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ZHEJIANG SANHUA INTELLIGENT CONTROLS CO., LTD.

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Rev: 2021.04

SHF1-DoC_UKCA-R2104



UK Declaration of Conformity

Issued in accordance with:

Pressure Equipment (Safety) Regulations 2016 (2016/1105)
Electrical Equipment (Safety) Regulations 2016 (2016/1101)

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.

Tel: +34 91 654 30 00 ; E-Mail: info@sanhuaeurope.com

Address: C/ José Celestino Mutis, 4, 21 28703 San Sebastian de los Reyes - Spain

Section 1 - Pressure Equipment (Safety) Regulations 2016

Declaration:

4-way reversing valves

shown in the following tables, are classified "Pressure accessories" in the sense of the Pressure Equipment (Safety) Regulations 2016, Article 2 – [PART 1 - Interpretation].

The Refrigerant proper to the Group I and II as defined in the Article 3(1) and Article 3(2) – [SCHEDULE 3 - Classification of pressure equipment] of the Pressure Equipment (Safety) Regulations 2016.

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.

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)	Safety category	Part 3 – Pressure Equipment (Safety) Regulations 2016	Safety category	Part 3 – Pressure Equipment (Safety) Regulations 2016
SHF(L)-3H-xxx-yy	7,5	5/16	Art. 4.3	-	Art. 4.3	-
SHF(L)-4H-xxx-yy	8,0	3/8	Art. 4.3	-	Art. 4.3	-
SHF(L)-7H-xxx-yy	11,2	1/2 to 5/8	Art. 4.3	-	Art. 4.3	-
SHF(L)-11H-xxx-yy	11,2	1/2 to 3/4	Art. 4.3	-	Art. 4.3	-

Table 1

Note:

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

YY position: identifies an internal code

All the models listed in the table above classified as “Art. 4.1” aren’t subjected to the Essential Safety Requirements set out in Pressure Equipment (Safety) Regulations 2016, Article 2 – [SCHEDULE 1 - Excluded Pressure Equipment and Assemblies (Regulation 4)] because their characteristics are below or equal to the limits fixed in Article 6 (c) (i) of the same Regulation. As mentioned in the Regulation 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 6 (c) (i) 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 or UKCA marking referred to in Article 8

- Are not accompanied by a “Declaration of Conformity” to Pressure Equipment (Safety) Regulations 2016

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:

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

Section 2 - Electrical Equipment (Safety) Regulations 2016

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 Electrical Equipment (Safety) Regulations 2016.

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

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

(BS) EN 60730-1:2017-05; (BS) EN 60730-1:2016 ;

(BS) EN 60730-1:2016/A1:2019 ; (BS) 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

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

- With sub-clauses 22.110

Household and similar electrical appliances – Safety

(BS) EN 60335-2-89:2018-10; (BS) 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)

(BS) EN 60335-2-40/2014-01

(BS) 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 Electrical Equipment (Safety) Regulations 2016
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 Electrical Equipment (Safety) Regulations 2016 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 Electrical Equipment (Safety) Regulations 2016 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 or UKCA marking referred to in Article 39
- Are not accompanied by a "Declaration of Conformity" to Electrical Equipment (Safety) Regulations 2016 - SCHEDULE 8 (Regulation 38)

Responsible

Date May. 8th, 2021

Signature

Stamp





浙江三花制冷集团有限公司

Zhejiang Sanhua Climate and Appliance Controls Group CO., LTD

Add: 358 West Xinchang Avenue,
312500, Xinchang, Zhejiang, China

Tel: +86-575-86221102



The UK Declaration of Conformity

Issued in accordance with

Pressure Equipment (Safety) Regulation 2016(2016/1105)

Electrical Equipment (Safety) Regulation 2016(2016/1101)

The manufacturer's name and address:

Company: Zhejiang Sanhua Climate and Appliance Controls Group Co., Ltd

Address: Xialiquan, Xinchang, 312500, Zhejiang, China

Authorized Representative: Ilan Peleg

Authorized Company: Sanhua International Europe S.L.

Tel: +34 91 654 46 92 Mob: +34 6 15 83 37 02 E-Mail: Ilan@sanhuaeurope.com

Address: C/ José Celestino Mutis, 4, 2I 28703 San Sebastian de los Reyes - Spain

Section 1 - Pressure Equipment (Safety) Regulation 2016(2016/1105)

Declaration:

4-way valves series shown in the tables below, are classified "Pressure accessories" in the sense of the Pressure Equipment (Safety) Regulation 2016(2016/1105), Article 2 point (5).
The Refrigerant proper to the Fluid Group I and II as defined in the article 3 (1) and 3 (2) of the Regulation 2016(2016/1105).

Summary:

Product Series	PS (bar)	Table
SHF Size: From 14 to 50	47	See Table 2
SHF Size: From 50 to 420	45	See Table 3
SHF-R Size: From 35 to 420	49	See Table 4

Table 1

Description of Products:

TS (°C)	-30 to +135		Fluid Group I		Fluid Group II	
Models	DN	Connection ØE\S\C ODS	Safety category	Part 3 – Pressure Equipment (Safety) Regulations 2016	Safety category	Part 3 – Pressure Equipment (Safety) Regulations 2016
SHF-14x-xx-yy SHF-14-xx-yy	13.88	3/4	Art. 4.3	-	Art. 4.3	-
SHF-20x-xx-yy SHF-20-xx-yy	17.20	3/4 to 7/8	Art. 4.3	-	Art. 4.3	-
SHF-35x-xx-yy SHF-35-xx-yy	20.9	7/8 to 1" 1/8	Art. 4.3	-	Art. 4.3	-
SHF-50x-xx SHF-50-xx	22.8	1" 1/8	Art. 4.3	-	Art. 4.3	-
SHF(L)-70-810-yy	28.15	1" 1/4	Cat. II	D	Art. 4.3	-
SHF(L)-70-911-yy	28.15	1" 3/8	Cat. II	D	Art. 4.3	-
SHF(L)-70-913-yy	34.1	1" 5/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-100-xxxx-yy	34.1	1" 3/8 to 1" 5/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-140-xxxx	41.0	1" 5/8 to 1" 3/4	Cat. II	D	Cat. I	A (point 1)
SHF(L)-175-xxxx	46.4	2" 1/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-210-xxxx	50.0	2" 5/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-350-xxxx	50.0	2" 5/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-420-xxxx	70.0	3" 1/8	Cat. II	D	Cat. I	A (point 1)

Table 2

TS (°C)	-30 to +120		Fluid Group I		Fluid Group II	
Models	DN	Connection ØE\S\C ODS	Safety category	Part 3 – Pressure Equipment (Safety) Regulations 2016	Safety category	Part 3 – Pressure Equipment (Safety) Regulations 2016
SHF-50-911D2**	31.6	1" 3/8	NOT CERTIFIED	-	Art. 4.3	-

Table 3

TS (°C)	-30 to +150		Fluid Group I		Fluid Group II	
Models	DN	Connection ØE\SC ODS	Safety category	Part 3 – Pressure Equipment (Safety) Regulations 2016	Safety category	Part 3 – Pressure Equipment (Safety) Regulations 2016
SHF-35R-xx	20.9	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	28.15	1" 3/8	Cat. II	D	Art. 4.3	-
SHF(L)-70R-913-yy	34.1	1" 5/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-100R-xxxx-yy	34.1	1" 3/8 to 1" 5/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-140R-xxxx	41.0	1" 5/8 to 1" 3/4	Cat. II	D	Cat. I	A (point 1)
SHF(L)-175R-xxxx	46.4	2" 1/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-210R-xxxx	50.0	2" 5/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-350R-xxxx	50.0	2" 5/8	Cat. II	D	Cat. I	A (point 1)
SHF(L)-420R-xxxx	70.0	3" 1/8	Cat. II	D	Cat. I	A (point 1)

Table 4

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

y position: identifies an internal code

Note:

All the models listed in the table above classified as “Art. 4.3” aren’t subjected to the Essential Safety Requirements set out in the Pressure Equipment (Safety) Regulation 2016(2016/1105), Article 2 because their characteristics are below or equal to the limits fixed in Article 6 (c) (i) of the same Regulation. As mentioned in the Directive all these products have a nominal size “DN” below or equal to :

- a) 25mm for refrigerants belonging to Fluid Group I
- b) 32mm for refrigerants belonging to Fluid Group II

Therefore, according to requirements of Article 4 (1) (c) (i) 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 or UKCA marking referred to in Article 8
- Are not accompanied by a “Declaration of Conformity” to Pressure Equipment (Safety) Regulation 2016(2016/1105)

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:

- BS EN 12284:2003 - Refrigerating systems and heat pumps. Valves. Requirements, testing and marking

- BS EN 378-2:2016 - Refrigerating systems and heat pumps. Safety and environmental requirements. Basic requirements, definitions, classification and selection criteria

Notified Body:

For products are defined as Category II in tables above, are 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
EC-Certificate of conformity No:	01 202 CHN/Q-19 0641

Section 2 - Electrical Equipment (Safety) Regulation 2016(2016/1101)

Declaration:

4-way reversing valves (SHF series), shown in the table 1, and all the electrical coils shown in the table 5 are in conformity to the following standards as required by the Electrical Equipment (Safety) Regulation 2016(2016/1101).

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

Automatic electrical controls for household and similar use – Part 1 : General requirements
(BS) EN 60730-1:2017-05 ; (BS) EN 60730-1:2016; (BS) EN 60730-1:2016/A1:2019;

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

Household and similar electrical appliances – Safety

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

- With sub-clauses 22.110

Household and similar electrical appliances – Safety

(BS)EN 60335-2-89:2018-10; (BS)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)

(BS)EN 60335-2-40/2014-01

(BS)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 Electrical Equipment (Safety) Regulation 2016(2016/1101)
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 5

Note:

The applicability of the Equipment (Safety) Regulation 2016(2016/1101) 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 Equipment (Safety) Regulation 2016(2016/1101) 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 or UKCA marking referred to in Article 39
- Are not accompanied by a "Declaration of Conformity" to Equipment (Safety) Regulation 2016(2016/1101) - SCHEDULE8(Regulation 8)

Responsible Person to issue the declaration of Conformity:	Date	Signature
Mr. Zhouyang Li	2021.5.27	