

European Commission High Level Group Review on PMDs

Survey

Observatorio Nacional de Seguridad Vial

January 2022

V.0.0



MINISTERIO
DEL INTERIOR





1. EXECUTIVE SUMMARY	3
2. SURVEY PARTICIPANTS	5
3. QUESTIONS ASKED IN THE SURVEY.....	5
4. SURVEY SUMMARY	6
5. SURVEY RESULTS	7
5.1. Mandatory license plate.....	7
5.2. Voluntary registration	7
5.3. National registry.....	8
5.4. Mandatory insurance	9
5.5. Voluntary insurance	9
5.6. Driving license and Training process	10
5.6.1. Mandatory driving license.....	10
5.6.2. Training process	11
5.7. Voluntary training.....	11
5.8. Minimum age.....	12
5.9. Mandatory helmet.....	13
5.11. PMD use	14
6. COUNTRY FACTSHEETS.....	15
6.1. Austria	15
6.2. Belgium	16
6.3. Bulgaria	17
6.4. Denmark.....	18
6.5. Finland.....	19
6.6. France	20
6.7. Germany	21
6.8. Greece.....	22
6.9. Hungary.....	23
6.10. Ireland.....	24
6.11. Italy	25
6.12. Lithuania.....	26
6.13. Luxembourg.....	27
6.14. Netherlands	28
6.15. Norway	29
6.16. Slovakia.....	30
6.17. Slovenia	31

6.18. Spain	32
7. REGULATION OF PMD'S TECHNICAL CHARACTERISTICS	34
7.1. Power (in W)	34
7.2. Lights	35
7.3. Braking system (single or double)	36
7.4. Maximum speed (in km/h)	37
7.5. Autobalance devices. allowed?	38



1. EXECUTIVE SUMMARY

How has urban mobility changed in recent years? How will cities adapt to the new safe, sustainable and connected mobility? These questions must be answered by leaders of public administrations around the world.

In the new era of mobility, the main players are the people, who nowadays have a wide range of options within the transport systems to get around. Pedestrians and public transport play a leading role, while other individual modes of travel take on an increasingly important role, such as bicycles or PMDs.

The greatest challenge that society faces in the field of urban road safety is to guarantee the safety of all road users, especially the most vulnerable ones. It is interesting to know how different countries are addressing PMD mobility regulation. For this reason, a questionnaire was sent to the High Level Group members of the European Commission in May 2021, the findings of which are set out in this report. The following countries have taken part on it: Austria, Belgium, Bulgaria, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, Netherlands, Norway Slovakia, Slovenia and Spain.

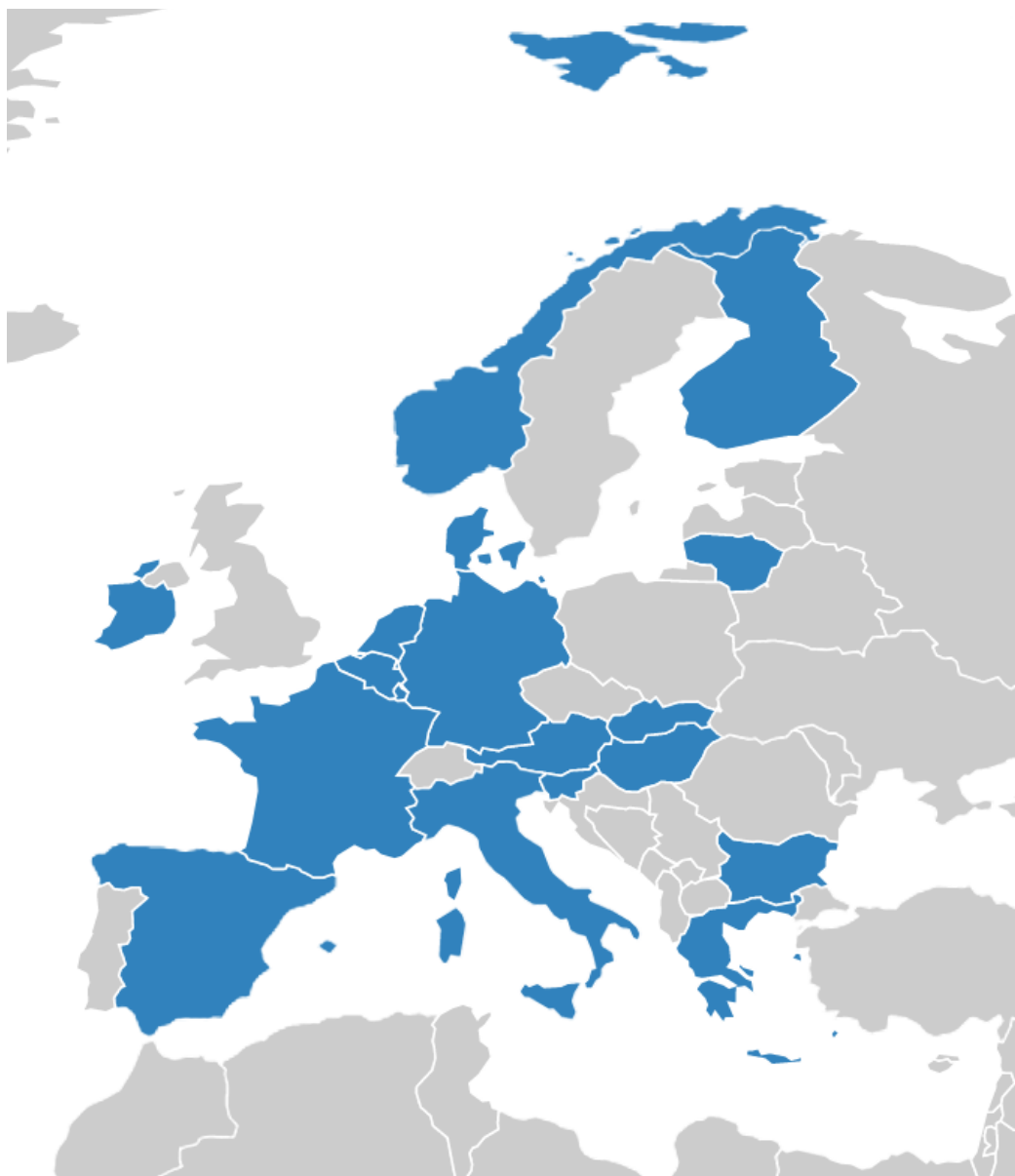
Key findings

- Two categories of vehicles were studied: e-scooters and those of L1e-B category (two-wheel moped), as defined in the EU regulation. With regard to the latter, from the responses received, we noted that there may not be a clear understanding of the types of vehicles that could be included in this category.
- Almost every single country has opposite regulations concerning license plates, vehicle registration, insurance, trainings, minimum age and helmet use in both categories.
- Despite the lack of some clear answers, L1e-B are widely regulated while e-scooters still have a lot of room for improvement. The situation in the near future is likely to be the same because there are no countries where deep changes are foreseen.
- E-scooter and L1e-B users do not have the option to voluntary register their vehicles in their countries, with the exception of e-scooters in Lithuania.
- Only in Italy the applicable regulations depend on the use made of the vehicle (personal use, sharing, parcel delivery ...), when talking about e-scooters.
- Luxembourg has the lowest minimum age to drive an e-scooter with a 10 years old limit for all categories. The highest limit is set in Denmark and Slovakia for e-scooters with a limit of 15 years old. Concerning L1e-B vehicles the highest one is 18 years old, which is set in Lithuania, while the lowest is 14 in France, Hungary, Italy and Slovenia.
- Regarding vehicle insurance, the situation is quite different for e-scooters and L1e-B vehicles. Voluntary insurance is most common for e-scooter vehicles, with the exception of France and Germany where it is mandatory. On the other hand, insurance is mandatory for L1e-B vehicles everywhere but in Belgium, Bulgaria and Norway.
- A mandatory driving license for PMDs is usually set for L1e-B vehicles, but it is not the same with e-scooters where voluntary trainings take the lead as in Austria, Belgium, France, Lithuania, Norway and Spain.

- Wearing a helmet when using an e-scooter is only mandatory in Austria, Bulgaria, Greece, Italy and Slovenia, while L1e-B users must wear helmet almost everywhere, with the exceptions of Austria and Netherlands.



2. SURVEY PARTICIPANTS



- Austria
- Belgium
- Bulgaria
- Denmark
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Lithuania
- Luxembourg
- Netherlands
- Norway
- Slovakia
- Slovenia
- Spain



3. QUESTIONS ASKED IN THE SURVEY

0. Definitions:

- a. e-scooter: Standing and a seated e-scooter
- b. L-category: L1e-B vehicle (Two-wheel moped)

1. **Mandatory license plate.** In your country, is there an obligation to obtain a license plate for personal mobility devices? If not, are there any plans to make it mandatory in the future?
2. **Voluntary registration.** If there is no mandatory but voluntary registration, can you describe the characteristics of the system?
3. **National Registry.** Is there a national registry of personal mobility devices? If so, can you describe its characteristics and representativeness?
4. **Mandatory insurance.** Is there an obligation to take out insurance for people who use a personal mobility device? If not, is there a plan to make it mandatory in the future?
5. **Voluntary insurance.** Are there voluntary insurance systems for personal mobility devices in your country? If so, can you describe its characteristics?
6. **Mandatory driving license and training process.** In your country, is there a mandatory driver's license and / or training process for personal mobility devices? If not, are there any plans to introduce mandatory license and / or training in the future?
7. **Voluntary training.** Are there any kind of voluntary training courses for users of personal mobility devices? If so, can you describe them?
8. **Minimum age.** In your country, is there a minimum age to drive a personal mobility device? If not, are there any plans to introduce a minimum age in the future?
9. **Mandatory helmet use.** In your country, is the use of the helmet mandatory for users of personal mobility devices? If not, are there any plans to make it mandatory in the future?
10. **Technical characteristics.** Have the technical characteristics of the personal mobility devices been regulated in your country? In particular:
 - Power (in W).
 - Illumination.
 - Braking systems or deceleration requirements.
 - Single or double braking.
 - Maximum speeds.
 - Self-balancing devices (hoverboard, segway, unicycle ...), are they allowed?

If there is no regulation of the PMD characteristics, are there any plans to do so in the future?

11. **PMD use.** Do the applicable regulations depend on the use made of the vehicle (personal use, sharing, parcel delivery ...)?

4. SURVEY SUMMARY

COUNTRY	VEHICLE	#1		#2	#3	#4		#5	#6				#7	#8	#9		#11
		License plate	Plans for the future	Voluntary registration	National registry	Mandatory insurance	Plans for the future	Voluntary insurance	Driving license	Plans for the future	Training process	Plans for the future	Voluntary training	Mimimun age	Mandatory helmet	Plans for the future	PMD use
Austria	e-scooter																
Austria	L1e-B																
Belgium	e-scooter																
Belgium	L1e-B																
Bulgaria	e-scooter																
Bulgaria	L1e-B																
Denmark	e-scooter																
Denmark	L1e-B																
Finland	e-scooter																
Finland	L1e-B																
France	e-scooter																
France	L1e-B																
Germany	e-scooter																
Germany	L1e-B																
Greece	e-scooter																
Greece	L1e-B																
Hungary	e-scooter																
Hungary	L1e-B																
Ireland	e-scooter																
Ireland	L1e-B																
Italy	e-scooter																
Italy	L1e-B																
Lithuania	e-scooter																
Lithuania	L1e-B																
Luxembourg	e-scooter																
Luxembourg	L1e-B																
Netherlands	e-scooter																
Netherlands	L1e-B																
Norway	e-scooter																
Norway	L1e-B																
Slovakia	e-scooter																
Slovakia	L1e-B																
Slovenia	e-scooter																
Slovenia	L1e-B																
Spain	e-scooter																
Spain	L1e-B																

*Q10 refers to a summary of technical characteristics of the PMD that had been regulated in each country. It's not a yes/no question, therefore it's not included

NO= Red cells YES = Green cells No answer = White cells



5. SURVEY RESULTS

5.1. MANDATORY LICENSE PLATE

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: Germany
- No: Austria Belgium Bulgaria Denmark Finland France Greece Hungary Ireland Italy Lithuania Luxembourg Netherlands Norway Slovakia Slovenia Spain
- No answer: none

L1e-B

■ Yes ■ No ■ No answer



- Yes: Austria Belgium Denmark Finland France Greece Italy Lithuania Luxembourg Netherlands Slovakia Slovenia Spain
- No: Bulgaria Hungary Ireland Norway
- No answer: Germany

5.2. VOLUNTARY REGISTRATION

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: Lithuania
- No: Austria Bulgaria Denmark Finland France Greece Hungary Ireland Italy Norway Slovakia Slovenia Spain
- No answer: Belgium Germany Luxembourg Netherlands

L1e-B

■ Yes ■ No ■ No answer



- Yes: none
- No: Austria Bulgaria Denmark Finland Greece Hungary Ireland Italy Netherlands Norway Slovakia Slovenia Spain
- No answer: Belgium France Germany Lithuania Luxembourg

5.3. NATIONAL REGISTRY

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: none
- No: Austria Bulgaria Denmark Finland France Germany Greece Hungary Ireland Italy Lithuania Luxembourg Norway Slovakia Slovenia Spain
- No answer: Belgium Netherlands

L1e-B

■ Yes ■ No ■ No answer



- Yes: Austria Belgium Denmark France Greece Ireland Italy Luxembourg Netherlands Slovakia Slovenia Spain
- No: Bulgaria Finland Germany Hungary Lithuania Norway
- No answer: none



5.4. MANDATORY INSURANCE

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: France Germany
- No: Austria Belgium Bulgaria Denmark Finland Greece Hungary Ireland Italy Lithuania Luxembourg Netherlands Norway Slovakia Slovenia Spain
- No answer: none

L1e-B

■ Yes ■ No ■ No answer



- Yes: Austria Denmark Finland France Greece Hungary Ireland Italy Lithuania Luxembourg Netherlands Slovakia Slovenia Spain
- No: Belgium Bulgaria Norway
- No answer: Germany

5.5. VOLUNTARY INSURANCE

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: Austria Belgium Finland France Ireland Italy Lithuania Norway Slovenia Spain
- No: Bulgaria Denmark Greece Hungary Slovakia
- No answer: Germany Luxembourg Netherlands

L1e-B

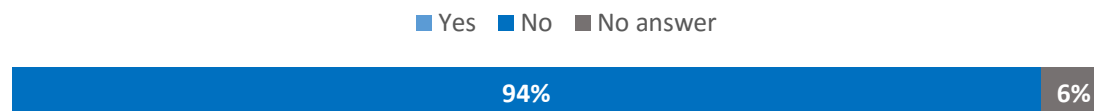


- Yes: Austria Belgium France Lithuania Norway
- No: Bulgaria Denmark Greece Hungary Italy Netherlands Slovakia Slovenia Spain
- No answer: Finland Germany Ireland Luxembourg

5.6. DRIVING LICENSE AND TRAINING PROCESS

5.6.1. MANDATORY DRIVING LICENSE

E-SCOOTER



- Yes: none
- No: Austria Belgium Bulgaria Denmark Finland France Germany Greece Hungary Ireland Italy Lithuania Luxembourg Norway Slovakia Slovenia Spain
- No answer: Netherlands

L1e-B



- Yes: Austria Belgium Denmark Finland France Greece Hungary Ireland Italy Lithuania Luxembourg Netherlands Slovakia Spain
- No: Bulgaria Norway Slovenia
- No answer: Germany



5.6.2. TRAINING PROCESS

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: none
- No: Denmark France Germany Greece Hungary Ireland Italy Lithuania Luxembourg Norway Slovakia Slovenia
- No answer: Austria Belgium Bulgaria Finland Netherlands Spain

L1e-B

■ Yes ■ No ■ No answer



- Yes: Austria Greece Hungary Ireland Italy Lithuania Luxembourg Netherlands Slovakia
- No: France Norway Slovenia
- No answer: Belgium Bulgaria Denmark Finland Germany Spain

5.7. VOLUNTARY TRAINING

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: Austria Belgium France Lithuania Norway Spain
- No: Bulgaria Denmark Finland Germany Greece Hungary Ireland Italy Luxembourg Slovakia Slovenia
- No answer: Netherlands

L1e-B

■ Yes ■ No ■ No answer



- Yes: Austria France Ireland Norway
- No: Bulgaria Denmark Finland Greece Hungary Italy Lithuania Luxembourg Netherlands Slovakia Slovenia Spain
- No answer: Belgium Germany

5.8. MINIMUM AGE

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: Bulgaria France Germany Greece Italy Lithuania Luxembourg Slovakia Slovenia
- No: Austria Finland Hungary Ireland Norway Spain
- No answer: Belgium Denmark Netherlands

L1e-B

■ Yes ■ No ■ No answer



- Yes: Austria Belgium Bulgaria Finland France Greece Hungary Ireland Italy Lithuania Luxembourg Netherlands Slovakia Slovenia Spain
- No: Norway
- No answer: Denmark Germany



5.9. MANDATORY HELMET

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: Austria Bulgaria Greece Italy Slovenia
- No: Belgium Denmark Finland France Germany Hungary Ireland Lithuania Luxembourg Netherlands Norway Slovakia Spain
- No answer: none

L1e-B

■ Yes ■ No ■ No answer



- Yes: Belgium Denmark France Greece Hungary Ireland Italy Lithuania Luxembourg Netherlands Slovakia Slovenia Spain
- No: Austria Norway
- No answer: Bulgaria Finland Germany

5.11. PMD USE

E-SCOOTER

■ Yes ■ No ■ No answer



- Yes: Belgium Denmark Italy
- No: Austria Bulgaria Finland France Germany Greece Hungary Lithuania Luxembourg Norway Slovakia Slovenia Spain
- No answer: Ireland Netherlands

L1e-B

■ Yes ■ No ■ No answer



- Yes: none
- No: Austria Belgium Denmark Finland Greece Hungary Italy Lithuania Luxembourg Netherlands Norway Slovakia Spain
- No answer: Bulgaria France Germany Ireland Slovenia



6. COUNTRY FACTSHEETS

6.1. AUSTRIA

Mandatory license plate

- E-scooter: no. No plans for the future
- L1e-B: yes. There are plans for the future

Voluntary registration

- E-scooter: no
- L1e-B: no

National Registry

- E-scooter: no
- L1e-B: yes. Registered as motor vehicle with license plate

Mandatory insurance

- E-scooter: no. No plans for the future
- L1e-B: yes. There are plans for the future. Liability insurance

Voluntary insurance.

- E-scooter: yes. Within home insurance plans or special insurance
- L1e-B: yes. Within home insurance plans or special insurance

Mandatory driving license

- E-scooter: no
- L1e-B: yes. No plans for the future.

Training process

- E-scooter: no data
- L1e-B: yes. Driving license AM. (Minimum 15 years old) for motorcycles

Voluntary training

- E-scooter: yes. Private companies offer voluntary training with costs
- L1e-B: yes. Private companies offer voluntary training with costs

Minimum age

- E-scooter: no limit. Children <12 years are only allowed to drive in adult's company. With the children bicycle driver license children with the age of 9 years can drive without an adult's company
- L1e-B: yes. 15. Driving license AM.

Mandatory helmet use

- E-scooter: yes. <12 years. No plans for the future
- L1e-B: no. No plans for the future

PMD use

- E-scooter: no
- L1e-B: no

6.2. BELGIUM

Mandatory license plate

- E-scooter: no
- L1e-B: yes

Voluntary registration

- E-scooter: no data
- L1e-B: no data

National Registry

- E-scooter: no data
- L1e-B: yes. Registration database.

Mandatory insurance

- E-scooter: no
- L1e-B: no. If the mere motorpower (=without pedalling) stops at maximum 25 km/h.

Voluntary insurance.

- E-scooter: yes, Civil liability insurance.
- L1e-B: yes, Civil liability insurance.

Mandatory driving license

- E-scooter: no
- L1e-B: yes

Training process

- E-scooter: no data
- L1e-B: no data

Voluntary training

- E-scooter: yes. Organisations active in the field of road safety organize such voluntary training = for example Vlaamse Stichting Verkeerskunde
- L1e-B: no data

Minimum age

- E-scooter: no data
- L1e-B: yes. 16

Mandatory helmet use

- E-scooter: no
- L1e-B: yes. For certain types of vehicles (unspecified in the reference)

PMD use

- E-scooter: yes. Used at footpace or lower = pedestrian, used at a speed higher than footpace = cyclist
- L1e-B: no

6.3. BULGARIA

Mandatory license plate

- E-scooter: no
- L1e-B: no

Voluntary registration

- E-scooter: no
- L1e-B: no

National Registry

- E-scooter: no
- L1e-B: no

Mandatory insurance

- E-scooter: no
- L1e-B: no

Voluntary insurance.

- E-scooter: no
- L1e-B: no

Mandatory driving license

- E-scooter: no
- L1e-B: no

Training process

- E-scooter: no data
- L1e-B: no data

Voluntary training

- E-scooter: no
- L1e-B: no

Minimum age

- E-scooter: yes. 14/16. The minimum age of the driver to drive an individual electric vehicle shall be: 16 – on a bicycle infrastructure and on roads and streets with a maximum speed limit of up to 50 km/h; 14years - only on bicycle lanes.
- L1e-B: no data

Mandatory helmet use

- E-scooter: yes. if under 18 years of age
- L1e-B: no

PMD use

- E-scooter: no
- L1e-B: no data

6.4. DENMARK

Mandatory license plate

- E-scooter: no. No plans for the future
- L1e-B: yes. Speed pedelecs excluded

Voluntary registration

- E-scooter: no
- L1e-B: no

National Registry

- E-scooter: no
- L1e-B: yes. Speed pedelecs excluded

Mandatory insurance

- E-scooter: no. Mandatory only for rental e-scooters
- L1e-B: yes. Mandatory for mopeds and speed pedelecs

Voluntary insurance.

- E-scooter: no. No government administrated voluntary insurance systems
- L1e-B: no. No government administrated voluntary insurance systems

Mandatory driving license

- E-scooter: no. No plans for the future
- L1e-B: yes. Mandatory for drivers of speed pedelecs aged 15-17

Training process

- E-scooter: no. No plans for the future
- L1e-B: no data

Voluntary training

- E-scooter: no. No government administrated voluntary training courses
- L1e-B: no. No government administrated voluntary training courses

Minimum age

- E-scooter: yes. 15
- L1e-B: yes. 15

Mandatory helmet use

- E-scooter: no. Plans: bicycle helmet required from January 1st 2022
- L1e-B: yes. Bicycle helmet required for drivers of speed pedelecs

PMD use

- E-scooter: yes. Mandatory insurance for rental e-scooters only
- L1e-B: no

6.5. FINLAND

Mandatory license plate

- E-scooter: no
- L1e-B: yes

Voluntary registration

- E-scooter: no
- L1e-B: no

National Registry

- E-scooter: no
- L1e-B: no

Mandatory insurance

- E-scooter: no
- L1e-B: yes

Voluntary insurance.

- E-scooter: yes. Within home insurance plans.
- L1e-B: no data

Mandatory driving license

- E-scooter: no
- L1e-B: yes. If the maximum speed is above 25 km/h: moped driving license for people born in 1985 or younger. People older than that do not need a driving license. If the maximum speed is at most 25 km/h: minimum age 15 years, no driving license.

Training process

- E-scooter: no data
- L1e-B: no data

Voluntary training

- E-scooter: no, there is some material for school teachers
- L1e-B: no

Minimum age

- E-scooter: no. Private rental companies apply an age limit of 18 years
- L1e-B: yes. 15. If the maximum speed is above 25 km/h: moped driving license for people born in 1985 or younger, and you cannot get the driving license before age of 15. If the maximum speed is at most 25 km/h: minimum age 15 years, no driving license.

Mandatory helmet use

- E-scooter: no
- L1e-B: no data

PMD use

- E-scooter: no
- L1e-B: no

6.6. FRANCE

Mandatory license plate

- E-scooter: no
- L1e-B: yes

Voluntary registration

- E-scooter: no
- L1e-B: no. Registration is mandatory.

National Registry

- E-scooter: no
- L1e-B: yes. SIV: Système d'immatriculation des véhicules

Mandatory insurance

- E-scooter: yes
- L1e-B: yes

Voluntary insurance.

- E-scooter: yes. In addition to mandatory motor third party liability insurance (MTPL)
- L1e-B: yes. In addition to mandatory motor third party liability insurance (MTPL)

Mandatory driving license

- E-scooter: no
- L1e-B: yes

Training process

- E-scooter: no
- L1e-B: no

Voluntary training

- E-scooter: yes, thanks to PMD associations or preventive actions
- L1e-B: yes, thanks to PMD associations or preventive actions

Minimum age

- E-scooter: yes, 12
- L1e-B: yes, 14

Mandatory helmet use

- E-scooter: no helmet is only mandatory while circulating outside cities / on roads where Speed limit is under 80km/h
- L1e-B: yes

PMD use

- E-scooter: no
- L1e-B: no

6.7. GERMANY

Mandatory license plate

- E-scooter: no
- L1e-B: no data

Voluntary registration

- E-scooter: no data
- L1e-B: no data

National Registry

- E-scooter: no
- L1e-B: no

Mandatory insurance

- E-scooter: no. Mandatory only for rental e-scooters
- L1e-B: no data

Voluntary insurance.

- E-scooter: no
- L1e-B: no

Mandatory driving license

- E-scooter: no
- L1e-B: no data

Training process

- E-scooter: no
- L1e-B: no data

Voluntary training

- E-scooter: no
- L1e-B: no data

Minimum age

- E-scooter: yes. 14
- L1e-B: no.

Mandatory helmet use

- E-scooter: no
- L1e-B: no data

PMD use

- E-scooter: no
- L1e-B: no data

6.8. GREECE

Mandatory license plate

- E-scooter: no
- L1e-B: yes, L1e-B are classified as moped, following all the relevant legislations (license plate, driving license, insurance, helmet etc.)

Voluntary registration

- E-scooter: no
- L1e-B: no

National Registry

- E-scooter: no
- L1e-B: yes

Mandatory insurance

- E-scooter: no
- L1e-B: yes

Voluntary insurance.

- E-scooter: no
- L1e-B: no

Mandatory driving license

- E-scooter: no
- L1e-B: yes

Training process

- E-scooter: no
- L1e-B: yes

Voluntary training

- E-scooter: no
- L1e-B: no

Minimum age

- E-scooter: yes, 12 & 16. Riders of PMDs with design speed up to 6 km/h must be aged at least 12 and riders of PMDs with design speed between 6 to 25 km/h must be aged at least 16.
- L1e-B: yes, 15. Riders of L1e-B with maximum design speed 25 km/h must be aged at least 15.

Mandatory helmet use

- E-scooter: yes
- L1e-B: yes

PMD use

- E-scooter: no
- L1e-B: no

6.9. HUNGARY

Mandatory license plate

- E-scooter: no.
- L1e-B: no. No plans for the future.

Voluntary registration

- E-scooter: no
- L1e-B: no

National Registry

- E-scooter: no
- L1e-B: no

Mandatory insurance

- E-scooter: no
- L1e-B: yes

Voluntary insurance.

- E-scooter: no
- L1e-B: no

Mandatory driving license

- E-scooter: no
- L1e-B: yes

Training process

- E-scooter: no
- L1e-B: no data

Voluntary training

- E-scooter: no
- L1e-B: no data. AM license needed, mandatory training

Minimum age

- E-scooter: no
- L1e-B: yes. 14. Can start the course at 13,5 years old.

Mandatory helmet use

- E-scooter: no
- L1e-B: yes

PMD use

- E-scooter: no
- L1e-B: no

6.10. IRELAND

Mandatory license plate

- E-scooter: no. Currently drafting legislation
- L1e-B: no. Subject to further review

Voluntary registration

- E-scooter: no. Currently drafting legislation
- L1e-B: no.

National Registry

- E-scooter: no. Currently drafting legislation
- L1e-B: yes

Mandatory insurance

- E-scooter: no. Currently drafting legislation
- L1e-B: yes

Voluntary insurance.

- E-scooter: yes
- L1e-B: no data

Mandatory driving license

- E-scooter: no. Currently drafting legislation
- L1e-B: yes. Initial basic training course

Training process

- E-scooter: no. Currently drafting legislation
- L1e-B: yes. Initial basic training course

Voluntary training

- E-scooter: no
- L1e-B: yes

Minimum age

- E-scooter: no. Currently drafting legislation
- L1e-B: yes. >16

Mandatory helmet use

- E-scooter: no. Currently drafting legislation
- L1e-B: yes

PMD use

- E-scooter: no data
- L1e-B: no data

6.11. ITALY

Mandatory license plate

- E-scooter: no
- L1e-B: yes

Voluntary registration

- E-scooter: no
- L1e-B: no

National Registry

- E-scooter: no
- L1e-B: yes. Vehicle registered on National Vehicle Archive of Ministry of Transport for the purpose of identifying the person responsible for traffic rule.

Mandatory insurance

- E-scooter: no
- L1e-B: yes.

Voluntary insurance.

- E-scooter: yes, similar to vehicle insurance companies
- L1e-B: no

Mandatory driving license

- E-scooter: no. No plans for the future
- L1e-B: yes. No plans for the future

Training process

- E-scooter: no. No plans for the future
- L1e-B: yes. No plans for the future.

Voluntary training

- E-scooter: no
- L1e-B: no

Minimum age

- E-scooter: yes, 14.
- L1e-B: yes, 14.

Mandatory helmet use

- E-scooter: yes. 14-18.
- L1e-B: yes

PMD use

- E-scooter: yes. Only sharing (municipal decree in order to mandatory insurance, restricted traffic areas and parking rules)
- L1e-B: individual / sharing / rental.

6.12. LITHUANIA

Mandatory license plate

- E-scooter: no. Same regulation as bicycles
- L1e-B: yes. Classified as mopeds.

Voluntary registration

- E-scooter: yes. Voluntary registration in Police database, theft prevention.
- L1e-B: no data

National Registry

- E-scooter: no
- L1e-B: no

Mandatory insurance

- E-scooter: no
- L1e-B: yes

Voluntary insurance.

- E-scooter: yes. Within home (property, asset) insurance plans
- L1e-B: yes. Within home (property, asset) insurance plans

Mandatory driving license

- E-scooter: no
- L1e-B: yes

Training process

- E-scooter: no
- L1e-B: yes

Voluntary training

- E-scooter: yes. Cyclists course for students, age 12-14.
- L1e-B: no

Minimum age

- E-scooter: yes, 14. 14 without supervision. 12 only after finishing voluntary training course. No restriction in residential areas.
- L1e-B: yes, 18. Depends on the rated power.

Mandatory helmet use

- E-scooter: no. Mandatory for <18 people
- L1e-B: yes

PMD use

- E-scooter: no
- L1e-B: no

6.13. LUXEMBOURG

Mandatory license plate

- E-scooter: no. No plans for the future.
- L1e-B: yes. No plans for the future.

Voluntary registration

- E-scooter: no data
- L1e-B: no data

National Registry

- E-scooter: no
- L1e-B: yes. National register of all vehicles with an immatriculation/license plate.

Mandatory insurance

- E-scooter: no
- L1e-B: yes

Voluntary insurance.

- E-scooter: no data.
- L1e-B: no data

Mandatory driving license

- E-scooter: no. No plans for the future.
- L1e-B: yes. No plans for the future.

Training process

- E-scooter: no. No plans for the future.
- L1e-B: yes. No plans for the future.

Voluntary training

- E-scooter: no
- L1e-B: no

Minimum age

- E-scooter: yes. 10. without an accompanying person on the roadway (from 6 way to school and cycle lanes can be used alone)
- L1e-B: yes. 16.

Mandatory helmet use

- E-scooter: no
- L1e-B: yes

PMD use

- E-scooter: no
- L1e-B: no

6.14. NETHERLANDS

Mandatory license plate

- E-scooter: no. E-scooter is not allowed yet. In the plans for new regulation we are thinking of introducing a license plate.
- L1e-B: yes. The Netherlands Vehicle Authority is in charge of a [national register](#).

Voluntary registration

- E-scooter: does not apply
- L1e-B: no. It is mandatory.

National Registry

- E-scooter: does not apply. Once allowed we are thinking about setting up a monitoring system including a national register.
- L1e-B: yes

Mandatory insurance

- E-scooter: no. In the plans for new regulation we are thinking of introducing a mandatory insurance (motor vehicle liability insurance act)
- L1e-B: yes

Voluntary insurance.

- E-scooter: does not apply
- L1e-B: no

Mandatory driving license

- E-scooter: does not apply.
- L1e-B: yes

Training process

- E-scooter: no data
- L1e-B: yes. In order to drive a L1e-B in The Netherlands you need a certificate (moped).

Voluntary training

- E-scooter: does not apply
- L1e-B: no. Mandatory

Minimum age

- E-scooter: does not apply
- L1e-B: yes. 16

Mandatory helmet use

- E-scooter: no. Most of the e-scooters are not allowed on the road
- L1e-B: yes. For certain types of vehicles

PMD use

- E-scooter: does not apply
- L1e-B: no data



6.15. NORWAY

Mandatory license plate

- E-scooter: no. No plans for the future.
- L1e-B: no. No plans for the future.

Voluntary registration

- E-scooter: no
- L1e-B: no

National Registry

- E-scooter: no
- L1e-B: no

Mandatory insurance

- E-scooter: no. Municipalities can have mandatory insurance for renting companies
- L1e-B: no. Municipalities can have mandatory insurance for companies renting bikes

Voluntary insurance.

- E-scooter: yes. Within private home insurance plans
- L1e-B: yes- Within private home insurance plans

Mandatory driving license

- E-scooter: no. No plans for the future.
- L1e-B: no. No plans for the future.

Training process

- E-scooter: no. No plans for the future.
- L1e-B: no. No plans for the future.

Voluntary training

- E-scooter: yes. Several different private providers
- L1e-B: yes. Several different private providers

Minimum age

- E-scooter: no
- L1e-B: no

Mandatory helmet use

- E-scooter: no. It is highly recommended
- L1e-B: no. It is highly recommended

PMD use

- E-scooter: no. rules referred to in these list is national and will apply to everyone. Municipalities may have other rules for sharing scooters.
- L1e-B: no. rules referred to in these list is national and will apply to everyone. Municipalities may have other rules for sharing bicycles.

6.16. SLOVAKIA

Mandatory license plate

- E-scooter: no. Only if it does not fall into category L (Regulation EU No. 168/2013)
- L1e-B: yes

Voluntary registration

- E-scooter: no
- L1e-B: no. For vehicle category L is registration mandatory

National Registry

- E-scooter: no
- L1e-B: yes. For vehicles bearing the registration plate. Vehicles are registered in national vehicle register

Mandatory insurance

- E-scooter: no
- L1e-B: yes

Voluntary insurance.

- E-scooter: no
- L1e-B: no

Mandatory driving license

- E-scooter: no. No plans for the future
- L1e-B: yes. In compliance with Directive 2006/126/EC on driving licence - Category AM

Training process

- E-scooter: no. No plans for the future
- L1e-B: yes. In compliance with Directive 2006/126/EC on driving licence - Category AM

Voluntary training

- E-scooter: no
- L1e-B: no

Minimum age

- E-scooter: yes. 15. A person under the age of 15 can ride an e-scooter only on a cycle track, earth track and in residential area.
- L1e-B: yes. 15.

Mandatory helmet use

- E-scooter: no
- L1e-B: yes

PMD use

- E-scooter: no
- L1e-B: no



6.17. SLOVENIA

Mandatory license plate

- E-scooter: no
- L1e-B: yes

Voluntary registration

- E-scooter: no
- L1e-B: no. Mandatory

National Registry

- E-scooter: no
- L1e-B: yes. Included in the national evidence of registered motor vehicles

Mandatory insurance

- E-scooter: no. No plans for the future
- L1e-B: yes

Voluntary insurance.

- E-scooter: yes. Depends on the insurance package
- L1e-B: no. Mandatory.

Mandatory driving license

- E-scooter: no. No plans for the future. From 12-14 years you can drive e-scooter with a valid cycling card, after 14 no requirements
- L1e-B: no. No plans for the future

Training process

- E-scooter: no. No plans for the future
- L1e-B: no. No plans for the future

Voluntary training

- E-scooter: no
- L1e-B: no

Minimum age

- E-scooter: yes. 14
- L1e-B: yes. 14

Mandatory helmet use

- E-scooter: yes. Until 18 years old.
- L1e-B: yes

PMD use

- E-scooter: no
- L1e-B: no data

6.18. SPAIN

Mandatory license plate

- E-scooter: no. Art.22bis y 25.1 RGV, Real Decreto 2822/1998, de 23 de diciembre.
- L1e-B: yes. Art.25.1 RGV, Real Decreto 2822/1998, de 23 de diciembre.

Voluntary registration

- E-scooter: no. Art.22bis y 25.1 RGV, Real Decreto 2822/1998, de 23 de diciembre.
- L1e-B: no. Art.25.1 RGV, Real Decreto 2822/1998, de 23 de diciembre.

National Registry

- E-scooter: no. Arts.2, 22bis y 25.1 RGV, Real Decreto 2822/1998, de 23 de diciembre.
- L1e-B: yes. Arts.2, 25.1 RGV, Real Decreto 2822/1998, de 23 de diciembre.

Mandatory insurance

- E-scooter: no. Arts. 1, 22bis.1 RGV, Real Decreto 2822/1998. Art.1 RD 1507/2008, de 12 de septiembre.
- L1e-B: yes. Arts. 1 y 25 RGV, Real Decreto 2822/1998. Art.1 RD 1507/2008, de 12 de septiembre

Voluntary insurance.

- E-scooter: yes. Instrucción DGT 16/V-124. Art. 1 RD 1507/2008, de 12 de septiembre, Art.6 RDL 6/2004, de 29 de octubre, por el que se aprueba el texto refundido de la Ley de ordenación y supervisión de los seguros privados.
- L1e-B: no. Arts. 1 y 25 RGV, Real Decreto 2822/1998. Art.1 RD 1507/2008, de 12 de septiembre

Mandatory driving license

- E-scooter: no. Art.61 RDL 6/2015, de 30 de octubre, por el que se aprueba el texto refundido de la Ley sobre Tráfico, Circulación de Vehículos a Motor y Seguridad Vial. Apartado A «Definiciones», del anexo II «Definiciones y categorías de los vehículos» del RGV, Real Decreto 2822/1998, de 23 de diciembre.
- L1e-B: yes. Art.61 RDL 6/2015, de 30 de octubre, por el que se aprueba el texto refundido de la Ley sobre Tráfico, Circulación de Vehículos a Motor y Seguridad Vial. Apartado A «Definiciones», del anexo II «Definiciones y categorías de los vehículos» del RGV, Real Decreto 2822/1998, de 23 de diciembre.

Training process

- E-scooter: no
- L1e-B: yes

Voluntary training

- E-scooter: yes. Instrucción DGT 16/V-124, Art.62.1 RDL 6/2015, de 30 de octubre, por el que se aprueba el texto refundido de la Ley sobre Tráfico, Circulación de Vehículos a Motor y Seguridad Vial.



- L1e-B: no. Art.61 RDL 6/2015, de 30 de octubre, por el que se aprueba el texto refundido de la Ley sobre Tráfico, Circulación de Vehículos a Motor y Seguridad Vial. Apartado A «Definiciones», del anexo II «Definiciones y categorías de los vehículos» del RGV, Real Decreto 2822/1998, de 23 de diciembre.

Minimum age

- E-scooter: no. Instrucción DGT 16/V-124, Art.61 RDL 6/2015, de 30 de octubre, por el que se aprueba el texto refundido de la Ley sobre Tráfico, Circulación de Vehículos a Motor y Seguridad Vial. Apartado A «Definiciones», del anexo II «Definiciones y categorías de los vehículos» del RGV, Real Decreto 2822/1998, de 23 de diciembre.
- L1e-B: yes. Art. 4.2 RD 818/2009, de 8 de mayo, por el que se aprueba el Reglamento General de Conductores.

Mandatory helmet use

- E-scooter: no. There are plans for the future. Arts. 116 y 118.1 RD 1428/2003, de 21 de noviembre, por el que se aprueba el Reglamento General de Circulación para la aplicación y desarrollo del texto articulado de la Ley sobre tráfico, circulación de vehículos a motor y seguridad vial, aprobado por el Real Decreto Legislativo 339/1990, de 2 de marzo
- L1e-B: yes. No plans for the future. Arts. 116 y 118.1 RD 1428/2003, de 21 de noviembre, por el que se aprueba el Reglamento General de Circulación para la aplicación y desarrollo del texto articulado de la Ley sobre tráfico, circulación de vehículos a motor y seguridad vial, aprobado por el Real Decreto Legislativo 339/1990, de 2 de marzo

PMD use

- E-scooter: no. Instrucción DGT 16/V-124
- L1e-B: no. Instrucción DGT 16/V-124

7. REGULATION OF PMD'S TECHNICAL CHARACTERISTICS

7.1. POWER (IN W)

Country	e-Scooter	L1e-B
Austria	600W	4W
Belgium	no data	4000W
Bulgaria	No	no data
Denmark	no data	no data
Finland	1000W	4000W
France	No	Yes
Germany	500W	No data
Greece	Yes	4000W
Hungary	No data	300W-4000W
Ireland	No	1000W
Italy	500W	Regulation UE 168/2013
Lithuania	1000W	4000W
Luxembourg	250W	No data
Netherlands	N.A.	4000W
Norway	No limit	250W
Slovakia	no data	up to 4000W
Slovenia	no data	no data
Spain	Without autobalance 1000W Autobalanced 2500W Cargo purposes 1500W	$\leq 4000W$



7.2. LIGHTS

Country	e-Scooter	L1e-B
Austria	no data	no data
Belgium	no data	no data
Bulgaria	yes if low visibility or darkness	no data
Denmark	yes	yes
Finland	no data	Moped requirements
France	yes	yes
Germany	yes	no data
Greece	Front: 1 white/yellow Back: 1 red reflective	All the lights that correspond to a moped
Hungary	no data	Type-approved position lamps
Ireland	no data	yes
Italy	no data	Regulation UE 168/2013
Lithuania	no data	no data
Luxembourg	yes	yes
Netherlands	no data	reflectors
Norway	front & back	front & back
Slovakia	yes	yes
Slovenia	in low visibility conditions	no data
Spain	front / back / brake	yes

7.3. BRAKING SYSTEM (SINGLE OR DOUBLE)

Country	e-Scooter	L1e-B
Austria	no data	no data
Belgium	no data	no data
Bulgaria	yes	no data
Denmark	no data	no data
Finland	No data	Moped requirements
France	yes	yes
Germany	double	no data
Greece	Yes	double
Hungary	no data	double
Ireland	no data	double
Italy	no data	Regulation UE 168/2013
Lithuania	no data	no data
Luxembourg	double	double
Netherlands	no data	no data
Norway	yes	yes
Slovakia	yes	yes
Slovenia	no data	no data
Spain	double	double



7.4. MAXIMUM SPEED (IN KM/H)

Country	e-Scooter	L1e-B
Austria	25km/h	45km/h
Belgium	25km/h	no data
Bulgaria	25km/h	no data
Denmark	Technical requirement, not speed limit 20km/h	Technically restricted to 20 km/h unassisted, and 45 km/h with pedal assistance
Finland	25km/h	45km/h
France	25km/h	45km/h
Germany	20km/h	
Greece	25km/h	45km/h
Hungary	no data	40km/h
Ireland	no	45km/h
Italy	6km/h pedestrian areas 25km/h urban roads	Regulation UE 168/2013
Lithuania	25km/h	45km/h
Luxembourg	25km/h	45km/h
Netherlands	25km/h	no data
Norway	20km/h	25km/h
Slovakia	25km/h	45km/h
Slovenia	25km/h	no data
Spain	25km/h	45km/h

7.5. AUTOBALANCE DEVICES. ALLOWED?

Country	e-Scooter	L1e-B
Austria	no data	no data
Belgium	no data	no data
Bulgaria	yes	no data
Denmark	no data	no data
Finland	yes	no data
France	yes	no
Germany	only with handlebar	no data
Greece	yes	no
Hungary	no data	no data
Ireland	no data	no data
Italy	yes, experimental stage until July 2022	Regulation UE 168/2013
Lithuania	no data	no data
Luxembourg	yes	yes
Netherlands	no data	no data
Norway	no data	yes
Slovakia	yes	no data
Slovenia	not allowed	no data
Spain	yes	no data