



## Standards for European Model Railroads

### List of valid Standards

- English language edition -

Exposition: **1st of November 2024**

# NEM

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N = Binding Standard    E = Recommendation    D = Documentation

Grey = Standard at present not in english language

**New Standards**

**Revised Edition**

**Editorially updated Edition**

The publication of the English versions of the standards is still under construction. It is constantly being completed. In the event that errors or appropriate possibilities for improvement are detected in the English versions of the standards, we ask you to report this with a short justification or explanation to: karsten.flach@morop.eu

#### Norms with country code apply only to the specified country

<b>Revision History</b>			<b>Edition 2024</b>
NEM 001	Introduction in to the NEM	(at present only in german and french language) D	Edition 1983
NEM 002	Rules for the Formulation of Standards for European Model Railroads	N	Edition 2019
Supplement 1 to NEM 002	Rules of Layout	(at present only in german and french language) N	Edition 2015
Supplement 2i to NEM 002	Development Process of the NEM	(at present only in german and french language) N	Edition 2014
Supplement 3i to NEM 002	Standard Layout of NEM	(at present only in german and french language) D	Edition 2014
NEM 003	Regulations on the Distribution of the Enacted NEM	(at present only in german and french language) D	Edition 2014
NEM 004	MOROP Seal	(at present only in german and french language) N	Edition 2010
Supplement 1 to NEM 004	Standards to be Applied	(at present only in german and french language) N	Edition 2017
Supplement 2 to NEM 004	Proceeding	(at present only in german and french language) N	Edition 2010
<b>NEM 005</b>	<b>Manufacturer Information for Models</b>	<b>N</b>	<b>Edition 2024</b>
NEM 006	Symbols for Characteristics of Model Vehicles	(at present only in german and french language) E	Edition 2010
NEM 010	Ratio, Scales, Gauges	N	Edition 2011
NEM 102	Area Clearances on Straight Track	N	Edition 2019
<b>NEM 103</b>	<b>Clearance Perimeter in track curves</b>	<b>N</b>	<b>Edition 2024</b>
Supplement to NEM 102/103	Profile gauge for Gauge H0	(at present only in german and french language) D	Edition 2019
NEM 104	Area Clearances for Narrow Gauge Railroads	E	Edition 2007
NEM 105	Tunnel Profiles for Normal Gauge Railroads	E	Edition 2013
NEM 110	Tracks and Turnouts – Guiding Track Dimensions	N	Edition 2009
Supplement to NEM 110/310/311	Principles of lane guidance in frogs	(at present only in german and french language) D	Edition 2009
Supplement 2 to NEM 110/310	Guide for Wheel Set and Track for Gauge 9 mm	D	Edition 2024
Supplement 3 to NEM 110/310	Guide for Wheel Set and Track for Gauge 12 mm	D	Edition 2024
Supplement 4 to NEM 110/310	Guide for Wheel Set and Track for Gauge 16.5 mm	D	Edition 2024
Supplement 6 to NEM 110/310	Guide for Wheel Set and Track for Gauge 32 mm	D	Edition 2024
NEM 110G	Tracks and Turnouts for Large and Garden Railroads – Guiding Track Dimensions	N	Edition 2011
<b>NEM 111</b>	<b>Minimum Curve Radii</b>	<b>(20240907) N</b>	Edition 2016
Supplement to NEM 111	Model railroad operation with prototypical UIC pulling and pushing devices	(at present only in german and french language) D	Edition 2015
<b>NEM 112</b>	<b>Track Spacing</b>	<b>E</b>	<b>Edition 2024</b>
NEM 113	Transition Curve	E	Edition 2016
NEM 114	Elevation of the track curve	E	Edition 2007
NEM 119	Location of Boundary Signs	E	Edition 2023
Supplement to NEM 119	Calculation Examples	E	Edition 2023
NEM 120	Rail Profiles and Connectors	E	Edition 2010
NEM 121	Cog Railroads	(20231201) E	Edition 2012
NEM 122	Roadbed Profile for Standard Gauge	E	Edition 2007

NEM 123	Cross-section of the Formation für Narrow Gauge Railroads	E	Edition 2005
NEM 124	Turnouts and Crossings with fixed simple frogs		
	(at present only in german and french language)	N	Edition 2010
NEM 127	Fixed frogs of straight intersections		
	(at present only in german and french language)	N	Edition 2010
NEM 201	Power Wire Location	N	Edition 2017
NEM 202	Pantograph with Overhead Wire Operation	N	Edition 2017
<b>NEM 301</b>	<b>Perimeters of Vehicles</b>	<b>N</b>	<b>Edition 2024</b>
NEM 302	Wagon Mass	E	Edition 2015
NEM 303	Buffers		
	(at present only in german and french language)	N	Edition 2015
NEM 304	Transitional Facilities – Bellow, Rubber bead	E	Edition 2009
NEM 306	Wagon route signs - suspension	E	Edition 2007
NEM 310	Wheel Sets – Tracking Dimensions	N	Edition 2009
NEM 310G	Wheel Sets for Large and Garden Railroads – Tracking Dimensions	N	Edition 2010
NEM 311	Wheel tire profiles		
	(at present only in german and french language)	E	Edition 2009
NEM 311G	Wheel tire profiles for Large and Garden Railroads		
	(at present only in german and french language)	E	Edition 2011
NEM 313	Carriage Wheelset with Bearing Pins	E	Edition 2009
NEM 314	Carriage Wheelset for Tip Bearing	E	Edition 2006
NEM 340	Wheel Set and Track for Special Systems		
	(at present only in german and french language)	D	Edition 2008
NEM 351	Couplings – General, Names		
	(at present only in german and french language)	D	Edition 1994
NEM 352	Guides for Short Couplings		
	(at present only in german and french language)	E	Edition 1986
NEM 355	Receptacle for Replaceable Coupling Heads in Scales TT und N		
	(at present only in german and french language)	E	Edition 2015
NEM 356	Coupler Head for Scale N	N	Edition 2022
NEM 357	Coupling Head for Scale N		
	(at present only in german and french language)	E	Edition 2015
NEM 359	Coupler Head for Scale TT		
	(at present only in german and french language)	E	Edition 2015
NEM 360	Standard Coupling for Scale H0		
	(at present only in german and french language)	N	Edition 1994
NEM 362	Receptacle for Replaceable Coupling Heads		
	(at present only in german and french language)	N	Edition 2004
NEM 363	Receiver for swappable H0 scale Couplers under restrictive installation conditions		
	(at present only in german and french language)	N	Edition 2018
NEM 365	Coupler Head for Scale 0		
	(at present only in german and french language)	E	Edition 2007
NEM 370	Hook shaft opening for porototypical screw coupling		
	(at present only in german and french language)	N	Edition 2015
NEM 380	Fixing Elements for Containers and Interchangeable Superstructures		
	(at present only in german and french language)	E	Edition 2023
NEM 600	Model Railroad Controls – Terminology, Main Terms	D	Edition 2007
NEM 601	Model Railroad Controls – Systems, Principles, Structures		
	(at present only in german and french language)	E	Edition 2006
NEM 602	Model Railroad Controls – Symbols, Switching Signs, Identification Letters		
	(at present only in german and french language)	E	Edition 2013
NEM 603	Control Signals – Definitions, Identification Letters		
	(at present only in german and french language)	E	Edition 2007
NEM 604	Wires – Cross-Sections, Conductor Lengths		
	(at present only in german and french language)	E	Edition 2013
	Supplement to NEM 604 Wire Cross-Sections AWG		
	(at present only in german and french language)	D	Edition 2013
NEM 605	Layout Wiring – Identification of Electrical Conductors	(20230221)	E
NEM 606	Model Railroad Controls – Requirements		
	(at present only in german and french language)	E	Edition 2012
NEM 607	Train bus – Requirements		
	(at present only in german and french language)	E	Edition 2012
NEM 608	Assignment of Additional Functions in Digital Driving Control		
	(at present only in german and french language)	E	Edition 2013
NEM 609	Guidelines on electrical safety at model railway exhibitions		
	(at present only in german and french language)	E	Edition 2010
	Supplement to NEM 609 Checklist		
	(at present only in german and french language)	E	Edition 2010

Supplement A to NEM 609 for Austria	(at present only in german and french language)	D	Edition 1999
Supplement CH to NEM 609 for Switzerland	(at present only in german and french language)	D	Edition 2011
Supplement D to NEM 609 for Germany	(at present only in german and french language)	D	Edition 1999
NEM 611	Electrical Supply of Stationary Equipment	N	Edition 2017
NEM 620	Power Connection of the vehicle and the power supply		
	(at present only in german and french language)	D	Edition 1983
NEM 621	Power Supply for Two-Rail Locomotives with and without Overhead Wire		
	(at present only in german and french language)	N	Edition 1981
NEM 624	Electrical Parameters – Wheelset	N	Edition 1997
NEM 625	Electrical Parameters – Wheelset and Track		
	(at present only in german and french language)	E	Edition 1997
NEM 630	Direct Current Traction – Electrical Characteristics		
	(at present only in german and french language)	N	Edition 1982
NEM 631	Direct Current Traction – Running and Traffic Direction of the Two-Rail System	N	Edition 1985
NEM 640	Alternating Current Traction – Electrical Characteristics	N	Edition 1988
NEM 641	Digital Traction – Electrical Characteristics	N	Edition 2017
NEM 645	Alternating Current Traction with Center Conductors		
	(at present only in german and french language)	N	Edition 1990
NEM 650	Electrical Interfaces for Model Vehicles	E	Edition 2018
NEM 651	Electrical Interface – 6-pin	E	Edition 2017
NEM 652	Electrical Interface – 8-pin	E	Edition 2017
NEM 655	Electrical Interface – Coupling Holder, Inner Arrangement		
	(at present only in german and french language)	E	Edition 2003
NEM 656	Electrical Interface – Coupling Holder, Outer Arrangement		
	(at present only in german and french language)	E	Edition 2007
NEM 657	Electrical Standard Interface – Model Railroad Accessories		
	(at present only in german and french language)	E	Edition 2001
NEM 658	Electrical Interface PluX 12 / 16 / 22	E	Edition 2022
NEM 660	Electrical Interface 21MTC	E	Edition 2022
<b>NEM 661</b>	<b>Maximum Speed of Model Engines</b>	<b>E</b>	<b>Edition 2024</b>
NEM 662	Electrical Interfaces Next 18 / Next18S	(20230627)	Edition 2016
NEM 663	Electrical Interface PluG for Large Railroads	E	Edition 2014
NEM 670	Digital Control Signal DCC – Technique for Encoding Bits		
	(at present only in german and french language)	N	Edition 2013
NEM 671	Digital Control Signal DCC – Baseline Data Packets	N	Edition 2014
NEM 672	Signal Control – Advanced Accessory Decoder Control (DCC)		
	(at present only in german and french language)	E	Edition 2015
NEM 680	Digital Control Signal SX – Technique for Encoding Bits		
	(at present only in german and french language)	D	Edition 2006
NEM 681	Digital Control Signal SX – Data Packets, Operation Model		
	(at present only in german and french language)	D	Edition 2007
NEM 690	Electrical Interface for Control Modules		
	(at present only in german and french language)	E	Edition 2013
NEM 691	Control Module Turnout	(at present only in german and french language)	Edition 2012
NEM 692	Control Module Signal	(at present only in german and french language)	Edition 2012
NEM 693	Drivers for Control Modules	(at present only in german and french language)	Edition 2012
NEM 694	Bus Protocol for Control Modules		Edition 2019
NEM 695	Control Module Track Section	(at present only in german and french language)	Edition 2013

Norms with country code apply only to the specified country and are written by the national sections of MOROP.  
See page national sections of MOROP for contact details.

NEM 800	Railroad Epochs		N	Edition 2007
NEM 801 A	Railroad Epochs for Austria	(at present only in german language)	E	Edition 2008
NEM 802 B	Railroad Epochs in Belgium	(at present only in french language)	E	Edition 2022
NEM 803 BG	Railroad Epochs in Bulgaria	(at present only in german language)	D	Edition 1992
NEM 804 CH	Railroad Epochs in Switzerland			
		(at present only in german and french language)	E	Edition 2009
<b>NEM 805 CZ</b>	<b>Railroad Epochs in Czech Republic</b>	(at present only in german language)	<b>D</b>	<b>Edition 2024</b>
NEM 806 D	Railroad Epochs in Germany	(at present only in german and french language)	E	Edition 2008
NEM 808 DK	Railroad Epochs in Denmark	(at present only in german and french language)	D	Edition 2015
NEM 809 E	Railroad Epochs in Spain	(at present only in german and french language)	E	Edition 2010
NEM 810 F	Railroad Epochs in France	(at present only in german and french language)	E	Edition 2010
NEM 813 H	Railroad Epochs in Hungary	(at present only in german language)	E	Edition 2022
NEM 814 I	Railroad Epochs in Italy	(at present only in german and french language)	E	Edition 2012
NEM 818 NL	Railroad Epochs in Netherlands	(at present only in german language)	E	Edition 2009
NEM 825 PL	Railroad Epochs in Poland	(at present only in german language)	E	Edition 2023
NEM 900	Layout Modules – General	(at present only in german and french language)	E	Edition 2008
NEM 908 D	Electrical Interface for Modules	(at present only in german language)	E	Edition 1997
NEM 909 D	Adapter Module – Valid only for Germany			
		(at present only in german and french language)	E	Edition 2008
NEM 913 F	Layout Modules Scale N – AFAN			
		(at present only in german and french language)	D	Edition 2009
NEM 916 F	Layout Modules Scale Nm – AFAN & GEMME			
		(at present only in german and french language)	D	Edition 2009
NEM 933/1 CH	Layout Modules – SWISSMODUL® / Scale H0			
		(at present only in german and french language)	D	Edition 2015
NEM 933/2 CH	Layout Modules – MAS 60 / Gauge H0	(20161101)		
		(at present only in german language)	D	Edition 1992
NEM 934 E	Layout Modules Scale H0 Typ FCAF or „Catalania“			
		(at present only in german and french language)	D	Edition 2015
NEM 943 F	Layout Modules Scale H0 FFMF „Classic“			
		(at present only in german and french language)	D	Edition 2010
NEM 961 D	Layout Modules Scale 0	(at present only in german language)	D	Edition 2009
NEM 962 F	Layout Modules Scale 0, CDZ			
		(at present only in german and french language)	D	Edition 2010
NEM 981 D	Layout Modules Scale I	(at present only in german language)	D	Edition 2008