

# Phase Control Power Thyristors



- designed for high power industrial and power transmission applications
- optimized for low on-state voltage drop
- matched  $Q_{rr}$  and  $V_T$  values available for series and/or parallel connections

| Part number  | $V_{DRM}$ | $V_{RRM}$ | $I_{TAVM}$             | $I_{TSM}$ |      | $V_{T0}$  | $r_T$      | $T_{VJM}$ | $R_{thJC}$ | $R_{thCH}$ | $F_m$ | Housing |
|--------------|-----------|-----------|------------------------|-----------|------|-----------|------------|-----------|------------|------------|-------|---------|
|              | $T_{VJM}$ |           | $T_C=70^\circ\text{C}$ | 8.3ms     | 10ms | $T_{VJM}$ |            |           |            |            |       |         |
|              | V         | A         | A                      | kA        | kA   | V         | m $\Omega$ |           |            |            |       |         |
| 5STP 10D1601 | 1600      |           | 969                    | 16.0      | 15.0 | 0.93      | 0.302      | 125       | 32.0       | 7.5        | 10    | D       |
| 5STP 20F1601 | 1600      |           | 1901                   | 29.2      | 27.3 | 0.95      | 0.152      | 125       | 16.0       | 4.0        | 22    | F       |
| 5STP 34H1601 | 1600      |           | 3370                   | 52.3      | 49.0 | 0.94      | 0.066      | 125       | 10.0       | 3.0        | 50    | H       |
| 5STP 07D1800 | 1800      |           | 730                    | 9.5       | 9.0  | 0.80      | 0.540      | 125       | 36.0       | 7.5        | 10    | D       |
| 5STP 09D1801 | 1800      |           | 932                    | 14.6      | 13.7 | 0.94      | 0.341      | 125       | 32.0       | 7.5        | 10    | D       |
| 5STP 18F1800 | 1800      |           | 1660                   | 22.0      | 21.0 | 0.83      | 0.230      | 125       | 17.0       | 4.0        | 22    | F       |
| 5STP 18F1801 | 1800      |           | 1825                   | 28.0      | 26.2 | 0.97      | 0.170      | 125       | 16.0       | 4.0        | 22    | F       |
| 5STP 27H1800 | 1800      |           | 3000                   | 53.3      | 50.5 | 0.88      | 0.103      | 125       | 10.0       | 2.0        | 50    | H       |
| 5STP 30H1801 | 1800      |           | 3108                   | 50.2      | 47.0 | 0.98      | 0.081      | 125       | 10.0       | 3.0        | 50    | H       |
| 5STP 50Q1800 | 1800      |           | 6100                   | 100.0     | 94.0 | 0.90      | 0.050      | 125       | 5.0        | 1.0        | 90    | Q       |
| 5STP 09D2201 | 2200      |           | 862                    | 12.8      | 12.0 | 1.00      | 0.404      | 125       | 32.0       | 7.5        | 10    | D       |
| 5STP 17F2201 | 2200      |           | 1702                   | 27.2      | 25.5 | 0.99      | 0.206      | 125       | 16.0       | 4.0        | 22    | F       |
| 5STP 29H2201 | 2200      |           | 2855                   | 48.1      | 45.0 | 1.00      | 0.107      | 125       | 10.0       | 3.0        | 50    | H       |
| 5STP 06D2800 | 2800      |           | 620                    | 8.5       | 8.0  | 0.92      | 0.780      | 125       | 36.0       | 7.5        | 10    | D       |
| 5STP 08D2801 | 2800      |           | 793                    | 11.3      | 10.6 | 1.02      | 0.510      | 125       | 32.0       | 7.5        | 10    | D       |
| 5STP 16F2800 | 2800      |           | 1400                   | 19.0      | 18.0 | 0.82      | 0.370      | 125       | 17.0       | 4.0        | 22    | F       |
| 5STP 16F2801 | 2800      |           | 1512                   | 25.2      | 23.6 | 1.02      | 0.265      | 125       | 16.0       | 4.0        | 22    | F       |
| 5STP 24H2800 | 2800      |           | 2625                   | 46.0      | 43.0 | 0.85      | 0.160      | 125       | 10.0       | 2.0        | 50    | H       |
| 5STP 27H2801 | 2800      |           | 2670                   | 45.9      | 43.0 | 1.04      | 0.127      | 125       | 10.0       | 3.0        | 50    | H       |
| 5STP 33L2800 | 2800      |           | 3740                   | 65.0      | 60.0 | 0.95      | 0.100      | 125       | 7.0        | 1.5        | 70    | L       |
| 5STP 45N2800 | 2800      |           | 5080                   | 79.0      | 75.0 | 0.86      | 0.070      | 125       | 5.7        | 1.0        | 90    | N       |
| 5STP 45Q2800 | 2800      |           | 5490                   | 79.0      | 75.0 | 0.86      | 0.070      | 125       | 5.0        | 1.0        | 90    | Q       |
| 5STP 04D4200 | 4200      |           | 470                    | 7.0       | 6.4  | 1.00      | 1.500      | 125       | 36.0       | 7.5        | 10    | D       |
| 5STP 12F4200 | 4200      |           | 1150                   | 16.0      | 15.0 | 0.95      | 0.575      | 125       | 17.0       | 4.0        | 22    | F       |
| 5STP 18H4200 | 4200      |           | 2075                   | 35.0      | 32.0 | 0.96      | 0.285      | 125       | 10.0       | 2.0        | 50    | H       |
| 5STP 28L4200 | 4200      |           | 3170                   | 55.6      | 52.0 | 0.97      | 0.158      | 125       | 7.0        | 1.5        | 70    | L       |
| 5STP 38N4200 | 4200      |           | 3960                   | 65.0      | 60.0 | 0.95      | 0.130      | 125       | 5.7        | 1.0        | 90    | N       |
| 5STP 38Q4200 | 4200      |           | 4275                   | 65.0      | 60.0 | 0.95      | 0.130      | 125       | 5.0        | 1.0        | 90    | Q       |

Please refer to page 21 for part numbering structure.

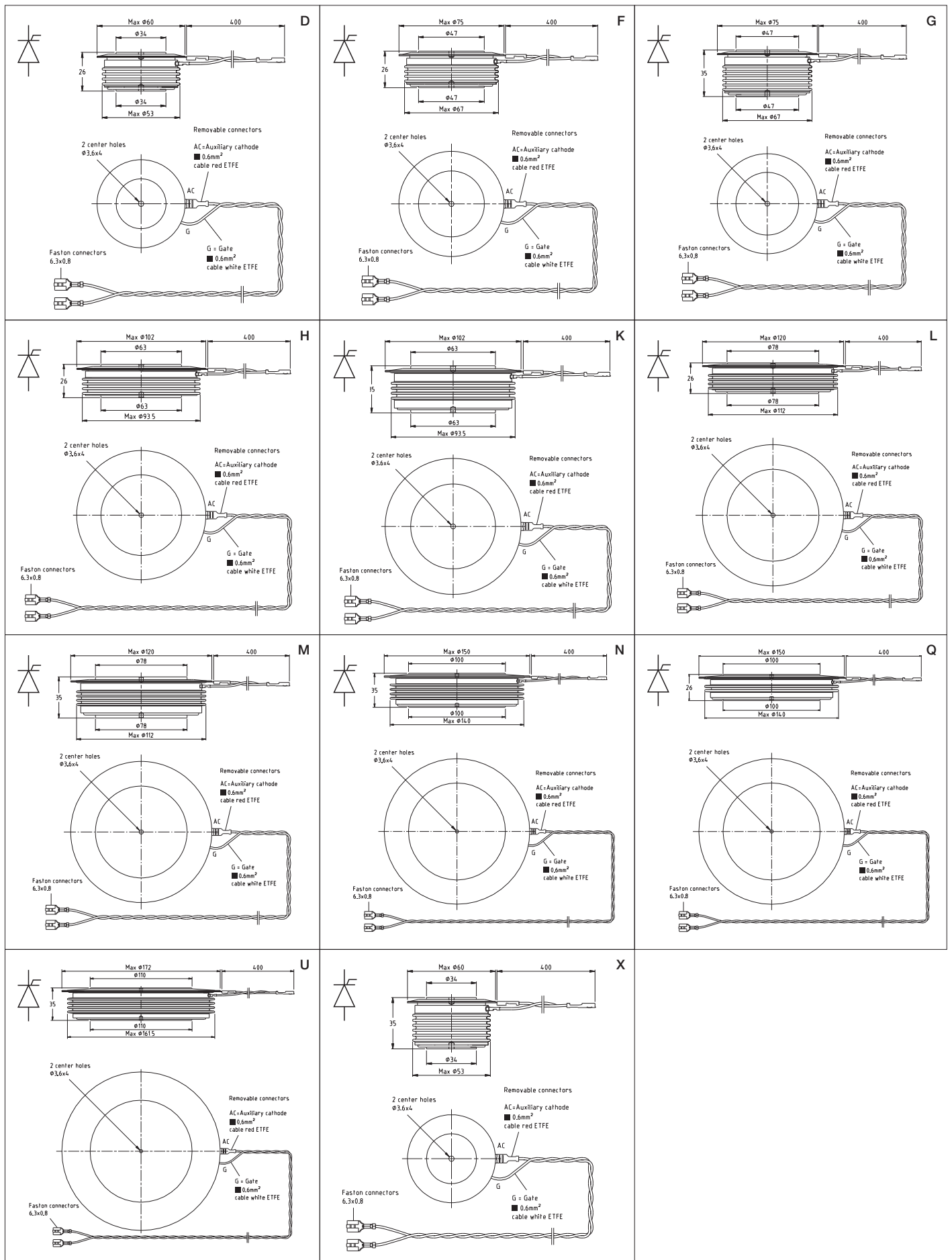
# Phase Control Power Thyristors



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| Part number  | $V_{DRM}$ | $V_{RRM}$ | $I_{TAVM}$             | $I_{TSM}$ |      | $V_{TO}$  | $r_T$      | $T_{VJM}$ | $R_{thJC}$ | $R_{thCH}$ | $F_m$ | Housing |
|--------------|-----------|-----------|------------------------|-----------|------|-----------|------------|-----------|------------|------------|-------|---------|
|              | $T_{VJM}$ |           | $T_C=70^\circ\text{C}$ | 8.3ms     | 10ms | $T_{VJM}$ |            |           |            |            |       |         |
|              | V         | A         | A                      | kA        | kA   | V         | m $\Omega$ |           |            |            |       |         |
| 5STP 04D5200 | 5200      |           | 440                    | 5.4       | 5.0  | 1.20      | 1.600      | 125       | 36.0       | 7.5        | 10    | D       |
| 5STP 17H5200 | 5200      |           | 1975                   | 31.0      | 29.0 | 1.02      | 0.320      | 125       | 10.0       | 2.0        | 50    | H       |
| 5STP 25L5200 | 5200      |           | 2760                   | 45.0      | 42.0 | 1.00      | 0.225      | 125       | 7.0        | 1.5        | 70    | L       |
| 5STP 25M5200 | 5200      |           | 2540                   | 45.0      | 42.0 | 1.00      | 0.225      | 125       | 9.0        | 1.5        | 70    | M       |
| 5STP 34N5200 | 5200      |           | 3600                   | 60.0      | 55.0 | 1.03      | 0.160      | 125       | 5.7        | 1.0        | 90    | N       |
| 5STP 34Q5200 | 5200      |           | 3875                   | 60.0      | 55.0 | 1.03      | 0.160      | 125       | 5.0        | 1.0        | 90    | Q       |
| 5STP 52U5200 | 5200      |           | 4120                   | 90.3      | 82.5 | 1.04      | 0.115      | 110       | 4.0        | 0.8        | 135   | U       |
| 5STP 03D6500 | 6500      |           | 380                    | 4.8       | 4.5  | 1.20      | 2.300      | 125       | 36.0       | 7.5        | 10    | D       |
| 5STP 08F6500 | 6500      |           | 830                    | 12.8      | 11.8 | 1.24      | 1.015      | 125       | 17.0       | 4.0        | 22    | F       |
| 5STP 08G6500 | 6500      |           | 720                    | 12.8      | 11.8 | 1.24      | 1.015      | 125       | 22.0       | 4.0        | 22    | G       |
| 5STP 12K6500 | 6500      |           | 1370                   | 23.4      | 21.9 | 1.18      | 0.632      | 125       | 11.0       | 2.0        | 50    | K       |
| 5STP 18M6500 | 6500      |           | 1800                   | 35.0      | 32.0 | 1.20      | 0.430      | 125       | 9.0        | 1.5        | 70    | M       |
| 5STP 26N6500 | 6500      |           | 2810                   | 50.0      | 45.0 | 1.12      | 0.290      | 125       | 5.7        | 1.0        | 90    | N       |
| 5STP 42U6500 | 6500      |           | 3430                   | 76.2      | 71.4 | 1.24      | 0.162      | 110       | 4.0        | 0.8        | 135   | U       |
| 5STP 03X6500 | 6500      |           | 350                    | 4.8       | 4.5  | 1.20      | 2.300      | 125       | 45.0       | 7.5        | 10    | X       |
| 5STP 12N8500 | 8500      |           | 1200                   | 38.0      | 35.0 | 1.25      | 0.480      | 90        | 5.7        | 1.0        | 90    | N       |

Please refer to page 21 for part numbering structure.



Dimensions in mm