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DCS800-EP Panel Drive

Frequently Asked Questions

1. Definitions:
 - a. **Power module:** This is the ABB product which converts AC power to DC power to run a variable speed motor. Example: DCS800-S02-0020-05
 - b. **Panel Drive:** This is the power module and system components packaged on an open panel. Example: DCS800-EP2-0020-05
2. What is the DCS800-EP Panel Drive?
 - a. It is a DCS800-S01 or -S02 power module mounted and wired on a panel with system components, such as the contactor, control transformer, and fuses.
3. Does it have to be installed in an enclosure?
 - a. Yes. The DCS800-EP has a UL TYPE OPEN rating.
4. Who can buy it from ABB?
 - a. Authorized industrial distributors and system integrators
5. Where is it made?
 - a. The power module is made in Germany. The panel drive is made in America, presently by our authorized manufacturing center in Denver, CO.
6. Is ABB stocking this drive?
 - a. We are stocking common sizes. The drives we stock contain all options, except the 75 – 150 HP drives which do not have the reactor option.
7. What are the voltage and power ratings?
 - a. 10 to 600 HP, but currently only released up to 150 HP.
 - b. 480 Vac as standard; 230 Vac as an option
8. What else is included (in addition to the power module)?
 - a. Contactor (AC up to 300 HP; DC through 600 HP)
 - b. Control transformer
 - c. AC line fuses
 - d. DC output fuses (regen only)
9. What are the options?
 - a. Internal reactor (E213)
 - b. Blower motor starter and overload (M60x)
 - c. Main circuit breaker (F278)
 - d. 230 V conversion (S235)
 - e. Without contactor (0F250)

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10. What is required to convert DCS800-EP to 230 Vac?
 - a. The power module is rated from 230 to 525 Vac, so it is not the issue. The control transformer, however, must be reconfigured so it can output 120 Vac in either case.
11. Can it be converted to 230 Vac in the field?
 - a. Yes (or at the factory). See *Installation and Start Up Manual* for instructions.
12. Do I need a field kit to do the 230 Vac conversion?
 - a. A field conversion kit is available but not required. The *Installation and Start Up Manual* describes how to convert it and shows what parts (fuses) are required.
13. I see the DCS800-S0x power module is rated at different power ratings based on level of overload. Can I do that with the Panel Drive?
 - a. No, the DCS800-EP Panel Drive has only one overload rating, which is "heavy duty." Everything on the panel (wire, contactors, etc.) are sized based on this continuous rating so it is not possible to run it at a higher continuous / lower overload rating.
14. Does the DCS800-EP require a reactor?
 - a. DC drives manufactured by ABB require a dedicated line reactor / isolation transformer as described in the *DCS800-S0x hardware manual*. For retrofits, if one isn't already present, it must be added. Failure to follow this could result in misfiring of the SCR's which could blow fuses or damage the drive.
15. My existing system did not need a reactor. Do I still need one with DCS800?
 - a. Yes. Some older model drives were designed to run without a reactor or transformer under certain conditions. DCS800 requires it in all situations.

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16. I see the width dimension is greater than the width of the Reliance FlexPak 3000. How do you figure it will fit in the existing footprint?

- a. First, the mounting holes line up with the FlexPak 3000. Second, Reliance required more clearance area to the sides of the drive than what is required for the DCS800-EP. When this difference is taken into account, the DCS800-EP is actually less wide than the FlexPak 3000.

Panel Size	FlexPak®		DCS800-EP		FlexPak®	DCS800
	Panel	Clearance	Panel	Clearance	Total	Total
A - high	18.8	10	18.8	9	28.8	27.8
A - wide	10.6	5	12.2	1	15.6	13.2
A - deep	12.2	0	14.4	0	12.2	14.4
B - high	19.3	17	19.3	15	36.3	34.3
B - wide	18.1	5	20.0	1	23.1	21
B - deep	13.5	0	13.8*	0	13.5	13.8*

*depth with optional reactor is 19.3"

17. When replacing a FlexPak, could there be a depth issue?


- a. The DCS800-EP is deeper than the FlexPak as shown above, especially frame A and frame B with reactor, so it is important that this be checked before specifying the drive.

18. Will the DCS800-EP work for replacing older Reliance drives, such as the MaxPak Plus?


- a. Yes, it will work but more "homework" is required. The hole patterns will probably be different and there may be variations as to the type of contactor used (AC vs. DC). There may be other differences as well.

19. Why would a customer want to replace their FlexPak with a DCS800?

- a. Rockwell is slowly phasing out the FlexPak 3000. Many people are not satisfied with the PowerFlex DC replacement. The DCS800 has a proven track record since its launch in late 2006. It is a state-of-the-art DC drive. If the FlexPak fails, the entire panel must be replaced but for the DCS800-EP, the power module could be replaced.

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20. Can the DCS800-EP be used to replace other manufacturer's panel drives, like Quantum III or SSD 590+VSD?
- a. There is a lot of variation in what is included on a panel drive. Each must be considered carefully before doing a retrofit. Pay special attention to: dimensions, presence of AC contactor or DC contactor, I/O voltage, features and options, and presence of dynamic braking.
21. Is there an installation guide?
- a. Yes, the *DCS800-EP Installation and Start Up Guide* (3AUA0000076388) is available.
22. Is there a conversion guide?
- a. A FlexPak 3000 to DCS800-EP conversion guide will be available in the 2nd quarter of 2010.
23. How do I get CAD drawings for the DCS800-EP?
- a. The Panel Drive CAD drawings will be available on the on-line CAD catalog beginning in mid-April, 2010. (www.abb-now.com)
24. How do I get electrical drawings for the DCS800-EP?
- a. Power and control wiring diagrams are available from the on-line Configurator tool. www.abb-now.com/drive configure. (They are also in the manual.)
25. What's the easiest way to quote a DCS800-EP?
- a. Use the Configurator tool mentioned above.
26. The packaging looks pretty tight. Will I be able to work on it without tearing it apart?
- a. This drive was designed with maintainability in mind. Access to fuses is possible without removing any other parts. Whenever possible, tool access is designed into the product. On the frame A drive, the power module must be removed to gain access to the control transformer, reactor, and AC contactor, but this can be accomplished in only a few minutes.
27. Why did we stop at 150 HP?
- a. The panel drive will be available up to 600 HP by the end of 2010.

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28. Why did we stop at 600 HP?
- A larger drive would require moving to the D5 frame power module which is too large and heavy to mount on a “shippable” panel, not to mention the large contactors, etc. that would be required.
29. What if my PLC needs to know when the DC contactor is closed?
- An auxiliary dry N.O. contact is brought out to the main terminal strip on the panel drive. This is especially convenient for two wire control.
30. I see the drive comes with fuses for the blower motor circuit. Are these the best fuses for my application?
- The fuses that are supplied from the factory are sized at the lowest overload setting. If used at a higher setting, larger fuses may be required. See the *Installation and Start Up Manual / Replacement Parts* for specific recommendations.
31. What are the benefits of installing a panel drive vs. a power module?
- It simplifies the process of procuring the accessory components; is a pre-wired, pre-tested solution for smooth, fast start ups, and is a space efficient design.
32. How do I use the DCS800-EP with a DC contactor?
- The A, B, and C frames (10 – 300 HP) have an AC contactor as standard, but all frames can be ordered without a contactor. This is to allow the user to install a DC contactor externally if desired. Note: Never connect more than one contactor to the drive’s relay output “D08” or on-board control transformer.
33. How do I get technical support for the drive?
- Call 1-800-HELP-365 (1-800-435-7365)
 - Email drivessupportline@us.abb.com
34. How do I get warranty parts?
- Contact Technical Support as above.
35. How do I get parts after the warranty period expires?
- The *Installation and Start Up Manual* has a complete list of replacement parts. You can source them on your own. Some parts may or may not be available from ABB Low Voltage Drives

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