



AN-316

Contact ID Reporting in Protege GX and Protege WX

Application Note



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Contents

Introduction	5
CID (Contact ID) Format	6
Reporting IDs	6
Central Station Reports in Protege GX	6
Setting Reporting IDs in Protege GX	7
Setting and Viewing Reporting IDs in Protege WX	8
Area Event Codes	8
Input Event Codes	9
Default Input Event Codes	9
Verified Alarm Code	10
Custom Reporting Codes	10
Contact ID Standard Reporting Table	12
Controller Inputs (Standard)	12
Controller Trouble Inputs (Standard)	12
Keypad Inputs (Standard)	13
Keypad Trouble Inputs (Standard)	14
Input Expander Inputs (Standard)	14
Input Expander Trouble Inputs (Standard)	15
Reader Expander Inputs (Standard)	15
Reader Expander Trouble Inputs (Standard)	16
Output Expander Inputs	17
Output Expander Trouble Inputs (Standard)	17
Analog Expander Inputs	17
Analog Expander Trouble Inputs (Standard)	17
Contact ID Large Reporting Table	19
Controller Inputs (Large)	19
Controller Trouble Inputs (Large)	19
Keypad Inputs (Large)	20
Keypad Trouble Inputs (Large)	21
Input Expander Inputs (Large)	21
Input Expander Trouble Inputs (Large)	22
Reader Expander Inputs (Large)	22
Reader Expander Trouble Inputs (Large)	23
Output Expander Inputs	24
Output Expander Trouble Inputs (Large)	24

Analog Expander Inputs	24
Analog Expander Trouble Inputs (Large)	24
SIMS II Reporting Format	26
SIMS II Format Structure	26
Module Type Numbers	27
SIMS II Reporting Table	27
Controller Inputs (SIMS II)	27
Controller Trouble Inputs (SIMS II)	28
Keypad Inputs (SIMS II)	28
Keypad Trouble Inputs (SIMS II)	29
Input Expander Inputs (SIMS II)	29
Input Expander Trouble Inputs (SIMS II)	30
Reader Expander Inputs (SIMS II)	30
Reader Expander Trouble Inputs (SIMS II)	31
Output Expander Inputs	32
Output Expander Trouble Inputs (SIMS II)	32
Analog Expander Inputs	32
Analog Expander Trouble Inputs (SIMS II)	32

Introduction

Contact ID is an established and widely supported reporting format, which can be used to report events and alarms over a phone line or IP connection. It is supported by both the Contact ID and Report IP (CID Over IP) services in Protege GX and Protege WX, and forms part of the ArmorIP reporting format as a supplement to full text transmission.

This application note describes the Contact ID reporting format and outlines the reporting and mapping options available in Protege GX and Protege WX.

Contact ID can report only a limited number of inputs, trouble inputs, areas and users, so it is important to configure these as efficiently as possible on large sites. Included in this document are three report map tables which can be used by Protege GX to report the maximum number of inputs possible for the format:

- Standard report map. Suitable for small intruder detection and access control installations. For more information, see [Contact ID Standard Reporting Table \(page 12\)](#).
- Large report map. Suitable for installations focused on intruder detection. For more information, see [Contact ID Large Reporting Table \(page 19\)](#).
- SIMS II format. A variant of the Contact ID format which allows for larger numbers of inputs and is suitable for both intruder and access based installations. For more information, see [SIMS II Reporting Format \(page 26\)](#).

For more information on adding and configuring services, see the [Protege GX Operator Manual](#) or [Protege WX Programming Reference](#).

All modules described in this document are Protege DIN rail modules. For legacy PCB modules, see [Application Note 089: Protege Reporting Information](#).

CID (Contact ID) Format

Contact ID is a DTMF reporting protocol that uses three digit reporting codes for each alarm transmission type, and three digit codes for each input. The format of the Contact ID message complies with the standard specified by SIA DC-05-1999.09.

The message composition is in the following form:

ACCT MT QXYZ GG CCC S

Where:

ACCT	4 digit account number composed using the digits 0-9 and B-F. This is set as the Client Code in the services or area programming.
MT	Message type. This two digit sequence is used to identify the Contact ID message to the receiver. Protege GX and Protege WX controllers send the code 18.
Q	Event qualifier, determined as follows: <ul style="list-style-type: none">• 1: New event or opening• 3: New restore or closing• 6: Previously reported condition still present (status report)
XYZ	3 digit event code composed using the digits 0-9 and B-F.
GG	Group or partition (area) number composed using the digits 0-9 and B-F. This is the Reporting ID set in the area programming. 00 indicates that no specific group or partition information is applicable.
CCC	Zone (input) number (input event reports) or user number (area open/close reports) composed using the digits 0-9 and B-F. This is the Reporting ID set in the input or user programming. The maximum code that can be reported is 999, and any number outside this range will be reported as 999. A reporting ID of 000 indicates that no specific input or user information applies.
S	Sum of all digits + S such that a MOD 15 will result in a 0. A 0 shall be transmitted and valued as a 10 for checksum purposes even though it is displayed and printed as a 0.

Reporting IDs

Reporting IDs are used to identify areas, inputs, trouble inputs and users in Contact ID messages. The Reporting ID of an area is equivalent to the two-digit group code, while that of an input, trouble input or user is the three digit zone/user number.

Central Station Reports in Protege GX

The report map generator in Protege GX is used to create central station reports. These allow you to view the reporting data for all of the inputs, trouble inputs, areas and users assigned to a particular reporting service. The report map is exported in CSV and HTML formats, which can be sent on to your monitoring station.

1. To generate a central station report, navigate to **Reports | Central station report**.
2. Select the **Reporting service** that you wish to create a report for.

Only primary services are available (not backup services).

3. Enter an **Output directory** where the report will be saved. Click **Browse** to view your directories and create a new folder if required.

When you run a report, Protege GX will create a subdirectory for each reporting service.

4. If you are using a reporting map, enable **Reset area, input and trouble input ID's** and select a **Report map type**. This will change the Reporting IDs of all areas, inputs and trouble inputs that are monitored by this service to follow the selected mapping table.

This option will overwrite any custom Reporting IDs which have been entered.

5. Click **Generate**.
6. After a brief pause, a popup will inform you that the report export is complete. Click **OK**.
7. To view your report, click **Open**. This opens the output directory, which contains the report map in both CSV and HTML formats.

Setting Reporting IDs in Protege GX

Reporting IDs for users, inputs, trouble inputs and areas are highly flexible in Protege GX, allowing a wide range of reporting solutions to fit your requirements.

When each record is added to the system it is given the next unique Reporting ID, and by default will report using that number. Reporting IDs assigned this way will be globally unique within the database. However, it is possible to customize the Reporting ID of each record individually, either manually or by applying a Contact ID mapping.

Note: As of Protege GX controller firmware version 2.08.583, the **Cid Mapping** or **CID Map Settings** options in the service programming are obsolete except for the SIMS II format (see next page). These settings should not be changed.

Manually Customizing Reporting IDs

If there are any specific requirements for reporting it is possible to manually define the **Reporting ID** for each record. These can be viewed and set in the following locations:

- For user records: **Users | Users | General**.
- For input records: **Programming | Inputs | General**.
- For area records: **Programming | Areas | Configuration**.
- For trouble input records: **Programming | Trouble Inputs | General**.

Using a Reporting ID Map

It is also possible to reset the Reporting IDs to use a particular mapping scheme when you generate a central station report. This changes the Reporting IDs of all inputs, trouble inputs and areas monitored by this service to match the selected mapping scheme.

If you are using a report map, it is recommended that you reset the Reporting IDs each time you run the central station report. Before you generate a central station report, enable **Reset Area, Input and Trouble Input ID's**, then select the desired report map from the following:

- **Standard:** The Reporting IDs will be reset to the Standard Contact ID mapping, suitable for small burglary and access control installations (see page 12).
- **Large:** The Reporting IDs will be reset to the Large Contact ID mapping, suitable for intrusion detection installations with a large number of input expanders (see page 19).
- **SIMS II:** The Reporting IDs will be reset to the SIMS II Contact ID variant, which allows the service to send a larger number of inputs (see page 26).

Some additional configuration is also required (see below).

The CSV central station report does not show the Group IDs (module numbers) which are required to interpret SIMS II reports. The HTML format should be sent to the monitoring station.

- **None:** The Reporting IDs will be reset to a sequential mapping - the first input will be mapped as 001, the second as 002, and so on. Reporting IDs are assigned to inputs first, then to trouble inputs, in order by Database ID. Any IDs mapped above the maximum reportable value for Contact ID will be reported as 999 by the controller.

Reporting IDs for areas monitored by this service will also be reset so that the first area has the code 01, the second has 02, etc. User Reporting IDs will not be reset.

Click **Generate** to reset the Reporting IDs and generate the report map showing the new values.

As only the records monitored by the selected reporting service are updated, this process may cause duplicate Reporting IDs within the Protege GX database. However, all Reporting IDs monitored by the selected reporting service will be unique.

Additional Configuration for SIMS II

If you are using the SIMS II format, as well as resetting the Reporting IDs you must also configure the service to send to correct group codes.

1. Navigate to **Programming | Services** and select the Contact ID or Report IP service that is to send SIMS II messages.
2. If the service is running, right click on the record and click **Stop Service**.
3. For a Contact ID service, open the **Settings** tab and set the **Cid Mapping** to SIMS II.
4. For a Report IP service, open the **General** tab and set the **CID Map Settings** to SIMS II.
5. Click **Save**.
6. Right click on the record and click **Start Service**.

Setting and Viewing Reporting IDs in Protege WX

In Protege WX, Reporting IDs for areas, inputs, trouble inputs and users are set automatically when each record is added to the system. You can view and edit the Reporting IDs for each record in the following locations:

- For user records: **Users | Users | General**.
- For input records: **Programming | Inputs | General**.
- For area records: **Programming | Areas | Configuration**.
- For trouble input records: **Programming | Trouble Inputs | General**.

It is not possible to automatically apply a report map to records in Protege WX.

A central station report contains all of the reporting data required by the monitoring station for a specific reporting service. To generate this report, navigate to **Monitoring | Reporting | Central Station Report**. Select a service and click **Export** to generate the report and save it to your computer in CSV format.

Area Event Codes

Area reporting codes are used to report the opening and closing of an area (arming and disarming) to the central station receiver or monitoring station. The following codes are sent for area arming and disarming:

Description	Event Code
Area Arming/Disarming This is sent with a user ID of 000 and is not normally used.	400
Area Arming/Disarming By User This is sent with the user ID that disarmed/armed the area. This is the code used for normal area arming.	401
Area Group Arming/Disarming By User When a group of areas is controlled by a user, this code will be used for each area in the group.	402

Description	Event Code
Automatic Area Arming/Disarming When an area arms/disarms in response to an event or action this code will be used. A user ID of 999 will be sent to identify it as a system user.	403
Cancel Area Arming/Disarming The cancel arming code is used when a deferred area is prevented from completing the arming cycle. Previously code 405 was used which is now obsolete.	406
Early Arming/Disarming Used to send an early open or close message when the area is armed or disarmed before it is due.	451
Late Arming/Disarming This message is sent when the area is not armed or not disarmed by the scheduled time.	452
Remote Arming/Disarming Used to report area control functions that are actioned remotely to the Protege controller, such as through the software.	407
Quick Arming/Disarming Used to report arming of the area without an exit delay.	408
Key Switch Arming/Disarming Sent when an area is armed or disarmed from an input or programmable function.	409
Stay Arming/Disarming Sent when the area is stay armed, indicating that only external inputs (inputs with the Stay Input option enabled) are armed.	441
Partial Arming/Disarming Sent when the area is armed with bypassed inputs.	456
Recent Arming Sent when the area has armed and an alarm has activated within the Recent Closing Time .	459

Input Event Codes

The event codes for inputs and trouble inputs indicate which type of condition is detected by the input.

Standard inputs typically report burglary alarm, tamper and bypass conditions. It is also possible to apply a custom event reporting code to any input using the input type, allowing them to report conditions such as medical alarms and smoke alerts.

In contrast, the trouble inputs for each module use specific event codes based on the type of trouble condition that they report. These are outlined in the relevant reporting tables for each module.

Default Input Event Codes

Regular input events are reported using the following standard burglary codes.

Event Type	Alarm Code
Alarm / Open	130 (Burglary)
Tamper	137 (Burglary Tamper)
Bypass	570 (Input Bypass)

Verified Alarm Code

In some installations it is necessary to send a different code when an alarm has been confirmed by more than one input opening. This allows response centers to distinguish between unconfirmed and confirmed alarm reports.

Event Type	Alarm Code
Verified Alarm	139 (Intrusion Verifier)

To use this code the following two features must be enabled:

- Smart input mode
- Remote notify delay

For more information and programming instructions, see Application Note 312: Minimizing Offsite Reporting of False Alarms in Protege GX and Protege WX.

Custom Reporting Codes

Custom reporting codes can be applied to inputs via the input type programming. Create an input type, set the **Custom Reporting Code**, and apply the input type to any number of inputs to cause them to report with the corresponding event code.

The available custom reporting codes are:

Reporting Code	Description	Event Code
0	Medical Alarm	100
1	Pendant Transmitter	101
2	Fail To Report In	102
3	Fire Alarm	110
4	Smoke Alarm	111
5	Combustion	112
6	Water Flow	113
7	Heat	114
8	Pull Station	115
9	Duct	116
10	Flame	117
11	Near Flame	118
12	Panic Alarm	120
13	Duress	121
14	Silent	122
15	Audible	123
16	Burglary	130
17	Perimeter	131
18	Interior	132
19	24 Hour	133
20	Entry/Exit	134

Reporting Code	Description	Event Code
21	Day/Night	135
22	Outdoor	135
23	Tamper	135
24	Near Alarm	135
25	24 Hour Non Burglary	150
26	Gas Detected	151
27	Refrigeration	152
28	Loss of Heat	153
29	Water Leakage	154
30	Foil Break	155
31	Day Trouble	156

Contact ID Standard Reporting Table

The following tables show the reporting codes for inputs and trouble inputs when the Contact ID Standard Table is used. The standard table is ideally suited to small burglary and access control installations.

With cross controller operations, it is possible for a single service to report on inputs from multiple controllers. In this case, the inputs from the first controller will be mapped according to the mapping scheme below. Inputs connected to subsequent controllers may use reserved or unused Reporting IDs left over from the first set of modules.

Controller Inputs (Standard)

The controller will report inputs from 1 to 16.

Input Address	Reporting ID
CP001:01	001
CP001:02	002
CP001:03	003
CP001:04	004
CP001:05	005
CP001:06	006
CP001:07	007
CP001:08	008
CP001:09-16	Reserved (009-016)

Controller Trouble Inputs (Standard)

The controller will report all trouble inputs from 1 to 64.

Trouble Input Address	Description	Event Code	Reporting ID
CP001:01	Reserved	-	Reserved (501)
CP001:02	12V Supply Failure (DIN rail controllers)	312	502
	AC Failure (PCB controllers)	301	
CP001:03	Reserved	-	Reserved (503)
CP001:04	Real Time Clock Not Set	626	504
CP001:05	Service Report Test	602	505
CP001:06	Service Report Failure to Communicate	354	506
CP001:07	Phone Line Fault	351	507
CP001:08	Auxiliary Failure	312	508
CP001:09	Bell Cut/Tamper	145	509
CP001:10	Reserved	-	Reserved (510)
CP001:11	Bell Current Overload	321	511

Trouble Input Address	Description	Event Code	Reporting ID
CP001:12	Reserved	-	Reserved (512)
CP001:13	Module Communication	143	513
CP001:14	Module Network Security	143	514
CP001:15-19	Reserved	-	Reserved (515-9)
CP001:20	Report IP Reporting Failure	330	520
CP001:21	Reserved	-	Reserved (521)
CP001:22	ModBUS Communication Fault	331	522
CP001:23	Protege System Remote Access	416	523
CP001:24	Installer Logged In	466	524
CP001:25-8	Reserved	-	Reserved (525-8)
CP001:29	System restarted	140	529
CP001:30	PoE Connection Lost (PoE model only)	140	530
CP001:31	Output Over-Current Failure (PoE model only)	140	531
CP001:32	3G Modem Link Lost	140	532
CP001:33	Controller Group Link Lost	140	533
CP001:34-64	Reserved	-	Reserved (534-564)

Keypad Inputs (Standard)

The keypad will report inputs from 1 to 4 on the first 6 modules. All modules above address KP006 will be reported using the default code of 999.

Input Address	Reporting ID
KP001:01	017
KP001:02	018
KP001:03	019
KP001:04	020
KP002:01	021
KP002:02	022
KP006:04	040
KP007:01	999
KP200:04	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Keypad Trouble Inputs (Standard)

The keypad will report trouble inputs from 1 to 8 on the first 6 modules. All modules above address KP006 will be reported using the default code of 999.

Trouble Input Address	Description	Event Code	Reporting ID
KP001:01	Module Tamper	145	565
KP001:02	Reserved	-	Reserved (566)
KP001:03	Panic (keys 1 + 3)	120	567
KP001:04	Duress (user duress code entered)	121	568
KP001:05-6	Reserved	-	Reserved (569-70)
KP001:07	Too Many Incorrect Codes	461	571
KP001:08	Module Offline	143	572
KP002:01	Module Tamper	145	573
KP002:02	Reserved	-	Reserved (574)
KP006:08	Module Offline	143	612
KP007:01	Module Tamper	145	999
KP200:08	Module Offline	143	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Input Expander Inputs (Standard)

An input expander will report inputs from 1 to 16 on the first 4 modules. All modules above address ZX004 will be reported using the default code of 999.

Input Address	Reporting ID
ZX001:01	041
ZX001:02	042
ZX001:03	043
ZX001:04	044
ZX001:05	045
ZX001:06	046
ZX001:07	047
ZX001:08	048
ZX001:09	049
ZX001:10	050
ZX001:11	051

Input Address	Reporting ID
ZX001:12	052
ZX001:13	053
ZX001:14	054
ZX001:15	055
ZX001:16	056
ZX002:01	057
ZX004:16	104
ZX005:01	999
ZX248:16	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Input Expander Trouble Inputs (Standard)

The input expander will report trouble inputs from 1 to 16 on the first 4 modules. All modules above address ZX004 will be reported using the default code of 999.

Input Address	Description	Event Code	Reporting ID
ZX001:01-15	Reserved	-	Reserved (613-27)
ZX001:16	Module Offline	143	628
ZX002:01	Reserved	-	Reserved (629)
ZX004:16	Module Offline	143	676
ZX005:01	Reserved	-	Reserved (999)
ZX248:16	Module Offline	143	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Reader Expander Inputs (Standard)

The reader expander will report inputs from 1 to 8 on the first 16 modules. All modules above address RD016 will be reported using the default code of 999.

Input Address	Reporting ID
RD001:01	105
RD001:02	106
RD001:03	107

Input Address	Reporting ID
RDO01:04	108
RDO01:05	109
RDO01:06	110
RDO01:07	111
RDO01:08	112
RDO02:01	113
RDO16:08	232
RDO17:01	999
RDO64:08	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Reader Expander Trouble Inputs (Standard)

The reader expander will report trouble inputs from 1 to 16 on the first 16 modules. All modules above address RDO16 will be reported using the default code of 999.

Trouble Input Address	Description	Event Code	Reporting ID
RDO01:01-11	Reserved	-	Reserved (677-87)
RDO01:12	Reader 1 Tamper	145	688
RDO01:13	Reader 2 Tamper	145	689
RDO01:14	Door 1 Too Many Access Attempts	461	690
RDO01:15	Door 2 Too Many Access Attempts	461	691
RDO01:16	Module Offline	143	692
RDO02:01	Reserved	-	Reserved (693)
RDO16:16	Module Offline	143	932
RDO17:01	Reserved	-	Reserved (999)
RDO64:16	Module Offline	143	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

The reader expander also monitors trouble inputs associated with connected doors. These are reported within the 'reserved' range of input codes assigned to the reader expander.

Trouble Input Address	Description	Event Code	Reporting ID
RDO01:DR1:01	Door Forced	423	682

Trouble Input Address	Description	Event Code	Reporting ID
RD001:DR2:01	Door Forced	423	683
RD001:DR1:02	Door Left Open	426	684
RD001:DR2:02	Door Left Open	426	685
RD001:DR1:08	Door Duress	000	696
RD001:DR2:08	Door Duress	000	697

Output Expander Inputs

The output expander will not report any inputs as there are no physical inputs provided.

Output Expander Trouble Inputs (Standard)

The output expander will report trouble inputs from 1 to 8 on the first 4 modules. All modules above address PX004 will be reported using the default code of 999.

Trouble Input Address	Description	Event Code	Reporting ID
PX001:01-7	Reserved	-	Reserved (933-9)
PX001:08	Module Offline	143	940
PX002:01	Reserved	-	Reserved (941)
PX004:08	Module Offline	143	964
PX005:01	Reserved	-	Reserved (999)
PX032:08	Module Offline	-	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Analog Expander Inputs

The analog input and output expanders will not report any inputs as there are no physical inputs provided.

Analog Expander Trouble Inputs (Standard)

The analog expander will report trouble inputs from 1 to 8 on the first 2 modules, all modules above address AE002 will be reported using the default code of 999.

Trouble Input Address	Description	Event Code	Reporting ID
AE001:01	Module Tamper	145	965
AE001:02	Mains Failure	301	966
AE001:03	Low Battery/Battery Failure	302	967
AE001:04	Output Voltage Low	312	968
AE001:05	Output Over-Current Failure	312	969

Trouble Input Address	Description	Event Code	Reporting ID
AE001:06	Core Temperature Over-Temp Failure	158	970
AE001:07	Reserved	-	Reserved (971)
AE001:08	Module Offline	143	972
AE002:01	Module Tamper	145	973
AE002:08	Module Offline	143	980
AE003:01	Module Tamper	145	999
AE032:08	Module Offline	143	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Contact ID Large Reporting Table

The following tables show the reporting codes for the inputs and trouble inputs when the Contact ID Large table is used. This table is ideally suited to predominantly burglary based installations that are comprised of a large number of input expanders.

With cross controller operations, it is possible for a single service to report on inputs from multiple controllers. In this case, the inputs from the first controller will be mapped according to the mapping scheme below. Inputs connected to subsequent controllers may use reserved or unused Reporting IDs left over from the first set of modules.

Controller Inputs (Large)

The controller will report all inputs from 1 to 16.

Input Address	Reporting ID
CP001:01	001
CP001:02	002
CP001:03	003
CP001:04	004
CP001:05	005
CP001:06	006
CP001:07	007
CP001:08	008
CP001:09-16	Reserved (009-016)

Controller Trouble Inputs (Large)

The control panel will report all trouble inputs from 1 to 64.

Trouble Input Address	Description	Event Code	Reporting ID
CP001:01	Reserved	-	Reserved (501)
CP001:02	12V Supply Failure (DIN rail controllers)	312	502
	AC Failure (PCB controllers)	301	
CP001:03	Reserved	-	Reserved (503)
CP001:04	Real Time Clock Not Set	626	504
CP001:05	Service Report Test	602	505
CP001:06	Service Report Failure to Communicate	354	506
CP001:07	Phone Line Fault	351	507
CP001:08	Auxiliary Failure	312	508
CP001:09	Bell Cut/Tamper	145	509
CP001:10	Reserved	-	Reserved (510)

Trouble Input Address	Description	Event Code	Reporting ID
CP001:11	Bell Current Overload	321	511
CP001:12	Reserved	-	Reserved (512)
CP001:13	Module Communication	143	513
CP001:14	Module Network Security	143	514
CP001:15-19	Reserved	-	Reserved (515-9)
CP001:20	Report IP Reporting Failure	330	520
CP001:21	Reserved	-	Reserved (521)
CP001:22	ModBUS Communication Fault	331	522
CP001:23	Protege System Remote Access	416	523
CP001:24	Installer Logged In	466	524
CP001:25-8	Reserved	-	Reserved (525-8)
CP001:29	System restarted	140	529
CP001:30	PoE Connection Lost (PoE model only)	140	530
CP001:31	Output Over-Current Failure (PoE model only)	140	531
CP001:32	3G Modem Link Lost	140	532
CP001:33	Controller Group Link Lost	140	533
CP001:34-64	Reserved	-	Reserved (534-564)

Keypad Inputs (Large)

The keypad will report inputs from 1 to 4 on the first 2 modules. All modules above address KP002 will be reported using the default code of 999.

Input Address	Reporting ID
KP001:01	017
KP001:02	018
KP001:03	019
KP001:04	020
KP002:01	021
KP002:04	024
KP003:01	999
KP200:04	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Keypad Trouble Inputs (Large)

The keypad will report trouble inputs from 1 to 8 on the first 2 modules. All modules above address KP002 will be reported using the default code of 999.

Input Address	Description	Event Code	Reporting ID
KP001:01	Module Tamper	145	565
KP001:02	Reserved	-	Reserved (566)
KP001:03	Panic (keys 1 + 3)	120	567
KP001:04	Duress (user duress code entered)	121	568
KP001:05-6	Reserved	-	Reserved (569-70)
KP001:07	Too Many Incorrect Codes	461	571
KP001:08	Module Offline	143	572
KP002:01	Module Tamper	145	573
KP002:08	Module Offline		580
KP003:01	Module Tamper	145	999
KP200:08	Module Offline	143	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Input Expander Inputs (Large)

The input expander will report inputs from 1 to 16 on the first 20 modules. All modules above address ZX020 will be reported using the default code of 999.

Input Address	Reporting ID
ZX001:01	025
ZX001:02	026
ZX001:03	027
ZX001:04	028
ZX001:05	029
ZX001:06	030
ZX001:07	031
ZX001:08	032
ZX001:09	033
ZX001:10	034
ZX001:11	035
ZX001:12	036

Input Address	Reporting ID
ZX001:13	037
ZX001:14	038
ZX001:15	039
ZX001:16	040
ZX002:01	041
ZX020:16	344
ZX021:01	999
ZX248:16	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Input Expander Trouble Inputs (Large)

The input expander will report trouble inputs from 1 to 16 on the first 20 modules. All modules above address ZX020 will be reported using the default code of 999.

Trouble Input Address	Description	Event Code	Reporting ID
ZX001:01-15	Reserved	-	Reserved (581-95)
ZX001:16	Module Offline	143	596
ZX002:01	Reserved	-	597
ZX020:16	Module Offline	143	900
ZX021:01	Reserved	-	Reserved (999)
ZX248:16	Module Offline	143	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Reader Expander Inputs (Large)

The reader expander will report inputs from 1 to 8 on the first 2 modules. All modules above address RD002 will be reported using the default code of 999.

Input Address	Reporting ID
RD001:01	345
RD001:02	346
RD001:03	347
RD001:04	348

Input Address	Reporting ID
RDO01:05	349
RDO01:06	350
RDO01:07	351
RDO01:08	352
RDO02:01	353
RDO02:08	360
RDO03:01	999
RDO64:08	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Reader Expander Trouble Inputs (Large)

The reader expander will report trouble inputs from 1 to 16 on the first 2 modules. All modules above address RDO02 will be reported using the default code of 999.

Input Address	Description	Event Code	Reporting ID
RDO01:01-11	Reserved	-	Reserved (901-11)
RDO01:12	Reader 1 Tamper	145	912
RDO01:13	Reader 2 Tamper	145	913
RDO01:14	Door 1 Too Many Access Attempts	461	914
RDO01:15	Door 2 Too Many Access Attempts	461	915
RDO01:16	Module Offline	143	916
RDO02:01	Reserved	-	Reserved (917)
RDO02:16	Module Offline	143	932
RDO03:01	Reserved	-	Reserved (999)
RDO64:16	Module Offline	143	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

The reader expander also monitors trouble inputs associated with connected doors. All door trouble inputs are reported with the default code of 999.

Trouble Input Address	Description	Event Code	Reporting ID
RDO01:DR1:01	Door Forced	423	999
RDO01:DR2:01	Door Forced	423	999

Trouble Input Address	Description	Event Code	Reporting ID
RD001:DR1:02	Door Left Open	426	999
RD001:DR2:02	Door Left Open	426	999
RD001:DR1:08	Door Duress	000	999
RD001:DR2:08	Door Duress	000	999

Output Expander Inputs

The output expander will not report any inputs as there are no physical inputs provided.

Output Expander Trouble Inputs (Large)

The 16 output expander will report trouble inputs from 1 to 8 on the first 2 modules. All modules above address PX002 will be reported using the default code of 999.

Input Address	Description	Event Code	Reporting ID
PX001:01-7	Reserved	-	Reserved (933-9)
PX001:08	Module Offline	143	940
PX002:01	Reserved	145	941
PX002:08	Module Offline	143	948
PX003:01	Reserved	-	Reserved (999)
PX032:08	Module Offline	143	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

Analog Expander Inputs

The analog input and output expanders will not report any inputs as there are no physical inputs provided.

Analog Expander Trouble Inputs (Large)

The analog expander will report trouble inputs from 1 to 8 on the first 2 modules. All modules above address AE002 will be reported using the default code of 999.

Input Address	Description	Event Code	Reporting ID
AE001:01	Module Tamper	145	949
AE001:02	Mains Failure	301	950
AE001:03	Low Battery/Battery Failure	302	951
AE001:04	Output Voltage Low	312	952
AE001:05	Output Over-Current Failure	312	953
AE001:06	Core Temperature Over-Temp Failure	158	954

Input Address	Description	Event Code	Reporting ID
AE001:07	Reserved	-	Reserved (955)
AE001:08	Module Offline	143	956
AE002:01	Module Tamper	145	957
AE002:08	Module Offline	143	964
AE003:01	Module Tamper	145	999
AE032:08	Module Offline	143	999

A reporting code of 999 indicates that the input is outside the maximum inputs that can be reported for this module type.

SIMS II Reporting Format

The SIMS II format is a variant of the Contact ID format which uses the same structure to send a larger number of inputs. This format replaces the Contact ID group code with the address of the expander module, and splits the Reporting ID number into a module type and input number.

Setting up SIMS II reporting requires some additional configuration. For more information, see [Additional Configuration for SIMS II](#) (page 8).

SIMS II Format Structure

When a Contact ID message is sent in the SIMS II format it takes on a specific structure where the message will still be accepted as a Contact ID message, but interpreted by the central station software as SIMS II format. The SIMS II format is still compliant with the standard Contact ID specification when sending an open/close or user event (see page 6), but uses the following alternative format for input events:

ACCT MT QXYZ GG FCC S

Where:

ACCT	4 digit account number composed using the digits 0-9 and B-F.
MT	Message type. This two digit sequence is used to identify the Contact ID message to the receiver. It may be transmitted as 18 (preferred) or 98 (optional). The Protege controller only transmits the 18 identifier.
Q	Event qualifier, determined as follows: <ul style="list-style-type: none">• 1: New event or opening• 3: New restore or closing• 6: Previously reported condition still present (status report)
XYZ	3 digit event code composed using the digits 0-9 and B-F.
GG	When sending an input or trouble input message this is the module address (rather than the group code). This field supports two digit module addresses only. Any module addresses higher than 99 will be reported without the initial digit (e.g. module address 177 will be reported as 77).
F	The module type as a digit from 0-9. See the Module Type Definition table below.
CC	Zone (input) number as a digit from 01-99. This is the physical address of the input. The FCC section of the format is the Reporting ID set in the input or trouble input.
S	Sum of all digits + S such that a MOD 15 will result in a 0. A 0 shall be transmitted and valued as a 10 for checksum purposes even though it is displayed and printed as a 0.

The SIMS II format is an alteration to the standard CID message and it DOES NOT conform to the SIA standard DC05 specification. Utilization of this format with a central station receiver that is not compatible will yield unpredictable results on the display and line printer output when sending input and trouble input information.

Module Type Numbers

The module type numbers used in the transmission of input and trouble input information are outlined below:

Module Number	Module Type
0	Controller (CP)
1	Keypad (KP)
2	Input Expander (ZX)
3	Reader Expander (RD)
4	Output Expander (PX)
5	Analog Expander (AE)
6	Reserved
7	Door (DR)
8	Reserved
9	Reserved

SIMS II Reporting Table

The following tables show the reporting codes for inputs and trouble inputs when the SIMS II reporting format is used.

In this format, inputs may have the same Reporting IDs as trouble inputs on the same module. These can be distinguished by the different event codes used by trouble inputs.

Note: With cross controller operations a single reporting service can report on inputs from multiple controllers. However, in the SIMS II mapping inputs which have the same physical address on different controllers will report with the same Reporting ID. For example, the first input on both controllers will report with a module code of 01 and ID of 001.

Controller Inputs (SIMS II)

The controller will report all inputs from 1-16.

Input Address	Module Number	Module Type	Reporting ID
CP001:01	01	0	01
CP001:02	01	0	02
CP001:03	01	0	03
CP001:04	01	0	04
CP001:05	01	0	05
CP001:06	01	0	06
CP001:07	01	0	07
CP001:08	01	0	08
CP001:09-16	01	0	Reserved (009-016)

Controller Trouble Inputs (SIMS II)

The controller will report all trouble inputs from 1-64.

Trouble Input Address	Description	Event Code	Module Number	Module Type	Reporting ID
CP001:01	Reserved	-	01	0	Reserved (01)
CP001:02	12V Supply Failure (DIN rail controllers)	312	01	0	02
	AC Failure (PCB controllers)	301			
CP001:03	Reserved	-	01	0	Reserved (03)
CP001:04	Real Time Clock Not Set	626	01	0	04
CP001:05	Service Report Test	602	01	0	05
CP001:06	Service Report Failure to Communicate	354	01	0	06
CP001:07	Phone Line Fault	351	01	0	07
CP001:08	Auxiliary Failure	312	01	0	08
CP001:09	Bell Cut/Tamper	145	01	0	09
CP001:10	Reserved	-	01	0	Reserved (10)
CP001:11	Bell Current Overload	321	01	0	11
CP001:12	Reserved	-	01	0	Reserved (12)
CP001:13	Module Communication	143	01	0	13
CP001:14	Module Network Security	143	01	0	14
CP001:15-19	Reserved	-	01	0	Reserved (15-19)
CP001:20	Report IP Reporting Failure	330	01	0	20
CP001:21	Reserved	-	01	0	Reserved (21)
CP001:22	ModBUS Communication Fault	331	01	0	22
CP001:23	Protege System Remote Access	416	01	0	23
CP001:24	Installer Logged In	466	01	0	24
CP001:25-8	Reserved	-	01	0	Reserved (25-8)
CP001:29	System restarted	140	01	0	29
CP001:30	PoE Connection Lost (PoE model only)	140	01	0	30
CP001:31	Output Over-Current Failure (PoE model only)	140	01	0	31
CP001:32	3G Modem Link Lost	140	01	0	32
CP001:33	Controller Group Link Lost	140	01	0	33
CP001:34-64	Reserved	-	01	0	Reserved (34-64)

Keypad Inputs (SIMS II)

The keypad will report inputs 1-4 on the first 99 modules. Modules above address KP099 will be reported with the final two digits of the address only.

Input Address	Module Number	Module Type	Reporting ID
KP001:01	01	1	01
KP001:02	01	1	02
KP001:03	01	1	03
KP001:04	01	1	04
KP002:01	02	1	01
KP099:04	99	1	04
KP100:01	00	1	01
KP200:04	00	1	04

Keypad Trouble Inputs (SIMS II)

The keypad will report trouble inputs from 1 to 8 on the first 99 modules. Modules above address KP099 will be reported with the final two digits of the address only.

Trouble Input Address	Description	Event Code	Module Number	Module Type	Reporting ID
KP001:01	Module Tamper	145	01	1	01
KP001:02	Reserved	-	01	1	Reserved (02)
KP001:03	Panic (keys 1 + 3)	120	01	1	03
KP001:04	Duress (user duress code entered)	121	01	1	04
KP001:05-6	Reserved	-	01	1	Reserved (05-6)
KP001:07	Too Many Incorrect Codes	461	01	1	07
KP001:08	Module Offline	143	01	1	08
KP002:01	Module Tamper	145	02	1	01
KP099:08	Module Offline	143	99	1	08
KP100:01	Module Tamper	145	00	1	01
KP200:08	Module Offline	143	00	1	08

Input Expander Inputs (SIMS II)

An input expander will report inputs from 1 to 16 on the first 99 modules. Modules above address ZX099 will be reported with the final two digits of the address only.

Input Address	Module Number	Module Type	Reporting ID
ZX001:01	01	2	01
ZX001:02	01	2	02

Input Address	Module Number	Module Type	Reporting ID
ZX001:03	01	2	03
ZX001:04	01	2	04
ZX001:05	01	2	05
ZX001:06	01	2	06
ZX001:07	01	2	07
ZX001:08	01	2	08
ZX001:09	01	2	09
ZX001:10	01	2	10
ZX001:11	01	2	11
ZX001:12	01	2	12
ZX001:13	01	2	13
ZX001:14	01	2	14
ZX001:15	01	2	15
ZX001:16	01	2	16
ZX002:01	02	2	01
ZX099:16	99	2	16
ZX100:01	00	2	01
ZX248:16	48	2	16

Input Expander Trouble Inputs (SIMS II)

The input expander will report trouble inputs from 1 to 16 on the first 99 modules. Modules above address ZX099 will be reported with the final two digits of the address only.

Input Address	Description	Event Code	Module Number	Module Type	Reporting ID
ZX001:01-15	Reserved	-	01	2	Reserved (01-15)
ZX001:16	Module Offline	143	01	2	16
ZX002:01	Reserved	-	01	2	Reserved (1)
ZX099:16	Module Offline	143	99	2	01
ZX100:01	Reserved	-	00	2	Reserved (01)
ZX248:16	Module Offline	143	48	2	16

Reader Expander Inputs (SIMS II)

The reader expander will report inputs from 1-8 on all 64 modules.

Input Address	Module Number	Module Type	Reporting ID
RDO01:01	01	3	01
RDO01:02	01	3	02
RDO01:03	01	3	03
RDO01:04	01	3	04
RDO01:05	01	3	05
RDO01:06	01	3	06
RDO01:07	01	3	07
RDO01:08	01	3	08
RDO02:01	02	3	01
RDO64:08	64	3	08

Reader Expander Trouble Inputs (SIMS II)

The reader expander will report trouble inputs from 1 to 16 on all 64 modules.

Trouble Input Address	Description	Event Code	Module Number	Module Type	Reporting ID
RDO01:01-11	Reserved	-	01	3	Reserved (01-11)
RDO01:12	Reader 1 Tamper	145	01	3	12
RDO01:13	Reader 2 Tamper	145	01	3	13
RDO01:14	Door 1 Too Many Access Attempts	461	01	3	14
RDO01:15	Door 2 Too Many Access Attempts	461	01	3	15
RDO01:16	Module Offline	143	01	3	16
RDO02:01	Reserved	-	02	3	Reserved (01)
RDO64:16	Module Offline	143	64	3	16

The reader expander also monitors trouble inputs associated with connected doors. These are reported within the 'reserved' range of input codes assigned to the reader expander.

Trouble Input Address	Description	Event Code	Module Number	Module Type	Reporting ID
RDO01:DR1:01	Door Forced	423	01	7	01
RDO01:DR2:01	Door Forced	423	01	7	01
RDO01:DR1:02	Door Left Open	426	01	7	02
RDO01:DR2:02	Door Left Open	426	01	7	02
RDO01:DR1:08	Door Duress	000	01	7	08
RDO01:DR2:08	Door Duress	000	01	7	08

The Module Number above refers to the reader expander address, not the door number. Therefore doors 1 and 2 on the same reader expander will share the same reporting codes.

Output Expander Inputs

The output expander will not report any inputs as there are no physical inputs provided.

Output Expander Trouble Inputs (SIMS II)

The output expander will report trouble inputs from 1 to 8 on all 32 modules.

Trouble Input Address	Description	Event Code	Module Number	Module Type	Reporting ID
PX001:01-7	Reserved	-	01	4	Reserved (01-07)
PX001:08	Module Offline	143	01	4	08
PX002:01	Reserved	-	02	4	Reserved (01)
PX032:08	Module Offline	-			999

Analog Expander Inputs

The analog input and output expanders will not report any inputs as there are no physical inputs provided.

Analog Expander Trouble Inputs (SIMS II)

The analog expander will report trouble inputs from 1 to 8 on all 32 modules.

Trouble Input Address	Description	Event Code	Module Number	Module Type	Reporting ID
AE001:01	Module Tamper	145	01	5	01
AE001:02	Mains Failure	301	01	5	02
AE001:03	Low Battery/Battery Failure	302	01	5	03
AE001:04	Output Voltage Low	312	01	5	04
AE001:05	Output Over-Current Failure	312	01	5	05
AE001:06	Core Temperature Over-Temp Failure	158	01	5	06
AE001:07	Reserved	-	01	5	Reserved (07)
AE001:08	Module Offline	143	01	5	08
AE002:01	Module Tamper	145	02	5	01
AE032:08	Module Offline	143	32	5	08

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