		Specification of PXP Power Module			
Project:	PXP			Reg. No.	0N-0906C-SPEC
Originator:	KPI	Date:	26.03.2019	Rev. No.	1
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Summary:

This document specifies the PXP Power Module.

Rev.	Date	Initials	Remark
1	09.01.2019	KPI	Initial, based on 0N-0906B_REV02 SPEC.doc

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1. MAIN FUNCTION OF THE PXP **0N-0906C** POWER MODULE

The power module is responsible for the double conversion of the UPS. The PXP power module **ASSY PM 20KVA 400VAC/230VAC 400VDC** consists of 3 power parts and 1 low power part:

- 3 rectifier
- 1 battery charger
- 3 inverter
- 1 PSU Board

Each power module has a rating of 20kVA.

The rectifier and the inverter are together on a common single phase module print (0N-0075-001: ASSY 6.7 KVA SINGLE PH PWR BOARD PXP 400V). The power module has three single phase modules. For 3 phase system each phase has an own module and for 1 phase system the 3 modules are in parallel. The 3 single phase modules have a common charger.

1.1. Rectifier

The AC/DC-converter is between the Input and the DC-bus.

1.2. Battery Charger


The DC/DC-converter is between the DC-bus and the battery connection. The battery charger is placed on the power interface board (0P4928AA-001: ASSY PWR INTERFACE BD 20KVA 400V PXP).

1.3. Inverter

The DC/AC-converter is between the DC-bus and the Output.

1.4. PSU Board

For details see 0P4904AC.

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2. INPUT / OUTPUT RANGES

	VALUE	Description
Input		
Voltage range	304.0 – 477.0 V	
Frequency range	40 – 70 Hz	
Power Factor	<0.98	
Input current total harmonic distortion	< 5 %	
Input current limit	34.0 A	
Output		
Voltage range	376.2 – 419.2 V	
Frequency range 50Hz	40 to 60Hz	Frequency is synchronized to bypass mains over the defined range.
Frequency range 60Hz	50 to 70Hz	Frequency is synchronized to bypass mains over the defined range.
Frequency slew rate	0.25 – 1 Hz/sec	
Battery		
End of discharge voltage (low shutdown)	320 V	
Full load DC Input Current	46.1 A	At 384V
Maximum DC Input Current	55.4 A	At end of discharge 320V
DC Input Current @150% overload	69.2 A	At 384V
Max DC Input Current @150% overload	83.0 A	At end of discharge 320V
Overload		
125 %	for 10 minutes	
150 %	for 1 minute	
320 %	for 60 ms	

3. ADJUSTMENT

None required

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4. INPUTS AND OUTPUTS

Input / Output	Connection	Pin Number	Function
L1 IN	J101	4 (green)	Input voltage L1
L2 IN	J101	3 (yellow)	Input voltage L2
L3 IN	J101	5 (orange)	Input voltage L3
J602:+	J101	6 (red)	DC Bus +
J601:-	J101	7 (blue)	DC Bus -
L1 OUT	J101	8 (purple)	Output voltage L1
L2 OUT	J101	10 (brown)	Output voltage L2
L3 OUT	J101	9 (white)	Output voltage L3
K1	J101	11	Thermo switch
K2	J101	12	Thermo switch
J606	J102	3 (red)	Battery +
J16	J102	4 (red)	Battery +
J17	J102	9 (blue)	Battery -
J617	J102	10 (blue)	Battery -
MTG 2306	J102	5 (gray)	Neutral
MTG 2306	J102	6 (gray)	Neutral
MTG 2306	J102	7 (gray)	Neutral
MTG 2306	J102	8 (gray)	Neutral
CONTROLLER BOX	J2	1 – 96	Controller Box
Fan Supply +	J2402	1 (red)	15, 24V ELV +
Fan Supply -	J2402	2 (black)	15, 24V ELV -
-	J2402	3	-
CBOX Supply +	J2402	4 (red)	15, 24V SELV1 +
CBOX Supply -	J2402	5 (black)	15, 24V SELV1 -

Schneider Electric		Specification of PXP Power Module			
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5. MECHANICAL

Size of the Power Module Box including connector: 46cm width, 55cm depth, 19cm height

Power Module weight: 31 kg



6. REFERENCE DOCUMENTS

For more details please refer to the following documents, where “xx” stands for the latest revision:

- 0N-0906C_REVxx MTS.docm

Module Test Specification

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A. OVERVIEW OF CONNECTIONS

