

Basic unit of the train protection MIREL VZ1

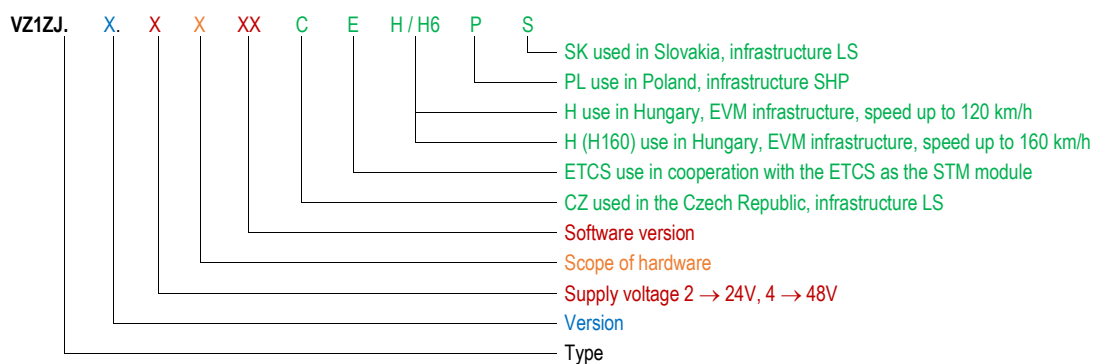
Type **VZ1ZJ**

illustrative pictures

Basic unit represents the core of the automatic train protection system MIREL VZ1. It is designed as a double-channel safety device that realizes most of all operative functions of the train protection. Basic unit runs the calculation of the safety algorithm, filtration and decoding of transmitted information from the track infrastructure, measurement of speed, passed track and moving direction, pressure scan in the main brake pipe, scanning and filtration of input binary signals, displaying the output signals of the train protection, self-diagnostics and diagnostic test.



Nomenclature



Versions

Designation	Dimension B x D x H [mm]	Construction system	Modification of construction system	Assembly	Weight [kg]
0	483 x 262 x 133	BOX3U	-	-	5,3
1U	132 x 227 x 129	BOXKOG	17	-	1,9
1L	130 x 231 x 105	BOXTUG	17A	left	1,6
1P	130 x 231 x 105	BOXTUG	17A	right	1,6

Modifications – scope of hardware

Designation	Description
-	without a recording module
D	recording module with removable storage media
J	recording module, legislative record
R	recording module without removable storage media
S	without transmission from the infrastructure

Modifications

Designation	Supply voltage [VDC]	Data transfer from infrastructure	Software version	Field of application ¹⁾
VZ1ZJ.0.203CS	24	yes	03	SK/CZ
VZ1ZJ.0.403CS	48	yes	03	SK/CZ
VZ1ZJ.0.203CPS	24	yes	03	SK/CZ/PL
VZ1ZJ.0.403CPS	48	yes	03	SK/CZ/PL
VZ1ZJ.0.203H	24	yes	03	H
VZ1ZJ.0.403H	48	yes	03	H
VZ1ZJ.0.203H6	24	yes	03	H160
VZ1ZJ.0.403H6	48	yes	03	H160
VZ1ZJ.0.203CHS	24	yes	03	SK/CZ/H
VZ1ZJ.0.403CHS	48	yes	03	SK/CZ/H
VZ1ZJ.0.203CH6S	24	yes	03	SK/CZ/H160
VZ1ZJ.0.403CH6S	48	yes	03	SK/CZ/H160
VZ1ZJ.0.203CHPS	24	yes	03	SK/CZ/H/PL
VZ1ZJ.0.2S03CS	24	no	03	SK/CZ
VZ1ZJ.0.4S03CS	48	no	03	SK/CZ
VZ1ZJ.0.204CS	24	yes	04	SK/CZ
VZ1ZJ.0.404CS	48	yes	04	SK/CZ
VZ1ZJ.0.204H	24	yes	04	H
VZ1ZJ.0.404H	48	yes	04	H
VZ1ZJ.0.204H6	24	yes	04	H160
VZ1ZJ.0.404H6	48	yes	04	H160
VZ1ZJ.0.204CHS	24	yes	04	SK/CZ/H
VZ1ZJ.0.404CHS	48	yes	04	SK/CZ/H
VZ1ZJ.0.204CH6S	24	yes	04	SK/CZ/H160
VZ1ZJ.0.404CH6S	48	yes	04	SK/CZ/H160
VZ1ZJ.0.204CPS	24	yes	04	SK/CZ/PL
VZ1ZJ.0.404CPS	48	yes	04	SK/CZ/PL
VZ1ZJ.0.204CES	24	yes	04	SK/CZ/ETCS
VZ1ZJ.0.404CES	48	yes	04	SK/CZ/ETCS
VZ1ZJ.0.204EH	24	yes	04	H/ETCS
VZ1ZJ.0.404EH	48	yes	04	H/ETCS
VZ1ZJ.0.204EH6	24	yes	04	H160/ETCS
VZ1ZJ.0.404EH6	48	yes	04	H160/ETCS
VZ1ZJ.0.204CHPS	24	yes	04	SK/CZ/H/PL
VZ1ZJ.0.404CHPS	48	yes	04	SK/CZ/H/PL
VZ1ZJ.0.204CH6PS	24	yes	04	SK/CZ/H160/PL
VZ1ZJ.0.404CH6PS	48	yes	04	SK/CZ/H160/PL
VZ1ZJ.0.204CEHS	24	yes	04	SK/CZ/H/ETCS
VZ1ZJ.0.404CEHS	48	yes	04	SK/CZ/H/ETCS
VZ1ZJ.0.204CEH6S	24	yes	04	SK/CZ/H160/ETCS
VZ1ZJ.0.404CEH6S	48	yes	04	SK/CZ/H160/ETCS
VZ1ZJ.0.204CEPS	24	yes	04	SK/CZ/PL/ETCS
VZ1ZJ.0.404CEPS	48	yes	04	SK/CZ/PL/ETCS
VZ1ZJ.0.204CEHPS	24	yes	04	SK/CZ/H/PL/ETCS

Designation	Supply voltage [VDC]	Data transfer from infrastructure	Software version	Field of application ¹⁾
VZ1ZJ.0.404CEHPS	48	yes	04	SK/CZ/H/PL/ETCS
VZ1ZJ.0.204CEH6PS	24	yes	04	SK/CZ/H160/PL/ETCS
VZ1ZJ.0.404CEH6PS	48	yes	04	SK/CZ/H160/PL/ETCS
VZ1ZJ.0.2S04CS	24	no	04	SK/CZ
VZ1ZJ.0.4S04CS	48	no	04	SK/CZ

¹⁾ approval for use in Hungary, Czech Republic and Slovakia

Prepared modifications

Designation	Supply voltage [VDC]	Data transfer from infrastructure	Software version	Field of application ²⁾
VZ1ZJ.x.2y03CS	24	yes	03	SK/CZ
VZ1ZJ.x.4y03CS	48	yes	03	SK/CZ
VZ1ZJ.x.2y03CPS	24	yes	03	SK/CZ/PL
VZ1ZJ.x.4y03CPS	48	yes	03	SK/CZ/PL
VZ1ZJ.x.2y03H	24	yes	03	H
VZ1ZJ.x.4y03H	48	yes	03	H
VZ1ZJ.x.2y03H6	24	yes	03	H160
VZ1ZJ.x.4y03H6	48	yes	03	H160
VZ1ZJ.x.2y03CHS	24	yes	03	SK/CZ/H
VZ1ZJ.x.4y03CHS	48	yes	03	SK/CZ/H
VZ1ZJ.x.2y03CH6S	24	yes	03	SK/CZ/H160
VZ1ZJ.x.4y03CH6S	48	yes	03	SK/CZ/H160
VZ1ZJ.x.2y03CHPS	24	yes	03	SK/CZ/H/PL
VZ1ZJ.x.2y04CS	24	yes	04	SK/CZ
VZ1ZJ.x.4y04CS	48	yes	04	SK/CZ
VZ1ZJ.x.2y04H	24	yes	04	H
VZ1ZJ.x.4y04H	48	yes	04	H
VZ1ZJ.x.2y04H6	24	yes	04	H160
VZ1ZJ.x.4y04H6	48	yes	04	H160
VZ1ZJ.x.2y04CHS	24	yes	04	SK/CZ/H
VZ1ZJ.x.4y04CHS	48	yes	04	SK/CZ/H
VZ1ZJ.x.2y04CH6S	24	yes	04	SK/CZ/H160
VZ1ZJ.x.4y04CH6S	48	yes	04	SK/CZ/H160
VZ1ZJ.x.2y04CPS	24	yes	04	SK/CZ/PL
VZ1ZJ.x.4y04CPS	48	yes	04	SK/CZ/PL
VZ1ZJ.x.2y04CES	24	yes	04	SK/CZ/ETCS
VZ1ZJ.x.4y04CES	48	yes	04	SK/CZ/ETCS
VZ1ZJ.x.2y04EH	24	yes	04	H/ETCS
VZ1ZJ.x.4y04EH	48	yes	04	H/ETCS
VZ1ZJ.x.2y04EH6	24	yes	04	H160/ETCS
VZ1ZJ.x.4y04EH6	48	yes	04	H160/ETCS
VZ1ZJ.x.2y04CHPS	24	yes	04	SK/CZ/H/PL
VZ1ZJ.x.4y04CHPS	48	yes	04	SK/CZ/H/PL
VZ1ZJ.x.2y04CH6PS	24	yes	04	SK/CZ/H160/PL
VZ1ZJ.x.4y04CH6PS	48	yes	04	SK/CZ/H160/PL
VZ1ZJ.x.2y04CEHS	24	yes	04	SK/CZ/H/ETCS
VZ1ZJ.x.4y04CEHS	48	yes	04	SK/CZ/H/ETCS

Designation	Supply voltage [VDC]	Data transfer from infrastructure	Software version	Field of application ²⁾
VZ1ZJ.x.2y04CEH6S	24	yes	04	SK/CZ/H160/ETCS
VZ1ZJ.x.4y04CEH6S	48	yes	04	SK/CZ/H160/ETCS
VZ1ZJ.x.2y04CEPS	24	yes	04	SK/CZ/PL/ETCS
VZ1ZJ.x.4y04CEPS	48	yes	04	SK/CZ/PL/ETCS
VZ1ZJ.x.2y04CEHPS	24	yes	04	SK/CZ/H/PL/ETCS
VZ1ZJ.x.4y04CEHPS	48	yes	04	SK/CZ/H/PL/ETCS
VZ1ZJ.x.2y04CEH6PS	24	yes	04	SK/CZ/H160/PL/ETCS
VZ1ZJ.x.4y04CEH6PS	48	yes	04	SK/CZ/H160/PL/ETCS

x - versions 0 / 1U / 1L / 1P

y - scope of hardware D / J / R

²⁾ without approval

Specifications

Number	Version	Title
257VZ1	190121	Technical conditions
153VZ1	190111	Operating manual
154VZ1	190111	Maintenance manual, diagnostic
481M	161208	Installation conditions
1122VZ1	180625	Installation manual
1068M	170516	BOXTUG Installation condition
2468M	180604	BOXKOG Installation condition

Usage

MIREL VZ1 – Automatic Train Protection System

Modifications not recommended for new applications

Designation	Supply voltage [VDC]	Data transfer from infrastructure	Software version	Field of application	Compensation
VZ1ZJ.0.202CS	24	yes	02	SK/CZ	VZ1ZJ.0.204CS ³⁾
VZ1ZJ.0.402CS	48	yes	02	SK/CZ	VZ1ZJ.0.404CS ³⁾
VZ1ZJ.0.2S02CS	24	no	02	SK/CZ	VZ1ZJ.0.1S04CS ³⁾
VZ1ZJ.0.4S02CS	48	no	02	SK/CZ	VZ1ZJ.0.4S04CS ³⁾

³⁾ limited compensation