<br>[V] | also available<br>$V_{DRM} V_{RRM}$<br>[V] | $I_{FAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj \max}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
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|                                                                            |      |                  |        |       |      |      |      |       |     |             |
|----------------------------------------------------------------------------|------|------------------|--------|-------|------|------|------|-------|-----|-------------|
| Power Line - single thyristor modules - baseplate 50 mm - pressure contact |      |                  |        |       |      |      |      |       |     |             |
| TZ150N26KOF                                                                | 2600 |                  | 150/85 | 4000  | 101  | 1.20 | 2.30 | 0.130 | 125 | TP50.1 / 40 |
| TZ240N36KOF                                                                | 3600 | 3400             | 240/85 | 5500  | 151  | 1.17 | 1.70 | 0.078 | 125 | TP50.1 / 40 |
| TZ310N26KOF                                                                | 2600 | 2200             | 310/85 | 8000  | 320  | 1.00 | 0.86 | 0.078 | 125 | TP50.1 / 40 |
| TZ400N26KOF                                                                | 2600 | 2400             | 400/85 | 11000 | 605  | 1.00 | 0.50 | 0.065 | 125 | TP50.1 / 40 |
| TZ425N18KOF                                                                | 1800 | 1600, 1400, 1200 | 425/85 | 12500 | 781  | 0.90 | 0.30 | 0.078 | 125 | TP50.1 / 40 |
| TZ430N22KOF                                                                | 2200 |                  | 430/85 | 12000 | 720  | 0.95 | 0.45 | 0.065 | 125 | TP50.1 / 40 |
| TZ500N18KOF                                                                | 1800 | 1600, 1200       | 500/85 | 14500 | 1051 | 0.90 | 0.27 | 0.065 | 125 | TP50.1 / 40 |
| TZ600N16KOF                                                                | 1600 | 1200             | 600/85 | 14000 | 980  | 0.90 | 0.27 | 0.065 | 125 | TP50.1 / 40 |

|                                                                          |      |  |         |       |      |      |      |       |     |           |
|--------------------------------------------------------------------------|------|--|---------|-------|------|------|------|-------|-----|-----------|
| Eco Line - single thyristor modules - baseplate 70 mm - pressure contact |      |  |         |       |      |      |      |       |     |           |
| ETZ950N22P70                                                             | 2200 |  | 923/85  | 25100 | 3150 | 0.82 | 0.22 | 0.041 | 135 | TE70 / 41 |
| ETZ1100N16P70                                                            | 1600 |  | 1051/85 | 28200 | 3976 | 0.80 | 0.15 | 0.040 | 135 | TE70 / 41 |

|                                                                            |      |                  |        |       |      |      |       |       |     |            |
|----------------------------------------------------------------------------|------|------------------|--------|-------|------|------|-------|-------|-----|------------|
| Power Line - single thyristor modules - baseplate 70 mm - pressure contact |      |                  |        |       |      |      |       |       |     |            |
| TZ530N36KOF                                                                | 3600 |                  | 530/85 | 20000 | 2000 | 1.05 | 0.49  | 0.045 | 125 | TP70 / 41  |
| TZ630N28KOF                                                                | 2800 | 2400, 2200       | 630/85 | 23000 | 2650 | 0.95 | 0.37  | 0.042 | 125 | TP70 / 41  |
| TZ740N22KOF                                                                | 2200 | 2000             | 740/85 | 26500 | 3500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 41 |
| TZ740N22KOF TIM                                                            | 2200 |                  | 819/85 | 26500 | 3500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 41 |
| TZ800N16KOF TIM                                                            | 1600 |                  | 800/85 | 30000 | 4500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 41 |
| TZ800N18KOF                                                                | 1800 | 1600, 1400, 1200 | 800/85 | 30000 | 4500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 41 |
| TZ800N18KOF TIM                                                            | 1800 |                  | 800/85 | 30000 | 4500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 41 |
| TZ810N22KOF                                                                | 2200 |                  | 819/85 | 35000 | 6125 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 41 |
| TZ810N22KOF TIM                                                            | 2200 |                  | 819/85 | 35000 | 6125 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 41 |
| TZ860N16KOF                                                                | 1600 |                  | 860/85 | 40000 | 8000 | 0.80 | 0.145 | 0.042 | 125 | TP70A / 41 |
| TZ860N16KOF TIM                                                            | 1600 |                  | 860/85 | 40000 | 8000 | 0.80 | 0.145 | 0.042 | 125 | TP70A / 41 |

# Thyristor / Diode Modules



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj\ max}$ | $[I^2dt]$<br>[A²·s · 10³]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
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## Eco Line - thyristor / diode modules - baseplate 20 mm - solder solder

|             |      |  |        |      |       |      |      |      |     |           |
|-------------|------|--|--------|------|-------|------|------|------|-----|-----------|
| TD60N16SOF  | 1600 |  | 55/85  | 1200 | 7.20  | 1.00 | 4.80 | 0.49 | 130 | TS20 / 39 |
| TD120N16SOF | 1600 |  | 119/85 | 2250 | 18.05 | 0.90 | 3.35 | 0.20 | 130 | TS20 / 39 |

## Power Line - thyristor / diode modules - baseplate 20 mm - pressure contact

|             |      |      |        |      |       |      |      |      |     |           |
|-------------|------|------|--------|------|-------|------|------|------|-----|-----------|
| TD61N16KOF  | 1600 | 1400 | 60/85  | 1400 | 9.80  | 0.80 | 3.40 | 0.52 | 125 | TP20 / 39 |
| TD92N16KOF  | 1600 |      | 92/85  | 1800 | 16.20 | 0.85 | 2.15 | 0.37 | 130 | TP20 / 39 |
| TD104N14KOF | 1400 | 1200 | 104/85 | 1800 | 16.20 | 0.85 | 2.15 | 0.37 | 130 | TP20 / 39 |

## Eco Line - thyristor / diode modules - baseplate 34 mm - solder bond

|             |      |      |        |      |        |      |      |       |     |                   |
|-------------|------|------|--------|------|--------|------|------|-------|-----|-------------------|
| TD140N16SOF | 1600 |      | 140/85 | 4000 | 80.00  | 1.00 | 1.60 | 0.19  | 125 | TS34 / 39         |
| TD160N16SOF | 1600 |      | 160/85 | 4500 | 101.30 | 1.10 | 0.99 | 0.145 | 125 | TS34 2nd Gen / 39 |
| TD175N16SOF | 1600 |      | 175/85 | 5400 | 125.00 | 0.83 | 1.30 | 0.164 | 125 | TS34 / 39         |
| TD190N18SOF | 1800 | 1600 | 190/85 | 4500 | 101.30 | 0.85 | 0.90 | 0.145 | 125 | TS34 2nd Gen / 39 |
| TD240N18SOF | 1800 | 1600 | 240/85 | 4400 | 96.80  | 0.85 | 0.90 | 0.165 | 140 | TS34 2nd Gen / 39 |

## Power Line - thyristor / diode modules - baseplate 34 mm - pressure contact

|             |      |      |        |      |       |      |      |      |     |           |
|-------------|------|------|--------|------|-------|------|------|------|-----|-----------|
| TD122N22KOF | 2200 | 1800 | 122/85 | 2950 | 43.50 | 1.00 | 2.15 | 0.20 | 125 | TP34 / 39 |
| TT140N22KOF | 2200 | 1800 | 140/85 | 3200 | 51.20 | 0.90 | 1.75 | 0.06 | 125 | TP34 / 39 |
| TD142N16KOF | 1600 | 1800 | 142/85 | 4100 | 84.00 | 0.90 | 1.10 | 0.22 | 125 | TP34 / 39 |
| TD162N16KOF | 1600 | 1400 | 162/85 | 4400 | 97.00 | 0.85 | 0.95 | 0.20 | 125 | TP34 / 39 |
| TD180N16KOF | 1600 | 1200 | 180/85 | 4100 | 84.00 | 0.85 | 0.90 | 0.20 | 130 | TP34 / 39 |

# Thyristor / Diode Modules



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/°C]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj\ max}$ | $[I^2dt]$<br>[A²s · 10³]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
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## Eco Line - thyristor / diode modules - baseplate 50 mm - solder bond

|                 |      |      |        |      |     |      |      |      |     |           |
|-----------------|------|------|--------|------|-----|------|------|------|-----|-----------|
| TD280N18SOF     | 1800 | 1600 | 280/85 | 7800 | 304 | 1.77 | 0.82 | 0.11 | 130 | TS50 / 40 |
| TD320N18SOF     | 1800 | 1600 | 320/85 | 8200 | 335 | 0.77 | 0.58 | 0.11 | 130 | TS50 / 40 |
| TD320N16SOF TIM | 1800 | 1600 | 380/85 | 8100 | 328 | 0.77 | 0.58 | 0.11 | 140 | TS50 / 40 |

## Prime Line - thyristor / diode modules - baseplate 50 mm - solder bond

|             |      |      |        |      |     |      |      |      |     |           |
|-------------|------|------|--------|------|-----|------|------|------|-----|-----------|
| TD390N18SOF | 1800 | 1600 | 380/85 | 8100 | 328 | 0.77 | 0.58 | 0.11 | 140 | TS50 / 40 |
|-------------|------|------|--------|------|-----|------|------|------|-----|-----------|

## Power Line - thyristor / diode modules - baseplate 50 mm - pressure contact

|                 |      |            |        |       |     |      |      |       |     |            |
|-----------------|------|------------|--------|-------|-----|------|------|-------|-----|------------|
| TD150N26KOF     | 2600 | 2200       | 150/85 | 4000  | 80  | 1.20 | 2.30 | 0.13  | 125 | TP50 / 40  |
| TD210N18KOF     | 1800 |            | 210/85 | 5800  | 168 | 1.00 | 0.85 | 0.13  | 125 | TP50A / 40 |
| TD215N22KOF     | 2200 | 2000, 1800 | 215/85 | 6300  | 198 | 0.95 | 0.92 | 0.13  | 125 | TP50A / 40 |
| TD250N18KOF     | 1800 | 1600, 1400 | 250/85 | 7000  | 245 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 40 |
| TD250N16KOF TIM | 1600 |            | 250/85 | 7000  | 245 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 40 |
| TD251N18KOF     | 1800 | 1600, 1400 | 250/85 | 8000  | 320 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 40 |
| TD260N22KOF     | 2200 |            | 260/85 | 8000  | 320 | 0.85 | 0.64 | 0.12  | 125 | TP50A / 40 |
| TD270N16KOF     | 1600 |            | 270/92 | 9000  | 400 | 0.80 | 0.58 | 0.12  | 125 | TP50A / 40 |
| TD285N16KOF     | 1600 |            | 285/92 | 10000 | 781 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 40 |
| TD330N16KOF     | 1600 | 1400, 1200 | 330/85 | 10000 | 500 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 40 |
| TD330N16KOF TIM | 1600 |            | 330/85 | 10000 | 500 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 40 |

# Thyristor / Diode Modules



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_c$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj \max}$ | $\int i^2 dt$<br>[A²S · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
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## Eco Line - thyristor / diode modules - baseplate 60 mm - pressure contact

|              |      |  |        |       |      |      |       |       |     |           |
|--------------|------|--|--------|-------|------|------|-------|-------|-----|-----------|
| ETD420N22P60 | 2200 |  | 420/85 | 11400 | 650  | 0.85 | 0.548 | 0.076 | 135 | TE60 / 41 |
| ETD480N22P60 | 2200 |  | 480/85 | 12000 | 720  | 0.85 | 0.484 | 0.076 | 135 | TE60 / 41 |
| ETD510N16P60 | 1600 |  | 510/85 | 12800 | 819  | 0.80 | 0.375 | 0.076 | 135 | TE60 / 41 |
| ETD540N22P60 | 2200 |  | 540/85 | 13300 | 884  | 0.85 | 0.425 | 0.076 | 135 | TE60 / 41 |
| ETD580N16P60 | 1600 |  | 580/85 | 13600 | 925  | 0.80 | 0.327 | 0.064 | 135 | TE60 / 41 |
| ETD630N16P60 | 1600 |  | 630/85 | 14700 | 1080 | 0.80 | 0.289 | 0.063 | 135 | TE60 / 41 |

## Power Line - thyristor / diode modules - baseplate 60 mm - pressure contact

|                 |      |                  |        |       |      |      |      |       |     |            |
|-----------------|------|------------------|--------|-------|------|------|------|-------|-----|------------|
| TD240N38KOF     | 3800 | 3600             | 240/85 | 5500  | 151  | 1.17 | 1.70 | 0.078 | 125 | TP60 / 41  |
| TD310N26KOF     | 2600 | 2000             | 310/85 | 9000  | 405  | 1.00 | 0.86 | 0.078 | 125 | TP60 / 41  |
| TD400N26KOF     | 2600 | 2400             | 400/85 | 11000 | 605  | 1.00 | 0.50 | 0.065 | 125 | TP60 / 41  |
| TD425N18KOF     | 1800 | 1600, 1400, 1200 | 425/85 | 12500 | 1051 | 0.90 | 0.35 | 0.065 | 125 | TP60A / 41 |
| TD430N22KOF     | 2200 |                  | 430/85 | 12000 | 1051 | 0.95 | 0.45 | 0.065 | 125 | TP60A / 41 |
| TD430N22KOF TIM | 2200 |                  | 430/85 | 12000 | 1051 | 0.95 | 0.45 | 0.065 | 125 | TP60A / 41 |
| TD500N16KOF TIM | 1600 |                  | 500/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 41 |
| TD500N18KOF     | 1800 | 1600, 1400, 1200 | 500/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 41 |
| TD520N22KOF     | 2200 |                  | 520/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 41 |
| TD570N16KOF     | 1600 |                  | 570/87 | 14000 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 41 |
| TD600N16KOF     | 1600 |                  | 600/85 | 17500 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 41 |
| TD600N16KOF TIM | 1600 |                  | 600/85 | 17500 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 41 |

## Prime Line - thyristor / diode modules - baseplate 60 mm - pressure contact

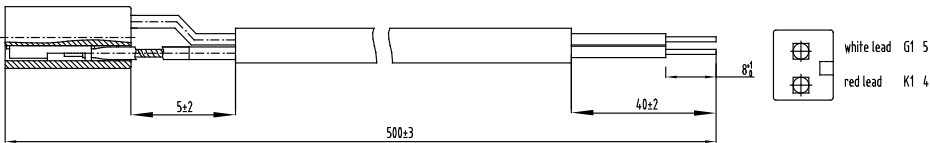
|             |      |  |        |       |      |      |      |       |     |            |
|-------------|------|--|--------|-------|------|------|------|-------|-----|------------|
| TD700N22KOF | 2200 |  | 700/85 | 20400 | 1462 | 0.85 | 0.35 | 0.049 | 135 | TP60A / 41 |
| TD820N16KOF | 1600 |  | 820/85 | 24800 | 2020 | 0.80 | 0.23 | 0.048 | 135 | TP60A / 41 |

# Fittings – Gate Leads for Modules with Baseplate 20 mm

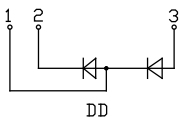
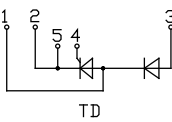
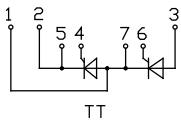
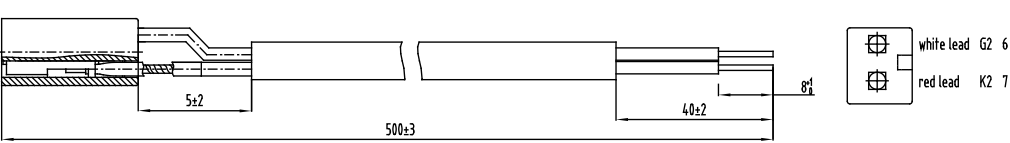


| Product                     | Connection to | Connection to | Color             | Length [mm] | Ordering Code |
|-----------------------------|---------------|---------------|-------------------|-------------|---------------|
| Module with baseplate 20 mm |               |               |                   |             |               |
| GATELEAD L=500 PB20 G1K1    | 5 / 4         | G1/K1         | G yellow / HK red | 500         | SP000983478   |
| GATELEAD L=500 PB20 G2K2    | 6 / 7         | G2/K2         | G yellow / HK red | 500         | SP000983484   |

Outline G1/K1



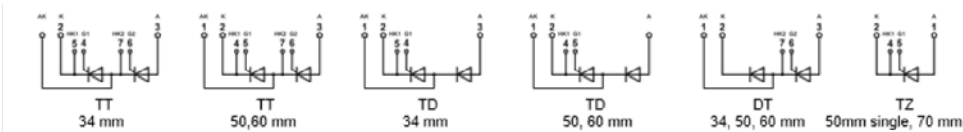
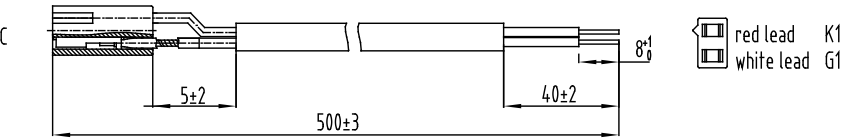
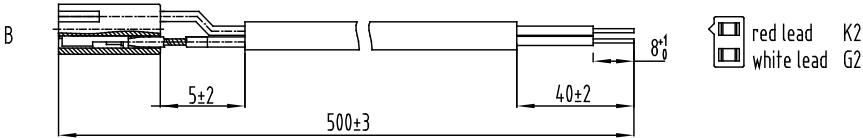
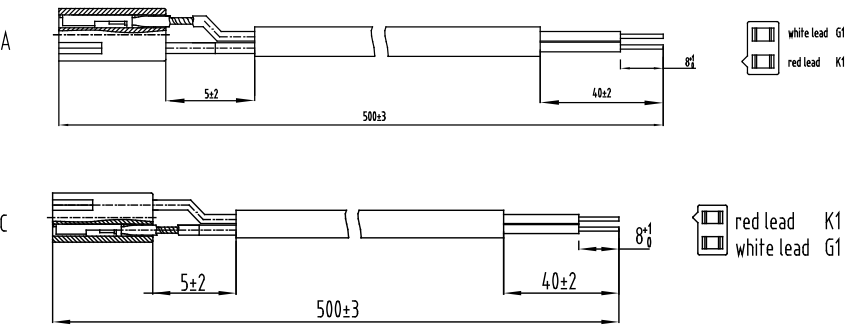
Outline G2/K2



# Fittings – Gate Leads for Modules with Baseplates 34-70 mm



| Product                            | Connection to | Connection to | Color            | Length [mm] | Outline | Ordering Code |
|------------------------------------|---------------|---------------|------------------|-------------|---------|---------------|
| Module with baseplate 34 mm        |               |               |                  |             |         |               |
| GATELEAD L=500 PB34-60_2           | 4 / 5         | G1/HK1        | G white / HK red | 500         | A       | SP000983496   |
| GATELEAD L=500 PB34-70_1           | 6 / 7         | G2/HK2        | G white / HK red | 500         | B       | SP000983490   |
| Module with baseplate 50, 60 mm    |               |               |                  |             |         |               |
| GATELEAD L=500 PB34-60_2           | 5 / 4         | G1/HK1        | G white / HK red | 500         | A       | SP000983496   |
| GATELEAD L=500 PB34-70_1           | 6 / 7         | G1/HK1        | G white / HK red | 500         | B       | SP000983490   |
| Module with baseplate 50 mm single |               |               |                  |             |         |               |
| GATELEAD L=500 PB34-60_2           | 5 / 4         | G1/HK1        | G white / HK red | 500         | A       | SP000983496   |
| Module with baseplate 70 mm        |               |               |                  |             |         |               |
| GATELEAD L=500 PB34-70_1           | 5 / 4         | G1/HK1        | G white / HK red | 500         | C       | SP000983490   |



# Diode / Diode Modules



| Product<br> | $V_{\text{DRM}} / V_{\text{RRM}}$<br>[V] | also available<br>$V_{\text{DRM}} V_{\text{RRM}}$<br>[V] | $I_{\text{FAVM}}/T_{\text{C}}$<br>[A/C°]<br>@180° el sin | $I_{\text{TSM}}$<br>[A]<br>@10ms, $T_{\text{vj max}}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{\text{vj max}}$ | $V_{\text{T(0)}}$<br>[V]<br>@ $T_{\text{vj max}}$ | $r_{\text{T}}$<br>[mΩ]<br>@ $T_{\text{vj max}}$ | $R_{\text{thJC}}$<br>[K/kW]<br>@180° el sin | $T_{\text{vj}}$<br>[°C]<br>max | Outline / page |
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## Eco Line - diode modules - baseplate 20 mm - solder solder

|           |      |  |         |      |       |      |      |      |     |           |
|-----------|------|--|---------|------|-------|------|------|------|-----|-----------|
| DD100N16S | 1600 |  | 134/100 | 2000 | 20.00 | 0.87 | 2.45 | 0.20 | 130 | DS20 / 42 |
|-----------|------|--|---------|------|-------|------|------|------|-----|-----------|

## Power Line - diode modules - baseplate 20 mm - pressure contact

|           |      |                  |         |      |       |      |      |      |     |           |
|-----------|------|------------------|---------|------|-------|------|------|------|-----|-----------|
| DD89N18K  | 1800 | 1600, 1400, 1200 | 89/100  | 2400 | 28.80 | 0.75 | 2.30 | 0.45 | 150 | DP20 / 42 |
| DD98N25K  | 2500 | 2200             | 98/100  | 2000 | 20.00 | 0.82 | 2.00 | 0.39 | 150 | DP20 / 42 |
| DD104N18K | 1800 | 1600, 1400, 1200 | 104/100 | 2500 | 31.25 | 0.70 | 2.10 | 0.39 | 150 | DP20 / 42 |

## Eco Line- diode modules - baseplate 34 mm - solder bond

|           |      |      |         |      |        |      |      |      |     |                   |
|-----------|------|------|---------|------|--------|------|------|------|-----|-------------------|
| DD170N16S | 1600 |      | 165/100 | 5500 | 151.25 | 0.75 | 1.05 | 0.18 | 135 | DS34 / 42         |
| DD180N22S | 2200 | 1600 | 174/100 | 5750 | 131.60 | 0.85 | 0.95 | 0.14 | 135 | DS34 2nd Gen / 42 |
| DD220N22S | 2200 | 1600 | 226/100 | 4800 | 115.20 | 0.85 | 0.95 | 0.16 | 150 | DS34 2nd Gen / 42 |

## Power Line - diode modules - baseplate 34 mm - pressure contact

|           |      |            |         |      |        |      |      |      |     |           |
|-----------|------|------------|---------|------|--------|------|------|------|-----|-----------|
| DD160N22K | 2200 |            | 160/100 | 4600 | 105.80 | 0.80 | 1.00 | 0.26 | 150 | DP34 / 42 |
| DD171N18K | 1800 | 1600, 1200 | 170/100 | 5600 | 157.00 | 0.75 | 0.80 | 0.26 | 150 | DP34 / 42 |

# Diode / Diode Modules



| Product<br> | $V_{\text{DRM}} / V_{\text{RRM}}$<br>[V] | also available<br>$V_{\text{DRM}} V_{\text{RRM}}$<br>[V] | $I_{\text{FAVM}} / T_{\text{C}}$<br>[A/C°]<br>@180° el sin | $I_{\text{TSM}}$<br>[A]<br>@10ms, $T_{\text{vj max}}$ | $\int I^2 dt$<br>[A²·s · 10⁻³]<br>@10ms, $T_{\text{vj max}}$ | $V_{\text{T(TO)}}$<br>[V]<br>@ $T_{\text{vj max}}$ | $r_{\text{T}}$<br>[mΩ]<br>@ $T_{\text{vj max}}$ | $R_{\text{thJC}}$<br>[K/kW]<br>@180° el sin | $T_{\text{vj}}$<br>[°C]<br>max | Outline / page |
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## Eco Line - diode modules - baseplate 50 mm - solder bond

|           |      |      |         |       |     |      |      |       |     |           |
|-----------|------|------|---------|-------|-----|------|------|-------|-----|-----------|
| DD340N22S | 2200 | 1600 | 330/100 | 10000 | 385 | 0.81 | 0.30 | 0.086 | 130 | DS50 / 43 |
|-----------|------|------|---------|-------|-----|------|------|-------|-----|-----------|

## Power Line - diode modules - baseplate 50 mm - pressure contact

|           |      |                  |         |       |     |      |      |       |     |            |
|-----------|------|------------------|---------|-------|-----|------|------|-------|-----|------------|
| DD175N34K | 3400 | 3200, 3000       | 175/100 | 4000  | 80  | 0.90 | 1.80 | 0.17  | 150 | DP50 / 43  |
| DD231N26K | 2600 | 2200             | 231/100 | 6400  | 205 | 0.80 | 0.84 | 0.17  | 150 | DP50 / 43  |
| DD260N18K | 1800 | 1600, 1400, 1200 | 260/100 | 8300  | 344 | 0.70 | 0.68 | 0.17  | 150 | DP50A / 43 |
| DD261N22K | 2200 | 2000             | 260/100 | 8300  | 344 | 0.70 | 0.68 | 0.17  | 150 | DP50A / 43 |
| DD285N04K | 400  | 200              | 285/100 | 8300  | 344 | 0.75 | 0.40 | 0.17  | 150 | DP50A / 43 |
| DD350N18K | 1800 | 1600, 1400, 1200 | 350/100 | 11000 | 605 | 0.75 | 0.40 | 0.13  | 150 | DP50A / 43 |
| DD360N22K | 2200 |                  | 360/100 | 13000 | 550 | 0.75 | 0.40 | 0.125 | 150 | DP50A / 43 |
| DD380N16K | 1600 |                  | 380/100 | 11500 | 660 | 0.75 | 0.32 | 0.125 | 150 | DP50A / 43 |

## Prime Line - diode modules - baseplate 50 mm - solder bond

|           |      |      |         |      |     |      |      |       |     |           |
|-----------|------|------|---------|------|-----|------|------|-------|-----|-----------|
| DD390N22S | 2200 | 1600 | 390/113 | 8400 | 353 | 0.81 | 0.30 | 0.086 | 150 | DS50 / 43 |
|-----------|------|------|---------|------|-----|------|------|-------|-----|-----------|

## Power Line - diode modules - baseplate 60 mm - pressure contact

|           |      |                  |         |       |      |      |       |       |     |            |
|-----------|------|------------------|---------|-------|------|------|-------|-------|-----|------------|
| DD435N40K | 4000 | 3600, 3400, 2800 | 435/100 | 12000 | 720  | 0.84 | 0.60  | 0.078 | 150 | DP60 / 44  |
| DD540N26K | 2600 | 2200             | 540/100 | 14000 | 980  | 0.78 | 0.31  | 0.078 | 150 | DP60 / 44  |
| DD600N18K | 1800 | 1600, 1400, 1200 | 600/100 | 19000 | 1800 | 0.75 | 0.215 | 0.078 | 150 | DP60A / 44 |
| DD700N22K | 2200 |                  | 700/100 | 21000 | 1805 | 0.78 | 0.19  | 0.065 | 150 | DP60A / 44 |
| DD710N16K | 1600 |                  | 710/100 | 26000 | 2420 | 0.75 | 0.15  | 0.065 | 150 | DP60A / 44 |

# Single Diode Modules



| Product<br> | $V_{DRM} / V_{RRM}$<br>[V] | also available<br>$V_{DRM} V_{RRM}$<br>[V] | $I_{FAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj \max}$ | $\int I^2 dt$<br>[A²·s · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
|----------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|
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|                                                                 |      |            |         |      |       |      |       |       |     |           |
|-----------------------------------------------------------------|------|------------|---------|------|-------|------|-------|-------|-----|-----------|
| Power Line - diode modules - baseplate 20 mm - pressure contact |      |            |         |      |       |      |       |       |     |           |
| ND89N16K                                                        | 1600 | 1200       | 89/100  | 2400 | 28.80 | 0.75 | 2.300 | 0.450 | 150 | DP20 / 42 |
| ND104N18K                                                       | 1800 | 1600, 1200 | 104/100 | 2500 | 31.25 | 0.70 | 2.100 | 0.390 | 150 | DP20 / 42 |

|                                                                 |      |                  |         |      |        |      |       |       |     |           |
|-----------------------------------------------------------------|------|------------------|---------|------|--------|------|-------|-------|-----|-----------|
| Power Line - diode modules - baseplate 34 mm - pressure contact |      |                  |         |      |        |      |       |       |     |           |
| ND171N18K                                                       | 1800 | 1600, 1400, 1200 | 170/100 | 5600 | 157.00 | 0.75 | 0.800 | 0.260 | 150 | DP34 / 42 |

|                                                                 |      |            |         |       |        |      |       |       |     |             |
|-----------------------------------------------------------------|------|------------|---------|-------|--------|------|-------|-------|-----|-------------|
| Power Line - diode modules - baseplate 50 mm - pressure contact |      |            |         |       |        |      |       |       |     |             |
| ND260N16K                                                       | 1600 | 1400, 1200 | 260/100 | 8300  | 344.00 | 0.70 | 0.680 | 0.170 | 150 | DP50ND / 43 |
| ND261N26K                                                       | 2600 |            | 260/100 | 8300  | 344.00 | 0.70 | 0.680 | 0.170 | 150 | DP50ND / 43 |
| ND350N16K                                                       | 1600 | 1200       | 350/100 | 11000 | 605.00 | 0.75 | 0.400 | 0.130 | 150 | DP50ND / 43 |

# Single Diode Modules



| Product<br> | $V_{DRM} / V_{RRM}$<br>[V] | also available<br>$V_{DRM} V_{RRM}$<br>[V] | $I_{FAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{FSM}$<br>[A]<br>@10ms, $T_{vj \max}$ | $\int I^2 dt$<br>[A²·s · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
|------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|
|------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|

|                                                                        |      |                  |         |       |      |      |       |       |     |             |
|------------------------------------------------------------------------|------|------------------|---------|-------|------|------|-------|-------|-----|-------------|
| Power Line - single diode modules - baseplate 50 mm - pressure contact |      |                  |         |       |      |      |       |       |     |             |
| DZ435N40K                                                              | 4000 | 3600             | 435/100 | 12000 | 720  | 0.84 | 0.600 | 0.078 | 150 | DP50.1 / 43 |
| DZ540N26K                                                              | 2600 | 2200, 2000       | 540/100 | 14000 | 980  | 0.78 | 0.310 | 0.078 | 150 | DP50.1 / 43 |
| DZ600N18K                                                              | 1800 | 1600, 1400, 1200 | 600/100 | 19000 | 1805 | 0.75 | 0.220 | 0.078 | 150 | DP50.1 / 43 |

|                                                                        |      |                  |          |       |      |      |       |       |     |            |
|------------------------------------------------------------------------|------|------------------|----------|-------|------|------|-------|-------|-----|------------|
| Power Line - single diode modules - baseplate 70 mm - pressure contact |      |                  |          |       |      |      |       |       |     |            |
| DZ950N44K                                                              | 4400 | 3600             | 950/100  | 29000 | 4205 | 0.85 | 0.280 | 0.042 | 150 | DP70 / 44  |
| DZ1070N28K                                                             | 2800 | 2600, 2200, 1800 | 1070/100 | 35000 | 6125 | 0.80 | 0.170 | 0.045 | 160 | DP70A / 44 |
| DZ1100N22K                                                             | 2200 |                  | 1100/100 | 40000 | 8000 | 0.75 | 0.073 | 0.048 | 150 | DP70A / 44 |
| DZ1100N22K TIM                                                         | 2200 |                  | 1100/100 | 40000 |      | 0.75 | 0.073 | 0.048 | 150 | DP70A / 44 |

# Thyristor Soft Starter Modules

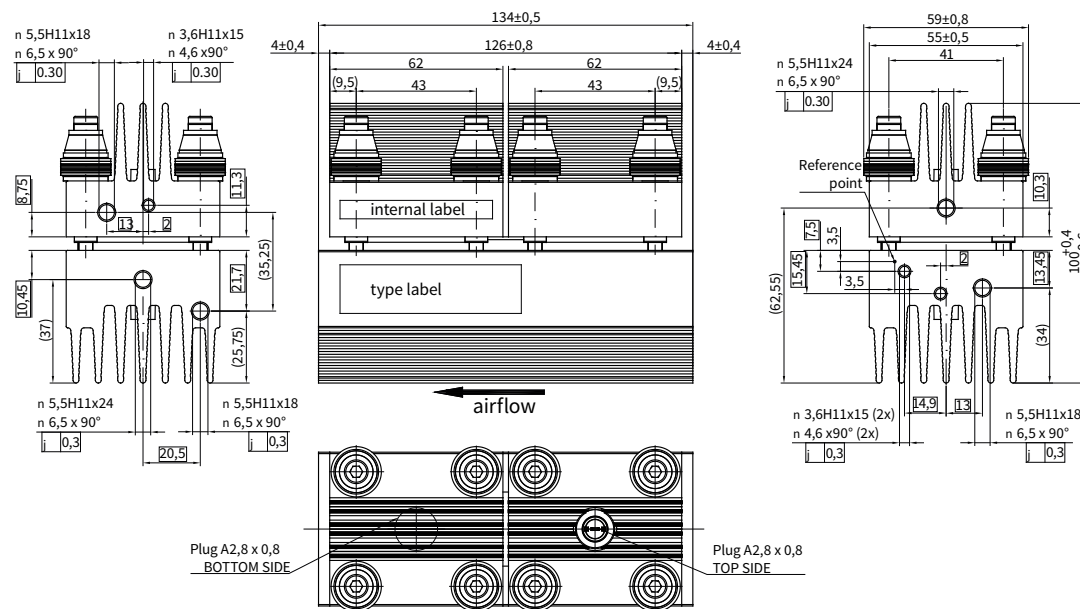


| Product | $V_{\text{DRM}} / V_{\text{RRM}}$<br>[V] | $I_{\text{overload (21s)}}$<br>[A] | $I_{\text{TSM}}$<br>[A]<br>@10ms, $T_{\text{vj max}}$ | $\int i^2 dt$<br>[A <sup>2</sup> s · 10 <sup>3</sup> ]<br>@10ms, $T_{\text{vj max}}$ | $V_{\text{(T0)}}$<br>[V]<br>@ $T_{\text{vj max}}$ | $r_{\text{T}}$<br>[mΩ]<br>@ $T_{\text{vj max}}$ | $R_{\text{thJA (21s)}}$<br>[K/W] | $T_{\text{vj}}$<br>[°C]<br>max | Outline |
|---------|------------------------------------------|------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|----------------------------------|--------------------------------|---------|
|---------|------------------------------------------|------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|----------------------------------|--------------------------------|---------|

## Power Line – thyristor soft starter modules - baseplate 55 mm - pressur contact

|               |      |      |       |      |      |      |       |     |     |
|---------------|------|------|-------|------|------|------|-------|-----|-----|
| STT800N16P55  | 1600 | 800  | 5400  | 146  | 0.90 | 0.83 | 0.203 | 155 | P55 |
| STT1400N16P55 | 1600 | 1300 | 9000  | 405  | 0.90 | 0.49 | 0.123 | 155 | P55 |
| STT1900N16P55 | 1600 | 1900 | 14000 | 980  | 0.90 | 0.28 | 0.087 | 155 | P55 |
| STT2200N16P55 | 1600 | 2180 | 17500 | 1531 | 0.90 | 0.24 | 0.084 | 155 | P55 |

## P55



# Thyristor Discs



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj \max}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Clamping force<br>[kN] | Outline / page |
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------|----------------|

| Power Line - thyristor discs up to 800 V |     |          |         |       |       |      |       |      |     |           |                |
|------------------------------------------|-----|----------|---------|-------|-------|------|-------|------|-----|-----------|----------------|
| T690N06TOF                               | 600 | 400      | 694/85  | 6700  | 225   | 0.80 | 0.44  | 51.0 | 140 | 10.5-21.0 | T42.14K0 / 46  |
| T920N06TOF                               | 600 | 400, 200 | 925/85  | 12000 | 720   | 1.00 | 0.23  | 39.0 | 140 | 10.5-21.0 | T48.14K0 / 46  |
| T1080N06TOF                              | 600 | 400, 200 | 1075/85 | 14500 | 1050  | 1.02 | 0.20  | 33.0 | 140 | 10.5-21.0 | T48.14K0 / 46  |
| T1410N06TOF                              | 600 | 400      | 1490/85 | 20000 | 2000  | 1.00 | 0.10  | 27.0 | 140 | 10.5-21.0 | T58.14K0 / 46  |
| T2510N06TOF VT                           | 600 | 400      | 2509/85 | 42000 | 8820  | 0.75 | 0.072 | 18.4 | 140 | 10.5-21.0 | T75.26K0 / 47  |
| T3710N06TOF VT                           | 600 | 400      | 3710/85 | 60000 | 18000 | 0.75 | 0.048 | 12.5 | 140 | 10.5-21.0 | T100.26K0 / 47 |

| Power Line -thyristor discs up to 3000 V |      |                        |         |       |       |      |       |      |     |           |                |
|------------------------------------------|------|------------------------|---------|-------|-------|------|-------|------|-----|-----------|----------------|
| T360N28TOF                               | 2800 | 2600, 2200             | 360/85  | 4500  | 101   | 1.10 | 1.600 | 44.0 | 125 | 5.0-10.0  | T48.14K0 / 46  |
| T460N26TOF                               | 2600 | 2600, 2200             | 459/85  | 9000  | 405   | 1.00 | 0.840 | 45.5 | 125 | 7.5-17.5  | T58.26K0 / 46  |
| T4771N28TOF PR                           | 2800 | 2200                   | 4340/85 | 91000 | 41400 | 0.77 | 0.107 | 4.8  | 125 | 63.0-91.0 | T150.26K0 / 48 |
| T660N26TOF                               | 2600 | 2200                   | 659/85  | 11500 | 660   | 1.00 | 0.500 | 33.0 | 125 | 10.5-21.0 | T58.26K0 / 46  |
| T700N22TOF                               | 2200 |                        | 699/85  | 12200 | 744   | 0.95 | 0.450 | 32.0 | 125 | 10.5-21.0 | T58.26K0 / 46  |
| T740N26TOF                               | 2600 | 2200                   | 727/85  | 11500 | 660   | 1.00 | 0.500 | 28.0 | 125 | 10.5-21.0 | T58.14K0 / 46  |
| T1040N22TOF VT                           | 2200 |                        | 1039/85 | 18500 | 1711  | 0.90 | 0.300 | 23.1 | 125 | 16.0-32.0 | T75.26K0 / 47  |
| T1220N28TOF VT                           | 2800 | 2600                   | 1220/85 | 22500 | 2531  | 1.00 | 0.275 | 18.4 | 125 | 20.0-45.0 | T75.26K0 / 47  |
| T1330N22TOF VT                           | 2200 |                        | 1329/85 | 23000 | 2645  | 0.90 | 0.234 | 18.4 | 125 | 20.0-45.0 | T75.26K0 / 47  |
| T1590N28TOF VT                           | 2800 | 2600                   | 1590/85 | 28000 | 3920  | 1.10 | 0.237 | 12.5 | 125 | 30.0-65.0 | T100.26K0 / 47 |
| T1960N22TOF VT                           | 2200 |                        | 1960/85 | 35000 | 6125  | 0.90 | 0.150 | 12.5 | 125 | 30.0-65.0 | T100.26K0 / 47 |
| T2160N28TOF VT                           | 2800 | 2600, 2500, 2200, 2000 | 2400/85 | 40000 | 8000  | 1.05 | 0.154 | 8.5  | 125 | 42.0-95.0 | T111.26K0 / 47 |
| T2480N28TOF VT                           | 2800 | 2600                   | 2480/85 | 43500 | 9460  | 0.95 | 0.154 | 8.5  | 125 | 42.0-95.0 | T111.26K0 / 47 |
| T2810N22TOF VT                           | 2200 | 1800, 1600             | 2810/85 | 50000 | 12500 | 0.90 | 0.112 | 8.5  | 125 | 42.0-95.0 | T111.26K0 / 47 |

# Thyristor Discs



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj\ max}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Clamping force<br>[kN] | Outline / page |
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------|----------------|
| Power Line - thyristor discs up to 1800 V                                                    |                                    |                                              |                                          |                                          |                                                      |                                      |                                  |                                      |                         |                        |                |
| T300N16TOF                                                                                   | 1600                               | 1400                                         | 303/85                                   | 3400                                     | 58                                                   | 0.90                                 | 1.350                            | 69.0                                 | 125                     | 2.5-5.0                | T42.14K0 / 46  |
| T390N16TOF                                                                                   | 1600                               | 1400, 1200                                   | 381/85                                   | 4250                                     | 91                                                   | 0.85                                 | 0.900                            | 62.0                                 | 125                     | 3.0-6.0                | T42.14K0 / 46  |
| T420N18TOF                                                                                   | 1800                               | 1600, 1400                                   | 424/85                                   | 6400                                     | 205                                                  | 0.90                                 | 0.750                            | 56.0                                 | 125                     | 5.0-10.0               | T48.14K0 / 46  |
| T430N18TOF                                                                                   | 1800                               | 1600, 1400                                   | 433/85                                   | 4600                                     | 106                                                  | 0.85                                 | 0.900                            | 51.0                                 | 125                     | 4.0-8.0                | T42.14K0 / 46  |
| T470N16TOF                                                                                   | 1600                               | 1400, 1200                                   | 470/85                                   | 6350                                     | 202                                                  | 0.80                                 | 0.750                            | 51.0                                 | 125                     | 4.0-8.0                | T42.14K0 / 46  |
| T560N18TOF                                                                                   | 1800                               | 1600, 1400                                   | 559/85                                   | 6900                                     | 238                                                  | 0.80                                 | 0.600                            | 44.0                                 | 125                     | 5.0-10.0               | T48.14K0 / 46  |
| T590N18TOF                                                                                   | 1800                               | 1600, 1400, 1200                             | 588/85                                   | 8000                                     | 320                                                  | 0.80                                 | 0.500                            | 45.0                                 | 125                     | 6.0-12.0               | T58.26K0 / 46  |
| T640N18TOF                                                                                   | 1800                               | 1600, 1400, 1200                             | 644/85                                   | 8000                                     | 320                                                  | 0.80                                 | 0.500                            | 39.0                                 | 125                     | 6.0-12.0               | T48.14K0 / 46  |
| T680N14TOF                                                                                   | 1400                               |                                              | 681/85                                   | 9500                                     | 451                                                  | 0.80                                 | 0.420                            | 39.0                                 | 125                     | 6.0-12.0               | T48.14K0 / 46  |
| T720N18TOF                                                                                   | 1800                               | 1600, 1400, 1200                             | 718/85                                   | 12500                                    | 781                                                  | 0.85                                 | 0.350                            | 38.0                                 | 125                     | 9.0-18.0               | T58.26K0 / 46  |
| T830N18TOF                                                                                   | 1800                               | 1600, 1400                                   | 844/85                                   | 12500                                    | 781                                                  | 0.85                                 | 0.300                            | 30.0                                 | 125                     | 9.0-18.0               | T58.14K0 / 46  |
| T880N18TOF                                                                                   | 1800                               | 1600, 1400                                   | 879/85                                   | 15500                                    | 1200                                                 | 0.85                                 | 0.270                            | 32.0                                 | 125                     | 10.5-21.0              | T58.26K0 / 47  |
| T940N18TOF                                                                                   | 1800                               | 1600, 1400                                   | 959/85                                   | 15500                                    | 1200                                                 | 0.85                                 | 0.270                            | 28.0                                 | 125                     | 10.5-21.0              | T58.14K0 / 47  |
| T1190N18TOF VT                                                                               | 1800                               | 1600, 1400, 1200                             | 1190/85                                  | 22500                                    | 2530                                                 | 0.90                                 | 0.190                            | 23.0                                 | 125                     | 16.0-32.0              | T75.26K0 / 47  |
| T1500N18TOF VT                                                                               | 1800                               | 1600, 1400                                   | 1500/85                                  | 33500                                    | 5611                                                 | 0.90                                 | 0.150                            | 18.4                                 | 125                     | 24.0-56.0              | T75.26K0 / 47  |
| T2180N18TOF VT                                                                               | 1800                               | 1600, 1400, 1200                             | 2180/85                                  | 36000                                    | 6480                                                 | 0.90                                 | 0.106                            | 12.5                                 | 125                     | 30.0-65.0              | T100.26K0 / 47 |
| T3160N18TOF VT                                                                               | 1800                               | 1600                                         | 3160/85                                  | 57000                                    | 16245                                                | 0.85                                 | 0.082                            | 8.5                                  | 125                     | 42.0-95.0              | T111.26K0 / 47 |

# Thyristor Discs



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj \max}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Clamping force<br>[kN] | Outline / page |
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------|----------------|
| Power Line - thyristor discs up to 5500 V                                                    |                                    |                                              |                                          |                                          |                                                      |                                      |                                  |                                      |                         |                        |                |
| T730N42TOF VT                                                                                | 4200                               | 3800                                         | 730/85                                   | 15800                                    | 1250                                                 | 1.20                                 | 0.570                            | 21.5                                 | 120                     | 18-43                  | T75.26K0 / 47  |
| T731N44TOH                                                                                   | 4400                               |                                              | 870/85                                   | 16000                                    | 1280                                                 | 1.08                                 | 0.650                            | 18.5                                 | 125                     | 15-24                  | T76.26K0 / 47  |
| T860N36TOF VT                                                                                | 3600                               |                                              | 860/85                                   | 17000                                    | 1445                                                 | 1.08                                 | 0.500                            | 21.0                                 | 125                     | 20-45                  | T75.26K0 / 47  |
| T901N36TOF                                                                                   | 3600                               | 3500                                         | 940/85                                   | 17000                                    | 1445                                                 | 1.16                                 | 0.494                            | 18.5                                 | 125                     | 15-24                  | T76.26K0 / 47  |
| T930N36TOF VT                                                                                | 3600                               |                                              | 930/85                                   | 17500                                    | 1530                                                 | 1.00                                 | 0.430                            | 21.5                                 | 125                     | 20-45                  | T75.26K0 / 47  |
| T1401N42TOH                                                                                  | 4200                               |                                              | 1590/85                                  | 36000                                    | 6480                                                 | 1.29                                 | 0.330                            | 9.7                                  | 125                     | 36-52                  | T120.35K0 / 48 |
| T1451N52TOH                                                                                  | 5200                               |                                              | 1660/85                                  | 43000                                    | 9250                                                 | 0.92                                 | 0.370                            | 9.7                                  | 125                     | 36-52                  | T120.35K0 / 48 |
| T1551N52TOH PR                                                                               | 5200                               |                                              | 1770/85                                  | 43000                                    | 9250                                                 | 0.92                                 | 0.370                            | 9.0                                  | 125                     | 36-52                  | T120.26K0 / 47 |
| T1601N36TOF                                                                                  | 3600                               | 3500                                         | 1900/85                                  | 44000                                    | 8400                                                 | 1.00                                 | 0.250                            | 9.0                                  | 125                     | 36-52                  | T120.35K0 / 48 |
| T1800N42TOF PR                                                                               | 4200                               |                                              | 1800/85                                  | 41000                                    | 8405                                                 | 0.85                                 | 0.400                            | 8.5                                  | 125                     | 36-52                  | T111.26K0 / 47 |
| T1930N38TOF VT                                                                               | 3800                               | 3600, 3400, 3200                             | 2180/85                                  | 37000                                    | 6850                                                 | 1.08                                 | 0.200                            | 8.5                                  | 125                     | 40-65                  | T111.26K0 / 47 |
| T2001N36TOF                                                                                  | 3600                               |                                              | 2060/85                                  | 41000                                    | 8400                                                 | 1.00                                 | 0.250                            | 8.7                                  | 125                     | 36-52                  | T120.26K0 / 47 |
| T2351N52TOH                                                                                  | 5200                               |                                              | 2250/85                                  | 54000                                    | 14600                                                | 0.81                                 | 0.360                            | 6.5                                  | 125                     | 45-65                  | T120.26K0 / 47 |
| T2851N52TOH                                                                                  | 5200                               | 4800                                         | 2980/85                                  | 79000                                    | 31000                                                | 0.77                                 | 0.235                            | 5.4                                  | 125                     | 63-91                  | T150.35K0 / 48 |
| T3441N52TOH                                                                                  | 5200                               |                                              | 3200/85                                  | 79000                                    | 31000                                                | 0.77                                 | 0.235                            | 4.8                                  | 125                     | 63-91                  | T150.26K0 / 48 |
| T3801N36TOF VT                                                                               | 3600                               |                                              | 3830/85                                  | 87000                                    | 37850                                                | 0.82                                 | 0.145                            | 4.8                                  | 125                     | 63-91                  | T150.26K0 / 48 |
| T4003N52TOH PR                                                                               | 5200                               |                                              | 3400/85                                  | 100000                                   | 50000                                                | 0.93                                 | 0.145                            | 4.8                                  | 120                     | 90-130                 | T172.40K0 / 48 |
| T4003NH52TOH                                                                                 | 5200                               |                                              | 3400/85                                  | 100000                                   | 50000                                                | 0.93                                 | 0.145                            | 4.8                                  | 120                     | 90-130                 | T172.40K0 / 48 |
| T4021N52TOH                                                                                  | 5200                               |                                              | 3880/85                                  | 100000                                   | 50000                                                | 0.93                                 | 0.145                            | 4.5                                  | 125                     | 90-130                 | T172.35K0 / 48 |

# Thyristor Discs



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj \max}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Clamping force<br>[kN] | Outline / page |
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------|----------------|
| Power Line - thyristor discs up to 7500 V                                                    |                                    |                                              |                                          |                                          |                                                      |                                      |                                  |                                      |                         |                        |                |
| T201N70TOH PR                                                                                | 7000                               |                                              | 245/85                                   | 4200                                     | 88                                                   | 1.29                                 | 4.220                            | 40.0                                 | 125                     | 7-12                   | T58.26K0 / 46  |
| T280N65TOF                                                                                   | 6500                               |                                              | 280/85                                   | 5800                                     | 115                                                  | 1.35                                 | 2.800                            | 43.0                                 | 125                     | 7-12                   | T58.27K0 / 46  |
| T501N70TOH                                                                                   | 7000                               |                                              | 640/85                                   | 13000                                    | 845                                                  | 1.30                                 | 1.350                            | 17.0                                 | 125                     | 15-24                  | T75.26K0 / 47  |
| T533N80TOH PR                                                                                | 8000                               |                                              | 540/85                                   | 10500                                    | 550                                                  | 1.26                                 | 1.470                            | 20.0                                 | 120                     | 15-24                  | T75.35K0 / 47  |
| T570N65TOF                                                                                   | 6500                               |                                              | 540/85                                   | 10500                                    | 442                                                  | 1.35                                 | 1.400                            | 21.0                                 | 125                     | 13-23                  | T75.26K0 / 47  |
| T1060N65TOF PR                                                                               | 6500                               |                                              | 1053/85                                  | 22500                                    | 2530                                                 | 1.35                                 | 0.720                            | 11.0                                 | 125                     | 27-45                  | T100.26K0 / 47 |
| T1081N70TOH                                                                                  | 7000                               | 6500                                         | 1300/85                                  | 34000                                    | 5780                                                 | 1.18                                 | 0.759                            | 8.6                                  | 125                     | 26-52                  | T120.26K0 / 47 |
| T1503N80TOH PR                                                                               | 8000                               |                                              | 1770/85                                  | 55000                                    | 15125                                                | 1.24                                 | 0.440                            | 6.3                                  | 120                     | 63-91                  | T150.40K0 / 48 |
| T1503NH80TOH                                                                                 | 8000                               |                                              | 1770/85                                  | 55000                                    | 15125                                                | 1.24                                 | 0.440                            | 6.3                                  | 120                     | 63-91                  | T150.40K0 / 48 |
| T1620N65TOF PR                                                                               | 6500                               |                                              | 1613/85                                  | 32000                                    | 5120                                                 | 1.35                                 | 0.430                            | 8.1                                  | 125                     | 40-65                  | T111.26K0 / 47 |
| T1851N70TOH                                                                                  | 7000                               |                                              | 1830/85                                  | 48000                                    | 11500                                                | 1.22                                 | 0.490                            | 6.5                                  | 125                     | 45-65                  | T120.26K0 / 48 |
| T1901N80TOH                                                                                  | 8000                               |                                              | 2100/85                                  | 65000                                    | 21100                                                | 1.24                                 | 0.440                            | 5.4                                  | 125                     | 63-91                  | T150.35K0 / 48 |
| T2251N80TOH                                                                                  | 8000                               | 7000                                         | 2260/85                                  | 65000                                    | 21100                                                | 1.24                                 | 0.440                            | 4.8                                  | 125                     | 63-91                  | T150.26K0 / 48 |
| T2563N80TOH PR                                                                               | 8000                               |                                              | 2300/85                                  | 90000                                    | 40500                                                | 1.20                                 | 0.350                            | 4.8                                  | 120                     | 90-130                 | T172.40K0 / 48 |
| T2563NH80TOH                                                                                 | 8000                               |                                              | 2300/85                                  | 90000                                    | 40500                                                | 1.20                                 | 0.350                            | 4.8                                  | 120                     | 90-130                 | T172.40K0 / 48 |
| T2871N80TOH                                                                                  | 8000                               |                                              | 2620/85                                  | 90000                                    | 40500                                                | 1.27                                 | 0.336                            | 4.5                                  | 125                     | 90-130                 | T172.35K0 / 48 |

# Thyristor Discs



| Product<br> | Max.<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{TAVM}/T_C$<br>[A/C°]<br>@180° el sin | $I_{TSM}$<br>[A]<br>@10ms, $T_{vj \max}$ | $\int i^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Clamping force [kN] | Outline / page |
|----------------------------------------------------------------------------------------------|------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|---------------------|----------------|
| Prime Line - electrical triggered thyristors up to 8000 V                                    |                                    |                                          |                                          |                                                      |                                      |                                  |                                      |                         |                     |                |
| T1901N80TOH                                                                                  | 8000                               | 2100/85                                  | 65000                                    | 21100                                                | 1.24                                 | 0.440                            | 5.4                                  | 125                     | 63-91               | T150.35K / 48  |
| T2251N80TOH                                                                                  | 8000                               | 2260/85                                  | 65000                                    | 21100                                                | 1.24                                 | 0.440                            | 4.8                                  | 125                     | 63-91               | T150.26K / 48  |
| T2871N80TOH                                                                                  | 8000                               | 2620/85                                  | 90000                                    | 40500                                                | 1.27                                 | 0.336                            | 4.5                                  | 125                     | 90-130              | T172.35K / 48  |
| T3011N80TOH                                                                                  | 8000                               | 2800/85                                  | 90000                                    | 40500                                                | 1.27                                 | 0.336                            | 4.0                                  | 125                     | 90-130              | T172.26K / 48  |

|                                                      |      |         |        |       |      |       |      |     |        |               |
|------------------------------------------------------|------|---------|--------|-------|------|-------|------|-----|--------|---------------|
| Prime Line - light triggered thyristors up to 8000 V |      |         |        |       |      |       |      |     |        |               |
| T533N80TOH PR                                        | 8000 | 540/85  | 10500  | 550   | 1.26 | 1.470 | 20.0 | 120 | 15-24  | T76.35L / 49  |
| T533N80TOH PR                                        | 8000 | 540/85  | 10500  | 550   | 1.26 | 1.470 | 20.0 | 120 | 15-24  | T76.35L / 49  |
| T1503NH80TOH                                         | 8000 | 1770/85 | 55000  | 15125 | 1.24 | 0.440 | 6.3  | 120 | 63-91  | T150.40L / 49 |
| T2563N80TOH PR                                       | 8000 | 2300/85 | 90000  | 40500 | 1.20 | 0.350 | 4.8  | 120 | 90-130 | T172.40L / 49 |
| T2563NH80TOH                                         | 8000 | 2300/85 | 90000  | 40500 | 1.20 | 0.350 | 4.8  | 120 | 90-130 | T172.40L / 49 |
| T4003N52TOH PR                                       | 5200 | 3400/85 | 100000 | 50000 | 0.93 | 0.145 | 4.8  | 120 | 90-130 | T172.40L / 49 |
| T4003NH52TOH                                         | 5200 | 3400/85 | 100000 | 50000 | 0.93 | 0.145 | 4.8  | 120 | 90-130 | T172.40L / 49 |

## Fitting – Laser Diode & for Light-Triggered Thyristors



| Product                | For disc housing            | Ordering Code |
|------------------------|-----------------------------|---------------|
| Laser Diode            |                             |               |
| LASER DIODE SPL-PL90 A | T76.35L, T150.40L, T172.40L | SP000091118   |

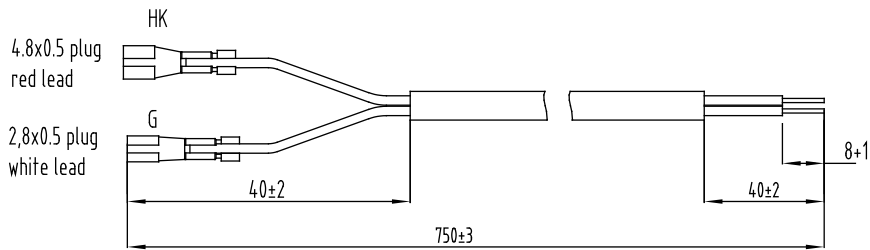
## Fitting – Light Fiber for Light-Triggered Thyristors



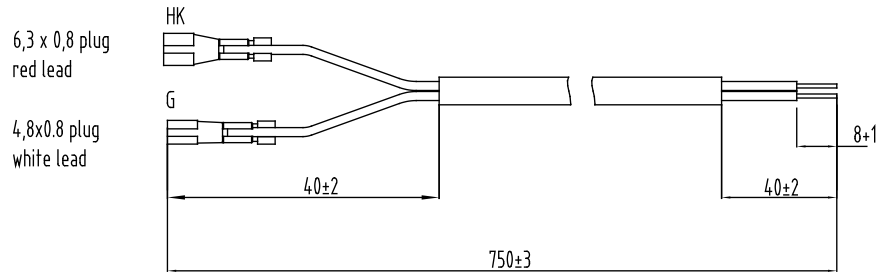
| Product                  | For disc housing   | Ordering Code |
|--------------------------|--------------------|---------------|
| Light Fiber              |                    |               |
| LIGHT FIBER LWL R10-LR50 | T76.35L            | SP000091120   |
| LIGHT FIBER LWL R10-LR87 | T150.40L, T172.40L | SP000091117   |

# Fittings – Gate Leads for Disc Type Devices

| Disc outline/page     | Type                     | Color     | Connector [mm]  | Length [mm] | Ordering Code |
|-----------------------|--------------------------|-----------|-----------------|-------------|---------------|
| Gatelead medium power |                          |           |                 |             |               |
| T42.14K0              | GATELEAD<br>L=750/0.5 MP | red/white | 4.8x0.5/2.8x0.5 | 750         | SP000983448   |
| T48.14K0              |                          |           |                 |             |               |
| T58.14K0              |                          |           |                 |             |               |
| T58.26K0              |                          |           |                 |             |               |
| T75.26K0              |                          |           |                 |             |               |
| T100.26K0             |                          |           |                 |             |               |
| T111.26K0             |                          |           |                 |             |               |



|                     |                          |           |                 |     |             |
|---------------------|--------------------------|-----------|-----------------|-----|-------------|
| Gatelead high power |                          |           |                 |     |             |
| T120.26K            | GATELEAD<br>L=750/0.8 HP | red/white | 6.3x0.8/4.8x0.8 | 750 | SP000983442 |
| T120.35K            |                          |           |                 |     |             |
| T150.26K            |                          |           |                 |     |             |
| T150.35K            |                          |           |                 |     |             |
| T172.26K            |                          |           |                 |     |             |



# Diode Discs



| Product<br> | $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{FAVM}/T_C$<br>[A/°C]<br>@180° el sin | $I_{FSM}$<br>@10ms, $T_{vj\ max}$ | $\int I^2 dt$<br>[A <sup>2</sup> s · 10 <sup>-3</sup> ]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Clamping force<br>[kN] | Outline / page |
|----------------------------------------------------------------------------------------------|------------------|----------------------------------------------|------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------|----------------------------------------------|------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------|----------------|

| Power Line - rectifier diodes up to 800 V |     |               |          |       |       |      |      |      |     |           |                |
|-------------------------------------------|-----|---------------|----------|-------|-------|------|------|------|-----|-----------|----------------|
| D650N06T                                  | 600 | 200           | 651/100  | 510   | 130   | 0.70 | 0.51 | 81.0 | 180 | 2.6-4.6   | D42.14K0 / 51  |
| D970N06T                                  | 600 |               | 972/100  | 8800  | 387   | 0.70 | 0.31 | 57.0 | 180 | 3.9-7.6   | D42.14K0 / 51  |
| D2450N07T                                 | 700 | 600, 400, 200 | 2452/100 | 4000  | 4061  | 0.70 | 0.10 | 25.3 | 180 | 12.0-24.0 | D58.14K0 / 51  |
| D5810N06T VF                              | 600 | 400           | 5800/58  | 70000 | 24500 | 0.70 | 0.04 | 17.0 | 180 | 30.0-60.0 | D75.26K0 / 51  |
| D8320N06T VF                              | 600 | 400           | 8320/56  | 95000 | 45000 | 0.70 | 0.02 | 12.5 | 180 | 40.0-80.0 | D100.26K0 / 51 |

| Power Line - rectifier diodes up to 1800 V |      |      |          |       |      |      |      |      |     |           |               |
|--------------------------------------------|------|------|----------|-------|------|------|------|------|-----|-----------|---------------|
| D1050N18T                                  | 1800 |      | 1050/130 | 18500 | 1710 | 0.81 | 0.17 | 38.0 | 180 | 10.0-24.0 | D58.26K0 / 51 |
| D1230N14T                                  | 1400 | 1200 | 1234/100 | 11800 | 696  | 0.81 | 0.28 | 39.0 | 180 | 6.0-15.0  | D48.14K0 / 51 |
| D1230N18T                                  | 1800 | 1600 | 1234/100 | 11800 | 696  | 0.81 | 0.28 | 39.0 | 180 | 6.0-15.0  | D48.14K0 / 51 |



| Power Line - rectifier diodes up to 3000 V |      |            |            |       |       |      |      |      |     |           |                |
|--------------------------------------------|------|------------|------------|-------|-------|------|------|------|-----|-----------|----------------|
| D770N18T                                   | 1800 | 1600       | 767/100    | 6000  | 180   | 0.81 | 0.54 | 57.0 | 180 | 3.2-7.6   | D42.14K0 / 51  |
| D820N22T                                   | 2200 |            | 818/100    | 9000  | 405   | 0.83 | 0.52 | 39.0 | 160 | 6.0-15.0  | D48.14K0 / 51  |
| D950N22T                                   | 2200 | 1800       | 950/100    | 10250 | 525   | 0.70 | 0.50 | 45.0 | 180 | 6.0-12.0  | D42.14K0 / 51  |
| D1030N26T                                  | 2600 | 2200       | 1030/100   | 14500 | 1051  | 0.82 | 0.28 | 38.0 | 160 | 10.0-24.0 | D58.26K0 / 51  |
| D2200N24T VF                               | 2400 | 2200, 2000 | 2200/100   | 35000 | 6125  | 0.83 | 0.15 | 17.0 | 160 | 24.0-60.0 | D75.26K0 / 51  |
| D2520N22T VF                               | 2200 |            | 2520/100   | 35000 | 6125  | 0.73 | 0.10 | 22.0 | 175 | 15.0-24.0 | D76.26K0 / 51  |
| D2650N24T VF                               | 2400 |            | 3520 / 100 | 41000 | 5611  | 0.82 | 0.15 | 16.9 | 180 | 24.0-60.0 | D75.26K0 / 51  |
| D4201N22T                                  | 2200 | 2000       | 4830/100   | 73500 | 27000 | 0.67 | 0.08 | 9.2  | 160 | 36.0-52.0 | D120.35K / 48  |
| D4810N28T VF                               | 2800 | 2200       | 4810/100   | 60000 | 18000 | 0.83 | 0.06 | 8.0  | 160 | 42.0-95.0 | D111.26K0 / 52 |

# Diode Discs



| Product<br> | $V_{RRM}$<br>[V] | also available<br>$V_{DRM}$ $V_{RRM}$<br>[V] | $I_{FAVM}/T_C$<br>[A/°C]<br>@180° el sin | $I_{FSM}$<br>@10ms, $T_{vj\ max}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Clamping force<br>[kN] | Outline / page |
|----------------------------------------------------------------------------------------------|------------------|----------------------------------------------|------------------------------------------|-----------------------------------|------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------|----------------|
| Power Line - rectifier diodes up to 5000 V                                                   |                  |                                              |                                          |                                   |                                                      |                                      |                                  |                                      |                         |                        |                |
| D740N48T                                                                                     | 4800             | 4400                                         | 750/100                                  | 11000                             | 605                                                  | 0.85                                 | 0.650                            | 39.0                                 | 160                     | 10-24                  | D58.26K0 / 51  |
| D850N40T                                                                                     | 4000             | 3600, 3200                                   | 850/100                                  | 12800                             | 819                                                  | 0.84                                 | 0.490                            | 38.0                                 | 160                     | 10-24                  | D58.26K0 / 51  |
| D1800N48T VF                                                                                 | 4800             | 4600, 4400, 4300, 4000                       | 1800/100                                 | 27500                             | 3781                                                 | 0.85                                 | 0.250                            | 16.9                                 | 160                     | 24-60                  | D75.26K0 / 51  |
| D2201N45T                                                                                    | 4500             |                                              | 2320/100                                 | 38000                             | 7220                                                 | 0.69                                 | 0.206                            | 11.2                                 | 140                     | 27-45                  | D100.26K0 / 52 |
| D3501N40T PR                                                                                 | 4000             |                                              | 3690/100                                 | 56000                             | 15700                                                | 0.73                                 | 0.130                            | 9.2                                  | 160                     | 36-52                  | D120.35K / 48  |
| D3501N42T                                                                                    | 4200             | 3600                                         | 3690/100                                 | 56000                             | 15700                                                | 0.73                                 | 0.130                            | 9.2                                  | 160                     | 36-52                  | D120.35K / 48  |
| D6001N50T                                                                                    | 5000             |                                              | 6070/100                                 | 110000                            | 60500                                                | 0.80                                 | 0.090                            | 4.6                                  | 160                     | 63-91                  | D150.26K / 48  |

|                                             |      |           |          |       |       |      |      |      |     |       |                |
|---------------------------------------------|------|-----------|----------|-------|-------|------|------|------|-----|-------|----------------|
| Power Line - rectifier diodes up to 10000 V |      |           |          |       |       |      |      |      |     |       |                |
| D471N90T                                    | 9000 |           | 565/100  | 10000 | 500   | 1.04 | 1.78 | 31.5 | 160 | 10-16 | D58.26K0 / 51  |
| D711N68T                                    | 6800 | 6500, 600 | 790/100  | 10500 | 550   | 0.84 | 0.87 | 31.5 | 160 | 10-16 | D58.26K0 / 51  |
| D1481N68T VF                                | 6800 |           | 1650/100 | 24500 | 3000  | 0.75 | 0.42 | 15.8 | 160 | 15-36 | D76.26K / 47   |
| D1721NH90T                                  | 9000 |           | 1670/85  | 35000 | 5780  | 1.36 | 0.65 | 7.5  | 140 | 36-52 | D120.26K0 / 52 |
| D2601N90T                                   | 9000 | 8500      | 2240/100 | 50000 | 12500 | 0.94 | 0.41 | 8.55 | 160 | 36-52 | D120.26K0 / 52 |
| D2601NH90T                                  | 9000 |           | 1440/85  | 22000 | 12500 | 0.94 | 0.41 | 8.55 | 160 | 36-52 | D120.26K0 / 52 |
| D3001N68T                                   | 6800 |           | 2900/100 | 53000 | 14040 | 0.84 | 0.22 | 9.2  | 160 | 36-52 | D120.35K0 / 52 |
| D3041N60T PR                                | 6000 |           | 3040/100 | 53000 | 14040 | 0.84 | 0.22 | 8.55 | 160 | 36-52 | D120.26K0 / 52 |
| D3041N68T                                   | 6800 | 6500      | 3040/100 | 53000 | 14040 | 0.84 | 0.22 | 8.55 | 160 | 36-52 | D120.35K / 48  |

# Diode Studs



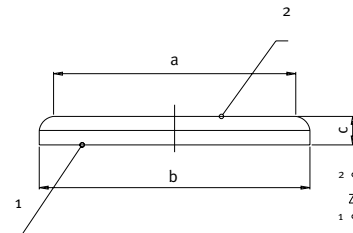
| Product                  | $V_{DRM} / V_{RRM}$<br>[V] | $I_{FAVM}/T_C$<br>[A/°C]<br>@180° el sin | $I_{FSM} / I_{TSM}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Outline / page |
|--------------------------|----------------------------|------------------------------------------|---------------------|------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|
| Power Line - diode studs |                            |                                          |                     |                                                      |                                      |                                  |                                      |                         |                |
| D251K18B                 | 1800                       | 250/102                                  | 4700                | 110.5                                                | 0.8                                  | 0.85                             | 0.236                                | 180                     | DSW27 M12 / 53 |
| D251N18B                 | 1800                       | 250/130                                  | 5300                | 140.5                                                | 0.8                                  | 0.85                             | 0.151                                | 180                     | DSW27 M12 / 53 |
| D400N22B VF              | 2200                       | 400/130                                  | 9800                | 480.2                                                | 0.7                                  | 0.62                             | 0.095                                | 180                     | DSW41 M24 / 53 |

# Welding Diodes



| Product                                              | $V_{RRM}$<br>[V] | $I_{FAVM}/T_C$<br>[A/°C]<br>@180° el sin | $I_{FSM}$<br>@10ms, $T_{vj \max}$ | $\int I^2 dt$<br>[A²s · 10³]<br>@10ms, $T_{vj \max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj \max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj \max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | Clamping force<br>[kN] |
|------------------------------------------------------|------------------|------------------------------------------|-----------------------------------|------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------|
| Power Line – welding and lightning protection diodes |                  |                                          |                                   |                                                      |                                      |                                  |                                      |                         |                        |
| 38DN06                                               | 600              | 3885/120                                 | 32300.0                           | 5200                                                 | 0.66                                 | 0.66                             | 12.4                                 | 180                     | 20-30                  |
| 46DN06                                               | 600              | 5100/118                                 | 52000.0                           | 13500                                                | 0.7                                  | 0.7                              | 9.35                                 | 180                     | 30-45                  |
| 56DN06B01                                            | 600              | 8400/110                                 | 70000.0                           | 24500                                                | 0.66                                 | 0.66                             | 5.8                                  | 180                     | 40-60                  |
| 65DN06                                               | 600              | 8470/98                                  | 95000.0                           | 45000                                                | 0.7                                  | 0.7                              | 4.7                                  | 180                     | 55-80                  |

| Designation | a [mm] | b [mm] | c [mm] |
|-------------|--------|--------|--------|
| 38DN06      | Ø 34   | Ø 38   | 4,0    |
| 46DN06      | Ø 43   | Ø 46   | 4,0    |
| 56DN06B01   | Ø 50   | Ø 56   | 5,0    |
| 65DN06      | Ø 58   | Ø 65   | 5,0    |



# IGCT/IGBT – Freewheeling Diodes



| Product | $V_{RRM}$<br>[V] | $I_{FAVM/TC}$ | $I_{FSM}$<br>@10ms, $T_{vj\ max}$ | $\int I^2 dt$<br>[A <sup>2</sup> S · 10 <sup>-3</sup> ]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | $Q_R$<br>[mAs]<br>@di/dt = 1000 A/μs<br>$I_{FM} = 2.5\ kA, T_{vj\ max}$ | $I_{RM}$<br>[A]<br>@di/dt = 1000 A/μs<br>$I_{FM} = 2.5\ kA, T_{vj\ max}$ | Clamping force<br>[kN] | Outline / page |
|---------|------------------|---------------|-----------------------------------|---------------------------------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------|----------------|
|---------|------------------|---------------|-----------------------------------|---------------------------------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------|----------------|

| Power Line - IGCT/IGBT - freewheeling diodes |      |         |       |      |      |       |      |     |       |      |       |               |
|----------------------------------------------|------|---------|-------|------|------|-------|------|-----|-------|------|-------|---------------|
| D931SH65T                                    | 6500 | 940/85  | 16000 | 1280 | 1.99 | 1.440 | 11.1 | 140 | 3.50  | 1300 | 27-45 | D100.26K / 52 |
| D1031SH45T                                   | 4500 | 1120/85 | 23000 | 2645 | 1.78 | 0.968 | 10.0 | 140 | 3.50  | 1500 | 27-45 | D100.26K / 52 |
| D1131SH65T                                   | 6500 | 1100/85 | 22000 | 2420 | 2.19 | 1.364 | 7.50 | 140 | 3.50  | 1200 | 36-52 | D120.26K / 52 |
| D1331SH45T                                   | 4500 | 1310/85 | 28000 | 3920 | 1.83 | 0.948 | 7.50 | 140 | 3.50  | 1500 | 36-52 | D120.26K / 52 |
| D1961SH45T                                   | 4500 | 1830/85 | 40000 | 8000 | 1.25 | 0.500 | 7.50 | 140 | 12.00 | 2250 | 36-52 | D120.26K / 52 |

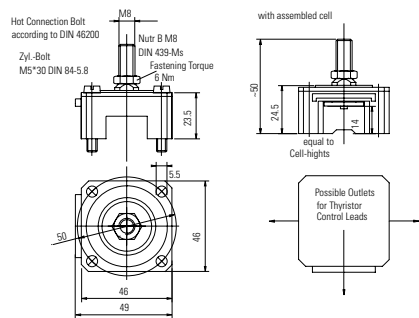
| Prime Line - IGCT/IGBT - freewheeling diodes |      |         |       |       |      |       |      |     |       |      |        |               |
|----------------------------------------------|------|---------|-------|-------|------|-------|------|-----|-------|------|--------|---------------|
| D1600U45X122                                 | 4500 | 1680/55 | 28000 | 3920  | 1.80 | 0.994 | 7.50 | 140 | 6.00  | 3600 | 36-65  | D120.26K / 52 |
| D2700U45X122                                 | 4500 | 2900/55 | 48000 | 11500 | 1.38 | 0.447 | 5.60 | 140 | 9.50  | 4200 | 50-100 | D120.26K / 52 |
| D4600U45X172                                 | 4500 | 4780/55 | 80000 | 32000 | 1.25 | 0.300 | 3.30 | 140 | 13.00 | 5500 | 50-130 | D172.26K      |

# Clamping Units for Discs

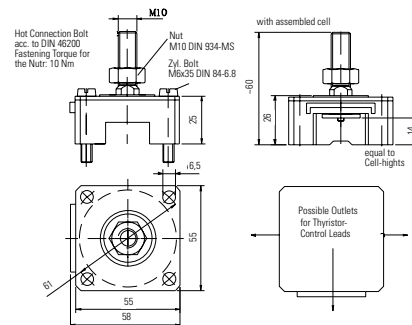


| Product              | For disc diameter [mm] | For disc height [mm] | Clamping force [kN] | Min. creeping distance [mm] | Ordering Code |
|----------------------|------------------------|----------------------|---------------------|-----------------------------|---------------|
| <b>Clamping Unit</b> |                        |                      |                     |                             |               |
| V50-14.45M           | 42                     | 14                   | 4.5                 | 11                          | SP000096563   |
| V50-14.45N           | 42                     | 14                   | 4.5                 | 11                          | SP000090625   |
| V50-14.60M           | 42                     | 14                   | 6                   | 11                          | SP000096564   |
| V50-14.60N           | 42                     | 14                   | 6                   | 11                          | SP000090626   |
| V61-14.80M           | 48                     | 14                   | 8                   | 11                          | SP000096565   |
| V61-14.80N           | 48                     | 14                   | 8                   | 11                          | SP000090627   |

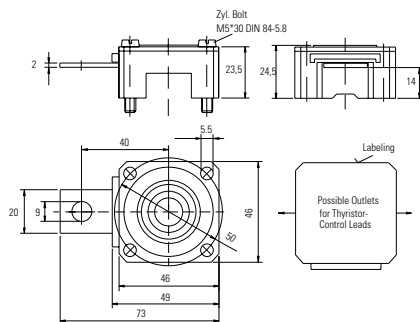
## V50..M



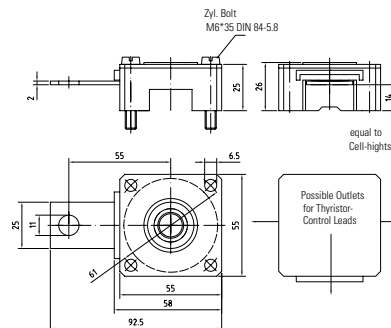
## V61..M



## V50..N



## V61..N

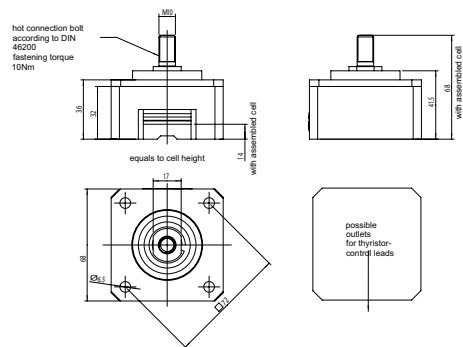


# Clamping Units for Discs

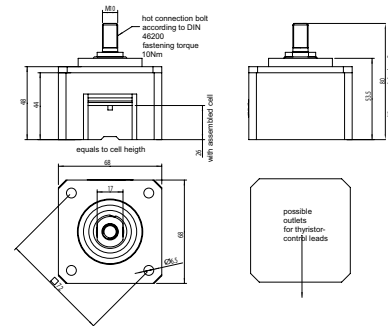


| Product              | For disc diameter [mm] | For disc height [mm] | Clamping force [kN] | Min. creeping distance [mm] | Ordering Code |
|----------------------|------------------------|----------------------|---------------------|-----------------------------|---------------|
| <b>Clamping Unit</b> |                        |                      |                     |                             |               |
| V72-14.150M          | 58                     | 14                   | 15                  | 11                          | SP000096566   |
| V72-26.80M           | 58                     | 26                   | 8                   | 23                          | SP000096569   |
| V72-26.120M          | 58                     | 26                   | 12                  | 23                          | SP000096567   |
| V72-26.150M          | 75                     | 26                   | 15                  | 23                          | SP000096568   |
| V89-26.300N          | 75                     | 26                   | 30                  | 26                          | SP000090624   |
| V89-26.400N          | 75                     | 26                   | 40                  | 26                          | SP000090662   |
| V100-35.200N         | 75                     | 26                   | 20                  | 26                          | SP000090635   |

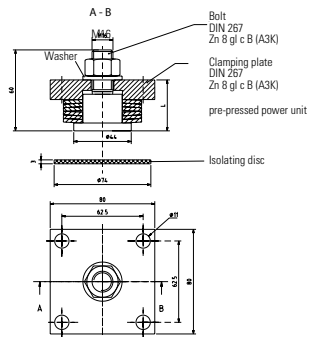
V72-14..M



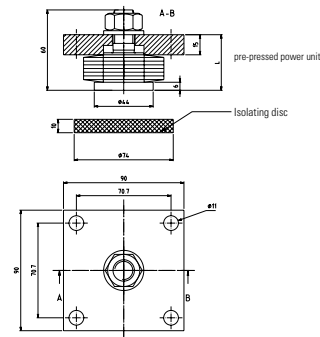
V72-26..M



V 89

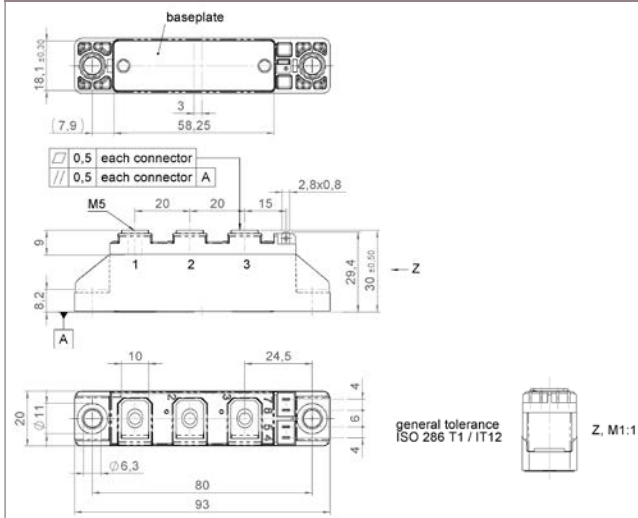


V 100

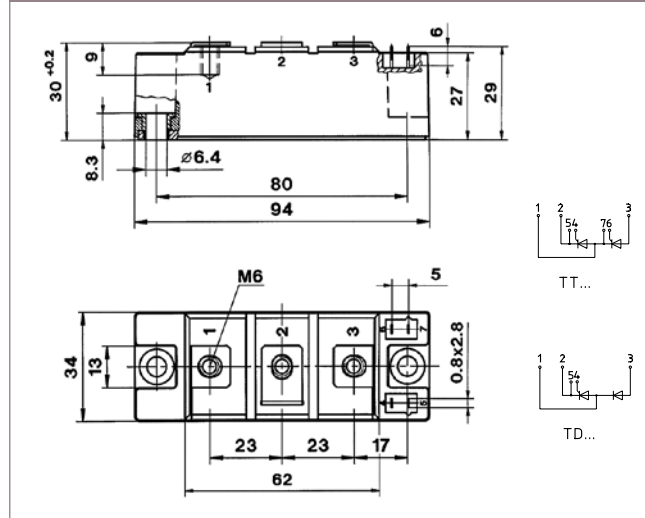


# Outlines Thyristor Modules

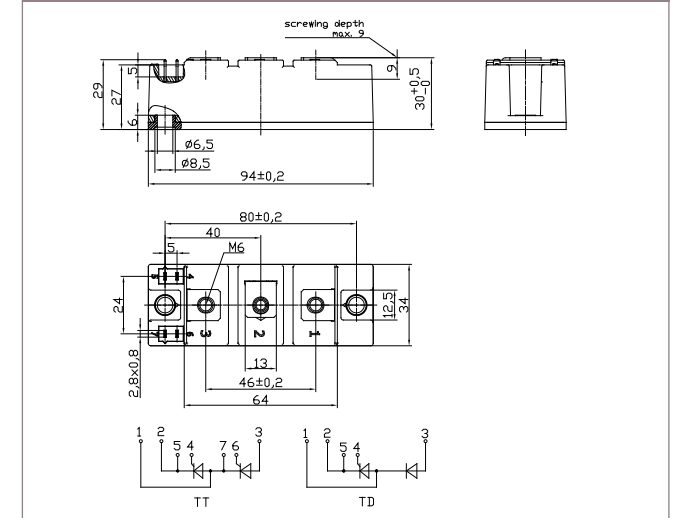
20 mm - TS20



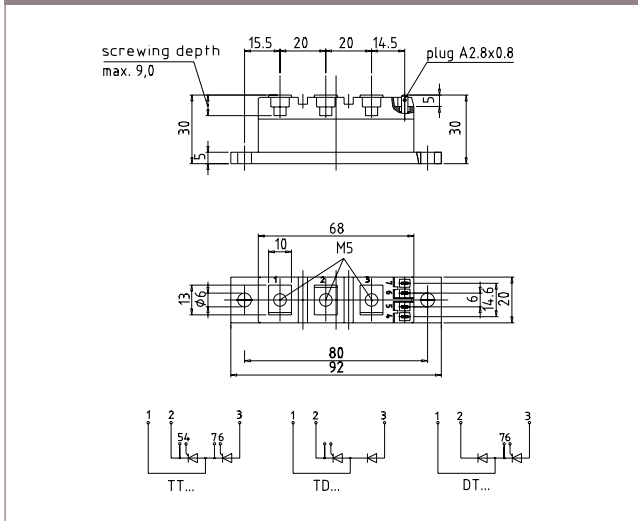
34 mm - TS34



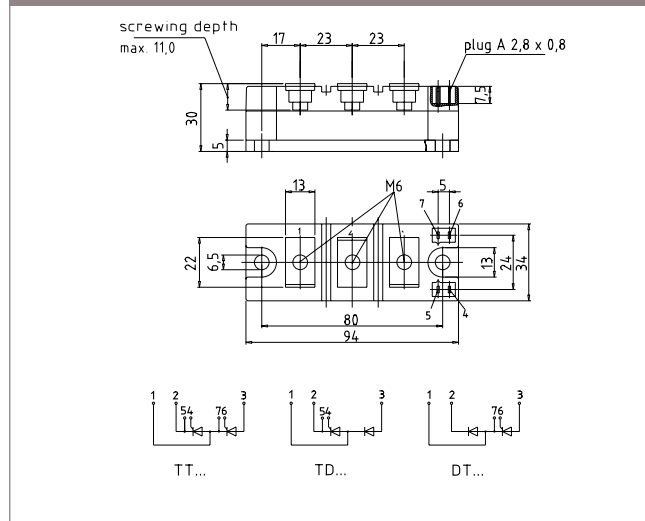
TS34 2nd Gen



20 mm - TP20

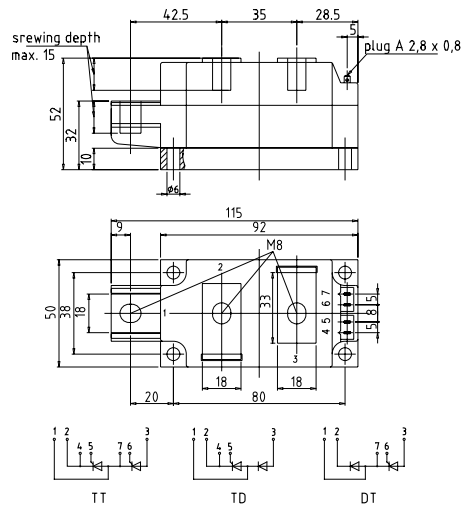


34 mm - TP34

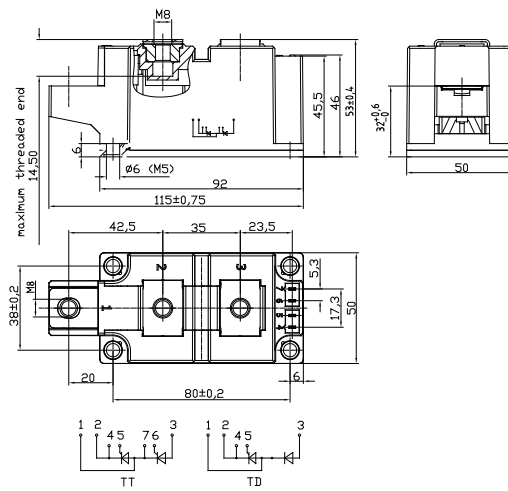


# Outlines Thyristor Modules

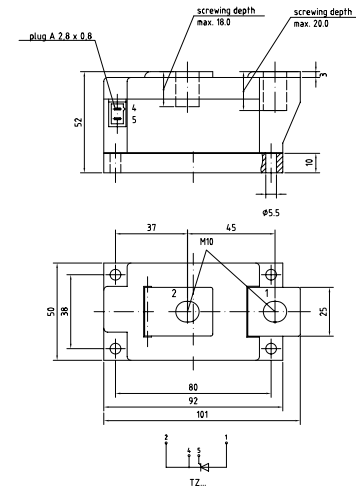
50 mm - TP50



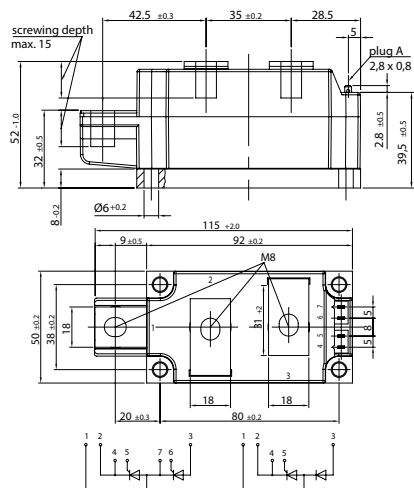
50 mm - TS50



50 mm - TP50.1

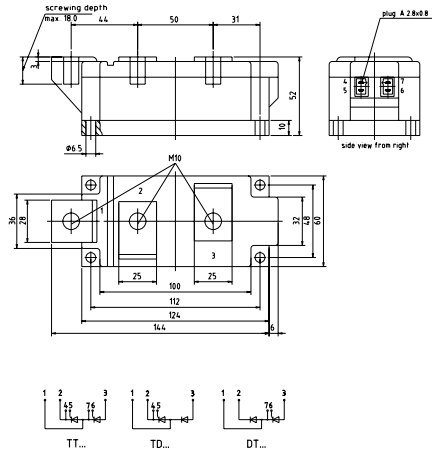


50 mm - TP50A

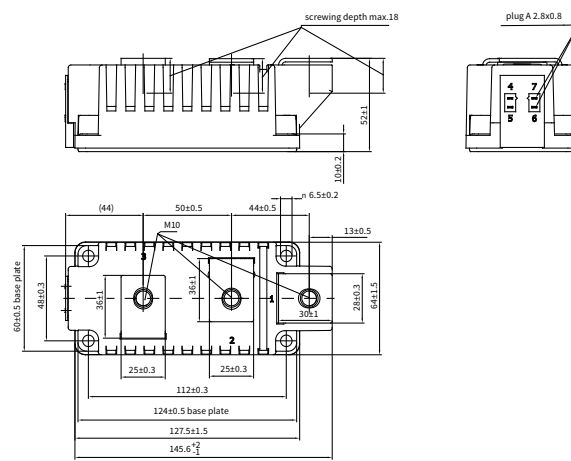


# Outlines Thyristor Modules

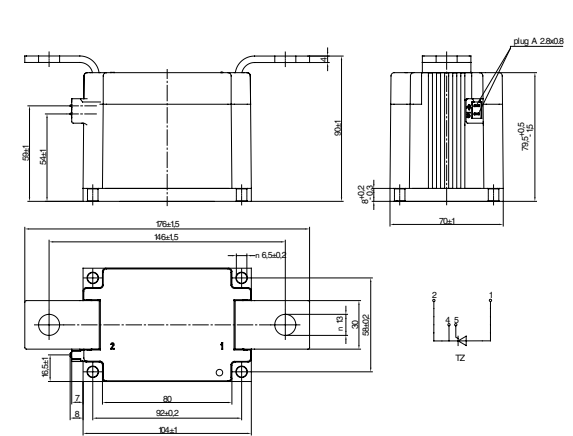
60 mm - TP60



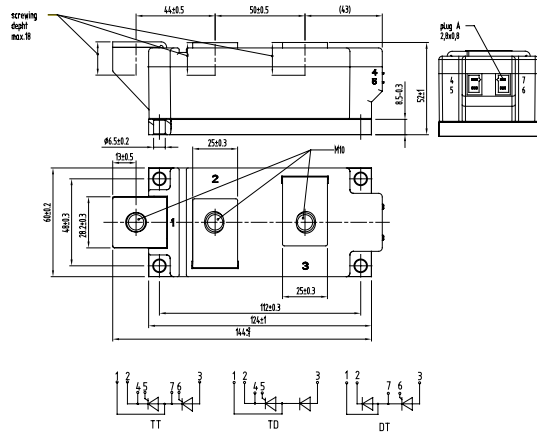
60 mm - TE60



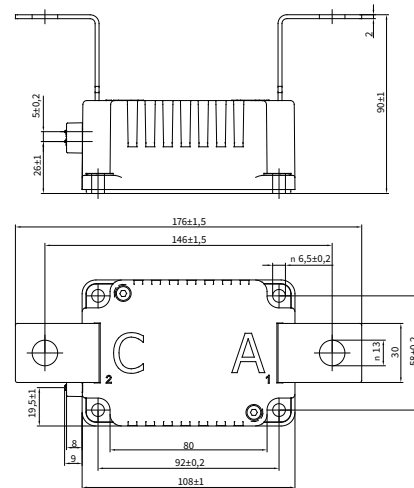
70 mm - TP70A



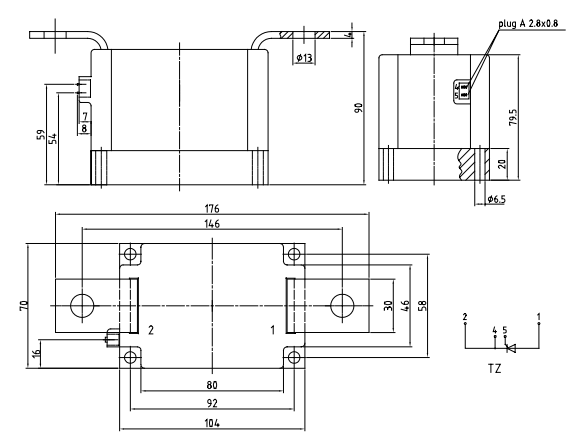
60 mm - TP60A



70 mm - TE70

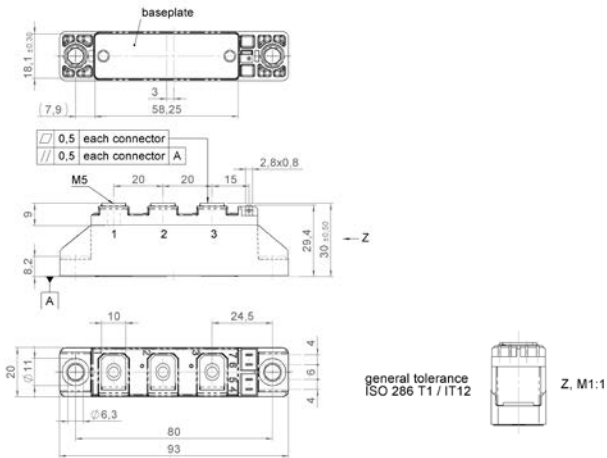


70 mm - TP70

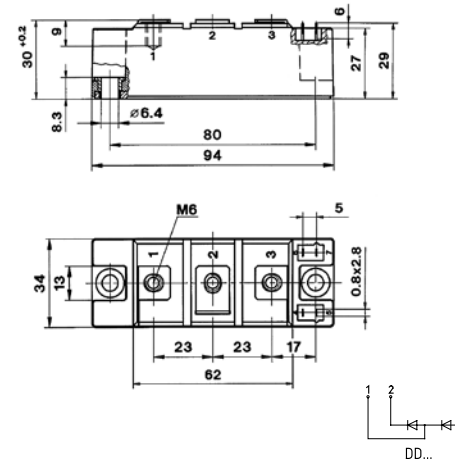


# Outlines Thyristor Modules

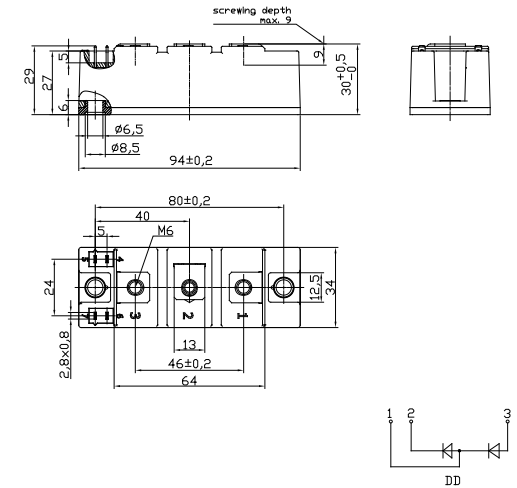
20 mm - DS20



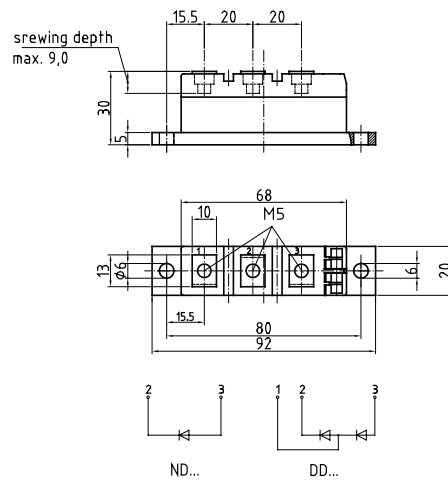
34 mm - DS34



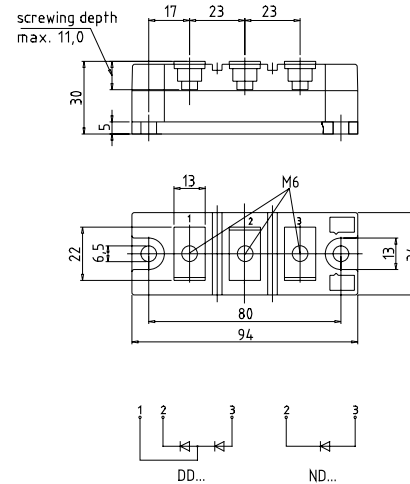
34 mm - DS34 2nd Gen



20 mm - DP20

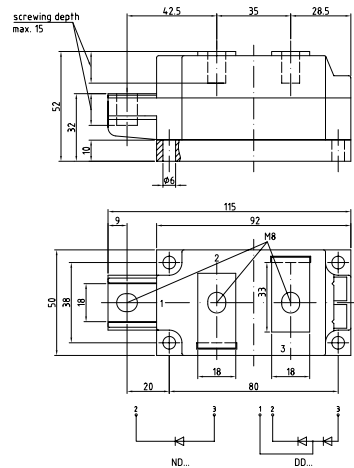


34 mm - DP34

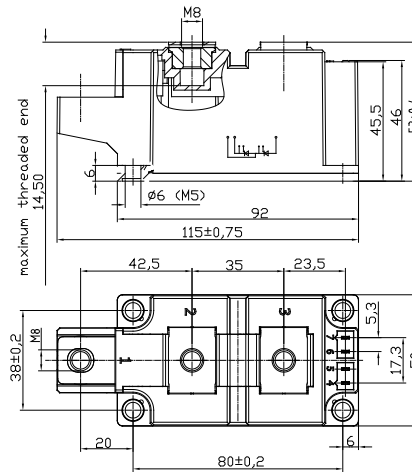


# Outlines Thyristor Modules

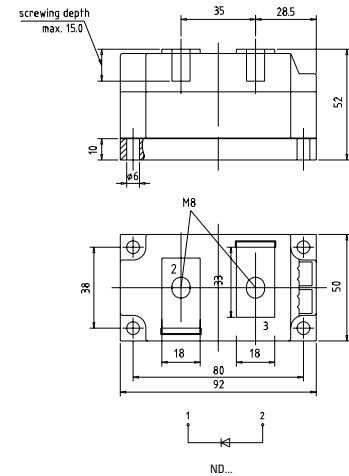
50 mm - DP50



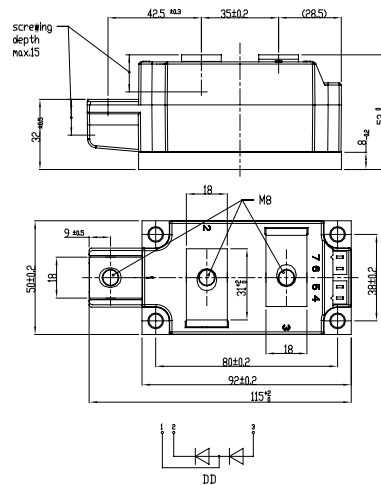
50 mm - DS50



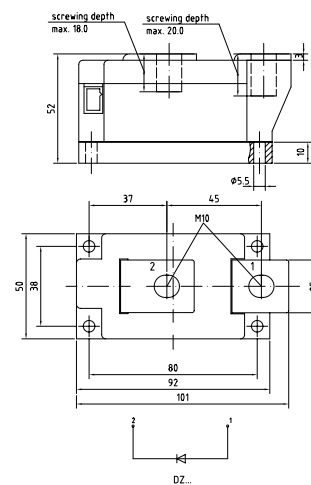
50 mm - DP50ND



50 mm - DP50A

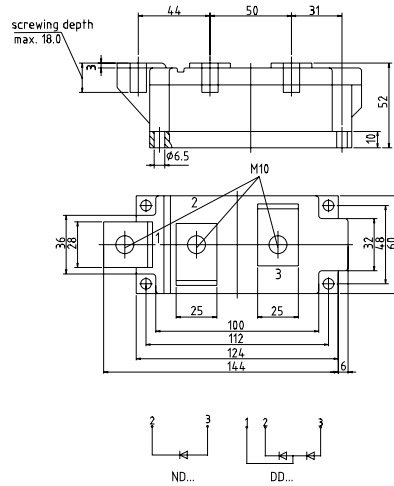


50 mm - DP50.1

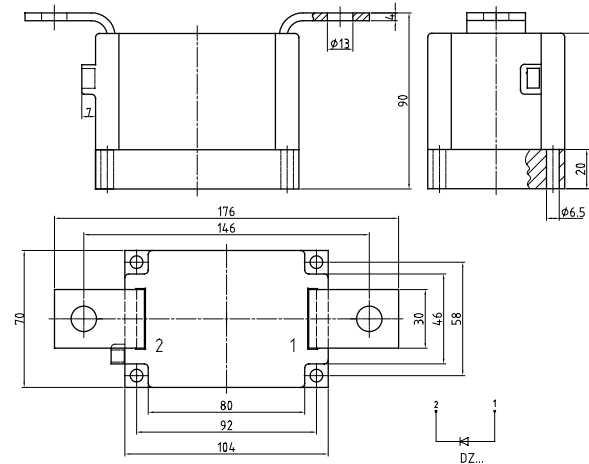


# Outlines Thyristor Modules

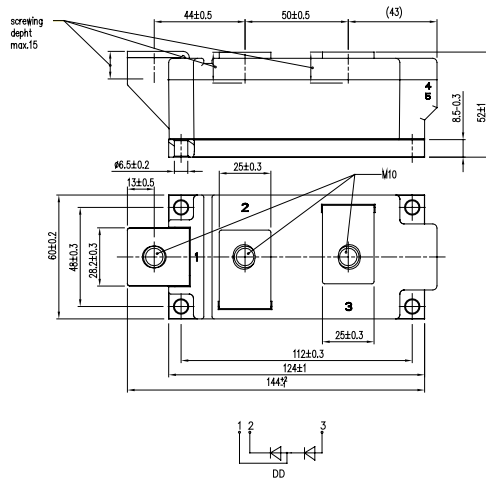
60 mm - DP60



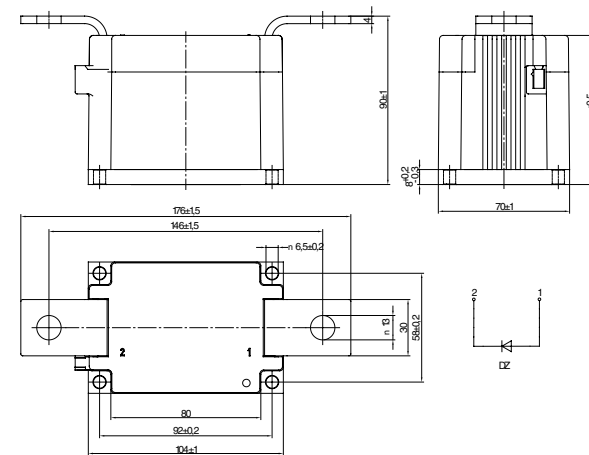
70 mm - DP70



60 mm - DP60A



70 mm - DP70A

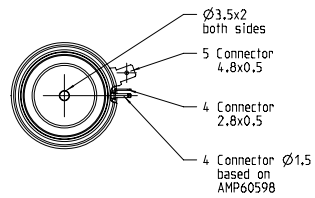
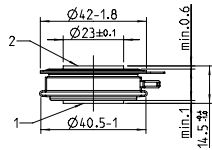


# Package Units

| Outline             | Packiging units |
|---------------------|-----------------|
| Power block modules |                 |
| DP20                | 15              |
| DS20                | 12              |
| DP34                | 8               |
| DS34                | 10              |
| DP50                | 3               |
| DP50.1              | 3               |
| DP50A               | 3               |
| DP50ND              | 3               |
| DP60                | 2               |
| DP60A               | 2               |
| DP70                | 1               |
| DP70A               | 1               |
| TP20                | 15              |
| TS20                | 12              |
| TP34                | 8               |
| TS34                | 10              |
| TP50                | 3               |
| TP50.1              | 3               |
| TP50A               | 3               |
| TP60                | 2               |
| TP60A               | 2               |
| TP70                | 1               |
| TP70A               | 1               |

# Outlines Thyristor Discs

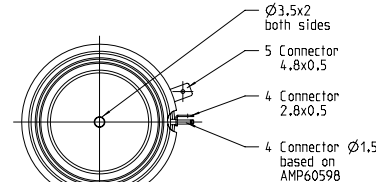
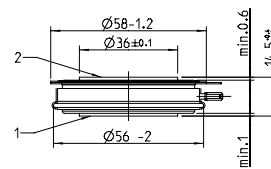
T42.14K0



strike distance: 5mm  
creepage distance: 6mm

overall height based  
on contact pressure

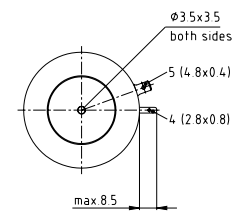
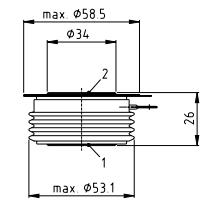
T58.14K0



strike distance: 4mm  
creepage distance: 5.0mm

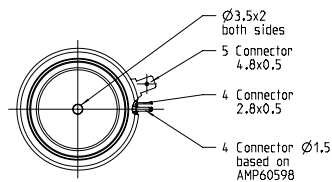
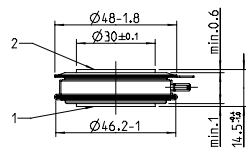
overall height based  
on contact pressure

T58.26K



max 8.5

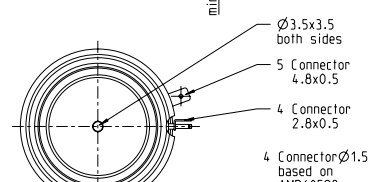
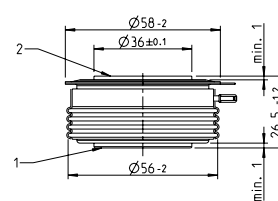
T48.14K0



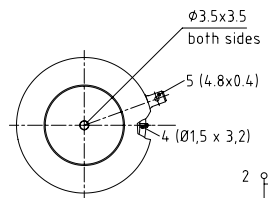
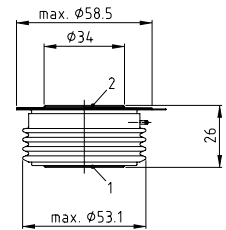
strike distance: 5.0mm  
creepage distance: 6.0mm

overall height based  
on contact pressure

T58.26K0

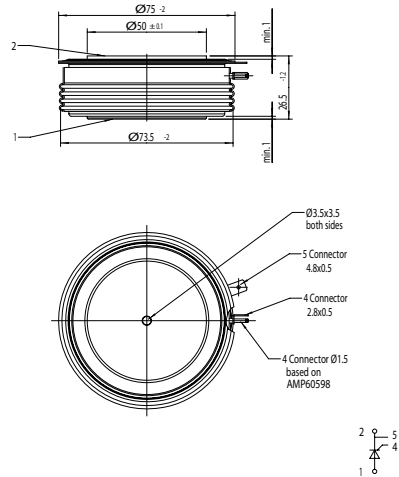


T58.26K1

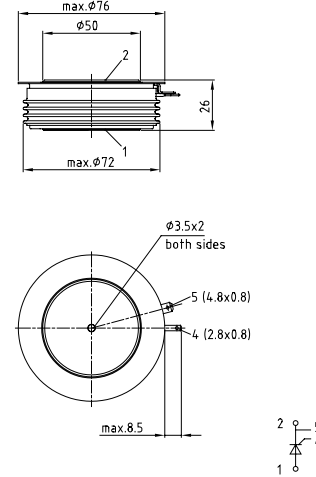


# Outlines Thyristor Discs

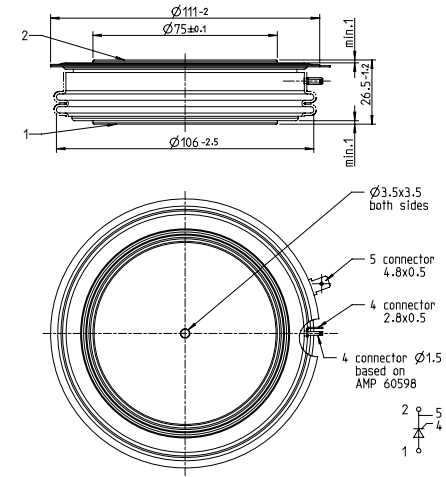
T75.26K0



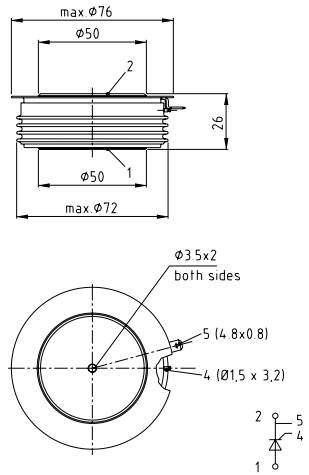
T76.26K



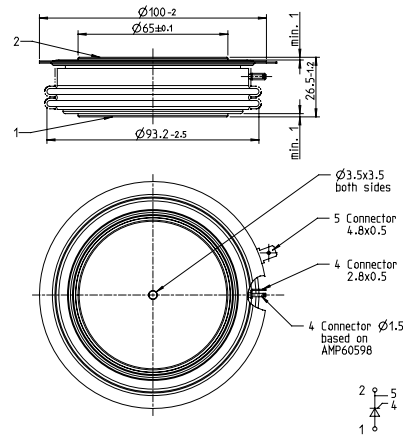
T111.26K0



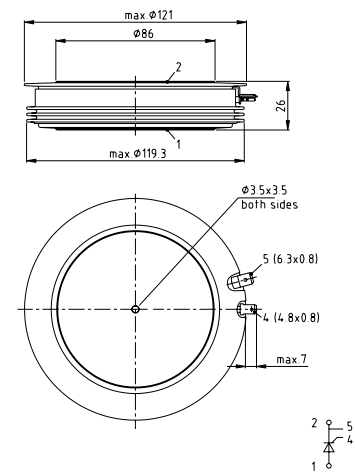
T75.26K1



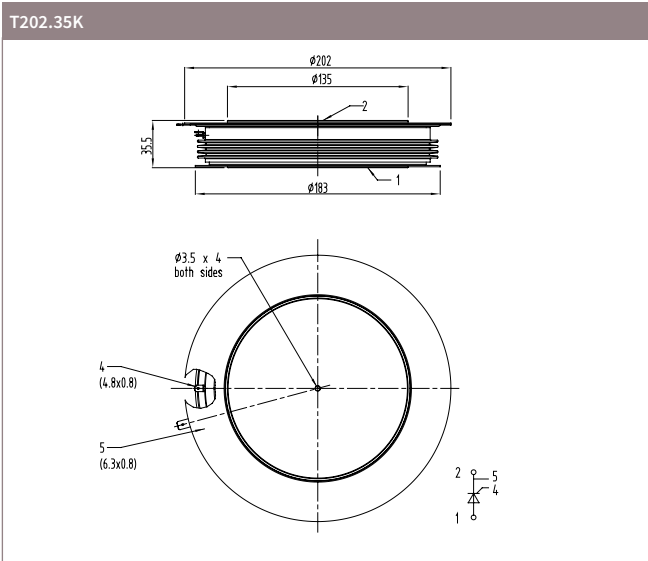
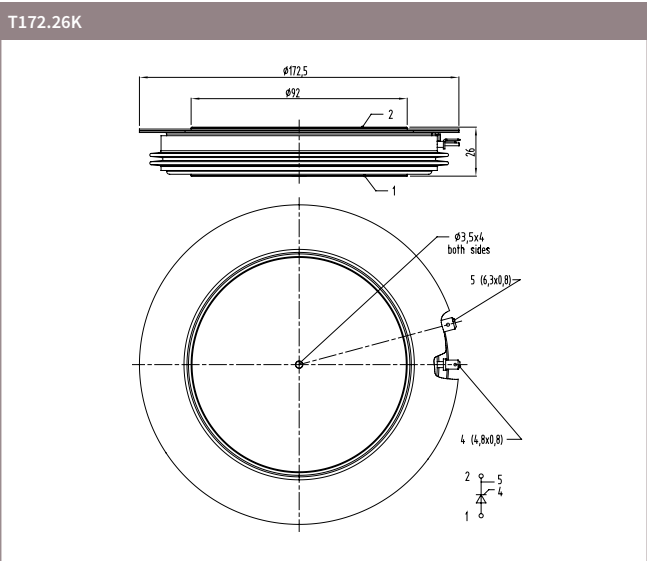
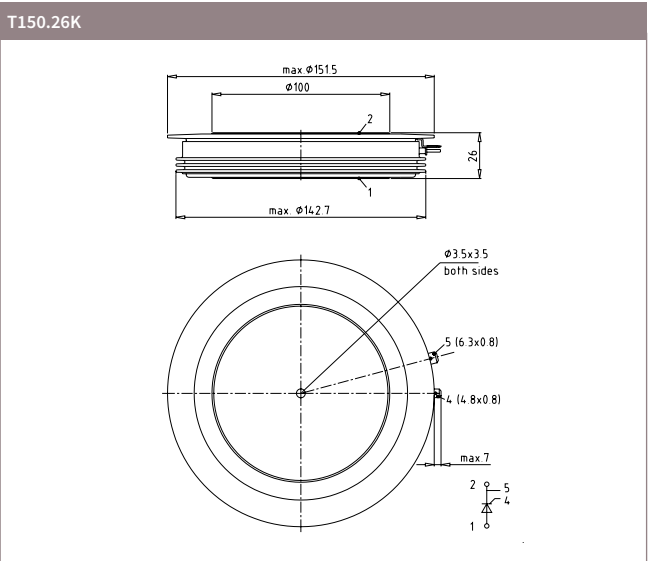
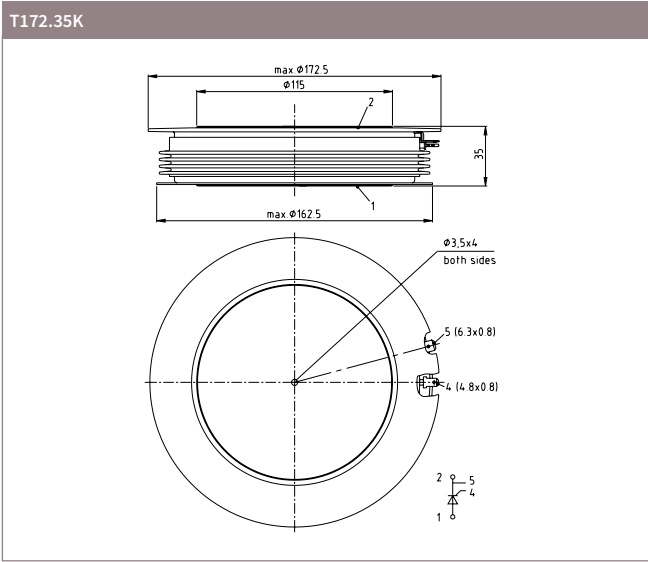
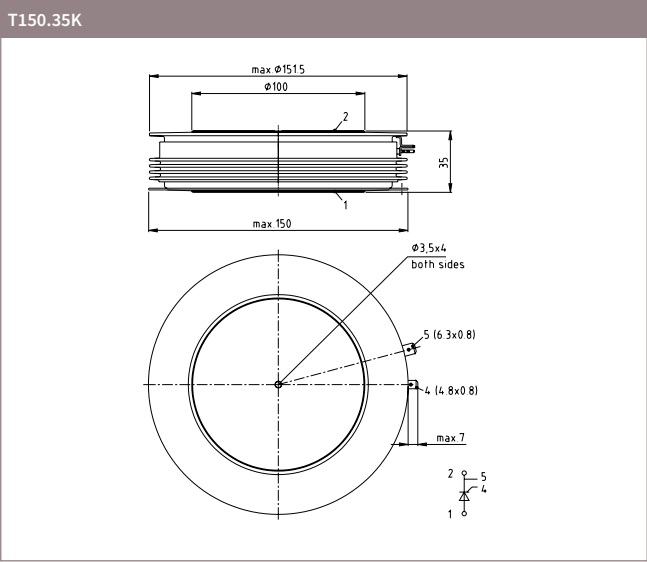
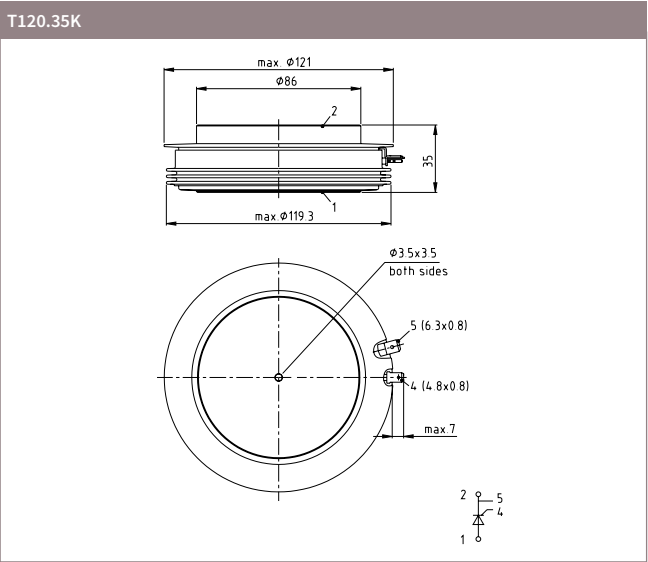
T100.26K0



T120.26K

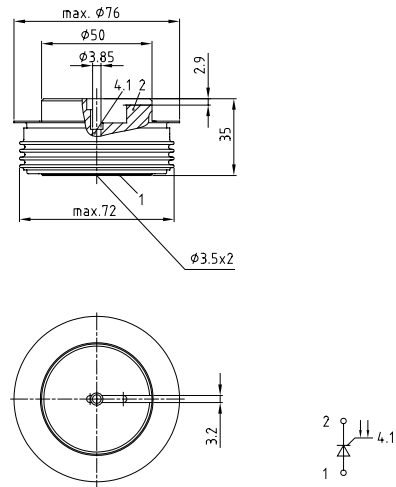


# Outlines Thyristor Discs

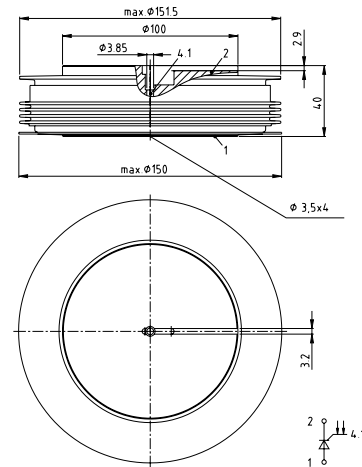


# Outlines Light Triggered Thyristors

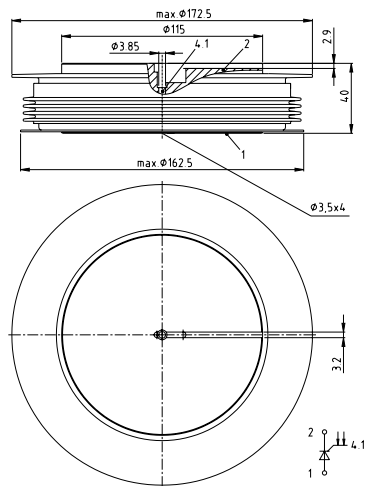
T76.35L



T172.40L



T150.40L

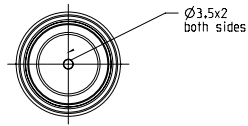
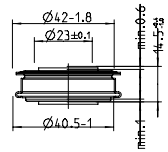


# Package Units

| Outline    | Packiging units |
|------------|-----------------|
| Presspacks |                 |
| T42.14K0   | 18              |
| T48.14K0   | 12              |
| T58.14K0   | 9               |
| T58.26K0   | 6               |
| T75.26K0   | 4               |
| T76.26K    | 4               |
| T76.35L    | 4               |
| T100.26K0  | 2               |
| T111.26K0  | 2               |
| T120.26K   | 2               |
| T120.35K   | 2               |
| T150.35K   | 1               |
| T150.40L   | 1               |
| T172.26K   | 1               |
| T172.35K   | 1               |
| T172.40L   | 1               |
| T202.35K   | 1               |

# Outlines Diode Discs

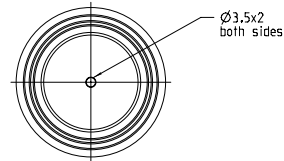
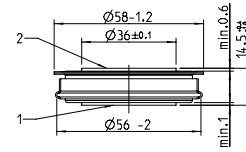
D42.14K0



strike distance: 9mm  
creepage distance: 10mm

overall height based  
on contact pressure

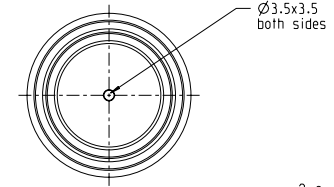
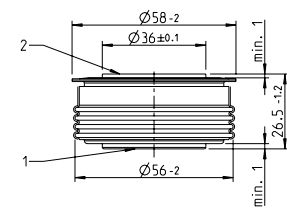
D58.14K0



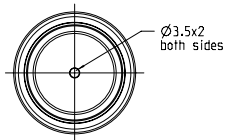
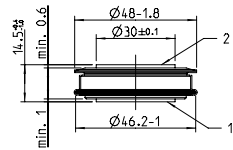
strike distance: 8.0mm  
creepage distance: 9.0mm

overall height based  
on contact pressure

D58.26K0



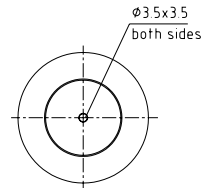
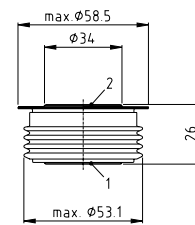
D48.14K0



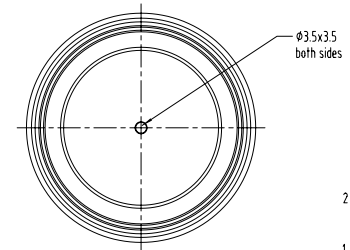
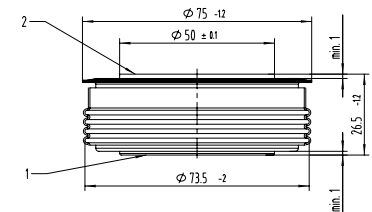
strike distance: 9mm  
creepage distance: 10mm

overall height based  
on contact pressure

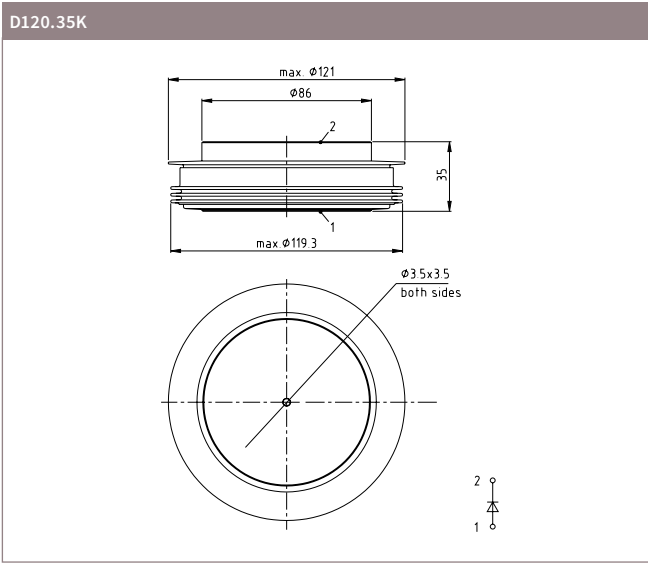
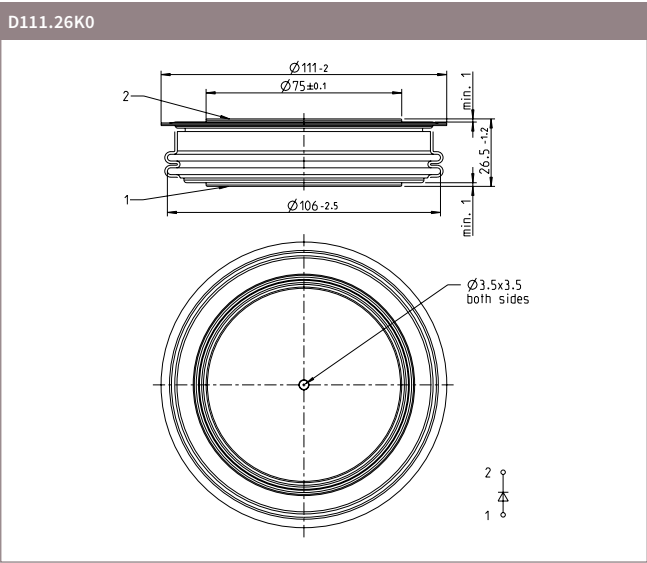
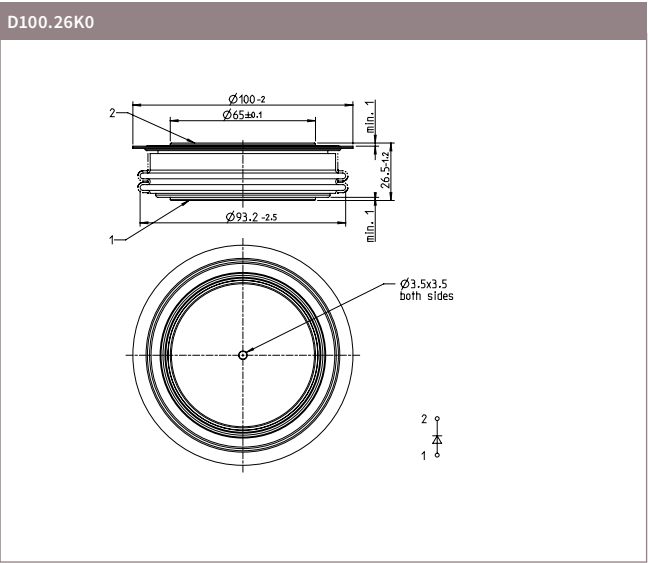
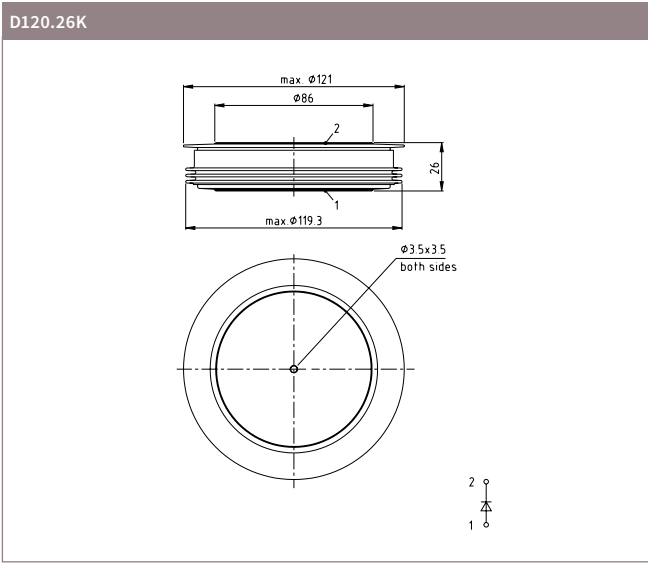
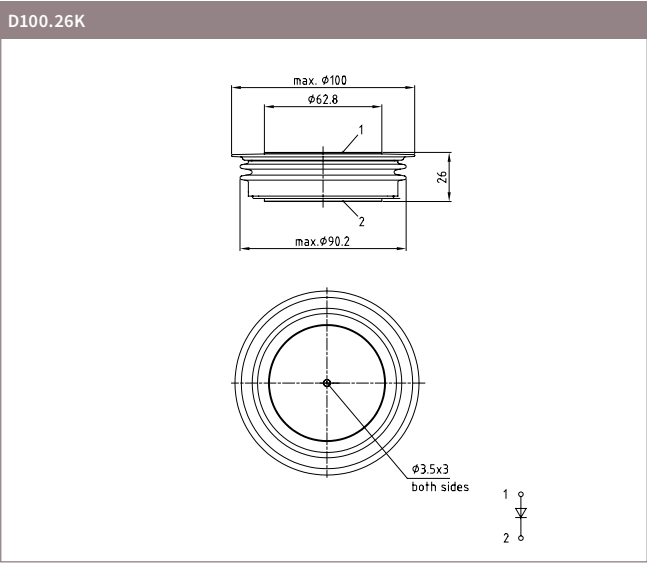
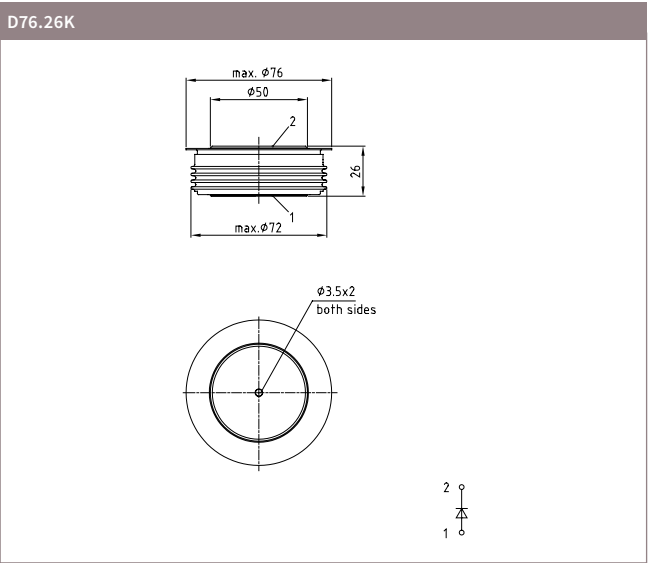
D58.26K



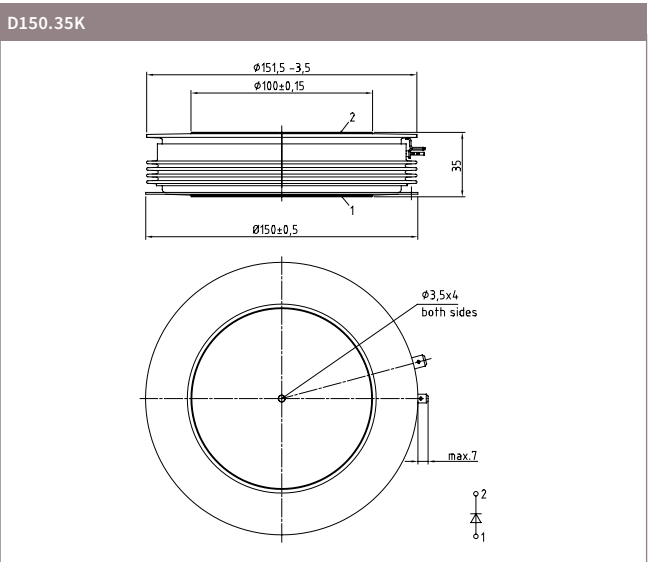
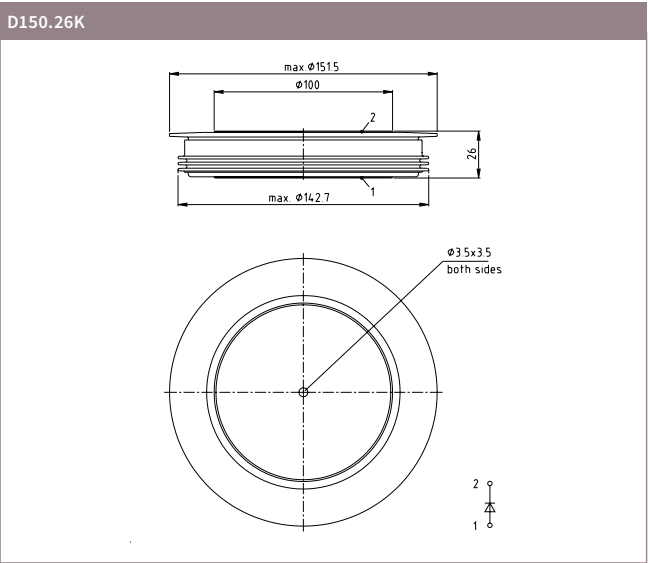
D75.26K0



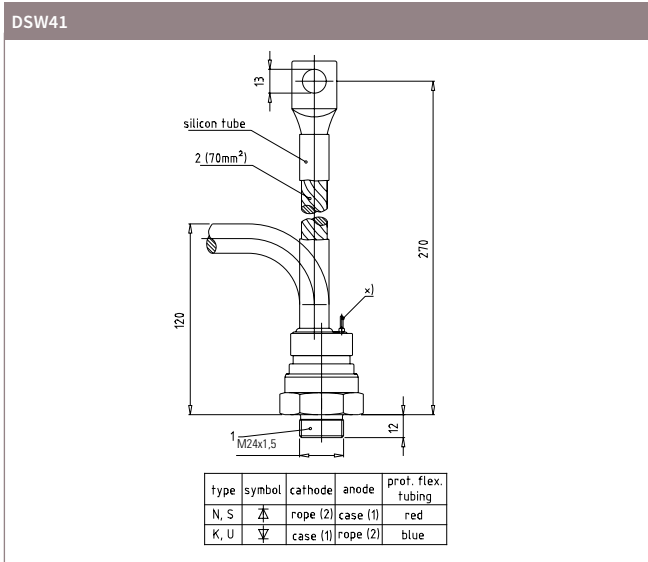
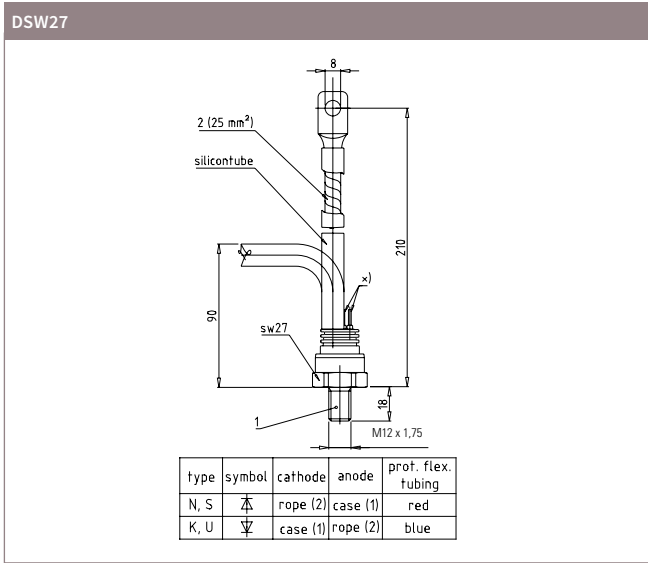
# Outlines Diode Discs



# Outlines Diode Discs



# Outlines Diode Studs

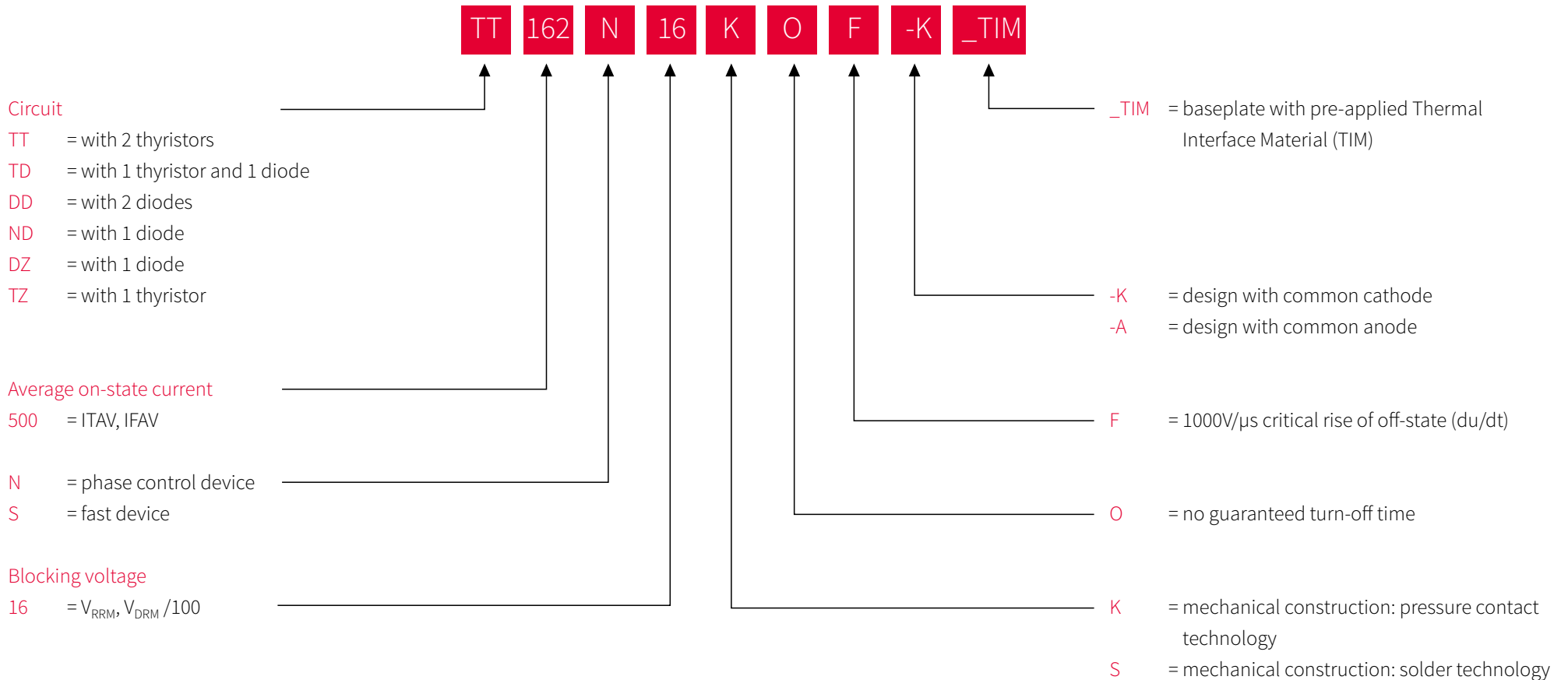


# Package Units

| Outline     | Packiging units |
|-------------|-----------------|
| Diode Discs |                 |
| D42.14K0    | 18              |
| D48.14K0    | 12              |
| D58.14K0    | 9               |
| D58.26K0    | 6               |
| D75.26K0    | 4               |
| D76.26K     | 4               |
| D100.26K0   | 2               |
| D111.26K0   | 2               |
| D120.26K    | 2               |
| D120.35K    | 2               |
| D150.26K    | 1               |
| D150.35K    | 1               |

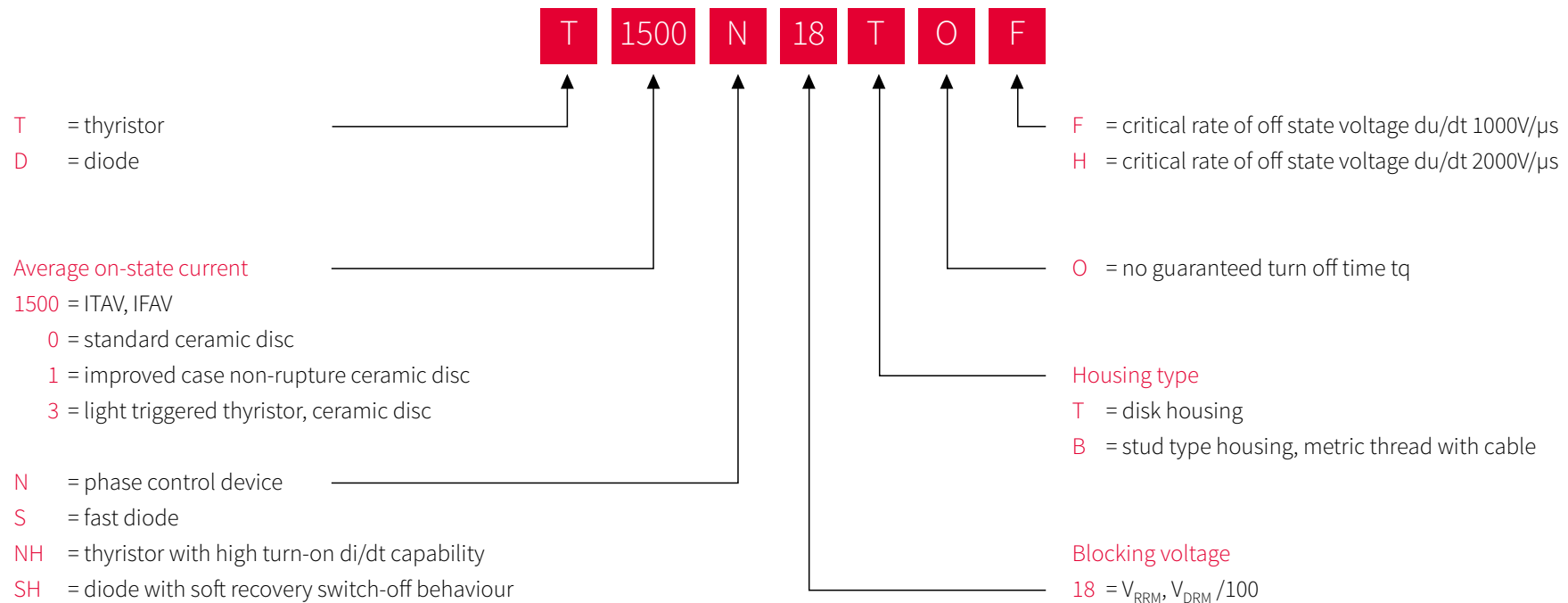
# Naming system

## Type designation thyristor and diode modules



# Naming system

## Type designation thyristor and diode discs



## Notes

# Explanations

|                       |                                           |                |                                               |
|-----------------------|-------------------------------------------|----------------|-----------------------------------------------|
| $F$                   | clamping force                            | $R_{thJA}$     | thermal resistance, junction to coolant       |
| $G$                   | weight                                    | $R_{thJC}$     | thermal resistance, junction to case          |
| $i_D$                 | forward off-state current                 | $t_g$          | trigger pulse duration                        |
| $I_{GD}$              | gate non trigger current                  | $t_q$          | circuit commutated turn-off time              |
| $i_{GM}$              | peak gate current                         | $T_{vj}$       | junction temperature                          |
| $I_H$                 | holding current                           | $T_{vjmax}$    | maximum permissible junction temperature      |
| $I_L$                 | latching current                          | $T_{vjop}$     | junction operating temperature                |
| $i_R$                 | reverse current                           | $T_{stg}$      | storage temperature                           |
| $I_{TAV}/I_{FAV}$     | on-state current (average value)          | $V_D$          | forward off-state voltage                     |
| $I_{TAVM}/I_{FAVM}$   | maximum average on-state current          | $V_{DRM}$      | repetitive peak forward off-state voltage     |
| $I_{TM}/I_{FM}$       | on-state current (peak value)             | $V_{DSM}$      | non-repetitive peak forward off-state voltage |
| $I_{TRMSM}/I_{FRMSM}$ | maximum RMS on-state current              | $V_{GD}$       | gate non trigger voltage                      |
| $I_{TSM}/I_{FSM}$     | surge non repetitive on-state current     | $V_{ISOL}$     | insulation test voltage                       |
| $I_F$                 | DC forward current                        | $V_R$          | reverse voltage                               |
| $\int i^2 dt$         | $I^2t$ value                              | $V_{RRM}$      | repetitive reverse voltage                    |
| $di_G/dt$             | rate of rise of gate current              | $V_{RSM}$      | non-repetitive peak reverse voltage           |
| $di_T/dt/di_F/dt$     | rate of rise of on-state current          | $V_T/V_F$      | on-state voltage                              |
| $(di/dt)_{cr}$        | critical rate of rise of on-state current | $V_{(TO)}$     | threshold voltage                             |
| $M$                   | mounting torque                           | $(dv/dt)_{cr}$ | critical rate of rise of off-state voltage    |
| $r_T$                 | slope resistance                          | $Z_{thJC}$     | transient thermal impedance, junction to case |
| $R_{thCK}$            | thermal resistance, case to heatsink      |                |                                               |

## Notes

# Where to buy

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## Worldwide shipping

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- › Fast delivery across Europe directly from production site



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