



Certificate of conformity n° A 23.079

page 1 of 2

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.

Only integral reproduction of this Certificate or reproductions of this page accompanied by any page(s) on which are stated the verifications performed and the assigned rated characteristics of the apparatus verified, are permitted without written permission from the ACAE.



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)

ACAE Laboratory IA03 (Dalmine)

ACAE Laboratory II01 (Torino)

ACAE Laboratory IV01 (Budapest)

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 (2021) and IEC61641:2014-09

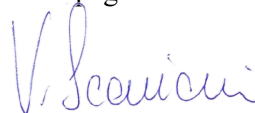
The verification were performed on the number of the different configurations sufficient to establish the ratings of similar variants and covering all possible ranges and applications including (see Annex n°1):

-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 2572 date 31/10/2023 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.


The General Secretary
Date: 2023.11.09

ACAE is accredited by



0070PROD

Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

ACAE is member of



Certificate of conformity n° A 23.079

page 2 of 2

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

Rated service voltage (U_e)	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

Date: 2023.11.09

ACAE is member

Accredited by



0070PRD

Signatory of EA, IAF and ILAC
Mutual Recognition Agreements



V. Scavini





Annex 1 to Certificate of conformity n° A 23.079

page 1 of 2

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	In		Icw	Busbar support distance
	mm x mm	mm ²	n°	IP30/31 air natural cooled equipped with grids	IP40/IP41 IP65 (**)	kA	mm
flat	20X5	100	1	292	250	-	-
	25X5	125	1	365	313	-	-
	32X5	160	1	467	400	-	-
	40X5	200	1	584	500	36	200
	50X5	250	1	730	625	36	225
	63X5	315	1	788	788	36	250
	80X5	400	1	1000	1000	36	300
	100X5	500	1	1460	1250	50	275
	30X10	300	1	876	713	36	300
	40X10	400	1	1168	950	36	350
	50X10	500	1	1460	1188	65	250
	80X10	800	1	2000	1900	65	275
	100X10	1000	1	-	1900	65	300
	120X10	1200	1	-	-	65	325
	40X5	400	2	1168	950	36	275
	80X5	800	2	2000	1900	65	225
	100X5	1000	2	2120	1900	65	275
	50X10	1000	2	2120	1875	65	300
	60X10	1200	2	2400	2250	65	325
	80X10	1600	2	3200	3000	70	235
	100X10	2000	2	3900	3400	100	225
	100X10	3000	3	3900	3400	100	250
	120X10	3600	3	4200	4052	100	275
	160X10	4800	3	5600 (*)	-	120	200
	200X10	6000	3	7000 (*)	-	120	250
	80X5	1600	4	3200	2720	65	275
	80X5	1600	4	3200	2720	70	200
	100X5	2000	4	4100	3400	65	300
	100X5	2000	4	4100	3400	70	250
shaped	30X10	165	1	-	390	25	450
	35X10	208	1	-	630	36	300
	45X10	325	1	-	800	36	375
	67X10	455	1	-	1030	50	225
	70X10	520	1	-	1250	50	250
	95X10	775	1	-	1600	65	200
	105X15	995	1	-	1700	75	200
	105X15	1250	1	-	2125	75	200
(*) tested IP4x air natural cooled equipped with grids - (**) for IP43 e IP54 refer IP65							



Annex 1 to Certificate of conformity n° A 23.079

page 2 of 2

Table B Circuit breakers and connetions

Type	I _{cw} (kA)	I _{cc} (kA)	Flexibar	Copper
MCCB Tmax XT1 160	-	50	1x15.5x3	1x15x5
MCCB Tmax XT2 160	-	100	1x15.5x3	1x15x5
MCCB Tmax XT3 250	-	100	1x20x3	3x20x1
MCCB Tmax XT4 250	-	100	1x20x3	1x20x5
MCCB Tmax T4 250	-	100	1x20x3	3x20x1
MCCB Tmax T4 320	-	100	1x20x5	1x25x5
MCCB Tmax T5 400	-	100	1x32x5	1x30x10
MCCB Tmax T5 630	-	100	1x32x10	1x30x10
MCCB Tmax XT5 400	-	120	1x32x5	1x30x10
MCCB Tmax XT5 630	-	120	1x32x10	1x30x10
MCCB Tmax T6 630	-	100	1x32x10	1x30x10
MCCB Tmax T6 800	-	100	1x32x10	1x30x10
MCCB Tmax XT6 800	-	70	1x32x10	1x30x10
MCCB Tmax XT6 1000	-	70	1x50x10	1x50x10
MCCB Tmax T7 1000	-	100	1x50x10	1x50x10
MCCB Tmax XT7 1000	-	100	1x50x10	1x50x10
ACB Emax 2 E1.2 1250	50	66	-	2x50x10
ACB Emax 2 E1.2 1250	50	66	-	1x100x10
MCCB Tmax T7 1250	-	100	2x50x10	2x40x10
MCCB Tmax XT7 1250	-	100	2x50x10	2x40x10
ACB Emax 2 E1.2 1600	50	66	-	2x50x10
MCCB Tmax T7 1600	-	100	-	2x50x10
MCCB Tmax XT7 1600	-	100	-	2x50x10
ACB Emax 2 E2.2 2000	85	85	-	3x60x10
ACB Emax 2 E2.2 2500	85	85	-	3x60x10
ACB Emax 2 E4.2 3200	100	100	-	3x100x10
ACB Emax 2 E4.2 4000	100	100	-	4x100x10
ACB Emax 2 E6.2 5000	120	120	-	5x100x10
ACB Emax 2 E6.2 6300	120	120	-	7x100x10



V. Scavini

The General Secretary
Date: 2023.11.09

ACAE is accredited by



0070PRD

Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

ACAE is member of

