

Quick Start Guide

Relay Retrofit Program



ABB's Relay Retrofit Program encompasses a repeatable procedure for replacing existing protection relays using pre-designed tools and installation accessories and a dedicated software tool for setting parameter migration. ABB's protection relays from the Relion® product family are used as the replacement devices.

With these carefully engineered tools and accessories, the time and effort needed to perform all the retrofit project phases – from engineering to final testing – is considerably reduced.

The program includes all the devices, accessories, hardware and software tools needed for a timely scheduled and controlled execution of your retrofit project.

Program deliverables

The Relay Retrofit Program for selected existing relays consists of the following:

- 615 series protection and control IEDs as replacement devices
- IED Migration Support Tool (MST)
- Relion Test Box, RTB615, with masking plates
- Replacement IED test templates
- Wire markings and wiring harnesses
- Cover plates
- Cutting tool
- Documentation
- Training

The program supports the migration of the existing relay's functionality into the new replacement IED, with the help of software and hardware tools and related accessories.

The program also offers the possibility to benefit from additional features, which become available with the replacement IED, for example, adding arc flash protection. Note, however, that the additional features and communication configuration are subject to supplementary engineering.

About this guide

This quick guide is designed to introduce the key concepts of the Relay Retrofit Program, providing an overview to the engineering, installing and testing activities.

For more detailed information, please refer to the complete customer documentation, which is available on the **Relay Retrofit Program's web page**. Go to: <https://new.abb.com/medium-voltage/distribution-automation/protection-relay-services/extensions-upgrades-and-retrofits/retrofits/relay-retrofit-program>.

ABB's Relay Retrofit Program

Engineering	Collect settings from the existing relay	Run the Migration Support Tool	Optional: Configure additional functionality	Write the configuration to the IED
Hardware	<ul style="list-style-type: none"> Laptop with USB serial adapter Cable SPA-ZP 5A3 for SPACOM 			<ul style="list-style-type: none"> Relion 615 series IED Cable RJ-45
Software	<ul style="list-style-type: none"> CAP505 tool for SPACOM MCX parameter collection form 	<ul style="list-style-type: none"> PCM600 Retrofit connectivity package Replacement IED connectivity package 	<ul style="list-style-type: none"> PCM600 	<ul style="list-style-type: none"> PCM600
Documentation	<ul style="list-style-type: none"> CAP 505 manuals SPACOM manuals MCX manuals 	<ul style="list-style-type: none"> Relay Retrofit Program application manual 	<ul style="list-style-type: none"> 615 series manuals 	<ul style="list-style-type: none"> 615 series manuals

Work instructions: Relay Retrofit Program Migration Support Tool Tutorial 1MRS757634

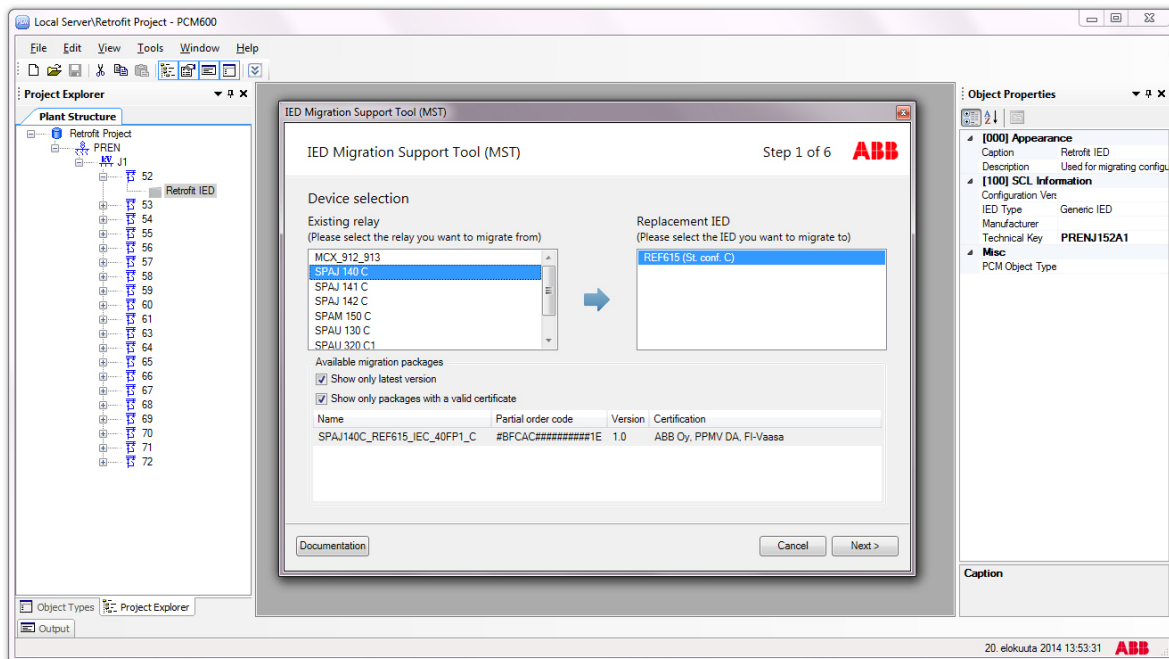
Installation	Extend the panel cutout	Install the cover plate, if needed	Optional: Configure additional functionality	Write the configuration to the IED
Hardware	<ul style="list-style-type: none"> Cutting tool 	<ul style="list-style-type: none"> Cover plates 	<ul style="list-style-type: none"> Relion 615 series IED 	<ul style="list-style-type: none"> Wiring harness including wire marking sets
Documentation	<ul style="list-style-type: none"> Cutting tool assembly manual and video Cutting tool operating guide and video Cutting tool safety guide 			

Work instructions: Relay Retrofit Program Application Manual 1MRS757638

Testing	Insert the IED into RTB615	Insert masking plates and connect cables	Import settings and test the IED	Reinstall the IED into the panel and perform final tests
Hardware	<ul style="list-style-type: none"> Relion Test Box RTB615 Relion 615 series IED 	<ul style="list-style-type: none"> Omicron Masking plates Cables between RTB615-Omicron 	<ul style="list-style-type: none"> Laptop 	<ul style="list-style-type: none"> Omicron
Software			<ul style="list-style-type: none"> Test software (Omicron test universe 2.40 or later) Omicron test templates PCM600 Connectivity packages: IED and Retrofit 	
Documentation			<ul style="list-style-type: none"> Relay Retrofit Program application manual 	<ul style="list-style-type: none"> 615 series manuals

Work instructions: Relay Retrofit Program Testing Tutorial 1MRS757639

Existing relay migration with the Migration Support Tool



Existing relay types and replacement IEDs

Relay type to be retrofitted	Replacement IED	Order code
SPAJ 140 C	REF615 standard configuration 'C'	#BFCAC#####1E ¹⁾
SPAJ 141 C	REF615 standard configuration 'C'	#BFCAD#####1E ¹⁾
SPAJ 142 C	REF615 standard configuration 'C'	#BFCAD#####1E ¹⁾
SPAM 150 C	REM615 standard configuration 'A'	#BMAAC#####1E ¹⁾ #BMAAG#####1E ^{1) 2)}
SPAU 130 C	REU615 standard configuration 'A'	#BUAEA#####1E ¹⁾
SPAU 320 C1	REU615 standard configuration 'A'	#BUAEA#####1E ¹⁾
SPAU 330 C1	REU615 standard configuration 'A'	#BUAEA#####1E ¹⁾
MCX 912, 913	REM615 standard configuration 'A'	#BMAAC#####1E ¹⁾ #BMAAG#####1E ^{1) 2)}

¹⁾ The order code for a replacement IED includes a fixed (in capital letters) and a non-fixed (in hashes (#)) part. The non-fixed part can be freely selected as when ordering any 615 series IED.

²⁾ With RTD inputs

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