

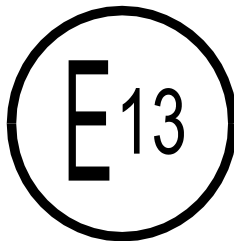


Référence: E13*10R05/01*15318*00

Annexes: - Rapport Technique
- Fiche de Renseignements du constructeur

Luxembourg, le 04 décembre 2019

Communication concernant:⁽²⁾
Communication concerning:




- **la délivrance d'une homologation**
approval granted
- ~~l'extension d'homologation~~
approval extended
- ~~le refus d'homologation~~
approval refused
- ~~le retrait d'homologation~~
approval withdrawn
- ~~l'arrêt définitif de la production~~
production definitely discontinued

d'un type de sous-ensemble électrique/électronique⁽²⁾ en ce qui concerne le Règlement N° 10
of a type of electrical/electronic sub-assembly with regard to Regulation N° 10

Numéro d'homologation par type:
Approval number:

E13*10R05/01*15318*00

Marque d'homologation:
Approval mark:

 10R - 05 15318

- 1. Fabricant: (marque commerciale du constructeur):**
Make (trade name of manufacturer): Auto Gauge (Taiwan) Co., Ltd.
- 2. Type:**
Type: #89364
Dénomination(s) commerciale(s) générale(s):
General commercial description(s): 80MM SPEED METER 0-200 KM/H
WITH 0-9000 RPM COMBO GAUGE
Version(s)/Variante(s):
Version(s)/Variant(s): Not applicable
- 3. Moyens d'identification du type, s'ils sont marqués sur le véhicule / composant / entité technique⁽²⁾:**
Means of identification of type, if marked on the vehicle / component / separate technical unit: See item 6.
- 3.1. Emplacement de ce marquage:**
Location of that marking: See item 6.

4. **Catégorie du véhicule:**
Category of vehicle: Not applicable
5. **Nom et adresse du constructeur:**
Name and address of manufacturer: Auto Gauge (Taiwan) Co., Ltd.
No. 8, Lane 50, Sec. 3, Nangang Rd.,
Nangang Dist., Taipei City,
Taiwan (R.O.C.)
6. **Dans le cas de composants ou d'entités techniques, emplacement et procédé de fixation de la marque de réception CEE:**
In the case of components and separate technical units, location and method of affixing of the ECE approval mark: Printed label durable fixed on housing of ESA or engraved on housing of ESA
7. **Adresse(s) de l' (des) usine(s) d'assemblage:**
Address(es) of assembly plant(s): Auto Gauge (Taiwan) Co., Ltd.
1F., No. 6, Lane. 50, Sec. 3, Nangang Rd.,
Nangang Dist., Taipei City,
Taiwan (R.O.C.)
8. **Informations supplémentaires (s'il y a lieu):**
Additional informations (where applicable): See appendix
9. **Autorité déléguée:**
Assigned authority: *Société Nationale de Certification et d'Homologation L-5201 Sandweiler*
- Service technique responsable de l'exécution des essais:**
Technical service responsible for carrying out the tests: Société Nationale de Certification et d'Homologation
11, rue de Luxembourg
L-5230 Sandweiler
10. **Date du rapport d'essai:**
Date of test report: 02.10.2019
11. **Numéro du rapport d'essai:**
Number of test report: 25604_11092019_Gauge
12. **Remarques (s'il y a lieu):**
Remarks (if any): See appendix

13. **Lieu:** Luxembourg
Place:

14. **Date:** 04 décembre 2019
Date:

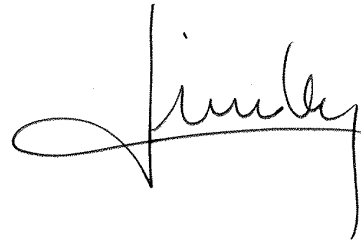
15. **Signature:**
Signature:

**Pour le Ministre de la Mobilité
et des Travaux publics**



Alain DISVISCOUR
Conseiller

Pour la SNCH



Laurent LINDEN
Directeur opérationnel



16. **L'index de l'ensemble des renseignements déposé chez l'autorité de réception, qui peut être obtenu sur demande, est joint.**

The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

See index to type-approval report

17. **Raison(s) de l'extension:** Not applicable
Reason(s) for extension:

² **Biffer la mention inutile**
Strike out what does not apply

Appendice

Appendix

au certificat d'homologation par type N° E13*10R05/01*15318*00

to type-approval certificate N° E13*10R05/01*15318*00

concernant l'homologation par type d'un sous ensemble électrique/électronique selon le Règlement N° 10.

concerning the type-approval of an electrical/electronic sub-assembly under Regulation N° 10.

- | | | |
|---------------|--|---|
| 1. | Informations supplémentaires.
Additional information. | |
| 1.1. | Tension nominale du système électrique [V]:
Electrical system rated voltage [V]: | 12V DC |
| | Masse:
Ground: | Negative / Positive ⁽²⁾ |
| 1.2. | Ce SEEE peut être utilisé sur n'importe quel type de véhicule avec les restrictions suivantes:
This ESA can be used on any vehicle type with the following restrictions: | Not applicable |
| 1.2.1. | Conditions d'installation, s'il y a lieu:
Installation conditions, if any: | Not applicable |
| 1.3. | CE SEEE peut seulement être utilisé sur les types de véhicules suivants:
This ESA can be used only on the following vehicle types: | Not applicable |
| 1.3.1. | Conditions d'installation, s'il y a lieu:
Installation conditions, if any: | Not applicable |
| 1.4. | La (les) méthode(s) spécifique(s) d'essais utilisée(s) et les bandes de fréquences couvertes pour déterminer l'immunité étai(ent): (indiquez s'il vous plaît à partir de l'annexe 9 la méthode précise utilisée).
The specific test method(s) used and the frequency ranges covered to determine immunity were: (Please specify precise method used from annex 9). | 150mm Stripline ISO 11452-5 2 nd ed. 2002
20 to 200MHz
Absorber chamber ISO 11452-2 2 nd ed. 2004
200 to 2000MHz |
| 1.5. | Laboratoire accrédité au titre de la norme ISO 17025 et reconnu par l'autorité d'homologation chargé d'effectuer les essais:
Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: | SGS-TÜV SAARLAND FORSTER GmbH
Saarbrücker Strasse 1
D-66706 Perl-Sinz |
| 2. | Commentaires:
Remarks: | None |



Référence: E13*10R05/01*15318*00

Annexes: - Rapport Technique
- Fiche de Renseignements du constructeur

Luxembourg, le 04 décembre 2019

Index du dossier d'homologation

Index to type-approval report

	Numéro d'homologation: Approval number:	E13*10R05/01*15318*00
	Révision: Revision:	00
	Marque de fabrication ou de commerce: Trade name or mark:	Auto Gauge (Taiwan) Co., Ltd.
	Type: Type:	#89364
1.	Procès-verbal d'essai: Test report:	N° 25604_11092019_Gauge
	- Compilation:	Page 1
	- Information sheet:	Attachment 1 - Page 2 & 3
	- Test report:	Attachment 2 - Page 4 to 15
2.	Dossier du constructeur: Report of the manufacturer:	Attachment 3
	- Manufacturer's information document:	Page 1 to 8
3.	Autres documents annexés: Other documents annexed:	Not applicable
4.	Date de délivrance de l'homologation initiale: Date of issue of initial type approval:	04.12.2019
5.	Date de la dernière délivrance de pages révisées: Date of last issue of revised pages:	Not applicable
6.	Date de la dernière délivrance d'une homologation révisée: Date of last extension:	Not applicable

Compilation No.: 25604 11092019 Gauge

Compilation page 1

Composition of the Attachments

Attachment 1 Information sheet page 2 to 3

Attachment 2 Test Report No.:
25604_11092019_Gauge page 4 to 15

Attachment 3 Report of the manufacturer external documents

- Annex 2B
- Technical Documents
- Photo of ESA



Attachment 1

Technical information about the ESA type according to ECE Reg. No. 10R00, 05 series of amendments from 16.10.2014, incl. supplement 1 from 08.10.2016.

SECTION I

- | | | |
|------|---|--|
| 1. | Make (trade name of manufacturer): | Auto Gauge (Taiwan) Co., Ltd. |
| 2. | Type:
Brand name:
General commercial description(s): | #89364
DAYTONA
80MM SPEED METER 0-200 KM/H
WITH 0-9000 RPM COMBO GAUGE |
| | <i>Version(s)/Variant(s):</i> | n. a. |
| 3. | Means of identification of type, if marked on the vehicle / component / separate technical unit : | see item 6. |
| 3.1. | Location of that marking: | see item 6. |
| 4. | Category of vehicle: | not applicable |
| 5. | Name and address of manufacturer: | Auto Gauge (Taiwan) Co., Ltd.
No. 8, Lane 50, Sec. 3, Nangang Rd.,
Nangang Dist., Taipei City,
Taiwan (R.O.C.) |
| 5.1 | Representative: | n. a. |
| 6. | In the case of components and separate technical units, location and method of affixing of the EC approval-mark: | printed label, durable fixed on housing of ESA or engraved on housing of ESA |
| 7. | Address(es) of assembly plant(s): | Auto Gauge (Taiwan) Co., Ltd.
1F., No. 6, Lane 50, Sec. 3, Nangang Rd.,
Nangang Dist., Taipei City,
Taiwan (R.O.C.) |
| 8. | Additional information (where applicable): | see appendix |

- | | | |
|------------|--|--|
| 9. | Assigned authority: | Société Nationale de Certification et d'Homologation
L-5201 Sandweiler |
| | Technical service responsible for conducting approval tests: | Société Nationale de Certification et d'Homologation
11, rue de Luxembourg
L-5230 Sandweiler |
| 10. | Date of test report: | 02.10.2019 |
| 11. | Number of test report: | 25604_11092019_Gauge |
| 12. | Remarks (if any): | none |

Appendix

- | | | |
|---------------|---|--|
| 1. | Additional information: | n. a. |
| 1.1. | Electrical system rated voltage [V]: | 12V DC |
| | Ground: | negative |
| 1.2. | This ESA can be used on any vehicle type with the following restrictions: | n. a. |
| 1.2.1. | Installation conditions, if any: | n. a. |
| 1.3. | This ESA can be used only on the following vehicle types: | n. a. |
| 1.3.1. | Installation conditions, if any: | n. a. |
| 1.4. | The specific test method(s) used and the frequency ranges covered to determine immunity were: | Tests were performed: 150mm Stripline (ISO 11452-5:2 nd ed. 2002) 20-200MHz, Absorber Chamber (ISO 11452-2:2 nd ed. 2004) 200-2000 MHz |
| 1.5. | Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: | SGS-TÜV Saarland Forster GmbH
Saarbrücker Strasse 1
66706 Perl-Sinz |
| 2. | Remarks: | n. a. |

Attachment 2

Test report #.: 25604_11092019_Gauge

**Tests on electronic parts in vehicles (electromagnetic compatibility)
per ECE Regulation No. 10R00, 05 series of amendments from 16.10.2014,
incl. supplement 1 from 08.10.2016.**

0. General declaration:

- 0.1. Model name:** 80MM SPEED METER 0-200 KM/H
WITH 0-9000 RPM COMBO GAUGE
- 0.2. Type / Brand name(s):** #89364 / DAYTONA
Version(s) / Brand name(s): n. a.
- 0.3. Type identification, place of printed label:**
Printed label, durable fixed on housing of ESA or engraved on housing of ESA
- 0.4. Name and address of manufacturer:** Auto Gauge (Taiwan) Co., Ltd.
No. 8, Lane 50, Sec. 3, Nangang Rd.,
Nangang Dist., Taipei City,
Taiwan (R.O.C.)
- 0.5. Number of description map:** 001

1. Details to equipment under test:

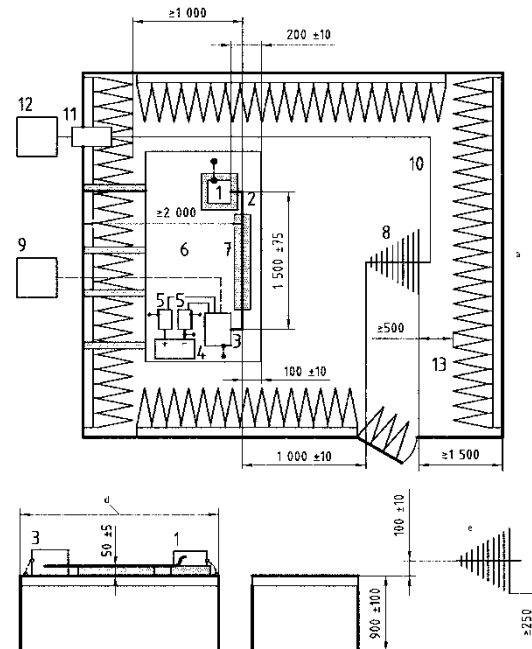
- 1.1. Representative EUT:** tested model was #89364
- 1.2. Description of EUT:** 80MM SPEED METER 0-200 KM/H
WITH 0-9000 RPM COMBO GAUGE

2. Test protocol:

2.1. Measurements radiated broadband electromagnetic emissions (annex 7)

- 2.1.1. Details to test:** Power supply of E.U.T. with car battery and was measured and observed with digital voltmeter METEX, type M2750. Power supply voltage comes over L.I.S.N. ($5\mu\text{H}/50\Omega$) and was connected with original cable from E. U. T. Ground plane was connected to earth ground system. E. U. T. was isolated with 50mm isolation from ground plane. Ground plane is a steel plate with dimension of 2.5x1m (L x W). Operation mode was with original cables during tests, works in simulation mode with worst case parameter in horizontal and vertical polarisation. Test was performed according to CISPR 25.

Dimensions in millimetres



2.1.2 Test results: passed, broadband emissions

2.2. Measurements radiated narrowband electromagnetic emissions (annex 8)

2.2.2 Details to tests: see pt.2.1.1

2.2.3 Test results: passed, narrowband emissions

SGS-TÜV Saarland Forster GmbH

18.09.2019

Test Report

EUT Information

EUT Name:	80MM SPEED METER
Manufacturer:	Auto Gauge (Taiwan) Co., Ltd.
Type:	#89364
S/N:	--
HW.-Rev.	--
SW:	--
Operating cond.:	100km/h, 6000rpm
Operator:	M. Linder
Test spec.:	Vehicle Directive
Test Side:	SAC1
Supply:	12V DC
Polarization:	Vertical/Horizontal
Line:	--
Project No.:	25604_11092019_Gauge
Connected Device:	--
Comment:	--

EMI Auto Test Template: Automotive Components - CBL

Hardware Setup:	Automotive Components - CBL
Measurement Type:	Open-Area-Test-Site (SAC/FAR)
Frequency Range:	30 MHz - 1 GHz
Graphics Level Range:	0 dB μ V/m - 80 dB μ V/m

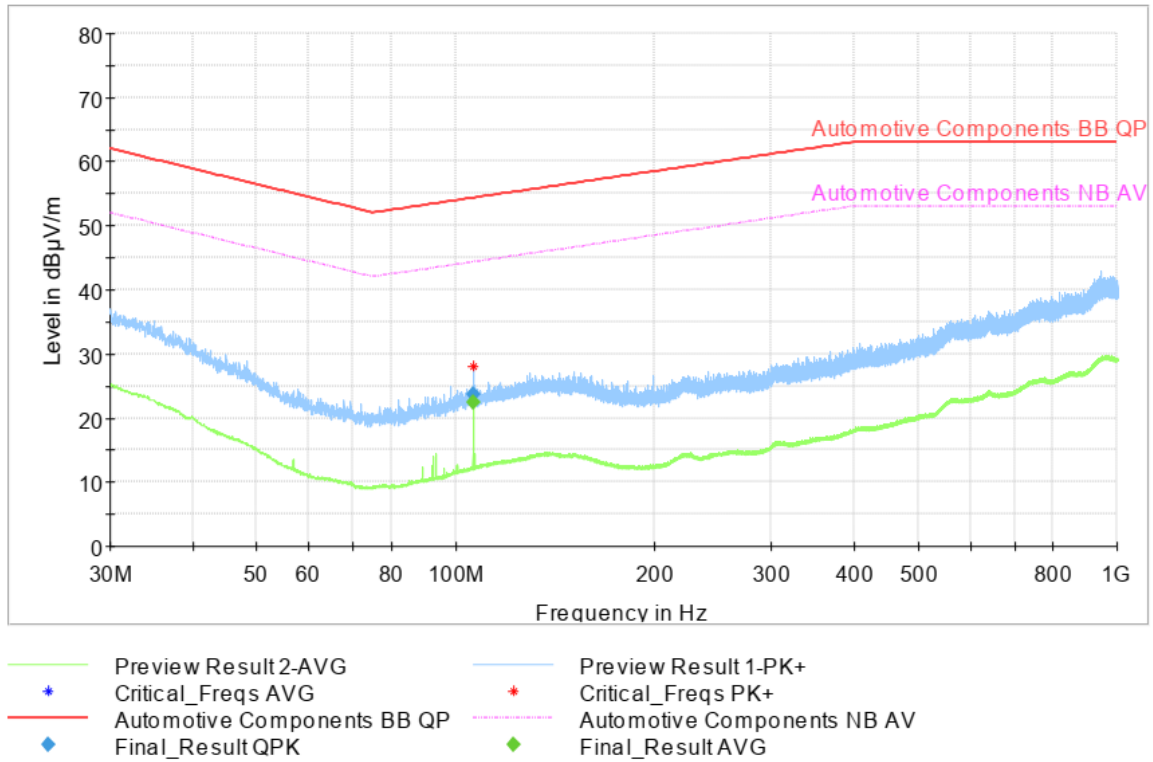
Preview Measurements:	
Scan Test Template:	Automotive Field Strength - CBL - Prescan

Final Measurements:	
Template for Single Meas.:	Automotive Field Strength - CBL - Final

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
Receiver: [ESU 26] 30 MHz - 1 GHz	40 kHz	QPK ; AVG	120 kHz	10 s	20 dB

SGS-TÜV Saarland Forster GmbH

18.09.2019



SGS-TÜV Saarland Forster GmbH

18.09.2019

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Corr. (dB/m)
106.200000	---	22.46	44.29	21.82	100.0	V	11.9
106.200000	23.67	---	54.29	30.62	100.0	V	11.9

2.3. Tests to immunity against radiated electromagnetic fields (annex 9)

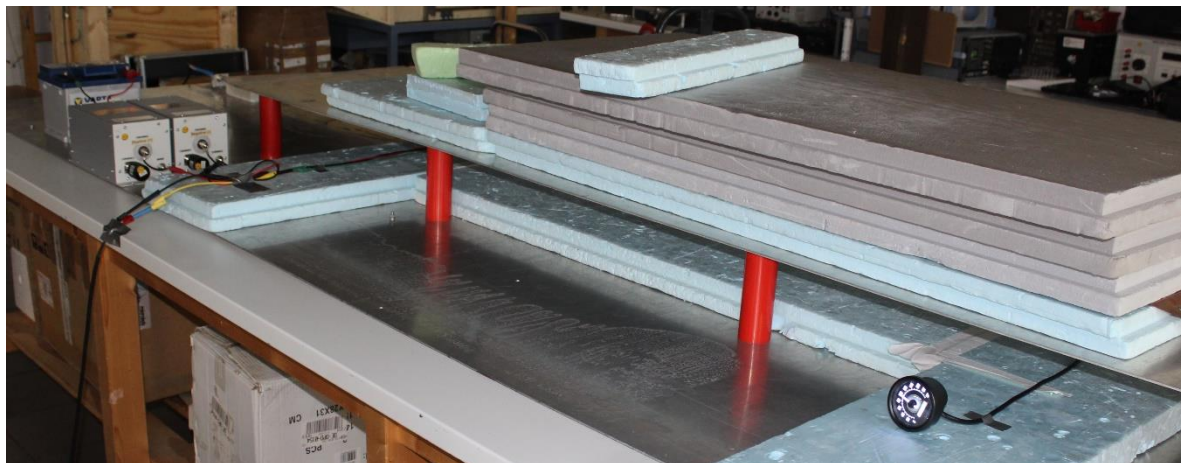
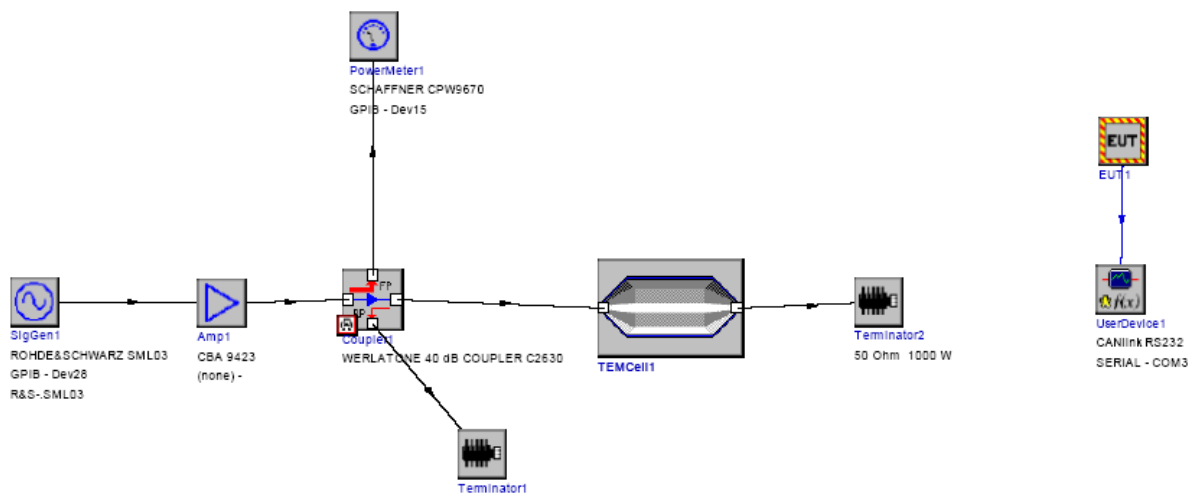
2.3.1. Test methods: Test setup and testing for electromagnetic radiation acc. annex 9 (Absorber Chamber ISO 11452-2:2nd ed. 2004 and Stripline 150mm ISO 11452-5:2nd ed. 2002).

2.3.1.1. Details to test: Functions simulated with separate simulation box, observed during tests with CCD camera.

Power supply installed with 12V DC via L.I.S.N.

Testparameter:

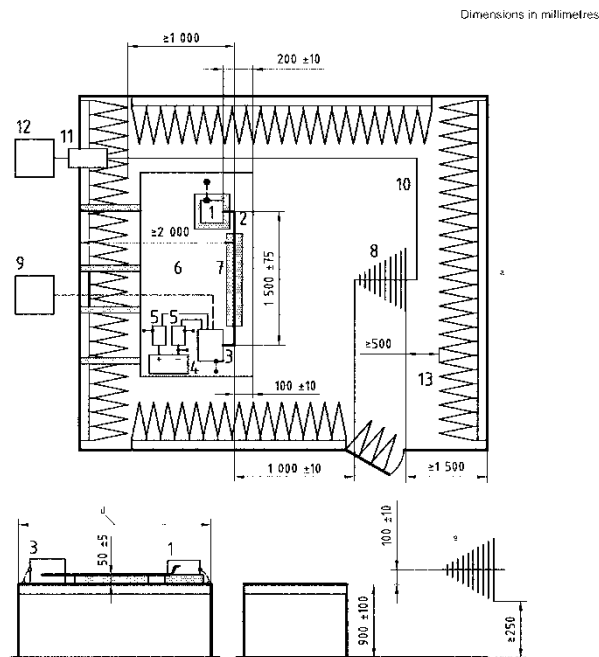
Tested frequencies:	20-200MHz
Test amplitude:	60V/m rms
Modulation:	AM, 80%, 1kHz;
Freq.Step:	acc. ISO 11452-1
Duration:	2sec per freq. step



Testparameter:

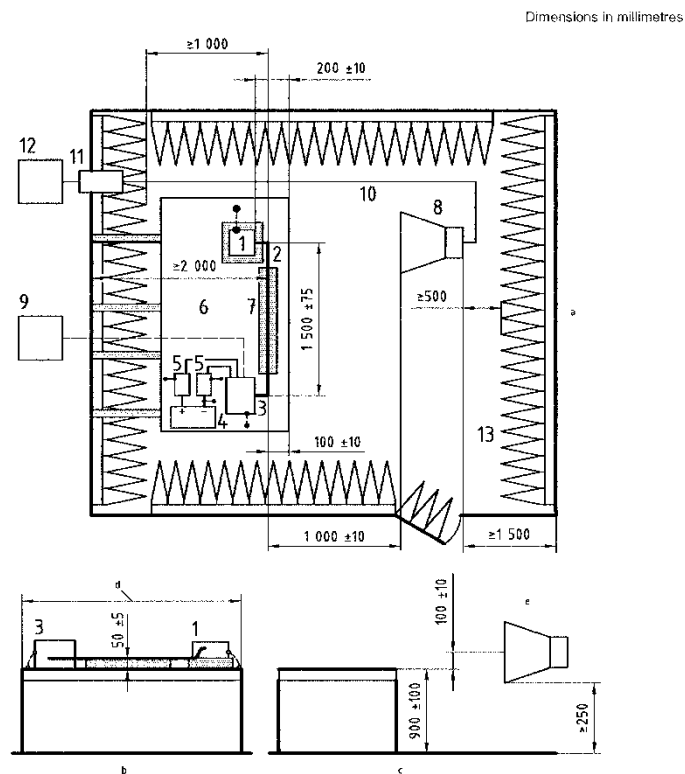
Tested frequencies: 200-800MHz
 Test amplitude: 30V/m rms
 Modulation: AM, 80%, 1kHz;
 Freq. Step: acc. ISO 11452-1
 Duration: 2sec per freq. Step

Tested frequencies: 800-1000MHz
 Test amplitude: 30V/m rms
 Modulation: PM, Tein 577µs,
 Period 4600µs
 Freq. Step: acc. ISO 11452-1
 Duration: 2sec per freq. step



Testparameter:

Tested frequencies: 1000-2000MHz
 Test amplitude: 30V/m rms
 Modulation: PM, Tein 577µs,
 Period 4600µs
 Freq. Step: acc. ISO 11452-1
 Duration: 2sec per freq. step



2.3.1.2. Test results: passed, no deviation of performance during tests.

2.4. Tests to immunity against transient disturbances (annex 10)

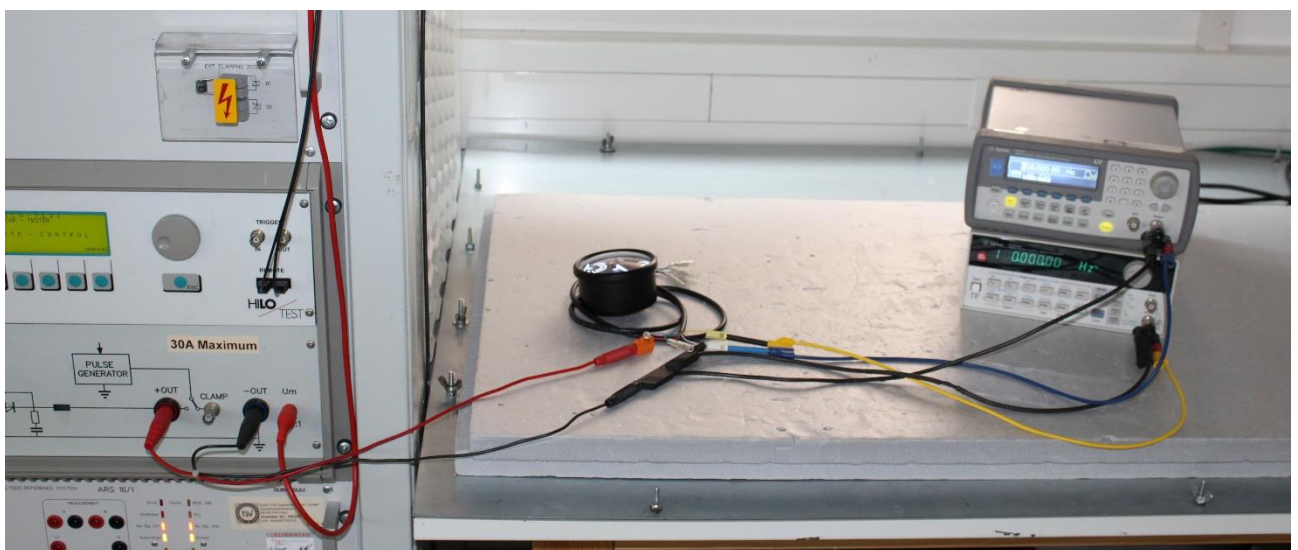
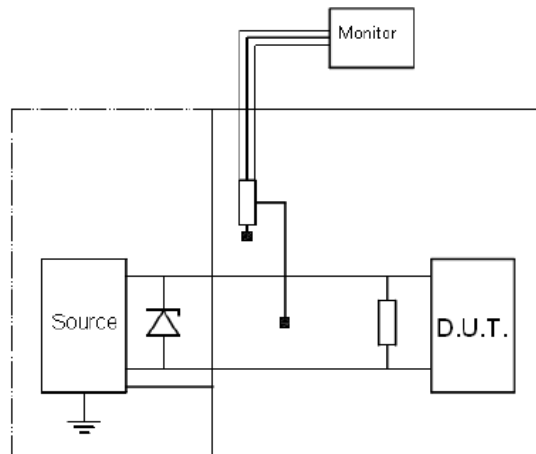
2.4.1. **Test methods:** tests were performed acc. ISO 7637-2 as described in Annex 10 with required test levels given in table 1.

2.4.1.1. **Details to test:** Functions simulated with separate simulation box, observed during tests with CCD camera.

ISO7637-2 Electrical disturbance

Conduction and coupling along supply lines

1. Transient immunity test-setup (Pulse injection)



Test Overview – Immunity against transient disturbances

<i>Company:</i>	SGS-TÜV Saarland Forster GmbH
<i>Operator:</i>	K. Cypher
<i>Manufacturer:</i>	Auto Gauge (Taiwan) Co., Ltd.
<i>Model No.:</i>	#89364
<i>Operating Mode:</i>	100km/h, 6000rpm
<i>Date of Test:</i>	11.09.2019
<i>Nominal Voltage:</i>	12.00 Volt (DC)
<i>Test Voltage:</i>	13.50 Volt (DC)
<i>Shunt resistor Rs:</i>	No Shunt
<i>Test Level:</i>	ISO 7637 Level 3

Voltage	Pulse	functional status to be maintained			actual functional status	Remark (reaction of the test sample)
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
12 V	1	C	C	D	B	restart
	2a	B	B	D	A	none
	2b	C	C	D	B	restart
	3a	A	A	D	A	none
	3b	A	A	D	A	none
	4	B	C	D	B	restart

2.4.1.2 Test result: no degradation of any performance was registered during tests.

2.5. Tests to emissions of conducted disturbances (annex 10)

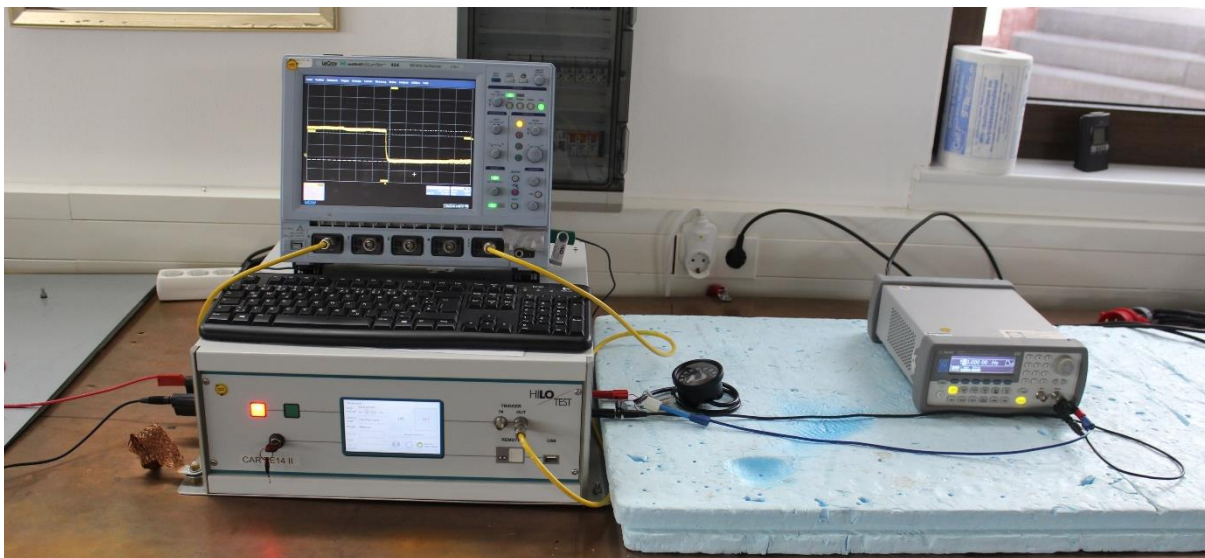
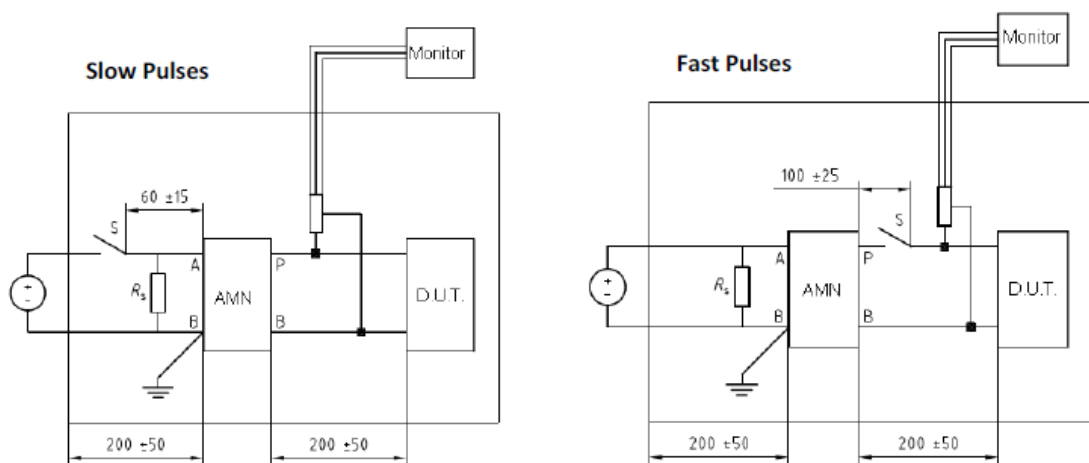
2.5.1. Test methods: tests were performed acc. ISO 7637-2 as described in Annex 10 with required test levels given in table 2.

2.5.1.1. Details to test: Functions simulated with separate simulation box, observed during tests with CCD camera.

ISO7637-2 Electrical disturbance

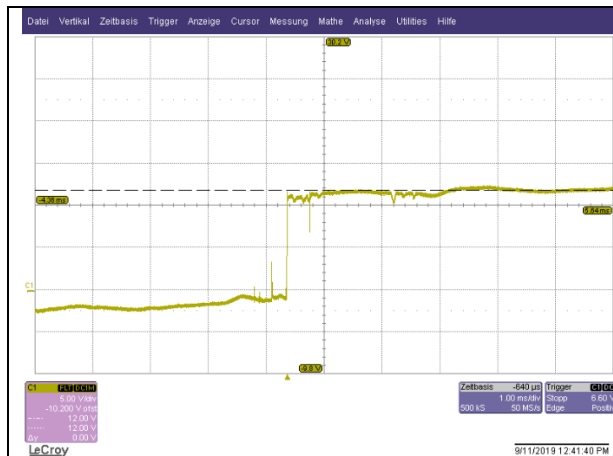
Conduction and coupling along supply lines

2. Transient emission test-setup (Slow and Fast Pulses)

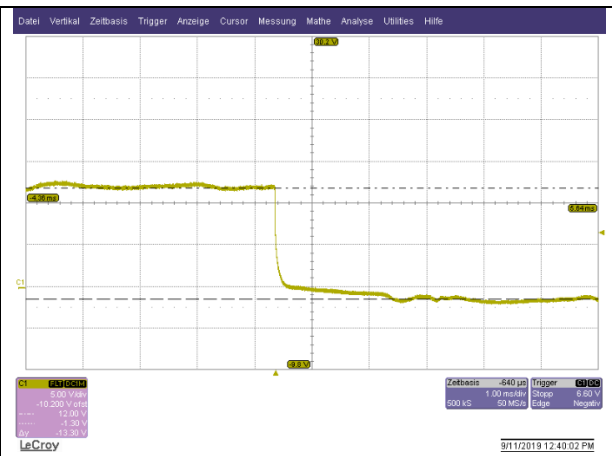


2.5.1.2 Tests result: passed, conducted disturbances

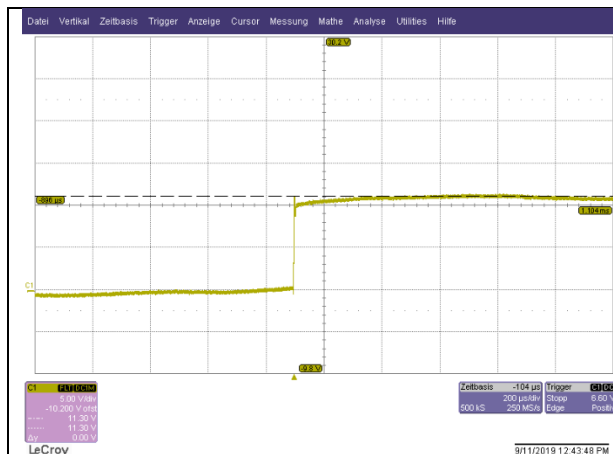
Test Overview – Voltage transient emissions	
Company:	SGS-TÜV Saarland Forster GmbH
Operator:	K. Cypher
Manufacturer:	Auto Gauge (Taiwan) Co., Ltd.
Model No.:	#89364
Operating Mode:	100km/h, 6000rpm
Date of Test:	11.09.2019
Nominal Voltage:	12.00 Volt (DC)
Test Voltage:	13.50 Volt (DC)
Shunt resistor Rs:	No Shunt
Test Level:	10 transients, 3 sec switch off, 10 sec switch on
Limits:	12V System, +75V/-100V



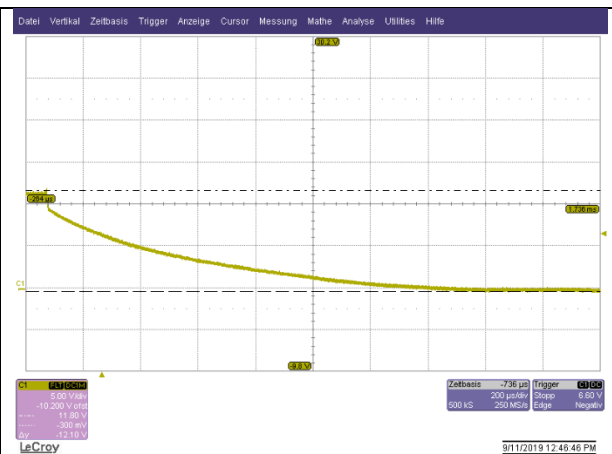
Slow Transients – Switch on



Slow Transients – Switch off



Fast Transients – Switch on



Fast Transients – Switch off

12 V				
Grenzwert <i>Limit value</i>	Messwert <i>measured value</i>			
	langsames Einschalten <i>slow switch on</i>	langsames Ausschalten <i>slow switch off</i>	schnelles Einschalten <i>fast switch on</i>	schnelles Ausschalten <i>fast switch off</i>
75 V	0.0V	0.0V	0.0V	0.0V
- 100 V	0.0V	-13.3V	0.0V	-12.1V

2.6 **Date of tests:** 11.09. & 18.09.2019

2.7 **Place of tests:** SGS-TÜV Saarland Forster GmbH
Saarbrücker Str. 1
66706 Perl-Sinz

2.8 **Remarks:** Tested model was #89364.

3. Annex

3.1. not applicable

3.2. not applicable

4. Final statement

The description map and in that described type comply with above standards. Test lab is recognized from recognition body of Federal Office for Vehicles, Germany under the registration number: KBA-P 00029-98. Parts of this report are not allowed to be reproduced or published without written permission from test lab.

This report covers complete sheet 4-15.

Perl, 02.10.2019
(Place) (date)



K.-H. Forster
(Authorised Person)



Report of the manufacturer

Report/Application No.: 25604_11092019_Gauge

Make (trade name of manufacturer): Auto Gauge (Taiwan) Co., Ltd.

Type: #89364

General commercial description(s): 80MM SPEED METER 0-200 KM/H
WITH 0-9000 RPM COMBO GAUGE

Version(s)/Variant(s): n.a.

Name and address of manufacturer: Auto Gauge (Taiwan) Co., Ltd.
No. 8, Lane 50, Sec. 3, Nangang Rd.,
Nangang Dist., Taipei City,
Taiwan (R.O.C.)

Contents of Attachment 3:

	Page
General indications and Contents of Attachment 3	1
Annex 2B	2-3
Schematic	4
BOM	5
Instruction Manual	6-7
Photos of E.u.T.	8

Annex 2B

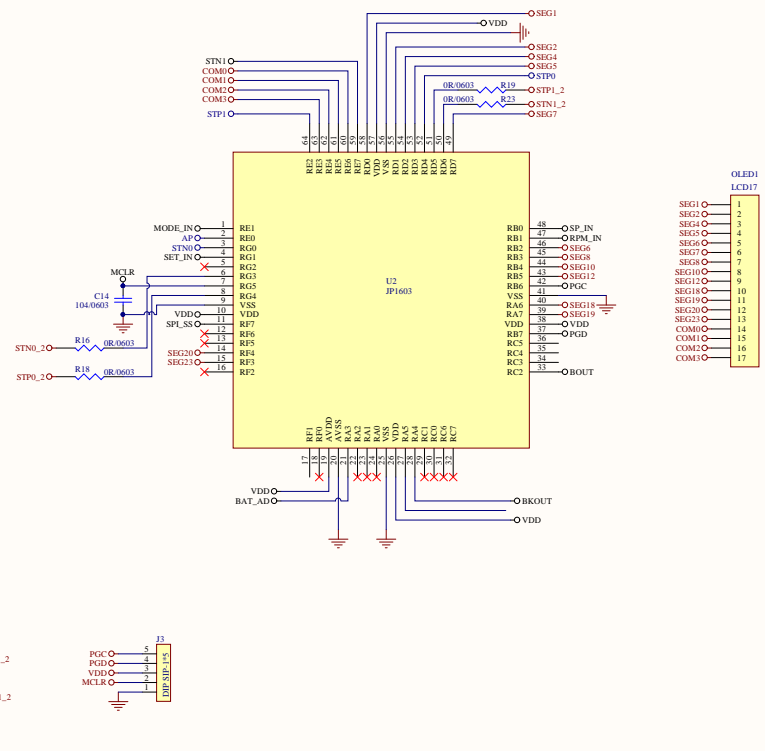
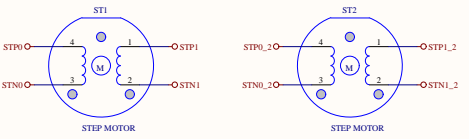
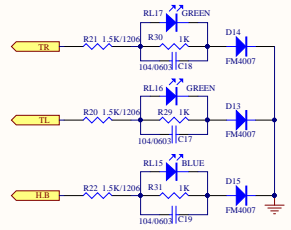
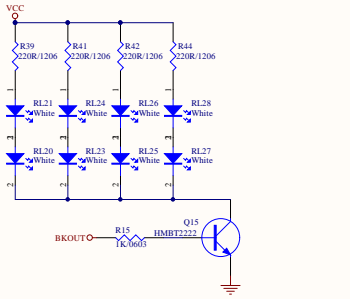
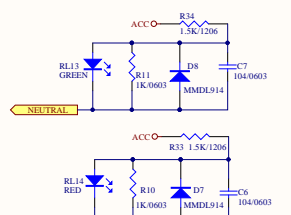
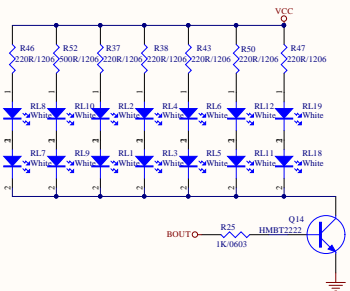
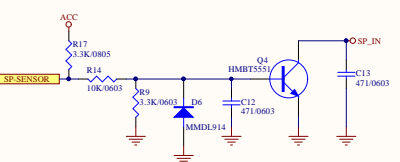
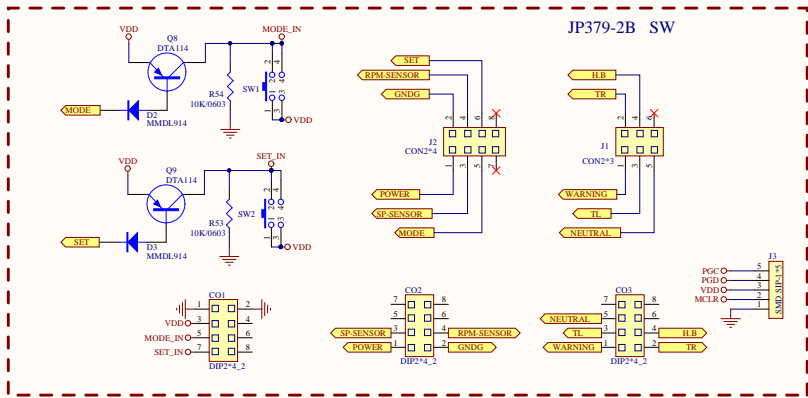
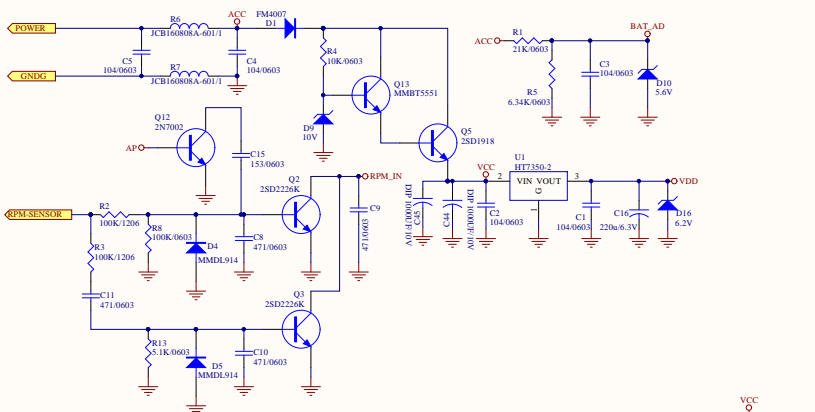
1. Make (trade name of manufacturer): Auto Gauge (Taiwan) Co., Ltd.
2. Type: #89364
Version(s): n.a.
3. Means of identification of type, if marked on the ~~vehicle~~ / component / ~~separate technical unit~~: see item 5.
 - 3.1. Location of that marking: see item 5.
4. Name and address of manufacturer: Auto Gauge (Taiwan) Co., Ltd.
No. 8, Lane 50, Sec. 3, Nangang Rd.,
Nangang Dist., Taipei City,
Taiwan (R.O.C.)
Representative: n. a.
5. In the case of components and separate technical units, location and method of affixing of the EC approval-mark: printed label, durable fixed on housing of ESA or engraved on housing of ESA
6. Address(es) of assembly plant(s): Auto Gauge (Taiwan) Co., Ltd.
1F., No. 6, Lane 50, Sec. 3, Nangang Rd.,
Nangang Dist., Taipei City,
Taiwan (R.O.C.)
7. This ESA shall be approved as a component/~~STU~~
8. Any restriction of use and conditions for fitting: n.a.
9. Electrical system rated voltage [V]: 12V DC
Ground: negative

Appendix 1: see test report and manufacturers information document

Appendix 2: see test report

Only applicable for charging systems: n.a.

- | | | |
|------------|---|------|
| 10. | Charger:on board/external: | n.a. |
| 11. | Charging current:direct current/alternating current
(number of phases/frequency) | n.a. |
| 12. | Maximal nominal current
(in each mode if necessary): | n.a. |
| 13. | Nominal charging voltage: | n.a. |
| 14. | Basic ESA interface functions: ex.L1/L2/L3/
PE/control pilot | n.a. |
| 15. | Minimum R _{SCE} value (see paragraph 7.11.
of this Regulation): | n.a. |



Title			
Size	Number	#89364	Revision
A2			
Date:	2019/3	Sheet	of
File:	C:\Users\JP379-1\sch	Drawn	By:

#89364 BOM_LIST

Item	Description	Specification	Quantity	position	Remark
1	Bead	JCB160808A-601/1	2	R6.R7	
2	Chip Resister	0603 0R 1%	4	R16.R18.R19.R23	
3	Chip Resister	0603 5.1K 1%	1	R13	
4	Chip Resister	0603 1K 1%	7	R10.R11.R15.R25.R29.R30.R31	
5	Chip Resister	0603 6.34K 1%	1	R5	
6	Chip Resister	0603 10K 1%	4	R53.R54.R4.R14	
7	Chip Resister	0603 100K 1%	1	R8	
8	Chip Resister	0603 21K 1%	1	R1	
9	Chip Resister	0603 3.3K 1%	1	R9	
10	Chip Resister	0805 3.3K 1%	1	R17	
11	Chip Resister	1206 220R 1%	10	R37.R38.R39.R41.R42.R43.R44 .R46.R47.R50	
12	Chip Resister	1206 510R 1%	1	R52	
13	Chip Resister	1206 100K 1%	2	R2.R3	
14	Chip Resister	1206 1.5K 1%	5	R20.R21.R22.R33.R34	
15	Chip Capacitor	0603 471K 100V	6	C8.C9.C10.C11.C12.C13	
16	Chip Capacitor	0603 104K 50V	11	C1.C2.C3.C4.C5.C7.C14.C17.C 18.C19	
17	Chip Capacitor	0603 153K 50V	1	C15	
18	Diode	BZT52-C6V2	1	D16	
19	Diode	BZT52-C10	1	D9	
20	Diode	FM4007-MH	4	D1.D13.D14.D15	
21	Diode	MMDL914T1G	7	D2.D3.D4.D5.D6.D7.D8	
22	Diode	UDZSTE-175.6B	1	D10	
23	Transister	2SD2226K T146V	2	Q2.Q3	
24	Transister	MMBT5551LT1G	2	Q4.Q13	
25	Transister	MMBT2222ALT1G	2	Q14.Q15	
26	Transister	DTA114EKA	2	Q8.Q9	
27	Transister	2SD1918	1	Q5	
28	Transister	2N7002ET1G	1	Q12	
29	Transister	HT7350-2	1	U1	
30	IC	PIC16F1947	1	U2	
31	LED	SK-WBE190PS-5PI-EY	22	RL1.RL2.RL3.RL4.RL5.RL6.RL7 .RL8.RL9.RL10.RL11.RL12.RL1 8.RL19.RL20.RL21.RL23.RL24. RL25.RL26.RL27.RL28	
32	LED	SS-0603XG-06C0-L2M2	3	RL13.RL16.RL17	
33	LED	SS-0603AR-06C0-F2H2	1	RL14	
34	LED	SS-0603XB-06C0-J1K1	1	RL15	
35	Capacitor	220UF 6.3V	1	C16	
36	Connector	222-91-05GBE7	1	J0	
37	Tac Switch	BTS-1102SF-2-RP-V-Y 6*6*12.5	2	SW1.SW2	
38	Connector	TU2005WNV-2X03S-A	1	J1	
39	Connector	TU2005WNV-2X04S-A	1	J2	
40	PCB	JP379-1B	1		
41	PCB	JP379-2B	1		

Thank you for choosing a high-quality DAYTONA VELONA-W display instrument. With proper installation and connection, you will have long-lasting pleasure with this high-quality product when used as intended.

When installing, please make sure that the speed indicator is located in the immediate view of the driver. Attach the housing securely to the enclosed V-Bracket or mount with an at least equivalent holder permanently to the bike. Do not use longer screws to connect the holder to the housing, as longer screws can damage the instrument's internal components. Attach the instrument in a way that no part obstructs or restricts the steering. Route the wiring in such a way, that the full steering angle works in both directions without hindrance and no cables are pinched or under tension when the steering moves. Protect the cabling, also in the long term, against chafing and damage during the constantly occurring steering movements.

Read this assembly and installation manual before installing and operating the display instrument. Proper installation and electric connection requires technical expertise, special tools and skilled craftsmanship. If you are unsure about the installation, have it done, for your own safety, by a trained mechanic.

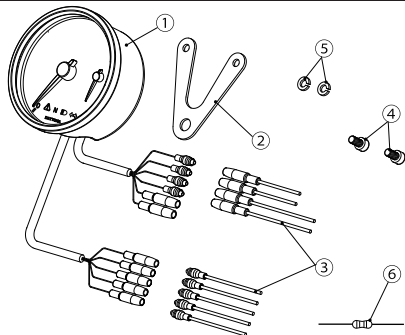
CAUTION

- Read all instructions before use.
- Needs to purchase the optional speed sensor if the vehicle does NOT come with an electrical speed sensor. Or use a converter (sold separately) that turns mechanical movement into electrical pulse, if the vehicle comes with a mechanical speedometer cable. (See the optional parts section in this manual.)
- Designed for a 12V system vehicle. VELONA gauges do NOT work with a 6V system or a battery-less system.
- VELONA gauges might not work normally when used together with other device that emits much noise.
- Use VELONA gauges for the intended purpose of use.
- VELONA gauges is for universal use, so it needs wiring for installation. Do the wiring referring to the vehicle owner's manual. (If you are not sure about installation, consult an experienced dealer.)
- Do NOT disassemble VELONA gauges. It may be damaged and water may come in.
- Do NOT leave VELONA gauges in high heat when not used for a long time.
- Do NOT hit, drop or give a shock on VELONA gauges. It may be damaged.
- Avoid contact with gasoline, brake fluid or other chemicals. It may be damaged.
- After installation, check to see if all the parts are correctly installed, and to see if all the screws are properly tightened.
- Inspect all installed parts after 100km driving. Periodical inspection is required every 500km(300mile). If anything unusual found while driving, pull over at a safe place to check.

PRODUCT FEATURES

- Stepping motor-driven speedometer and rpm-meter
- Stainless steel + black painted
- KM/H or MPH selectable
- Odometer (NOT Resettable) : 0.0-99,999.9km (mile)
- Dual Trip Meter (Resettable) : 0.0-99,999.9km (mile)
- RPM Meter : 0-9,000rpm
- Ability to connect to OEM speed sensor, if the vehicle is equipped with an electrical speed sensor.
- Voltmeter : DC10.0-16.0V
- Maximum speed memory and recall
- Maximum rpm memory and recall
- Indicators (turn signal[L/R], high beam, neutral, warning)
- Power DC10-16V (regular 12V)

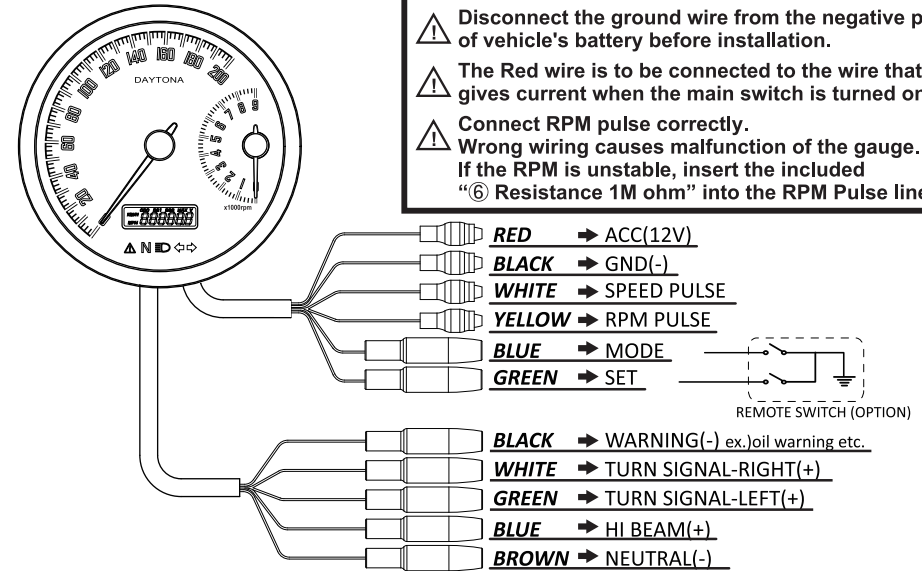
COMPONENTS



NO.	DESCRIPTION	REMARKS	Q'TY
①	Gauge Unit		1
②	V-Bracket		1
③	Extension Wire Set	9 pcs	1set
④	Cap Screw	M5x10	2
⑤	Spring Washer	M5	2
⑥	Register 1M ohm	1/4W	1

INSTALLATION

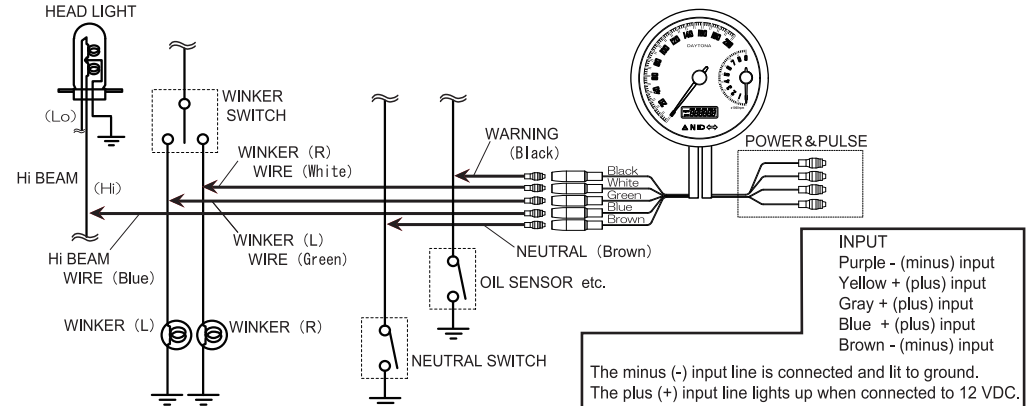
- ⚠ Wrong wiring may cause malfunction of the gauge. Make sure to have correct wiring.
- ⚠ Disconnect the ground wire from the negative post of vehicle's battery before installation.
- ⚠ The Red wire is to be connected to the wire that gives current when the main switch is turned on.
- ⚠ Connect RPM pulse correctly. Wrong wiring causes malfunction of the gauge. If the RPM is unstable, insert the included "6 Resistance 1M ohm" into the RPM Pulse line.



RPM pulse detection <Three options>

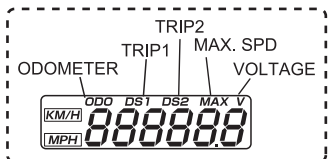
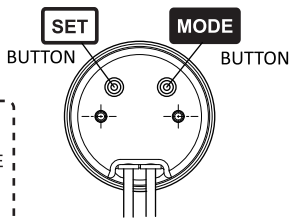
From ignition coil Connect the yellow wire to the positive terminal/wire of the ignition coil	From spark plug code Wind the yellow wire 5-6 times on the spark plug code, and then tape to fix it.	For 2000&up Harley-Davidson only Connect the yellow wire to the red wire of the vehicle's crank position sensor
---	--	---

Indicator connected



BUTTON OPERATION AND SETUP

⚠ Read all instructions before setting.
Especially for "speed calibration", initially decide which way you will do from 3 types.



- ⚠ WARNING
- N NEUTRAL
- HI BEAM
- TURN SIGNAL-LEFT
- TURN SIGNAL-RIGHT

NORMAL MODE

[ODOMETER] → [TRIPMETER 1] → [TRIPMETER 2] → [MAX SPEED] → [MAX RPM] → [VOLTMETER]

42780 → 77.3 → 190 → 200 → 9000 → 12.8

reset [00] → reset [00] → reset [00] → reset [00]

SETUP MODE

[SPEED CALIBRATION] → [RPM SETUP] → [UNIT SETUP]

SP → rP → UNIT

UNIT SETUP (KM/H or MPH)

At SETUP MODE, choose UNIT SETUP and hold down SET for 2 seconds.

[KM/H] ↔ [MPH]

To switch between "KM/H" and "MPH", press MODE.

Hold down SET for 2 seconds. The display goes back to NORMAL MODE.

SPEED CALIBRATION

At SETUP MODE, choose SPEED CALIBRATION and hold down SET for 2 seconds. You can choose one way from 3 types of calibration.

AUTO CALIBRATION MODE

When ready to drive, hold down SET for 2 seconds.

90

Press MODE.

0

Drive exactly one(1) kilometer/mile. (When driving, the display counts number of pulse obtained from sensor.)

1km(mile)

After driving one(1) kilometer/mile, stop the vehicle and press MODE to finish the setting.

18133 ※18133 is sample.

Hold down SET for 2 seconds. The display goes back to NORMAL MODE.

SPEED ADJUST MODE

When ready to drive, hold down SET for 2 seconds.

90

Start driving following another vehicle running at constant speed of 40km/h(MPH).

40km/h(MPH)

Press MODE in driving at actual speed 40km/h(MPH) to finish the setting.

The display will start indicating the current speed after a while and automatically goes back to NORMAL MODE.

MANUAL MODE

Calculate the value of "pulse per km" by A + B

A pulses per revolution
Enter the AUTO CALIBRATION MODE, turn the wheel exactly 10 revolutions. The display shows the pulses per 10 revolutions. Divide this value by 10.

B tyre circumference (km)
Measure your tyre circumference in "cm" and divide by 100,000 to be "km".

A ÷ B = pulses per km

Then enter MANUAL MODE and input this value as follows.

Hold down SET for 2 seconds.

00000

RPM SETUP

At SETUP MODE, choose RPM SETUP and hold down SET for 2 seconds.

PPR (Pulse Per Rotation) SETUP

1P-1r → 1P-2r → 2P-1r → 30P-1r

To switch between engine types, press MODE.

Select PPR from the following.

- 1P-1r : 1pulse per 1revolution
- 1P-2r : 1pulse per 2revolutions
- 2P-1r : 2pulses per 1revolution
- 30P-1r : For 2000up Harley-Davidson only.

Hold down SET for 2 seconds at the intended type to set. The display goes back to NORMAL MODE.

OPTIONAL PARTS

- TWIN SIGNAL SPEED PULSE CONVERTER <#87430>
- PROXIMITY SPEED SENSOR <#87038>
- RPM INDUCTION WIRE SET <#87170>
- RPM PULSE RECTIFIER <#92333>
- SPEED PULSE CONVERTER
DIA10 INSERT <#87755>
DIA15 INSERT <#87143>
DIA18 PLUG CONNECTION <#87041>
M12 THREAD FEMALE <#87429>
FOR BMW BOXER MODEL <#88457>

Photos of E.u.T.

