



**LABORATORY FOR TESTING OF MACHINERY,
EQUIPMENT AND DEVICES**
CENTER FOR TESTING AND EUROPEAN CERTIFICATION LTD

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TEST REPORT

№ 2emc-e-20-248/28.02.2020

OBJECT TO BE TESTED: Electric and electronic equipment, appliances, devices
Machine for direct printing on cotton Flatdog white Smart, Model- FlatDog Smart Evolution
*(name of object to be tested, type, model, quantity,
type – portable, fixed, for walling in and other)*

APPLICANT FOR TEST: " Studio Grif " Ltd., Bulgaria, Plovdiv, 136 Maritsa Str., ZIP 4000
Tel.: +359 887 629 283, e-mail: contact@flatdog.eu ;
Application № 248 / 20.01.2020
(name of the firm – applicant, address, telephone, number and date of the test application)

METHOD OF TEST :

BDS EN 61000-4-4:2012 Electromagnetic compatibility (EMC).
Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
BDS EN 61000-4-5:2014 Electromagnetic compatibility (EMC).
Part 4-5: Testing and measurement techniques - Surge immunity test
(number and name of the standards)

DATE OF ACCEPTANCE IN THE TEST LABORATORY: 12.12.2019

CODE OF THE OBJECT: 00006 ;
(identification number)

YEAR OF PRODUCTION : 2020

MANUFACTURER: " Studio Grif " Ltd., Bulgaria, Plovdiv, 136 Maritsa Str., ZIP 4000
Tel.: +359 887 629 283, e-mail: contact@flatdog.eu ;
(firm, trade mark, address)

DECLARED TECHNICAL DATA: Rated voltage: 220 VAC
Rated frequency: 50-60 Hz
Rated current: 3 A

TECHNICAL REQUIREMENTS:

BDS EN 61000-6-2:2006 Electromagnetic compatibility (EMC)
Part 6-2: Generic standards - Immunity for industrial environments

DATE OF TEST PERFORMANCE: 12.02.2020

HEAD OF THE LABORATORY
/ T. Hristov /





Copy of identification table and/or photo of tested object



Производител: Студио Гриф ООД
България, 4000 Пловдив,
бул. Марица 136
Модел: Flatdog Smart Evolution
Сериен номер: 00006
Дата на производство: 01.2020
Номер на елсхема: GRIFPRN7
Напрежение/честота: 220 V, 50 Hz, монофазен
Максимален товар: 3A
Максимален ток
на късо съединение: 6000 A
Тегло: 120 кг.





Immunity of Radio disturbance characteristics for industrial environments

Performance criterion A: The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Performance criterion B: The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Performance criterion C: Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

Environment requirements during the test	Ambient temperature	15 to 35 °C
	Relative Humidity	30 to 60 %
	Air pressure	860 to 1060 mbar
Test environment	Ambient temperature	25 °C
	Relative Humidity	40 %
	Air pressure	1010 mbar





1. ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST

BDS EN 61000-4-4, T. 7 – Test setup

BDS EN 61000-4-4, T. 8 – Test procedure

Rise time	5 ns ±30 %
Duration	50 ns ± 30 %
Repetition frequency	5 kHz
Burst duration	15 ms ± 20 % за 5 kHz
Burst period	300 ms ± 20 %
Time of application	1 min for each polarity and coupling
Performance Criteria according to Table 4, cl. 4.5 of BDS EN 61000-6-2	Criteria B

Pulse Application	Application	Level	Test Voltage V	Polarity	Result
Between L and Ground plane	Coupling network	1	500	+	Criteria A
				-	Criteria A
		2	1000	+	Criteria A
				-	Criteria A
		3	2000	+	Criteria B
				-	Criteria B
Between neutral and Ground plane	Coupling network	1	500	+	Criteria A
				-	Criteria A
		2	1000	+	Criteria A
				-	Criteria A
		3	2000	+	Criteria B
				-	Criteria B
Between L, neutral and Ground plane	Coupling network	1	500	+	Criteria A
				-	Criteria A
		2	1000	+	Criteria A
				-	Criteria A
		3	2000	+	Criteria B
				-	Criteria B

Signal lines

Pulse Application	Application	Level	Test Voltage V	Polarity	Result
RJ-45	Coupling clamp	1	500	+	Criteria A
				-	Criteria A
RJ-45	Coupling clamp	2	1000	+	Criteria A
				-	Criteria A

Control lines

Pulse Application	Application	Level	Test Voltage V	Polarity	Result
-	Coupling clamp	1	500	+	-
				-	-
-	Coupling clamp	2	1000	+	-
				-	-

*The results showed in present test report concern tested sample only
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2. SURGE IMMUNITY TEST

BDS EN 61000-4-5, τ. 7 – Test setup
BDS EN 61000-4-2, τ. 8 – Test procedure

Front time	1,2 μs ± 30 %	
Time to half value	50 μs ± 20 %	
Source impedance	Power line symmetrical Power line unsymmetrical	2 Ω + 18 μF 12 Ω + 9 μF
Phase angles	0°/90°/180°/ 270°	
Number of surges / polarity /phase angle	5	
Performance Criteria according to Table 4, cl. 4.4 of BDS EN 61000-6-2	Criteria B	

Power line symmetrical

Pulse Application	Level	Test Voltage V	Polarity	Result
phase L – neutral N	1	500	+	Criteria A
			-	Criteria A
	2	1000	+	Criteria A
			-	Criteria A

Power line unsymmetrical

Pulse Application	Level	Test Voltage V	Polarity	Result
phase L – protective earth	1	500	+	Criteria A
			-	Criteria A
	2	1000	+	Criteria A
			-	Criteria A
	3	2000	+	Criteria A
			-	Criteria A
neutral N - protective earth	1	500	+	Criteria A
			-	Criteria A
	2	1000	+	Criteria A
			-	Criteria A
	3	2000	+	Criteria A
			-	Criteria A

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USED TECHNICAL EQUIPMENTS:


	Appliance	Type	Manufacturer	Identity №	Last calibration date
1.	Thermometer-higrometer	177-H1	TESTO Germany	01320300/902	17.04.2018
2.	EFT/B - Generator	NSG/INA 2050 PNW 2225	Schaffner Electrotest GmbH, Germany	200906-578LU 200838-570LU	16.04.2015
3.	Surge - Generator	NSG/INA 2050 PNW 2050 CDN 133	Schaffner Electrotest GmbH, Germany	200906-578LU 200911-636LU 34464	16.04.2015
4.	EMI – receiver 9 kHz ÷ 1000 MHz	SCR 3501	Schaffner Electrotest GmbH, Germany	522	21.08.2017
5.	Bilog antenna	CBL 6111D 30 MHz÷1000 MHz	TESEQ Switzerland	25770	29.09.2017

TEST PERFORMER: 1.



/ D. Chavalinov /



2.


/ T. Hristov /

HEAD OF THE LABORATORY :


/ T. Hristov /

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