

SYSTEM OF ELECTRIFICATION *

	Specification	Value	Measuring unit	Permitted deviation	
				Class I	Class II
1.	Voltage of electrical overhead wire	25 000	V	+10% -24%	+10% -24%
2.	Frequency of electrical overhead wire	50	Hz	±2	±2
3.	Minimum height dimension of electrical overhead wire above rail level: above level crossings: 6000 mm	5050**	mm	+20 -0	+20 -0
4.	Minimum height dimension of electrical overhead wire above level crossings	6000	mm	+20 -0	+20 -0
5.	Maximum height dimension of electrical overhead wire above rail level	6150	mm	+0 -20	+0 -20
6.	Staggering of electrical overhead wire: ±300 mm	±300	mm	±10	±30
7.	Staggering of electrical overhead wire built before 1992 (tolerated value)	±400	mm	±10	±30
8.	Maximum permissible height lift of overhead wire during the passage of pantograph	120	mm		
9.	Pre-sag of wire	0	mm		
10.	Pantograph (static) contact force	75	N	±5	±5
11.	Section insulator - Permitted height difference of overhead wire connection		mm	±5	±15

* In compliance with National Railway Regulation, Volume I (Ministry of Economy and Transport, 2004)

** Exceptions:

The height of the overhead wire

- varies between 4820-4990 mm at the Budapest Keleti pu. station above certain tracks in profiles 11-12.
- on the Budapest Keleti pu.-Ferencváros line between profiles 31-32 above left track is 4940 mm, above right track 4990 mm
- in the Budapest Déli pu. tunnel between profiles 14-17 above left track is 4800 mm, above right track 4850 mm
- on the Kelenföld-Háros line between profiles 36-37 above right track is 5000 mm
- on the Gödöllő - Aszód line in profile 373 above right track is 5020 mm
- at station Hatvan between profiles 659-669 above track V, and above the crossing of tracks IV-V is 5020 mm
- varies in Miskolc-Rendező pu. marshalling yard in profiles 2-3 above certain tracks between 5002-5035 mm
- varies at Budapest Nyugati pu. station in profiles 19-22 above different tracks between 4820-4910 mm
- at Kőbánya teher pu. station in profiles 68-69 above track VIII is 4940 mm
- on the Mende-Sülysáp line in profiles 237-238 above both tracks is 5030 mm
- on the Debrecen-Apafa line in profiles 2230-2231 above right track is 4950 mm
- at Békéscsaba station in profiles 857-858 above track I is 4980 mm, above track XV 5000 mm, above track XVI 4980 mm
- at Pécs station in profiles 48-49 above track II is 5030 mm, above track III 5000 mm, above track IV 4990 mm
- at Tüskevár station in profiles 999-1000 above through track I is 5020 mm

All the electrified lines on the railway network of MÁV Zrt are rated as Class I.

Voltage of the electrical overhead wire in electrified border crossings

MÁV Zrt.

	Name of the border crossing	Infrastructure Managers	Voltage/frequency of the overhead wire	
			MÁV Zrt	Next IM
1.	Hegyeshalom - Nickelsdorf	MÁV/ÖBB	25 kV/50 Hz	15 kV/16 2/3 Hz
2.	Gyékényes - Koprivnica	MÁV/HŽ	25 kV/50 Hz	25 kV/50 Hz
3.	Kelebia - Subotica	MÁV/ŽS	25 kV/50 Hz	25 kV/50 Hz
4.	Lőkösháza - Curtici	MÁV/CFR	25 kV/50 Hz	25 kV/50 Hz
5.	Hidasnémeti - Cana	MÁV/ŽSR	25 kV/50 Hz	3 kV DC
6.	Szob - Sturovo	MÁV/ŽSR	25 kV/50 Hz	25 kV/50 Hz
7.	Komárom - Komarno	MÁV/ŽSR	25 kV/50 Hz	25 kV/50 Hz
8.	Óriszentpéter - Hodoš	MÁV/SŽ	25 kV/50 Hz	25 kV/50 Hz

GYSEV Zrt.

	Name of the border crossing	Infrastructure Managers	Voltage/frequency of the overhead wire	
			GYSEV Zrt.	Next IM
1.	Sopron - Baumgarten	GYSEV	25 kV/50 Hz	25 kV/50 Hz
2.	Harka - Deutschkreutz	GYSEV/ÖBB	25 kV/50 Hz	25 kV/50 Hz
3.	Fertőszentmiklós - Pamhagen	GYSEV	25 kV/50 Hz	25 kV/50 Hz
4.	Rajka - Rusovce	GYSEV/ŽSR	25 kV/50 Hz	25 kV/50 Hz