The Andel Driver

The Andel driver Interfaces to the Andel Floodline 128 leak detection system. Available for Commander and ObSys.

This document relates to Andel driver version 1.0

Please read the *Commander Manual* or *ObSys Manual* alongside this document, available from *www.northbt.com*

Contents

Compatibility with the Andel System

The Andel driver allows North to interface with an Andel Floodline 128 leak detection system.

The leak detection system supports up to 128 zones, consisting of a network of leak detection cables and sensors.

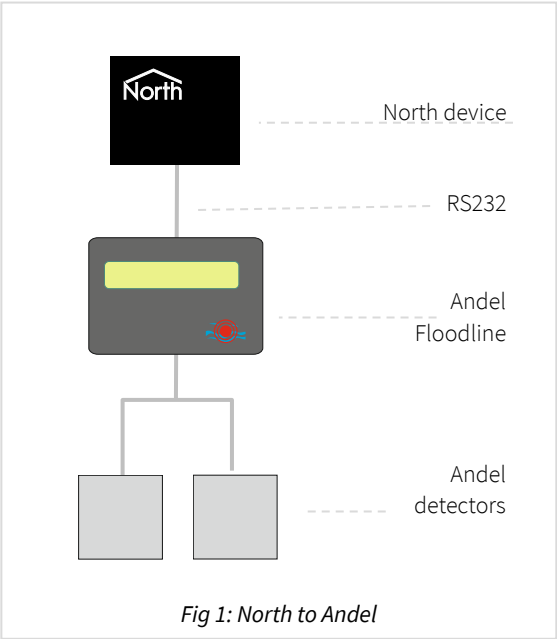

Fig 1: North to Andel

Equipment

Andel equipment compatible with the driver include:

- Andel Floodline 128 leak detection cables and sensors

Values

The driver can typically access the following values:

- Zone state
- Module state
- Motherboard fault
- System fault

The leak detection system can send alarms to the Andel driver.

Using the Driver

On ObSys, the Andel driver is pre-installed. On Commander, the driver is available to download in the file 'Bank 15 Andel.cdm'. On all of these North devices, you can use the driver to create an interface to Andel. Once started, you will need to set up the driver before it can communicate with the Andel system.

Making the Cable

Using the RS232 cable specification, connect the North Device COM port to Andel. Connector types at each end of the cable are shown.

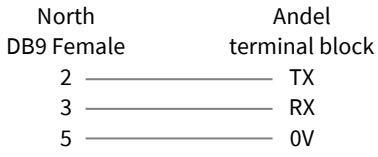

Fig 2 North to Andel cable

The maximum RS232 cable length is 15m and should be as short as possible.

Cables are available from North, order code CABLE/Andel.

Starting the Interface

To start an interface using the Andel driver, follow these steps:

- **Start Engineering** your North device using ObSys
- Navigate to **Configuration, Interfaces,** and set a unused **Interface** to 'Andel' to start the particular interface
- Navigate to the top-level of your North device, then rescan it

The driver setup object (Mc), labelled **Andel Setup**, should now be available. If this object is not available, check an interface licence is available and the driver is installed.

Setting up the Driver

To set up the driver, follow these steps:

- Navigate to the **Andel Setup** object (Mc). For example, if you started interface 1 with the driver earlier, then the object reference will be 'M1'
- Set the **RS232 Com Port** (RS.COM) to select which serial port on the North Device is connected to the Andover device.

Checking Communications

You can check that the interface is communicating by reading the **Device State** object (DS). A value of 'Yes' indicates the driver has connected to, and is communicating with, the Andel driver.

Alarms

When the Andel system reports an event to the driver, the driver sends a North-format alarm to the device's alarm processing.

Format

North-format alarms contain six text fields. The Andel driver places the following information into these fields:

System – copied from Device Label object (DL) within driver setup

Point – see Point & Condition Field section below

Condition – see Point & Condition Field section below

Priority – always '2'

Date & Time – from North device

Examples

System	Point	Condition	Priority	Date	Time
Floodline 128	Mains Power	Fail	2	11/03/19	11:26:26
Floodline 128	Mains Power	Ok	2	11/03/19	12:32:02
Floodline 128	Battery	Low	2	10/04/19	13:06:59
Floodline 128	Battery	Ok	2	10/04/19	15:10:06
Floodline 128	Zone 47	Leak Detected	2	11/07/19	16:20:07
Floodline 128	Zone 47	Leak Cleared	2	11/07/19	16:35:25

Point & Condition Field

The following alarm point and conditions can be sent by the driver:

Point	Fault Condition	Cleared Condition
Mains Power	Fail	Ok
Battery	Low	Ok
Module *a*	Comms Fail	Comms Ok
Zone *x*	Leak Detected	Leak Cleared
Zone *x*	Open Circuit	Open Cleared
Zone *x*	Short Circuit	Short Cleared

Note: Module number, *a*, is in the range 1 to 4. Zone number, *x*, is in the range 1 to 128.

Object Specifications

Once an interface is started, one or more extra objects become available within the top-level object of the device. As with all North objects, each of these extra objects may contain sub-objects, (and each of these may contain sub-objects, and so on) - the whole object structure being a multi-layer hierarchy. It is possible to navigate around the objects using the ObSys Engineering Software.

Each object is specified below, along with its sub-objects.

Example Object Reference

An example of a reference to an object in the same device: the Andel (S1) contains Zone *x* (Z1), which itself contains a Value (V). Therefore, the complete object reference is 'S1.Z1.V1

An example of a reference to an object in a different device: the IP network object (IP) contains Default Commander object (CDIP), which contains the object above (S1.Z1.V1) – therefore the complete object reference is 'IP.CDIP. S1.Z1.V1'

Device Top-Level Objects

When an interface is started using the Andel driver, the objects below become available within the top-level object of the device. For example, if interface 1 is started, then the object references 'M1' and 'S1' become available.

Description	Reference	Type
Andel Setup Set up the Andel driver, started on interface *c* (*c* is the interface number)	M*c*	Fixed Container: On the Commander platform this will be *[CDM v20\Andel v10]* On the ObSys platform this will be *[OSM v20\Andel v10]*
Andel System Access Andel system connected to interface *c* (*c* is the interface number)	S*c*	Fixed Container: *[Andel v10]*

Andel Driver Setup

Object Type: *[OSM v20\Andel v10]*
Object Type: *[CDM v20\Andel v10]*

The Andel driver contains the following objects:

Description	Reference	Type
RS232 COM Port	RS.COM	Obj\Num:1…8; Adjustable
Device Label	DL	Obj\Text: 20 chars; Adjustable
Device State Communications established with Floodline unit	DS	Obj\NoYes
Error Code Last communication fault	EC	Obj\ENum Values: 0=Last Comms Ok, 1…4=Protocol Fault

Andel System

Object Type: *[Andel v10]*

The Andel system contains the following objects:

Description	Reference	Type
Motherboard – System Fault	MB.SF	Obj\NoYes
Motherboard – Mains Fail	MB.MF	Obj\NoYes
Motherboard – Low Battery	MB.LB	Obj\NoYes
Motherboard – Leak Detected	MB.LD	Obj\NoYes
Motherboard – Remote Disconnected	MB.RD	Obj\NoYes
Motherboard – Display Disconnected	MB.DD	Obj\NoYes
Motherboard – Display Comms Fail	MB.CF	Obj\NoYes
System – Mains Fail	S.MF	Obj\NoYes
System – Low Battery	S.LB	Obj\NoYes
System – Remote Disconnected	S.RD	Obj\NoYes
Module *a* The module number, a, is in a range 1...4.	M*a*	Fixed Container: *[Andel v10\Module]*
Zone *x* The Zone number, *x*, is in the range 1…128.	Z*x*	Fixed Container: *[Andel v10\Zone]*

Module

Object Type: *[Andel v10\Module]*

The Andel Module is a module within an Andel Floodline 128 leak detection system.

The Andel Module contains the following objects:

Description	Reference	Type
Value	V	Obj\ENum: 0…4 Values: 0=Ok, 1=Leak Detected, 2=Open Circuit, 3=Short Circuit, 4=Comms Fault
Leak Detected state	F1	Obj\NoYes
Open Circuit state	F2	Obj\NoYes
Short Circuit state	F3	Obj\NoYes
Comms Fault state	F4	Obj\NoYes

Zone

Object Type: *[Andel v10\Zone]*

The Andel Zone is a zone within an Andel Floodline 128 leak detection system.

The Andel Zone contains the following objects:

Description	Reference	Type
Value	V	Obj\Enum: 0…4 Values: 0=Ok, 1=Leak Detected, 2=Open Circuit, 3=Short Circuit, 4=Comms Fault
Leak Detected state	F1	Obj\NoYes
Open Circuit state	F2	Obj\NoYes
Short Circuit state	F3	Obj\NoYes
Comms Fault state	F4	Obj\NoYes

Driver Versions

Version	Build Date	Details
1.0	06/06/2000	Driver released

Next Steps…

If you require help, contact support on 01273 694422 or visit *www.northbt.com/support*

North Building Technologies Ltd
+44 (0) 1273 694422
support@northbt.com
www.northbt.com

Author: LH
Checked by: JF

Document issued 06/10/2020.