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Tamper

APPLICATION NOTE - 112

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HID Global's iCLASS (revision B, with PIVII) readers support tamper detection. Tamper detection provides access control systems the ability to monitor the tampered state of an iCLASS reader. If readers are powered down or taken off the wall, access systems (properly setup to receive tamper signals) can relay reader tamper alarms to alarm monitoring stations.

There are three tamper options on iCLASS readers.

- Open Collector
- I'm Alive
- OSDP (requires HADP/OSDP reader)

The most recent revision B iCLASS readers detect tamper using an optical sensor. The optical sensor is built into the reader and works by detecting when the reader is separated from the back plate.

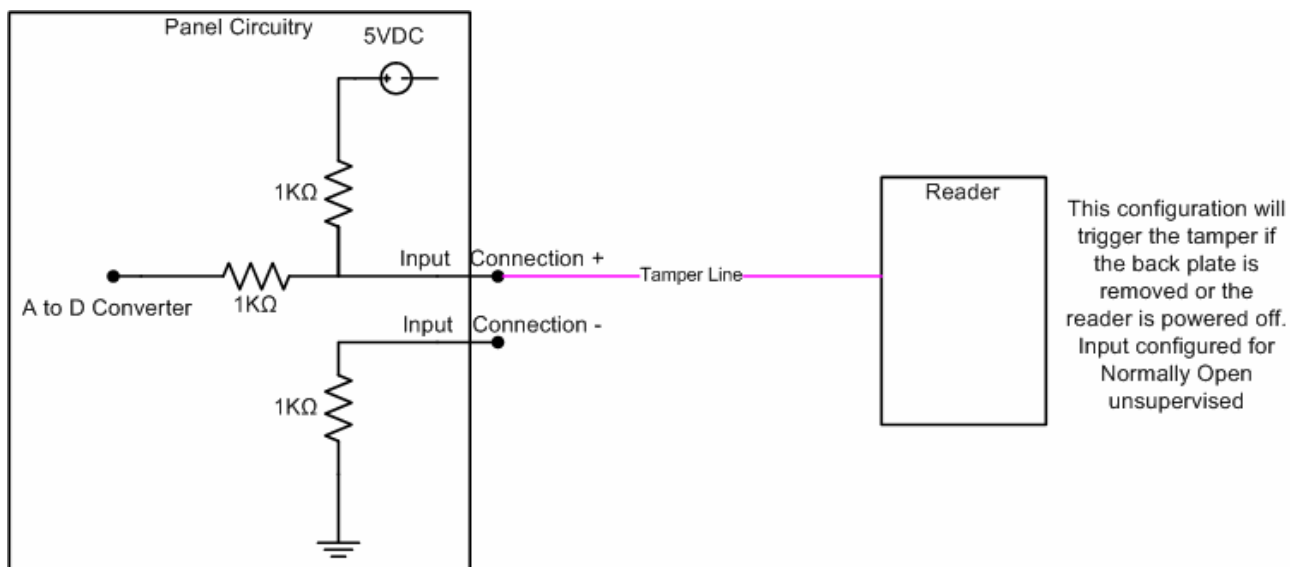
If the tamper detect is enabled, the tamper response is one of the following three:

- Open Collector: The reader open collector line is syncs from a high state (5V) to a low state (Ground). See the [Installation Guide](#) for open collector line specifics.
- I'm Alive: During a tamper state, the I'm Alive¹ message is inverted.
- OSDP: Upon reception of a "Reader Status Report Request" (0x67), the reader responds with a "Reader Tamper Status Report" (0x4B) responds. For more information, see HADP/OSDP Specification.

The tamper detect will remain active until the reader is attached to the back plate. Depending on wiring installation, the tamper will also be active if the reader is powered off.

¹ I'm Alive is byte sized message consistently sent over Wiegand or Clock-and-Data output lines. This repeating message informs the host the reader is online and functioning.

Use the following wiring guide for open collector tamper:



Additionally, use the correct electrical polarity so that a tamper signal will be generated when the wires are cut. Another method that can be used by installers is to include an additional pair of wires that are connected together through a resistor at the reader. The panel using a technique called Supervision can monitor this loop. Supervision detects when wires are cut, shorted, or other electrical characteristics of the wires are changed.

Before the optical tamper in the revision B iCLASS readers, a switch was utilized. Any readers with the below part numbers (P/N) containing date codes on or after the 'Start Manufactured Date Code' contain optical tamper instead of switches.

Products	Part Number	Start Manufactured Date Code	Start Serial Number	Mounting Plate Revision
R10	6100BKT	1607	000001	6303-104-01 Rev 3
	6100BGN	2207	000001	6303-104-01 Rev 3
	6100BGT	3307	000001	6303-104-01 Rev 3
	6100BKN	0707	000001	6303-104-01 Rev 3
R30	6110BGN	2907	000001	6304-103-01 Rev 3
	6110BKT	1607	000001	6304-103-01 Rev 3
	6110BKN	0707	000001	6304-103-01 Rev 3
R40	6120BGT	3007	000001	6305-103-01 Rev 4
	6120BKN	0707	000001	6305-103-01 Rev 4
	6120BGN	2207	000001	6305-103-01 Rev 4
	6120BKT	0807	000001	6305-103-01 Rev 4
RP40	6125BKX	0707	000001	6305-103-01 Rev 4
RK40	6130BGT	3307	000001	6094-101-01 Rev 9
	6130BKN	3107	000001	6094-101-01 Rev 9

By default, the tamper is disabled in the iCLASS reader. Order the Tamper option through the [iCLASS How To Order Guide](#) to activate. Additionally a configuration card enables the Tamper feature in field installed readers. Order configuration cards through HID Technical Support.

Enable/Disable	Tamper Type	Configuration Card Part Number
Tamper Enable	Open Collector	2000-08-00-000009
Tamper Enable	HADP (OSDP)	2000-08-00-000022
Tamper Enable	Invert I'm Alive Message	2000-08-00-000023
Tamper Disable	Disable All	2000-08-00-000038

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