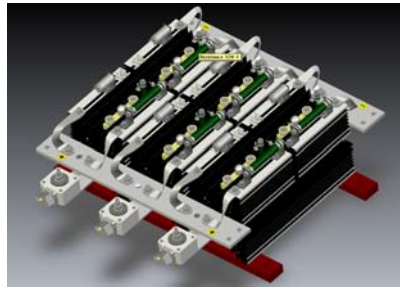


SKS 700N B6C 470 V16



SEMISTACK Thyristor

Three-phase controlled bridge rectifier

SKS 700N B6C 470 V16

Preliminary Data

Features

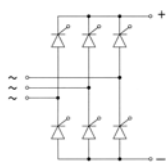
- P11 heatsink
- Presspack stack with double side cooling
- Natural convection cooled
- Black anodized heatsink for maximum radiation

Typical Applications

- Industrial rectifiers
- Softstarters
- DC motor control
- AC controller

Options

No. 08755015



B6C

Characteristics						
Symbol	Conditions	min.	typ.	max.	Unit	
Electrical Data						
I_d		no overload		700	A	
	$T_{amb} = 45^\circ\text{C}$	150 % overload, 60s every 10 min.		604	907	A
		200 % overload, 60s every 10 min.		549	1099	A
V_{CES}				1600	V	
V_{DC}	DC voltage applied to the capacitor bank			670	V	
V_{AC}	network voltage (line side), -20% / +15%			500	V	
V_{isol}	50 Hz / 1 min.		2500		V	
i^2t	$T_{vj} = 25^\circ\text{C}$			1125	kA^2s	
	$T_{vj} = 125^\circ\text{C}$			845	kA^2s	
$(di/dt)_{cr}$	$T_{vj} = 125^\circ\text{C}$			125	$\text{A}/\mu\text{s}$	
$(dv/dt)_{cr}$				1000	$\text{V}/\mu\text{s}$	
V_{GT}		3			V	
I_{GT}		200			mA	
P_{tot}	$T_{amb} = 45^\circ\text{C}$		1787		W	
R_{thja}	per component		0.30		K/W	
T_{vj}		-40		125	$^\circ\text{C}$	
Fuse	Type SU (690V) Size 32		630		A	
RC	Resistance (80W)		33		Ω	
RC	Capacitance (900V _{dc} / 630V _{ac})		0.47		μF	
Thermal trip	normally closed		95		$^\circ\text{C}$	
Mechanical Data						
dv/dt_{AIR}					m^3/h	
w	approx. total weight		56		kg	
Size	Width x Depth x Height (with fan)	700	650	311	mm	
T_{stg}		5		60	$^\circ\text{C}$	
T_{amb}		5		60	$^\circ\text{C}$	
Altitude	Installation height w/o derating			1000	m	
Protection			IP00			
Pollution	EN 50178		2			
Fan Data						
Fan	included in the stack (NO)					
Type						
V_{Fan}	Fan voltage				V	
f_{FAN}	Fan frequency				Hz	
I_{FAN}	Fan current				A	
P_{FAN}	Fan power				W	

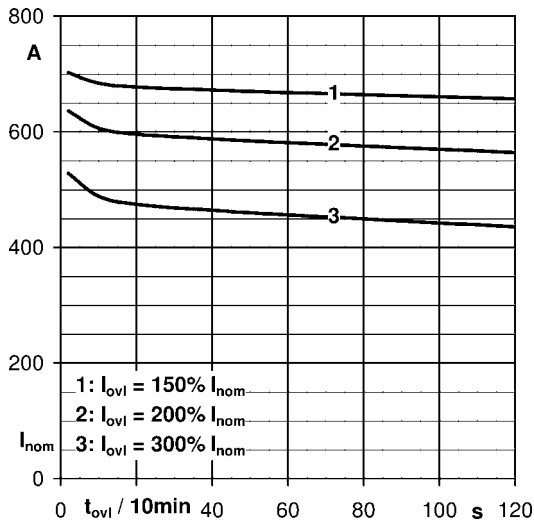


Fig. 1 Maximal overload factor vs nom current and ovl duration, $T_{amb} = 35^{\circ}\text{C}$

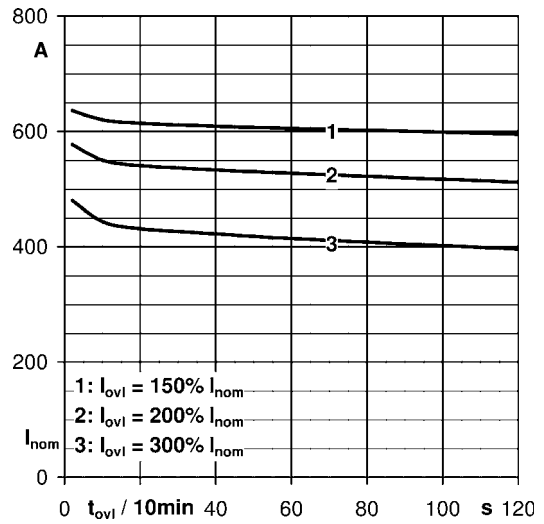


Fig. 2 Maximal overload factor vs nom current and ovl duration, $T_{amb} = 45^{\circ}\text{C}$

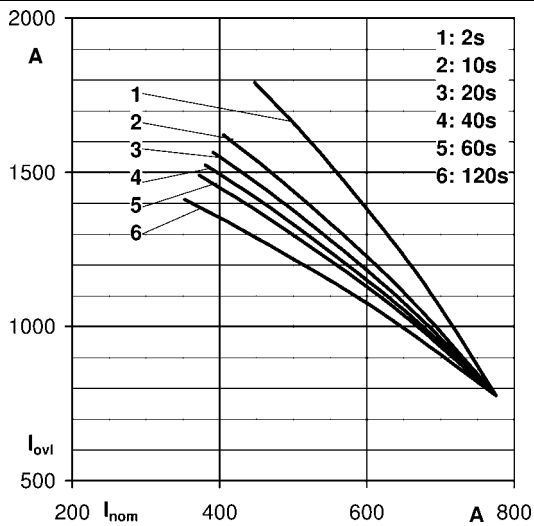


Fig. 3 Maximal overload duration vs nom current and ovl factor, $T_{amb} = 35^{\circ}\text{C}$

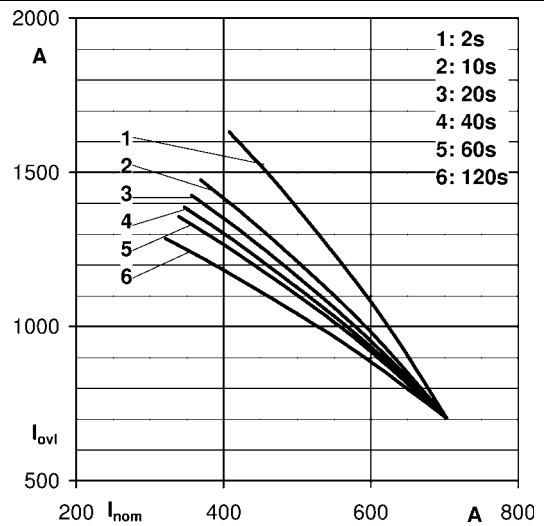


Fig. 4 Maximal overload duration vs nom current and ovl factor, $T_{amb} = 45^{\circ}\text{C}$

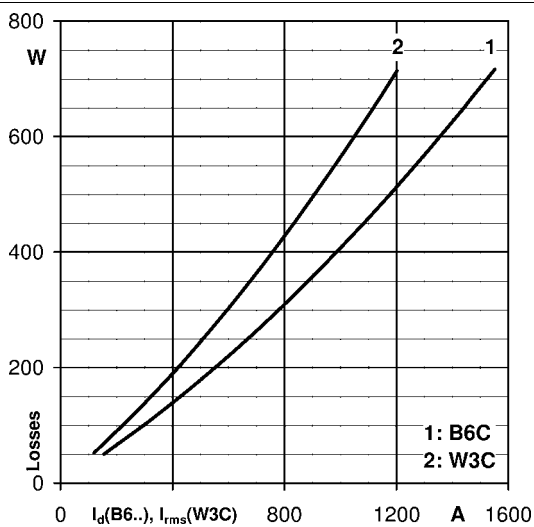


Fig.5 Power losses

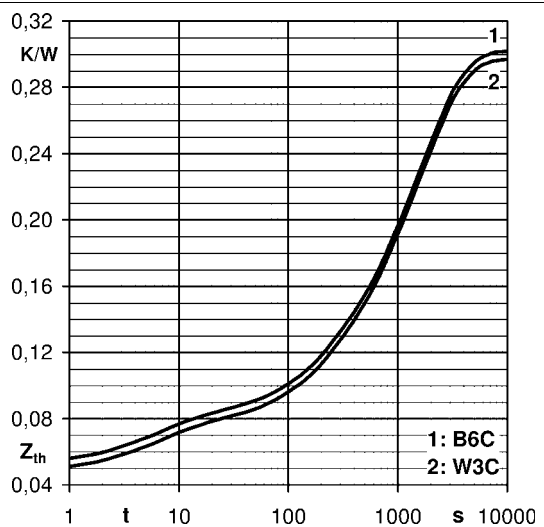
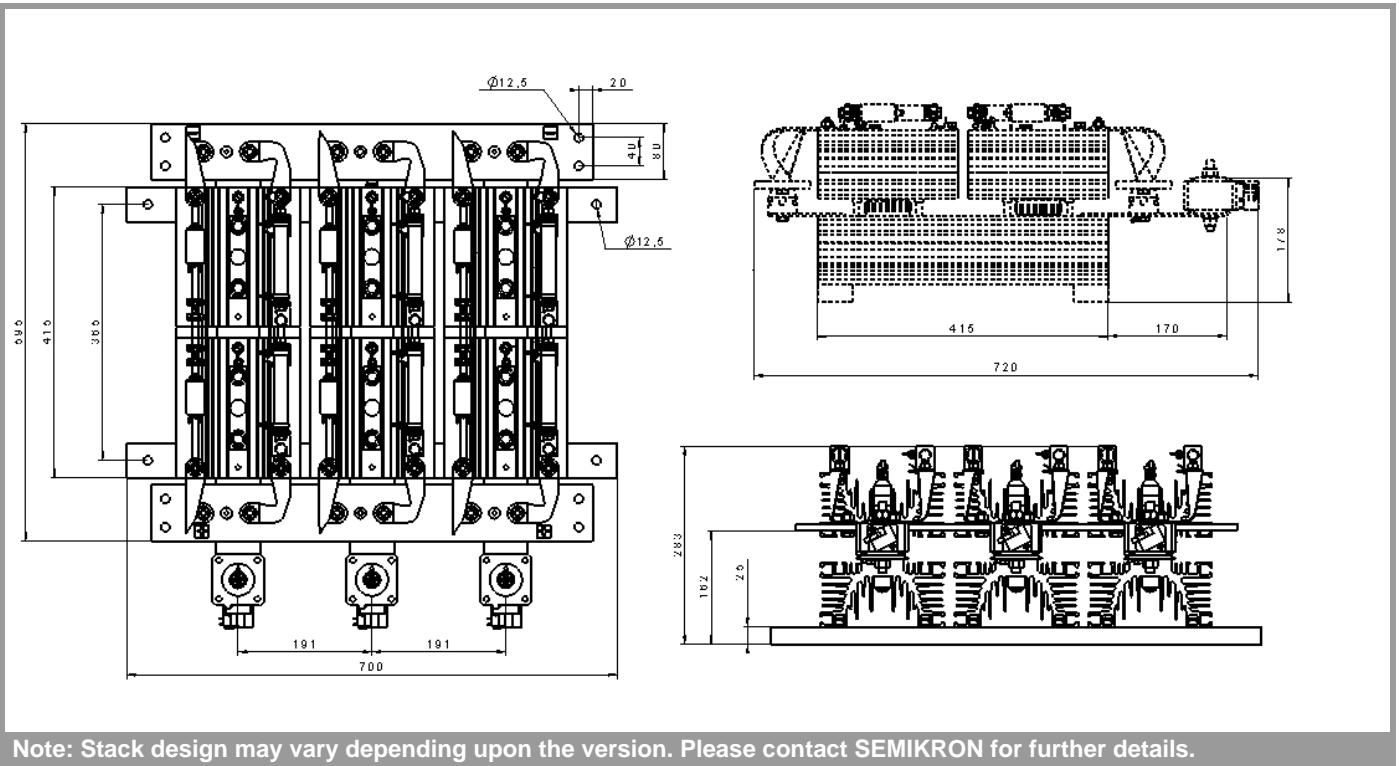


Fig. 6 Thermal impedance $Z_{th}(j-a)$

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Note: Stack design may vary depending upon the version. Please contact SEMIKRON for further details.

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