

ID: IN40216 | Access Levels: Everyone

# Connected Components Workbench v21: Implicit messaging UDFBs for Kinetix 5100 and PowerFlex 520-series drives

Document ID IN40216

Published Date 01/20/2025

## Summary

Connected Components Workbench v21: Implicit messaging UDFBs for Kinetix 5100 and PowerFlex 520-series drives

## Content

### Environment

- Connected Components Workbench v21.00 and newer
- 2080-L50E Micro850 and 2080-L70E controllers
- Kinetix 5100 servo drives
- PowerFlex 523 and PowerFlex 525 Adjustable Frequency AC drives

### Overview

Starting with Connected Components Workbench (CCW) v21, the Micro850 2080-L50E and Micro870 2080-L70E controllers are capable of implicit (Class1) messaging.

To facilitate programming of the Kinetix 5100 servo drives and PowerFlex 520-series VFDs, you can use 14 pre-developed User-Defined Function Blocks (UDFBs).

There are 11 UDFBs for Kinetix 5100 and 3 for PowerFlex 520-series drives:

Kinetix 5100		PowerFlex 523 and 525
raC_Opr_K5100_MS0	raC_Opr_K5100_MAI	RA_PF523_VEL
raC_Opr_K5100_MS0	raC_Opr_K5100_MAG	RA_PF525_VEL
raC_Opr_K5100_MAFR	raC_Opr_K5100_MAH	RA_PF525_POS
raC_Opr_K5100_MAS	raC_Opr_K5100_MAT	
raC_Opr_K5100_MAJ	raC_Drv_K5100	
raC_Opr_K5100_MAM		

## Downloading and importing the UDFBs

Follow the below steps to download and import implicit messaging UDFBs into CCW software.

1. Go to [PCDC](#).
2. Search for and click *Connected Components Workbench*.
3. From the **Select a version** menu, select *21.01.00*. It will now appear on the right.
4. Click *Downloads* → *Select Files*.
5. From the **Available Downloads** window, select *Connected Components Workbench Micro800 Sample Code v21.00.00* and click *Downloads*.
6. Follow the rest of the prompts to download the file and navigate to the download directory.
7. Right click *21.00.00-CCW-SampleProjects.exe* and select *Run as administrator*.
8. Extract the installer.
9. Enter the extracted folder.
10. Double click *Connected Components Workbench Sample Project.msi*.
11. Follow the prompts to install the samples.
12. Go to C:\Users\Public\Documents\CCW\Samples\Rockwell Automation\UDFBs\Micro800\_Lx0E\_K5100\_P520\_UDFB.
13. Extract **K5100\_UDFB\_for\_Lx0E\_Class1.zip** and **PF520\_UDFB\_for\_Lx0E\_Class1.zip**.
14. Import the extracted UDFBs as in [QA34237 - CCW: Using project from Sample Code Library](#).

See Appendix H of [Micro830, Micro850, and Micro870 Programmable Controllers User Manual](#), Publication 2080-UM002 for information on configuring the UDFBs.

## Reference

[https://literature.rockwellautomation.com/idc/groups/literature/documents/um/2080-um002\\_-en-e.pdf](https://literature.rockwellautomation.com/idc/groups/literature/documents/um/2080-um002_-en-e.pdf)

## Recently Viewed

Kinetix 5500/5700: Clearing SAFE FLT S03 fault	Kinetix 5500/5700: SAFE FLT S03 with Hardwired Safe Torque Off	TLP Feedback Battery
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