



**SEMIPACK® 1**

## Modules with Thyristor and Free-Wheeling Diode

### SKNH 56

#### Features

- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532
- Electrical data see also data sheet SKKH 57

#### Typical Applications\*

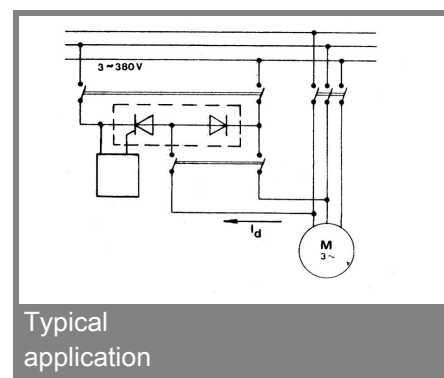
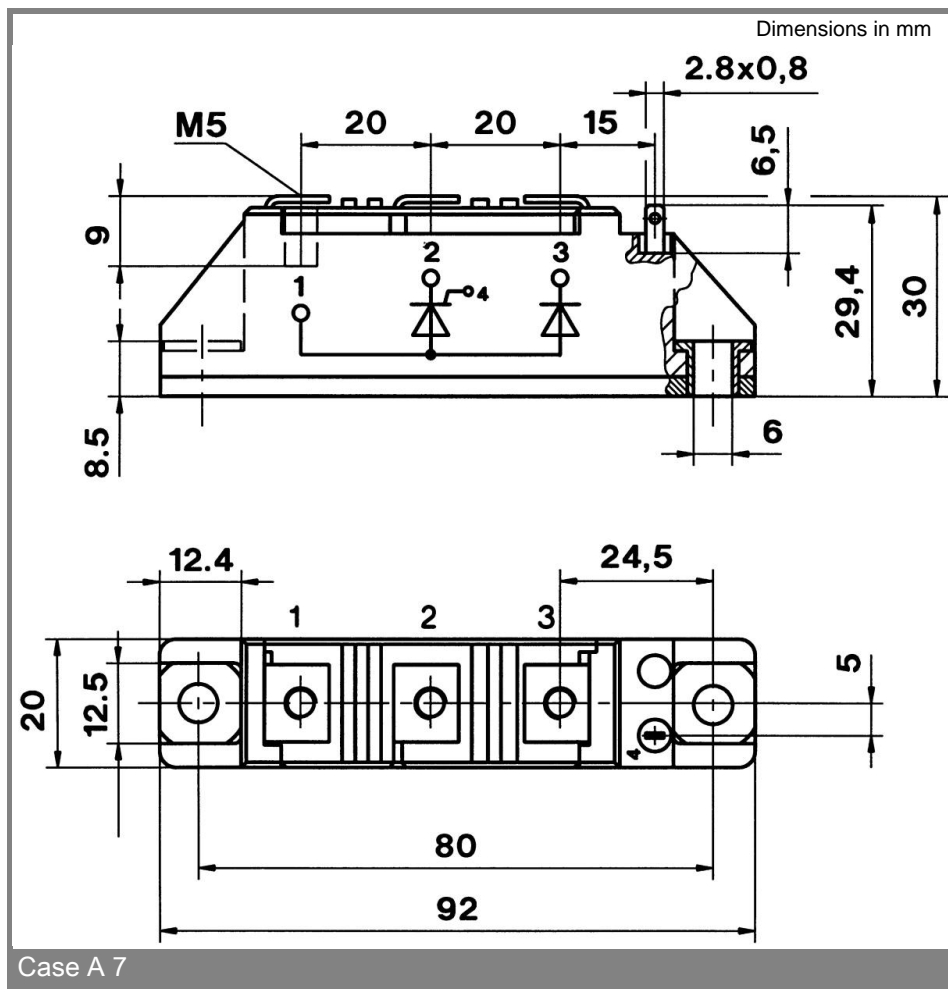
- Special modules for DC braking of AC induction motors

$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_{TRMS} = 95 \text{ A}$ (maximum value for continuous operation) $I_{TAV} = 50 \text{ A}$ (sin. 180; $T_c = 85^\circ \text{C}$ )	
1300	1200	SKNH 56/12E	
1500	1400	SKNH 56/14E	
1700	1600	SKNH 56/16E	
1900	1800	SKNH 56/18E	

Symbol	Conditions	Values	Units
$I_{TAV}$	sin. 180; $T_c = 85 (100)^\circ \text{C}$ ;	50 (35)	A
$I_D$	P3/120; $T_a = 45^\circ \text{C}$ ;	70	A
$I_{TSM}$	$T_{vj} = 25^\circ \text{C}$ ; 10 ms	1500	A
	$T_{vj} = 125^\circ \text{C}$ ; 10 ms	1250	A
$i^2t$	$T_{vj} = 25^\circ \text{C}$ ; 8,3 ... 10 ms	11000	A <sup>2</sup> s
	$T_{vj} = 125^\circ \text{C}$ ; 8,3 ... 10 ms	8000	A <sup>2</sup> s
$V_T$	$T_{vj} = 25^\circ \text{C}$ ; $I_T = 200 \text{ A}$	max. 1,65	V
$V_{T(TO)}$	$T_{vj} = 125^\circ \text{C}$	max. 0,9	V
$r_T$	$T_{vj} = 125^\circ \text{C}$	max. 3,5	mΩ
$I_{DD}, I_{RD}$	$T_{vj} = 25^\circ \text{C}$ ; $V_{RD} = V_{RRM}$ ; $V_{DD} = V_{DRM}$	max. 15	mA
$t_{gd}$	$T_{vj} = 25^\circ \text{C}$ ; $I_G = 1 \text{ A}$ ; $di_G/dt = 1 \text{ A}/\mu\text{s}$	1	μs
$t_{gr}$	$V_D = 0,67 \cdot V_{DRM}$	2	μs
$(di/dt)_{cr}$	$T_{vj} = 125^\circ \text{C}$	max. 100	A/μs
$(dv/dt)_{cr}$	$T_{vj} = 125^\circ \text{C}$	max. 1000	V/μs
$t_q$	$T_{vj} = 125^\circ \text{C}$	50 ... 150	μs
$I_H$	$T_{vj} = 25^\circ \text{C}$ ; typ. / max.	/ 250	mA
$I_L$	$T_{vj} = 25^\circ \text{C}$ ; $R_G = 33 \Omega$ ; typ. / max.	/ 600	mA
$V_{GT}$	$T_{vj} = 25^\circ \text{C}$ ; d.c.	min. 3	V
$I_{GT}$	$T_{vj} = 25^\circ \text{C}$ ; d.c.	min. 150	mA
$V_{GD}$	$T_{vj} = 125^\circ \text{C}$ ; d.c.	max. 0,25	V
$I_{GD}$	$T_{vj} = 125^\circ \text{C}$ ; d.c.	max. 6	mA
$R_{th(j-c)}$	cont.; per thyristor / per diode	0,57	K/W
$R_{th(j-c)}$	sin. 180; per thyristor / per diode	0,6	K/W
$R_{th(j-c)}$	sin. 180; per module	0,3	K/W
$R_{th(c-s)}$	per thyristor / per module	0,2 / 0,1	K/W
$T_{vj}$		- 40 ... + 125	°C
$T_{stg}$		- 40 ... + 125	°C
$V_{isol}$	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
$M_s$	to heatsink	5 ± 15 %	Nm
$M_t$	to terminals	5 ± 15 %	Nm
$a$		5 * 9,81	m/s <sup>2</sup>
$m$	approx.	120	g
Case		A 7	



**SKNH**



\* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.