

## Three – Phase Bridge Rectifier

**Features**

- Easy connections
- Excellent power volume ratio
- Insulated type

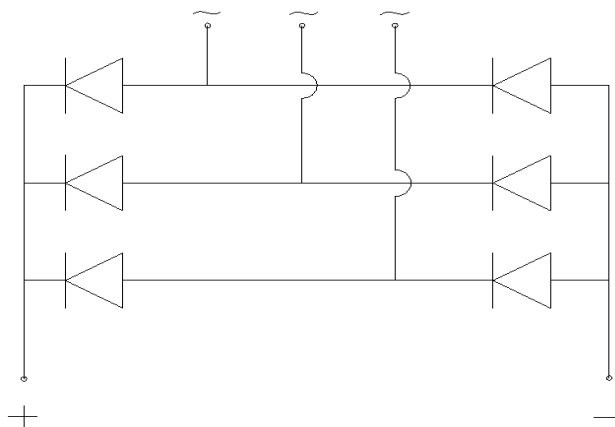
Voltage Ratings ( $T_J = 25^{\circ}\text{C}$ unless otherwise noted)				
Type number	Voltage code	VRRM, Max. repetitive peak reverse voltage (V)	VRSM, Max. non-repetitive peak reverse voltage (V)	IRRM max @ $T_J$ max (mA)
160 MDS	80	800	900	10
	100	1000	1100	
	120	1200	1300	
	140	1400	1500	
	160	1600	1700	

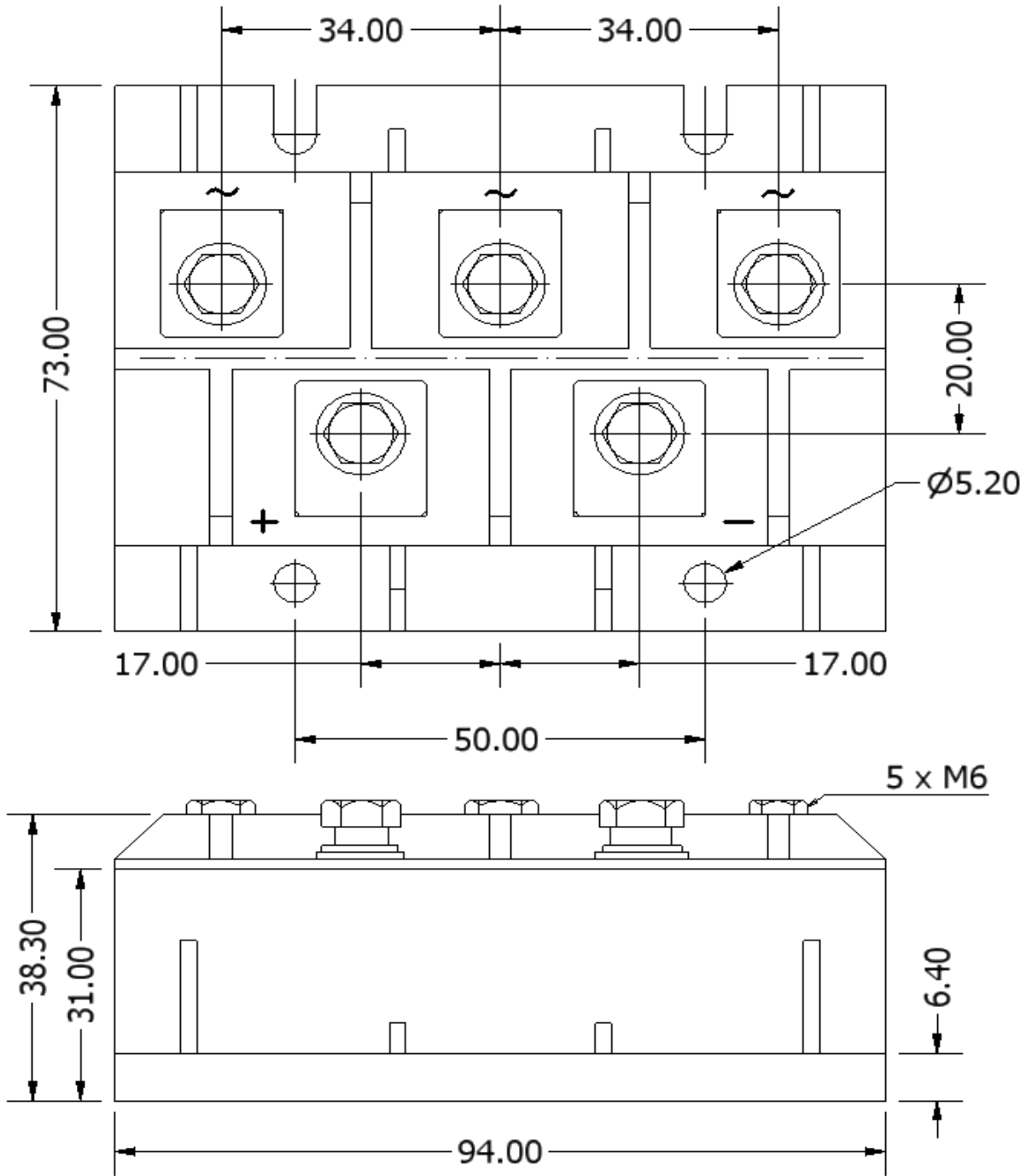

**MDS - 160**

Thermal and Mechanical Specifications ( $T_A = 250\text{C}$ unless otherwise noted)				
Parameters		Symbol	Values	Units
Maximum operating junction temperature range		$T_J$	- 40 to + 150	$^{\circ}\text{C}$
Maximum storage temperature range		$T_{\text{Stg}}$	- 40 to + 150	$^{\circ}\text{C}$
Maximum thermal resistance, junction to case	DC operation per module	$R_{\text{th}(JC)}$	0.12	$^{\circ}\text{C}/\text{W}$
	DC operation per junction		0.73	
	120 Rect conduction angle per module		0.15	
	120 Rect conduction angle per junction		0.88	
Maximum thermal resistance, case to heatsink	Per module, Mounting surface smooth, flat and greased	$R_{\text{th}(CS)}$	0.03	$^{\circ}\text{C}/\text{W}$
Mounting torque $\pm 10\%$	to heatsink	T	4 to 6	Nm
	to terminal		3 to 4	
Approximate weight			176	g

Electrical Specifications ( $T_J = 25^{\circ}\text{C}$ unless otherwise noted)					
Parameters	Conditions		Symbol	Values	Units
Maximum DC output current	120° Rect conduction angle, $T_C = 85^{\circ}\text{C}$		$I_0$	160	A
Maximum peak one-cycle forward, non-repetitive surge current	t = 10ms	No voltage reappplied	$I_{FSM}$	1430	A
	t = 8.3ms			1500	
	t = 8.3ms	100% $V_{RRM}$ reappplied		1200	
	t = 10ms			1260	
Maximum $I^2t$ for fusing	T = 8.3ms	No voltage reappplied	$I^2t$	10200	$\text{A}^2\text{s}$
	T = 10ms			9300	
	T = 8.3ms	100% $V_{RRM}$ reappplied		7200	
	T = 10ms			6600	
Maximum $J^2vt$ for fusing	T = 0.1 to 10ms, no voltage reappplied		$J^2vt$	102000	$\text{A}^2\text{Vs}$
Low level value of threshold voltage	[ $16.7\% * \pi * I_{F(AV)} < I < \pi * I_{F(AV)}$ ], @ $T_J$ max		$V_{F(TO)1}$	0.81	V
High level value of threshold voltage	[ $I > \pi * I_{F(AV)}$ ], @ $T_J$ max		$V_{F(TO)2}$	1.04	V
Low level value of forward slope resistance	[ $16.7\% * \pi * I_{F(AV)} < I < \pi * I_{F(AV)}$ ], @ $T_J$ max		$r_1$	3.52	$\text{m}\Omega$
High level value of forward slope resistance	[ $I > \pi * I_{F(AV)}$ ], @ $T_J$ max		$r_2$	3.13	$\text{m}\Omega$
Maximum forward voltage drop	$I_{pk} = 100\text{A}$ , $t_p = 400 \mu\text{s}$ single junction		$V_{FM}$	1.49	V
RMS isolation voltage	f = 50Hz, t = 1ms, all terminals shorted		$V_{ISO}$	4000	V

### Diode Configuration





ALL DIMENSIONS IN MM