

# E DIN EN ISO 19148:2020-09 (E)

Erscheinungsdatum: 2020-07-31

## Geographic information - Linear referencing (ISO/DIS 19148:2020); English version prEN ISO 19148:2020

---

### Contents

Page

Foreword	v
Introduction	vi
<b>1 Scope</b>	<b>1</b>
<b>2 Normative references</b>	<b>1</b>
<b>3 Terms and definitions</b>	<b>1</b>
<b>4 Symbols, abbreviated terms, backwards compatibility, and UML notation</b>	<b>4</b>
4.1 Symbols and abbreviated terms	4
4.2 Backwards compatibility	5
4.3 UML notation	5
<b>5 Conformance</b>	<b>5</b>
5.1 Conformance overview	5
5.2 Conformance classes	6
5.2.1 General	6
5.2.2 Data type conformance	6
5.2.3 Operation conformance	7
<b>6 Linear referencing</b>	<b>7</b>
6.1 Background	7
6.1.1 Linear referencing concepts	7
6.1.2 Linear referencing packages	17
6.2 Package: Linear Referencing System	18
6.2.1 Semantics	18
6.2.2 PositionExpression	19
6.2.3 LinearElement	20
6.2.4 LinearElementType	21
6.2.5 ILinearElement	21
6.2.6 IFeature	22
6.2.7 ISpatial	23
6.2.8 LinearReferencingMethod	24
6.2.9 DistanceAlongDirection	25
6.2.10 LRMTType	25
6.2.11 DistanceExpression	26
6.2.12 Referent	27
6.2.13 ReferentType	28
6.2.14 ValueExpression	29
6.3 Package: Linear Referencing Towards Referent	30
6.3.1 Semantics	30
6.3.2 LRMWithTowardsReferent	30
6.3.3 DistanceExpression	31
6.4 Package: Linear Referencing Offset	31
6.4.1 Semantics	31
6.4.2 LRMWithOffset	32
6.4.3 LateralOffsetDirection	33
6.4.4 VerticalOffsetDirection	34
6.4.5 LateralOffsetDistanceExpression	34
6.4.6 LateralOffsetExpression	35
6.4.7 LateralOffsetReferent	36

6.4.8	VerticalOffsetExpression.....	37
6.4.9	VerticalOffsetReferent.....	38
6.4.10	ICrossSectionalConvention.....	38
6.4.11	ICrossSectionalConventionPart.....	39
6.5	Package: Linear Referencing Offset Vector.....	40
6.5.1	Semantics.....	40
6.5.2	VectorOffsetDistanceExpression.....	40
6.5.3	VectorOffsetExpression.....	41
6.6	Package: Linearly Located Event.....	42
6.6.1	Semantics.....	42
6.6.2	Linearly located event.....	43
6.6.3	Event.....	44
6.6.4	AttributeEvent.....	45
6.6.5	FeatureEvent.....	46
6.6.6	EventLocation.....	46
6.6.7	AtLocation.....	47
6.6.8	FromToLocation.....	47
6.6.9	EventTime.....	48
6.6.10	EventInstant.....	49
6.6.11	EventPeriod.....	49
6.7	Package: Linear Segmentation.....	49
6.7.1	Semantics.....	49
6.7.2	SegmentableFeature.....	50
6.7.3	LinearSegmentSet.....	51
6.7.4	LinearSegment.....	53
<b>Annex A (normative) Abstract test suite.....</b>		<b>54</b>
<b>Annex B (informative) Generalized model for linear referencing.....</b>		<b>58</b>
<b>Annex C (informative) Commonly used linear referencing methods and models.....</b>		<b>61</b>
<b>Annex D (informative) Application Schema example.....</b>		<b>84</b>
<b>Annex E (informative) Event and segmentation examples.....</b>		<b>86</b>
<b>Annex F (informative) Backwards compatibility with ISO19148:2012.....</b>		<b>94</b>
<b>Bibliography.....</b>		<b>96</b>