

Test report No.: 7482379367-01
Manufacturer: Autel Intelligent Automobile Co., Ltd.
Type: ATS100 – Autel Turn Assist 100



Test Report

No.: 7482379367-01

Test of a type of separate technical unit
with regard to UN/ECE Regulation No.
151
Paragraphs 6.5. and Paragraphs 6.6.
including
R151 Amendment 1 and Amendment 2

Product name : ATS 100 - Autel Turn Assist

Product model : ASR 100

Name of applicant : Autel Intelligent Automobile Co., Ltd.

Test classification : Commissioned Test



Prepared By Zhen Yang



Authorized By Joe Zhou

Test report No.: 7482379367-01
Manufacturer: Autel Intelligent Automobile Co., Ltd.
Type: ATS100 – Autel Turn Assist 100



China

I. General

Make (trade name of manufacturer) : Autel Intelligent Automobile Co., Ltd.
Type : ATS 100
Variant(s) : n/a
Version(s) : V1.00.14
Commercial description(s) : Autel Turn Assist 100
Means of identification of type, if marked on the vehicle : Autel ASR 100
Category of Test vehicle : N2
Name and address of manufacturer : Autel Intelligent Automobile Co., Ltd.
701, Building B1, Zhiyuan, Xueyuan Road, Xili,
Nanshan, Shenzhen, China
Address(es) of assembly plant(s) : Autel Intelligent Automobile Co., Ltd.
Name and address of manufacturer's representative (if applicable) : N/A

II. Test results

Refer to the Annex I

III. Picture

Refer to the Annex II

IV. Information Document

Refer to the Annex III

V. Information provided by Autel

Refer to the Annex IV

VI. Statement of conformity

The test report may be reproduced and published in full and by the client only. It can be reproduced partially with the written permission of the test laboratory only.

Shanghai, 2021-12-21
(yyyy-mm-dd)

Annex I Test results

1. Description of the test object

- 1.1. Variant / version of test vehicle : FAW CA4250P77K25T1E5
- 1.2. VIN of test vehicle : LFWSRXSJ3L1F50232
- 1.3. Vehicle condition : Good
- 1.3.1. Maximum permissible mass [kg] : 40000
- 1.3.2. Mass of vehicle when tested [kg] : 14500
- 1.3.3. Tyre size and pressure [kPa] : 12.00R22.5
930
- 1.4. Vehicle width [m] : 2.55
- 1.5. Mounting position of detection unit : Right Side of vehicle, see image below
- 1.6. Specification of BSIS equipment : ATS 100 – Autel Turn Assist 100
- Make and type of device : Autel Intelligent Automobile Co., Ltd.
ATS 100
- Detection means : Millimeter-wavelength radar
- Kind of warning for driver : Optical / acoustic / ~~haptic~~
- User-adjustable information timing : ~~Applicable~~ / Not applicable

2. Test conditions

2.1. Test equipment

Equipment name	Manufacturer	Type	Serial number
Bicyclist target	4Active	SPT Opt1d-cyclist	TX-ZXC-001
Speed measurement device	ABD	Launch pad	TX-YDT-002
Steering Robots	ABD	SR60	TX-JQR-003-01
Pedal Robots	ABD	CBAR1000	TX-JQR-003-02
Inertial and GPS Measurement Systems	Oxts	RT	TX-CFZ-001

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- 2.2. Test track : Flat, dry asphalt / ~~concrete~~ surface
- 2.3. Ambient temperature (°C) (0°C~45°C) : 2-13
- 2.4. Test date : 2021-11-29 to 2021-12-01 (yyyy-mm-dd)
- 2.5. Test lab and test track location : Zhongzhi Zhitong Testing Technology Co., Ltd.
 Hongqiao, Taixing, Jiangsu, China

3. Test results :

3.1. Blind Spot Information Static Tests according :
 to R151 Paragraphs 6.6.

	Bycyclist speed [km/h]		Point of constant speed [m]		Forward vehicle [m]		Sideward vehicle [m]		Point of Blind Spot Information signal activated [m]		Result
	target	tested	target	tested	target	tested	target	tested	target	tested	
Static Type Test 1	5	5.02	--	--	1.15	1.08	--	--	2	7.01	Pass/Fail
Static Type Test 2	20	20	44	46.5	--	--	2.75	2.63	7.77	32.32	Pass/Fail
Tolerance etc.	±0.5		or more		±0.2		±0.2		or more		

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3.2. Blind Spot Information Dynamic Test :
 according to R151 Paragraphs 6.5.

Test cases	V _{bicycle} [km/h]		V _{vehicle} [km/h]		Maximum lateral deviation [m]	Longitudinal deviation [m]				Operating condition of Blind Spot Information signal [m]		result	
	target	tested	target	tested	bicycle	bicycle vs Line A	vehicle vs Line B	d _c [m]	d _d [m]	start signal	end signal (vs Collision point)		
1	20	19.67	10	9.78	1.18	44.22	15.64	15	26.1	23.82	0	Pass / Fail	
2	20	20.32	10	10.44	1.18	44.15	22.35	15	32.3	30.23	0	Pass / Fail	
3	20	19.91	20	19.87	1.18	44.32	38.18	38.3	65	61.51	0	Pass / Fail	
4	10	9.72	20	19.27	4.22	22.15	43.37	15	43.2	40.13	0	Pass / Fail	
5	10	10.02	10	9.47	4.22	22.26	19.64	19.8	65	61.67	0	Pass / Fail	
6	20	20.02	10	9.38	4.22	44.18	14.52	15	26.1	23.14	0	Pass / Fail	
7	20	20.03	10	9.73	4.22	44.49	17.58	15	29.1	24.04	0	Pass / Fail	
Additional test cases	8	10	10.08	25	25.31	2.98	52.78	55.27	15	48.8	43.41	0	Pass / Fail
	9	15	15.05	28	28.77	2.98	54.13	59.22	17	51	42.76	0	Pass / Fail
	10	20	19.98	30	31.18	4.21	55.27	60.21	18.6	51.9	47.62	0	Pass / Fail
	11	5	4.97	30	30.03	4.21	62.35	66.34	18.61	57.9	53.31	0	Pass / Fail
Tolerance	±0.5		±2		±0.2	±0.5							

Annex II.Picture

Test Vehicle and Autel Turn Assist 100



End of Report

Autel Intelligent Automobile Co., Ltd.	Type: ATS100 – Autel Turn Assist 100 Information Document No.: BSIS-7482379367-01
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Annex III
Information Document
OF
Test report: 7482379367-01
UN Regulation No. 151
UNIFORM PROVISIONS CONCERNING THE APPROVAL
OF MOTOR VEHICLES WITH REGARD
TO THE BLIND SPOT INFORMATION SYSTEM FOR THE
DETECTION OF BICYCLES

Company name: Autel Intelligent Automobile Co., Ltd.

Type: ATS 100 – Autel Turn Assist 100

SHANGHAI, December 21, 2021

Autel Intelligent Automobile Co., Ltd.	Type: ATS100 – Autel Turn Assist 100 Information Document No.: BSIS-7482379367-01
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Autel Intelligent Automobile Co., Ltd.	Type: ATS100 – Autel Turn Assist 100 Information Document No.: BSIS-7482379367-01
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Confirmation

We hereby declare that the product of Autel Intelligent Automobile Co., Ltd., type ATS 100 – Autel Turn Assist 100 submitted for the test of UN ECE R151.

1. is compatible with the enclosed documentation

and

2. has been manufactured under condition of mass production.

Autel Intelligent Automobile Co., Ltd.	Type: ATS100 – Autel Turn Assist 100 Information Document No.: BSIS-7482379367-01
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1. Make (trade name of the manufacturer) : Autel Intelligent Automobile Co., Ltd.
2. Type : ATS 100 – Autel Turn Assist 100
- 2.1. Version(s) : V1.00.14
- 2.2. General commercial description(s) : Autel Turn Assist 100
3. Means of identification of type if marked : Autel ASR 100
on the ~~vehicle~~/component/STU
- 3.1. Location of that marking : Radar housing
4. Name and address of the manufacturer : Autel Intelligent Automobile Co., Ltd.
701, Building B1, Zhiyuan, Xueyuan Road, Xili, Nanshan,
Shenzhen, China
5. In the case of components and separate : N/A
technical units, location and method of
affixing of the approval mark
6. Address(es) of assembly plant(s) : Nanshan District Xueyuan Road, Tianliaocun Gongyequ A
Qu 9 Dong, Shenzhen, Guangdong, China
7. This ESA shall be approved as a : Component
8. Any restrictions of use and conditions : N/A
for fitting
9. Electrical system rated voltage : 8 – 32V
10. Charger: on board/external : N/A
11. Charging current: DC/AC : N/A
(number of phases/frequency)
12. Maximal nominal current (in each mode : N/A
if necessary)
13. Nominal charging voltage : N/A
14. Basic ESA interface functions: ex. : N/A
L1/L2/L3/N/PE/control pilot
15. Minimum $R_{s_{ce}}$ value (see paragraph : N/A
7.11. of this Regulation)
16. Statement for model difference (if : N/A
applicable)

**Autel Intelligent Automobile
Co., Ltd.**

Type: ATS100 – Autel Turn Assist 100
Information Document No.: BSIS-7482379367-01

Date: 2021-12-21

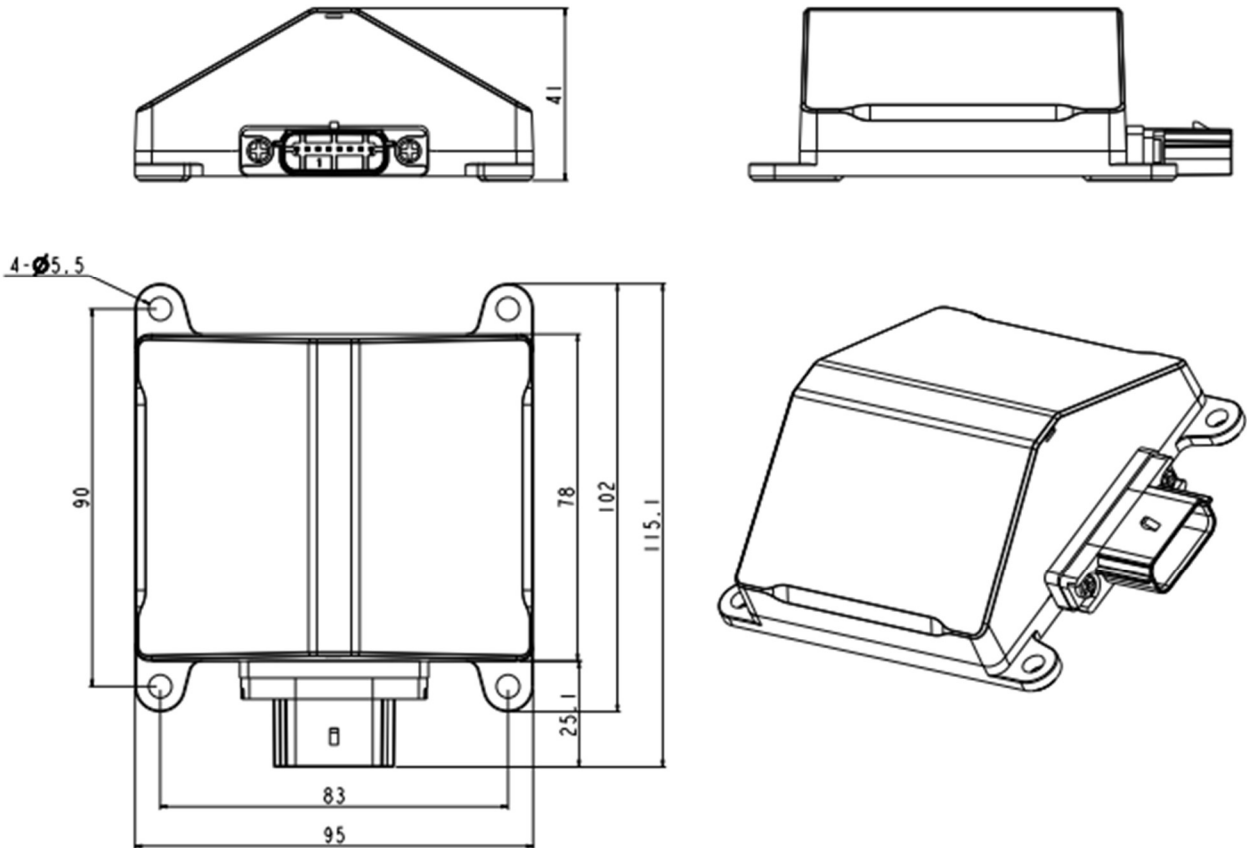
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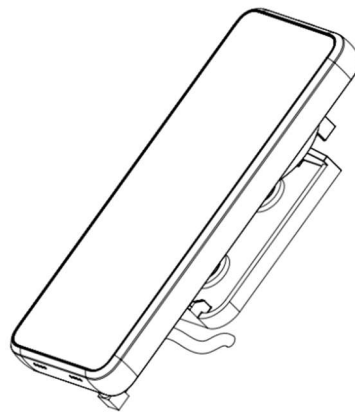
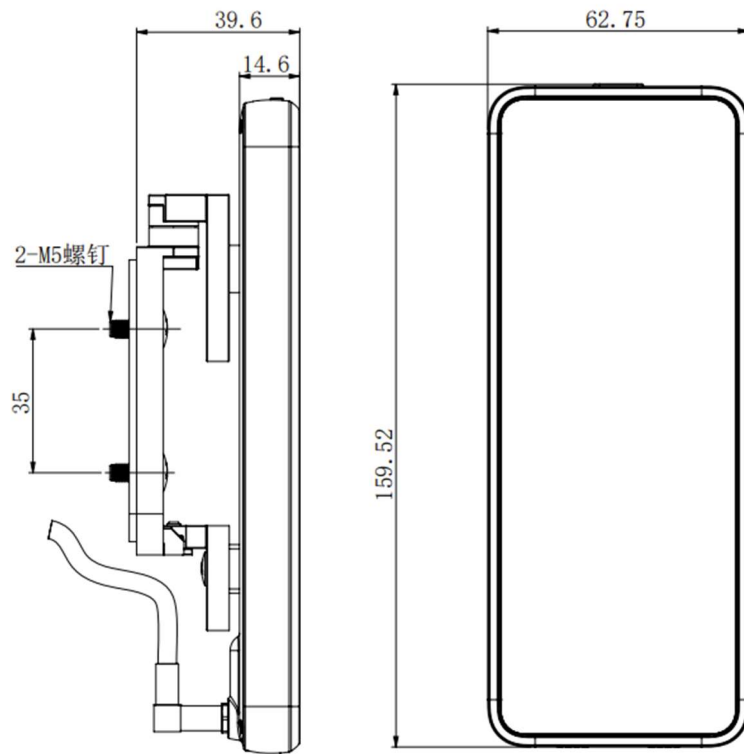
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Label Drawing



Drawing unit: mm



Drawing unit: mm

Annex IV

Detection Range which provided by Autel Intelligent Automobile Co., Ltd. According to Autel Turn Assist 100 Host computer(AU040120070126)

4.1. Blind Spot Information Static Tests :

	Bycyclist speed [km/h]	Point of constant speed [m]	Forward vehicle [m]	Sideward vehicle [m]	Point of Blind Spot Information signal detected [m]	
	target	target	target	target	target	ATS 100
Static Type Test 1	5	--	1.15	--	2	11.23
Static Type Test 2	20	44	--	2.75	7.77	-47

4.2. Blind Spot Information Dynamic Test :

Test Case	$V_{bicycle}$ [km/h]	$V_{Vehicle}$ [km/h]	$d_{lateral}$ [m]	d_a [m]	d_b [m]	d_c [m]	d_d [m]	$d_{bicycle}$ [m]	$l_{corridor}$ [m]	$d_{corridor}$ [m]	Blind Spot Information signal detected[m] BY ATS 100		
											Start range	End signal	
1	20	10	1.25	44.4	15.8	15	26.1	65	80	vehicle width + 1 m	-44.12	0	
2	20	10			22	15	32.3				-39.55	0	
3	20	20			38.3	38.3	65				29.36	0	
4	10	20	4.25	22.2	43.5	15	43.2				43.28	0	
5	10	10			19.8	19.8	65				-	0	
6	20	10			44.4	14.7	15				26.1	-51.55	0
7						17.7					29.1	-52.73	0
8	10	25	3	52.7	55.4	15	48.8	150	200		49.92	0	
9	15	28	3	54.2	59	17	51				42.27	0	
10	20	30	4.25	55.6	60.5	18.6	51.9				37.14	0	
11	5	30	4.25	62.5	66.5	18.61	57.9				50.16	0	

Note: Start range means: The distance between the target and the radar