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MDF1-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:

Solenoid 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.

Summary:

Product Series	Design Pressure PS (bar)	Table
MDF-A03/D03 [Thread connections]	45	See Table 2
MDF-A03/D03 [ODF solder connections]	45	See Table 3
MDF-B03 [ODF solder connections]	45	See Table 4
MDF-A02 [Thread connections]	45	See Table 5
MDF-A02 [ODF solder connections]	45	See Table 6
MDF-A03 RH [ODF solder connections]	49	See Table 7
HDF [ODF solder connections]	45	See Table 8

Table 1

Description of Products:

Design Pressure (PS):	45 bar		FLUID GROUP I		FLUID GROUP II	
Temperaure Range (TS):	-30°C / +105°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL*	DN (mm)	Connection ØD SAE Flare	PED category	Module annex III – PED Directive 2014/68/EU	PED category	Module annex III – PED Directive 2014/68/EU
MDF-A03-xL yyy [from size 2 to size 15]	from 6,35 to 22,2	from 1/4" to 7/8"	NOT SUITABLE	-	Art. 4.3	-

Table 2

Design Pressure (PS):	45 bar		FLUID GROUP I		FLUID GROUP II	
Temperaure Range (TS):	-30°C / +105°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL*	DN (mm)	Connection ØD ODS	PED category	Module annex III – PED Directive 2014/68/EU	PED category	Module annex III – PED Directive 2014/68/EU
MDF-A03-xH yyy [from size 2 to size 20]	from 6,35 to 22,2	from 1/4" to 1" 1/8"	Art. 4.3	-	Art. 4.3	-
MDF-D03-xH yyy [from size 6 to size 15]	from 9,52 to 22,2	from 3/8" to 7/8"	Art. 4.3	-	Art. 4.3	-
MDF-A03-22H011/009	22,2	28mm & 1" 1/8	Art. 4.3	-	Art. 4.3	-
MDF-A03-22H003	28,6	35mm (1" 3/8)	NOT CERTIFIED	-	Art. 4.3	-

Table 3

Design Pressure (PS):	45 bar		FLUID GROUP I		FLUID GROUP II	
Temperaure Range (TS):	-40°C / +140°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL	DN (mm)	Connection ØD ODS	PED category	Module annex III – PED Directive 2014/68/EU	PED category	Module annex III – PED Directive 2014/68/EU
MDF-B03-25H005/003	28,6	28mm & 1" 1/8	NOT CERTIFIED	-	Art. 4.3	-
MDF-B03-25H004	35,0	35mm (1" 3/8)	NOT CERTIFIED	-	Cat.I	A (point 1)
MDF-B03-32H001	35,0	35mm (1" 3/8)	Cat.II	D	Cat.I	A (point 1)
MDF-B03-32H003/002	41,3	42mm & 1" 5/8	Cat.II	D	Cat.I	A (point 1)
MDF-B03-40H003/002	41,3	42mm & 1" 5/8	NOT CERTIFIED	-	Cat.I	A (point 1)
MDF-B03-40H004	52,4	54mm (2" 1/8)	NOT CERTIFIED	-	Cat.I	A (point 1)

Table 4

Design Pressure (PS):	45 bar		FLUID GROUP I		FLUID GROUP II	
Temperaure Range (TS):	-30°C / +105°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL	DN (mm)	Connection ØD ODS	PED category	Module annex III – PED Directive 2014/68/EU	PED category	Module annex III – PED Directive 2014/68/EU
MDF-A02-xL yyy [from size 6 to size 15]	from 9,52 to 22,2	from 3/8" to 7/8"	NOT SUITABLE	-	Art. 4.3	-

Table 5

Design Pressure (PS):	45 bar		FLUID GROUP I		FLUID GROUP II	
Temperature Range (TS):	-30°C / +105°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL	DN (mm)	Connection ØD ODS	PED category	Module annex III – PED Directive 2014/68/EU	PED category	Module annex III – PED Directive 2014/68/EU
MDF-A03-xH yyy [from size 6 to size 22]	from 6,35 to 22,2	from 1/4" to 7/8"	Art. 4.3	-	Art. 4.3	-
MDF-A02-20H 008/004	28,6	28mm & 1" 1/8	NOT CERTIFIED	-	Art. 4.3	-
MDF-A02-22H 012/008	28,6	28mm & 1" 1/8	NOT CERTIFIED	-	Art. 4.3	-
MDF-A02-22H 004	35,0	35mm (1" 3/8)	NOT CERTIFIED	-	Art. 4.3	-

Table 6

Design Pressure (PS):	49 bar		FLUID GROUP I		FLUID GROUP II	
Temperature Range (TS):	-30°C / +105°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL	DN (mm)	Connection ØD ODS (inch)	PED category	Module annex III – PED Directive 2014/68/EU	PED category	Module annex III – PED Directive 2014/68/EU
MDF-A03-xRH yyy [from size 2 to size 20]	from 6,35 to 22,2	from 1/4" to 1" 1/8"	Art. 4.3	-	Art. 4.3	-
MDF-A03-22RH 03	28,6	35mm (1" 3/8)	Cat.II	D	Art. 4.3	-

Table 7

Design Pressure (PS):	45 bar		FLUID GROUP I		FLUID GROUP II	
Temperature Range (TS):	-40°C / +140°C		FLUID GROUP I		FLUID GROUP II	
SANHUA MODEL	DN (mm)	Connection ØD ODS (inch)	PED category	Module Annex III PED Directive 2014/68/EU	PED category	Module Annex III PED Directive 2014/68/EU
HDFxHy [from size 3 to size 22]	from 4,95 to 19,8	from 1/4" to 1" 1/8	Art. 4.3	-	Art. 4.3	-
HDF22H02	22,2	35mm (1" 3/8)	NOT CERTIFIED	-	Art. 4.3	-

Table 8

Note:

XX position: identifies the valve size

YYY position: identifies an internal code

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 9

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

Declaration:

Solenoid 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.

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**

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

* Note: the additional test are valid only for the coil models certified for usage with Fluid Group I (reference on table 10)

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	SUITABLE FOR	Power Supply	Rated Voltage (V)	Applicability of 2014-35-EU	CERTIFIED FOR FLUID GROUP I
MQ-A03024-xxxxxx	MDF A03/B03	AC	24	NO	NO
MQ-A0311A-xxxxxx	MDF A03/B03	AC	110 to 120	YES	NO
MQ-A0322G-xxxxxx	MDF A03/B03	AC	220 to 240	YES	YES
MQ-A11024-xxxxxx	MDF A03/B03	AC	24	NO	NO
MQ-A1111A-xxxxxx	MDF A03/B03	AC	110 to 120	YES	NO
MQ-A1122G-xxxxxx	MDF A03/B03	AC	220 to 240	YES	NO
MQ-D03012-xxxxxx	MDF A03 2-3H; MDF D03 6-15H; MDF A03 20-22H	DC	12	NO	NO
MQ-D03024-xxxxxx	MDF A03 2-3H; MDF D03 6-15H; MDF A03 20-22H	DC	24	NO	NO
MQ-A02024-xxxxxx	MDF A02	AC	24	NO	YES
MQ-A0211A-xxxxxx	MDF A02	AC	110 to 120	YES	YES
MQ-A0222G-xxxxxx	MDF A02	AC	220 to 240	YES	YES
MQ-D02012-xxxxxx	MDF A02	DC	12	NO	YES
MQ-D02024-xxxxxx	MDF A02	DC	24	NO	YES
MQ-A03024-001001	HDF	AC	24	NO	NO
MQ-A0311A-001001	HDF	AC	110 to 120	YES	NO
MQ-A0322G-001001	HDF	AC	220 to 240	YES	NO

Table 10

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	2021.5.27	

