Manuals+ — User Manuals Simplified.

**ECA 82 LON
Communication Module**

Danfoss ECA 82 LON Communication Module Instructions

Contents

Danfoss ECA 82 LON Communication Module

OVERVIEW

LON TP/TF-10

12-24 V a.c.

ECL Comfort 300/301 + ECA 82

WebAccess

TP/FP-10 Bus No FT Termination ~10-24 V *~* = 12-30 V

RS 232 Ethernet
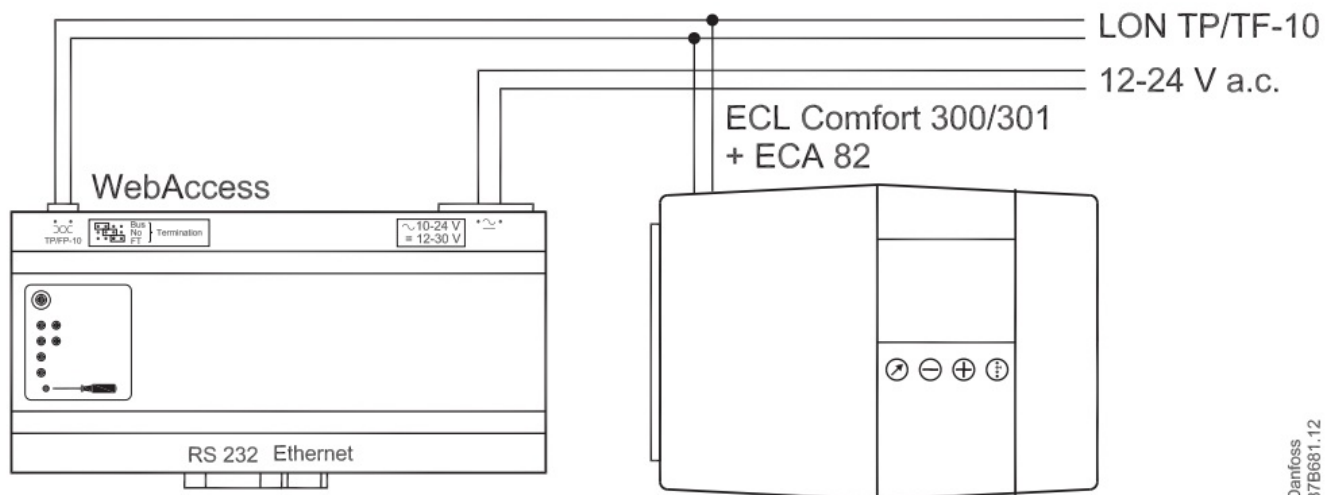
Danfoss
87B681.12

INSTALLATION INSTRUCTION

4

WebAccess (TP/FT-10) — ECA 82: 1 2 3
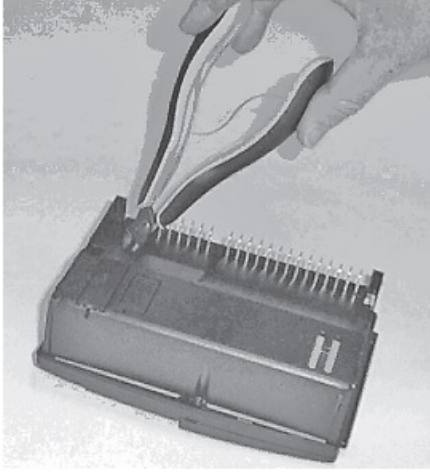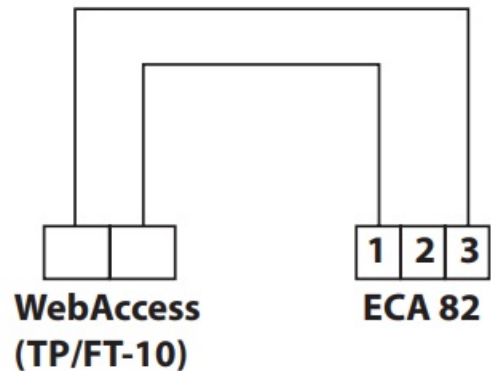
FEATURES

1. **LONWORKS Protocol Support**

   Enables integration into LonWorks networks for building automation.

2. **Plug-and-Play Module**

   Easily connects to compatible Danfoss controllers like AK-CC 550/750.

3. **Standard FTT-10 Transceiver**

   Uses free topology twisted-pair wiring for flexible network installation.

4. **Echelon Compatible**

   Complies with Echelon specifications for interoperability.

5. **SNVTs (Standard Network Variable Types)**

   Uses standard data formats for consistent communication across devices.

6. **Module Addressing Options**

   Supports both automatic and manual node ID/address assignment.

7. **Status LED Indicators**

   Visual indicators for power, service pin, communication status, and errors.

8. **Compact Design**

   Small footprint allows easy integration into control panels.

9. **Service Pin Button**

For commissioning and identifying the module on the network.

10. **Firmware Updatable**

Can be upgraded using compatible tools to stay current.

11. **Power Supply via Controller**

Eliminates the need for a separate power source.

12. **Data Logging Support**

Supports exchange of logged data to/from BMS.

13. **Node Isolation Protection**

Protects against electrical faults from affecting the network.

14. **Field Configuration Capability**

Can be configured on-site using LNS-based tools.

15. **Secure Communications**

Supports secure network communication using LON authentication.

SETUP GUIDES

1. **Power Off Controller**

Ensure the host controller is powered off before inserting the module.

2. **Insert Module Properly**

Plug the module into the dedicated expansion port on the controller.

3. **Power On the Controller**

Apply power to the controller to boot both the controller and module.

4. **Connect LON Cables**

Wire the module using twisted pair to the LON network (TP/FT-10).

5. **Use Shielded Cable**

Use shielded and grounded cabling to reduce noise and signal loss.

6. **Press Service Pin**

Press the service pin to announce the module on the LON network.

7. **Assign Node ID**

Use LNS-based tools to assign a unique Node ID to the module.

8. **Load XIF File**

Import the External Interface File (XIF) into the LON configuration tool.

9. **Bind SNVTs**

Bind the Standard Network Variables to the corresponding BMS points.

10. **Check LED Indicators**

Ensure LEDs indicate proper operation (green = good, red = fault).

11. **Run Diagnostics**

Use LonMaker or a similar tool to check for communication errors.

12. **Configure Network Settings**

Set up transmission rates, polling intervals, and other network settings.

13. **Test Data Exchange**

Confirm that data is properly being exchanged between the BMS and the controller.

14. **Label Connections**

Label wiring and port assignments for easy future maintenance.

15. **Backup Configuration**

    Save the LON network database and configuration for disaster recovery.

CARE & MAINTENANCE

1. **Keep It Dust-Free**

    Regularly clean the module area with a dry cloth to avoid dust buildup.

2. **Avoid Moisture**

    Ensure the control panel is kept dry to prevent short circuits.

3. **Check LED Indicators Weekly**

    Verify LEDs to detect early signs of communication issues.

4. **Secure Wiring**

    Periodically inspect and tighten any loose LON network connections.

5. **Inspect for Corrosion**

    Look for any signs of corrosion on terminals, especially in humid environments.

6. **Update Firmware Annually**

    Check Danfoss support for any available firmware updates.

7. **Check Communication Logs**

    Monitor network logs for packet loss or timeout issues.

8. **Verify SNVT Bindings**

    Confirm that bindings still reflect the current system configuration.

9. **Environmental Conditions Check**

    Keep temperature and humidity within operating specifications.

10. **Avoid Static Discharge**

    Handle the module and controller with anti-static precautions when servicing.

11. **Use Surge Protection**

    Install surge protectors to avoid damage from electrical spikes.

12. **Don't Force Module**

    Avoid forcing the module into place; ensure clean insertion/removal.

13. **Replace Damaged Cables**

    Immediately replace any frayed or cut twisted pair cables.

14. **Keep Documentation Updated**

    Maintain updated wiring diagrams and configuration files on-site.

15. **Schedule Annual System Review**

    Conduct a full network health check yearly with certified tools.

FAQS

1. What devices are compatible with the ECA 82 LON module?
The ECA 82 LON is typically used with Danfoss AK-CC 550/750 series controllers and other compatible Danfoss equipment.
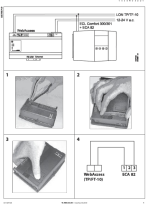
2. How is the ECA 82 powered?
The module draws power directly from the controller it's connected to; no external power supply is needed.

3. How do I connect the ECA 82 to a LON network?

Use twisted-pair wiring (TP/FT-10) to connect the module to the LON bus. Follow Danfoss wiring standards for best results.

Documents / Resources

Danfoss ECA 82 LON Communication Module [pdf] Instructions
087R9749, VIKMO300, ECA 82 LON Communication Module, ECA 82, LON Communication Module, Communication Module, Module

References

- **User Manual**