

## Thyristor /Diode Modules

1 / 2

TYPE: MCD312-16io1

### Features

- Industrial standard package
- Electrically insulated base plate
- Heat transfer through aluminium oxide ceramic insulated metal base plate
- Chip soldered on direct copper bonded  $AL_2O_3$  ceramic
- Thyristor chip with center gate

### Typical Applications

- DC motor control
- AC motor soft starters
- Temperature control
- Professional light dimming

$V_{DRM}/V_{RRM}$	$T_j=25^{\circ}C$	1600	V
$V_{RSM}$	$T_j=25^{\circ}C$	1700	V

### Maximum Ratings

Symbol	Condition	Ratings	Unit
$I_{T(AV)}$	sin. 180; $T_c = 85^{\circ}C$ ,	320	A
$I_{TRMS}$	sin. 180; $T_c = 85^{\circ}C$ ,	500	A
$I_{TSM}$	$T_{vj}=45^{\circ}C$ ; 10 ms	9200	A
	$T_{vj}=125^{\circ}C$ ; 10 ms	7820	A
$I^2t$	$T_{vj}=45^{\circ}C$ ; 8,3...10 ms	423.2	$kA^2S$
$(di/dt)_{cr}$	non-repetitive	100	A/us
$V_{iso}$	A.C. 1s / 1min.	3600/3000	V
$T_j$		-40 ~ + 140	$^{\circ}C$
$T_{stg}$		-40 ~ + 125	$^{\circ}C$
W	About	255	g

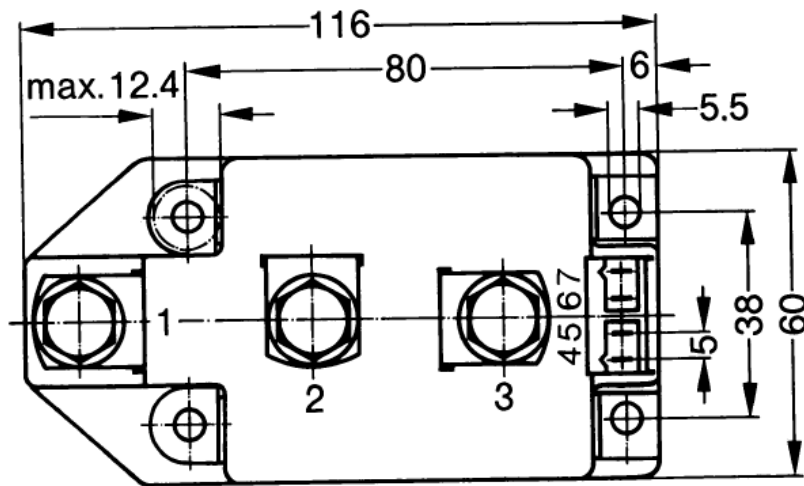
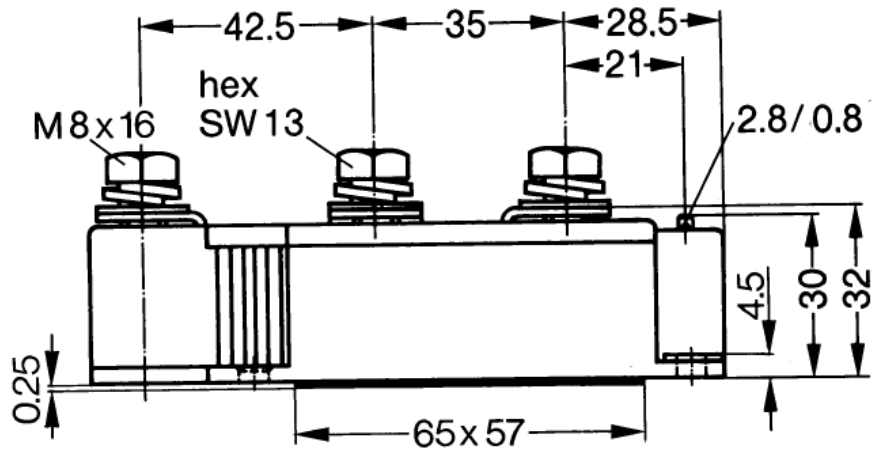
### Electrical Characteristics

Symbol	Condition	Ratings	Unit
$I_{DRM} / I_{RRM}$	At $V_{DRM}$ , $T_j=140^{\circ}C$	40	mA
$V_T$	On-State Current 600A, $T_j=25^{\circ}C$	132	V
$V_{T(TO)}$	$T_j=125^{\circ}C$	0.80	V
$t_{gd}$	$T_j=25^{\circ}C$	2	us
$t_q$	$T_j=100^{\circ}C$	200	us
$I_{GT}/V_{GT}$	$T_j=25^{\circ}C$	150 / 2.0	mA/V
$V_{GD}$	$T_j=125^{\circ}C$	0.25	V
$(dv/dt)_{cr}$	$T_j=125^{\circ}C$	1000	V/us
$I_H$	$T_j=25^{\circ}C$ , max.	150	mA
$I_L$	$T_j=25^{\circ}C$ , max.	200	mA
$R_{th(j-c)}$	Per Module	0.11	K/W

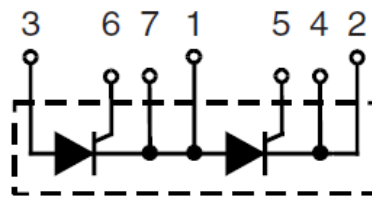
Thyristor /Diode Modules

TYPE: MCD312-16io1

Outline Drawing



MCC  
Version 1 B



MCD  
Version 1 B

