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01 Freeze the drive-to-network contract

Capture the active communication setup

Record drive type and firmware, adapter software, selected protocol, communication profile, device identity and process-data mapping. Keep the configured communication-loss response with this record.

Identify command authority

Establish which source is permitted to start, stop and reference the drive in the maintenance state. Restored network traffic must not unintentionally restore a run command.

Drive fit	Supported control-unit slot and firmware
Controller fit	Matching identity, profile and process words
Test boundary	Approved command and loss-of-network behavior

Confirm drive and firmware fit

Check the drive option slot, software compatibility and supported adapter protocol before installation.

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02 Install the option and frame connection

Use the drive isolation procedure

Only qualified personnel should carry out the electrical work. Follow the applicable drive procedure, verify the safe state and inspect the option-slot connection before handling the adapter.

Seat, lock and tighten correctly

Insert the module carefully, engage the lock and tighten the mounting screw with a Torx TX10 tool. The screw supports mechanical retention and the electrical frame connection used for shielding.

Mounting torque	0.8 N·m
Drive interface	20-pin signal and power connector
Inspection	No damaged connector, loose screw or incomplete lock

Isolate before module handling

Follow the drive’s electrical safety procedure and verify the safe state before installing or removing the option.

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03 Build the intended Ethernet path

Separate network and motor routes

Keep bus cabling away from motor leads, avoid parallel routing and protect cables at entries. Include all patch leads in the segment-length calculation.

Choose chain or ring deliberately

For a chain, connect X2 to the next adapter’s X1. Where continuity through a single interruption is required, use the supported protocol-specific ring design rather than merely closing a chain.

Segment ceiling	100 m including patching
Chain ceiling	50 FENA-21 nodes
Ring association	EtherNet/IP DLR or PROFINET MRP

Secure the frame connection

Seat the adapter and lock correctly; tighten the mounting screw to 0.8 N·m without over-tightening.

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04 Commission protocol and process mapping

Verify link mode before process control

Confirm network identity and negotiated communication. PROFINET requires 100 Mbit/s full duplex; a 10 Mbit/s link is not an acceptable substitute for that protocol.

Prove the interpreted words

With motion controlled by the approved test plan, compare command state, reference direction and scale, status word and actual values at both ends. Do not infer correct mapping from a link LED.

Physical layer	Expected link and activity
Protocol layer	Expected device identity and cyclic data
Drive layer	Correct command authority and reference interpretation

Route Ethernet away from motor leads

Avoid parallel runs with motor cabling and protect cables at entries.

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05 Test interruption and controlled recovery

Define the expected exception state

Agree the permitted interruption and the drive’s configured reaction before disconnecting a network path. Observe downstream devices when testing a daisy-chain failure boundary.

Accept restoration explicitly

Restore the intended path and verify drive status, command source and reference behavior. Confirm that no unexpected restart, stale command or degraded ring condition remains.

Loss result	Expected drive and network response
Recovery result	Normal data and intended control authority
Release evidence	Configuration and observed transitions retained

Other ABB product references

ABB DI811 3BSE008552R1

ABB TB811 3BSE008568R1

ABB TU810V1 3BSE013230R1

Separate product references; no substitution or compatibility is implied.