
Version 1.0
Universal Fire Indicator: 11011



LONMARK

Functional Profile:

Universal Fire Indicator

Overview

This document describes the profile of a Universal Fire Indicator (UFI) object (Figure 1). Use of the standard Node object is implied. Each UFI object can control one physical indicator device. Applications that require multiple device control from the same LONWORKS interface (node), can be accommodated by deploying multiple object instances (Figure 2).

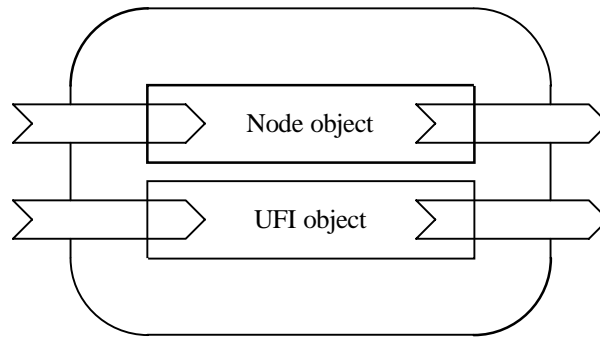


Figure 1 Functional profile

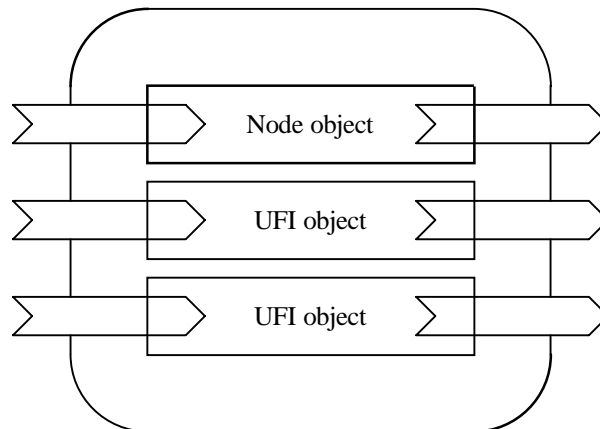


Figure 2 Multiple object instances

Example Usage

The services provided by this profile are intended to facilitate the interaction with one or more of the following LONWORKS devices:

- Intelligent panel.
- Building management system.

Background

The UFI object, encapsulates the functional requirements for specialized indicator devices such as simple display panels etc.. In the diagrams below the LONWORKS interface is physically hard wired to the indicator device.

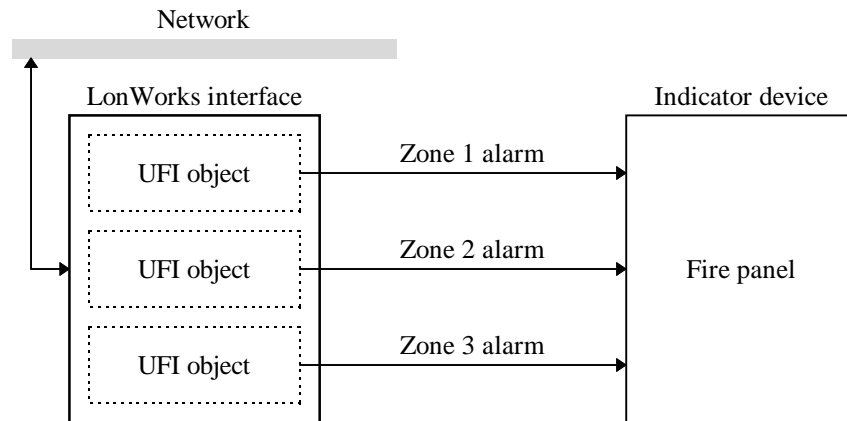


Figure 3 Example 1 - Fire panel alarm indication

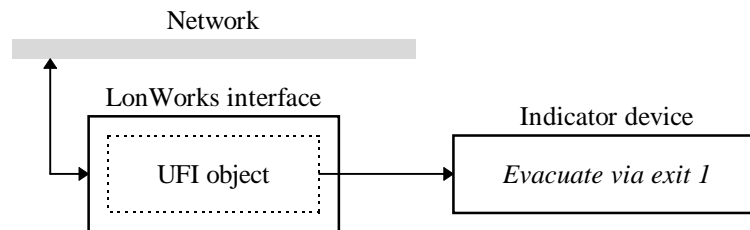


Figure 4 Example 2 - Display panel.

Node Object

The Node object can be used to provide additional alarm reporting, via the nvoAlarm network variable, in devices using the Fire Indicator object. The Node object is fully described in the LONMARK Application Layer guidelines. Details of the use of the nvoAlarm network variable in conjunction with the Fire Indicator object are provided below.

nvoAlarm

network output sync SNVT_alarm nvoAlarm;

The structure definition for SNVT_alarm is described in the SNVT Master List and Programmer's Guide (005-0027-01) however further definition is provided below for its use for Indicator fire conditions.

- (1) Zone Number (Node Location): Describes location of the device. 6 characters (ASCII-Numeric, Site/System Specific)
- (2) The valid alarm_type_t enumerations are as follows:

Enum #	Alarm_type Field	Notes*
0	AL_NO_CONDITION	No alarm condition exists
13	AL_FIR_ALM	Alarm condition
15	AL_FIR_TRBL	Trouble (fault) condition with an object
16	AL_FIR_SUPV	Supervisory condition with an object (eg. sprinkler pressure)
17	AL_FIR_TEST_ALARM	Alarm condition with an object in Test Mode
21	AL_FIR_MAINT_ALERT	Maintenance alert condition for an input object
0xFF	AL_NUL	

- (3) The valid priority_level_t enumerations are as follows:

Name	Definition	Notes	BACnet Level
SNVT_alarm	priority_level field		type file SNVT_PR.H
4	PR_3	Fire Supervisory	BACnet Priority
10	PR_10	Fire RTN'S (Display)	BACnet Priority
	PR_NUL	priority null	

When Transmitted

It is transmitted when an alarm condition occurs and also upon receiving an RQ_UPDATE_ALARM request via the nviRequest network variable.

Valid Range

The valid range for the value field is any value within the defined limits of the SNVT_alarm output.

Default Service Type

Universal Fire Indicator Object

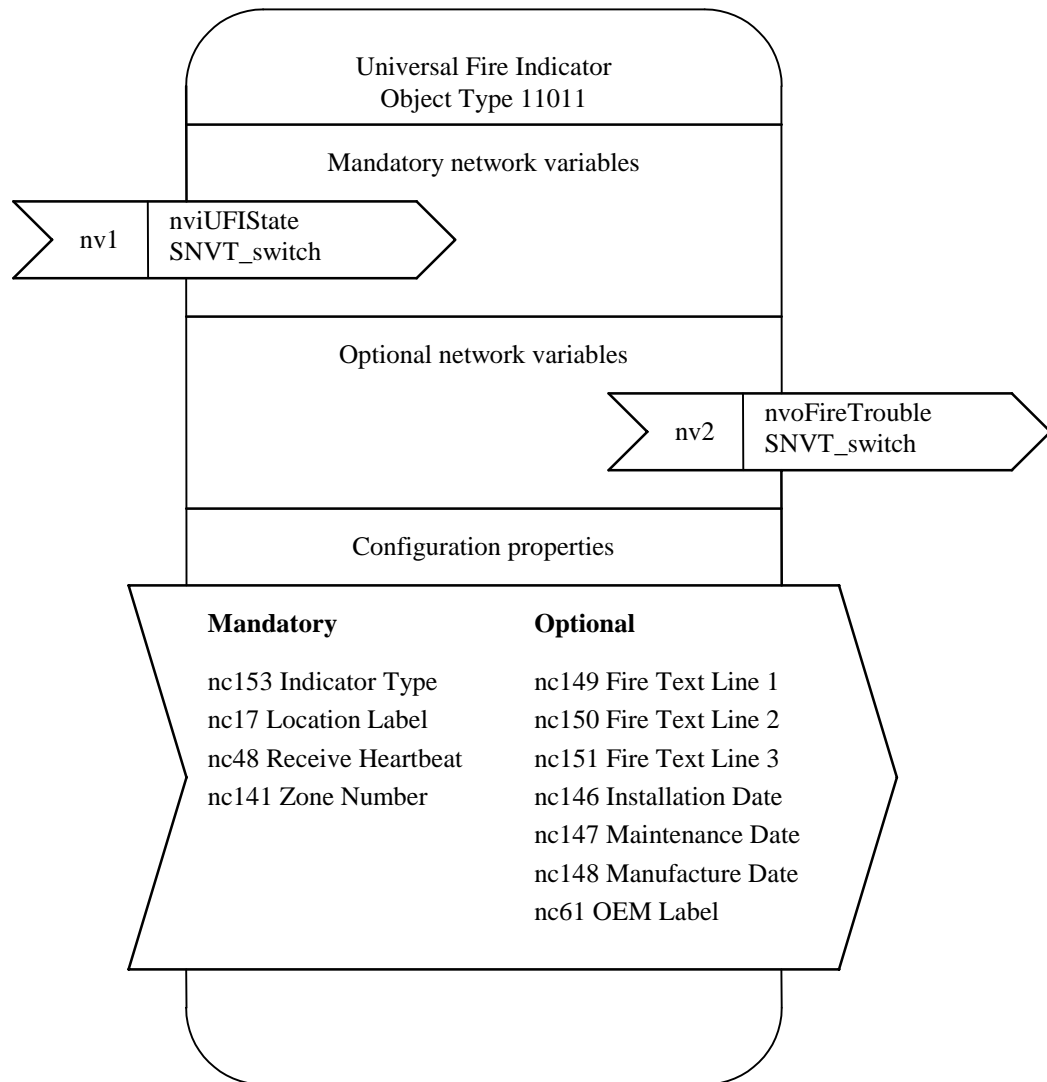


Figure 5 UFI object details

Mandatory Network Variables

Universal Fire Indicator State

network input SNVT_switch nviUFISate;

The input network variable controls the indicator device.

Valid Range

nviUIState	Description
0, 0	Indicator device deactivated
100, 1	Indicator device activated

Default Value

Indicator device deactivated.

Optional Network Variables

Indicator Trouble

network output SNVT_switch nvoFireTrouble;

This output network variable reflects the operational condition of the indicator device. A trouble condition can include any fault/trouble that can be detected by the device.

Valid Range

Condition	Description
0, 0	Indicator device operational
100, 1	Indicator device is in trouble

When Transmitted

The variable is transmitted immediately, when the operational condition of the indicator device has changed significantly.

Update Rate

Not specified.

Default Service Type

The default service type is acknowledged.

Configuration Properties

Indicator Type

network input config SNVT_fire_indcte nciIndicator;
This configuration property describes the indicator device.

Valid Range

Defined by SNVT_fire_indcte.

Default Value

FN_UNIVERSAL.

SCPT Reference

SCPTfireIndicate(153)

Location Label

network input config SNVT_str_asc nciLocation;
This configuration property describes the physical location of the UFI object.

Valid Range

Defined by SNVT_str_asc.

Default Value

Not specified.

SCPT Reference

SCPTlocation(17)

Receive Heartbeat

network input config SNVT_time_sec nciMaxReceiveT;
This configuration property, defines the maximum period of time that should expire, before the indicator device is deactivated.

Valid Range

Defined by SNVT_time_sec.

Default Value

Disabled.

SCPT Reference

SCPTmaxSendTime(48)

Zone Number

network input config SNVT_count nciZoneNumber;
This configuration property contains the zone number for the indicator device.

Valid Range

Defined by SNVT_count.

Default Value

Not specified.

SCPT Reference

SCPTzoneNum(141)

Fire Text Line 1

```
network input config SNVT_str_asc nciFireText1;
```

This configuration property, contains text information, pertinent during a fire condition. If this string is delimited by the metasymbol '>', nciFireText2 contains additional text information.

Valid Range

Defined by SNVT_str_asc.

Default Value

Not specified.

SCPT Reference

SCPTfireTxt1(149)

Fire Text Line 2

```
network input config SNVT_str_asc nciFireText2;
```

This configuration property, contains text information, pertinent during a fire condition. If this string is delimited by the metasymbol '>', nciFireText3 contains additional text information.

Valid Range

Defined by SNVT_str_asc.

Default Value

Not specified.

SCPT Reference

SCPTfireTxt2(150)

Fire Text Line 3

```
network input config SNVT_str_asc nciFireText3;
```

This configuration property, contains text information, pertinent during a fire condition.

Valid Range

Defined by SNVT_str_asc.

Default Value

Not specified.

SCPT Reference

SCPTfireTxt3(151)

Installation Date

network input config SNVT_time_stamp nciInstallDate;
This configuration property contains the date of installation.

Valid Range

Defined by SNVT_time_stamp.

Default Value

Not specified.

SCPT Reference

SCPTinstallDate(146)

Maintenance Date

network input config SNVT_time_stamp nciMaintDate;
This configuration property contains the last maintenance date.

Valid Range

Defined by SNVT_time_stamp.

Default Value

Not specified.

SCPT Reference

SCPTmaintDate(147)

Manufacture Date

network input config SNVT_time_stamp nciManfDate;
This configuration property contains the date of manufacture. (Factory set and write access disabled).

Valid Range

Defined by SNVT_time_stamp.

Default Value

Not specified.

SCPT Reference

SCPTmanfDate(148)

OEM Label

network input config SNVT_str_asc nciOEMLabel;
This configuration property contains manufacture specific details.
(Factory set and write access disabled).

Valid Range
Defined by SNVT_str_asc.

Default Value
Not specified.

SCPT Reference
SCPToemType(61)

Data Transfer

Not supported.

Power-up State

The configuration properties are adopted. The indicator device is deactivated and nvoAlarm is transmitted immediately.

Boundary and Error Conditions

None specified.

Additional Considerations

None specified.