ABB 3BHE041626R0101 PDD405 A101

Control Hub

ABB 3BHE041626R0101 PDD405 A101 is a control hub used at the interface between an ACS580MV inverter unit and its control compartment. It carries the signals needed for inverter control and inverter-cabinet monitoring, while DDCS optical communication transfers data through the hub to the PEBB control boards inside the power modules. For maintenance teams sourcing a replacement, the complete ABB order code and A101 identification distinguish this unit from other drive-control assemblies. The control hub works within the drive control system alongside the BCU main control unit; it is not a complete drive or a standalone motor controller.



Technical Specifications

Product Identity	
Manufacturer	ABB
Order code	3BHE041626R0101
Type designation	PD D405 A101 / PDD405 A101
Product type	Control hub
Construction	Control-hub board with plug-in daughterboard positions
Functional Configuration	
Documented drive architecture	ACS580MV
System role	Interface between inverter unit and control compartment
Internal data path	DDCS optical communication to PEBB control boards
Software replacement requirement	Check and match control-hub software to the installed drive
Performance & Power	
Power / signal identification	X1 power connector; X2 signal connections
Environment	
Spare board storage temperature	–5 to +55 °C in the original packaging, with the circuit board in an antistatic bag or box.

Selected original manufacturer material follows on pages 3–4.

Compatibility & Selection Guide

System compatibility. The ACS580MV control architecture uses the BCU for general drive, motor-control and closed-loop functions, with the control hub providing the inverter-side interface. Replacement control-hub software must match the drive software configuration. Check the complete spare-part identification and the drive-specific documentation before substitution; a similar board appearance alone does not establish interchangeability.

Wiring & Installation Reference

Control-hub replacement

1. Isolate the drive. A qualified electrician must stop, de-energize, lock out and ground the drive according to the complete ABB procedure, including auxiliary supplies and the required discharge and voltage checks.

2. Identify and remove. Switch off the control-compartment miniature circuit breakers. Label and disconnect the relevant fibers, power, signals and pressure tube. Support the assembly before releasing its mounting screws.

3. Restore and verify. Install the approved replacement in reverse order, restore the original connection positions and check the drive-specific configuration and software before the authorized restart procedure.

Installation precautions

Hazardous voltage. Never replace the control hub with the drive energized. Follow the complete ACS580MV isolation, discharge, voltage-verification and grounding procedure; a stopped drive is not necessarily electrically safe.

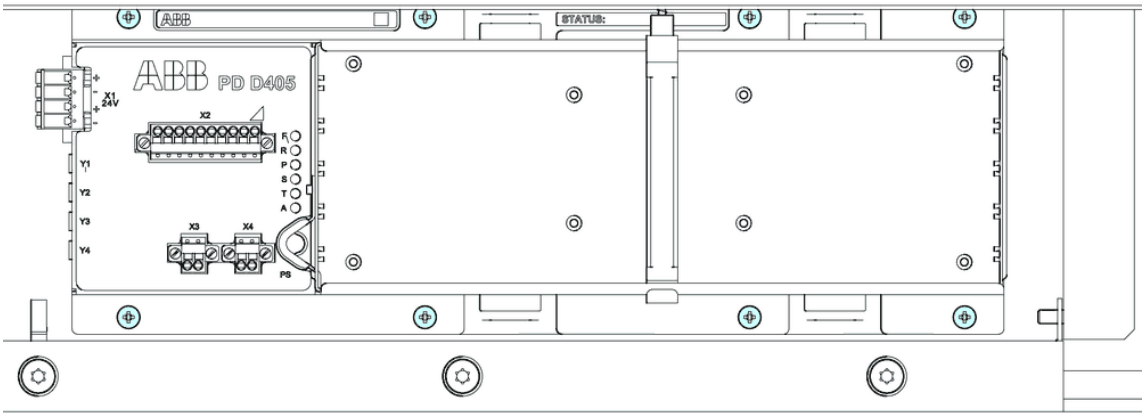
ESD protection. Use grounded ESD protection, handle circuit boards by their edges and place them on a grounded ESD-protected work surface.

View control-hub connections (PDF) — page 3 · View control-hub mounting reference (PDF) — page 3

Manufacturer reference 1

Procedimiento:

1. Detenga, desenergice y ponga a tierra el convertidor siguiendo los pasos descritos en el apartado *Apagado del convertidor de frecuencia para el mantenimiento* antes de iniciar los trabajos.
2. Apague todos los microinterruptores automáticos del compartimento de control.
3. Desconecte todos los enlaces de fibra óptica de las tarjetas secundarias y los enlaces de fibra óptica Y1,Y2,Y3,Y4, el conector de la fuente de alimentación (X1), los conectores de señal (X2) y el tubo de presión.
4. Sujete el hub de control, afloje los 8 tornillos de fijación de la placa de montaje y retire el módulo.

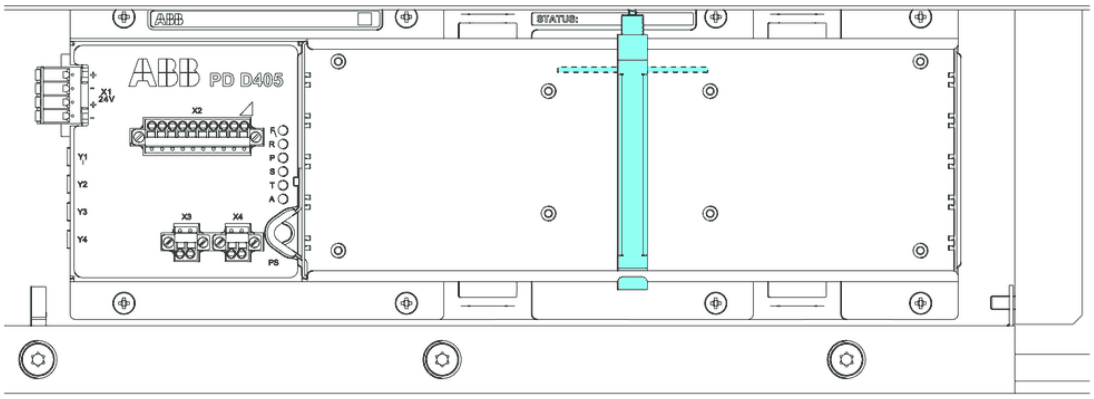


5. Instale el nuevo hub de control en orden inverso.
6. Una vez completado el trabajo, es posible poner en marcha de nuevo el convertidor. Véase el Capítulo *Funcionamiento, Energización y puesta en marcha del convertidor*.

Tarjeta secundaria del hub de control

Las tarjetas secundarias del hub de control se montan en ranuras en la tarjeta del hub de control.

1. Detenga, desenergice y ponga a tierra el convertidor siguiendo los pasos descritos en el apartado *Apagado del convertidor de frecuencia para el mantenimiento* antes de iniciar los trabajos.
2. Apague todos los microinterruptores automáticos del compartimento de control.
3. Desconecte todos los enlaces de fibra óptica de las tarjetas secundarias.
4. Afloje los tornillos del retenedor y retírelo.



5. Elija la tarjeta secundaria que desea sustituir y retírela.
6. Instale la nueva tarjeta secundaria en orden inverso.
7. Una vez completado el trabajo, es posible poner en marcha de nuevo el convertidor. Véase el Capítulo *Funcionamiento, Energización y puesta en marcha del convertidor*.