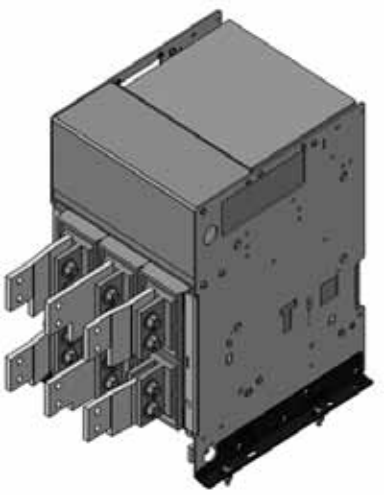
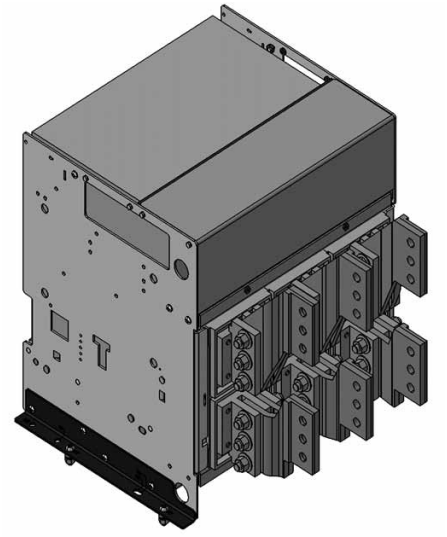
Service Note

Retrofitting kit
Hard Bus Retrofill for Terasaki AT Air Circuit Breaker with ABB New Emax Air Circuit Breaker

With a few modifications and sustainable costs, Retrofitting kits are the perfect solution to improve a low voltage switchgear.
ABB SACE has developed new hard bus retrofill Retrofitting kits to replace and upgrade AT Terasaki Air Circuit breaker with New Emax.

ABB ensures operating continuity between Terasaki AT air circuit breakers, AT 3 poles, 1250A, 1600A and 2500A, equipped with either Vertical or Horizontal Rear Terminals, and the recent series of circuit New Emax.
Replacement kits are designed to preserve existing switchgear and reduce downtimes to a minimum.
Special copper adapting kits are mounted on New Emax terminals in order to replicate the copper bars connections of Terasaki breaker.
The result is a completely upgraded System with all the advantages of new technology offered by ABB New Emax circuit breakers. All New Emax Electrical and Mechanical accessories can be used. Mechanical interlock and ATS work only with New Emax Circuit breakers.





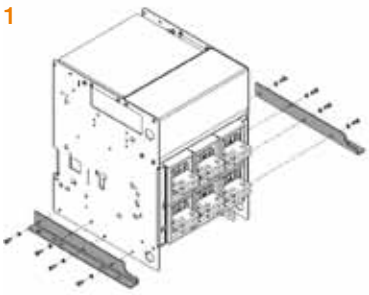
Benefits

– Increased safety;
– Service continuity;
– Easy installation;
– Maintenance costs reduction;
– Products and spare parts availability;
– Tested solution;
– Wide range of mechanical and electrical accessories with New Emax;
– Power measurement with advanced trip units (PR122 and PR123);
– Monitoring with PR120/K, electrical signaling internal module;
– Communication:
  - Modbus (PR120/D-M),
  - Wireless, (PR120/D-BT),
  - Profibus, DeviceNet or AS-I (EP 010 – FBP);
– Diagnosis and installation with Ekip Connect Software.

Retrofitting kit consists of:

1 Dedicated plates for fixed part to fix the circuit breaker in the same fixing point of Terasaki's one;
2 Special New Emax adapter busbars according to the size;
3 Insulating material to align terminals according to New Emax dimensions;
4 Adhesive template for panel door cutout.

1



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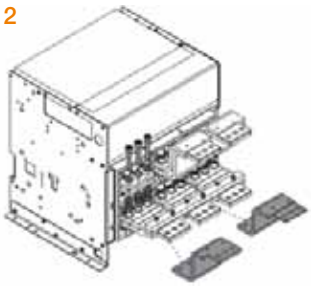

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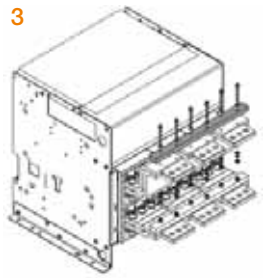

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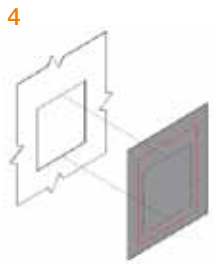

It is required to order a dedicated New Emax Fixed Part (with retrofitting kit included) + New Emax Moving Part.
Here below the list of Hard bus Retrofill (RF) retrofitting kits for Terasaki AT- ABB New Emax circuit breakers:

Terasaki Circuit Breaker	Iu	W terminals	Poles	to	New Emax	Performance level	Iu [A]
AT	1250	HR	3	→	E2	N	1250
AT	1600	HR	3	→	E2	N	1600
AT	2500	HR	3	→	E2	N	2500
AT	1250	VR	3	→	E2	N	1250
AT	1600	VR	3	→	E2	N	1600
AT	2500	VR	3	→	E3	N	2500

Before ordering, please, verify the panel has enough room to allow the replacement.
Below the list of New Emax accessories available for the retrofitting kit Terasaki AT → New Emax:

New Emax accessories available for the Terasaki AT-New Emax retrofitting kit:	
Electrical accessories	Mechanical accessories
YO (shunt opening release)	Key lock in open position
YO2 (second shunt opening release)	Padlock in open position
YC (shunt closing release)	Key lock in racked in/test/out position
YU (undervoltage release)	Mechanical compartment door lock
D (electronical Delay for YU - into the switchboard)	Protection for sealable trip unit
M (motor for charging spings)	Mechanical operation counter
AUX Spring charged (S33M)	IP54 door protection
AUX Open/Closed auxiliary contacts	O/C pushbutton protection
AUX CB connected/ test/ insulated position	Mechanical Interlock (only with other New Emax)
Closing Spring charged signalling – S33	Modules
Electric TU reset	PR120/K signalling module
SOR Test Unit	PR120/V measuring module
Overcurrent release trip indication	PR120/D-M Modbus communication module
Contact for signalling undervoltage release de-eenrgized	PR120/D-BT Bluetooth communication module

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1SDC001008L0201 - 2014.09