Allen-Bradley 1756-DMD30

ControlLogix SD3000 Drive Interface Module

Allen-Bradley 1756-DMD30 is the ControlLogix interface for SD3000 six-pulse and twelve-pulse DC drive equipment. It links an individual Power Module Interface chassis to the control system and provides velocity, position and outer torque control. The 1756-DMD30 suits an existing SD3000 application; the similarly named 1756-DMF30 is for SF3000 field supplies.



Technical Specifications

Product Identity	
Manufacturer	Allen-Bradley
Catalog number	1756-DMD30
Functional Configuration	
System	ControlLogix
Applicable drive equipment	SD3000 six-pulse S6/S6R and twelve-pulse S12/S12R DC drives
SynchLink data rate	5 Mbps
Drive Communication data rate	10 Mbps
SynchLink fiber	200/230 µm hard-clad silica; 650 nm
Drive Communication fiber	62.5/125 µm glass; 820 nm
Optical cable length	1–300 m; maximum 300 m with no more than one splice or one adapter
Drive Communication nodes	One PMI chassis
Performance & Power	
Module supply	From1756 chassis backplane
Backplane current	1.35 A at 5.1 V DC; 3 mA at 24 V DC
Maximum power dissipation	6.96 W
Environment	
Operating temperature	0–60°C
Relative humidity	5–95%, noncondensing

Selected original manufacturer material follows on page 3.

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Compatibility & Selection Guide

System and software compatibility. The 1756-DMD30 works within a ControlLogix system using RSLogix 5000 and DriveExecutive for configuration. For a module running firmware 2.05, the compatible baselines are RSLogix 5000 8.02.00, RSLinx 2.30 and DriveExecutive 1.01 or later. Match the installed firmware and project electronic keying before replacement; the photographed unit firmware has not been confirmed.

Wiring & Installation Reference

Optical connections

Drive Comm. Individual PMI chassis link · Use the specified 62.5/125 µm glass fiber and SC/ST connection arrangement.

Synch Comm. SynchLink synchronization/data · Use specified 200/230 µm hard-clad silica fiber; do not interchange the two optical cable types.

Transmit/receive. Transmit at rear; receive at front · Follow the original connection diagram and retain dust caps when disconnected.

Installation checks

Check the chassis budget. Allow 1.35 A at 5.1 V DC and 3 mA at 24 V DC in addition to all other installed modules.

Seat and lock the module. Align the circuit board with the upper and lower guides, then slide the module in until both locking tabs click.

Connect and verify the optical links. Connect the specified Drive Comm and SynchLink fibers according to the transmit/receive diagram, then check the module and link indicators.

Installation precautions. Remove power or verify the area is nonhazardous before insertion, removal or disconnection. RIUP can still cause unintended machine motion or loss of process control. Never look into module optical ports or cable connectors; intense light and invisible radiation can cause permanent eye damage. Use ESD protection, avoid connector pins and circuit components, and keep optical dust covers installed when unused. Use a suitable tool-access enclosure for this open industrial equipment.

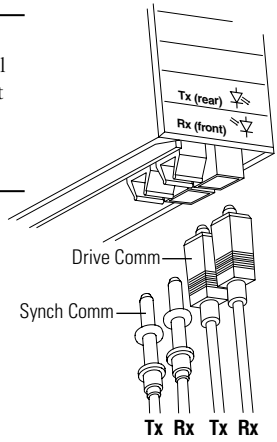
View optical connection diagram (PDF) · PDF page 3 | View installation guide · PDF page 2

Manufacturer sources: ControlLogix Drive Module Installation Instructions / ControlLogix Drive Module User Manual / ControlLogix Drive Module Firmware v2.05 Release Notes.

Connect the Fiber Optic Cables

Connect the fiber optic cables as shown.

ATTENTION: Hazard of permanent eye damage exists when using optical transmission equipment. This product emits intense light and invisible radiation. Do not look into module ports or fiber optic cable connectors.



Pre-Configured Drive Comm Cables

Catalog Number	Length
1756-DMCF001	1 meter
1756-DMCF003	3 meters
1756-DMCF010	10 meters
1756-DMCF030	30 meters
1756-DMAF (UDC/PMI existing cable adapters)	N/A

Pre-Configured SynchLink Comm Cables

Catalog Number	Length
1403-CF001	1 meter
1403-CF003	3 meters
1403-CF005	5 meters
1403-CF010	10 meters
1403-CF020	20 meters
1403-CF050	50 meters
1403-CF100	100 meters
1403-CF250	250 meters