



EA MLA Signatory  
Český institut pro akreditaci, o.p.s.  
Olšanská 54/3, 130 00 Praha 3

issues

according to section 16 of Act No. 22/1997 Coll., on technical requirements for products, as amended

# CERTIFICATE OF ACCREDITATION

No. 210/2024

AVL Moravia s.r.o.  
with registered office Tovární 605, Hranice I-Město, 753 01 Hranice,  
Company Registration No. 64619842

for the Testing Laboratory No. 1080  
Testing Laboratory

Scope of accreditation:

Testing of rotating electrical machines, rotating electrical machines on vehicles, electric drives, switchboards, electrical equipment and testing of vibrations and degree of protection to the extent as specified in the appendix to this Certificate.

This Certificate of Accreditation is a proof of Accreditation issued on the basis of assessment of fulfillment of the accreditation criteria in accordance with

ČSN EN ISO/IEC 17025:2018

In its activities performed within the scope and for the period of validity of this Certificate, the Conformity Assessment Body is entitled to refer to this Certificate, provided that the accreditation is not suspended and the Accredited Body meets the specified accreditation requirements in accordance with the relevant regulations applicable to the activity of an accredited Conformity Assessment Body.

This Certificate of Accreditation replaces, to the full extent, Certificate No.: 642/2022 of 21. 12. 2022, or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **21. 12. 2027**

Prague: 9. 5. 2024



Jan Velíšek  
Director of the Department  
of Testing and Calibration Laboratories  
Czech Accreditation Institute



**The Appendix is an integral part of  
Certificate of Accreditation No. 210/2024 of 09/05/2024**

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

**AVL Moravia s.r.o.**  
CAB number 1080, Testing Laboratory  
Mostecká 992/26, Husovice, 614 00 Brno

**Tests:**

Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
<b>1</b>	<b>Measurement of insulation resistance</b>			
1.1*	Measurement of insulation resistance	ČSN EN IEC 60034-27-4:2018, cl. 6	Rotating electrical machines	-
1.2*	Measurement of insulation resistance	ČSN EN IEC 61439-1 ed. 3:2022, cl. 11.9	Switchboards	-
<b>2</b>	<b>Measurement of resistance</b>			
2.1*	Measurement of resistance	ČSN EN 60034-1 ed. 2:2011, cl. 8.6.2.1; ČSN EN 60034-2-1 ed. 2:2015, cl. 5.7; ČSN EN IEC 60034-4-1:2018, cl. 6.3; IEEE Std 118 - 1978	Rotating electrical machines	-
2.2*	Measurement of resistance	ČSN EN 60349-1 ed. 2:2011, Annex A3; ČSN EN 60349-2 ed. 2:2011, Annex A3	Rotating electrical machines on vehicles	-
<b>3</b>	<b>Test of electrical resistance</b>			
3.1*	Test of electrical resistance by withstand voltage	ČSN EN 60034-1 ed. 2:2011, cl. 9.2; IEEE Std 112 - 2017, cl. 8.2	Rotating electrical machines	-
3.2*	Test of electrical resistance by withstand voltage	ČSN EN 60349-1 ed. 2:2011, cl. 9.5; ČSN EN 60349-2 ed. 2:2011, cl. 9.5	Rotating electrical machines on vehicles	-
3.3*	Test of electrical resistance by withstand voltage	ČSN EN IEC 61439-1 ed. 3:2022, cl. 10.9.2, 10.9.4	Switchboards	-
<b>4</b>	<b>Temperature-rise test</b>			
4.1*	Temperature-rise test	ČSN EN 60034-1 ed. 2:2011, cl. 8; IEEE Std 112 - 2017, cl. 4.4, 5.9; ČSN EN 60034-4 ed. 2:2009, cl. 6.8;	Rotating electrical machines	-

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Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
		ČSN EN IEC 60034-4-1:2018, cl. 6.7		
4.2*	Temperature-rise test	ČSN EN 60349-1 ed. 2:2011, cl. 8.1, Annex A; ČSN EN 60349-2 ed. 2:2011, cl. 8.1, Annex A	Rotating electrical machines on vehicles	-
4.3*	Temperature-rise test	ČSN EN IEC 61439-1 ed. 3:2022 cl. 10.10.2.3.1 - 10.10.2.3.5	Switchboards	-
<b>5</b>	<b>Measurement of loading characteristics</b>			
5.1*	Measurement of loading characteristics	ČSN EN 60034-2-1 ed. 2:2015, cl. 6.1.3.2.3; IEEE Std 112 - 2017, cl. 5.7; ČSN EN IEC 60034-4-1:2018, cl. 6.2, 6.9	Rotating electrical machines	-
<b>6</b>	<b>Measurement of no-load curve and no-load loss</b>			
6.1*	Measurement of no-load curve and no-load loss	ČSN EN 60034-2-1 ed. 2:2015, cl. 6.1.3.2.4, 6.1.3.2.5, 7.1.3.2.2; IEEE Std 112 - 2017, cl. 5.6; ČSN EN 60034-4 ed. 2:2009, cl. 6.4, 6.6; ČSN EN IEC 60034-4-1:2018, cl. 6.4, 6.6	Rotating electrical machines	-
6.2*	Measurement of no-load curve and no-load loss	ČSN EN 60349-2 ed. 2:2011, cl. 9.3.1 a), 9.3.2 a)	Rotating electrical machines on vehicles	-
<b>7</b>	<b>Determination of efficiency</b>			
7.1*	Determination of efficiency	ČSN EN 60034-2-1 ed. 2:2015, cl. 6.1.2, 6.1.3, 6.1.4, 7.1.2, 7.1.3, 7.2.5; IEEE Std 112 - 2017, cl. 6.4	Rotating electrical machines	-
7.2*	Determination of efficiency	ČSN EN 60349-1 ed. 2:2011, Annex B1, B3, B6	Rotating electrical machines on vehicles	-



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Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
<b>8</b>	<b>Measurement of short-circuit curve and short-circuit loss</b>			
8.1	Measurement of short-circuit curve and short-circuit loss	IEEE Std 112 - 2017, cl. 7.2; ČSN EN IEC 60034-4-1:2018, cl. 6.5	Rotating electrical machines	-
8.2	Measurement of short-circuit curve and short-circuit loss	ČSN EN 60349-2 ed. 2:2011, cl. 9.3.1 b); 9.3.2 b)	Rotating electrical machines on vehicles	-
<b>9</b>	<b>Measurement of torque curve</b>			
9.1*	Measurement of torque curve	IEEE Std 112 - 2017, cl. 7.3.2.5	Rotating electrical machines	-
<b>10</b>	<b>Overload ability test</b>			
10.1*	Overload ability test	ČSN EN 60034-1 ed. 2:2011, cl. 9.3, 9.4	Rotating electrical machines	-
10.2*	Overload ability test	ČSN EN 60349-1 ed. 2:2011, cl. 8.1.5; ČSN EN 60349-2 ed. 2:2011, cl. 8.1.6	Rotating electrical machines on vehicles	-
<b>11</b>	<b>Test of mechanical resistance (test at elevated speed)</b>			
11.1*	Test of mechanical resistance (test at elevated speed)	ČSN EN 60034-1 ed. 2:2011, cl. 9.7	Rotating electrical machines	-
11.2*	Test of mechanical resistance (test at elevated speed)	ČSN EN 60349-1 ed. 2:2011, cl. 9.4; ČSN EN 60349-2 ed. 2:2011, cl. 9.4	Rotating electrical machines on vehicles	-
<b>12</b>	<b>Measurement of vibration</b>			
12.1*	Measurement of vibration	ČSN EN IEC 60034-14:2019 ed. 3, cl. 5-9; ČSN ISO 20816-1:2017, cl. 4; ČSN ISO 20816-3:2023, cl. 4	Rotating electrical machines	-





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Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
12.2*	Measurement of vibration	ČSN EN 60349-1 ed. 2:2011, cl. 8.8; ČSN EN 60349-2 ed. 2:2011, cl. 8.4	Rotating electrical machines on vehicles	-
<b>13</b>	<b>Test of degree of protection</b>			
13.1*	Test of degree of protection	ČSN EN 60034-5 ed. 3:2020, tab. 4, no. 2-4; tab. 5, no. 3-6	Rotating electrical machines	-
13.2*	Test of degree of protection	ČSN EN 60529:1993 tab. 5, no. 2-4 a tab. 8, no. 3-6	Switchboards	-
13.3*	Test of degree of protection	ČSN EN IEC 61439-1 ed. 3:2022, cl. 10.3	Electrical equipment	-
<b>14</b>	<b>Measurement of effective continuity between parts and PE</b>			
14.1*	Measurement of effective continuity between parts and PE	ČSN EN IEC 61439-1 ed. 3:2022, cl. 10.5.2; ČSN EN IEC 61439-2 ed. 3:2021, cl. 8.4.3.2.2	Switchboards	-
<b>15</b>	<b>Verification of mechanical function, connection, operating curve and function</b>			
15.1*	Verification of mechanical function, connection, operating curve and function	ČSN EN IEC 61439-1 ed. 3:2022, cl. 11.8, 11.10	Switchboards	-
<b>16</b>	<b>Measurement of residual voltage</b>			
16.1*	Measurement of residual voltage	ČSN EN IEC 61439-1 ed. 3:2022, cl. 8.4.5	Switchboards	-

<sup>1</sup> asterisk at the ordinal number identifies the tests, which the Laboratory is qualified to carry out outside the permanent laboratory premises

<sup>2</sup> if the document identifying the test procedure is dated, only these specific procedures are used. If the document identifying the test procedure is not dated, the latest valid edition of the specified procedure is used (including any changes)

<sup>3</sup> the laboratory does not apply a flexible approach to the scope of accreditation.

