



# Selection Guide 2020/2021

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



Discs  
Power Disc



## Prime Line

unique, optimized, leading

Modules  
Prime Block



Solder Bond



Pressure Contact

Diodes  
Prime Soft



Discs  
Prime Disc



Press Pack IGBT  
Prime Switch



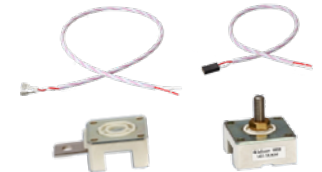
## System Line

specific, complete, versatile

Stacks/Assemblies  
Power Stack



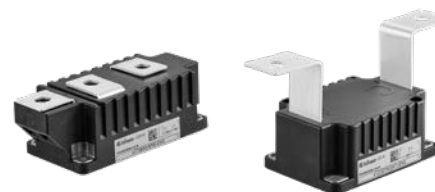
Accessories  
Power Fit



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

Prime Line

# Designed for highest performance

Infineon® Prime Block



Solder Bond Technology



Pressure Contact Technology

The Prime Block modules are designed for highest performance when the desired current exceeds 600 A for a 60 mm footprint or 330 A for a 50 mm footprint. This avoids the paralleling of modules when this is not an option.

Prime Block modules are a perfect fit for industrial AC and DC drives as well as for rectifiers and bypasses in UPS.

The new modules have been optimized for better thermal resistance and higher operational temperatures to push their performance beyond the existing limits. As a result, the Prime Block achieves the highest power density in its respective footprint while maintaining the well-known reliability, which leads to an outstanding lifetime.

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

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



Order directly

Prime Line

# Extreme energy. Ultimate run.

## Infineon® Prime Switch

40 years experience in Press Pack Design with  
30 years experience in IGBT Chip Design



Infineon Technologies Bipolar extends its high power product portfolio with a new direct Press Pack IGBT using Infineon Trench 4.5 kV IGBT chips:

### **Infineon® Prime Switch.**

This new, application optimized Press Pack IGBT – with and without internal freewheeling diode is designed to fulfill all current and future requirements of high power systems using IGBT power semiconductors. Main applications are HVDC & FACTS, DC-Breaker and medium voltages drives. We grant highest quality and performance due to both, robust design and the outstanding production processes.

#### Benefit from

- › Full Long term short-on-fail behavior
- › Hermetically sealed and explosion proof housing
- › Double side cooling
- › Outstanding power cycling capability

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



Find out more

Focus on  
application

# Switch to higher power levels –

With our integrated solutions



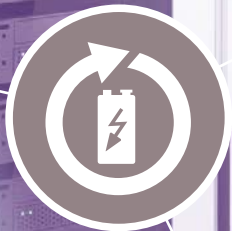
## Broadest thyristor portfolio for UPS bypasses up to 3 MVA

### Infineon® Power Discs

- › Highest power densities in standard housings with 75/100/111 mm diameter
- › Best-in-class maximum junction temperature for compact heatsink design
- › On-state voltage class selection makes paralleling easy

### Infineon® Power Stacks

- › Customizable modular single and three-phase solutions
- › Available as single units and in high-volume production quantities

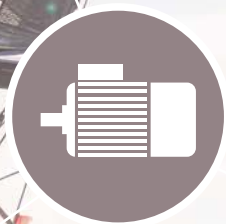


[www.infineon.com/ups-bypass](http://www.infineon.com/ups-bypass)



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?

## 4 steps to your individual Power Stack

We support your requests flexibly with building blocks:

1. Find a module or disc which support 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

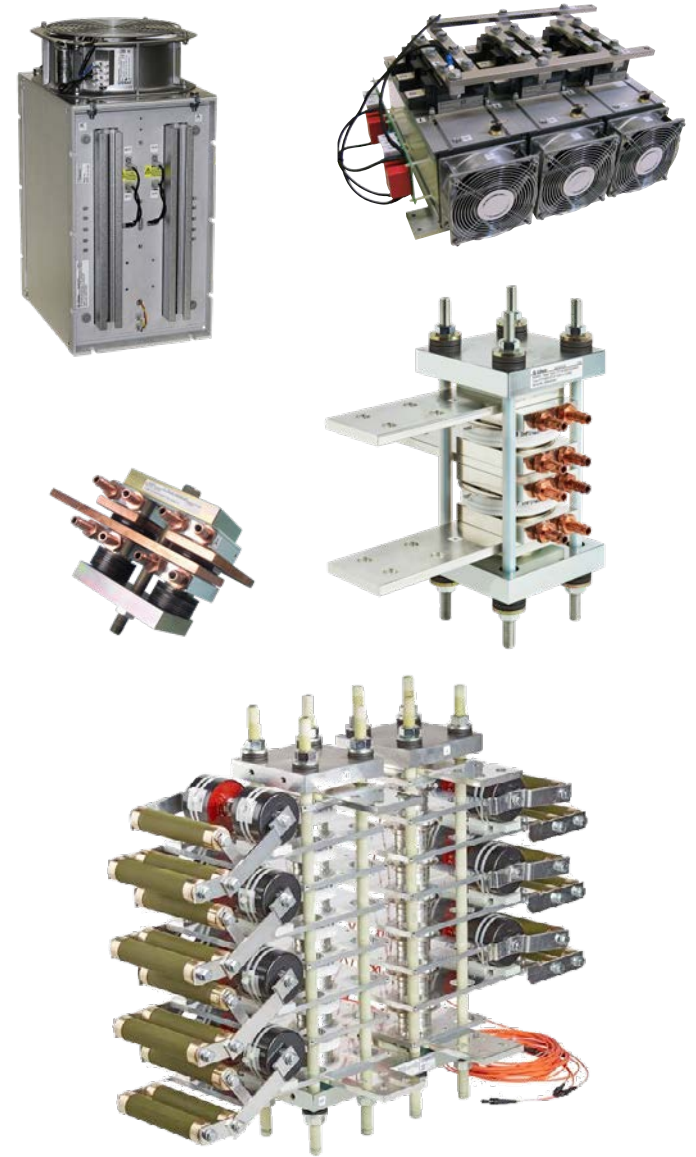
over

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

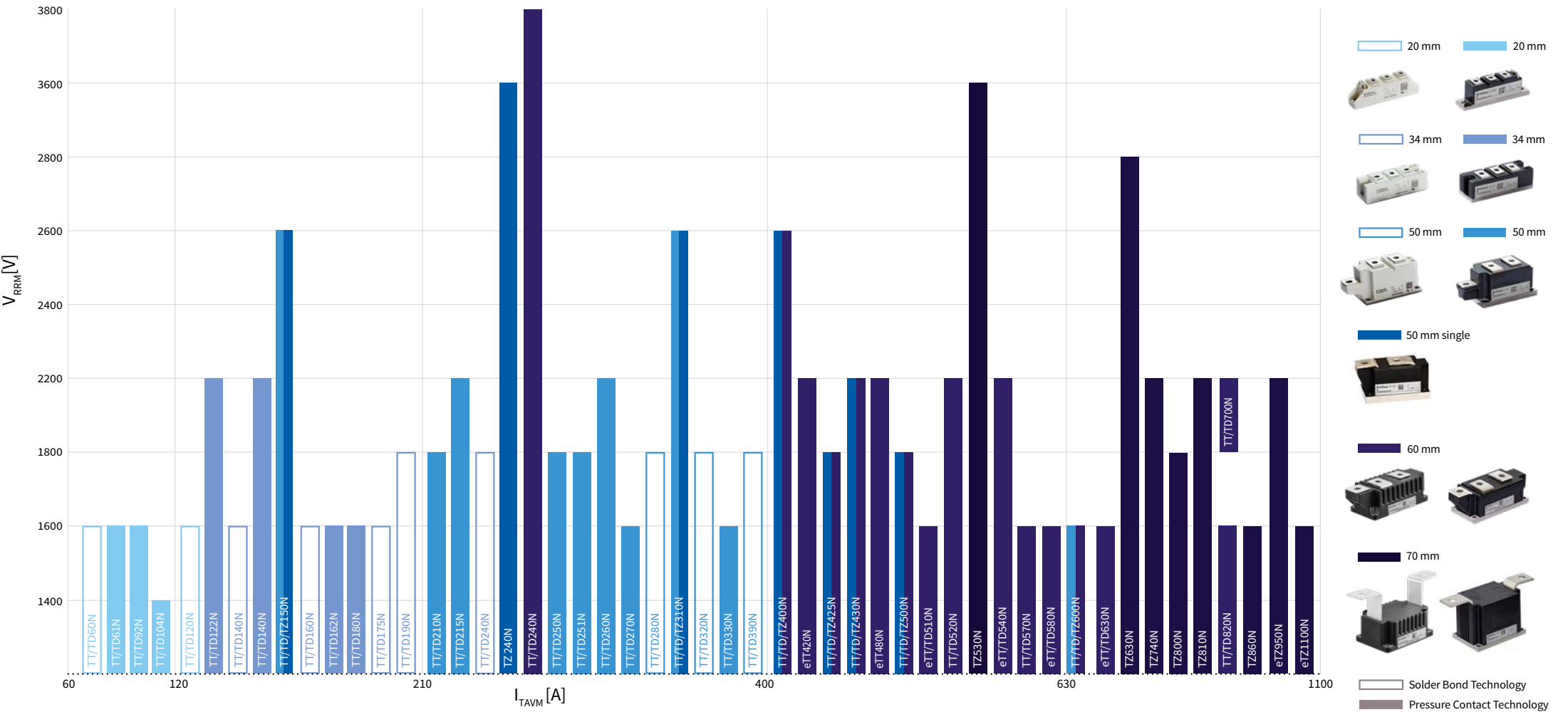


Personal service and support:

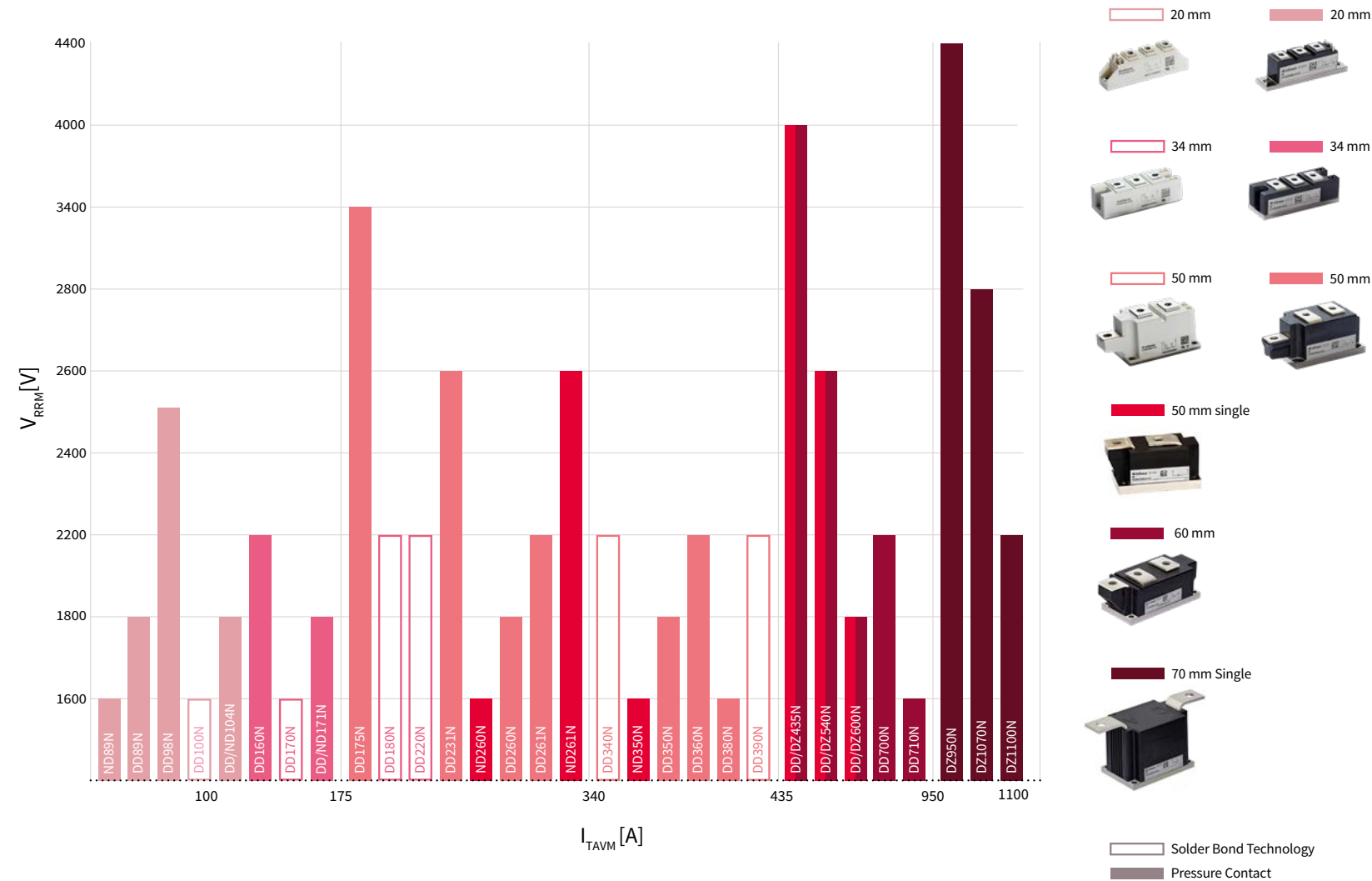
support@infineon-bip.com | Phone: +49 2902 9899-1766

www.ifbip-shop.com

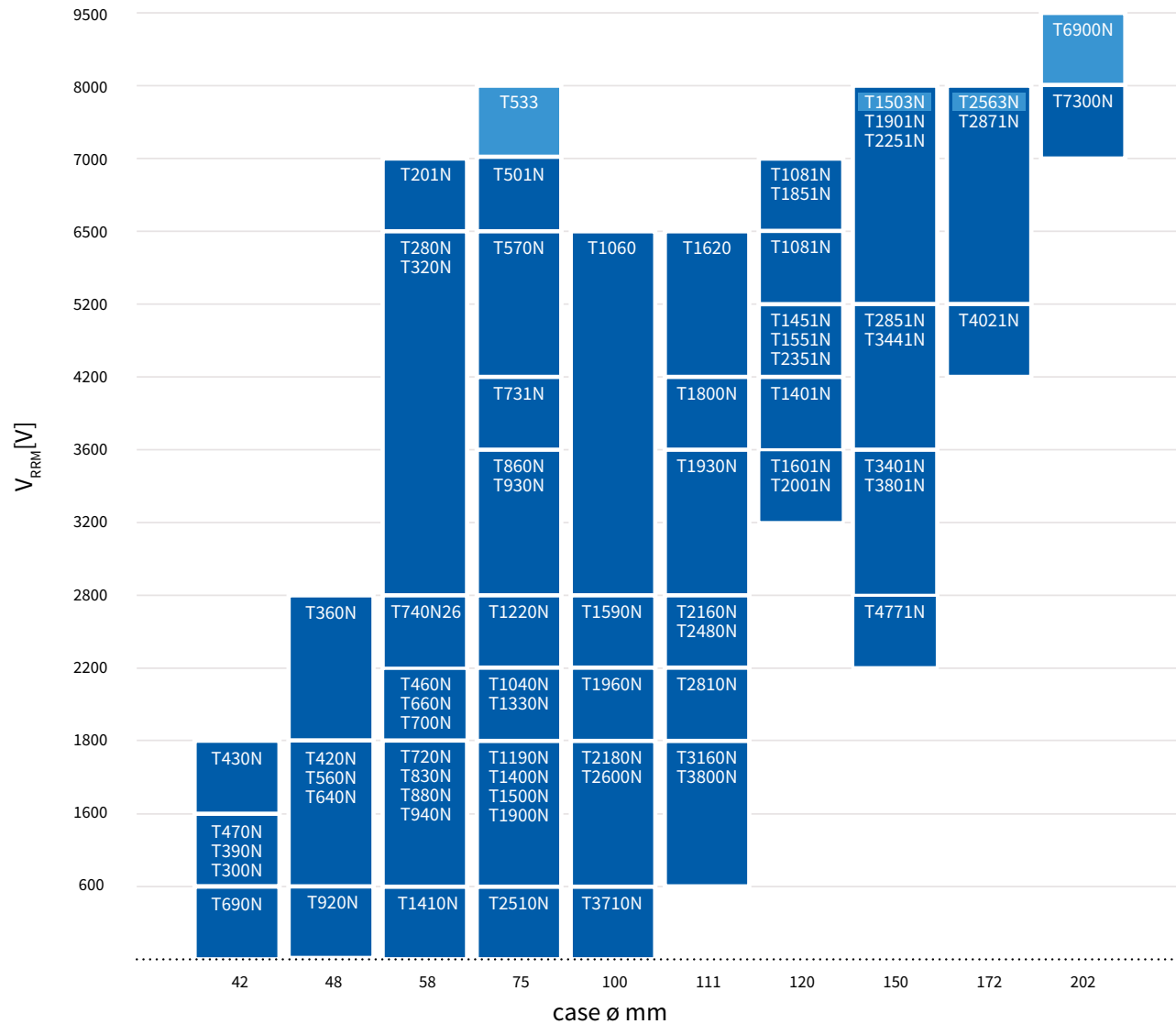
# Overview thyristor/thyristor, thyristor/diode and single thyristor modules



# Overview diode modules



# Overview thyristors in disc housings



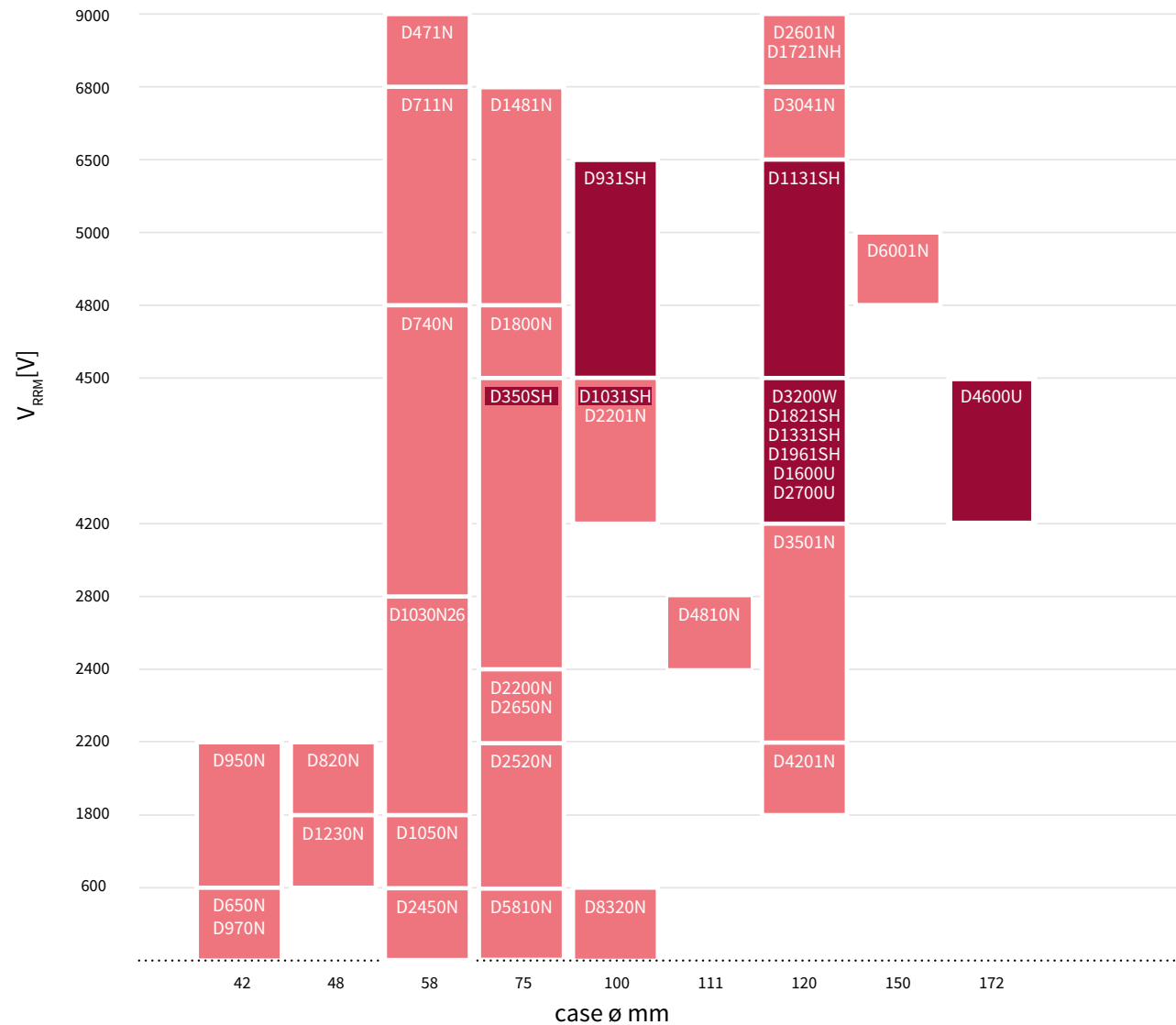
**LTTs**  
Light Triggered Thyristors



ETT  
Electrical Triggered Thyristors

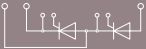


# Overview diodes in disc housings



# 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>[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 |
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|

## Eco Line - thyristor modules - baseplate 20 mm - solder bond

|                |      |  |        |      |       |      |      |      |     |           |
|----------------|------|--|--------|------|-------|------|------|------|-----|-----------|
| TT60N16SOF     | 1600 |  | 55/85  | 1200 | 7.20  | 1.00 | 4.80 | 0.49 | 130 | TS20 / 38 |
| TT60N16SOFB01  | 1600 |  | 55/85  | 1200 | 7.20  | 1.00 | 4.80 | 0.49 | 130 | TS20 / 38 |
| TT120N16SOF    | 1600 |  | 119/85 | 2250 | 18.05 | 0.90 | 3.35 | 0.20 | 130 | TS20 / 38 |
| TT120N16SOFB01 | 1600 |  | 119/85 | 1900 | 18.05 | 0.90 | 3.35 | 0.20 | 130 | TS20 / 38 |

## 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 / 38 |
| TT92N16KOF  | 1600 |      | 92/85  | 1800 | 16.20 | 0.85 | 2.43 | 0.37 | 140 | TP20 / 38 |
| TT104N14KOF | 1400 |      | 104/85 | 1800 | 16.20 | 0.85 | 2.43 | 0.37 | 140 | TP20 / 38 |

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

|             |      |      |        |      |        |      |      |       |     |                   |
|-------------|------|------|--------|------|--------|------|------|-------|-----|-------------------|
| TT140N16SOF | 1600 |      | 140/85 | 4000 | 80.00  | 1.00 | 1.60 | 0.19  | 125 | TS34 / 38         |
| TT160N16SOF | 1600 |      | 160/85 | 4500 | 101.30 | 1.10 | 0.99 | 0.165 | 125 | TS34 2nd Gen / 38 |
| TT175N16SOF | 1600 |      | 175/85 | 5400 | 125.00 | 0.83 | 1.30 | 0.164 | 125 | TS34 / 38         |
| TT190N18SOF | 1800 | 1600 | 190/85 | 4500 | 101.30 | 0.85 | 0.90 | 0.165 | 125 | TS34 2nd Gen / 38 |
| TT240N18SOF | 1800 | 1600 | 240/85 | 4400 | 96.80  | 0.85 | 0.90 | 0.165 | 140 | TS34 2nd Gen / 38 |

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

|             |      |      |        |      |       |      |      |      |     |           |
|-------------|------|------|--------|------|-------|------|------|------|-----|-----------|
| TT122N22KOF | 2200 |      | 122/85 | 2950 | 43.50 | 1.00 | 2.15 | 0.20 | 125 | TP34 / 38 |
| TT142N16KOF | 1600 |      | 142/85 | 4100 | 84.00 | 0.90 | 1.10 | 0.22 | 125 | TP34 / 38 |
| TT162N16KOF | 1600 | 1400 | 162/85 | 4400 | 97.00 | 0.85 | 0.95 | 0.20 | 125 | TP34 / 38 |
| TT180N16KOF | 1600 | 1200 | 180/85 | 4100 | 84.00 | 0.85 | 0.90 | 0.20 | 130 | TP34 / 38 |

B01: constructive variation

# 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 |
|-------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|
|-------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|

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

|                 |      |      |        |      |       |      |      |      |     |           |
|-----------------|------|------|--------|------|-------|------|------|------|-----|-----------|
| TT280N18SOF     | 1800 | 1600 | 280/85 | 7800 | 304.2 | 0.77 | 0.82 | 0.11 | 130 | TS50 / 39 |
| TT320N16SOF TIM | 1600 |      | 320/85 | 8200 | 335.0 | 0.77 | 0.58 | 0.11 | 130 | TS50 / 39 |
| TT320N18SOF     | 1800 | 1600 | 320/85 | 8200 | 335.0 | 0.77 | 0.58 | 0.11 | 130 | TS50 / 39 |

## 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 / 39 |
|-------------|------|------|--------|------|-------|------|------|------|-----|-----------|

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

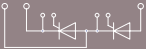
|                 |      |            |        |       |       |      |      |       |     |            |
|-----------------|------|------------|--------|-------|-------|------|------|-------|-----|------------|
| TT170N18KOF     | 1800 | 1600, 1400 | 170/85 | 4600  | 106.0 | 0.95 | 1.00 | 0.17  | 125 | TP50A / 39 |
| TT210N18KOF     | 1800 |            | 210/85 | 5800  | 168.0 | 1.00 | 0.85 | 0.13  | 125 | TP50A / 39 |
| TT215N22KOF     | 2200 | 2000, 1800 | 215/85 | 6300  | 198.0 | 0.95 | 0.92 | 0.13  | 125 | TP50A / 39 |
| TT250N18KOF     | 1800 | 1600, 1400 | 250/85 | 7000  | 245.0 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 39 |
| TT250N16KOF TIM | 1600 |            | 250/85 | 7000  | 245.0 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 39 |
| TT251N18KOF     | 1800 | 1600, 1400 | 250/85 | 8000  | 320.0 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 39 |
| TT260N22KOF     | 2200 |            | 260/85 | 8000  | 320.0 | 0.85 | 0.64 | 0.12  | 125 | TP50A / 39 |
| TT270N16KOF     | 1600 |            | 270/92 | 9000  | 400.0 | 0.80 | 0.58 | 0.12  | 125 | TP50A / 39 |
| TT285N16KOF     | 1600 |            | 285/92 | 10000 | 781.0 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 39 |
| TT330N16AOF     | 1600 |            | 305/85 | 9000  | 405   | 0.80 | 0.58 | 0.12  | 130 | TP50A / 39 |
| TT330N16KOF     | 1600 | 1400, 1200 | 330/85 | 10000 | 500.0 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 39 |
| TT330N16KOF TIM | 1600 |            | 330/85 | 10000 | 500.0 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 39 |



These modules are available with „Thermal Interface Material“ (TIM). With TIM a reproducible thermal performance of power electronic systems will be achieved.

# 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>[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 |
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|--------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|

## Eco Line - thyristor modules - baseplate 60 mm - pressure contact

|              |      |  |        |       |      |      |       |       |     |           |
|--------------|------|--|--------|-------|------|------|-------|-------|-----|-----------|
| ETT540N22P60 | 2200 |  | 540/85 | 13300 | 884  | 0.85 | 0.425 | 0.076 | 135 | TE60 / 40 |
| ETT580N16P60 | 1600 |  | 580/85 | 13600 | 925  | 0.80 | 0.327 | 0.064 | 135 | TE60 / 40 |
| ETT630N16P60 | 1600 |  | 630/85 | 14700 | 1080 | 0.80 | 0.289 | 0.063 | 135 | TE60 / 40 |

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

|                 |      |                  |        |       |      |      |      |       |     |            |
|-----------------|------|------------------|--------|-------|------|------|------|-------|-----|------------|
| TT240N38KOF     | 3800 | 3600             | 240/85 | 5500  | 151  | 1.17 | 1.70 | 0.078 | 125 | TP60 / 40  |
| TT400N26KOF     | 2600 | 2400             | 400/85 | 11000 | 605  | 1.00 | 0.50 | 0.065 | 125 | TP60 / 40  |
| TT430N22KOF     | 2200 |                  | 430/85 | 12000 | 1051 | 0.95 | 0.45 | 0.065 | 125 | TP60A / 40 |
| TT500N16KOF TIM | 1600 |                  | 500/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 40 |
| TT500N18KOF     | 1800 | 1600, 1400, 1200 | 500/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 40 |
| TT520N22KOF     | 2200 |                  | 520/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 40 |
| TT570N16KOF     | 1600 |                  | 570/87 | 14000 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 40 |
| TT600N16KOF     | 1600 |                  | 600/85 | 17500 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 40 |
| TT600N16KOF TIM | 1600 |                  | 600/85 | 17500 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 40 |

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

|                 |      |  |        |       |      |      |      |       |     |            |
|-----------------|------|--|--------|-------|------|------|------|-------|-----|------------|
| TT700N22KOF     | 2200 |  | 700/85 | 17100 | 1462 | 0.85 | 0.35 | 0.049 | 135 | TP60A / 40 |
| TT820N16KOF     | 1600 |  | 820/85 | 20100 | 2020 | 0.80 | 0.23 | 0.048 | 135 | TP60A / 40 |
| TT820N16KOF TIM | 1600 |  | 820/85 | 20100 | 2020 | 0.80 | 0.23 | 0.048 | 135 | TP60A / 40 |



These modules are available with „Thermal Interface Material“ (TIM). With TIM a reproducible thermal performance of power electronic systems will be achieved.

# Single Thyristor 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 · 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 |
|----------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|---------------------------------------------|--------------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|---------------------------------------------|--------------------------------|----------------|

| Power Line - single thyristor modules - baseplate 50 mm - pressure contact |      |                  |        |       |      |      |      |       |     |             |
|----------------------------------------------------------------------------|------|------------------|--------|-------|------|------|------|-------|-----|-------------|
| TZ240N36KOF                                                                | 3600 |                  | 240/85 | 5500  | 151  | 1.17 | 1.70 | 0.078 | 125 | TP50.1 / 39 |
| TZ310N26KOF                                                                | 2600 | 2200             | 310/85 | 8000  | 320  | 1.00 | 0.86 | 0.078 | 125 | TP50.1 / 39 |
| TZ400N26KOF                                                                | 2600 |                  | 400/85 | 11000 | 605  | 1.00 | 0.50 | 0.065 | 125 | TP50.1 / 39 |
| TZ425N18KOF                                                                | 1800 | 1600, 1400, 1200 | 425/85 | 12500 | 781  | 0.90 | 0.30 | 0.078 | 125 | TP50.1 / 39 |
| TZ430N22KOF                                                                | 2200 |                  | 430/85 | 12000 | 720  | 0.95 | 0.45 | 0.065 | 125 | TP50.1 / 39 |
| TZ500N18KOF                                                                | 1800 | 1600, 1200       | 500/85 | 14500 | 1051 | 0.90 | 0.27 | 0.065 | 125 | TP50.1 / 39 |
| TZ600N16KOF                                                                | 1600 | 1200             | 600/85 | 14000 | 980  | 0.90 | 0.27 | 0.065 | 125 | TP50.1 / 39 |

| Eco Line - single thyristor modules - baseplate 70 mm - pressure contact |      |  |         |       |      |      |      |       |     |           |
|--------------------------------------------------------------------------|------|--|---------|-------|------|------|------|-------|-----|-----------|
| ETZ950N22P70                                                             | 2200 |  | 923/85  | 25100 | 3150 | 0.82 | 0.22 | 0.041 | 135 | TE70 / 40 |
| ETZ1100N16P70                                                            | 1600 |  | 1051/85 | 28200 | 3976 | 0.80 | 0.15 | 0.040 | 135 | TE70 / 40 |

| Power Line - single thyristor modules - baseplate 70 mm - pressure contact |      |                  |        |       |      |      |       |       |     |            |
|----------------------------------------------------------------------------|------|------------------|--------|-------|------|------|-------|-------|-----|------------|
| TZ530N36KOF                                                                | 3600 |                  | 530/85 | 20000 | 2000 | 1.05 | 0.49  | 0.045 | 125 | TP70 / 40  |
| TZ630N28KOF                                                                | 2800 | 2400, 2200       | 630/85 | 23000 | 2650 | 0.95 | 0.37  | 0.042 | 125 | TP70 / 40  |
| TZ740N22KOF                                                                | 2200 |                  | 740/85 | 26500 | 3500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 40 |
| TZ740N22KOF TIM                                                            | 2200 |                  | 819/85 | 26500 | 3500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 40 |
| TZ800N16KOF TIM                                                            | 1600 |                  | 800/85 | 30000 | 4500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 40 |
| TZ800N18KOF                                                                | 1800 | 1600, 1400, 1200 | 800/85 | 30000 | 4500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 40 |
| TZ800N18KOF TIM                                                            | 1800 |                  | 800/85 | 30000 | 4500 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 40 |
| TZ810N22KOF                                                                | 2200 |                  | 819/85 | 35000 | 6125 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 40 |
| TZ810N22KOF TIM                                                            | 2200 |                  | 819/85 | 35000 | 6125 | 0.82 | 0.17  | 0.042 | 125 | TP70A / 40 |
| TZ860N16KOF                                                                | 1600 |                  | 860/85 | 40000 | 8000 | 0.80 | 0.145 | 0.042 | 125 | TP70A / 40 |
| TZ860N16KOF TIM                                                            | 1600 |                  | 860/85 | 40000 | 8000 | 0.80 | 0.145 | 0.042 | 125 | TP70A / 40 |



These modules are available with „Thermal Interface Material“ (TIM). With TIM a reproducible thermal performance of power electronic systems will be achieved.

# 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>[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 |
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|

## 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 / 38 |
| TD120N16SOF | 1600 |  | 119/85 | 2250 | 18.05 | 0.90 | 3.35 | 0.20 | 130 | TS20 / 38 |

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

|             |      |  |        |      |       |      |      |      |     |           |
|-------------|------|--|--------|------|-------|------|------|------|-----|-----------|
| TD61N16KOF  | 1600 |  | 60/85  | 1400 | 9.80  | 0.80 | 3.40 | 0.52 | 125 | TP20 / 38 |
| TD92N16KOF  | 1600 |  | 92/85  | 1800 | 16.20 | 0.85 | 2.43 | 0.37 | 140 | TP20 / 38 |
| TD104N12KOF | 1200 |  | 104/85 | 1800 | 16.20 | 0.85 | 2.43 | 0.37 | 140 | TP20 / 38 |

## 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 / 38         |
| TD160N16SOF | 1600 |      | 160/85 | 4500 | 101.30 | 1.10 | 0.99 | 0.165 | 125 | TS34 2nd Gen / 38 |
| TD175N16SOF | 1600 |      | 175/85 | 5400 | 125.00 | 0.83 | 1.30 | 0.164 | 125 | TS34 / 38         |
| TD190N18SOF | 1800 | 1600 | 190/85 | 4500 | 101.30 | 0.85 | 0.90 | 0.165 | 125 | TS34 2nd Gen / 38 |
| TD240N18SOF | 1800 | 1600 | 240/85 | 4400 | 96.80  | 0.85 | 0.90 | 0.165 | 140 | TS34 2nd Gen / 38 |

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

|             |      |      |        |      |       |      |      |      |     |           |
|-------------|------|------|--------|------|-------|------|------|------|-----|-----------|
| TD122N22KOF | 2200 |      | 122/85 | 2950 | 43.50 | 1.00 | 2.15 | 0.20 | 125 | TP34 / 38 |
| TD140N22KOF | 2200 | 1800 | 140/85 | 3200 | 51.20 | 0.90 | 1.75 | 0.06 | 125 | TP34 / 38 |
| TD162N16KOF | 1600 |      | 162/85 | 4400 | 97.00 | 0.85 | 0.95 | 0.20 | 125 | TP34 / 38 |
| TD180N16KOF | 1600 |      | 180/85 | 4100 | 84.00 | 0.85 | 0.90 | 0.20 | 130 | TP34 / 38 |

# 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>[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 |
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|

| 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 / 39 |
| TD320N18SOF                                                          | 1800 | 1600 | 320/85 | 8200 | 335 | 0.77 | 0.58 | 0.11 | 130 | TS50 / 39 |
| TD320N16SOF TIM                                                      | 1600 |      | 380/85 | 8100 | 328 | 0.77 | 0.58 | 0.11 | 140 | TS50 / 39 |

| 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 / 39 |

| Power Line - thyristor / diode modules - baseplate 50 mm - pressure contact |      |                  |        |       |     |      |      |       |     |            |
|-----------------------------------------------------------------------------|------|------------------|--------|-------|-----|------|------|-------|-----|------------|
| TD210N18KOF                                                                 | 1800 | 1600, 1200       | 210/85 | 5800  | 168 | 1.00 | 0.85 | 0.13  | 125 | TP50A / 39 |
| TD215N22KOF                                                                 | 2200 |                  | 215/85 | 6300  | 198 | 0.95 | 0.92 | 0.13  | 125 | TP50A / 39 |
| TD215N22KOF TIM                                                             | 2200 |                  | 215/85 | 6300  | 198 | 0.95 | 0.92 | 0.13  | 125 | TP50A / 39 |
| TD250N18KOF                                                                 | 1800 | 1600, 1400, 1200 | 250/85 | 7000  | 245 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 39 |
| TD250N16KOF TIM                                                             | 1600 |                  | 250/85 | 7000  | 245 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 39 |
| TD251N18KOF                                                                 | 1800 | 1600             | 250/85 | 8000  | 320 | 0.80 | 0.70 | 0.13  | 125 | TP50A / 39 |
| TD260N22KOF                                                                 | 2200 |                  | 260/85 | 8000  | 320 | 0.85 | 0.64 | 0.12  | 125 | TP50A / 39 |
| TD270N16KOF                                                                 | 1600 |                  | 270/85 | 9000  | 405 | 0.80 | 0.58 | 0.12  | 125 | TP50A / 39 |
| TD285N16KOF                                                                 | 1600 | 1400, 1200       | 285/92 | 10000 | 781 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 39 |
| TD330N16AOF                                                                 | 1600 |                  | 305/85 | 9000  | 405 | 0.80 | 0.58 | 0.12  | 130 | TP50A / 39 |
| TD330N16KOF                                                                 | 1600 |                  | 330/85 | 10000 | 500 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 39 |
| TD330N16KOF TIM                                                             | 1600 |                  | 330/85 | 10000 | 500 | 0.80 | 0.50 | 0.112 | 130 | TP50A / 39 |



These modules are available with „Thermal Interface Material“ (TIM). With TIM a reproducible thermal performance of power electronic systems will be achieved.

# 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, $T_{vj\ max}$ | $V_{T(T0)}$<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 |
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------------------|---------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------------------|---------------------------------------|----------------------------------|--------------------------------------|-------------------------|----------------|

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

|              |      |  |        |       |      |      |       |       |     |           |
|--------------|------|--|--------|-------|------|------|-------|-------|-----|-----------|
| ETD540N22P60 | 2200 |  | 540/85 | 13300 | 884  | 0.85 | 0.425 | 0.076 | 135 | TE60 / 40 |
| ETD580N16P60 | 1600 |  | 580/85 | 13600 | 925  | 0.80 | 0.327 | 0.064 | 135 | TE60 / 40 |
| ETD630N16P60 | 1600 |  | 630/85 | 14700 | 1080 | 0.80 | 0.289 | 0.063 | 135 | TE60 / 40 |

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

|                 |      |            |        |       |      |      |      |       |     |            |
|-----------------|------|------------|--------|-------|------|------|------|-------|-----|------------|
| TD240N36KOF     | 3600 |            | 240/85 | 5500  | 151  | 1.17 | 1.70 | 0.078 | 125 | TP60 / 40  |
| TD400N26KOF     | 2600 |            | 400/85 | 11000 | 605  | 1.00 | 0.50 | 0.065 | 125 | TP60 / 40  |
| TD430N22KOF     | 2200 |            | 430/85 | 12000 | 1051 | 0.95 | 0.45 | 0.065 | 125 | TP60A / 40 |
| TD430N22KOF TIM | 2200 |            | 430/85 | 12000 | 1051 | 0.95 | 0.45 | 0.065 | 125 | TP60A / 40 |
| TD500N16KOF TIM | 1600 |            | 500/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 40 |
| TD500N18KOF     | 1800 | 1600, 1200 | 500/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 40 |
| TD520N22KOF     | 2200 |            | 520/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 40 |
| TD520N22KOF TIM | 2200 |            | 520/85 | 14500 | 1051 | 0.85 | 0.35 | 0.058 | 125 | TP60A / 40 |
| TD570N16KOF     | 1600 |            | 570/87 | 14000 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 40 |
| TD600N16KOF     | 1600 |            | 600/85 | 17500 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 40 |
| TD600N16KOF TIM | 1600 |            | 600/85 | 17500 | 1531 | 0.80 | 0.23 | 0.058 | 125 | TP60A / 40 |

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

|                 |      |  |        |       |      |      |      |       |     |            |
|-----------------|------|--|--------|-------|------|------|------|-------|-----|------------|
| TD700N22KOF     | 2200 |  | 700/85 | 20400 | 1462 | 0.85 | 0.35 | 0.049 | 135 | TP60A / 40 |
| TD700N22KOF TIM | 2200 |  | 700/85 | 20400 | 1462 | 0.85 | 0.35 | 0.049 | 135 | TP60A / 40 |
| TD820N16KOF     | 1600 |  | 820/85 | 24800 | 2020 | 0.80 | 0.23 | 0.048 | 135 | TP60A / 40 |



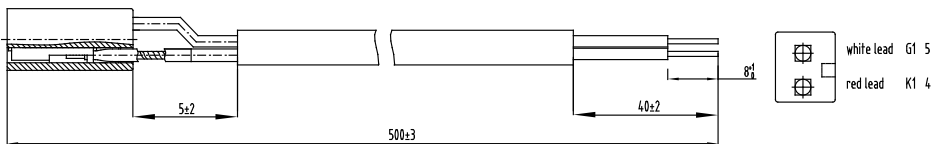
These modules are available with „Thermal Interface Material“ (TIM). With TIM a reproducible thermal performance of power electronic systems will be achieved.

# Accessories – Gateleads for Modules with Baseplate 20 mm

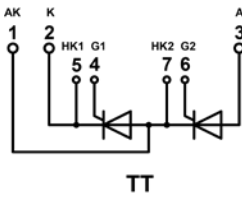
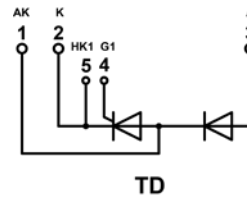
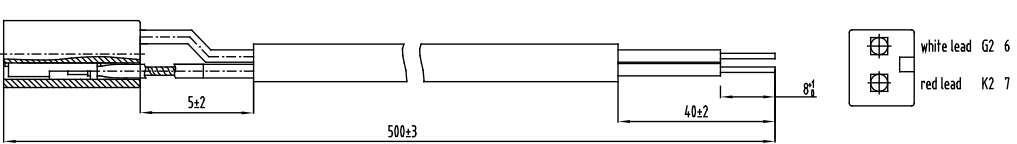


| Product                     | Connection to | Connection to | Color             | Length [mm] | Ordering Code |
|-----------------------------|---------------|---------------|-------------------|-------------|---------------|
| Module with baseplate 20 mm |               |               |                   |             |               |
| 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

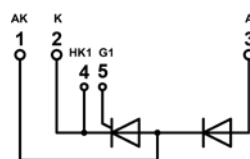
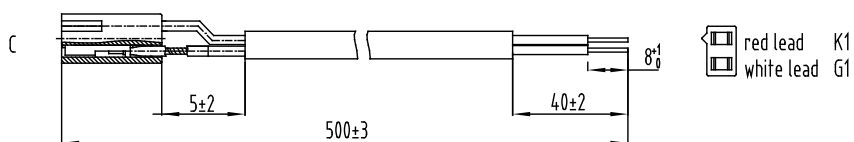
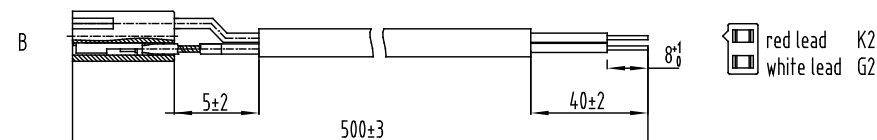
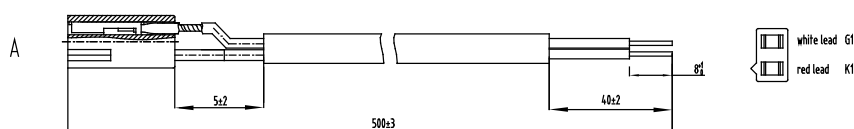


These Gateleads are only suitable for 20 mm pressure contact modules.

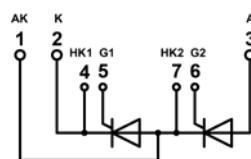
# Accessories – Gateleads for Modules with Baseplates 34-70 mm



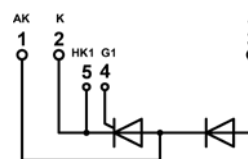
| Product                            | Connection to | Connection to | Color            | Length [mm] | Outline | Ordering Code |
|------------------------------------|---------------|---------------|------------------|-------------|---------|---------------|
| Module with baseplate 34 mm        |               |               |                  |             |         |               |
| 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   |



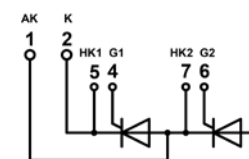
TD  
34 mm



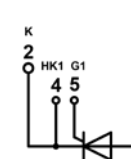
TT  
34 mm



TD  
50, 60 mm



TT  
50, 60 mm



TZ  
50 mm single, 70 mm

# Diode / Diode Modules



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

## Eco Line - diode modules - baseplate 20 mm - solder solder

|           |      |  |         |      |       |      |      |      |     |           |
|-----------|------|--|---------|------|-------|------|------|------|-----|-----------|
| DD100N16S | 1600 |  | 134/100 | 2000 | 20.00 | 0.87 | 2.45 | 0.20 | 130 | DS20 / 41 |
|-----------|------|--|---------|------|-------|------|------|------|-----|-----------|

## 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 / 41 |
| DD98N25K  | 2500 | 2200             | 98/100  | 2000 | 20.00 | 0.82 | 2.00 | 0.39 | 150 | DP20 / 41 |
| DD104N18K | 1800 | 1600, 1200       | 104/100 | 2500 | 31.25 | 0.70 | 2.10 | 0.39 | 150 | DP20 / 41 |

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

|           |      |      |         |      |        |      |      |      |     |                   |
|-----------|------|------|---------|------|--------|------|------|------|-----|-------------------|
| DD170N16S | 1600 |      | 165/100 | 5500 | 151.25 | 0.75 | 1.05 | 0.18 | 135 | DS34 / 41         |
| DD180N22S | 2200 | 1600 | 174/100 | 5000 | 125.00 | 0.85 | 0.95 | 0.16 | 135 | DS34 2nd Gen / 41 |
| DD220N22S | 2200 | 1600 | 226/100 | 4800 | 115.20 | 0.85 | 0.95 | 0.16 | 150 | DS34 2nd Gen / 41 |

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

|           |      |            |         |      |        |      |      |      |     |           |
|-----------|------|------------|---------|------|--------|------|------|------|-----|-----------|
| DD160N22K | 2200 |            | 160/100 | 4600 | 105.80 | 0.80 | 1.00 | 0.26 | 150 | DP34 / 41 |
| DD171N18K | 1800 | 1600, 1200 | 170/100 | 5600 | 157.00 | 0.75 | 0.80 | 0.26 | 150 | DP34 / 41 |

# 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 |
|----------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|---------------------------------------------|--------------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|---------------------------------------------|--------------------------------|----------------|

| Eco Line - diode modules - baseplate 50 mm - solder bond |      |      |         |      |     |      |      |       |     |           |
|----------------------------------------------------------|------|------|---------|------|-----|------|------|-------|-----|-----------|
| DD340N22S                                                | 2200 | 1600 | 330/100 | 8500 | 385 | 0.81 | 0.30 | 0.086 | 130 | DS50 / 42 |
| DD340N22S TIM                                            | 2200 |      | 330/100 | 8500 | 385 | 0.81 | 0.30 | 0.086 | 130 | DS50 / 42 |

| 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 / 42  |
| DD260N18K                                                       | 1800 | 1600, 1200       | 260/100 | 8300  | 344 | 0.70 | 0.68 | 0.17  | 150 | DP50A / 42 |
| DD261N22K                                                       | 2200 | 2000             | 260/100 | 8300  | 344 | 0.70 | 0.68 | 0.17  | 150 | DP50A / 42 |
| DD285N02K                                                       | 200  |                  | 285/100 | 8300  | 344 | 0.75 | 0.40 | 0.17  | 150 | DP50 / 42  |
| DD350N18K                                                       | 1800 | 1600, 1400, 1200 | 350/100 | 11000 | 605 | 0.75 | 0.40 | 0.13  | 150 | DP50A / 42 |
| DD360N22K                                                       | 2200 |                  | 360/100 | 13000 | 550 | 0.75 | 0.40 | 0.125 | 150 | DP50A / 42 |
| DD380N16K                                                       | 1600 |                  | 380/100 | 11500 | 660 | 0.75 | 0.32 | 0.125 | 150 | DP50A / 42 |

| Prime Line - diode modules - baseplate 50 mm - solder bond |      |      |         |      |     |      |      |       |     |           |
|------------------------------------------------------------|------|------|---------|------|-----|------|------|-------|-----|-----------|
| DD390N22S                                                  | 2200 | 1600 | 390/113 | 8500 | 385 | 0.81 | 0.30 | 0.086 | 150 | DS50 / 42 |
| DD390N22S TIM                                              | 2200 |      | 390/113 | 8400 | 353 | 0.81 | 0.30 | 0.086 | 150 | DS50 / 42 |

| Power Line - diode modules - baseplate 60 mm - pressure contact |      |                  |         |       |      |      |       |       |     |            |
|-----------------------------------------------------------------|------|------------------|---------|-------|------|------|-------|-------|-----|------------|
| DD435N40K                                                       | 4000 | 3600, 3400       | 435/100 | 12000 | 720  | 0.84 | 0.60  | 0.078 | 150 | DP60 / 43  |
| DD540N22K                                                       | 2200 |                  | 540/100 | 14000 | 980  | 0.78 | 0.31  | 0.078 | 150 | DP60A / 43 |
| DD540N22K TIM                                                   | 2200 |                  | 540/100 | 14000 | 980  | 0.78 | 0.31  | 0.078 | 150 | DP60A / 43 |
| DD540N26K                                                       | 2600 |                  | 540/100 | 14000 | 980  | 0.78 | 0.31  | 0.078 | 150 | DP60 / 43  |
| DD600N18K                                                       | 1800 | 1600, 1400, 1200 | 600/100 | 19000 | 1800 | 0.75 | 0.215 | 0.078 | 150 | DP60A / 43 |
| DD700N22K                                                       | 2200 |                  | 700/100 | 21000 | 1805 | 0.78 | 0.19  | 0.065 | 150 | DP60A / 43 |
| DD710N16K                                                       | 1600 |                  | 710/100 | 26000 | 2420 | 0.75 | 0.15  | 0.065 | 150 | DP60A / 43 |



These modules are available with „Thermal Interface Material“ (TIM). With TIM a reproducible thermal performance of power electronic systems will be achieved.

# Single Diode Modules



| Product | $V_{\text{DRM}} / V_{\text{RRM}}$<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 · 10³]<br>@10ms, $T_{\text{vj max}}$ | $V_{\text{(T0)}}$<br>[V]<br>@ $T_{\text{vj max}}$ | $r_{\text{T}}$<br>[mΩ]<br>@ $T_{\text{vj max}}$ | $R_{\text{thJC}}$<br>[K/kW]<br>@180° el sin | $T_{\text{vj}}$<br>[°C]<br>max | Outline / page |
|---------|------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|---------------------------------------------|--------------------------------|----------------|
|---------|------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|---------------------------------------------|--------------------------------|----------------|

|                                                                 |      |            |         |      |       |      |       |       |     |           |
|-----------------------------------------------------------------|------|------------|---------|------|-------|------|-------|-------|-----|-----------|
| 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 / 41 |
| ND104N18K                                                       | 1800 | 1600, 1200 | 104/100 | 2500 | 31.25 | 0.70 | 2.100 | 0.390 | 150 | DP20 / 41 |

|                                                                 |      |                  |         |      |        |      |       |       |     |           |
|-----------------------------------------------------------------|------|------------------|---------|------|--------|------|-------|-------|-----|-----------|
| 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 / 41 |

|                                                                 |      |      |         |       |        |      |       |       |     |             |
|-----------------------------------------------------------------|------|------|---------|-------|--------|------|-------|-------|-----|-------------|
| Power Line - diode modules - baseplate 50 mm - pressure contact |      |      |         |       |        |      |       |       |     |             |
| ND260N12K                                                       | 1200 |      | 260/100 | 8300  | 344.00 | 0.70 | 0.680 | 0.170 | 150 | DP50ND / 42 |
| ND350N16K                                                       | 1600 | 1200 | 350/100 | 11000 | 605.00 | 0.75 | 0.400 | 0.130 | 150 | DP50ND / 42 |

# Single Diode Modules



| Product | $V_{\text{DRM}} / V_{\text{RRM}}$<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 | $I_{\text{FSM}}$<br>[A]<br>@10ms, $T_{\text{vj max}}$ | $\int I^2 dt$<br>[A²·s · 10³]<br>@10ms, $T_{\text{vj max}}$ | $V_{\text{(T0)}}$<br>[V]<br>@ $T_{\text{vj max}}$ | $r_{\text{T}}$<br>[mΩ]<br>@ $T_{\text{vj max}}$ | $R_{\text{thJC}}$<br>[K/kW]<br>@180° el sin | $T_{\text{vj}}$<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 / 42 |
| DZ540N26K                                                              | 2600 | 2200             | 540/100 | 14000 | 980  | 0.78 | 0.310 | 0.078 | 150 | DP50.1 / 42 |
| DZ600N18K                                                              | 1800 | 1600, 1400, 1200 | 600/100 | 19000 | 1805 | 0.75 | 0.220 | 0.078 | 150 | DP50.1 / 42 |

|                                                                        |      |      |          |       |      |      |       |       |     |            |
|------------------------------------------------------------------------|------|------|----------|-------|------|------|-------|-------|-----|------------|
| 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 / 43  |
| DZ1070N22K                                                             | 2200 | 1800 | 1100/100 | 35000 | 6125 | 0.75 | 0.073 | 0.048 | 150 | DP70A / 43 |
| DZ1070N28K                                                             | 2800 | 2600 | 1070/100 | 35000 | 6125 | 0.80 | 0.170 | 0.045 | 160 | DP70 / 43  |
| DZ1100N22K                                                             | 2200 |      | 1100/100 | 40000 | 8000 | 0.75 | 0.073 | 0.048 | 150 | DP70A / 43 |
| DZ1100N22K TIM                                                         | 2200 |      | 1100/100 | 40000 | 8000 | 0.75 | 0.073 | 0.048 | 150 | DP70A / 43 |

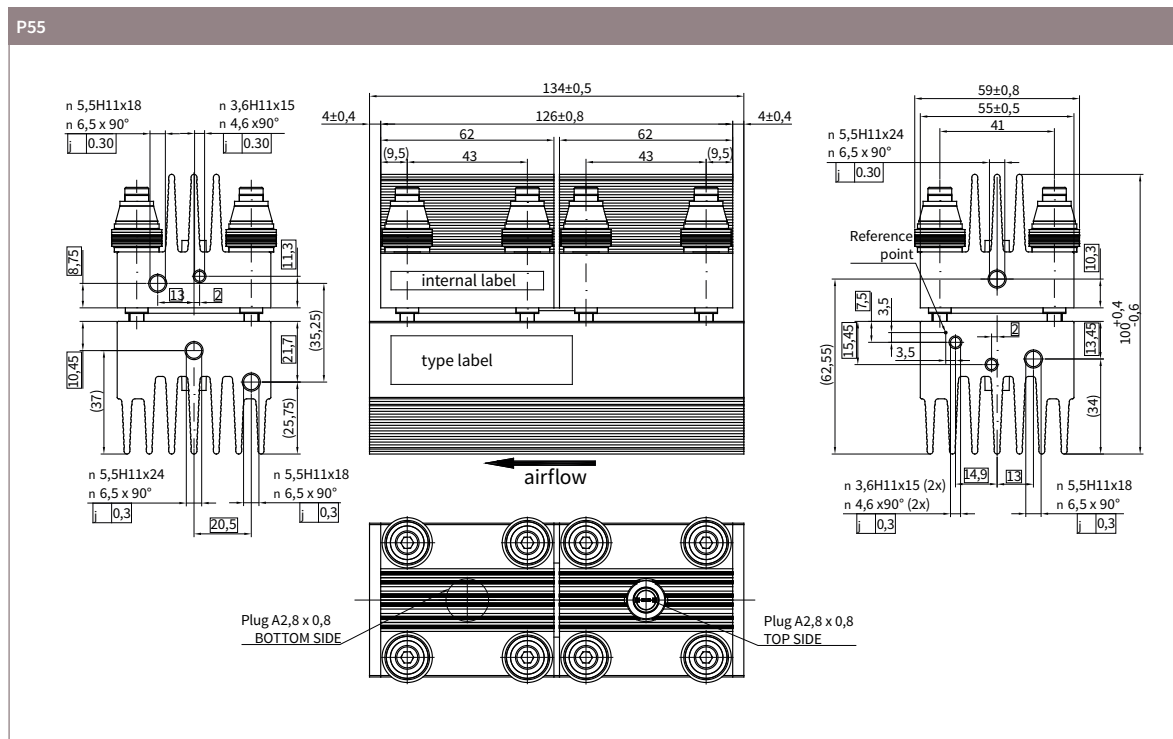
 These modules are available with „Thermal Interface Material“ (TIM). With TIM a reproducible thermal performance of power electronic systems will be achieved.

# Thyristor Soft Starter Modules



| Product | $V_{DRM} / V_{RRM}$<br>[V] | also available<br>$V_{DRM} / V_{RRM}$<br>[V] | $I_{overload}$ (21s)<br>[A] | $I_{TSM}$<br>[A]<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>@ $T_{vj \max}$ | $R_{thJA}$ (21s)<br>[K/W] | $T_{vj}$<br>[°C]<br>max | Outline |
|---------|----------------------------|----------------------------------------------|-----------------------------|------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------|----------------------------------|---------------------------|-------------------------|---------|
|---------|----------------------------|----------------------------------------------|-----------------------------|------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------|----------------------------------|---------------------------|-------------------------|---------|

| Power Line – thyristor soft starter modules - baseplate 55 mm - pressur contact |      |      |      |       |      |      |      |       |     |     |
|---------------------------------------------------------------------------------|------|------|------|-------|------|------|------|-------|-----|-----|
| STT800N18P55                                                                    | 1800 | 1600 | 800  | 5400  | 146  | 0.90 | 0.83 | 0.203 | 155 | P55 |
| STT1400N18P55                                                                   | 1800 | 1600 | 1300 | 9000  | 405  | 0.90 | 0.49 | 0.123 | 155 | P55 |
| STT1900N18P55                                                                   | 1800 | 1600 | 1900 | 14000 | 980  | 0.90 | 0.28 | 0.087 | 155 | P55 |
| STT2200N18P55                                                                   | 1800 | 1600 | 2180 | 17500 | 1531 | 0.90 | 0.24 | 0.084 | 155 | 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 600 V |     |          |         |       |       |      |       |      |     |           |                |
|------------------------------------------|-----|----------|---------|-------|-------|------|-------|------|-----|-----------|----------------|
| T690N06TOF                               | 600 | 400      | 694/85  | 6700  | 225   | 0.80 | 0.44  | 51.0 | 140 | 4.0-8.0   | T42.14K0 / 44  |
| T920N06TOF                               | 600 | 400, 200 | 925/85  | 12000 | 720   | 1.00 | 0.23  | 39.0 | 140 | 5.5-8.0   | T48.14K0 / 44  |
| T1410N06TOF                              | 600 | 400      | 1490/85 | 20000 | 2000  | 1.00 | 0.10  | 27.0 | 140 | 12.0-24.0 | T58.14K0 / 44  |
| T2510N06TOF VT                           | 600 | 400      | 2509/85 | 42000 | 8820  | 0.75 | 0.072 | 18.4 | 140 | 24.0-56.0 | T75.26K0 / 45  |
| T3710N06TOF VT                           | 600 | 400      | 3710/85 | 60000 | 18000 | 0.75 | 0.048 | 12.5 | 140 | 30.0-65.0 | T100.26K0 / 45 |

| 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 / 44  |
| T390N16TOF                                | 1600 | 1400, 1200       | 381/85  | 4250  | 91    | 0.85 | 0.900 | 62.0 | 125 | 3.0-6.0   | T42.14K0 / 44  |
| T420N18TOF                                | 1800 | 1600, 1400       | 424/85  | 6400  | 205   | 0.90 | 0.750 | 56.0 | 125 | 5.0-10.0  | T48.14K0 / 44  |
| T430N18TOF                                | 1800 | 1600, 1400       | 433/85  | 4600  | 106   | 0.85 | 0.900 | 51.0 | 125 | 4.0-8.0   | T42.14K0 / 44  |
| T470N16TOF                                | 1600 | 1400, 1200       | 470/85  | 6350  | 202   | 0.80 | 0.750 | 51.0 | 125 | 4.0-8.0   | T42.14K0 / 44  |
| T560N18TOF                                | 1800 | 1600, 1400       | 559/85  | 6900  | 238   | 0.80 | 0.600 | 44.0 | 125 | 5.0-10.0  | T48.14K0 / 44  |
| T640N18TOF                                | 1800 | 1600, 1400, 1200 | 644/85  | 8000  | 320   | 0.80 | 0.500 | 39.0 | 125 | 6.0-12.0  | T48.14K0 / 44  |
| T720N18TOF                                | 1800 | 1600, 1400, 1200 | 718/85  | 12500 | 781   | 0.85 | 0.350 | 38.0 | 125 | 9.0-18.0  | T58.26K0 / 44  |
| T830N18TOF                                | 1800 | 1600, 1400       | 844/85  | 12500 | 781   | 0.85 | 0.300 | 30.0 | 125 | 9.0-18.0  | T58.14K0 / 44  |
| T880N18TOF                                | 1800 | 1600, 1400       | 879/85  | 15500 | 1200  | 0.85 | 0.270 | 32.0 | 125 | 10.5-21.0 | T58.26K0 / 44  |
| T940N18TOF                                | 1800 | 1600, 1400       | 959/85  | 15500 | 1200  | 0.85 | 0.270 | 28.0 | 125 | 10.5-21.0 | T58.14K0 / 44  |
| T1190N18TOF VT                            | 1800 | 1600, 1400, 1200 | 1190/85 | 22500 | 2530  | 0.90 | 0.190 | 23.0 | 125 | 16.0-32.0 | T75.26K0 / 45  |
| T1500N18TOF VT                            | 1800 | 1600, 1400       | 1500/85 | 33500 | 5611  | 0.90 | 0.150 | 18.4 | 125 | 24.0-56.0 | T75.26K0 / 45  |
| T2180N18TOF VT                            | 1800 | 1600, 1400, 1200 | 2180/85 | 36000 | 6480  | 0.90 | 0.106 | 12.5 | 125 | 30.0-65.0 | T100.26K0 / 45 |
| T3160N18TOF VT                            | 1800 | 1600             | 3160/85 | 57000 | 16245 | 0.85 | 0.082 | 8.5  | 125 | 42.0-95.0 | T111.26K0 / 45 |

VT = Delivered in  $V_T$  classes

# Thyristor Discs



| Product<br> | Max.<br>$V_{\text{DRM}}$ $V_{\text{RRM}}$<br>[V] | also available<br>$V_{\text{DRM}}$ $V_{\text{RRM}}$<br>[V] | $I_{\text{TAVM}}/T_{\text{C}}$<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, $T_{\text{vj max}}$ | $V_{\text{(T0)}}$<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 | Clamping force<br>[kN] | Outline / page |
|----------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|---------------------------------------------|--------------------------------|------------------------|----------------|
| Power Line -thyristor discs up to 3000 V                                                     |                                                  |                                                            |                                                          |                                                       |                                                            |                                                   |                                                 |                                             |                                |                        |                |
| T360N28TOF                                                                                   | 2800                                             | 2600                                                       | 360/85                                                   | 4500                                                  | 101                                                        | 1.10                                              | 1.600                                           | 44.0                                        | 125                            | 5.0-10.0               | T48.14K0 / 44  |
| T460N26TOF                                                                                   | 2600                                             | 2400, 2200                                                 | 459/85                                                   | 9000                                                  | 405                                                        | 1.00                                              | 0.840                                           | 45.5                                        | 125                            | 7.5-17.5               | T58.26K0 / 44  |
| T660N26TOF                                                                                   | 2600                                             | 2200                                                       | 659/85                                                   | 11500                                                 | 660                                                        | 1.00                                              | 0.500                                           | 33.0                                        | 125                            | 10.5-21.0              | T58.26K0 / 44  |
| T700N22TOF                                                                                   | 2200                                             |                                                            | 699/85                                                   | 12200                                                 | 744                                                        | 0.95                                              | 0.450                                           | 32.0                                        | 125                            | 10.5-21.0              | T58.26K0 / 44  |
| T740N26TOF                                                                                   | 2600                                             | 2200                                                       | 727/85                                                   | 11500                                                 | 660                                                        | 1.00                                              | 0.500                                           | 28.0                                        | 125                            | 10.5-21.0              | T58.14K0 / 44  |
| T1040N22TOF VT                                                                               | 2200                                             |                                                            | 1039/85                                                  | 18500                                                 | 1711                                                       | 0.90                                              | 0.300                                           | 23.1                                        | 125                            | 16.0-32.0              | T75.26K0 / 45  |
| T1220N28TOF VT                                                                               | 2800                                             | 2600                                                       | 1220/85                                                  | 22500                                                 | 2531                                                       | 1.00                                              | 0.275                                           | 18.4                                        | 125                            | 20.0-45.0              | T75.26K0 / 45  |
| T1330N22TOF VT                                                                               | 2200                                             |                                                            | 1329/85                                                  | 23000                                                 | 2645                                                       | 0.90                                              | 0.234                                           | 18.4                                        | 125                            | 20.0-45.0              | T75.26K0 / 45  |
| T1590N28TOF VT                                                                               | 2800                                             | 2600                                                       | 1590/85                                                  | 28000                                                 | 3920                                                       | 1.10                                              | 0.237                                           | 12.5                                        | 125                            | 30.0-65.0              | T100.26K0 / 45 |
| T1960N22TOF VT                                                                               | 2200                                             |                                                            | 1960/85                                                  | 35000                                                 | 6125                                                       | 0.90                                              | 0.150                                           | 12.5                                        | 125                            | 30.0-65.0              | T100.26K0 / 45 |
| T2160N28TOF VT                                                                               | 2800                                             | 2600, 2400, 2200, 2000                                     | 2400/85                                                  | 40000                                                 | 8000                                                       | 1.05                                              | 0.154                                           | 8.5                                         | 125                            | 42.0-95.0              | T111.26K0 / 45 |
| T2480N28TOF VT                                                                               | 2800                                             | 2600                                                       | 2480/85                                                  | 43500                                                 | 9460                                                       | 0.95                                              | 0.154                                           | 8.5                                         | 125                            | 42.0-95.0              | T111.26K0 / 45 |
| T2810N22TOF VT                                                                               | 2200                                             | 1800, 1600                                                 | 2810/85                                                  | 50000                                                 | 12500                                                      | 0.90                                              | 0.112                                           | 8.5                                         | 125                            | 42.0-95.0              | T111.26K0 / 45 |
| T4771N28TOF PR                                                                               | 2800                                             | 2200                                                       | 4340/85                                                  | 91000                                                 | 41400                                                      | 0.77                                              | 0.107                                           | 4.8                                         | 125                            | 63.0-91.0              | T150.26K0 / 46 |

VT = Delivered in  $V_{\text{T}}$  classes

PR = Delivered with measurement protocol

# 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                                                    |                                    |                                              |                                          |                                          |                                                      |                                      |                                  |                                      |                         |                        |                |
| T731N44TOH                                                                                   | 4400                               |                                              | 870/85                                   | 16000                                    | 1280                                                 | 1.08                                 | 0.650                            | 18.5                                 | 125                     | 15-24                  | T76.26K / 45   |
| T860N36TOF VT                                                                                | 3600                               |                                              | 860/85                                   | 17000                                    | 1445                                                 | 1.08                                 | 0.500                            | 21.0                                 | 125                     | 20-45                  | T75.26K0 / 45  |
| T901N36TOF                                                                                   | 3600                               | 3500                                         | 940/85                                   | 17000                                    | 1445                                                 | 1.16                                 | 0.494                            | 18.5                                 | 125                     | 15-24                  | T76.26K / 45   |
| T930N36TOF VT                                                                                | 3600                               |                                              | 930/85                                   | 17500                                    | 1530                                                 | 1.00                                 | 0.430                            | 21.5                                 | 125                     | 20-45                  | T75.26K0 / 45  |
| T1401N42TOH                                                                                  | 4200                               |                                              | 1590/85                                  | 36000                                    | 6480                                                 | 1.29                                 | 0.330                            | 9.7                                  | 125                     | 36-52                  | T120.35K / 46  |
| T1451N52TOH                                                                                  | 5200                               |                                              | 1660/85                                  | 43000                                    | 9250                                                 | 0.92                                 | 0.370                            | 9.7                                  | 125                     | 36-52                  | T120.35K / 46  |
| T1551N52TOH PR                                                                               | 5200                               |                                              | 1770/85                                  | 43000                                    | 9250                                                 | 0.92                                 | 0.370                            | 9.0                                  | 125                     | 36-52                  | T120.26K / 45  |
| T1601N36TOF                                                                                  | 3600                               | 3500                                         | 1900/85                                  | 44000                                    | 8400                                                 | 1.00                                 | 0.250                            | 9.0                                  | 125                     | 36-52                  | T120.35K / 46  |
| T1800N42TOF PR                                                                               | 4200                               |                                              | 1800/85                                  | 41000                                    | 8405                                                 | 0.85                                 | 0.400                            | 8.5                                  | 125                     | 36-52                  | T111.26K0 / 45 |
| T1930N38TOF VT                                                                               | 3800                               | 3600, 3400, 3200                             | 2180/85                                  | 37000                                    | 6850                                                 | 1.08                                 | 0.200                            | 8.5                                  | 125                     | 40-65                  | T111.26K0 / 45 |
| T2001N36TOF                                                                                  | 3600                               |                                              | 2060/85                                  | 41000                                    | 8400                                                 | 1.00                                 | 0.250                            | 8.7                                  | 125                     | 36-52                  | T120.26K / 45  |
| T2351N52TOH                                                                                  | 5200                               |                                              | 2250/85                                  | 54000                                    | 14600                                                | 0.81                                 | 0.360                            | 6.5                                  | 125                     | 45-65                  | T120.26K / 45  |
| T2851N52TOH                                                                                  | 5200                               | 4800                                         | 2980/85                                  | 79000                                    | 31000                                                | 0.77                                 | 0.235                            | 5.4                                  | 125                     | 63-91                  | T150.35K0 / 46 |
| T3441N52TOH                                                                                  | 5200                               |                                              | 3200/85                                  | 79000                                    | 31000                                                | 0.77                                 | 0.235                            | 4.8                                  | 125                     | 63-91                  | T150.26K0 / 46 |
| T3801N36TOF VT                                                                               | 3600                               |                                              | 3830/85                                  | 87000                                    | 37850                                                | 0.82                                 | 0.145                            | 4.8                                  | 125                     | 63-91                  | T150.26K0 / 46 |
| T4021N52TOH                                                                                  | 5200                               |                                              | 3880/85                                  | 100000                                   | 50000                                                | 0.93                                 | 0.145                            | 4.5                                  | 125                     | 90-130                 | T172.35K / 46  |

VT = Delivered in  $V_T$  classes

PR = Delivered with measurement protocol

# 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 / 44  |
| T280N65TOF                                                                                   | 6500                               |                                              | 280/85                                   | 5800                                     | 115                                                  | 1.35                                 | 2.800                            | 43.0                                 | 125                     | 7-12                   | T58.27K0 / 44  |
| T501N70TOH                                                                                   | 7000                               |                                              | 640/85                                   | 13000                                    | 845                                                  | 1.30                                 | 1.350                            | 17.0                                 | 125                     | 15-24                  | T75.26K0 / 45  |
| T570N65TOF                                                                                   | 6500                               |                                              | 540/85                                   | 10500                                    | 442                                                  | 1.35                                 | 1.400                            | 21.0                                 | 125                     | 13-23                  | T75.26K0 / 45  |
| T1060N65TOF PR                                                                               | 6500                               |                                              | 1053/85                                  | 22500                                    | 2530                                                 | 1.35                                 | 0.720                            | 11.0                                 | 125                     | 27-45                  | T100.26K0 / 45 |
| T1081N70TOH                                                                                  | 7000                               | 6500                                         | 1300/85                                  | 34000                                    | 5780                                                 | 1.18                                 | 0.759                            | 8.6                                  | 125                     | 26-52                  | T120.26K / 45  |
| T1620N65TOF PR                                                                               | 6500                               |                                              | 1613/85                                  | 32000                                    | 5120                                                 | 1.35                                 | 0.430                            | 8.1                                  | 125                     | 40-65                  | T111.26K0 / 45 |
| T1851N70TOH                                                                                  | 7000                               |                                              | 1830/85                                  | 48000                                    | 11500                                                | 1.22                                 | 0.490                            | 6.5                                  | 125                     | 45-65                  | T120.26K / 45  |

PR = Delivered with measurement protocol

# 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 [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 / 46  |
| T2251N80TOH                                                                                   | 8000                               | 7000                                         | 2260/85                                  | 65000                                    | 21100                                                | 1.24                                 | 0.440                            | 4.8                                  | 125                     | 63-91               | T150.26K / 46  |
| T2871N80TOH                                                                                   | 8000                               |                                              | 2620/85                                  | 90000                                    | 40500                                                | 1.27                                 | 0.336                            | 4.5                                  | 125                     | 90-130              | T172.35K / 46  |
| T7300N85TOH                                                                                   | 8500                               |                                              | 5540/65                                  | 115000                                   | 66120                                                | 1.27                                 | 0.166                            | 3.5                                  | 125                     | 135-210             | T202.35K / 46  |

|                                                      |      |  |         |        |       |       |       |      |     |         |               |
|------------------------------------------------------|------|--|---------|--------|-------|-------|-------|------|-----|---------|---------------|
| Prime Line - light triggered thyristors up to 8000 V |      |  |         |        |       |       |       |      |     |         |               |
| T533N80TOH                                           | 8000 |  | 540/85  | 10500  | 550   | 1.26  | 1.470 | 20.0 | 120 | 15-24   | T76.35L / 47  |
| T1503N80TOH                                          | 8000 |  | 1770/85 | 55000  | 15125 | 1.24  | 0.440 | 6.3  | 120 | 63-91   | T150.40L / 47 |
| T2563N80TOH                                          | 8000 |  | 2300/85 | 90000  | 40500 | 1.20  | 0.350 | 4.8  | 120 | 90-130  | T172.40L / 47 |
| T6900N80TOH                                          | 8000 |  | 4860/65 | 115000 | 66120 | 1.174 | 0.204 | 3.5  | 120 | 135-210 | T202.40L / 47 |

## Accessories – Laser Diode for Light Triggered Thyristors



| Product                                | For Light Guide                                                                  | Ordering Code |
|----------------------------------------|----------------------------------------------------------------------------------|---------------|
| Laser Diode with ST connector (female) |                                                                                  |               |
| LASER DIODE SPL-PL90 A                 | For Light Guides with ST connector for disc housings T76.35L, T150.40L, T172.40L | SP000091118   |

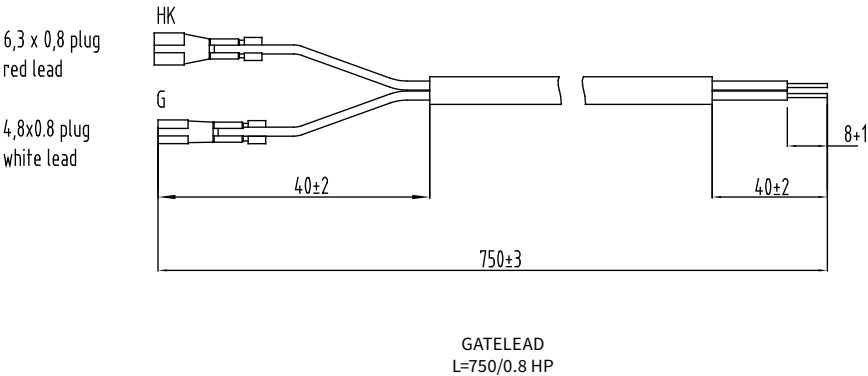
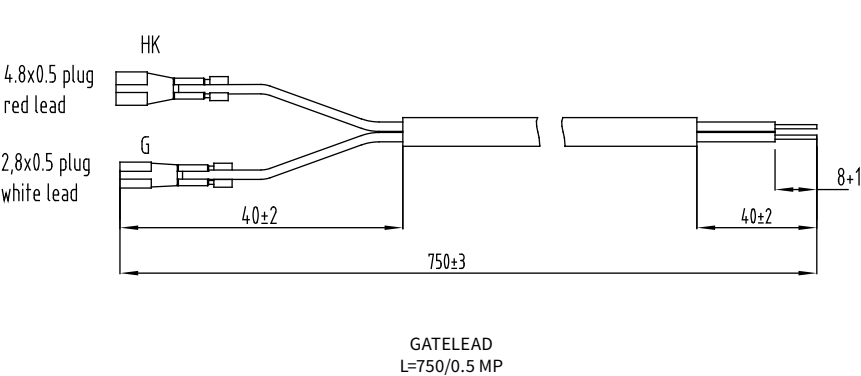
## Accessories – Light Guides for Light Triggered Thyristors



| Product                              | For disc housing            | Length [mm]             | Ordering Code |
|--------------------------------------|-----------------------------|-------------------------|---------------|
| Light Guide with ST connector (male) |                             |                         |               |
| LIGHT FIBER LWL R10-LR50-L3000 A     | T76.35L                     | 3000                    | SP000091119   |
| LIGHT FIBER LWL R10-LR87-L3000       | T150.40L, T172.40L          | 3000                    | SP000091117   |
| Other lengths on request             | T76.35L, T150.40L, T172.40L | 1400, 4200, 6000, 15000 |               |

# Accessories – Gateleads for Disc Type Devices

| Disc outline/page | Type                     | Color     | Connector [mm]  | Length [mm] | Ordering Code |
|-------------------|--------------------------|-----------|-----------------|-------------|---------------|
| Gatelead          |                          |           |                 |             |               |
| 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         |                          |           |                 |             |               |
| 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 / 48  |
| D970N06T                                  | 600 |          | 972/100  | 8800  | 387   | 0.70 | 0.31   | 57.0 | 180 | 3.9-7.6   | D42.14K0 / 48  |
| D2450N06T                                 | 600 | 400, 200 | 2450/100 | 28500 | 4061  | 0.70 | 0.0975 | 25.3 | 180 | 12.0-24.0 | D58.14K0 / 48  |
| D5810N06T VF                              | 600 | 400      | 5800/58  | 70000 | 24500 | 0.70 | 0.04   | 17.0 | 180 | 30.0-60.0 | D75.26K0 / 48  |
| D8320N06T VF                              | 600 | 400      | 8320/56  | 95000 | 45000 | 0.70 | 0.02   | 12.5 | 180 | 40.0-80.0 | D100.26K0 / 49 |

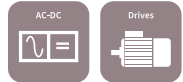
| Power Line - rectifier diodes up to 1800 V |      |            |          |       |      |      |      |      |     |           |               |
|--------------------------------------------|------|------------|----------|-------|------|------|------|------|-----|-----------|---------------|
| D1050N18T                                  | 1800 |            | 1050/130 | 18500 | 1710 | 0.81 | 0.17 | 38.0 | 180 | 10.0-24.0 | D58.26K0 / 48 |
| D1230N18T                                  | 1800 | 1600, 1400 | 1234/100 | 11800 | 696  | 0.81 | 0.28 | 39.0 | 180 | 6.0-15.0  | D48.14K0 / 48 |



| Power Line - rectifier diodes up to 3000 V |      |            |            |       |       |      |      |      |     |           |                |
|--------------------------------------------|------|------------|------------|-------|-------|------|------|------|-----|-----------|----------------|
| D820N22T                                   | 2200 |            | 818/100    | 9000  | 405   | 0.83 | 0.52 | 39.0 | 160 | 6.0-15.0  | D48.14K0 / 48  |
| D950N22T                                   | 2200 | 1800       | 950/100    | 10250 | 525   | 0.70 | 0.50 | 45.0 | 180 | 6.0-12.0  | D42.14K0 / 48  |
| D1030N26T                                  | 2600 | 2200       | 1030/100   | 14500 | 1051  | 0.82 | 0.28 | 38.0 | 160 | 10.0-24.0 | D58.26K0 / 48  |
| D2200N24T VF                               | 2400 | 2200, 2000 | 2200/100   | 35000 | 6125  | 0.83 | 0.15 | 17.0 | 160 | 24.0-60.0 | D75.26K0 / 48  |
| D2520N22T VF                               | 2200 |            | 2520/100   | 35000 | 6125  | 0.73 | 0.10 | 22.0 | 175 | 15.0-24.0 | D76.26K0 / 48  |
| D2650N24T VF                               | 2400 |            | 3520 / 100 | 41000 | 5611  | 0.82 | 0.15 | 16.9 | 180 | 24.0-60.0 | D75.26K0 / 48  |
| D4201N22T                                  | 2200 | 2000       | 4830/100   | 73500 | 27000 | 0.67 | 0.08 | 9.2  | 160 | 36.0-52.0 | D120.35K / 49  |
| D4810N28T VF                               | 2800 | 2200       | 4810/100   | 60000 | 18000 | 0.83 | 0.06 | 8.0  | 160 | 42.0-95.0 | D111.26K0 / 49 |

VF = Delivered in  $V_F$  classes

# 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 / 48  |
| D1800N48T VF                               | 4800 | 4600, 4400, 4300, 4000 | 1800/100 | 27500  | 3781  | 0.85 | 0.250 | 16.9 | 160 | 24-60 | D75.26K0 / 48  |
| D2201N45T                                  | 4500 |                        | 2320/100 | 38000  | 7220  | 0.69 | 0.206 | 11.2 | 140 | 27-45 | D100.26K0 / 49 |
| D3501N42T                                  | 4200 | 4000                   | 3690/100 | 56000  | 15700 | 0.73 | 0.130 | 9.2  | 160 | 36-52 | D120.35K / 49  |
| D6001N50T                                  | 5000 |                        | 6070/100 | 110000 | 60500 | 0.80 | 0.090 | 4.6  | 160 | 63-91 | D150.26K / 50  |

| 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 / 48 |
| D711N68T                                    | 6800 | 6500, 6000 | 790/100  | 10500 | 550   | 0.84 | 0.87 | 31.5 | 160 | 10-16 | D58.26K0 / 48 |
| D1481N68T VF                                | 6800 | 6500       | 1650/100 | 24500 | 3000  | 0.75 | 0.42 | 15.8 | 160 | 15-36 | D76.26K / 49  |
| D1721NH90T                                  | 9000 |            | 1670/85  | 35000 | 5780  | 1.36 | 0.65 | 7.5  | 140 | 36-52 | D120.26K / 49 |
| D2601N90T                                   | 9000 | 8500       | 2240/100 | 50000 | 12500 | 0.94 | 0.41 | 8.55 | 160 | 36-52 | D120.26K / 49 |
| D2601NH90T                                  | 9000 |            | 1440/85  | 22000 | 12500 | 0.94 | 0.41 | 8.55 | 160 | 36-52 | D120.26K / 49 |
| D3001N68T                                   | 6800 |            | 2900/100 | 53000 | 14040 | 0.84 | 0.22 | 9.2  | 160 | 36-52 | D120.35K / 49 |
| D3041N68T                                   | 6800 | 6500, 6000 | 3040/100 | 53000 | 14040 | 0.84 | 0.22 | 8.55 | 160 | 36-52 | D120.35K / 49 |

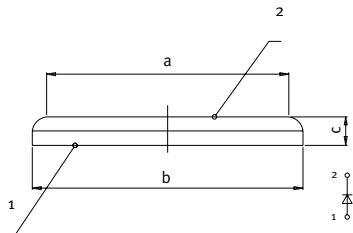
VF = Delivered in  $V_F$  classes

# 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 |                  |                                          |                                   |                                                      |                                      |                                  |                                      |                         |                        |
| 38DN06B02                                            | 600              | 8075/100                                 | 32300.0                           | 5200                                                 | 0.74                                 | 0.049                            | 11.5                                 | 180                     | 15-30                  |
| 46DN06B02                                            | 600              | 5100/118                                 | 48000.0                           | 11520                                                | 0.7                                  | 0.047                            | 9.4                                  | 180                     | 25-45                  |
| 56DN06B02                                            | 600              | 10300/100                                | 70000.0                           | 24500                                                | 0.73                                 | 0.024                            | 5.8                                  | 180                     | 30-45                  |
| 65DN06B02                                            | 600              | 12810/100                                | 95000.0                           | 45100                                                | 0.76                                 | 0.018                            | 4.7                                  | 180                     | 40-80                  |

| Designation | a [mm] | b [mm] | c [mm] |
|-------------|--------|--------|--------|
| 38DN06B02   | Ø 34   | Ø 38   | 4      |
| 46DN06B02   | Ø 43   | Ø 46   | 4      |
| 56DN06B02   | Ø 50   | Ø 56   | 5      |
| 65DN06B02   | Ø 58   | Ø 65   | 5      |



# IGCT/IGBT – Freewheeling Diodes



| Product<br> | $V_{RRM}$<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 / 49 |
| D1031SH45T                                   | 4500 | 1120/85 | 23000 | 2645 | 1.78 | 0.968 | 10.0 | 140 | 3.50  | 1500 | 27-45 | D100.26K / 49 |
| D1131SH65T                                   | 6500 | 1100/85 | 22000 | 2420 | 2.19 | 1.364 | 7.50 | 140 | 3.50  | 1200 | 36-52 | D120.26K / 49 |
| D1301SH45T                                   | 4500 | 1350/85 | 28000 | 3920 | 1.8  | 0.994 | 7.50 | 140 | 6.0   | 3600 | 36-52 | D120.26K / 49 |
| D1331SH45T                                   | 4500 | 1310/85 | 28000 | 3920 | 1.83 | 0.948 | 7.50 | 140 | 3.50  | 1500 | 36-52 | D120.26K / 49 |
| D1821SH45T                                   | 4500 | 1710/85 | 40000 | 8000 | 1.54 | 0.825 | 5.60 | 140 | 7.0   | 3600 | 53-96 | D120.26K / 49 |
| D1961SH45T                                   | 4500 | 1830/85 | 40000 | 8000 | 1.25 | 0.500 | 7.50 | 140 | 12.00 | 2250 | 36-52 | D120.26K / 49 |

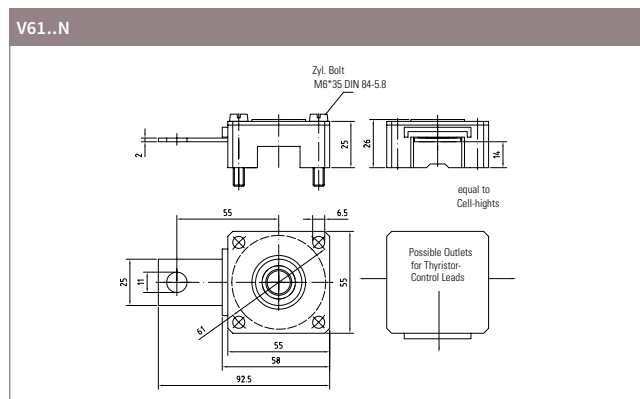
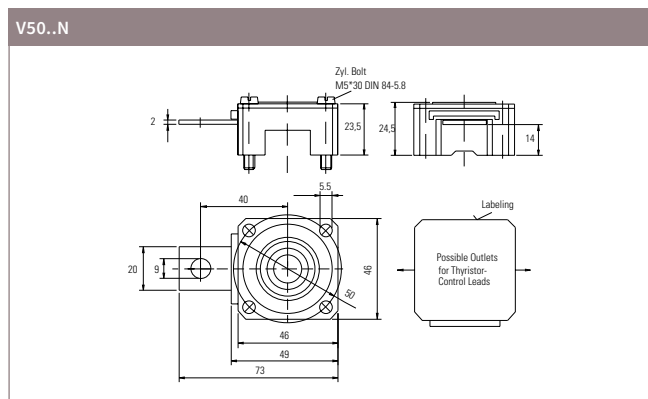
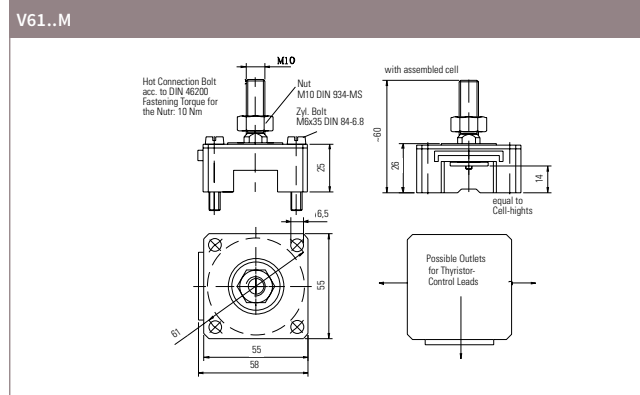
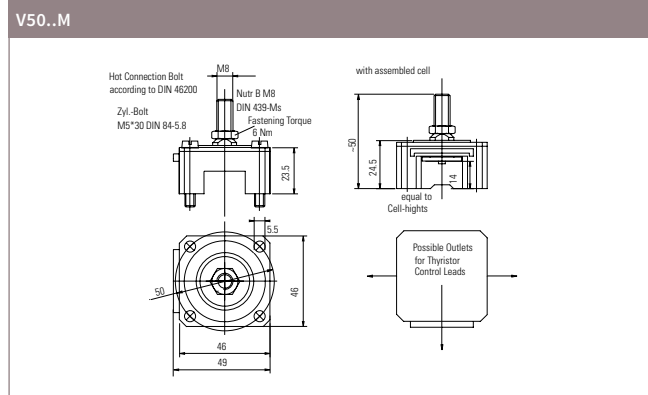
| Product<br> | $V_{RRM}$<br>[V] | $I_{FAVM/TC}$ | $I_{FSM}$<br>@10ms, $T_{vj\ max}$ | $\int I^2 dt$<br>[A <sup>2</sup> S · 10 <sup>3</sup> ]<br>@10ms, $T_{vj\ max}$ | $V_{(T0)}$<br>[V]<br>@ $T_{vj\ max}$ | $r_T$<br>[mΩ]<br>@ $T_{vj\ max}$ | $R_{thJC}$<br>[K/kW]<br>@180° el sin | $T_{vj}$<br>[°C]<br>max | $Q_R$<br>[mAs]<br>@di/dt = 5000 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 |
|----------------------------------------------------------------------------------------------|------------------|---------------|-----------------------------------|--------------------------------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------|----------------|
|----------------------------------------------------------------------------------------------|------------------|---------------|-----------------------------------|--------------------------------------------------------------------------------|--------------------------------------|----------------------------------|--------------------------------------|-------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------|----------------|

|                                         |      |         |       |       |      |       |      |     |       |      |        |               |
|-----------------------------------------|------|---------|-------|-------|------|-------|------|-----|-------|------|--------|---------------|
| Prime Line - IGBT - freewheeling diodes |      |         |       |       |      |       |      |     |       |      |        |               |
| D1600U45X122                            | 4500 | 1680/55 | 28000 | 3920  | 1.80 | 0.994 | 7.50 | 140 | 6.00  | 3600 | 36-65  | D120.26K / 49 |
| D2700U45X122                            | 4500 | 2900/55 | 48000 | 11500 | 1.38 | 0.447 | 5.60 | 140 | 9.50  | 4200 | 50-100 | D120.26K / 49 |
| D4600U45X172                            | 4500 | 4780/55 | 80000 | 32000 | 1.25 | 0.300 | 3.30 | 140 | 13.00 | 5500 | 50-130 | D172.26K / 50 |
| D3200W45X122                            | 4500 | 3470/55 | 63500 | 20160 | 1.25 | 0.300 | 5.60 | 140 | 9.50  | 4200 | 50-100 | D120.26K / 49 |

# 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   |

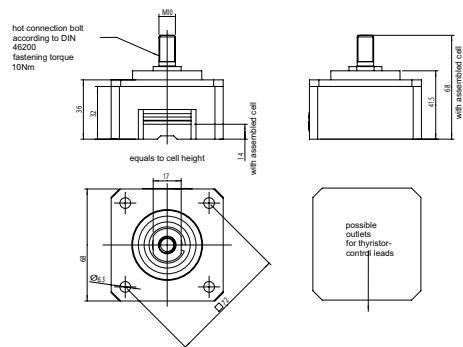


# Clamping Units for Discs

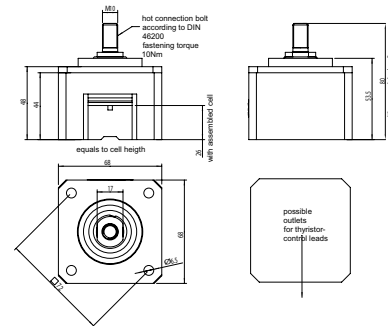


| Product              | For disc diameter [mm] | For disc height [mm] | Clamping force [kN] | Min. creeping distance [mm] | Ordering Code |
|----------------------|------------------------|----------------------|---------------------|-----------------------------|---------------|
| <b>Clamping Unit</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   |

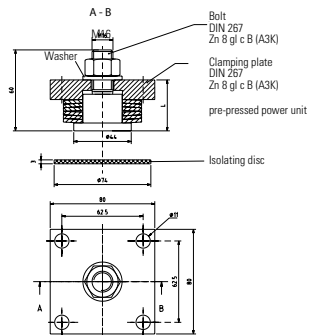
V72-14..M



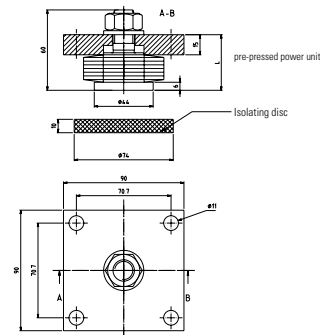
V72-26..M



V 89

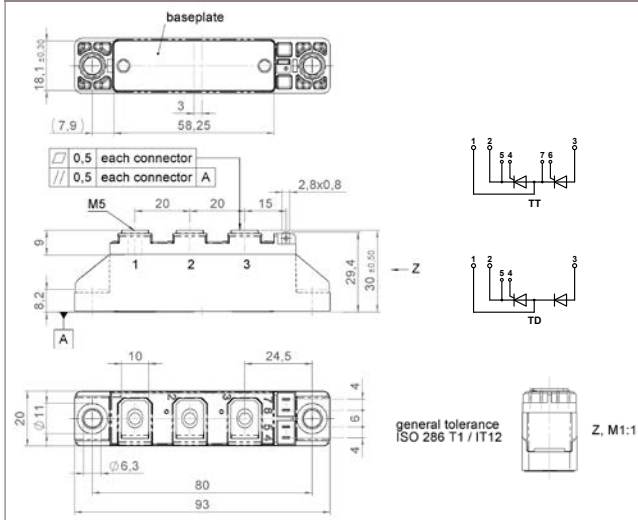


V 100

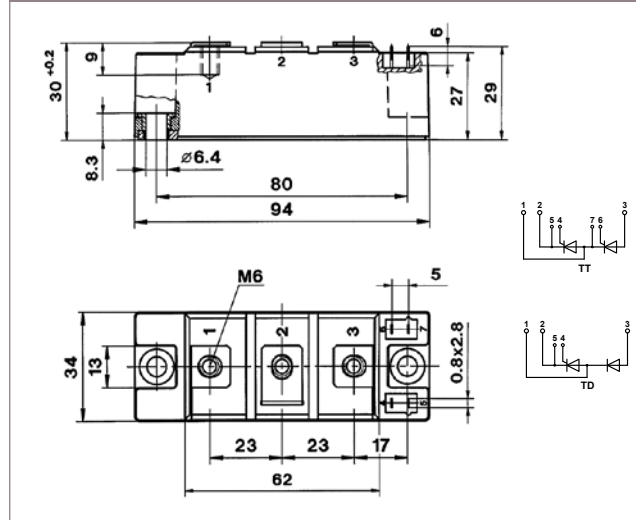


# Outlines Thyristor Modules

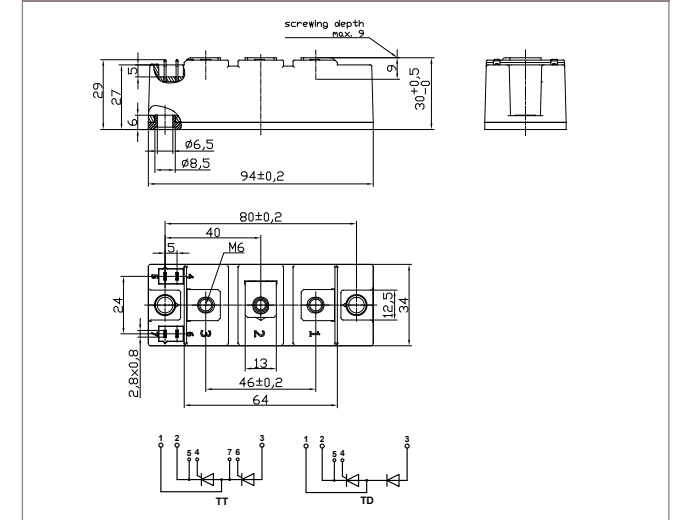
20 mm - TS20



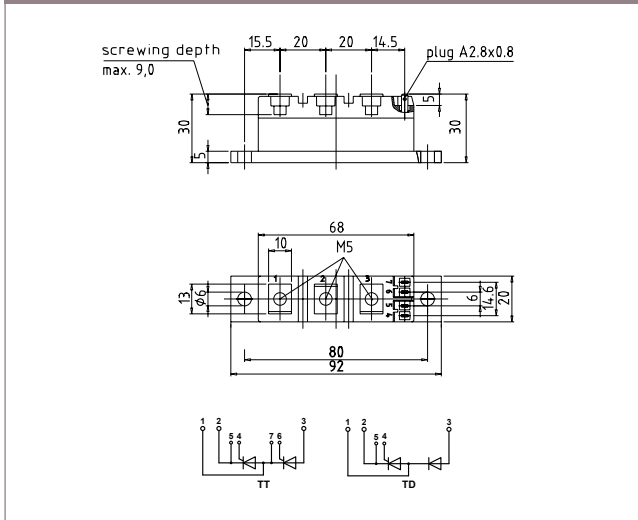
34 mm - TS34



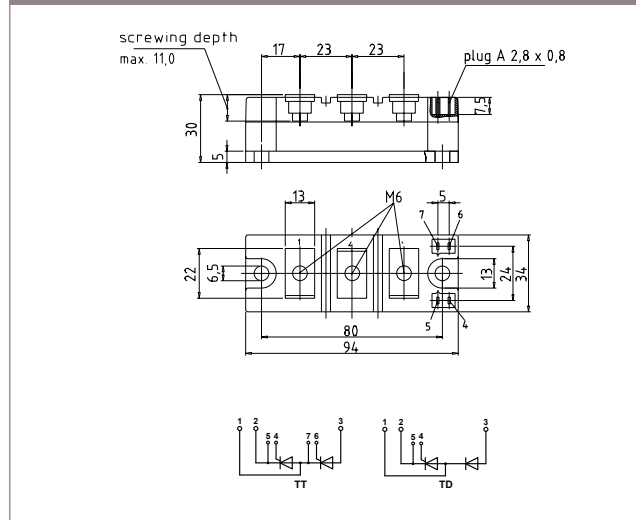
TS34 2nd Gen



20 mm - TP20

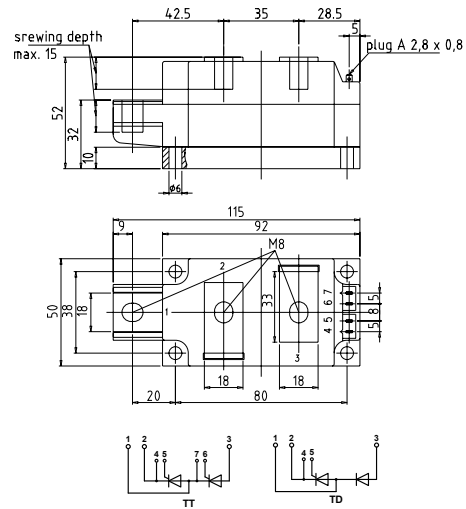


34 mm - TP34

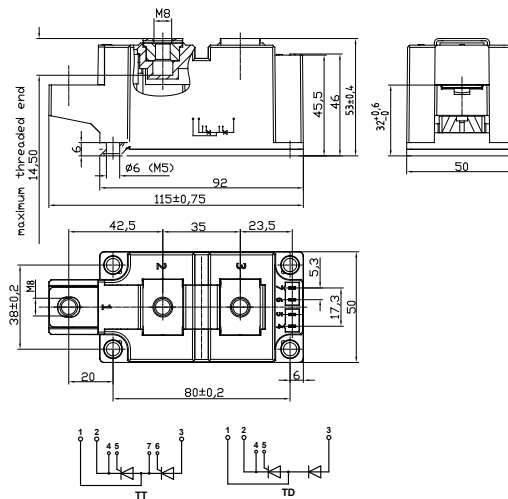


# Outlines Thyristor Modules

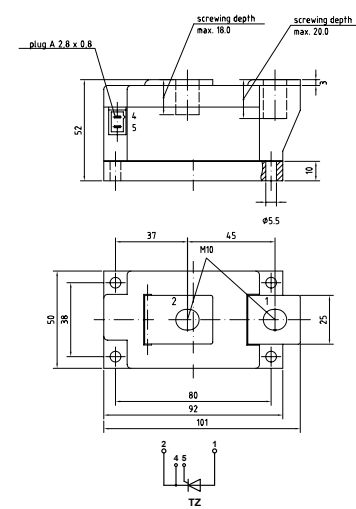
50 mm - TP50



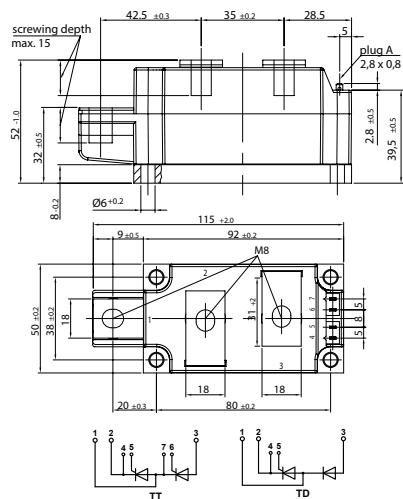
50 mm - TS50



50 mm - TP50.1

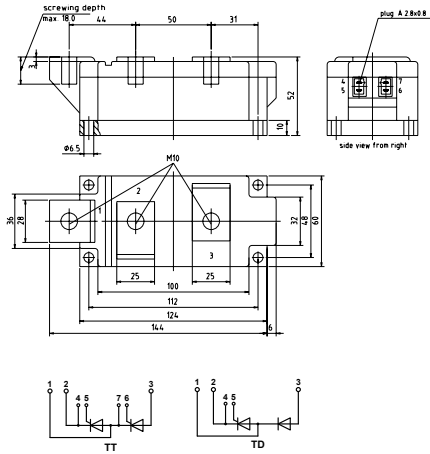


50 mm - TP50A

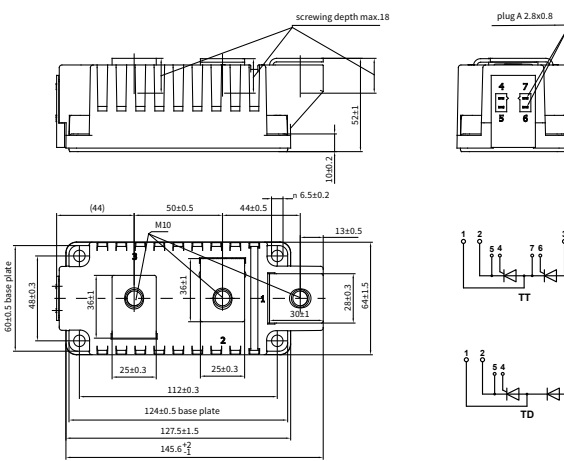


# Outlines Thyristor Modules

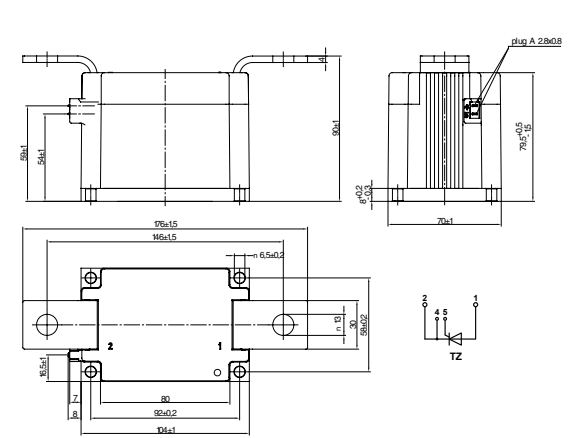
60 mm - TP60



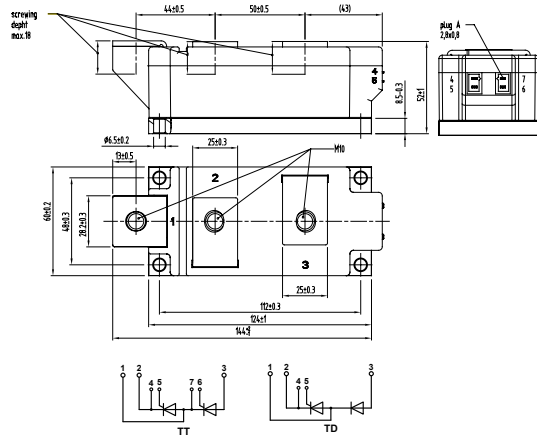
60 mm - TE60



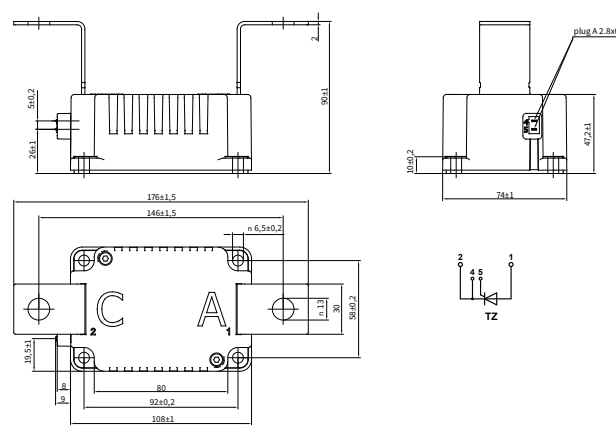
70 mm - TP70A



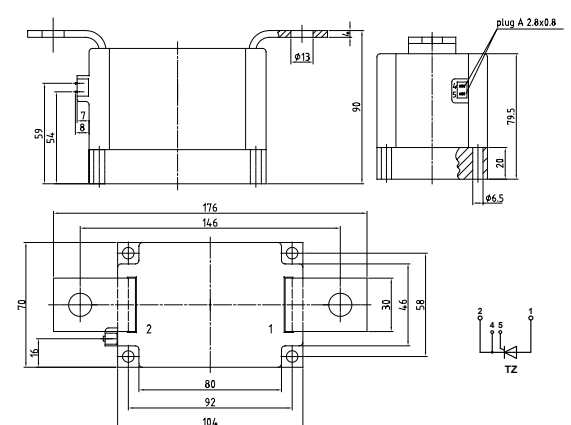
60 mm - TP60A



70 mm - TE70

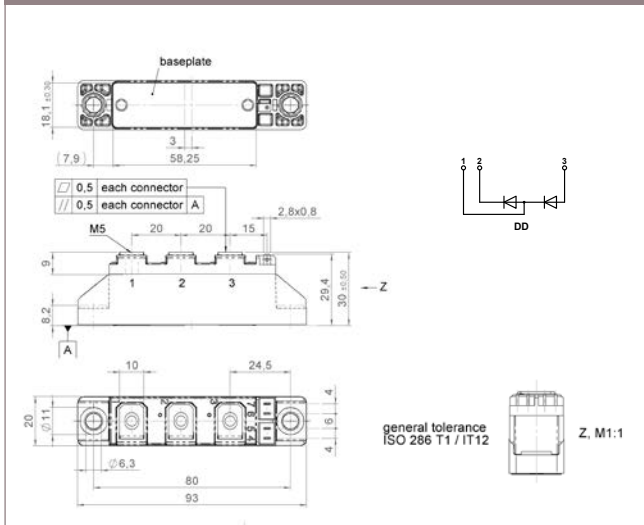


70 mm - TP70

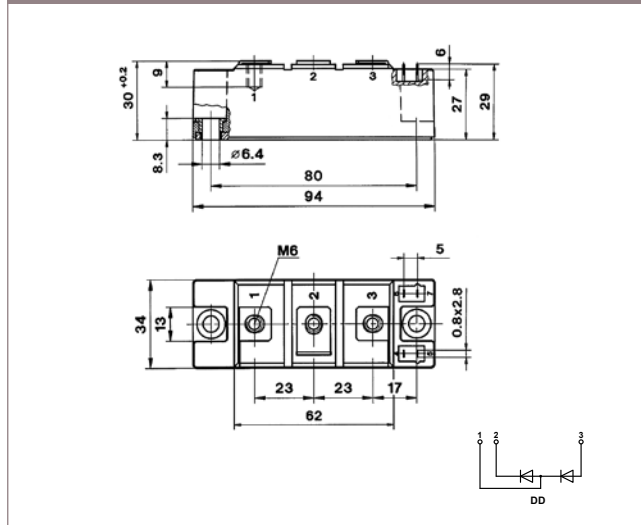


# Outlines Diode Modules

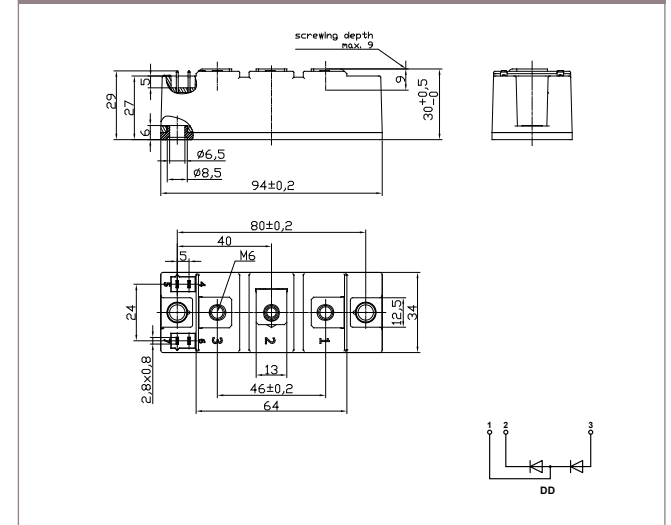
20 mm - DS20



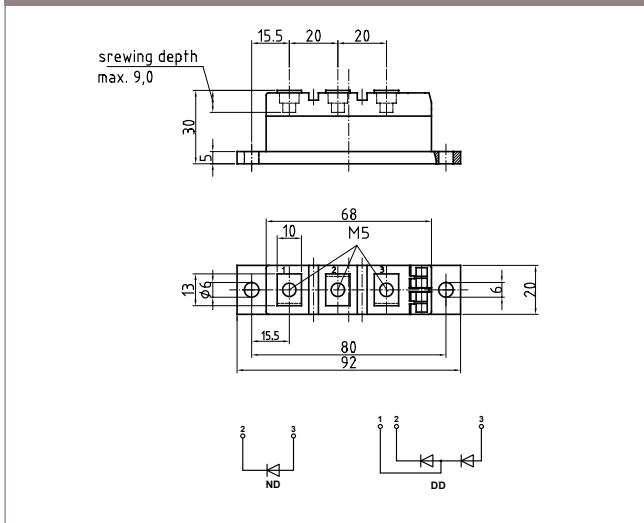
34 mm - DS34



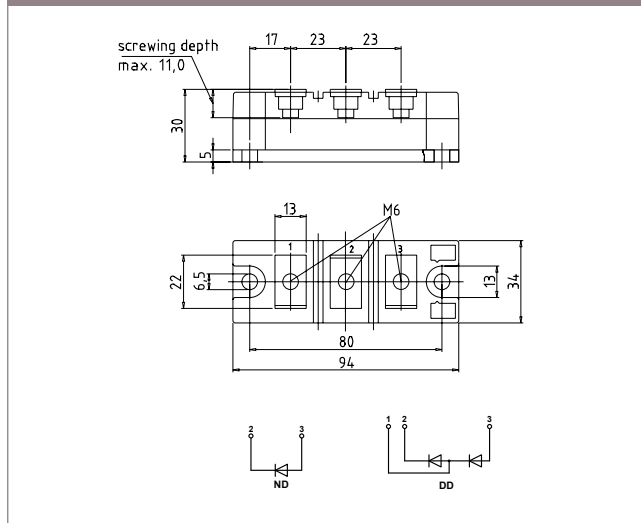
34 mm - DS34 2nd Gen



20 mm - DP20

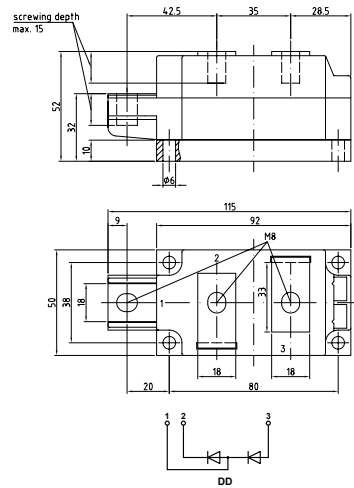


34 mm - DP34

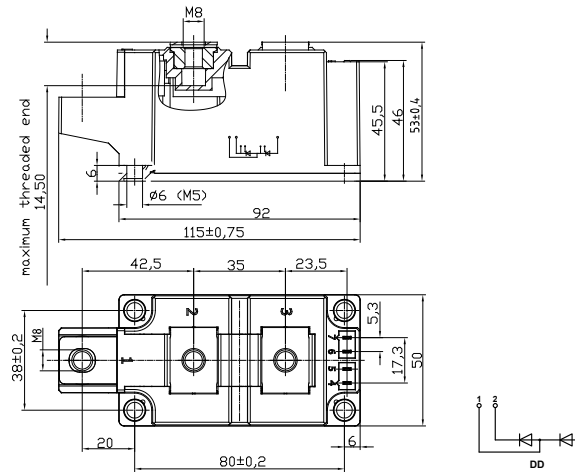


# Outlines Diode Modules

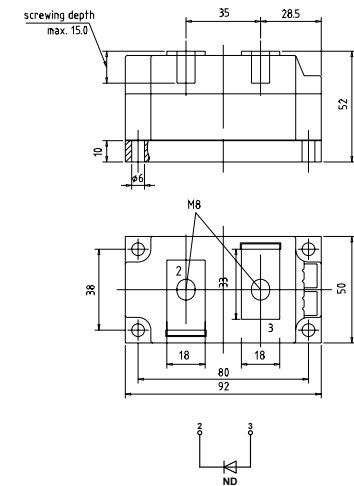
50 mm - DP50



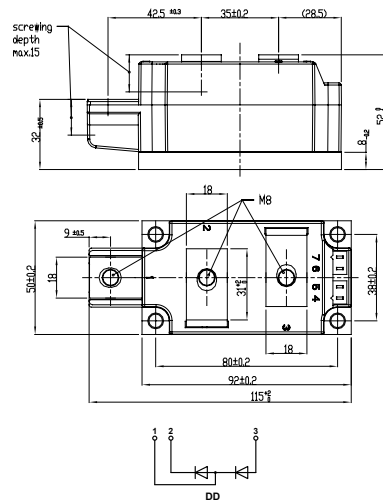
50 mm - DS50



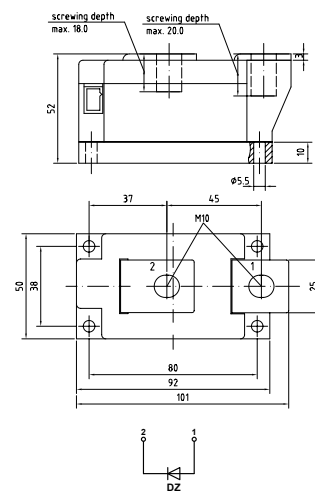
50 mm - DP50ND



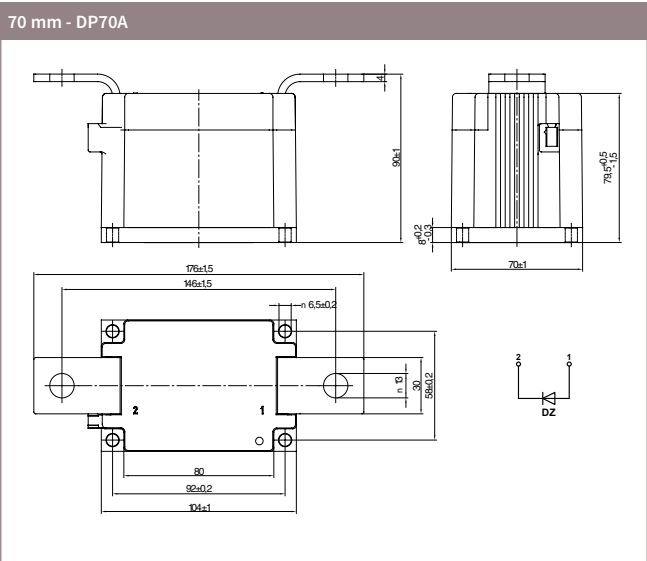
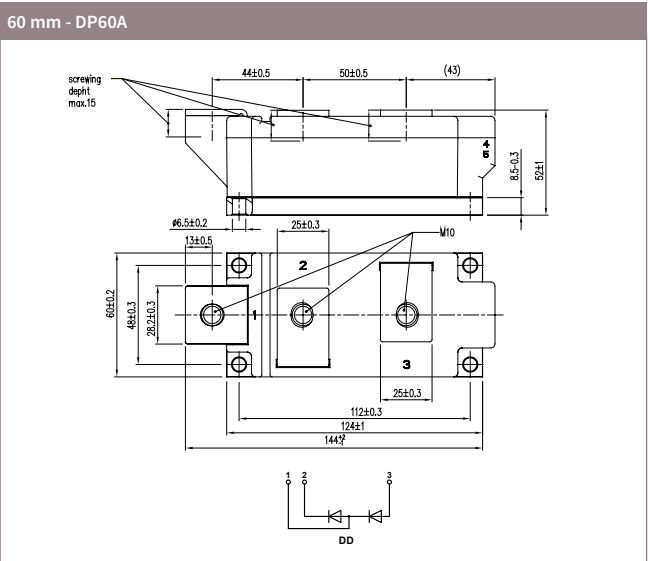
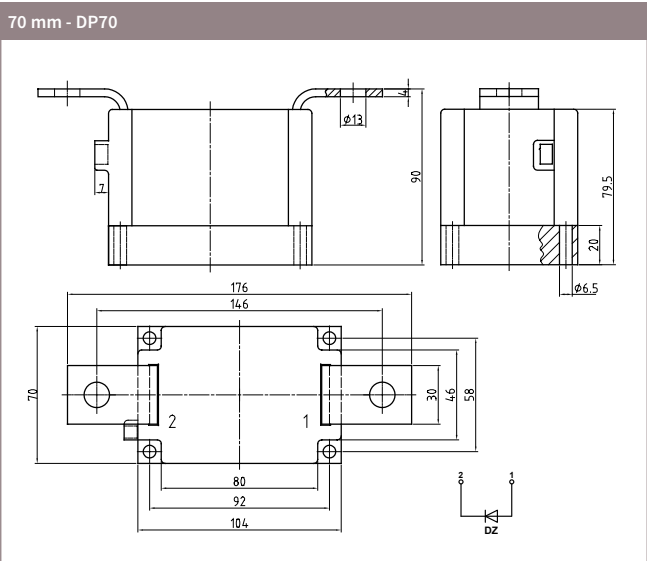
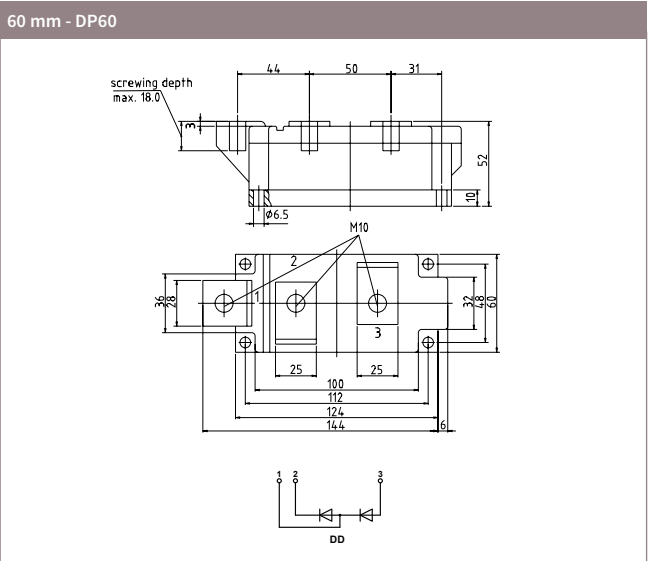
50 mm - DP50A



50 mm - DP50.1



# Outlines Diode Modules

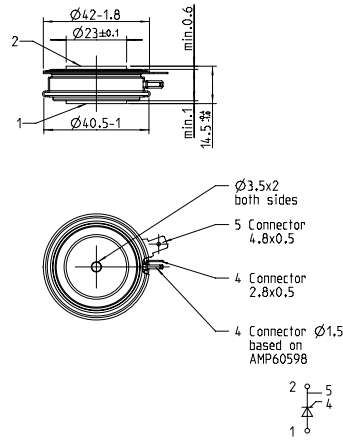


# Package Units

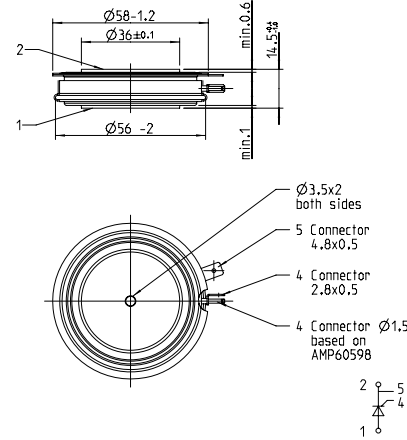
| Outline             | Packging units |
|---------------------|----------------|
| Power block modules |                |
| DP20                | 15             |
| DS20                | 12             |
| DP34                | 8              |
| DS34                | 10             |
| DP50                | 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

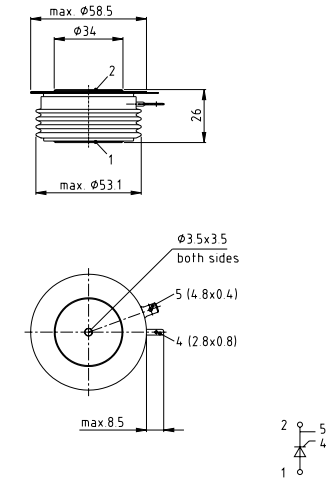
T42.14K0



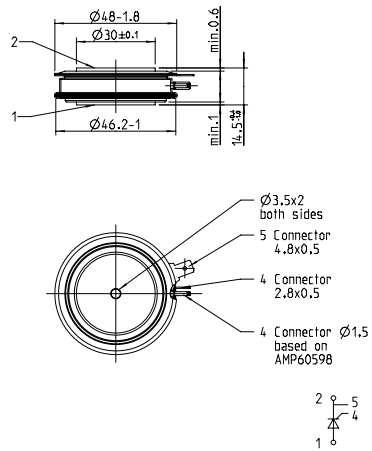
T58.14K0



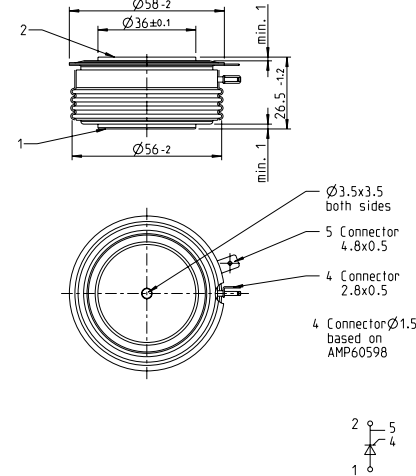
T58.26K



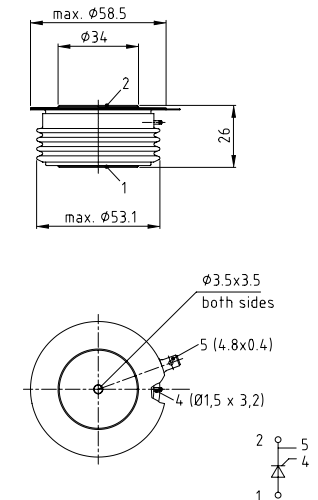
T48.14K0



T58.26K0

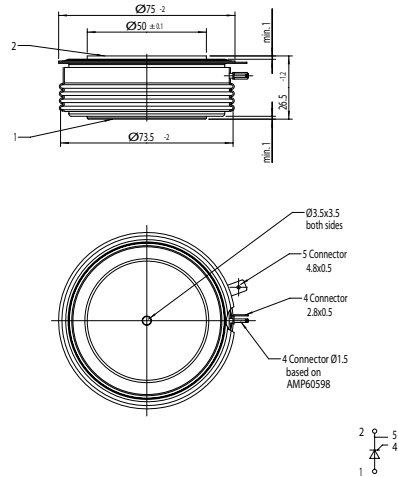


T58.26K1

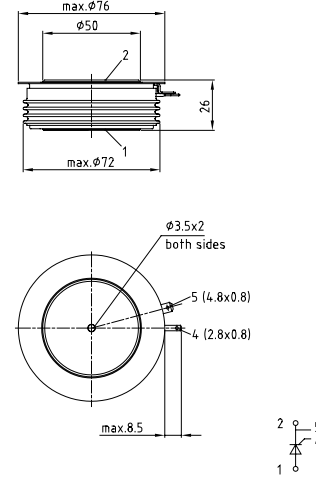


# Outlines Thyristor Discs

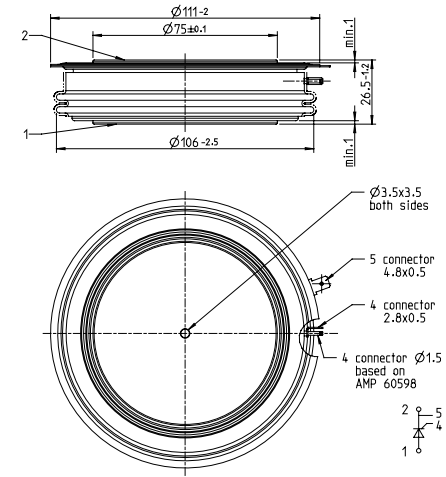
T75.26K0



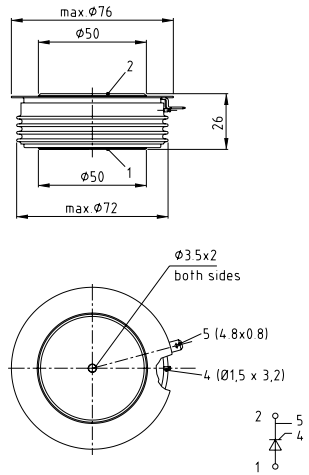
T76.26K



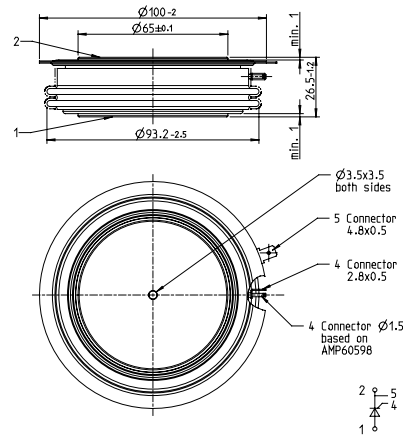
T111.26K0



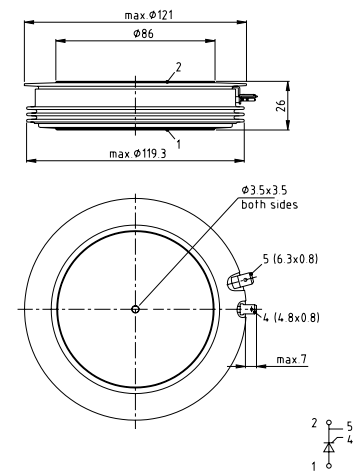
T75.26K1



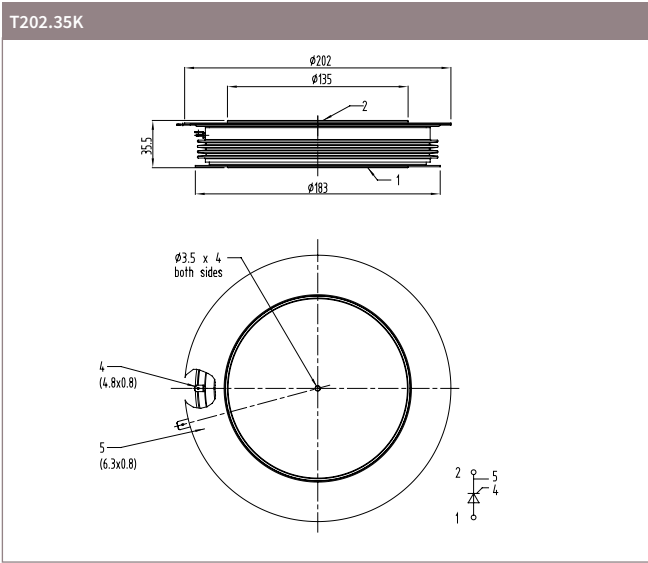
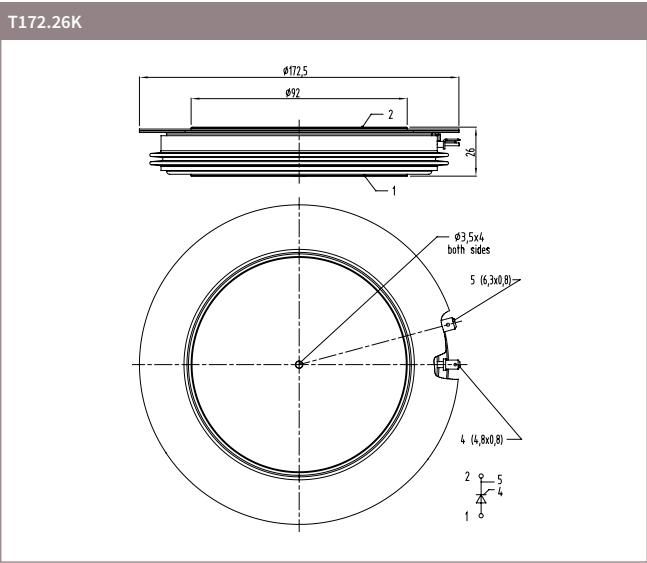
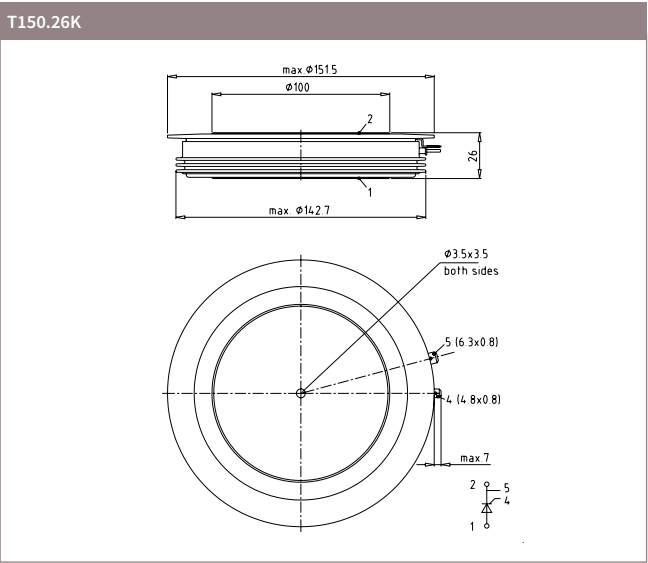
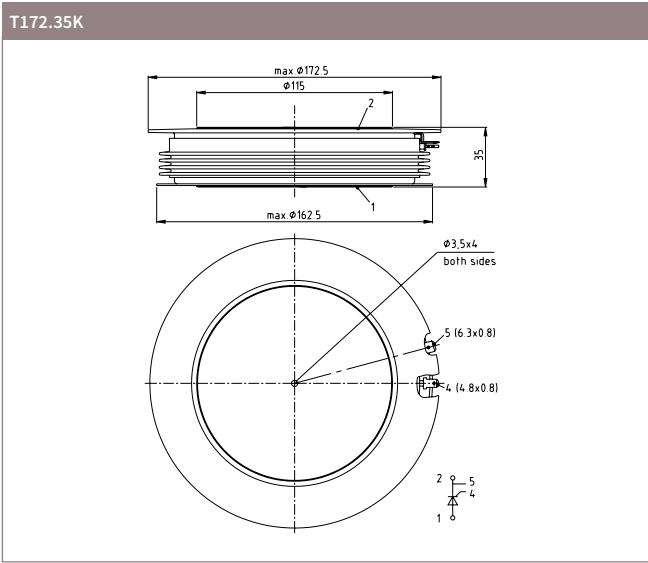
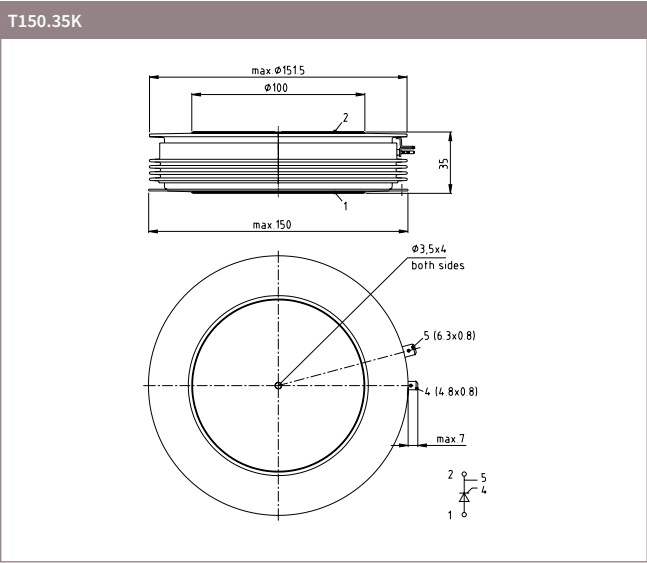
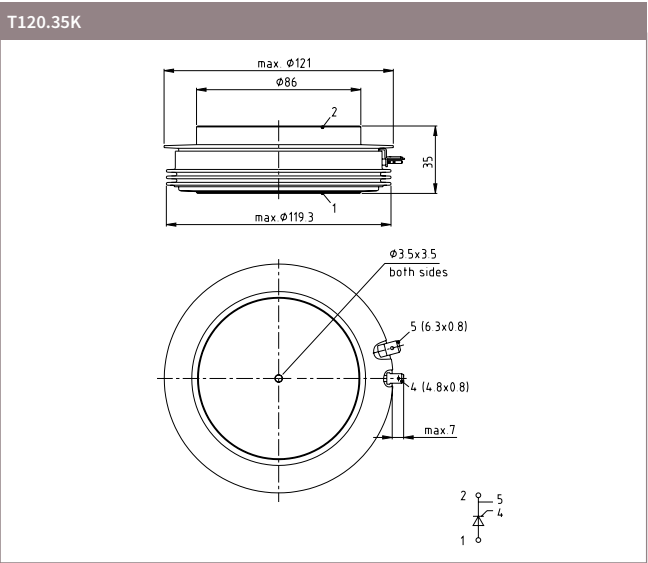
T100.26K0



T120.26K

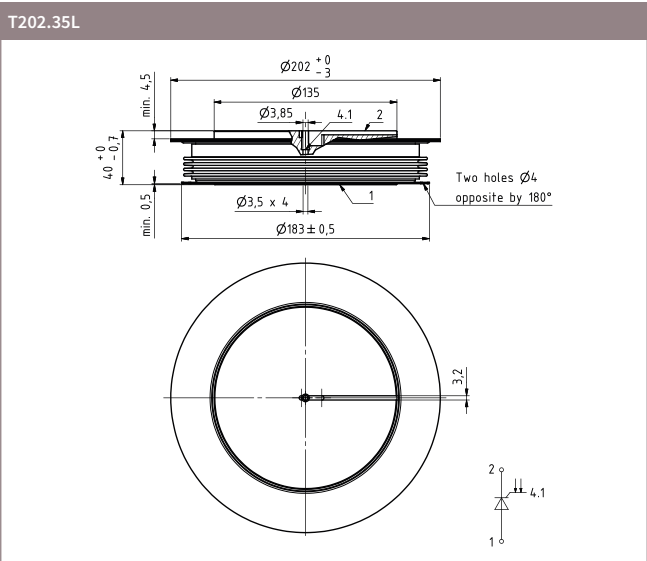
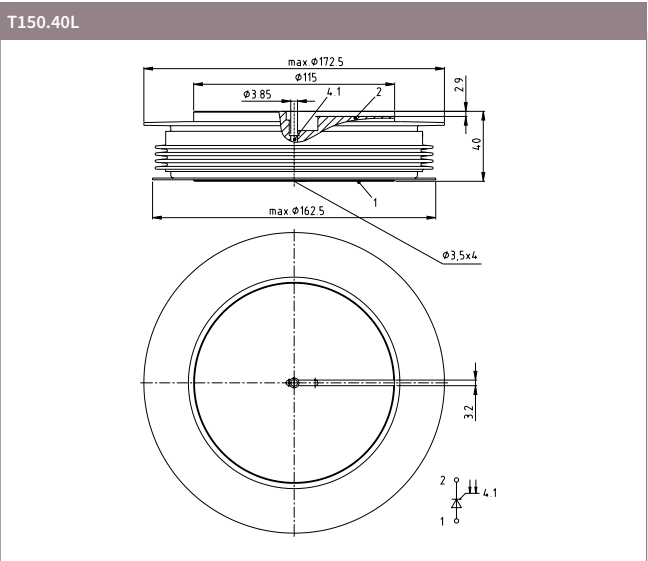
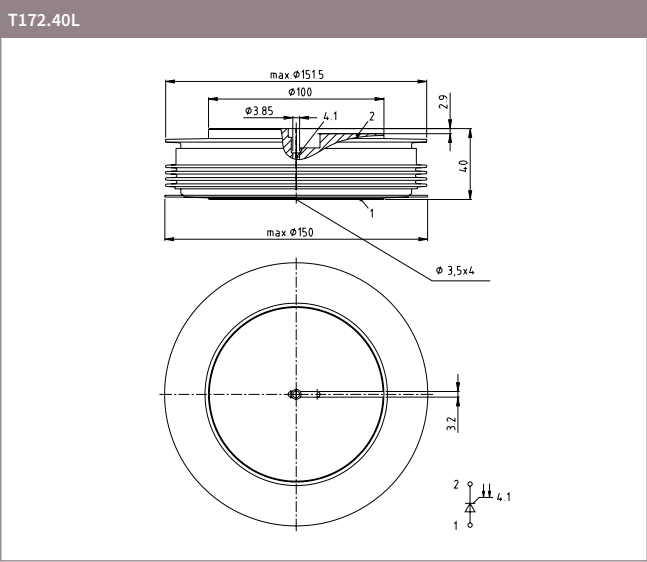
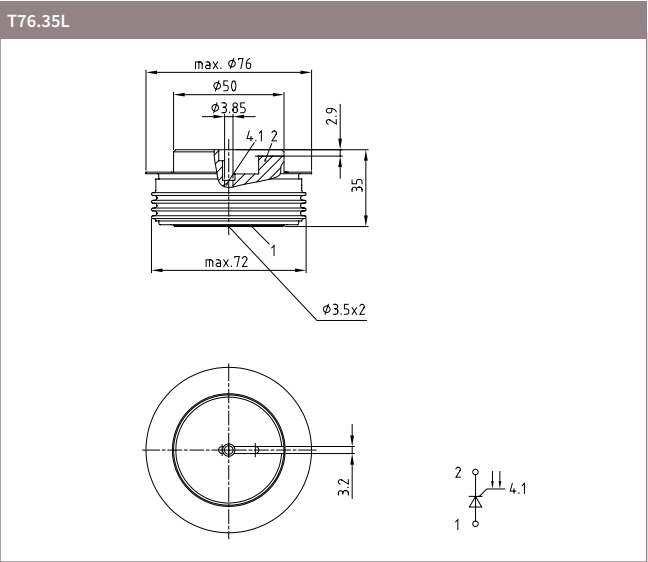


# Outlines Thyristor Discs



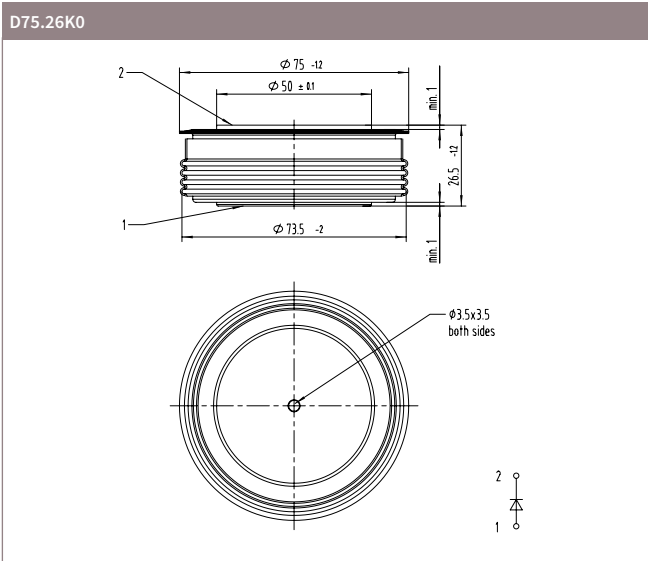
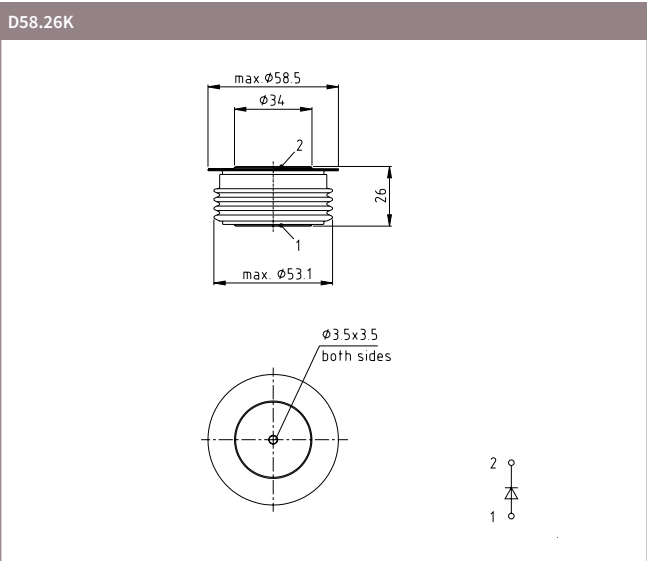
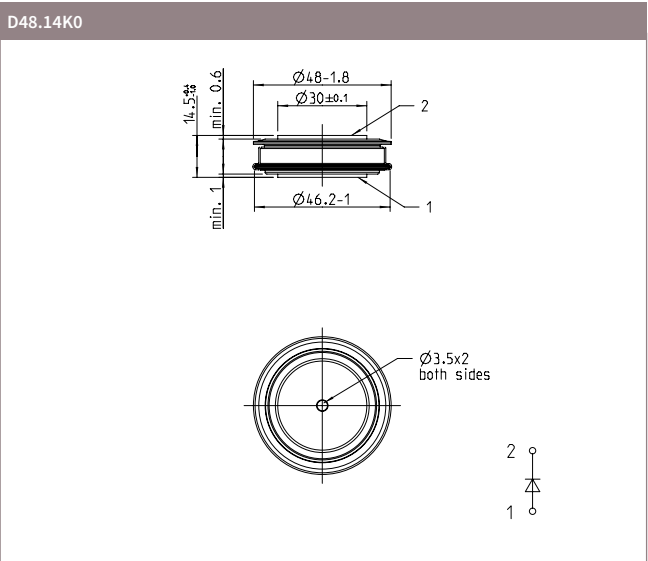
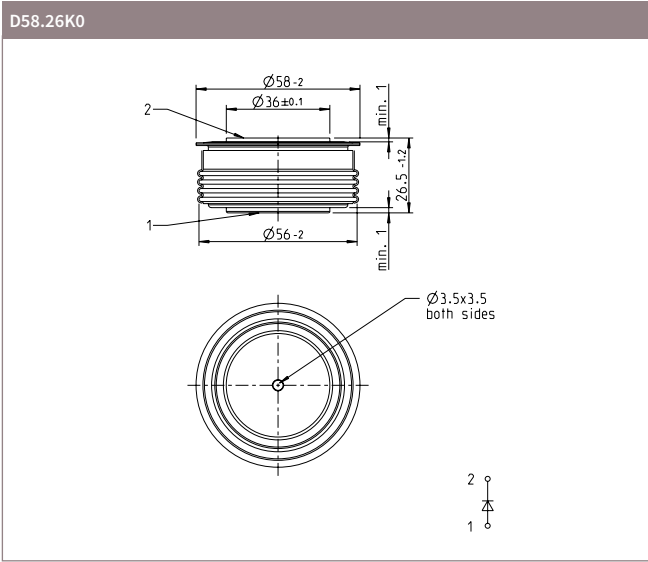
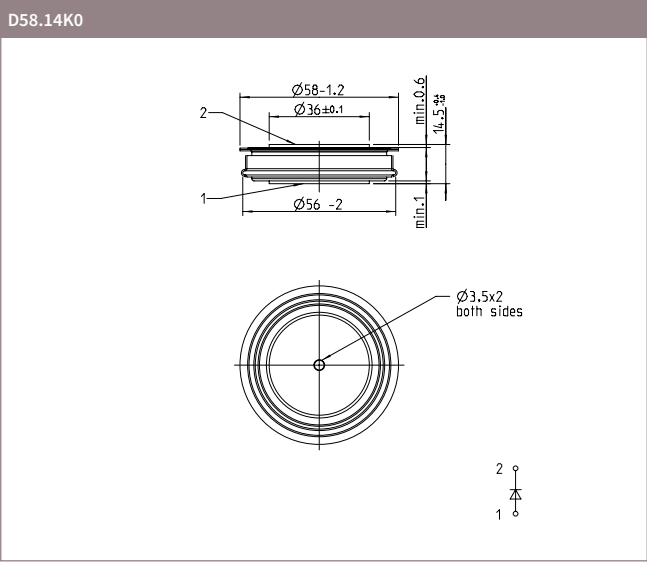
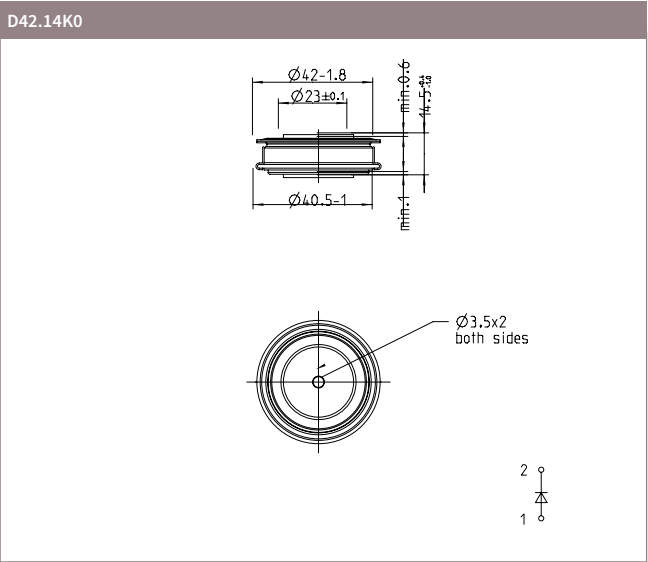
# Outlines Light Triggered Thyristors

# Package Units

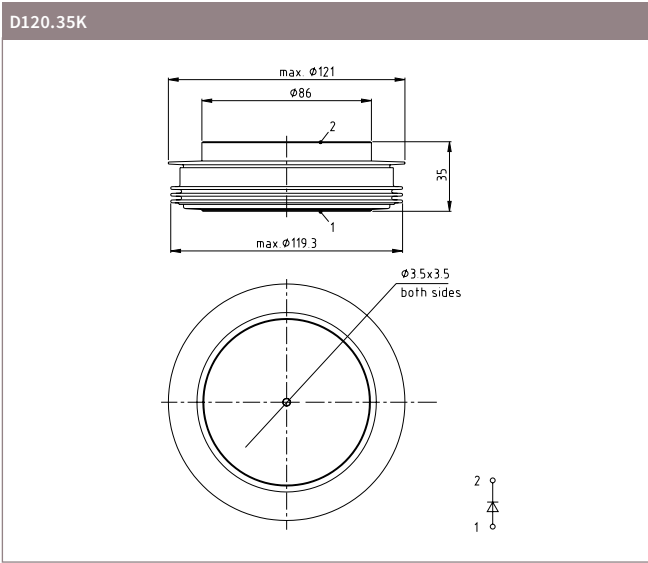
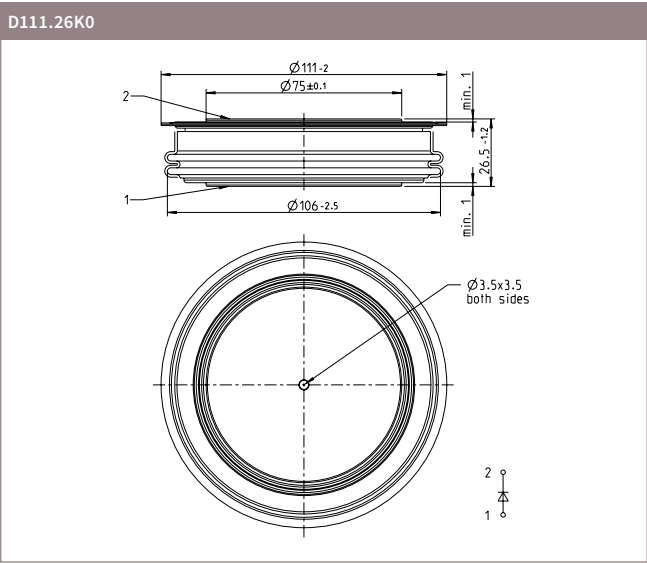
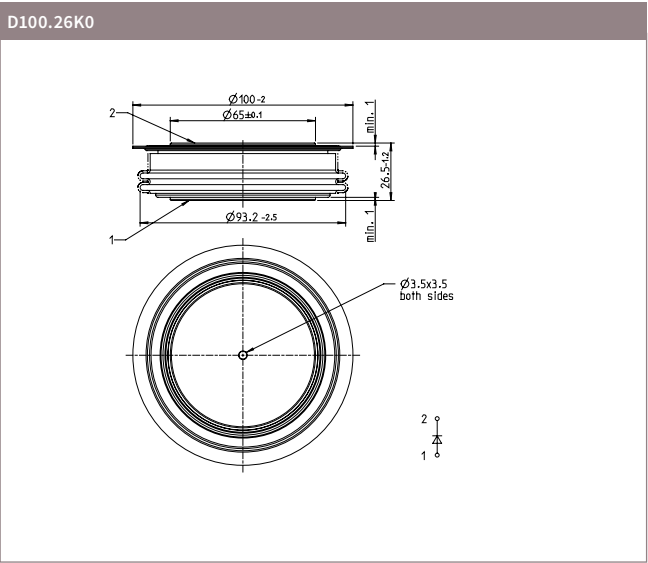
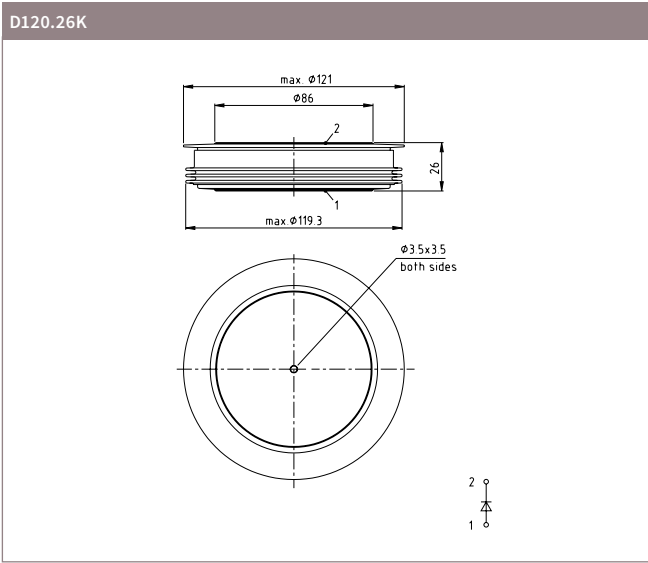
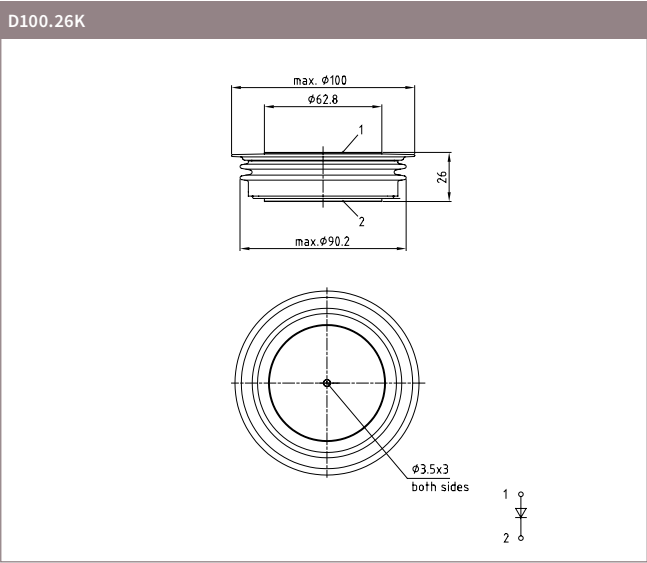
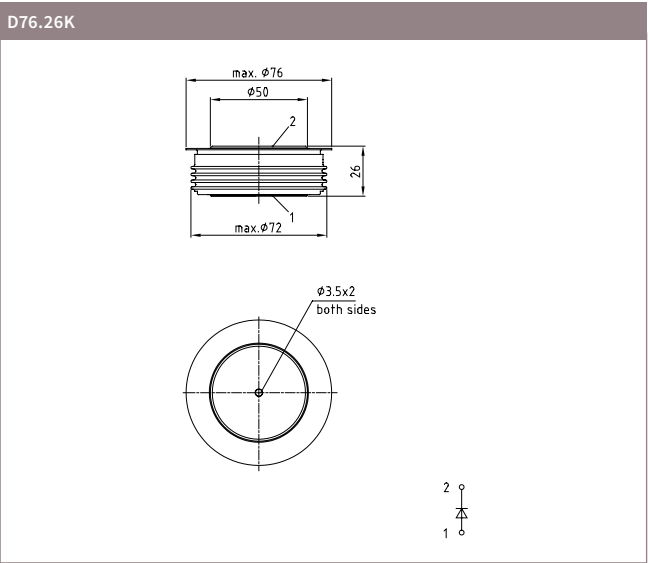


| Outline    | Packging units |
|------------|----------------|
| Presspacks |                |
| T42.14K0   | 18             |
| T48.14K0   | 12             |
| T58.14K0   | 9              |
| T58.26K0   | 6              |
| T75.26K0   | 4              |
| T76.26K    | 4              |
| T76.35L    | 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

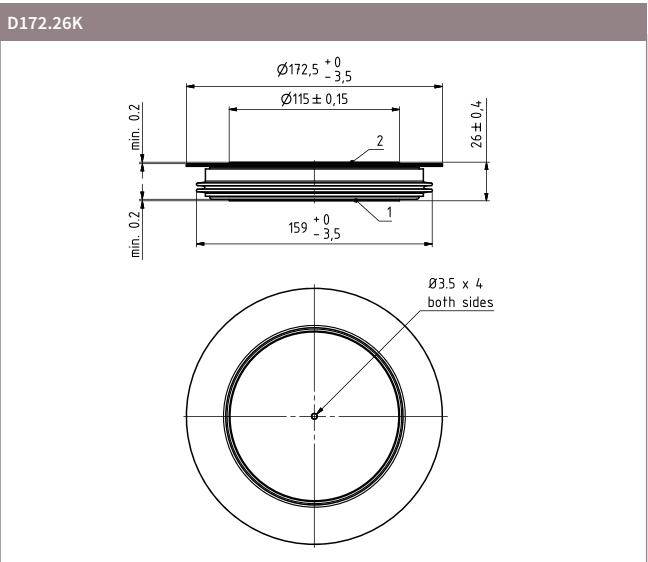
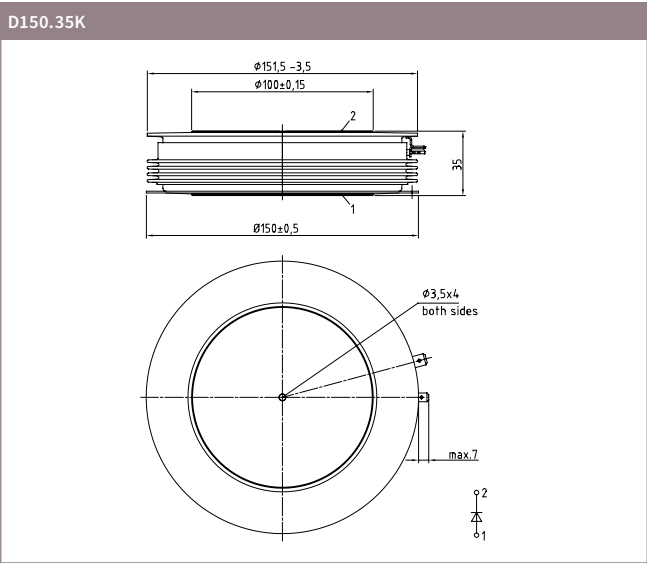
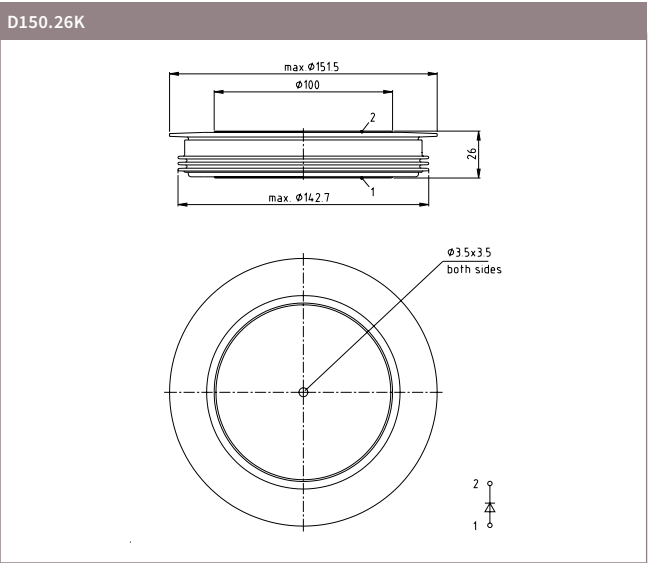


# Outlines Diode Discs



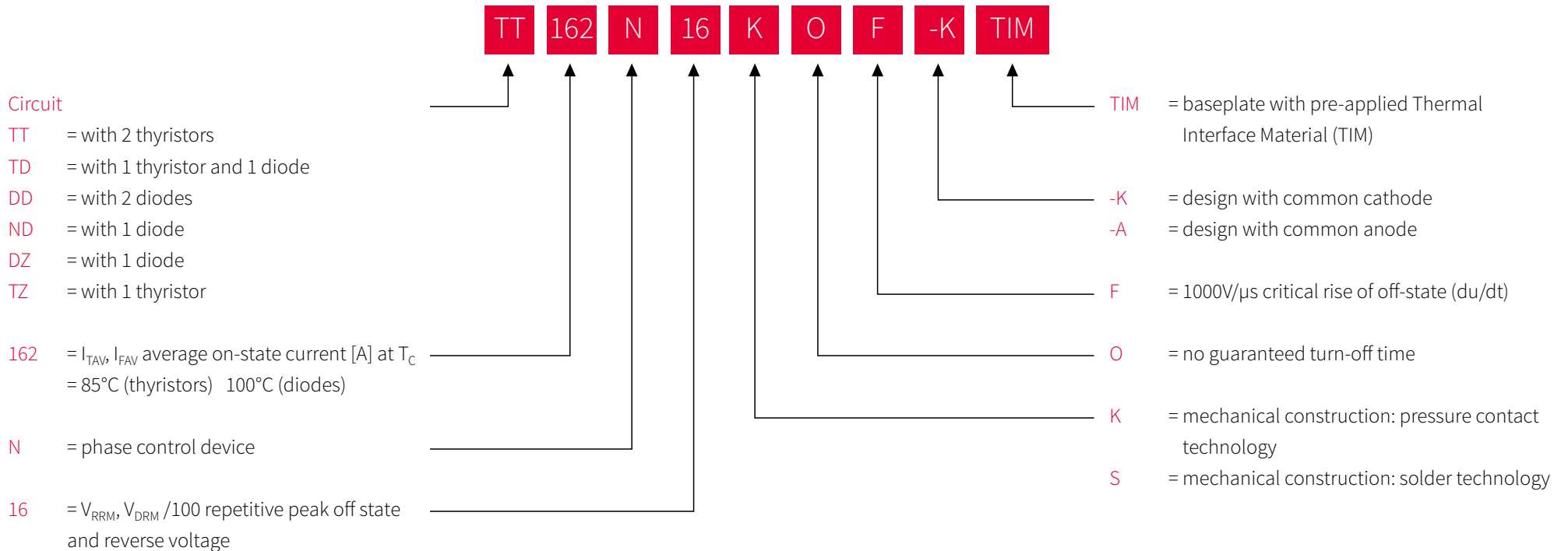
# Outlines Diode Discs

# Package Units

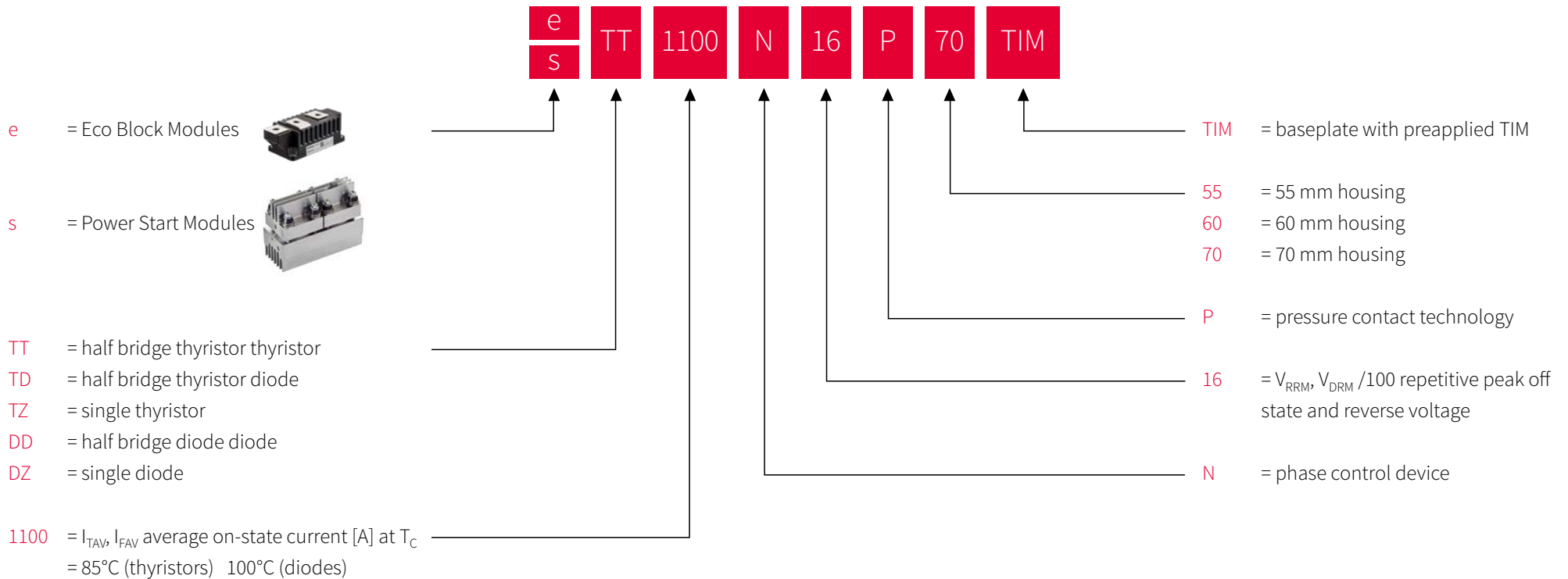


| Outline     | Packiging units |
|-------------|-----------------|
| Diode Discs |                 |
| D42.14K0    | 18              |
| D48.14K0    | 12              |
| D58.14K0    | 9               |
| D58.26K0    | 6               |
| D75.26K0    | 4               |
| D76.26K     | 4           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

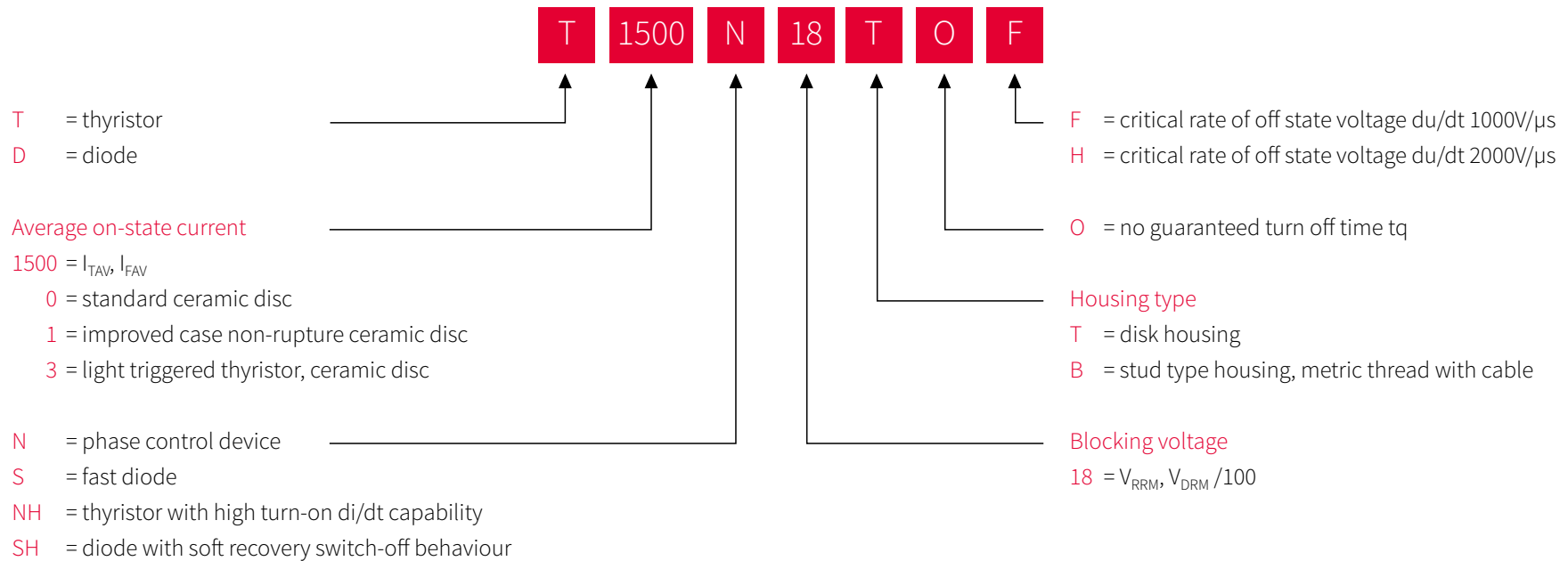
# Naming for standard modules



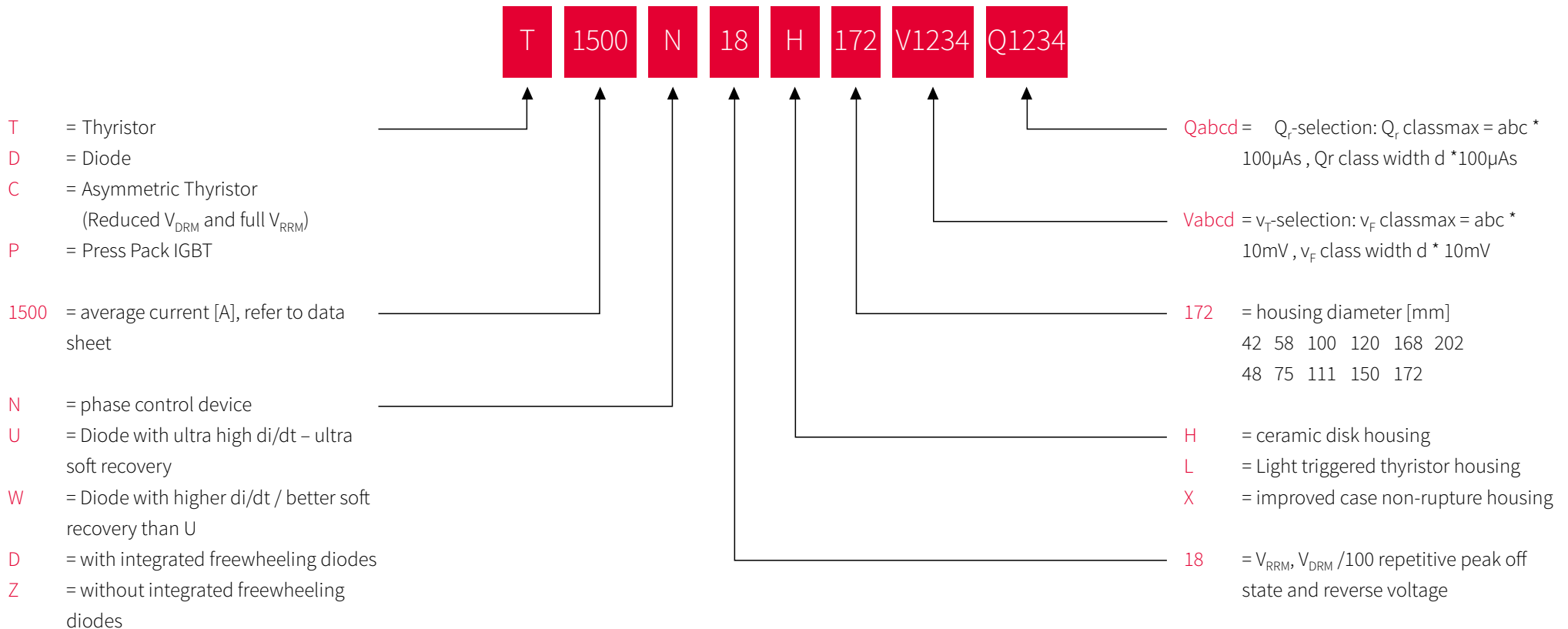
# Naming for Ecoline 60/70 mm and Power Start Modules



# Naming for thyristor and diode discs



# Naming for thyristor/diode discs and Press Pack IGBTs



# 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

## Notes

# Where to buy

Infineon distribution partners and sales offices:

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

Infineon Technologies Bipolar Webshop:

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

## Technical & sales support

- › Reply within 24 hours
- › Multilingual sales and technical support
- › Design-in-support directly from leading manufacturer

## Worldwide shipping

- › No minimum order quantity
- › Over 600 most common thyristors/diodes and stacks
- › Fast delivery across Europe directly from production site



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

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

Published by  
Infineon Technologies Bipolar GmbH & Co. KG  
Max-Planck-Strasse 5, 59581 Warstein  
[support@infineon-bip.com](mailto:support@infineon-bip.com)

© 2020 Infineon Technologies Bipolar GmbH & Co. KG.  
All rights reserved.

Order Number: B157-I0825-V2-7600-EU-EC-P  
Date: 06 / 2020



### Please note!

THIS DOCUMENT IS FOR INFORMATION PURPOSES ONLY AND ANY INFORMATION GIVEN HEREIN SHALL IN NO EVENT BE REGARDED AS A WARRANTY, GUARANTEE OR DESCRIPTION OF ANY FUNCTIONALITY, CONDITIONS AND/OR QUALITY OF OUR PRODUCTS OR ANY SUITABILITY FOR A PARTICULAR PURPOSE. WITH REGARD TO THE TECHNICAL SPECIFICATIONS OF OUR PRODUCTS, WE KINDLY ASK YOU TO REFER TO THE RELEVANT PRODUCT DATA SHEETS PROVIDED BY US. OUR CUSTOMERS AND THEIR TECHNICAL DEPARTMENTS ARE REQUIRED TO EVALUATE THE SUITABILITY OF OUR PRODUCTS FOR THE INTENDED APPLICATION.

WE RESERVE THE RIGHT TO CHANGE THIS DOCUMENT AND/OR THE INFORMATION GIVEN HEREIN AT ANY TIME.

### Additional information

For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office ([www.infineon.com](http://www.infineon.com)).

### Warnings

Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.