



Czech

TÜV SÜD Czech, s.r.o
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INSPECTION REPORT

File number 14.375.302

Issued by inspection body No. 4002 accredited by CAI according to ČSN EN ISO/IEC 17020:2012

Purpose of inspection:

Conformity assessment of technical equipment with the requirements of relevant technical regulations for electromagnetic compatibility.

Customer: **Hardy Process Solutions, Inc.
10075 Mesa Rim Road
San Diego, CA 92121 USA**

Order No. of: **212000001 from 8.11.2021**

TÜV SÜD Czech s.r.o order.: **5402200954**

Inspected device

Name: **Modular weight system**
Type: **HI 6850 Series**

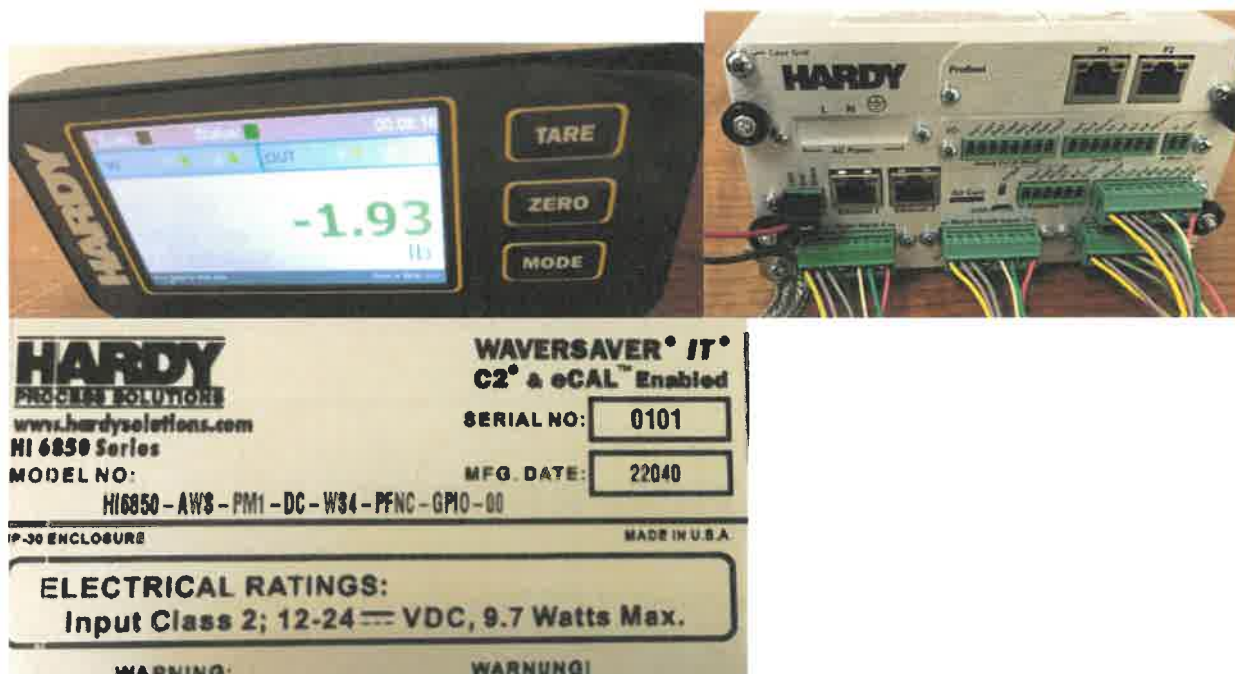
Model No: **HI6850-AWS-PM1-DC-WS4-PFNC-GPIO-00**

Power voltage: **12-24 V DC**

Power consumption: **9,7 W Max.**

Tested sample: **HI6850-AWS-PM1-DC-WS4-PFNC-GPIO-00 – Serial No:0101**

Purpose devices: **The HI 6850 series is a processor system for measuring weight**



Tested sample and its production label

For assessing the conformity, the following standards and regulations have been used as a specification:

Instruction TUV-SUD: I 540-015-5, I 540-015-6,
ČSN EN IEC 61000-6-4 ed.3 :2019 (idt. IEC 61000-6-4) tests emission
ČSN EN IEC 61000-6-2 ed.4:2019 (idt. IEC 61000-6-2), test immunity – (tested according to :
EN 61000-4-2, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11).

For undated references, the current valid edition at the date of these report issuance applies.

And these attached documents:

Without attachments

Performed steps

- A. Tests and verification EMC emission according to EN 61000-6-4 test emission
- B. Tests and verification – EMC immunity according to EN 61000-6-2 test immunity –

Used controlling, measuring and testing devices

- Coupling network PMM L3-32, ev. č. PM-2934
- Analyzer - PQ-Box 100 PM - PM-3025
- Set of antennas - AS 02 (BC-01, LP-02), PM-2933
- Attenuator ATT 6/75, v.č. 1103-48, ev. č. PM 2090/6
- Calibration set R100A, v.č. 05006, ev. č. PM 2090/7
- Testing impulse generator EM TEST UCS 500-M4 v.č.V0502100014
- Testing impulse generator EM TEST dito No.V0502100015
- Testing impulse generator EM TEST CWS 500C PM250 No. V 0502100016
- Digital thermometer and hydrometer ALMEMO 2290-4 V5 + probe No.:PM-2161
- Antenna 1 x 1 m, typ MS 100, v.č. V0502100014
- EMC receiver PMM 9010F, range 9 kHz – 6 GHz, ev.č. PM-2131
32 grid type: V, PMM model L3-32,

The instruments are subject to regular calibration

Location and conditions of the inspection

Testing room TUV-SUD – Teslova 2, Ostrava 702 00

Climatic condition:	2022-0-22	2022-03-08
temperature:	22,1 ± 0,5 °C	22,6 ± 0,5 °C
humidity:	43,5 ± 0,2 %	42,1 ± 0,2 %

During inspection learned the following:

A. Tests and verification EMC emission according to EN 61000-6-4 test emission

TESTING METHOD: operating time of the device (EUT) before test start – min0.5 hr, conditions according to the article 7.6.4 ČSN EN 55011.

The device was tested in standard operating mode with the input and output circuit terminals connected.

1.1 Measuring of disturbance voltage on feeder terminal clamps 0.15 to 30 MHz acc. to EN 61000-6-4

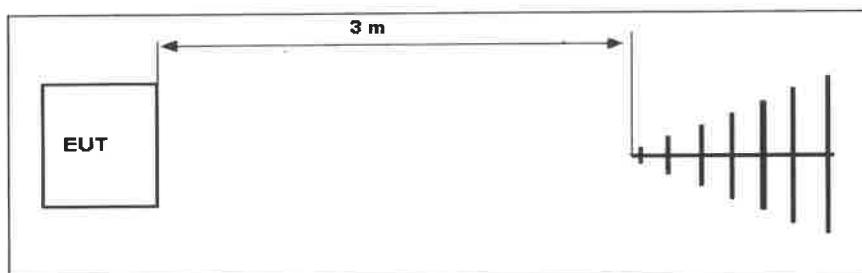
Testing arrangement acc. to the article 7.4 of ČSN EN 55016-2-1, the distance of the equipment under test from the V-type artificial network (L3-32)- 1 m, the length of the feeder cable 1,5 m. The test was performed on the ac side of the ac/dc adapter (manufacturer-recommended power supply - mean well EDR-120-2). The manufacturer's recommended filter was used on the power supply side. Type of filter: WE-LSFS 810913020 – Wurth elektronik. Quasi-amplitudes (QPeak), average (Avg) and amplitudes (Peak) of the signal were measured.

Tab. 1 - Limit value for disturbance voltage on (AC) power line according EN 61000-6-4

Frequency range of emission (MHz)	Quasi-peak value (dBµV)	Average (dBµV)
0,15 – 0,50	79	66
5 – 30	73	60

1.2 Measuring of interference radiated by the cover of the device in the range of 30 MHz to 1 GHz acc. to ČSN EN 61000-6-4.

Test arrangement acc. to the article 7.3 ČSN EN 55016-2-3 using the article 7.2 ČSN EN 55011, the distance of the aerial from EUT 3 m, measured with horizontal and vertical polarization of the aerials, aerial height 1.7 m. Quasi-amplitudes and amplitudes of the signal for the ČSN EN 61000-6-4 were measured.



Tab. 2 – Radiated emission limits according EN 61000-6-4

Frequency range (MHz)	Measured distance 3 m
	Quasi-pik (dB μ V/m)
30 – 230	50
230 - 1000	57

2. TEST RESULTS:

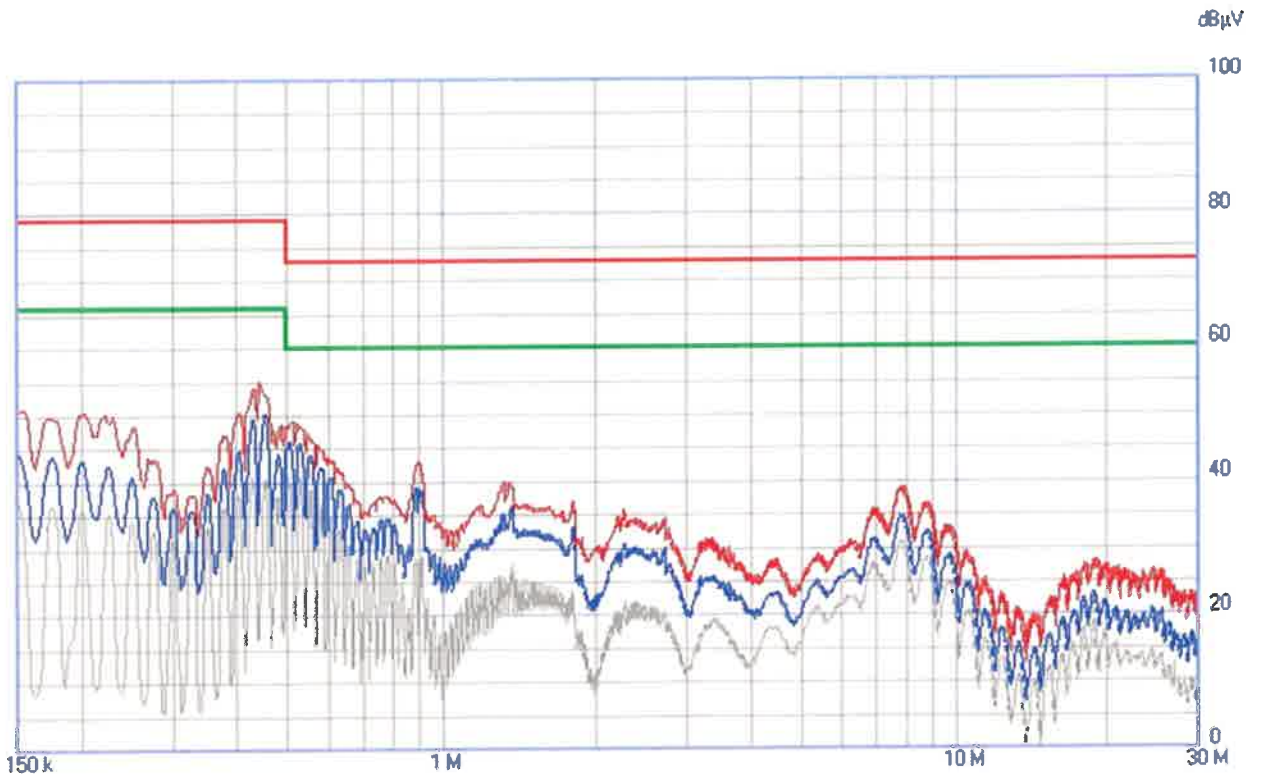
The measured values mentioned in the records on measuring are in the form of frequency characteristics.

2.1 Measuring of the disturbance voltage on feeder terminal clamps.

The measured values of the disturbance voltage on feeder terminal clamps in the range of 150 kHz to 30 MHz are mentioned in the record on measuring graph No. 1 – Peak+QPeak +Avg normal function. The test was performed on the ac ac side of the ac/dc adapter (manufacturer-recommended power supply - mean well EDR-120-2). The manufacturer's recommended filter was used on the DC power supply of the device. Type of filter: WE-LSFS 810913020 – Würth elektronik.

QPeak + Avg

Graph 1 - disturbance voltage on feeder terminal clamps –(envelope L1, N)



01_HARDY_HI6850_PM1_filter

Start [MHz]	Stop [MHz]	Step	Detector	Hold Time	RBW	Min Att	Pre Amp	Pre Sel	Prompt start	Ancillary
0.15	30	AUTO (2.045 kHz)	P Q A 61000_6_4qp 61000_6_4avg	500 ms	9 kHz	10	OFF	OFF	A	N, L1

Ancillary = L3 PMM

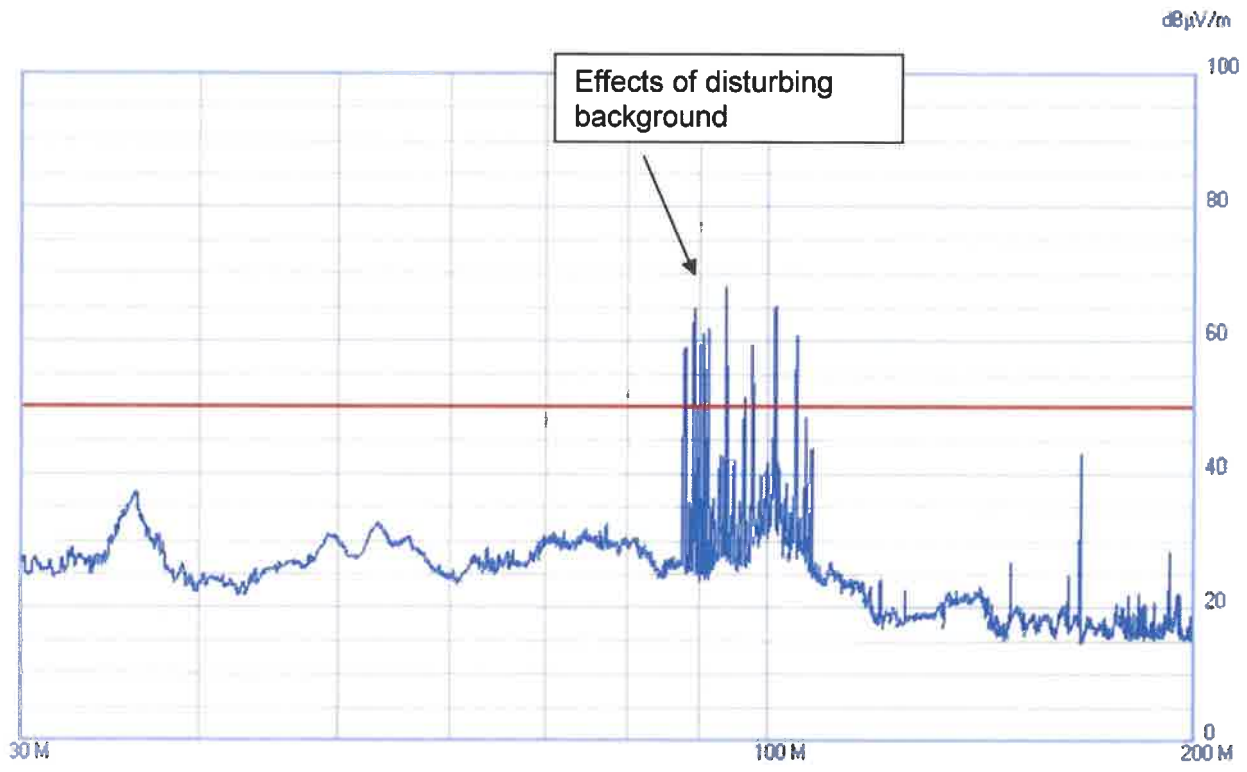
Limits:
61000_6_4qp
61000_6_4avg

Factors: Peak QPeak Avg

2.2 The measuring results of the electromagnetic interference by the cover of the unit in the range of 30 MHz to 1000 MHz are mentioned in the records on graph No. 2 and No. 3.
 The measuring results of the electromagnetic interference from the space-background are mentioned in the records on graph No. 4 and 5.

Records of emissions from the cover of the unit, incl. interfering emissions of background – limit according to ČSN EN 61000-6-4

Graph 2 - Records of emissions from the cover of the device including background emission – range 30 – 200MHz - (envelope of horizontal and vertical polarization)



02a_HARDY_HI6850 PM1 DC

	Start [MHz]	Stop [MHz]	Step	Detector	Hold Time	RBW	Min Att	Pre Amp	Pre Sel	Prompt start	Ancillary
1	30	200	AUTO (26 172 kHz)	P Q 61000_6_4-3m	500 ms	120 kHz	0	ON	ON		V, H

Ancillary = Antenna

Limits:

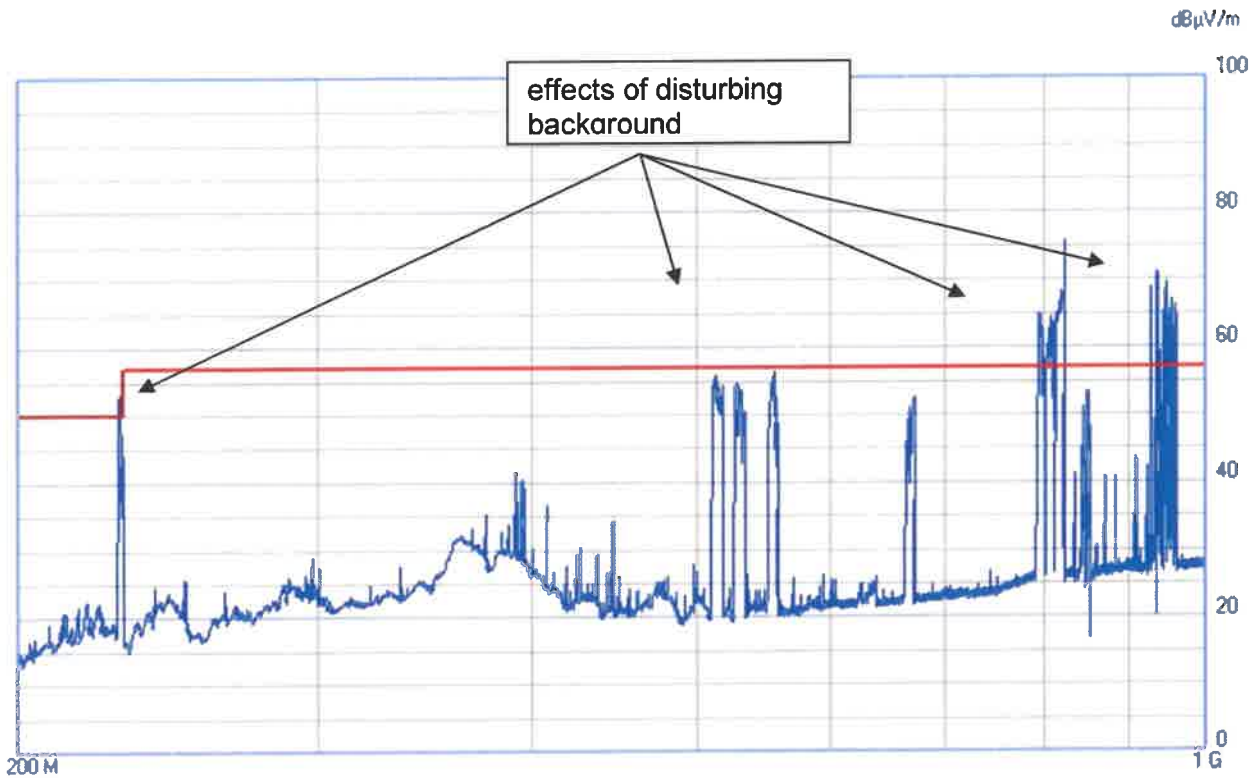
61000_6_4-3m

Factors:

BC 01 19

QPeak —

Graph 3 - Records of emissions from the cover of the device including background emission – range 200 – 1000MHz - (envelope of horizontal and vertical polarization)



03a_HARDY_HI6850_PM1 DC_

	Start [MHz]	Stop [MHz]	Step	Detector	Hold Time	RBW	Min Att	Pre Amp	Pre Sel	Prompt start	Ancillary
1	200	1000	AUTO (26 172 kHz)	P Q 61000_6_4-3m	500 ms	120 kHz	10	ON	ON	...	V, H

Ancillary = Antenna

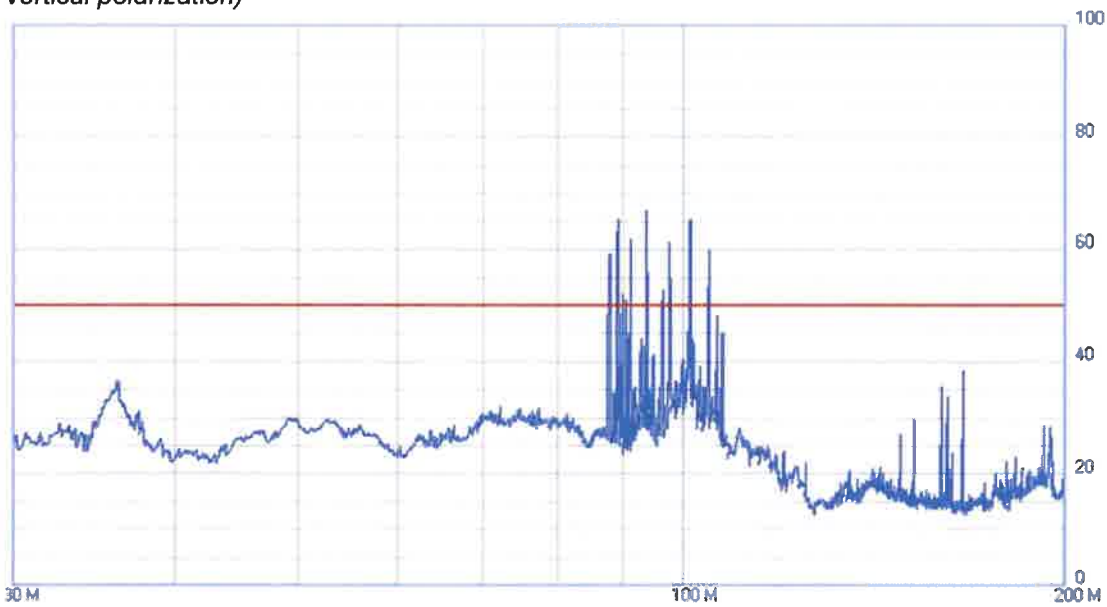
Limits:
61000_6_4-3m

Factors:
LP 02 19

QPeak ———

Records of emissions from interfering emissions of background

Graph 4 - Records of emissions from background – range 30 – 200 MHz - (envelope of horizontal and vertical polarization)

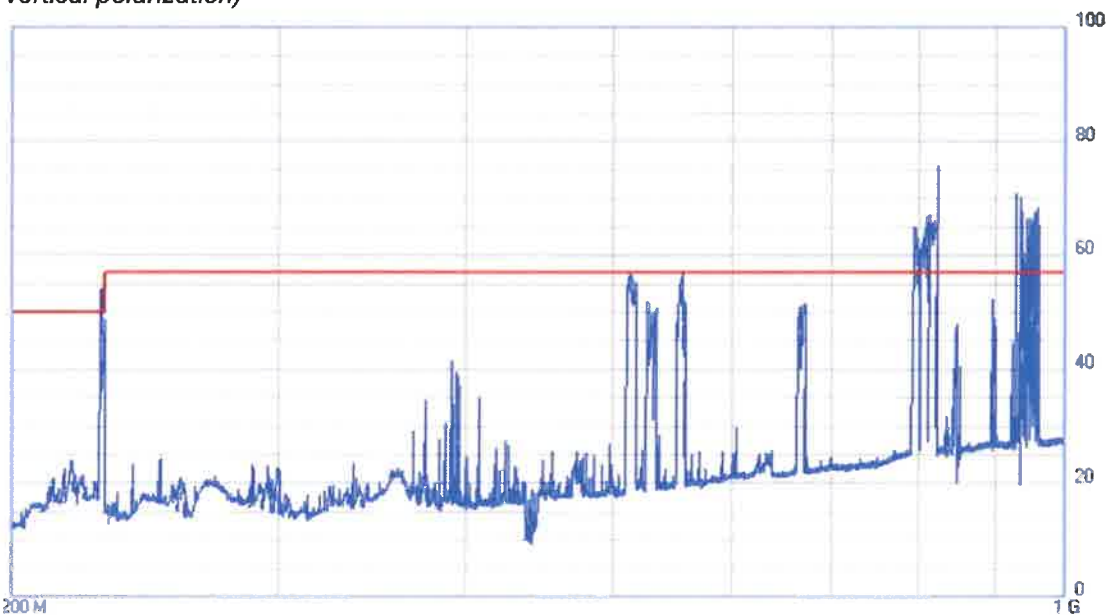


02a_HARDY_HI6950_BACKGROUND

	Start [MHz]	Stop [MHz]	Step	Detector	Hold Time	RBW	Min Att	Pre Amp	Pre Sel	Prompt start	Ancillary
1	30	200	AUTO (26 172 kHz)	P Q 61000_6_4-3m	500 ms	120 kHz	0	ON	ON	...	V, H

Ancillary = Antenna
 Limits: 61000_6_4-3m
 Factors: 8C 01 19 QPeak —

Graph 5 - Records of emissions from background – range 200 – 1000MHz - (envelope of horizontal and vertical polarization)



03a_HARDY_HI6950_BACKGROUND

	Start [MHz]	Stop [MHz]	Step	Detector	Hold Time	RBW	Min Att	Pre Amp	Pre Sel	Prompt start	Ancillary
1	200	1000	AUTO (26 172 kHz)	P Q 61000_6_4-3m	500 ms	120 kHz	10	ON	ON	...	V, H

Ancillary = Antenna
 Limits: 61000_6_4-3m
 Factors: LP 02 19 QPeak —

3. TEST EVALUATION:

3.1 Disturbance voltage on the feeder terminal clamps in the range of 150 kHz to 30 MHz

The measured values of disturbance voltages on the power clamps are below the limit values according to ČSN EN 61000-6-4

Estimation of measurement uncertainty

Measuring uncertainty expanded acc. to ČSN EN 55016-4-2 - $2 u_c(V) = 3,60 \text{ dB}$ –

Tested device PASS the requirements of the ČSN EN 61000-6-3.

3.2 Radiated electromagnetic interference from the cover of the device in the range of 30 MHz to 1000 MHz

The measured values of the radio interference of the background exceed the set limits in some places acc. to the table 6 EN 55011 ed.4. According to the article 7.2 of ČSN EN 55011 ed.4 the measured values from the device cover were compared to the measured values of the disturbing background. It arises from the comparison of the disturbance radiation and disturbing background signal levels - a high level of the disturbing background, whose values closes to the prescribed limit

value to less than $6 \text{ dB}(\mu\text{V})$ and on definite frequency it excess the limit value – this is caused by background radiation.

Comparison of background graphs with the test device is shown in graphs 6 and 7.

Estimation of measurement uncertainty:

Measuring uncertainty extended acc. to ČSN EN 55016-4-2 for the measuring range of 30 MHz to 200 MHz: - $2 u_c(E) = 4,95 \text{ dB}$ in the distance of 3 m, aerial horizontal polarization,

- $2 u_c(E) = 5,06 \text{ dB}$ in the distance of 3 m, aerial vertical polarization;

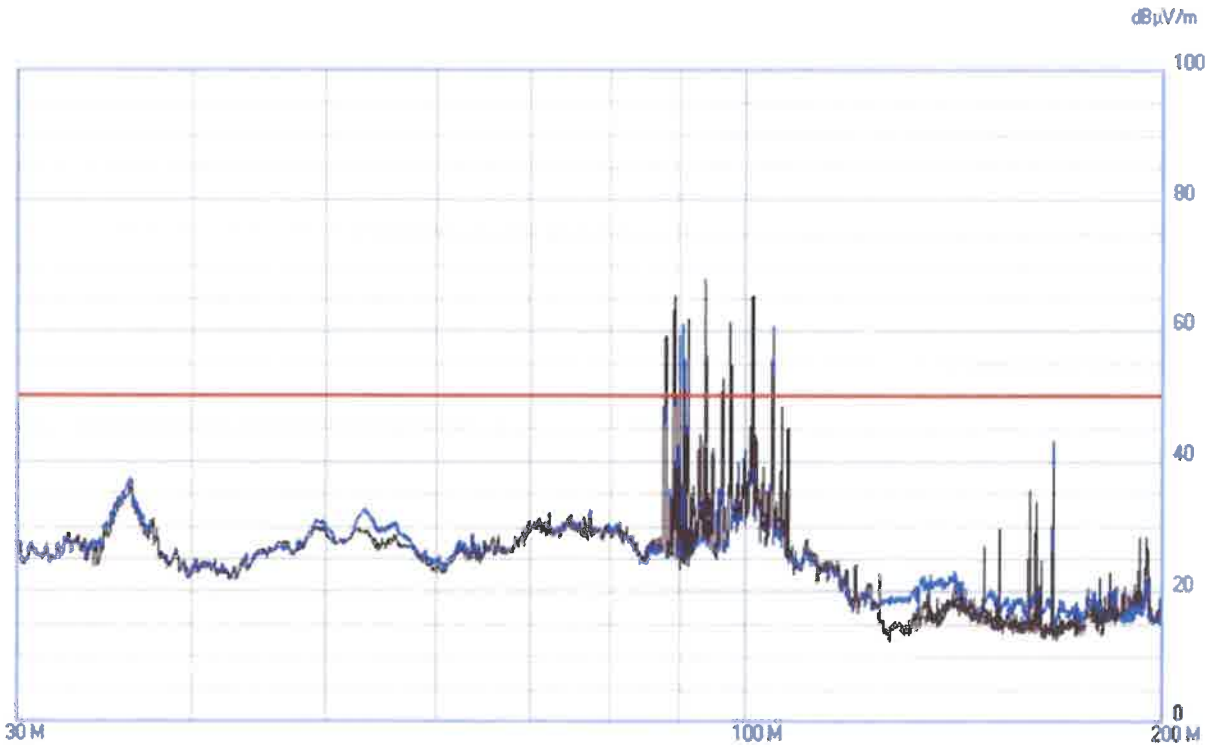
for the measuring range of 200 MHz to 1000 MHz:

- $2 u_c(E) = 5,19 \text{ dB}$ in the distance of 3 m, aerial horizontal polarization,

- $2 u_c(E) = 5,18 \text{ dB}$ in the distance of 3 m, aerial vertical polarization.

Equipment under test PASS the requirements according tab 1.1. ČSN EN 61000-6-3.

Graph 6 - Comparison of the radiation patterns of the background itself with the test device (range 30 – 200 MHz)



02a_HARDY_HI6850 PM1 DC

	Start [MHz]	Stop [MHz]	Step	Detector	Hold Time	RBW	Min Att	Pre Amp	Pre Sel	Prompt start	Ancillary
1	30	200	AUTO (26.172 kHz)	P Q 61000_6_4-3m	500 ms	120 kHz	0	ON	ON	...	V, H

Ancillary = Antenna

Factors: QPeak

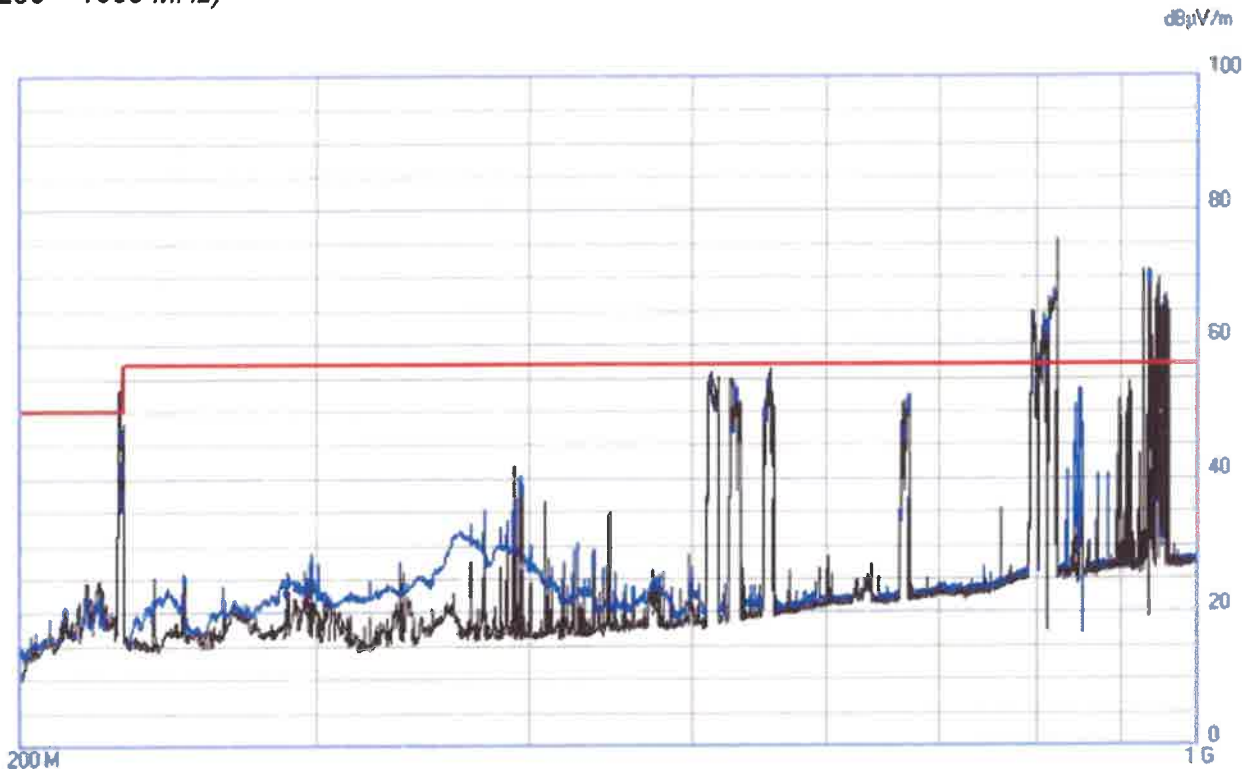
02a_HARDY_HI6850 BACKGROUND

	Start [MHz]	Stop [MHz]	Step	Detector	Hold Time	RBW	Min Att	Pre Amp	Pre Sel	Prompt start	Ancillary
1	30	200	AUTO (26.172 kHz)	P Q 61000_6_4-3m	500 ms	120 kHz	0	ON	ON	...	V, H

Ancillary = Antenna

Factors: QPeak

Graph 7 - Comparison of the radiation patterns of the background itself with the test device (range 200 – 1000 MHz)



03a_HARDY_HI6850_PM1_DC_

	Start [MHz]	Stop [MHz]	Step	Detector	Hold Time	RBW	Min Att	Pre Amp	Pre Sel	Prompt start	Ancillary
1	200	1000	AUTO (26.172 kHz)	P.G 61000_6_4-3m	500 ms	120 kHz	10	ON	ON	—	V, H

Ancillary = Antenna

Factors: QPeak:

03a_HARDY_HI6850_BACKGROUND

	Start [MHz]	Stop [MHz]	Step	Detector	Hold Time	RBW	Min Att	Pre Amp	Pre Sel	Prompt start	Ancillary
1	200	1000	AUTO (26.172 kHz)	P.G 61000_6_4-3m	500 ms	120 kHz	10	ON	ON	—	V, H

Ancillary = Antenna

Factors: QPeak:

B. Tests and verification – EMC immunity according to EN 61000-6-2

Requirements for Minimal Resistance of the Device in industrial environment according requirements EN 61000-6-2

Input / Output	Acting phenomenon	Basic standard	Testing value	Required criterion
By cover	Electrostatic discharge (ESD)	EN 61000-4-2	4 kV touch 8 kV air	B B
	50 Hz frequency magnetic field (HPower)	EN 61000-4-8	30 A/m	A
Power voltage, or Input/output terminals	Short-time voltage drop (DIPS)	EN 61000-4-11	0% - 0.02 s (1 period)	B
			40% - 2 s (10 periods)	C
			70% - 0.5 s (25 periods)	C
	Short-time voltage interruption (INTERRUPT)	EN 61000-4-11	0% - 5 s (250 periods)	C
	Impulse group (BURST)	EN 61000-4-4	± 2 kV Tr/Th=5/50 ns 5 kHz	B
Shock pulse (SURGE)	EN 61000-4-5	± 2 ¹⁾ / ± 1 ²⁾ kV Tr/Th= 1,2/50 (8/20) μs	B	
High-frequency electromagnetic disturbance non-symmetrical	EN 61000-4-6	10 V (0,15 až 80 MHz)	A	
1) Conductor-earth		2) Conductor-conductor		

Functional Criteria

Functional Criteria A

The EUT shall continue to operate as intended during and after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the EUT is used as intended. If the performance level is not specified by the manufacturer, this may be derived from the product description and documentation and what the user may reasonably expect from the equipment if used as intended.

Functional Criteria B

The EUT shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the EUT is used as intended. The performance level may be replaced by a permissible loss of performance. However, during the test degradation of performance is allowed but 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, either of these may be derived from the product description and documentation and what the user may reasonably expect from the equipment if used as intended.

Functional Criteria C

Temporary loss of function is allowed during the test, provided the function is self-recoverable or can be restored by the operation of the controls

TESTING METHODS AND TEST RESULTS:

- the tested device was operated at the rated voltage of 24 V DC via manufacturer-recommended AC/DC 230 AC/24 V DC power supply - Mean well EDR-120-
- the device was tested in standard operating mode with the input and output circuit terminals connected.
- the output values of the measured signals were monitored during the individual tests.

1.1 Resistance Test to the Electrostatic Discharge (ESD) acc. to ČSN EN 61000-4-2 ed.2.

The standardized course of test pulses and setting values of individual parameters of the test are shown in the following tables.

Each test was carried out with ten pulses of positive polarity and ten pulses of negative polarity for every tested point and every voltage level (the prescribed test value of voltage is reached subsequently in several steps).

The test was carried out in the mode of contact discharge (CD) on the metal accessible surfaces of the device cover in the air discharge (AD) mode onto the insulating surface of the control panel and accessible surface.

Test – contact discharge

Test Procedure		EN 61000-4-2 : ESD	
Test generator:	EM TEST dito	Software No.:	001591
		Serial No.:	01/05
Test setup:			
tr:	1 S		
Testpoints	4		
Mode:	Contact Discharge (CD)		
Polarity:	Alternate		
Trigger:	Single		
Test Voltages:	±2000 V -> ±4000 V		
Events:	10		

Test Result	EN 61000-6-2: ESD
Pulses:	40
Result:	No function worsening occurred. Meets the functional criterion A (the criterion B required).

Test – air discharge

Test Procedure	EN 61000-4-2 : ESD		
Test generator:	EM TEST dito	Software No.:	001591
		Serial No.:	01/05
Test setup:			
tr:	1 S		
Testpoints	4		
Mode:	Air Discharge (AD)		
Polarity:	Alternate		
Trigger:	Single		
Test Voltages:	±6000 V -> ±8000 V		
Events:	10		

Test Result	EN 61000-6-2: ESD
Pulses:	40
Result:	No function worsening occurred. Meets the functional criterion A (the criterion B required).

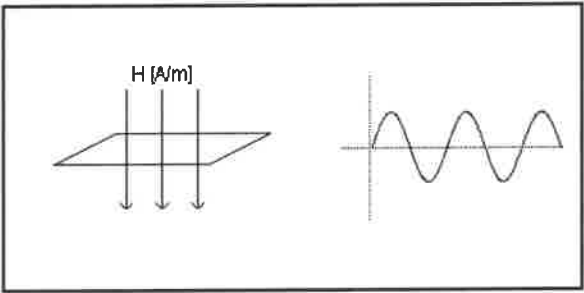
1.2 Resistance Test by the Magnetic Field of Network Frequency with the Intensity of 30 A/m acc. to ČSN EN 61000-4-8 ed.2.

The generator and current transformer testing circuits were verified by the measuring of the current flowing from the antenna before the test and the transformer factor (T_f) was set in order to the real value of the field created by the antenna was 30 A/m, while complying with the antenna coefficient of $C_f = 0.91$.

The real measured current $I_2 = 32.89$ A
 The real intensity of the mag. field $H = I_2 \times C_f = 32.89 \times 0.91 = 29.93$ A/m

The standardized course of the testing field and the setting values of the test individual parameters, especially C_f a T_f , are shown in the following table.

The tested device underwent the action of the field by the immersing method.

Test Procedure		EN 61000-4-8 HPower	
Test generator:	UCS500 M4	Software No.:	001591
		Serial No.:	0402-02
Antenna:	Frame (MS 100)	Trafo:	2630, Range 30 A
Test setup:			
H:	30 A/m		
Antenna Factor:	0.910 1/m		
Trafo Factor:	0.465 A/V		
Test duration:	10 min		

Test Result		EN 61000-6-2: HPower	
H:	30 A/m		
elapsed Test time:	60 min		
Result:	No device functional worsening was observed. Meets the functional criterion A.		

1.3 The Test of the Resistance to the Short-Time Drops of Supply Voltage (DIPS) acc. to ČSN EN 61000-4-11 ed.2.

DISP is applied for the input of the device control voltage. The test was carried out by means of a one-voltage coupling network of the testing generator. 3 voltage drops in the el. angle of 0° and 180° are applied in order to lower to 0% for the period of 20 ms, to 40% for the period of 200 ms and for the drop to 70% for the period of 500 ms with the time of 10 seconds between them (see the following tables). For this test, voltage drops were applied via an AC / DC power supply.

Voltage drop to 0 % for the time of one period (0.02 s)

Test Procedure		EN 61000-4-11: DISP	
Test generator:	UCS500 M4	Serial No.:	V052100014
Test setup:			
V:			
td:	20 ms		
tr:	10 s		
Angle:	0, 180 °		
Mode:	Synchronous		
Test Type:	Dips		
Events:	3		

Test Result:		EN 61000-6-2: DISP
Pulses:	6	
Result:	No device functional worsening was observed. Meets the functional criterion A (Permitted functional criterion B).	

Voltage drop to 40 % for the time of 10 periods (0.2 s)

Test Procedure		EN 61000-4-11: DIPS	
Test generator:	UCS500 M4	Serial No.:	V052100014
Test setup:			
V:	40% V		
td:	200 ms		
tr:	10 s		
Angle:	0, 180 °		
Mode:	Synchronous		
Test Type:	Dips		
Events:	3	Time between Tests:	10 s

Test Result:		EN 61000-6-2: DISP	
Pulses:	6		
Result:	No device functional worsening was observed. Meets the functional criterion A (Permitted functional criterion C).		

Voltage drop to 70 % for the time of 25 periods (0.5 s)

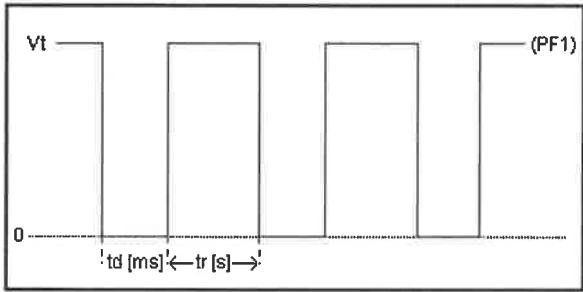
Test Procedure		EN 61000-4-11: DIPS	
Test generator:	UCS500 M4	Serial No.:	V052100014
Test setup:			
V:	70% V		
td:	500 ms		
tr:	10 s		
Angle:	0, 180 °		
Mode:	Synchronous		
Test Type:	Dips		
Events:	3	Time between Tests:	10 s

Test Result:		EN 61000-6-2: DISP	
Pulses:	6		
Result:	No device functional worsening was observed. Meets the functional criterion A (Permitted functional criterion C).		

1.4 The Test of Resistance to Short-Time Interruption of Supply Voltage (INTERRUPT) acc. to ČSN EN 61000-4-11 ed.2.

It is applied on the input of alternating feeding of the device. It is made by means of a one-phase coupling supply network of the testing generator. 3 voltage interruptions for the period of 5,000 ms for the electric angle value of 0° and 180° are performed. The test setting parameters are in the following table. For this test, voltage drops were applied via an AC / DC power supply.

Voltage interruption for the time of 250 periods (5 s)

Test Procedure		EN 61000-4-11: INTERRUPT	
Test generator:	UCS500 M4	Serial No.:	V052100014
Test setup:			
td:	5000 ms		
tr:	10 s		
Angle:	0, 180 °		
Mode:	Synchronous		
Test Type:	PF1		
Events:	3		

Test Result:		EN 61000-6-2: INTERRUPT
Pulses:	6	
Result:	There was interrupted function during the test , automatic start up after test - the normal state. Meets the functional criterion C (Permitted functional criterion C).	

1.5 The Test of the Resistance to Fast Transient Performances (BURST) acc. to ČSN EN 61000-4-4 e.2.

The standardized course of the testing pulses and setting values of individual parameters of the test are shown in the following table.

The test was performed using a UCS 500 coupling network for 24 V DC supply voltage and on input / output signals via capacitive coupling clamps. The action time of positive and negative polarity pulse groups of the prescribed voltage testing values ($\pm 2,000$ V) is 1 minute for each coupling combination.

Test Procedure		EN 61000-4-4 : BURST	
Test generator:	UCS500 M4	Software No.:	001591
		Serial No.:	V052100014
Coupling network:	CNI503	Serial No.:	070201
Test setup:			
U:	± 2000 V		
f:	5 KHz		
td:	15 Ms		
tr:	300 Ms		
Angle:	°		
Mode:	Asynchronous		
Coupling:	Power input 24V L+, L- // IN/OUT via capacitive coupling clamps		
Test duration:	20 min	Time between Tests:	2 s

Test Result:		EN 61000-6-2: BURST	
U:	± 2000 V	f:	5 kHz
		td:	15 ms
		tr:	300 ms
Coupling:	Power input 24V L+, L- // IN/OUT via capacitive coupling clamps		
elapsed Test time:	20 min		
Result:	<p>No worsening of the required function occurred in the course of the test.</p> <p>Meets the functional criterion A (Permitted functional criterion B).</p>		

1.6 The Test of the Resistance to the Shock Pulse (SURGE) acc. to ČSN EN 61000-4-5 ed.2.

The standardized course of testing pulses and setting values of testing individual parameters are shown in the following table.

The test is carried out by means of the coupling network UCS 500 for inputs of DC voltage. The device underwent 5 pulses of positive polarity and five pulses of negative polarity for each coupling combination.

The tests were carried out with the following testing voltage: +/- 500 V for the conductor - conductor combination

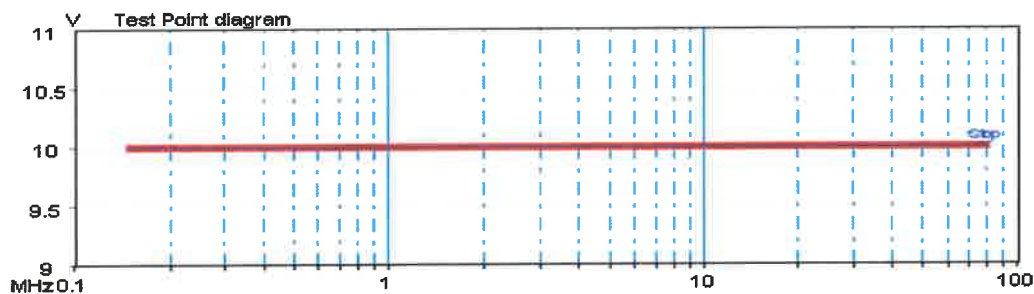
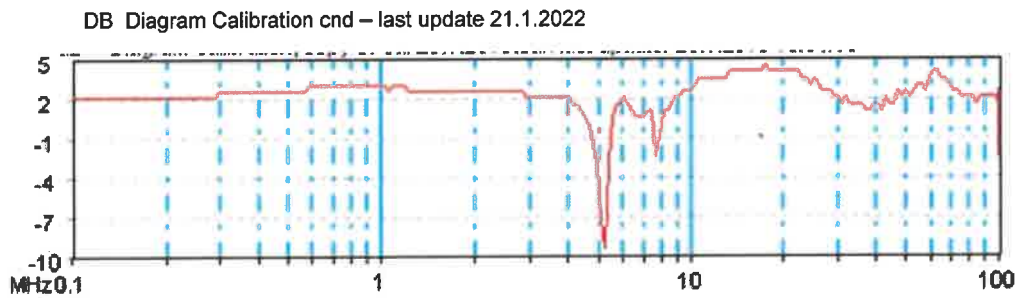
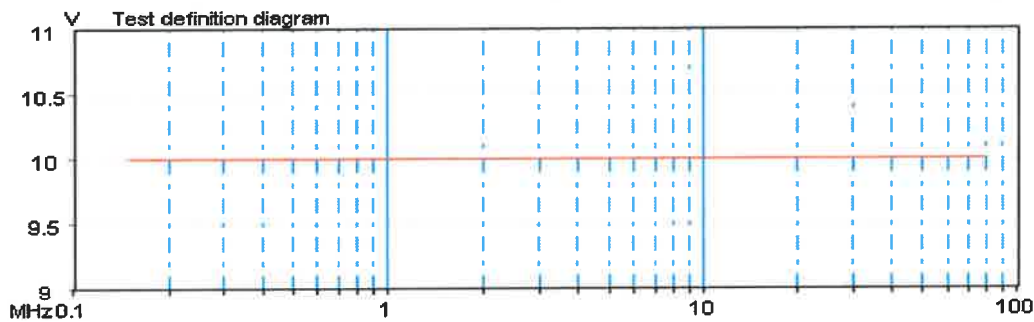
Test Procedure		EN 61000-4-5 : SURGE	
Test generator:	UCS500 M4	Software No.:	001591
		Serial No.:	V052100014
Pulse (Open circuit)	1.2/50 us	Pulse (Short circuit)	8/20 us
Coupling network:	CNI503	Serial No.:	070201
Test setup:			
tr:	5 s		
Angle (Start):	0 °		
Angle (Stop):	270 °		
Angle (Step):	90 °		
Mode:	Synchronous		
Polarity:	Alternate		
Line to line	500 V		
Line to earth			
Coupling:	L+/L-		
Events:	5		

Test Result:		EN 61000-6-2: SURGE	
U:	± 500 V	pulses:	6
Coupling	L+/L-		
Result:	No functional worsening occurred. Meets the functional criterion A (criterion B permitted)		

1.7 The Test of the Resistance to the Injected Currents on power voltage of eut acc. to. ČSN EN 61000-4-6

The test was carried out by means of the CWS 500 - pulse generator and by means of the coupling network M3-32A – applied on power voltage of devices. The setting values of test individual parameters are shown in the following table.

Test Procedure		EN 61000-4-6: Level III.ets	
Test generator:	CWS 500 C	Serial No.:	V 0502100016
	Start	Stop	Step
Level:	10,0 V	10,0 V	10,0 V
Frequency:	0,15 MHz	80 MHz	1 %
Modulation:	AM 1000 Hz / 80 %	Tp. count:	631
Occured after:	0,1 s	Time between Tests:	0,0 s

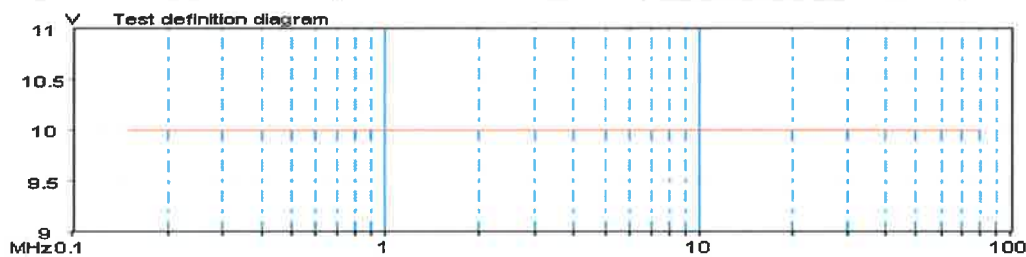


Test Result:		EN 61000-6-2: RF
Result:	<p>No functional worsening occurred. Only slight changes in analog values within the limit values given by the manufacturer during the test.</p> <p>Meets the required functional criterion A</p>	

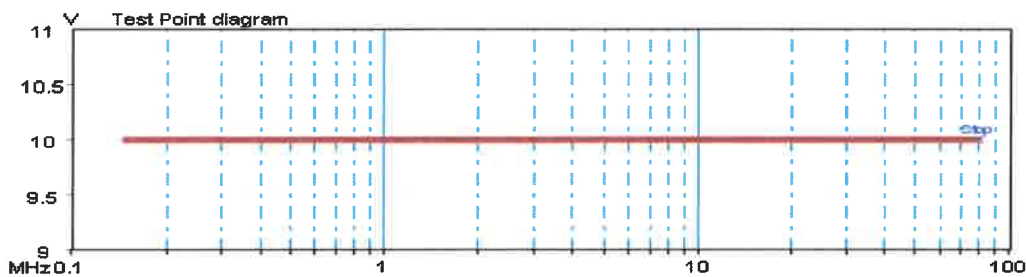
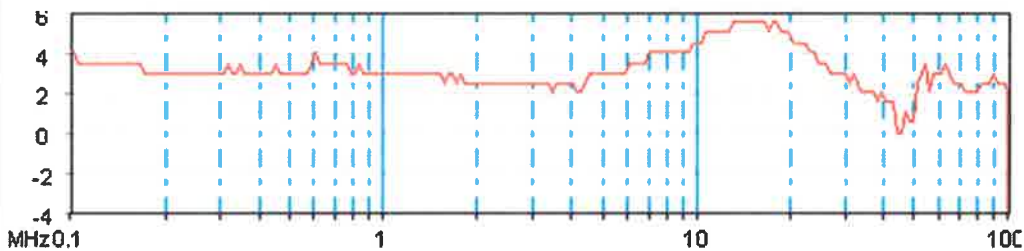
1.8 The Test of the Resistance to the Injected Currents on input/output connection of eut via using an injection current probe (coil) acc. to. ČSN EN 61000-4-6

The test was carried out by means of the CWS 500 - pulse generator and by means of the coupling network M3-32A – applied on power voltage of devices. The setting values of test individual parameters are shown in the following table.

Test Procedure		EN 61000-4-6: Level III.ets	
Test generator:	CWS 500 C	Serial No.:	V 0502100016
	Start	Stop	Step
Level:	10,0 V	10,0 V	10,0 V
Frequency:	0,15 MHz	80 MHz	1 %
Modulation:	AM 1000 Hz / 80 %	Tp. count:	631
Occured after:	0,1 s	Time between Tests:	0,0 s



DB Diagram Calibration injection probe – last update 21.1.2022



Test Result:	EN 61000-6-2: RF
Result:	No functional worsening occurred. Only slight changes in analog values within the limit values given by the manufacturer during the test. Meets the required functional criterion A

2. TEST EVALUATION:

2.1 The results of individual tests are recorded in the above-mentioned tables separately for every tested discipline.

2.2 It rises from the individual tests that the mentioned device showed at least the standard-required functional criterion

On the basis of conducted inspection, we submit the following inspection

conclusion:

The device meets the requirements of the standards and regulations for the tests mentioned in this report.

The above listed inspection conclusion shall apply under the following conditions:

No conditions.

The outcomes of inspection presented in this inspection report are related only to the inspected device. The inspection report may not be reproduced otherwise than as a whole unless agreed to by TÜV SÜD Czech s.r.o. and the customer.

In Ostrava, on 18.3.2022

TÜV SÜD Czech s.r.o. inspector: Ing Tomáš Liberda



TÜV SÜD Czech s.r.o. Business Unit Manager: Ing. Petr Domša

V.z.

