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SHF2-DoC_EU-R2104

The EU Declaration of Conformity

Issued in accordance with:

The Pressure Equipment Directive 2014/68/EU

The Low Voltage Directive 2014/35/EU

The manufacturer's name and address:

Company: Zhejiang Sanhua Intelligent controls Co., Ltd
Address: Xialiquan, Qixing District, Xinchang, 312500, Zhejiang, China

Authorized Representative: Mr. Ilan Peleg

Authorized Company: Sanhua International Europe S.L.

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Section 1 - The Pressure Equipment Directive 2014/68/EU

Declaration:

4-way reversing valves

shown in the following tables, are classified "Pressure accessories" in the sense of the Pressure Equipment Directive 2014/68/EU, Article 2 point (5).

The Refrigerant proper to the Group I and II as defined in the articles 13 (1) (a) and 13 (1) (b) of Directive 2014/68/EU.

a) Refrigerant of Group I: Refrigerant is classified as hazardous substance or mixture as defined in points (7) and (8) of Article 2 of Regulation (EC) No. 1272/2008.

b) Refrigerant of Group II: Refrigerant cannot be classified as hazardous substance or mixture as defined in points (7) and (8) of Article 2 of Regulation (EC) No. 1272/2008.

Product Series	Design Pressure PS (bar)	Table
SHF - sizes: from 14 to 50	47	See Table 2
SHF - sizes: from 70 to 420	45	See Table 3
SHF-R - sizes: from 35 to 420	49	See Table 4

Table 1

Description of Products:

Design Pressure (PS):		47 bar					
Temperaure Range (TS):		-30°C / +135°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL	DN (mm)	Connection ØE/S/C ODS (inch)	PED category	Module annex III – PED Directive 2014/68/EU	PED category	Module annex III – PED Directive 2014/68/EU	
SHF-14A-xx-yy	13,88	3/4	Art. 4.3	-	Art. 4.3	-	
SHF-20D-xx-yy	17,20	3/4 to 7/8	Art. 4.3	-	Art. 4.3	-	
SHF-35B-xx-yy	20,95	7/8 to 1" 1/8	Art. 4.3	-	Art. 4.3	-	
SHF-50A-xx	22,80	1" 1/8	Art. 4.3	-	Art. 4.3	-	
SHF-50B-911D2	22,80	1" 3/8	Art. 4.3	-	Art. 4.3	-	

Table 2

Design Pressure (PS):		45 bar					
Temperaure Range (TS):		-30°C / +135°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL	DN (mm)	Connection ØE/S/C ODS (inch)	PED category	Module annex III – PED Directive 2014/68/EU	PED category	Module annex III – PED Directive 2014/68/EU	
SHF-50-911D2**	31,6	1" 3/8	NOT CERTIFIED	-	Art. 4.3	-	
SHF(L)-70-810-yy	28,2	1" 1/4	Cat. II	A2	Art. 4.3	-	
SHF(L)-70-911-yy	28,2	1" 3/8	Cat. II	A2	Art. 4.3	-	
SHF(L)-70-913-yy	34,1	1" 5/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-100-xxxx-yy	34,1	1" 3/8 to 1" 5/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-140-xxxx	41,0	1" 5/8 to 1" 3/4	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-175-xxxx	46,4	2" 1/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-210-xxxx	50,0	2" 5/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-350-xxxx	50,0	2" 5/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-420-xxxx	69,0	3" 1/8	Cat. II	A2	Cat. I	A (point 1)	

Table 3

Design Pressure (PS):		49 bar					
Temperaure Range (TS):		-30°C / +150°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL	DN (mm)	Connection ØE/S/C ODS (inch)	PED category	Module annex III – PED Directive 2014/68/EU	PED category	Module annex III – PED Directive 2014/68/EU	
SHF-35R-xx	21,0	7/8 to 1" 1/8	Art. 4.3	-	Art. 4.3	-	
SHF-50R-yy	22,8	1" 1/8	Art. 4.3	-	Art. 4.3	-	
SHF(L)-70R-911-yy	28,2	1" 3/8	Cat. II	A2	Art. 4.3	-	
SHF(L)-70R-913-yy	34,1	1" 5/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-100R-xxxx-yy	34,1	1" 3/8 to 1" 5/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-140R-xxxx	41,0	1" 5/8 to 1" 3/4	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-175R-xxxx	46,4	2" 1/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-210R-xxxx	50,0	2" 5/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-350R-xxxx	50,0	2" 5/8	Cat. II	A2	Cat. I	A (point 1)	
SHF(L)-420R-xxxx	69,0	3" 1/8	Cat. II	A2	Cat. I	A (point 1)	

Table 4

Note:

XXX position: identifies the shape and the size of the solder connection pipes (inch)

YY position: identifies an internal code

** : Temperature range (TS) of model SHF-50-911D2 is from -30°C to +120°C

All the models listed in the table above classified as “Art. 4.3” aren’t subjected to the Essential Safety Requirements set out in Annex I of Directive 2014/68/EU because their characteristics are below or equal to the limits fixed in Article 4 (1) (c) (i) & (ii) of the same Directive. As mentioned in the Directive all these products have a nominal size “DN” below or equal to:

a) 25mm for refrigerants belonging to Group I

b) 32mm for refrigerants belonging to Group II

Therefore, according to requirements of Article 4 (1) (c) them:

- Are designed and manufactured in accordance with a sound engineering practice in order to ensure safe use.
- Are accompanied by adequate instructions for use
- Bear markings to permit identification of the manufacturer
- Don’t bear CE marking referred to in Article 18 and Article 19
- Are not accompanied by a “Declaration of Conformity” to Directive 2014/68/EU referred to in Annex IV

Covered by this declaration is in conformity with the following directives, standards or other normative documents, provided that the product is used in accordance with our instructions:

- EN 12284:2003 - Refrigerating systems and heat pumps. Valves. Requirements, testing and marking
- EN 378-2:2016 - Refrigerating systems and heat pumps. Safety and environmental requirements. Basic requirements, definitions, classification and selection criteria

Notified Body:

Surveillance of the QS-System: examination / inspection / test during manufacturing:

Name:	TUV Rheinland Industrie Service GmbH
Address:	Am Grauen Stein, D-51105 Koln - Germany
Identification Number:	0035
Fluid Group:	1
EC-Certificate of conformity No:	01 202 CHNQ-19 0641

Table 4

Section 2 - The Low Voltage Directive 2014/35/EU

Declaration:

4-way reversing valves

shown in the tables above, and all the electrical coils shown in the table below are in conformity to the following standards as required by the Low Voltage Directive 2014/35/EU.

Additional test has been performed in order to allow the usage of the present electrical device with Flammable refrigerants as described in the EN-378-1/2012-08 Annex F section F.2.3

Automatic electrical controls for household and similar use – Part 1 : General requirements

EN 60730-1:2017-05 ; EN 60730-1:2016 ; EN 60730-1:2016/A1:2019 ; EN 60730-2-6:2016

- With sub-clauses 7/8/9/10/11/12/13/18/19/20/21/27

Household and similar electrical appliances – Safety

EN 60335-2-24:2019-11 ; EN 60335-2-24:2010/A1:2019

- With sub-clauses 22.110

Household and similar electrical appliances – Safety

EN 60335-2-89:2018-10; EN 60335-2-89:2010/A2:2017

- With sub-clauses 22.109

Household and similar electrical appliance – Safety

(Particular requirements for electrical heat pumps, air conditioner, dehumidifiers)

EN 60335-2-40/2014-01

EN 60335-2-40/2003 + A11/2004 + A12/2005 + A1/2006 + A2/2009 + A13/2012

- With sub-clauses 22.116 [no electrical component, which could be a source of ignition in case of normal operation or in the event of a leak]
- With sub-clauses 22.117 and Annex BB

Electrical Coils:

COIL NAME	WINDING CODE	Power Supply	Rated Voltage (V)	Applicability of 2014-35-EU
SQ-A25 22G-00 xxxx	SHF-4-10L3	AC	220-240	YES
SQ-A25 200-00 xxxx	SHF-4-10L2	AC	200	YES
SQ-A25 100-00 xxxx	SHF-4-10L1	AC	100	YES
SQ-A25 11A-00 xxxx	SHF-4-10L4	AC	110-120	YES
SQ-A25 024-00 xxxx	SHF-4-10L5	AC	24	NO
SQ-A25 26H-00 xxxx	SHF-4-10L6	AC	265-277	YES
SQ-A47 22G-00 xxxx	SHF-4-10FA5	AC	220-240	YES
SQ-A47 220-00 xxxx	SHF-4-10FA1	AC	220	YES
SQ-A47 11B-00 xxxx	SHF-4-10FA2	AC	120	YES
SQ-A47 10A-00 xxxx	SHF-4-10FA3	AC	100-110	YES
SQ-A47 024-00 xxxx	SHF-4-10FA4	AC	24	NO
SQ-A47 26H-00 xxxx	SHF-4-10FA6	AC	265-277	YES
SQ-A47 200-00 xxxx	SHF-4-10FA7	AC	200	YES

Table 2

Note:

The applicability of the Directive 2014/35/EU as mentioned in the Article 1 is limited to the coil models with voltage rating of between 50 and 1000 V for alternating current and between 75 and 1500 V for direct current.

All the products excluded by the Directive 2014/35/EU respects the following requirements:

- Are designed and manufactured in accordance with a sound engineering practice in order to ensure safe use.
- Are accompanied by adequate instructions for use
- Bear markings to permit identification of the manufacturer
- Don't bear CE marking referred to in Article 16 and Article 17
- Are not accompanied by a "Declaration of Conformity" to Directive 2014/35/EU referred to in Annex IV

Responsible Person to issue the declaration of Conformity:	Date	Signature
Mr. Zhouyang Li	2021.05.27	

