

		Specification for rectifier module 0N-74153			
Project:	SDC			Reg. No.	0N-74153-SPEC
Originator:	AZFAR	Date:	13.06.2023	Rev. No.	1
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Rev.	Date	Initials	Remark
1	13.06.2023	AZFAR	Initial, based on 0M-94000A_REV01 SPEC.

1. ELECTRICAL SPECIFICATION:

1.1. Natural cooled

Function	Nominal value	Tolerance	Adjustment
Max. DC voltage	500V		
Max. DC current, continuous (100% load)	125A _{rms}		
Max. DC current, 2s (150% load)	187A _{rms}		
Powerloss thyristors at 100% load	294W		
Powerloss diode at 100% load	-W		
Powerloss total at 100% load	294W		
Powerloss thyristors at 150% load	491W		
Powerloss diode at 150% load	-W		
Powerloss total at 150% load	491W		
I ² t (rectifier 25 °C)	20kA ² s		
I ² t (rectifier 125 °C)	15kA ² s		
Driver unit supply voltage	-15 VDC		
Driver unit supply current max. at -15V _{DC}			
No load conditions	max. 40mA		
Load condition until 150% load	max. 310mA		
Temperature warning level	100°C	+/- 4 °C	
Temperature shut down level	110°C	+/- 4 °C	
Minimum airflow through heat sink	- m/s		
Air temperature into heat sink	0 – 45°C		

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1.2. Forced cooled

Function	Nominal value	Tolerance	Adjustment
Max. DC voltage	500V		
Max. DC current, continuous (100% load)	160A _{rms}		
Max. DC current, 2s (150% load)	240A _{rms}		
Powerloss thyristors at 100% load	401W		
Powerloss diode at 100% load	-W		
Powerloss total at 100% load	401W		
Powerloss thyristors at 150% load	686W		
Powerloss diode at 150% load	-W		
Powerloss total at 150% load	686W		
I ² t (rectifier 25 °C)	20kA ² s		
I ² t (rectifier 125 °C)	15kA ² s		
Driver unit supply voltage	-15 VDC		
Driver unit supply current max. at -15V _{DC}			
No load conditions	max. 40mA		
Load condition until 150% load	max. 310mA		
Temperature warning level	90°C	+/- 4 °C	
Temperature shut down level	100°C	+/- 4 °C	
Minimum airflow through heat sink	6m/s		
Air temperature into heat sink	0 – 60°C		

The Power Module is developed according to standard IEC 950 Edition: 2, Amendment: A4.

2. ADJUSTMENT AND PROGRAMMING

There are no parameters for adjustment or programming.

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3. TERMINALS FOR INPUT AND OUTPUT

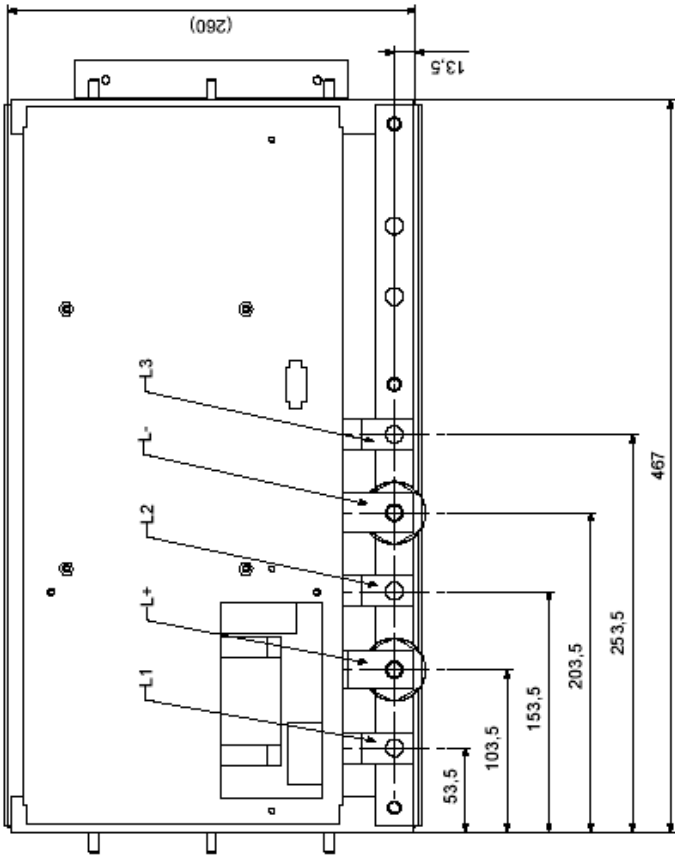
Description of the connectors on the iso driver: see specification of 0P8593xx-001, where “xx” stands for the latest letter revision.

Power terminals			
TERMI- NAL	INPUT /OUTPUT	FUNCTION	ELECTRICAL DATA
L1, L2, L3	Input	AC input terminals	Max. AC voltage = 416V _{rms} I _{RMS} cont. max: 130A _{rms}
L+	Output	DC+ terminal	Max. DC voltage = 500V I _{RMS} cont. max: 160A _{rms}
L-	Output	DC- terminal	0 Volt I _{RMS} cont. max: 160A _{rms}

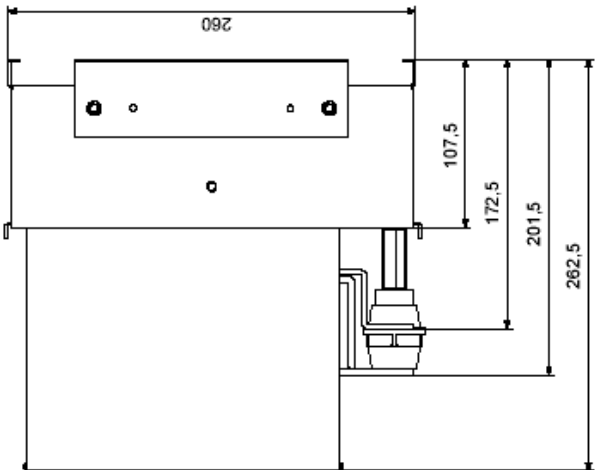
4. MECHANICAL DIMENSION

Weight Approx. 13.0kg +/- 0.5kg

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ALL TERMINAL BOLTS ARE M12



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FUNCTIONAL DESCRIPTION

The rectifier SDC thyristor module is a B6C bridge, constructed with three dual thyristor modules. Schematic drawing: see 8001181. All the connections and jumper settings are mentioned here. The rectifier can be stopped by means of the PULSE_BLK- signal on X003, provided by a VLU module. If no VLU module is available, X003 is left open. The “temp loop” functionality is provided by means of connector X012 and can be disabled by means of jumper J106. The aim of the “temp loop” functionality is to simplify the system wiring in combination with VLU and “legacy” controller.

Description of the iso driver: see specification of 0P8593xx-001, where “xx” stands for the latest letter revision.

The heat sink dissipates the heat generated by the thyristors. A certain airflow therefore is demanded. Two thermo switches are placed on the heat sink. These are normally closed types. They can be used for indication of temperature warning and temperature shutdown. Switching temperature: see chapter 1.

There is placed a snubber PCB inside the module. This is done to protect the thyristors from too fast voltage rising and from over voltage during the switching process.