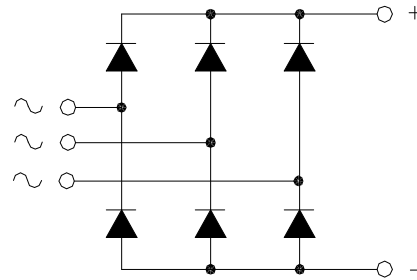




## DBM110

### POWER RECTIFIER BRIDGE

Output Current **110 A**



| $V_{RRM}$ | $V_{RSM}$ | P/N       |
|-----------|-----------|-----------|
| 400       | 500       | DBM110.04 |
| 600       | 700       | DBM110.06 |
| 800       | 900       | DBM110.08 |
| 1200      | 1300      | DBM110.12 |
| 1600      | 1700      | DBM110.16 |

#### Features

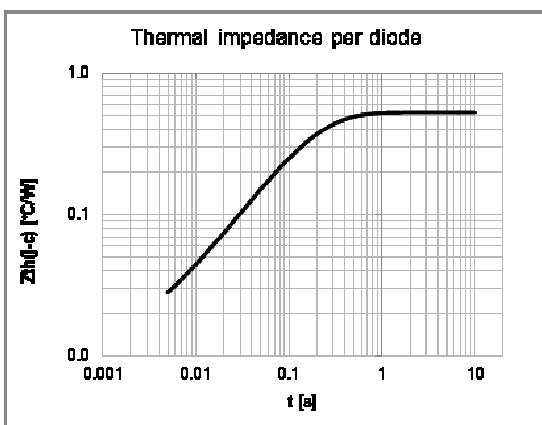
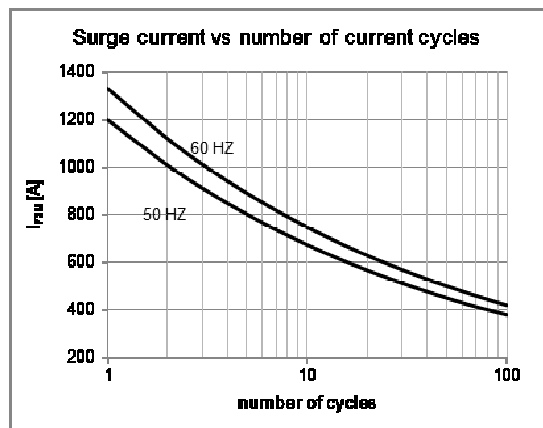
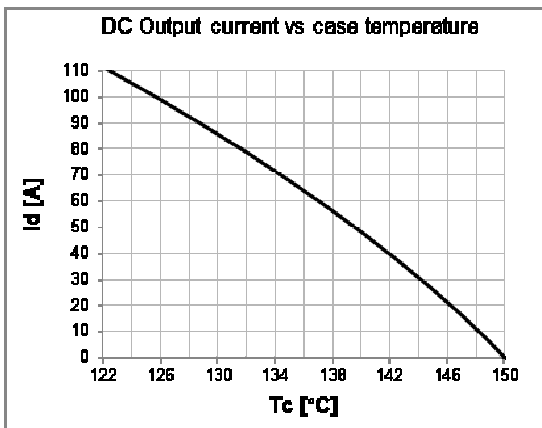
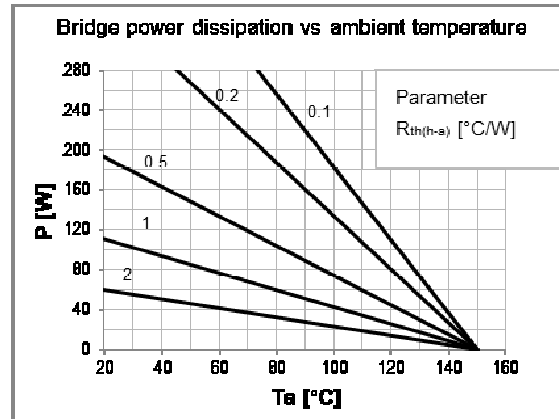
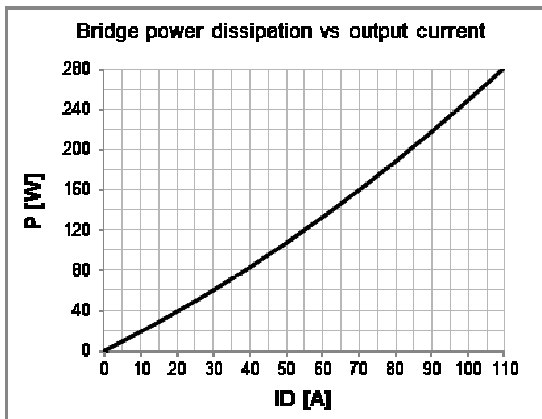
- Low forward voltage diodes for high surge capability
- Low thermal impedance packaging
- Electrically insulated case

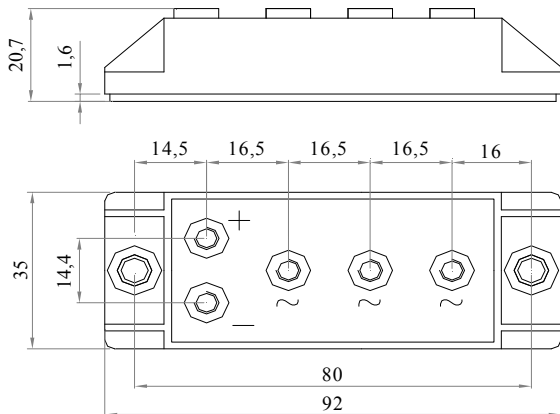
#### Applications

- Input rectifier for variable frequency drives
- Battery charger rectifiers
- Three phase rectifier for power supplies
- Rectifiers for DC motor fields supplies

| Diodes characteristics |                                       | Conditions                       | $T_j$ [°C] | Value                 |
|------------------------|---------------------------------------|----------------------------------|------------|-----------------------|
| $I_{RRM}$              | Max repetitive peak reverse current   | $V = V_{RRM}$                    | 150        | 4 mA                  |
| $V_{F(TO)}$            | Threshold voltage                     |                                  | 150        | 0,9 V                 |
| $r_F$                  | Forward slope resistance              |                                  | 150        | 3,5 mΩ                |
| $V_{FM}$               | Peak forward voltage, max             | $I_F = 100A$                     | 25         | 1,2 V                 |
| $I_{FSM}$              | Surge forward current                 | Half sine wave, 10 ms            | 150        | 1200 A                |
| $I^2t$                 | Max $I^2t$ for fusing                 |                                  | 150        | 7200 A <sup>2</sup> s |
| $T_{jmax}$             | Operating junction temperature        |                                  |            | -40 / 150 °C          |
| $R_{th(j-c)}$          | Thermal resistance (junction to case) | DC operation                     |            | 0,52 °C/W             |
| $R_{th(j-c)}$          | Thermal resistance (junction to case) | Rectangular wave 120° conduction |            | 0,58 °C/W             |

| Module characteristics |  | Conditions                                    | Value                 |
|------------------------|--|---|-----------------------|
| $I_D$                  | DC output current                        | $T_c = 122$ °C                                | 110 A                 |
| $I_D$                  | DC output current                        | $T_a = 40$ °C ; freely suspended              | 8 A                   |
| $V_{INS}$              | RMS Insulating voltage                   | 50 / 60 Hz $t = 1$ s ( $i < 1$ mA)            | 3600 V                |
| $V_{INS}$              | RMS Insulating voltage                   | 50 / 60 Hz $t = 60$ s ( $i < 1$ mA)           | 3000 V                |
| $R_{th(j-c)}$          | Thermal resistance (junction to case)    | DC operation                                  | 0,087 °C/W            |
| $R_{th(j-c)}$          | Thermal resistance (junction to case)    | Rect. wave 120° conduction                    | 0,097 °C/W            |
| $R_{th(c-h)}$          | Thermal resistance (case to heatsink)    | Mounting surface flat, smooth and greased     | 0,076 °C/W            |
| $R_{th(j-a)}$          | Thermal resistance (junction to ambient) | Freely suspended or mounted on an insulator   | 8,5 °C/W              |
| $R_{th(j-a)}$          | Thermal resistance (junction to ambient) | Mounted on a painted metal sheet 250x250x1 mm | 3,0 °C/W              |
| $T_{stg}$              | Max storage temperature                  |   | 150 °C                |
| $M_1$                  | Mounting torque, ± 15 %                  |   | 4,5 N·m<br>40 lb·inch |
| $M_2$                  | Terminal connection torque, ± 15 %       |   | 3,0 N·m<br>26 lb·inch |




**Fig.1**
**DBM110.04-SS5-FIX5-HP-P80-TA**

Code:DBM70001100005

**DBM110.06-SS5-FIX5-HP-P80-TA**

Code:DBM70001100023

**DBM110.08-SS5-FIX5-HP-P80-TA**

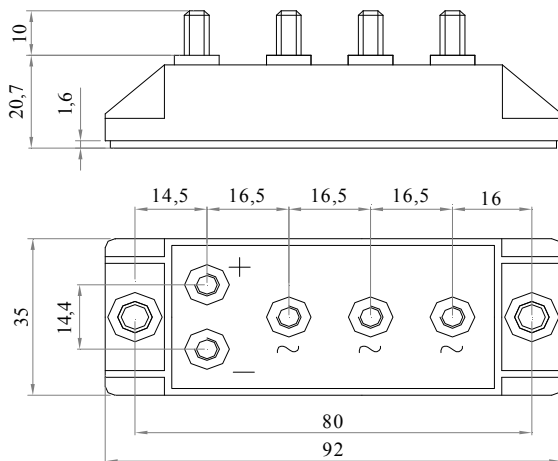
Code:DBM70001100041

**DBM110.12-SS5-FIX5-HP-P80-TA**

Code:DBM70001100059

**DBM110.16-SS5-FIX5-HP-P80-TA**

Code:DBM70001100077


**Fig.2**
**DBM110.04-MM5x10-FIX5-HP-P80-TA**

Code:DBM70001100001

**DBM110.06-MM5x10-FIX5-HP-P80-TA**

Code:DBM70001100019

**DBM110.08-MM5x10-FIX5-HP-P80-TA**

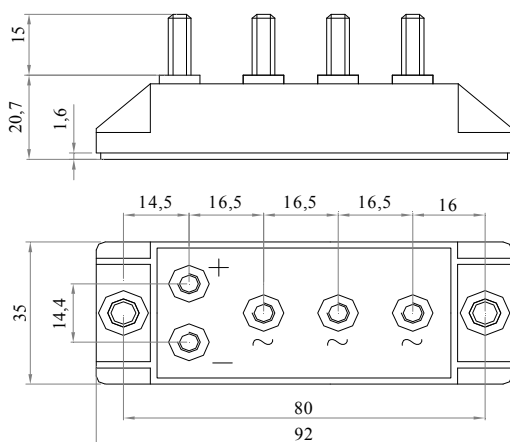
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**DBM110.12-MM5x10-FIX5-HP-P80-TA**

Code:DBM70001100055

**DBM110.16-MM5x10-FIX5-HP-P80-TA**

Code:DBM70001100073


**Fig.3**
**DBM110.04-MM5x15-FIX5-HP-P80-TA**

Code:DBM70001100003

**DBM110.06-MM5x15-FIX5-HP-P80-TA**

Code:DBM70001100021

**DBM110.08-MM5x15-FIX5-HP-P80-TA**

Code:DBM70001100039

**DBM110.12-MM5x15-FIX5-HP-P80-TA**

Code:DBM70001100057

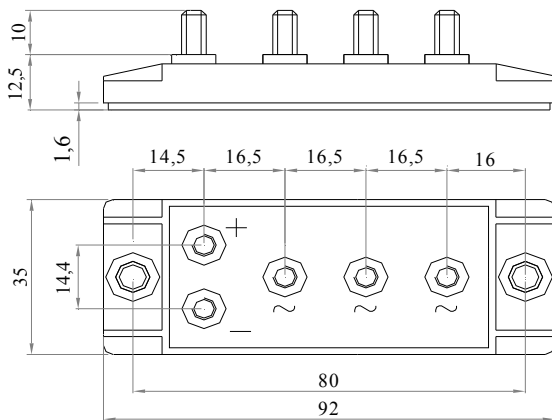
**DBM110.16-MM5x15-FIX5-HP-P80-TA**

Code:DBM70001100075

**Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V**

**Power fix:**  
 SS=Screw (M5)  
 MM=Bolt (M5)

**Mounting fix:**  
 FIX=  $\varnothing$ 5,5


**Fig.4**
**DBM110.04-MM5x10-FIX5-LP-P80-TA**

Code:DBM70001100000

**DBM110.06-MM5x10-FIX5-LP-P80-TA**

Code:DBM70001100018

**DBM110.08-MM5x10-FIX5-LP-P80-TA**

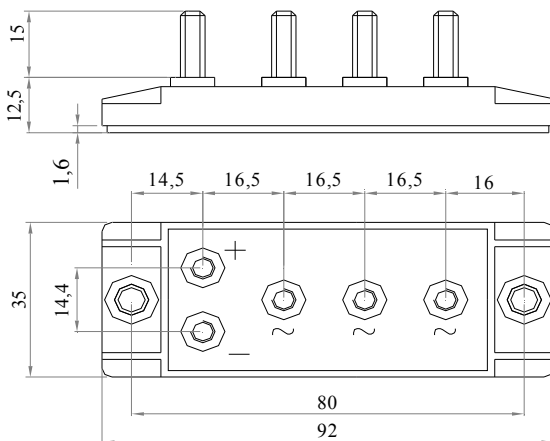
Code:DBM70001100036

**DBM110.12-MM5x10-FIX5-LP-P80-TA**

Code:DBM70001100054

**DBM110.16-MM5x10-FIX5-LP-P80-TA**

Code:DBM70001100072


**Fig.5**
**DBM110.04-MM5x15-FIX5-LP-P80-TA**

Code:DBM70001100002

**DBM110.06-MM5x15-FIX5-LP-P80-TA**

Code:DBM70001100020

**DBM110.08-MM5x15-FIX5-LP-P80-TA**

Code:DBM70001100038

**DBM110.12-MM5x15-FIX5-LP-P80-TA**

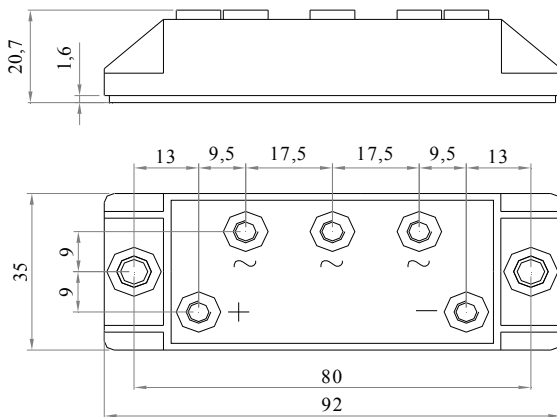
Code:DBM70001100056

**DBM110.16-MM5x15-FIX5-LP-P80-TA**

Code:DBM70001100074

**Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V**
**Power fix:**  
 MM=Bolt (M5)

**Mounting fix:**  
 FIX=  $\varnothing$ 5,5


**Fig.6**
**DBM110.04-SS5-FIX5-HP-P80-TB**

Code:DBM70001100011

**DBM110.06-SS5-FIX5-HP-P80-TB**

Code:DBM70001100029

**DBM110.08-SS5-FIX5-HP-P80-TB**

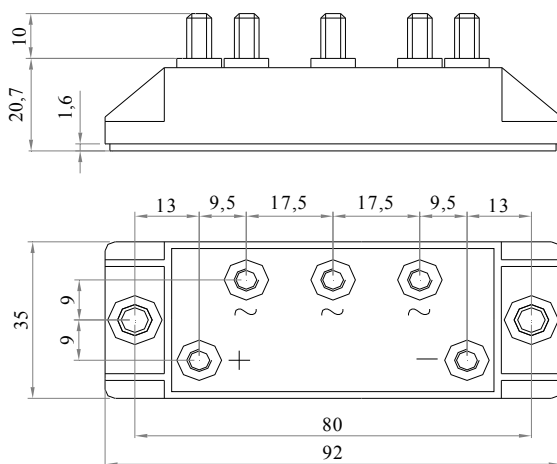
Code:DBM70001100047

**DBM110.12-SS5-FIX5-HP-P80-TB**

Code:DBM70001100065

**DBM110.16-SS5-FIX5-HP-P80-TB**

Code:DBM70001100083


**Fig.7**
**DBM110.04-MM5x10-FIX5-HP-P80-TB**

Code:DBM70001100007

**DBM110.06-MM5x10-FIX5-HP-P80-TB**

Code:DBM70001100025

**DBM110.08-MM5x10-FIX5-HP-P80-TB**

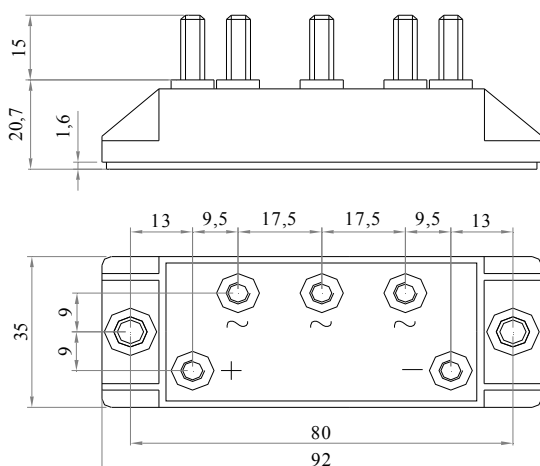
Code:DBM70001100043

**DBM110.12-MM5x10-FIX5-HP-P80-TB**

Code:DBM70001100061

**DBM110.16-MM5x10-FIX5-HP-P80-TB**

Code:DBM70001100079


**Fig.8**
**DBM110.04-MM5x15-FIX5-HP-P80-TB**

Code:DBM70001100009

**DBM110.06-MM5x15-FIX5-HP-P80-TB**

Code:DBM70001100027

**DBM110.08-MM5x15-FIX5-HP-P80-TB**

Code:DBM70001100045

**DBM110.12-MM5x15-FIX5-HP-P80-TB**

Code:DBM70001100063

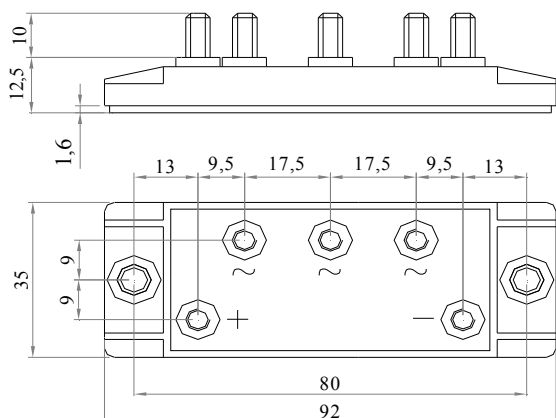
**DBM110.16-MM5x15-FIX5-HP-P80-TB**

Code:DBM70001100081

**Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V**

**Power fix:**  
 SS=Screw (M5)  
 MM=Bolt (M5)

**Mounting fix:**  
 FIX=  $\varnothing$ 5,5


**Fig.9**
**DBM110.04-MM5x10-FIX5-LP-P80-TB**

Code:DBM70001100006

**DBM110.06-MM5x10-FIX5-LP-P80-TB**

Code:DBM70001100024

**DBM110.08-MM5x10-FIX5-LP-P80-TB**

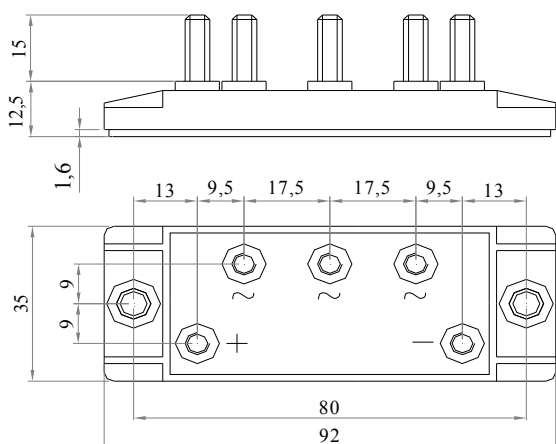
Code:DBM70001100042

**DBM110.12-MM5x10-FIX5-LP-P80-TB**

Code:DBM70001100060

**DBM110.16-MM5x10-FIX5-LP-P80-TB**

Code:DBM70001100078


**Fig.10**
**DBM110.04-MM5x15-FIX5-LP-P80-TB**

Code:DBM70001100008

**DBM110.06-MM5x15-FIX5-LP-P80-TB**

Code:DBM70001100026

**DBM110.08-MM5x15-FIX5-LP-P80-TB**

Code:DBM70001100044

**DBM110.12-MM5x15-FIX5-LP-P80-TB**

Code:DBM70001100062

**DBM110.16-MM5x15-FIX5-LP-P80-TB**

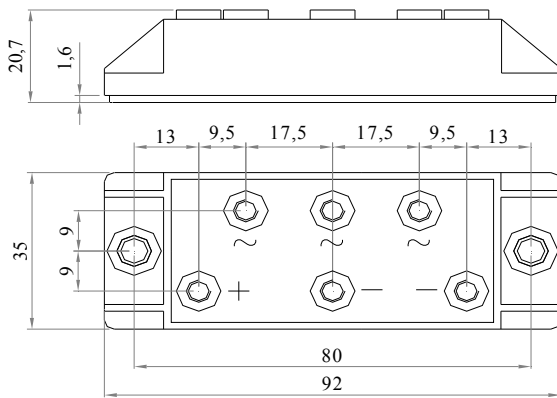
Code:DBM70001100080

**Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V**
**Power fix:**

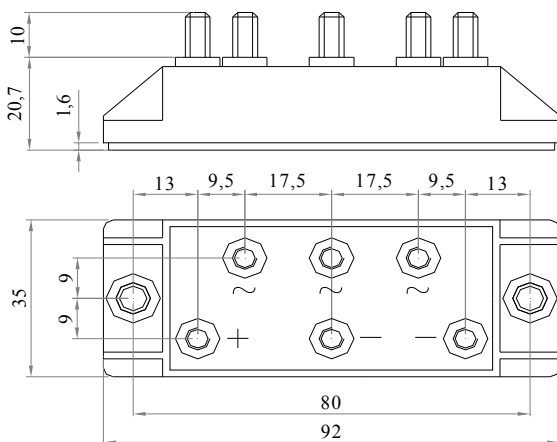
MM=Bolt (M5)

**Mounting fix:**

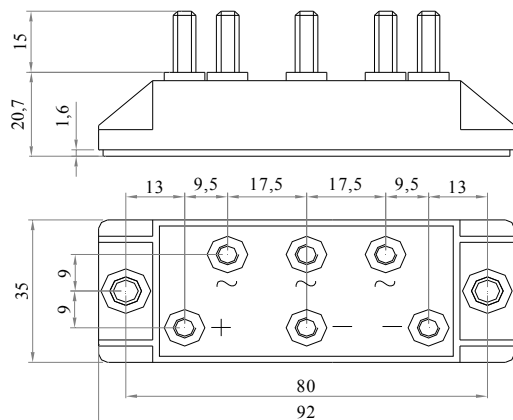
 FIX=  $\varnothing$ 5,5



**Fig.11** DBM110.04-SS5-FIX5-HP-P80-TC  
 Code:DBM70001100017  
 DBM110.06-SS5-FIX5-HP-P80-TC  
 Code:DBM70001100035  
 DBM110.08-SS5-FIX5-HP-P80-TC  
 Code:DBM70001100053  
 DBM110.12-SS5-FIX5-HP-P80-TC  
 Code:DBM70001100071  
 DBM110.16-SS5-FIX5-HP-P80-TC  
 Code:DBM70001100089



**Fig.12** DBM110.04-MM5x10-FIX5-HP-P80-TC  
 Code:DBM70001100013  
 DBM110.06-MM5x10-FIX5-HP-P80-TC  
 Code:DBM70001100031  
 DBM110.08-MM5x10-FIX5-HP-P80-TC  
 Code:DBM70001100049  
 DBM110.12-MM5x10-FIX5-HP-P80-TC  
 Code:DBM70001100067  
 DBM110.16-MM5x10-FIX5-HP-P80-TC  
 Code:DBM70001100085

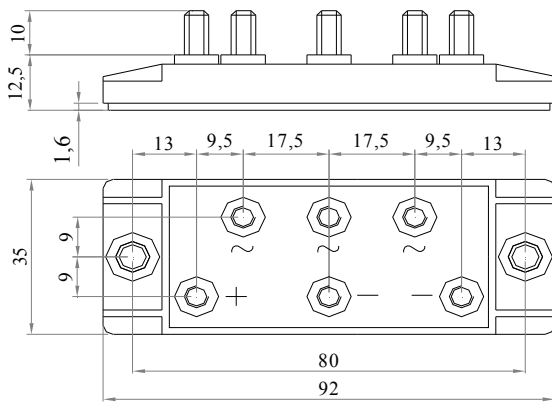


**Fig.13** DBM110.04-MM5x15-FIX5-HP-P80-TC  
 Code:DBM70001100015  
 DBM110.06-MM5x15-FIX5-HP-P80-TC  
 Code:DBM70001100033  
 DBM110.08-MM5x15-FIX5-HP-P80-TC  
 Code:DBM70001100051  
 DBM110.12-MM5x15-FIX5-HP-P80-TC  
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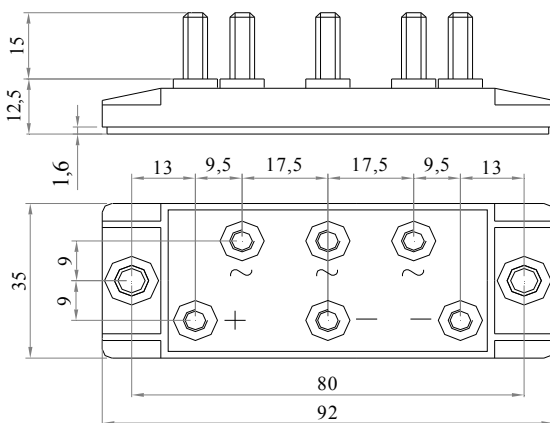
**Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V**

**Power fix:**  
 SS=Screw (M5)  
 MM=Bolt (M5)

**Mounting fix:**  
 FIX= Ø5,5



**Fig.15** DBM110.04-MM5x10-FIX5-LP-P80-TC  
 Code:DBM70001100012  
 DBM110.06-MM5x10-FIX5-LP-P80-TC  
 Code:DBM70001100030  
 DBM110.08-MM5x10-FIX5-LP-P80-TC  
 Code:DBM70001100048  
 DBM110.12-MM5x10-FIX5-LP-P80-TC  
 Code:DBM70001100066  
 DBM110.16-MM5x10-FIX5-LP-P80-TC  
 Code:DBM70001100084



**Fig.16** DBM110.04-MM5x15-FIX5-LP-P80-TC  
 Code:DBM70001100014  
 DBM110.06-MM5x15-FIX5-LP-P80-TC  
 Code:DBM70001100032  
 DBM110.08-MM5x15-FIX5-LP-P80-TC  
 Code:DBM70001100050  
 DBM110.12-MM5x15-FIX5-LP-P80-TC  
 Code:DBM70001100068  
 DBM110.16-MM5x15-FIX5-LP-P80-TC  
 Code:DBM70001100086

**Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V**

**Power fix:**  
 MM=Bolt (M5)

**Mounting fix:**  
 FIX=  $\varnothing$ 5,5