

# DIN EN 16185-2:2020-01 (E)

## Railway applications - Braking systems of multiple unit trains - Part 2: Test methods (includes Amendment A1:20 19)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
<b>1</b>	<b>Scope .....</b>	<b>5</b>
<b>2</b>	<b>Normative references .....</b>	<b>5</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>6</b>
<b>4</b>	<b>Symbols and abbreviations .....</b>	<b>7</b>
<b>5</b>	<b>Requirements .....</b>	<b>7</b>
5.1	General .....	7
5.2	Test specification .....	8
5.2.1	General .....	8
5.2.2	Identification of the parts to be tested .....	8
5.2.3	General conditions for the tests .....	9
<b>6</b>	<b>Static tests program .....</b>	<b>9</b>
6.1	General .....	9
6.2	Reports .....	10
6.3	Documentation .....	10
6.4	Methodology (for type tests only) .....	11
6.4.1	Measurement of the friction application force .....	11
6.4.2	Measurement of the delay time .....	11
6.4.3	Measurement of the application force build-up time .....	11
6.4.4	Measurement of the application force release time .....	11
6.4.5	Measurement of the brake response time .....	11
6.4.6	Measurement of the pressure drop time in the brake pipe or the equalising reservoir of the driver's brake valve .....	12
6.4.7	Measurement of the pressure rise time in the brake pipe or the equalising reservoir of the driver's brake valve .....	12
6.4.8	Measurement of the dead time of the WSP dump valves .....	12
6.4.9	Measurement of the exhaust time of the WSP dump valves .....	12
6.4.10	Measurement of the fill time of the WSP dump valves .....	12
6.4.11	Measurement of air tightness .....	12
6.4.12	Measurement of braking and release times of EP assist brake .....	12
6.4.13	Evaluation of the longitudinal brake force applied to the track by Magnetic Track Brake or Eddy Current Brake .....	12
6.5	Test schedule .....	14
<b>7</b>	<b>Dynamic tests schedule .....</b>	<b>52</b>
7.1	General for dynamic tests .....	52
7.1.1	Preconditions .....	52
7.1.2	Test conditions .....	52
7.1.3	Measured variables to be recorded .....	53
7.1.4	Verification of deceleration and stopping distance .....	54
7.1.5	Definition of braked weight percentage ( ) .....	55
7.1.6	Measurement of the brake force contribution of the different brakes .....	55
7.2	Test program .....	56
Annex A (informative) Typical format for a test report for type or routine test .....		70
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2008/57/EC aimed to be covered .....		71
DIN EN 16185-2:2020-01 EN 16185-2:2014+A1:2019 (E) Bibliography .....		73