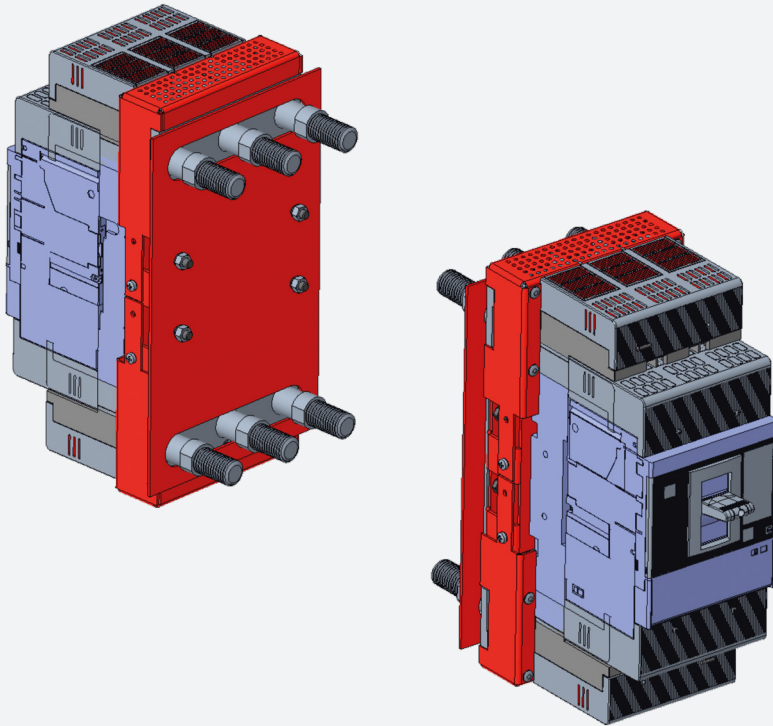


SERVICE NOTE

Advanced retrofitting kit solution

Hard Bus Retrofill ABB Sace Limitor LN 500 – LN 800 to Tmax XT IEC



With few modifications to your existing switchgear, retrofitting kits are a cost-effective solution to upgrade your electrical system. The Hard Bus Retrofill retrofitting kits allows a very fast and reliable upgrade of ABB Limitor circuit breakers with Tmax XT.

Product highlights

Air circuit breakers put into service many years ago might not provide the reliability and safety assurances required today. Making certain that people, equipment, and processes are properly protected is a growing concern. When maintenance is no longer enough owing to lack of materials or when components are out of production, retrofit kits are the best solution. ABB Low Voltage Service offers a unique way to upgrade installed hardware and software to the next generation, by changing the worn or outdated parts while maintaining the original plant and equipment configuration. The kits are tested in the ABB SACE Division Lab, accredited by ACCREDIA and acknowledged by important international certification bodies such as ACAE/LOVAG, ANCE, ASTA, ETL SEMKO, UL, CSA and Naval Registers.

Safety and Service continuity

- Safety improvement
- Service continuity guaranteed
- Ease of installation
- Reduction of the cost of maintenance
- Long availability of the product and its spare parts
- Factory tested solution
- Wide range of mechanical and electrical accessories with Tmax XT.

Value Propositions



Safety & Protection

Highest quality level confirmed by certified products. ABB brand is associated with buying quality products.



Easy to install

Fast and easy installation without dismantling the existing fixed part. Reduces downtime, with installation completed in less than one hour.



Control & Connectivity

Ekip Power Controller to improve energy efficiency and saving. Integration into systems with communication modules supporting various protocols: Modbus RS-485, Modbus TCP, Profibus, DeviceNet, EtherNet/IP, IEC61850, Bluetooth.



Easy to maintain

Diagnosis and installation with Ekip Connect Software. Automatic notifications to remind of maintenance activities. ABB Ability Energy and Asset Manager is also available with Emax 2 for Predictive Maintenance.



Sustainability

Retrofit kits enable a circular economy by extending the lifespan of your electrical system and minimizing CO₂ emissions and raw materials usage.

How to retrofit an ABB Limitor IEC?

ABB offers a complete range of solutions to upgrade ABB Sace Limitor circuit breakers circuit breakers with Tmax XT:

- **Hard Bus Retrofill (HBRF):** it is the traditional retrofit kit for which the complete Limitor circuit breaker needs to be dismantled. The kit consists of a new Tmax XT breaker equipped with special terminals to fit the existing busbars. This solution is available for Withdrawable circuit breakers.

All retrofit solutions have been tested for mechanical and electrical operations, short circuit breaking capacity, short circuit withstand current and dielectric properties according to IEC standards.

Correspondence table

The tables below show the correspondences between Limitor and Tmax XT:

SACE Limitor nameplate	Iu [A]	Version	Poles	Terminals type	Tmax XT	Performance level	Iu [A]	Icu/Ics 220-230V [kA]	Icu/Ics 400-415V [kA]	Icu/Ics 440V [kA]	Icu/Ics 500V [kA]	Icu/Ics 660-690V [kA]	Current type
LN 500	500	Plug-in	3p	R	XT5	V	630	200 (1)	200	170	125	75	AC
			4p	R	XT5	V	630	200 (1)	200	170	125	75	AC
		Withdrawable	3p	R	XT5	V	630	200 (1)	200	170	125	75	AC
			4p	R	XT5	V	630	200 (1)	200	170	125	75	AC
LN 800	500	Withdrawable	3p	R (HR)	XT7	L	800	200 (1)	120 (3)	100 (4)	85 (2)	50 (5)	AC
			4p	R (VR)	XT7	L	800	200 (1)	120 (3)	100 (4)	85 (2)	50 (5)	AC

(1) derating from Icu/Ics of Limitor (300 kA); (2) derating from Icu/Ics of Limitor (125 kA); (3) derating from Icu/Ics of Limitor (200 kA); (4) derating from Icu/Ics of Limitor (170 kA); (5) derating from Icu/Ics of Limitor (75 kA)

Accessories compatibility

Limitor LN500 - LN800 Withdrawable or Plug-in	HBRF W/P to XT5/XT7
YO	YO
YU	YU
Auxiliary contacts	Auxiliary contacts
Direct action motor operating mechanism	Motor Operator (M)
Direct-mounted rotary handle operating mechanism	Direct rotary handle - RHD (solution suitable only in case of DR S7 to XT7)
Rotary handle operating mechanism with transmission rod	Transmitted rotary handle - RHE 300mm
Front flange for operating lever mechanism	FLD
Key lock for open position	Key lock for open position
Mechanical in	-