

# Pre-Configured Matching Unit (PCMU)

## The solution to mitigate risk and save costs on relay upgrades

The PCMU represents the best choice to replace ABB legacy relays. It ensures a reliable, seamless upgrade due to the risk reduction only a wire-alike solution can provide. It also offers the lowest possible cost of installation in the market by allowing you to use the existing wiring and connecting it into the wire-alike terminals\*. Additionally, the time to update drawings after installation is virtually eliminated since no changes in wiring are required.

### PCMU benefits:

- **Relion® REF615 technology** - Provides the ideal solution to upgrade ABB's DPU245, DPU445, DPU2000 and MSOC relays
- **Installation time savings**
  - Pre-designed wire-alike and pre-configured relay solution to quickly and efficiently carry out the replacement (retrofit) and minimize downtime
  - **Wire-alike** solutions, plate that contains terminal blocks with connection to REF615 relay pre-wired based on application requirements
  - Installation can be completed in as little as 40 minutes
  - **Form & fit**- PCMU utilizes the existing cutout; no panel modifications, cutting, or drilling is necessary (except MSOC)
- **Engineering time savings** - Save up to 70% of the time required to update existing drawings after the upgrade
- **Eliminate risk of setting conversions** - Settings conversion support is included to ensure your system keeps functioning properly as soon as the new units are powered on
- **Expanded communication capabilities** - With the Relion 615, you can use Modbus, DNP3.0, or IEC 61850 for your communications
- **Advanced technology** - Upgrade to the latest capabilities in protection, control, metering, and fault recording
- **Reduced risk of human error** - Controlled and repeatable procedure for replacing existing protection relays with modern protection relay allows users to implement as standardized solution

\*SCADA integration work may be needed.



The Relion 615 Series is a comprehensive family of protection relays perfectly aligned for the protection, control, measurement, and supervision of utility substations and industrial systems. It includes dedicated protection relays for feeder, motor, and transformer protection.

The PCMU provides a seamless and cost effective way to replace legacy relays. It reduces risk and saves money. A detailed comparison of the PCMU series vs the traditional replacement, which requires an adapter plate and is not wire-alike, shows how users save time and money when replacing protection relays and requires less personnel for less time.

The PCMU replaces DPUs of the 245, 445, and 2000 series and MSOC relays. To request a training or quotation, contact your ABB representative with the style numbers of your existing relays.

	Competitor solution			PCMU		
	Personnel	Days	Cost	Personnel	Days	Cost
Engineering of solution	16	hr	\$3,200	4	hr	\$800
Translate protection settings to match old relays	4	hr	\$800	Included in PCMU		
Translate logic settings to match relays	4	hr	\$800	Included in PCMU		
New autocad dwgs	8	hr	\$1,600	2	hr	\$400
Adapter plate	\$50	1	\$50	Included in PCMU		
Miscellaneous	\$100	1	\$100	\$50	1	\$50
Factory prewiring to relay terminals	6	hr	\$300	Included in PCMU		
Removing existing relay & associated wiring	1	hr	\$50	1	hr	\$50
Drill hole, mount plate, wire to terminal blocks	1	hr	\$50	0.5	hr	\$25
Programming set up of new relay, including protection settings	2	hr	\$100	Included in PCMU		
Wire check (ring out)	1	hr	\$50	0.5	hr	\$25
Updating of drawings by customer	35	hr	\$7,000	10	hr	\$2,000
<b>TOTAL</b>			<b>\$14,100</b>			<b>\$3,350</b>

Note: Calculation is typical and may vary depending on specific customer conditions. Calculation assumes replacement is planned so no utility downtime is considered.

Task Owner	Competitor solution			PCMU		
	Personnel	Days	Man-days	Personnel	Days	Man-days
Engineering	2	1.25		1	0.50	
Drafting	2	2.75		1	1.63	
Shop Technician	1	0.75		Not required		
Field Technician	1	0.63		1	0.50	
<b>TOTAL</b>	<b>6</b>		<b>9.38</b>	<b>3</b>		<b>2.63</b>

Note: Calculation is typical and may vary depending on specific customer conditions. Calculation assumes replacement is planned so no utility downtime is considered.



PCMU features the same terminal layout as the DPU2000.

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