



# SCOMES

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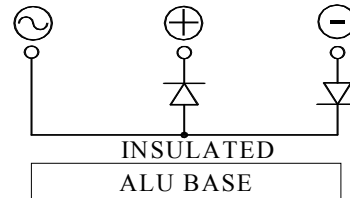
## MRY100.017

Schottky Technology

### INSULATED DIODE MODULE

**Output Current** 100A

**Blocking Voltage** 170V

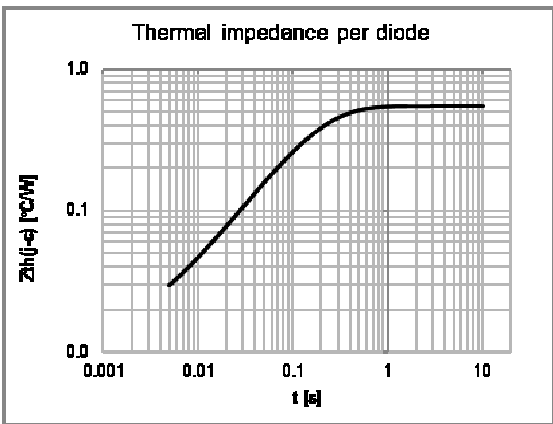
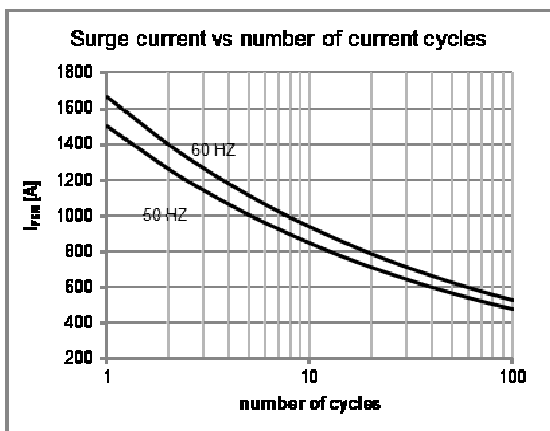
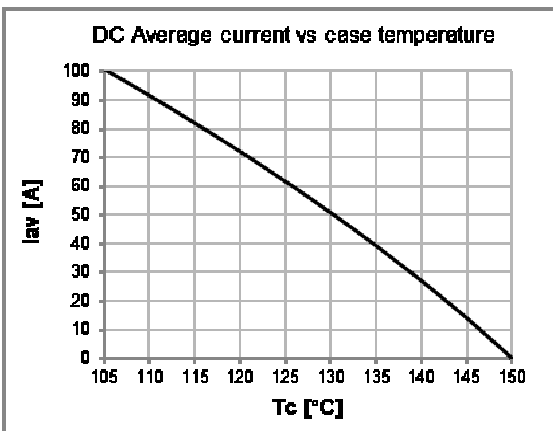
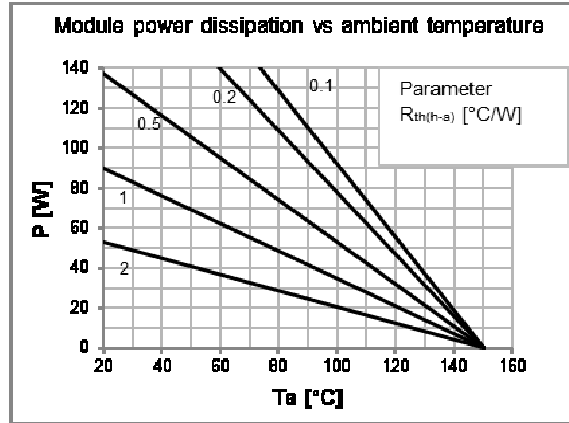
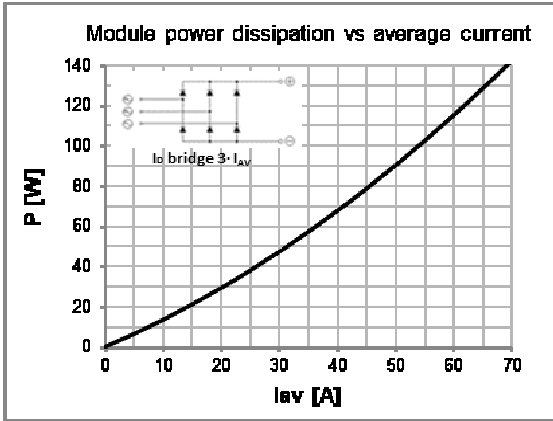


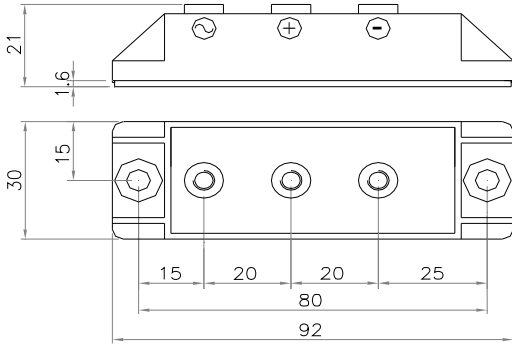
$V_{RRM}$	$V_{RSM}$	P/N
170	200	MRY100.017

Features	
High efficiency operation	
High frequency operation	
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	

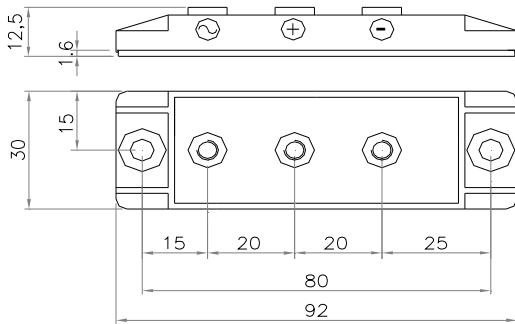
Diodes characteristics	Conditions	$T_j$ [°C]	Value
$I_{RRM}$	Max repetitive peak reverse current $V = V_{RRM}$	150	150 mA
$V_{F(TO)}$	Threshold voltage	150	0,62 V
$r_F$	Forward slope resistance	150	1,9 mΩ
$V_{FM}$	Peak forward voltage, max $I_F = 100A$	25	0,9 V
$I_{FSM}$	Surge forward current	Half sine wave, 10 ms	1500 A
$I^2t$	Max $I^2t$ for fusing	150	11250 A <sup>2</sup> s
$I_{F(AV)}$	Average forward current	$T_c = 105$ °C - DC	100 A
$I_{F(AV)}$	Average forward current	$T_c = 105$ °C - in three phase bridge configuration	75 A
$I_{F(AV)}$	Average forward current	$T_c = 105$ °C - in single phase bridge configuration	77 A
$T_{jmax}$	Operating junction temperature		-40 / 150 °C
$R_{th(j-c)}$	Thermal resistance (junction to case) DC operation		0,55 °C/W
$R_{th(j-c)}$	Thermal resistance (junction to case) Rectangular wave 120° conduction		0,59 °C/W

Module characteristics	Conditions	Value
$V_{INS}$	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	0,275 °C/W
$R_{th(j-c)}$	Thermal resistance (junction to case) Rect. wave 120° conduction	0,295 °C/W
$R_{th(c-h)}$	Thermal resistance (case to heatsink) Mounting surface flat, smooth and greased	0,150 °C/W
$R_{th(j-a)}$	Thermal resistance (junction to air) Freely suspended or mounted on an insulator	9,0 °C/W
$R_{th(j-a)}$	Thermal resistance (junction to air) Mounted on a painted metal sheet 250x250x1 mm	4,0 °C/W
$T_{stg}$	Max storage temperature	150 °C
$M_1$	Mounting torque, ± 15 %	4,5 N·m 40 lb·inch
$M_2$	Terminal connection torque, ± 15 %	3,0 N·m 26 lb·inch

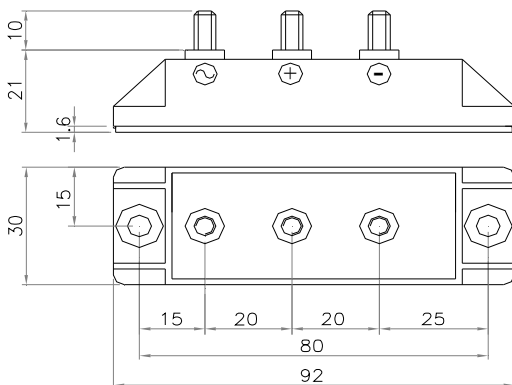




**Fig.1** MRY100.017-SS5-FIX5-HP-P80-TA  
Code:990001000009



**Fig.2** MRY100.017-SS5-FIX5-LP-P80-TA  
Code:990001000010

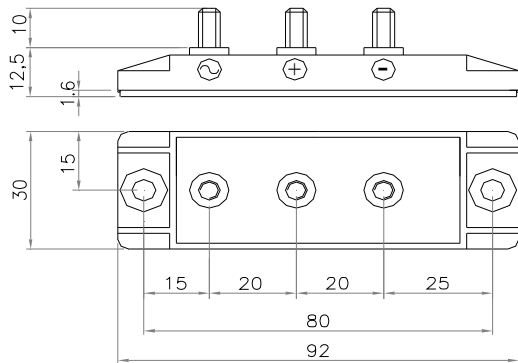


**Fig.3** MRY100.017-MM5x10-FIX5-HP-P80-TA  
Code:990001000011

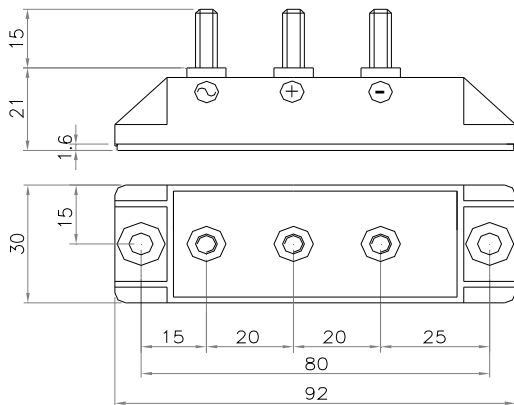
**Power fix:**  
SS=Screw (M5)

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

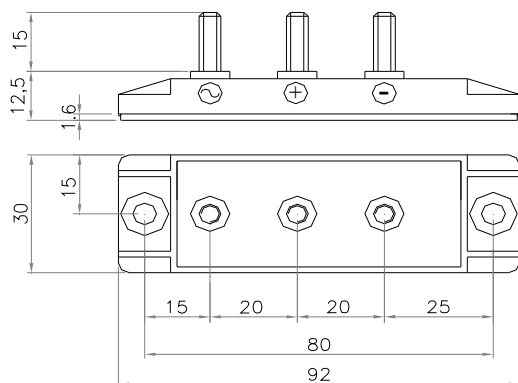
**Profile:**  
HP=High Profile LP=Low Profile



**Fig.4** MRY100.017-MM5x10-FIX5-LP-P80-TA  
Code:990001000012



**Fig.5** MRY100.017-MM5x15-FIX5-HP-P80-TA  
Code:990001000013



**Fig.6** MRY100.017-MM5x15-FIX5-LP-P80-TA  
Code:990001000014

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

**Mounting fix:**  
FIX= Ø5,5

**Profile:**  
HP=High Profile LP=Low Profile