



The Protec Driver

The Protec driver connects to the Protec Fire Detection range of digital addressable fire control panels. Available for Commander and ObSys.

This document relates to Protec driver version 1.5

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

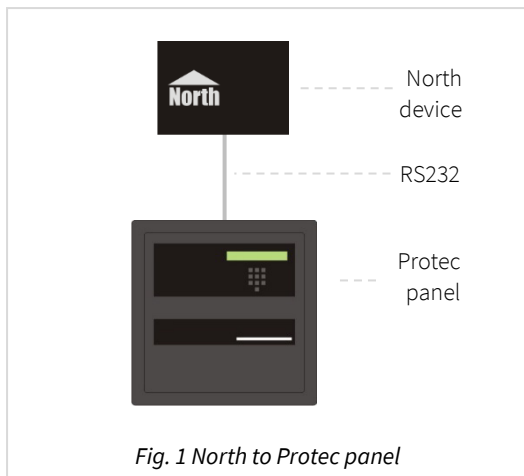
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Compatibility with the Protec System

The Protec driver allows North to interface with a Protec Fire Detection system.

The driver connects to a Protec digital addressable fire control panel (Fig. 1), and can communicate with a network of panels.



Equipment

Protec Fire Detection control panels compatible with the driver include:

- Algo-tec 6500 series
- Algo-tec 5400/6400 series
- Algo-tec 6300 and AN95

Values

Depending on the series of fire control panel, the driver can typically access the following values:

- | | |
|----------------|---|
| • Reset panel | • Loop state |
| • Sounders | • Loop device state |
| • Date & Time | • Zone state |
| • System state | • Output group (5400/6400 and 6500 series only) |
| • Panel state | • Damper state (5400/6400 and 6500 series only) |

States for fire, pre-alarm, fault, and isolation conditions are available.

Fire control panels can send alarms to the Protec driver.

Prerequisites

Algo-tec 6300 panel only: this has limited capacity when communicating that a large number of devices have changed state. Typically, this is when all devices in a zone have been isolated/de-isolated. After this type of operation, use the Resync Driver object (RST) to re-synchronise the driver with the Protec system.

The Algo-tec 6300 panel uses a 600 baud serial connection. On Commander, this requires version 2.0 build 15/06/16 or later.

Driver Operation

Events from the Panel

The driver connects to a Protec Algo-tec fire control panel, and listens for change-of-state events. These events are processed by the driver to maintain a database of active alarm states in the Protec system. Events are grouped and stored in the database using one of the following states: fire, pre-alarm, fault, or isolation.

On starting the interface, the driver synchronises its database with the Protec system by requesting the current active alarms. You can also force a re-synchronisation at any time by using the Resync Interface object (RST).

Both the Protec fire panel and driver monitor the communication between each other. If communication is lost, then the panel and driver report the fault. Once regained, missed events are resent and operation resumes.

Alarms

When an event is received from the Protec panel, the driver sends this as a North-format alarm to the device's alarm processing.

Reading from the Protec System

On reading an object from the Protec System, the driver responds with the state from its database. No request is sent to the panel.

Commands to the Protec System

Commands can be sent to the Protec System. These can be to: accept, silence, or reset active events on the system; isolate a loop-device; or override an output group.

On 6400 series panels and earlier, a pause is required between commands. The driver will pause up to 10 seconds between each command to the panel. Be aware of this pause when configuring Essential Data or Data Transfer modules.

Output Groups

Output groups are used by the panel to control groups of output devices, such as sounders, dampers etc.

The driver can be used to override an output group from its automatic state to either 'on' or 'off'. When you override an output on panels up to 99, the driver remembers this state so you can read it. The driver does not listen to output groups events from the panel.

When the fire system is reset all output groups return to their automatic state, cancelling any overrides.

When integrating the fire panel with an HVAC system, outputs are typically used to open ventilation dampers. If the advanced driver object Resend Output Group Overrides (A.OG) is enabled, then any output group overridden by the driver (on panels up to 99) will be re-commanded to its override state whenever the fire system is reset.

Output group overrides are remember during a power-cycle. Use the Resync Driver object (RST) to clear the driver's memory of overridden output groups.

Using the Driver

On ObSys and Commander, the Protec driver is pre-installed. On both these North devices, you can use the driver to create an interface to Protec. Once started, you will need to set up the driver before it can communicate with the Protec system.

Making the Cable

Using the RS232 cable specification (Fig. 2), connect the North device COM port to the Protec panel DB9 port.

Algo-tec 6500 panels:

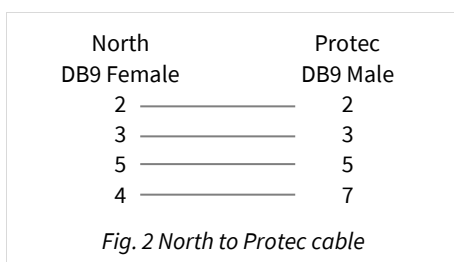
The COM port, labelled 'RS232', is located on the main backplane PCB.

Algo-tec 5400/6300/6400 panels:

The COM port, labelled 'Graphics port', is located on the inside of the panel at the hinge-edge of the door, facing the hinge itself. Not to be confused with 'Commissioning Port 1', which faces inwards from the door.

Protec may supply an RS232 opto-isolator device with the panel. On the Commander platform, this is not required as Commander's RS232 ports are isolated. The cable connecting pins 4 & 7 is only required when an opto-isolator is used.

Connector types at each end of the cable are shown.



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

The maximum RS232 cable length is 15m.

Starting the Interface

- 🖥 To start an interface using the Protec driver, follow these steps:
 - **Start Engineering** your North device using ObSys
 - Navigate to **Configuration, Interfaces**, and set an unused **Interface** to 'Protec' to start the particular interface
 - Navigate to the top-level of your North device and re-scan it

The driver setup object (Mc), labelled **Protec 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 **Protec 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 the serial port number on the North device the panel is connected to
 - Set the **Baud Rate** (RS.BR) to match that of the Protec panel graphics port
 - Set the **Panel Type** (P.T) to match the series of panel the driver is connected to. Set this to '6500', '5400/6400', or 'AN95/6300'.

Checking Communications

The **Protec Setup** object contains a **Comms Online** (DS) objects. A value of 'Yes' indicates the driver has connected to, and is communicating with the Protec system.

Alarms

When the Protec 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 Protec driver places the following information into these fields:

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

Point – see Point Field section below

Condition – see Condition and Priority Field section below

Priority – see Condition and Priority Field section below

Date & Time – from connected panel

Examples

System	Point	Condition	Priority	Date	Time
Protec System	Zone 1	Isolated	2	10/03/14	14:29:48
Protec System	Zone 1	De-Isolated	2	10/03/14	14:35:12
Protec System	Panel 12 Loop 1 Dev 12 Zone 12	Pre-Alarm	2	10/03/14	14:26:26
Protec System	Panel 2 Loop 1 Dev 1 Zone 16	Fire	1	10/03/14	15:06:59
Protec System	Panel 2	Alarms Silenced	3	10/03/14	15:07:35
Protec System	Panel 2	Reset	1	10/03/14	15:07:40
Protec System	Panel 2 Loop 1 Dev 1 Zone 16	Fire Cleared	1	10/03/14	15:07:40
Protec System	Panel 12 Loop 1 Dev 12 Zone 12	Pre-Alarm Cleared	2	10/03/14	16:26:26

Point Field

Selected by **Alarm Point Field** object (AT) within driver setup.

If 'PLD reference' option is selected, Point Field contains:

System

Panel *a*

Panel *a* Loop *b*

Panel *a* Loop *b* Dev *c*

Panel *a* Loop *b* Dev *c* Zone *d*

Zone *d*

System

If 'Label from panel' option is selected, Point Field contains:

device-location

Panel *a* *device-location*

Condition and Priority Field

The following alarm conditions can be sent by the driver:

Active Condition	Inactive Condition	Priority
Fire	Fire Cleared	1
	Reset	1
RS232 Comms Failure	RS232 Comms Failure Cleared	1
Isolated	De-Isolated	2
Pre-Alarm	Pre-Alarm Cleared	2
General Alarm	General Alarm Cleared	2
Technical Alarm	Technical Alarm Cleared	2
Alarm Fault	Alarm Fault Cleared	3
Evacuate		3
	Alarms Silenced	3
Aux 24V Supply Fault	Aux 24V Supply Fault Cleared	3
Earth Fault	Earth Fault Cleared	3
Fault	Fault Cleared	3
RS485 Fault	RS485 Fault Cleared	3
Signalling Error	Signalling Error Cleared	3
Supply Fault	Supply Fault Cleared	3
System Fault	System Fault Cleared	3
System Fault: Clock	System Fault Cleared	3
System Fault: EEPROM	System Fault Cleared	3
System Fault: Event	System Fault Cleared	3
System Fault: Flash	System Fault Cleared	3
System Fault: IO	System Fault Cleared	3
System Fault: LCD	System Fault Cleared	3
System Fault: LDU	System Fault Cleared	3
System Fault: Local	System Fault Cleared	3
System Fault: Menu	System Fault Cleared	3
System Fault: Printer	System Fault Cleared	3
System Fault: Software	System Fault Cleared	3
Type Fault	Type Fault Cleared	3
Zone Fault	Zone Fault Cleared	3
Alarms Outputs Disabled	Alarms Outputs Enabled	4
Buzzer Isolated	Buzzer De-Isolated	4
Control Outputs Disabled	Control Outputs Enabled	4
Device Added	Device Added Cleared	4
Engineer Test	Engineer Test Cleared	4
Event Accepted		4
Fault Links Disabled	Fault Links Enabled	4
Fire Links Disabled	Fire Links Enabled	4
Fire Protection Disabled	Fire Protection Enabled	4
High-Level Access Login	High-Level Access Logout	4
Initialisation	Initialisation Cleared	4
	Missing Loop Devices	4
Non-Fire Outputs Disabled	Non-Fire Outputs Enabled	4

A panel may not send all conditions listed.

Zone isolations may indicate a part isolation by appending the condition with '(Auto)' to indicate automatic detection devices, or '(MCP)' to indicate manually operated devices.

Object Specifications

Once an interface has been 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 Protec System (S1) contains Panel 1 (P1), which contains Loop 2 (L2), which has Device 22 (D22), which contains an alarm state (C). Therefore, the complete object reference will be 'S1.P1.L2.D22.C'.

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.P1.L2.D22.C) – therefore the complete object reference is 'IP.CDIP.S1.P1.L2.D22.C'.

Device Top-Level Objects

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

Description	Reference	Type
Protec Setup Set up the Protec driver, started on interface c (c is the interface number)	Mc	Fixed Container: On the Commander platform this will be [CDM v20\Protec v15] On the ObSys platforms this will be [OSM v20\Protec v15]
Protec System Access Protec system connected to interface c (c is the interface number)	Sc	Fixed Container: On a 6500 series panel network this will be [Protec v15\6600] On a x400 series panel network this will be [Protec v15\X400] On a x300/AN95 series panel network this will be [Protec v15\AN95]

Protec Driver Setup

Object Type: *[OSM v20\Protec v15]*

Object Type: *[CDM v20\Protec v15]*

The Protec driver contains the following objects:

Description	Reference	Type
RS232 COM port	RS.COM	Obj\Num: 1...8; Adjustable
Baud Rate Baud rate of the connected fire panel, typically 9600 or 19200 baud. Algo-tec 6300 panels use 600 baud.	RS.BR	Obj\Num: 600...19200; Adjustable
System Label Label displayed when scanning the system and within alarms	DL	Obj\Text: 20 Chars; Adjustable
Comms Online Indicates whether communication is established with the panel	DS	Obj\NoYes
Panel Type Select the series of Protec panel connected	PT	Obj\Enum: 0...1; Adjustable Where: 0=AN95/6300, 1=5400/6400, 2=6500
Alarm Point Field Selects source of the alarm message point field. When set to '1' (Label from panel), alarms sent include the panel/loop/device label if provided from the panel	AT	Obj\Enum: 0...1; Adjustable Where: 0=PLD reference, 1=Label from panel
Alarm include Panel Prefixes loop and device alarms with the panel number, when Alarm point field (AT) is set '1' (Label from panel)	AP	Obj\NoYes; Adjustable
Event storage available Each event from the system must be remembered by the driver. If no storage is available for a new event, the driver will not be able to remember it.	SC	Obj\Num: 0...800
Resync Interface Clears the driver's internal database or event and output group overrides, then re-requests the current state from the Protec system.	RST	Obj\NoYes; Adjustable
Filter Events Stop the driver listening for particular event types or panels. This provides more event storage for other event types.	FE	Fixed Container: On the Commander platform this will be <i>[CDM v20\Protec v15\Filter]</i> On the ObSys platforms this will be <i>[OSM v20\Protec v15\Filter]</i>
Advanced Setup Additional configuration options	A	Fixed Container: On the Commander platform this will be <i>[CDM v20\Protec v15\Advanced]</i> On the ObSys platforms this will be <i>[OSM v20\Protec v15\Advanced]</i>

Protec Driver Filter Events

Object Type: [OSM v20\Protec v15\Filter]

Object Type: [CDM v20\Protec v15\Filter]

Each event from the Protec Fire Detection system must be remembered by the driver. On a large Protec system with more than 800 active events at any one time, use this object to select which event types are ignored by the driver – isolation, fault, damper events, etc.

If more event storage is required, use multiple connections to Protec, with each Protec driver configured to store events for a particular range of panels.

Description	Reference	Type
Ignore Isolation events Enable to ignore isolation events from the system. This provides more event storage for other event conditions	I.C1	Obj\NoYes; Adjustable
Ignore Fault events Enable to ignore fault events from the system	I.C2	Obj\NoYes; Adjustable
Ignore Pre-Alarm events Enable to ignore pre-alarm events from the system	I.C3	Obj\NoYes; Adjustable
Ignore Fire events Enable to ignore fire events from the system	I.C4	Obj\NoYes; Adjustable
Ignore Damper events Enable to ignore damper events from the system. This provides more event storage for other event conditions	I.C5	Obj\NoYes; Adjustable
Store events from panel (start) Lowest address of network interface panel to store events from	PS	Obj\Num: 0...99; Adjustable
Store events from panel (end) Highest address of network interface panel to store events from	PE	Obj\Num: 1...99; Adjustable

Protec Advanced Setup

Object Type: [OSM v20\Protec v15\Advanced]

Object Type: [CDM v20\Protec v15\Advanced]

The Protec driver contains the following advanced configuration options.

Description	Reference	Type
Resend Output Group Overrides Set to 'Yes' to send Output Group overrides when the panel is reset	OG	Obj\NoYes; Adjustable Default value: 'No'
Pause between commands (ms) The delay between sending commands to the panel. On 5400/6300/6400 panels this should be set to '10000' ms (10 seconds). On 6500 panels this can be set to '0'.	PT	Obj\Num: 0...10000; Adjustable Default value: '0'
Enable platform time sync Enable to set the North device's date and time when commanded from the Protec system.	TS	Obj\NoYes; Adjustable Default value: 'No'

6500 Series System

Object Type: *[Protec v15\6600]*

The Protec series 6500 system is a network of Protec 6500 fire detection panels. It contains objects to view the status of the whole system (P) and objects to access information from each connected panel (Px).

Description	Reference	Type
Zone & System Summary	P	Fixed container can be one of the following types: [Protec v15\6600\System]
Panel x The panel number, x, can be in the range 1...160	Px	Fixed container, can be one of the following types: [Protec v15\6600\Panel]

x400 Series System

Object Type: *[Protec v15\X400]*

The Protec series x400 system is a network of Protec 6400 or 5400 fire detection panels. It contains objects to view the status of the whole system (P) and objects to access information from each connected panel (Px).

Description	Reference	Type
Zone & System Summary	P	Fixed container can be one of the following types: [Protec v15\X400\System]
Panel x The panel number, x, can be in the range 1...99	Px	Fixed container, can be one of the following types: [Protec v15\X400\Panel]

x300 Series System

Object Type: *[Protec v15\AN95]*

The Protec series x300 system is a network of Protec 6300 or AN95 fire detection panels. It contains objects to view the status of the whole system (P) and objects to access information from each connected panel (Px).

Description	Reference	Type
Zone & System Summary	P	Fixed container can be one of the following types: [Protec v15\AN95\System]
Panel x The panel number, x, can be in the range 1...64	Px	Fixed container, can be one of the following types: [Protec v15\AN95\Panel]

Zone & System Summary

Object Type: *[Protec v15\6600\System]*

Object Type: *[Protec v15\X400\System]*

Object Type: *[Protec v15\AN95\System]*

The Protec Zone and System Summary object contains zone and network-wide status for the Protec system. Objects are also available to perform network-wide commands – reset, silence, etc.

Description	Reference	Type
Commands Contains objects for resetting latched events, and silencing sounders	A	Fixed Container: On a 6500 series panel network this will be <i>[Protec v15\6600\Actions]</i> On a x400 series panel network this will be <i>[Protec v15\X400\Actions]</i> On a x300 series panel network this will be <i>[Protec v15\AN95\Actions]</i>
System Alarm State	C	Obj\Enum: 0...4 Where: 0=OK,1=Isolate,2=Fault,3=Pre-alarm,4=Fire
System Ok	C0	Obj\NoYes
Isolation	C1	Obj\NoYes
MCP Devices Isolated Indicates one or more manual call-point devices within the zone are isolated	C1.M	Obj\NoYes
Auto Devices Isolated Indicates one or more automatic detection devices within the zone are isolated	C1.A	Obj\NoYes
Fault	C2	Obj\NoYes
Pre-Alarm	C3	Obj\NoYes
Fire	C4	Obj\NoYes
Zone x The zone number, x, is in the range 1...800 for x400 panels; and 1...255 for x300 panels	Zx	Fixed container: <i>[Protec v15\Zone]</i>

Compatibility Objects

The Protec system also contains the following objects for backward compatibility.

Description	Reference	Type
System Value System alarm state	V1	Obj\Enum Value: 0=OK, 8=Damper activated, 10=Earth fault, 12=System fault, 13=Supply fault, 15=Detector fault, 16=Loop fault, 19=Alarms sounding, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire
Devices in Fault b condition The fault condition, b, is in the range 8...22, where: 8=Damper activated, 10=Earth fault, 12=System fault, 13=Supply fault, 15=Detector fault, 16=Loop fault, 19=Alarms sounding, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire	Fb	Obj\NoYes

Commands

Object Type: [Protec v15\6600\Actions]

Object Type: [Protec v15\X400\Actions]

Object Type: [Protec v15\AN95\Actions]

A Protec Command object allows an action to be set within the Protec system:

Description	Reference	Type
Reset Performs a reset on the panel	R	Obj\NoYes; Adjustable only
Sounders Silences or re-sounds (evacuate) the sounders	S	Obj\OffOn; Adjustable
Accept Accept alarms, and silence the panel buzzer. Object available in x400 series panels only	A	Obj\NoYes; Adjustable only
Date and Time Set the system date and time	TIME	Obj\DateTime; Adjustable

Zone

Object Type: [Protec v15\Zone]

A Protec zone contains the following objects:

Description	Reference	Type
Zone Alarm State	C	Obj\Enum: 0...4; Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire
Zone OK	C0	Obj\NoYes
Zone Devices Isolated Indicates one or more devices within the zone are isolated	C1	Obj\NoYes
Zone MCP Devices Isolated Indicates one or more manual call-point devices within the zone are isolated	C1.M	Obj\NoYes
Zone Auto Devices Isolated Indicates one or more automatic detection devices within the zone are isolated	C1.A	Obj\NoYes
Zone Devices in Fault	C2	Obj\NoYes
Zone Devices in Pre-Alarm	C3	Obj\NoYes
Zone Devices in Fire	C4	Obj\NoYes

Compatibility Objects

A Protec zone also contains the following objects for backward compatibility.

Description	Reference	Type
Zone Value Zone alarm state	V1	Obj\Enum Value: 0=OK, 8=Damper activated, 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire
Zone Devices in Fault <i>b</i> condition The fault condition, <i>b</i> , is in the range 8...22, where: 8=Damper activated, 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire	Fb	Obj\NoYes

6500 Series Panel

Object Type: *[Protec v15\6600\Panel]*

A Protec 6500 series panel contains the following objects:

Description	Reference	Type
Panel Alarm State	C	Obj\Enum: 0...4 Where: 0=Ok,1=Isolate,2=Fault,3=Pre-alarm,4=Fire
Panel Ok	C0	Obj\NoYes
Isolation	C1	Obj\NoYes
Fault	C2	Obj\NoYes
Pre-Alarm	C3	Obj\NoYes
Fire	C4	Obj\NoYes
Loop x The Loop number, <i>x</i> , is in the range 1...4	Lx	Fixed container: <i>[Protec v15\6600\Loop]</i>
Output Group y The Output Group number, <i>y</i> , is in the range 1...255	Oy	Fixed container: <i>[Protec v15\Output]</i>

Compatibility Objects

A Protec panel also contains the following objects for backward compatibility.

Description	Reference	Type
Panel Value Panel alarm state	V1	Obj\Enum Value: 0=OK, 8=Damper activated, 10=Earth fault, 12=System fault, 13=Supply fault, 15=Detector fault, 16=Loop fault, 19=Alarms sounding, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire
Devices in Fault <i>b</i> condition The fault condition, <i>b</i> , is in the range 8...22, where: 8=Damper activated, 10=Earth fault, 12=System fault, 13=Supply fault, 15=Detector fault, 16=Loop fault, 19=Alarms sounding, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire	Fb	Obj\NoYes

6500 Series Loop

Object Type: *[Protec v15\6600\Loop]*

A Protec panel loop contains the following objects:

Description	Reference	Type
Loop Alarm State	C	Obj\Enum: 0...4; Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire
Loop Ok	C0	Obj\NoYes
Loop Devices Isolated Indicates one or more devices are isolated	C1	Obj\NoYes
Loop/Devices in Fault	C2	Obj\NoYes
Loop Devices in Pre-Alarm	C3	Obj\NoYes
Loop Devices in Fire	C4	Obj\NoYes
Device x The device address, x, is in the range 1...512	Dx	Fixed container: <i>[Protec v15\Dev]</i>

Compatibility Objects

A Protec loop also contains the following objects for backward compatibility.

Description	Reference	Type
Loop Value Loop alarm state	V1	Obj\Enum Value: 0=OK, 8=Damper activated, 13=Supply fault, 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire
Loop Devices in Fault <i>b</i> condition The fault condition, <i>b</i> , is in the range 8...22, where: 8=Damper activated, 13=Supply fault, 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire	Fb	Obj\NoYes

x400 Series Panel

Object Type: *[Protec v15\X400\Panel]*

A Protec x400 series panel contains the following objects:

Description	Reference	Type
Panel Alarm State	C	Obj\Enum: 0...4 Where: 0=Ok,1=Isolate,2=Fault,3=Pre-alarm,4=Fire
Panel Ok	C0	Obj\NoYes
Isolation	C1	Obj\NoYes
Fault	C2	Obj\NoYes
Pre-Alarm	C3	Obj\NoYes
Fire	C4	Obj\NoYes
Loop x The Loop number, <i>x</i> , is in the range 1...4 on x400 panels	Lx	Fixed container: <i>[Protec v15\X400\Loop]</i>
Output Group y The Output Group number, <i>y</i> , is in the range 1...255	Oy	Fixed container: <i>[Protec v15\Output]</i>

Compatibility Objects

A Protec panel also contains the following objects for backward compatibility.

Description	Reference	Type
Panel Value Panel alarm state	V1	Obj\Enum Value: 0=OK, 8=Damper activated, 10=Earth fault, 12=System fault, 13=Supply fault, 15=Detector fault, 16=Loop fault, 19=Alarms sounding, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire
Devices in Fault <i>b</i> condition The fault condition, <i>b</i> , is in the range 8...22, where: 8=Damper activated, 10=Earth fault, 12=System fault, 13=Supply fault, 15=Detector fault, 16=Loop fault, 19=Alarms sounding, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire	Fb	Obj\NoYes

x300 Series Panel

Object Type: *[Protec v15\AN95\Panel]*

A Protec x300 series panel contains the following objects:

Description	Reference	Type
Panel Alarm State	C	Obj\Enum: 0...4 Where: 0=Ok,1=Isolate,2=Fault,3=Pre-alarm,4=Fire
Panel Ok	C0	Obj\NoYes
Isolation	C1	Obj\NoYes
Fault	C2	Obj\NoYes
Pre-Alarm	C3	Obj\NoYes
Fire	C4	Obj\NoYes
Loop <i>x</i> The Loop number, <i>x</i> , is in the range 1...8 on x300 panels	L <i>x</i>	Fixed container: <i>[Protec v15\AN95\Loop]</i>

x400/x300 Series Loop

Object Type: *[Protec v15\X400\Loop]*

Object Type: *[Protec v15\AN95\Loop]*

A Protec panel loop contains the following objects:

Description	Reference	Type
Loop Alarm State	C	Obj\Enum: 0...4; Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire
Loop Ok	C0	Obj\NoYes
Loop Devices Isolated Indicates one or more devices are isolated	C1	Obj\NoYes
Loop/Devices in Fault	C2	Obj\NoYes
Loop Devices in Pre-Alarm	C3	Obj\NoYes
Loop Devices in Fire	C4	Obj\NoYes
Device x The device address, x, is in the range 1...127	Dx	Fixed container: <i>[Protec v15\Dev]</i>

Compatibility Objects

A Protec loop also contains the following objects for backward compatibility.

Description	Reference	Type
Loop Value Loop alarm state	V1	Obj\Enum Value: 0=OK, 8=Damper activated, 13=Supply fault, 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire
Loop Devices in Fault b condition The fault condition, b, is in the range 8...22, where: 8=Damper activated, 13=Supply fault, 15=Detector fault, 16=Loop fault, 20=Devices Isolated, 21=Pre-Alarm, 22=Fire	Fb	Obj\NoYes

Device

Object Type: [Protec v15\Dev]

The Protec loop device contains the following objects:

Description	Reference	Type
Device Alarm State	C	Obj\Enum: 0...4; Adjustable Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire Adjustable values: 0=Deisolate, 1=Isolate
Device Ok	C0	Obj\NoYes
Device Isolated	C1	Obj\NoYes; Adjustable on 5400/6400 and 6500 series panels only
Device in Fault	C2	Obj\NoYes
Device in Pre-Alarm	C3	Obj\NoYes
Device in Fire	C4	Obj\NoYes
Damper Activated	C5	Obj\NoYes

Compatibility Objects

A Protec loop device also contains the following objects for backward compatibility.

Description	Reference	Type
Device Value Device alarm state	V1	Obj\Enum Value: 0=OK, 8=Damper activated, 13=Supply fault, 15=Detector fault, 20=Device Isolated, 21=Pre-Alarm, 22=Fire
Device in Fault <i>b</i> condition The fault condition, <i>b</i> , is in the range 8...22, where: 8=Damper activated, 13=Supply fault, 15=Detector fault, 20=Device Isolated, 21=Pre-Alarm, 22=Fire	F <i>b</i>	Obj\NoYes
Isolate Device Object available in 5400/6400 and 6500 series panels only	I	Obj\NoYes: Adjustable only

Output Group

Object Type: [Protec v15\Output]

A Protec Output Group object controls devices connected to the panel, such as dampers.

The driver remembers the last override state set (on panels up to 99), reading the object returns this state. If the output group has not been overridden using the driver, then an automatic state is returned.

The Protec fire panel reverts all output group overrides to automatic when reset, use the Advanced Driver Setup object (A.OG) to enable resending of overrides after a reset. Refer to [Driver Operation](#) for more details.

The following objects are available to control the same output group. Select the object most suited to your application.

Description	Reference	Type
Override Override the output group state to 'Off', 'On', or release to automatic control.	S	Obj\Enum: 0...3; Adjustable only Where: 0=Override to Off, 1=Override to On, 3=Automatic (release override)
Override to On Override the output group state to 'On', or release to automatic control.	N	Obj\NoYes; Adjustable Where: 0=Automatic (release override), 1=Override to On
Override to Off Override the output group state to 'Off', or release to automatic control.	F	Obj\NoYes; Adjustable Where: 0=Automatic (release override), 1=Override to Off

Driver Versions

Version	Build Date	Details
1.0	1/9/2000	Driver released
1.1	9/8/2007	Added damper control status objects (6000 damper interface)
1.2	25/10/2010	Increased database size. Added System object (P) and moved zones from per panel to this common object. Updated driver to use new North fire object model. Added objects to ignore isolations, event free count, and resync. 6300 panels now supported with panel firmware after March 2009.
1.2	24/9/2011	Alarm events now include more text from panel
1.3	28/5/2013	Updated for protocol issue 15 – new events Improved damper support Added ignore damper events object
1.3	11/2/2015	Updated for protocol issue 16 – removed unused alarms Added support for MICCO damper states Resolved issue when setting output group to ‘off’
1.4	1/3/2016	Updated for protocol issue 18 Added support for Algo-tec 6000PLUS protocol (version 3) Added support for zone part-isolation (added objects Zx.C1.A and .M) Added support for larger MICCO modules Increased event storage Driver object IDP changed to EDP (Enable damper events) Driver object ETD (Enable platform time sync) added Driver object AP (prefix loop/dev alarms with panel number) added Added support for more events – passed as alarm messages
1.4	7/7/2017	Added objects Oy.N and Oy.F to provide conversion on override outputs
1.4	21/1/2019	Resolved issue with protocol device text field length. Previously, this may have caused a loss of communications with the panel if the device text field was corrupt.
1.5	29/3/2019	Updated for protocol issue 19 Added support for General Alarm and Technical Alarm events. Indicated using pre-alarm state. 10 second pause between commands enforced for 5400/6300/6400 panels. Option to re-send output group overrides when the panel is reset. Modified and added driver objects for filtering events (objects from previous versions still valid). For isolations, .C objects are now adjustable

Next Steps...

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



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Document issued 24/03/2026.