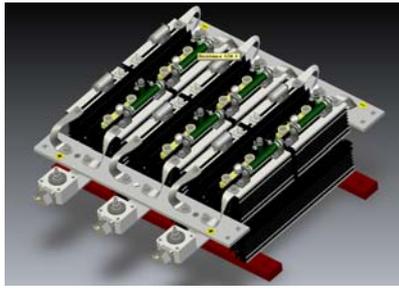


# SKS 700N B6C 470 V16



## 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

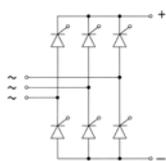
#### Typical Applications

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

#### Options

No. 08755015

Characteristics						
Symbol	Conditions	min.	typ.	max.	Unit	
<b>Electrical Data</b>						
$I_d$		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	$\text{kA}^2\text{s}$	
	$T_{vj} = 125^\circ\text{C}$			845	$\text{kA}^2\text{s}$	
$(di/dt)_{cr}$	$T_{vj} = 125^\circ\text{C}$			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		$\Omega$	
RC	Capacitance (900V <sub>dc</sub> / 630V <sub>ac</sub> )		0.47		$\mu\text{F}$	
Thermal trip	normally closed		95		$^\circ\text{C}$	
<b>Mechanical Data</b>						
$dv/dt_{AIR}$					$\text{m}^3/\text{h}$	
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			
<b>Fan Data</b>						
Fan	included in the stack ( <b>NO</b> )					
Type						
$V_{Fan}$	Fan voltage				V	
$f_{FAN}$	Fan frequency				Hz	
$I_{FAN}$	Fan current				A	
$P_{FAN}$	Fan power				W	



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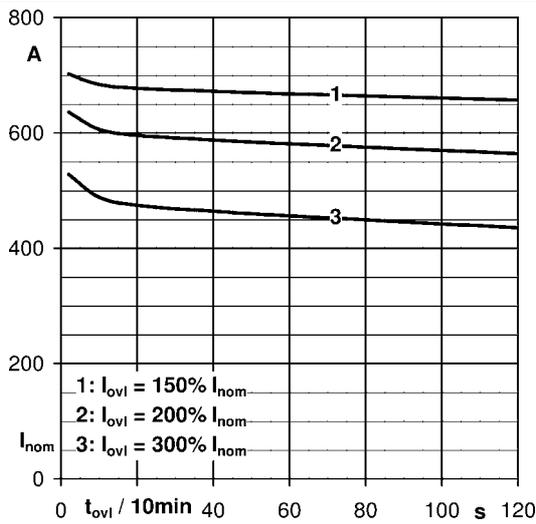


Fig. 1 Maximal overload factor vs nom current and ovl duration,  $T_{amb} = 35^{\circ}\text{C}$

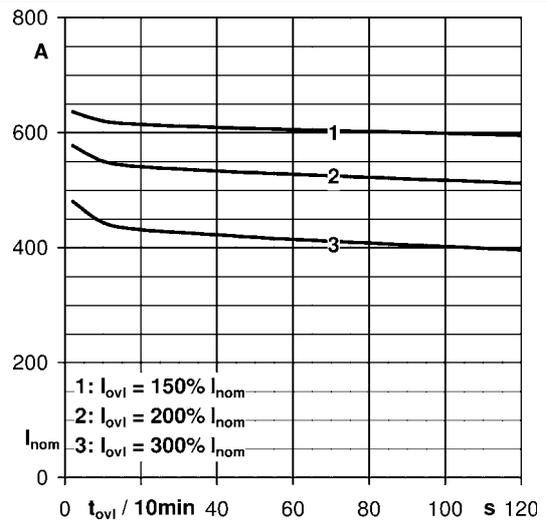


Fig. 2 Maximal overload factor vs nom current and ovl duration,  $T_{amb} = 45^{\circ}\text{C}$

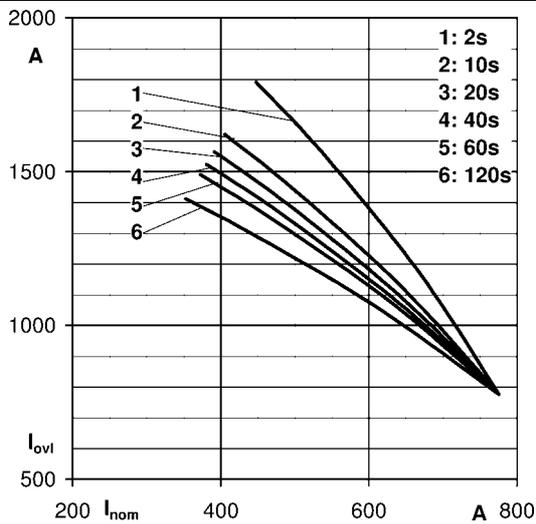


Fig. 3 Maximal overload duration vs nom current and ovl factor,  $T_{amb} = 35^{\circ}\text{C}$

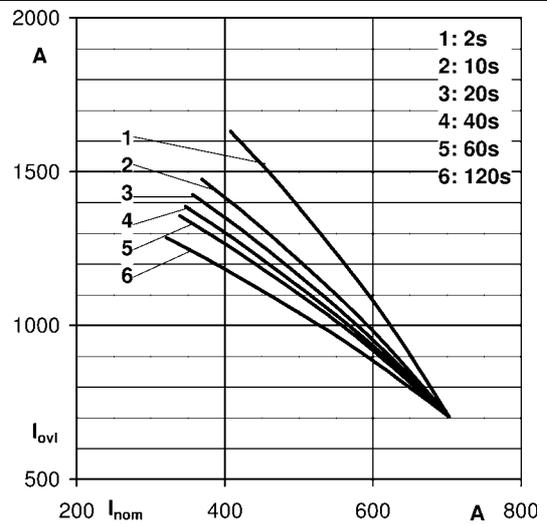


Fig. 4 Maximal overload duration vs nom current and ovl factor,  $T_{amb} = 45^{\circ}\text{C}$

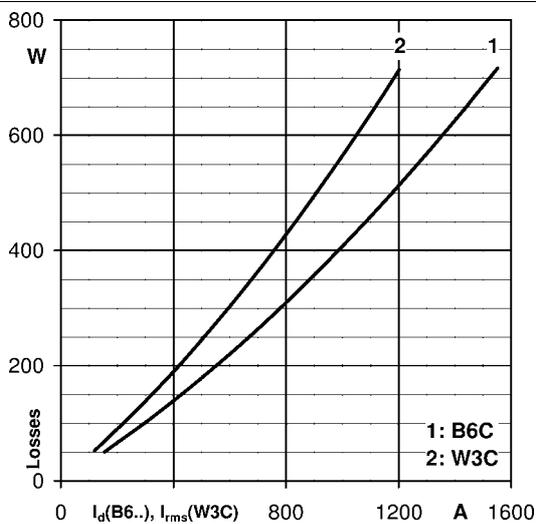


Fig.5 Power losses

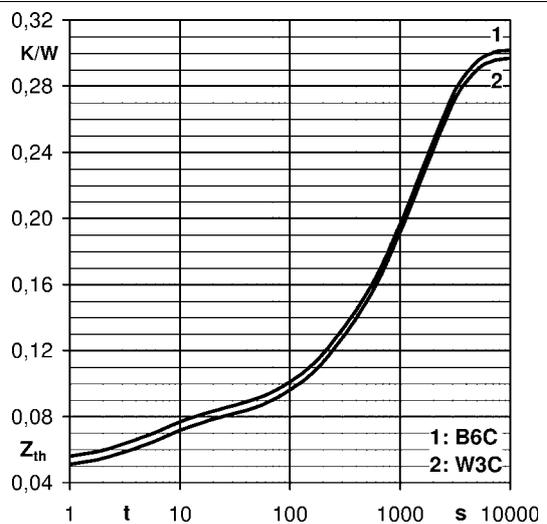
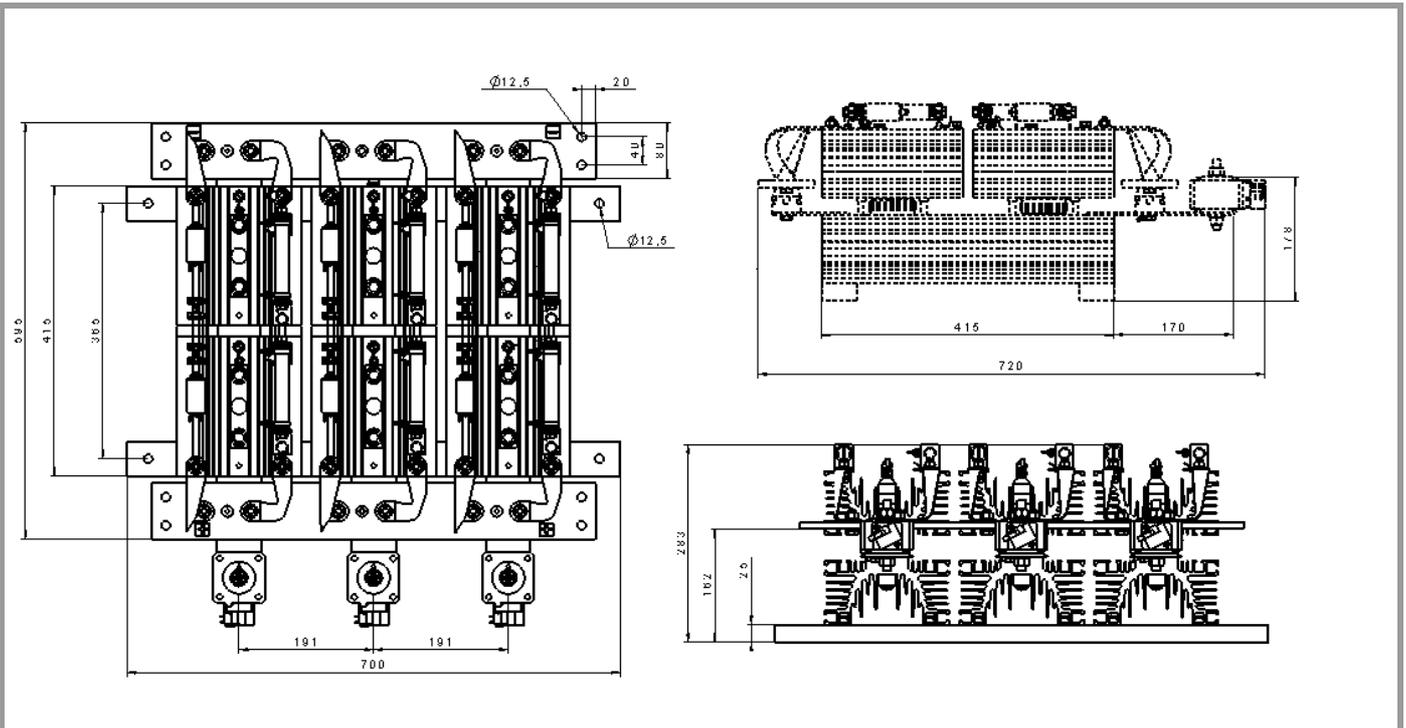


Fig. 6 Thermal impedance  $Z_{th}(j-a)$

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

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