

ISO 23375:2023-02 (E)

Intelligent transport systems - Collision evasive lateral manoeuvre systems (CELM) - Requirements and test procedures

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Symbols and abbreviated terms	2
4.1	Symbols	2
4.2	Abbreviated terms	3
5	System overview	3
5.1	General	3
5.2	Classification	4
6	General functional requirements	4
6.1	Functional elements	4
6.2	State transition	4
6.2.1	Definition of states	5
6.2.2	Transition conditions	5
6.3	Response to failure during CELM active state	6
6.4	Status indication	6
6.4.1	Active state	6
6.4.2	Optional warning	7
6.4.3	Failure	7
6.4.4	CELM switch on/off status	7
6.5	Status symbols	7
6.6	Minimization of vehicle lateral movement by CELM	7
6.7	Driver override	7
6.8	User-adjustable intervention thresholds	7
6.9	Information to the user in the manual	7
7	Operating conditions and requirements for Type 1 systems	7
7.1	General	7
7.2	Object condition	8
7.2.1	Object type	8
7.2.2	Amount of lateral offset	8
7.3	Activation speed of subject vehicle	9
7.4	Road condition	10
7.5	Operational limit	10
7.5.1	Operation on roads with lane markings	10
7.5.2	Operation on roads without lane markings	11
8	Operating conditions and requirements for Type 2 systems	12
8.1	General	12
8.2	Object condition	13
8.3	Activation speed of subject vehicle	13
8.4	Additional considerations for support beyond collision avoidance	13
9	Performance evaluation test methods	13
9.1	General	13
9.2	Test conditions	13
9.2.1	Environmental conditions	13

9.2.2	Test course conditions.....	13
9.2.3	Test vehicle conditions.....	14
9.2.4	Test system installation and configuration.....	14
9.2.5	Data recording.....	14
9.2.6	Test target.....	14
9.3	Type 1 test procedures.....	15
9.3.1	Test case selection.....	15
9.3.2	Test parameters.....	15
9.3.3	Test target selection and positioning.....	17
9.3.4	Test procedures.....	20
9.3.5	Pass criteria.....	21
9.4	Type 2 test procedures.....	21
9.4.1	Test equipment.....	21
9.4.2	Trajectory and torque data.....	22
9.4.3	Test procedure.....	25
9.4.4	Pass criteria.....	26
Annex A (informative) Examples of use cases for Type 1 systems.....		27
Annex B (informative) Additional information for Type 2 testing.....		30
Bibliography.....		31