



Certificate of conformity n° A 20.040

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Apparatus: Low-voltage assembly
800A-1000A-1250A-1600A-2000A-2500A-3200A-4000A-5000A-6300A (I_{nA})

Designation: System pro E power - Top Busbar System

Manufacturer: ABB S.p.A. – Electrification Area
Via Italia, 58 - 23846 Garbagnate Monastero (LC) – Italy

Applicant: ABB S.p.A. – Electrification Area
Via Italia, 58 - 23846 Garbagnate Monastero (LC) – Italy

Tested by: ACAE Laboratory IA01 (Bergamo)
ACA E Laboratory IA03 (Dalmine)
ACA E Laboratory II01 (Torino)
ACA E Laboratory IV01 (Budapest)

This Certificate applies only to the apparatus verified. The responsibility for conformity of any apparatus having the same designation with that verified rests with the manufacturer.

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The apparatus, constructed in accordance with the description mentioned in the Test Report listed on this Certificate has been subjected to the series of proving tests in accordance with IEC Standard IEC61439-2 Ed.3.0 (2020-07) EN61439-2 (2011-10) and IEC61641:2014-09

The verification were performed on the number of the different configurations sufficient to confirm the ratings of similar variants and covering all possible ranges and applications including (see Annex n°1):

- conductor material: flat and shaped copper, insulated copper flexible bars
- Air circuit breakers ACB: Emax1.2, Emax2.2, Emax4.2, Emax6.2
- Moulded case circuit breakers MCCB: TmaxT1÷T7, TmaxXT1÷XT7

The results are summarized in the RIV 1969 date 01/12/2020 in accordance to ACAE procedures. The values obtained and the general performance are considered to comply with the above Standard(s) and to justify the characteristic assigned by the manufacturer as stated at pages no. 2.

Virginia Scavini
The General Secretary
Date: 2020.12.10

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Ratings compliance with: IEC 61439-1/2 Ed. 03

Rated service voltage (U_c)	up to 415 V
Rated insulation voltage (U_i) 1000V	1000 V
Rated frequency (f)	50-60 Hz
Rated impulse withstanding voltage (U_{imp})	up to 12 kV
Rated current (I_{nA})	up to 7000 A
Rated short time withstand current (I_{cw})	up to 120 kA
Rated peak short-circuits current (I_{pk})	up to 264 kA
Degree of protection	IP30/31, 40/41, 43, 54, 65
Form of internal separations	1, 2a/2b, 3a/3b, 4a/4b
IEC TR 61641 ed.03 Permissible current under arcing conditions	65 kA 0,3 s at 480 V, class A Up to 4000A

Overview of product evaluation:

IEC 61439-2	Characteristics verified	Results
10.2.2	Resistance to corrosion	Passed
10.2.3.1	Verification of thermal stability of enclosures	Not applicable; not insulating material
10.2.3.2	Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects	Passed
10.2.4	Resistance to ultra-violet (UV) radiation	Not applicable; indoor installation
10.2.5	Lifting	Passed
10.2.6	Mechanical impact	Passed
10.2.7	Marking	Passed
10.2.8	Mechanical operation	Passed
10.3	Degree of protection of ASSEMBLIES	Passed
10.4	Clearances and creepage distances	Passed
10.5.2	Effective earth continuity between the exposed conductive parts of the ASSEMBLY and the protective circuit	Passed
10.5.3	Short-circuit withstand strength of the protective circuit	Passed
10.6	Incorporation of switching devices and components	Passed
10.7	Internal electrical circuits and connections	Passed
10.8	Terminals for external conductors	Passed
10.9.2	Dielectric properties Power-frequency withstand voltage	Passed
10.9.3	Dielectric properties Impulse withstand voltage	Passed
10.10	Verification of temperature rise	Passed
10.11	Short-circuit withstand strength	Passed
10.12	Electromagnetic compatibility (EMC)	Not applicable see J.9.4.2
IEC TR 61641	Guide for testing under conditions of arcing due to internal fault	Passed



The General Secretary

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Annex 1 to Certificate of conformity n° A 20.040

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Product details:

All statements are valid in conjunction with the additional technical table A, related to the size and capability of the main conductors and Table B related the Circuit breakers.

Table A main busbar system

Copper busbar	Section		Q.ty n°	In		Icw kA
	mm x mm	mm ²		IP30/31 air natural cooled equipped with grids	IP40/IP41 IP65 (**)	
flat	20X5	100	1	292	250	-
	25X5	125	1	365	313	-
	32X5	160	1	467	400	-
	40X5	200	1	584	500	36
	50X5	250	1	730	625	36
	63X5	315	1	788	788	36
	80X5	400	1	1000	1000	36
	100X5	500	1	1460	1250	50
	30X10	300	1	876	713	36
	40X10	400	1	1168	950	36
	50X10	500	1	1460	1188	65
	80X10	800	1	2000	1900	65
	100X10	1000	1	-	1900	65
	120X10	1200	1	-	-	65
	40X5	400	2	1168	950	36
	80X5	800	2	2000	1900	65
	100X5	1000	2	2120	1900	65
	50X10	1000	2	2120	1875	65
	60X10	1200	2	2400	2250	65
	80X10	1600	2	3200	3000	65
	100X10	2000	2	3900	3400	100
	100X10	3000	3	3900	3400	100
	120X10	3600	3	4200	4052	100
160X10	4800	3	5600 (*)	-	120	
200X10	6000	3	7000 (*)	-	120	
80X5	1600	4	3200	2720	65	
100X5	2000	4	4100	3400	65	
shaped	30X10	165	1	-	390	25
	35X10	208	1	-	630	36
	45X10	325	1	-	800	36
	67X10	455	1	-	1030	50
	70X10	520	1	-	1250	50
	95X10	775	1	-	1600	65
	105X15	995	1	-	1700	75
	105X15	1250	1	-	2125	75

(*) tested IP4x air natural cooled equipped with grids -

(**) for IP43 e IP54 refer IP65

