

SIEMENS

***MK8000 OPC Server Interface
Specification for NK823x***

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NK823x

The NK823x gateway is used to connect local and distributed safety and security devices to the CDI network. It provides a first level of centralisation, and acts as a secure communication partner for the NK8210, MM8000, and MK8000.

Summary view

NK823x Model

NK823x	Obj. Name: HWCMPM	NT ID: 1
Ethernet 1	Obj. Name: HWCMLGE	NT ID: 2
Ethernet protocol	Obj. Name: UDCMLILO	NT ID: 32
Ethernet 2	Obj. Name: HWCMLAX	NT ID: 21
Ethernet protocol	Obj. Name: UDCMLILO	NT ID: 32
Lines	Obj. Name: UDUDOLMN	NT ID: 9
Line - COM1	Obj. Name: HWCMLIGE	NT ID: 7
Link serial	Obj. Name: UDUDOLMN	NT ID: 12
Link serial CK	Obj. Name: UDUDOLMN	NT ID: 19
Link serial Cerban	Obj. Name: UDUDOLMN	NT ID: 17
Link Modem	Obj. Name: HWCMLWET	NT ID: 20
Line - COM2, COM3, COM4	Obj. Name: HWCMLIGE	NT ID: 8
Link serial CK	Obj. Name: UDUDOLMN	NT ID: 19
Link serial Cerban	Obj. Name: UDUDOLMN	NT ID: 17
Link serial CK	Obj. Name: UDUDOLMN	NT ID: 19
Link Modem	Obj. Name: HWCMLWET	NT ID: 20
I2C Bus	Obj. Name: HWCMEPGE	NT ID: 3
Digital input modules	Obj. Name: HWCIMGE	NT ID: 10
Digital input	Obj. Name: HWCMDIGE	NT ID: 4
Digital output modules	Obj. Name: HWCoomGE	NT ID: 11
Digital output	Obj. Name: HWCMDOGE	NT ID: 5
DF8045	Obj. Name: HWCIMBA	NT ID: 23
Balanced input	Obj. Name: HWCODIBA	NT ID: 16
DF8046	Obj. Name: HWCIMBA	NT ID: 24

Balanced input	Obj. Name: HWCODIBA	NT ID: 16
Clock	Obj. Name: HWCMLGE	NT ID: 14
Tamper control	Obj. Name: HWCMTGCE	NT ID: 15
Local host	Obj. Name: HWCMLLC	NT ID: 18
Protocol Folder	Obj. Name: UDUDOLMN	NT ID: 22
Protocol CEI	Obj. Name: UDCMAPGE	NT ID: 25
Protocol CMSDL	Obj. Name: UDCMAPGE	NT ID: 26
Protocol BACnet	Obj. Name: UDCMAPGE	NT ID: 27
Interactions	Obj. Name: UDUDOLMN	NT ID: 1.025
Interaction Folder	Obj. Name: UDUDOLMN	NT ID: 1.082
Interaction	Obj. Name: MGNOPGUD	NT ID: 1.033
Interaction Node	Obj. Name: UDUDUDUD	NT ID: 1.041
I/O on board folder	Obj. Name: UDCOOLRO	NT ID: 29
External power supply	Obj. Name: HWCMPSET	NT ID: 31
Generic Input	Obj. Name: HWCODIGE	NT ID: 28
Relay Output	Obj. Name: HWCODOGE	NT ID: 30
Power supply	Obj. Name: HWCMPSGE	NT ID: 13

NK823x - (HWCMAPMN)

The NK823x object represents the gateway used to connect local and distributed safety and security devices to the CDI network. It provides a first level of centralisation, and acts as a secure communication partner for the NK8210.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

801 Prealarm Ack ✓

The memory on the NK823x is too low. The event has been acknowledged.

811 Prealarm & Fault Ack ✓

This event is the combination of the Prealarm and Fault state. The event has been acknowledged.

1000 Quiet ✓

No abnormal conditions present.

1350 Anomaly Unreset ✓ ✓

The event should now be reset by the operator. The following condition can generate this event:

New configuration
New Firmware
New Kernel
Reset command received
Reset executed

1369 Not Aligned

The control unit is not aligned to the field.

1370 Alignment In Progress

The alignment phase is in progress.

1999 Fault Ack ✓

The event has been acknowledged.

The following condition can generate this event:

Initialization error
Missing Expansion Board
General Fault

Ethernet 1 - (HWCMALGE)

This is the upstream connection with the router and management station.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

1351 Anomaly Ack

The Ethernet is not configured. The event has been acknowledged.

1999 Fault Ack

The Ethernet is in fault. The event has been acknowledged.

I2C Bus - (HWCMEPGE)

This object represents a bus line for connecting IO modules or power supply.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet ✓ ✓

No abnormal conditions present.

1351 Anomaly Ack ✓ ✓

The IC2 is not configured. The event has been acknowledged.

1999 Fault Ack ✓ ✓

The I2C is in fault. The event has been acknowledged.

Digital input - (HWCMDIGE)

This object represents the digital input that can be connected to NK823x.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

950 Active

The input is active.

1000 Quiet

No abnormal conditions present.

1999 Fault Ack

The input is in fault. The event has been acknowledged.

Digital output - (HWCMDOGE)

This object represents the digital output that can be connected to NK822x.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

950 Active



The digital output is active.

1000 Quiet



No abnormal conditions present.

1999 Fault Ack



The output is in fault. The event has been acknowledged.

Line - COM1 - (HWCMLIGE)

The Line - COM1 object represents the status of connection on the COM1.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

1351 Anomaly Ack

The COM1 is not configured. The event has been acknowledged.

1999 Fault Ack

The communication on the COM1 is in fault. The event has been acknowledged.

Line - COM2, COM3, COM4 - (HWCMLIGE)

This object represents the status of the connection.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

1351 Anomaly Ack

The Line is not configured. The event has been acknowledged.

1999 Fault Ack

The line is in fault. The event has been acknowledged.

Lines - (UDUDOLMN)

This is a folder.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

Digital input modules - (HWCOIMGE)

This is a digital input module under which there are 8 digital inputs.
In an NK8223 there can be up to 7 digital input modules

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

Digital output modules - (HWCOOMGE)

This is a digital output module. Under this module there are eight digital outputs.
In a NK823 there can be eight of these modules

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

Power supply - (HWCMPSGE)

The Power Supply object represents what concerns the supervision of power supply.
The supervision of power is managed by NK823x by a device connected on I2C connector of NK823x called DF8090.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

1999 Fault Ack

A fault condition has been detected. One of these conditions are present:

- The Power supply is in fault
- The Mains failed
- The battery is low
- The Battery is in fault

The event has been acknowledged.

Clock - (HWCMLGE)

This object represents the status of clock inside the NK823x.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

1350 Anomaly Unreset



An anomaly condition has been detected. One of these conditions are present:

- The date&time was rejected.
- The new date&time was issued.

The event should now be reset by the operator.

Tamper control - (HWCMTCGE)

This object represents the status of the tamper protection of the NK823x.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

901 Tamper Ack ✓

A cabinet was opened. The event has been acknowledged.

1000 Quiet ✓

No abnormal conditions present.

1300 Disarmed ✓

The tamper is disabled.

Balanced input - (HWCODIBA)

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

901 Tamper Ack

The input is in tamper. The event has been acknowledged.

950 Active

The input is active.

1000 Quiet

No abnormal conditions present.

1999 Fault Ack

The input is in fault. The event has been acknowledged.

Local host - (HWCMAILLC)

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

1351 Anomaly Ack

The local host is not configured. The event has been acknowledged.

1999 Fault Ack

The local host is in fault. The event has been acknowledged.

Ethernet 2 - (HWCMALAX)

This is the upstream connection with the router and management station.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

1351 Anomaly Ack

The Ethernet is not configured. The event has been acknowledged.

1999 Fault Ack

The Ethernet is in fault. The event has been acknowledged.

DF8045 - (HWCOIMBA)

This object represent the main node for the DF8045 module.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

DF8046 - (HWCOIMBA)

This object represent the main node for the DF8046 module.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

Generic Input - (HWCODIGE)

The generic inputs are on the main board of NK823x.
Physically they are always present on the NK8223, but they can be used also to monitor an external (e.g. of a FS20) power supply.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

950 Active

The input is active.

1000 Quiet

No abnormal conditions present.

I/O on board folder - (UDCOOLRO)

This object is a folder.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

Relay Output - (HWCODOGE)

This object represent the relay output on the NK823x main board

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

950 Active



The relay is active.

1000 Quiet



No abnormal conditions present.

External power supply - (HWCMPSET)

This object represent a external power supply.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

1999 Fault Ack

The External power supply is in fault.

One of the following condition could be active:

Mains fault

Battery fault

Power supply fault

The event has been acknowledged.

Ethernet protocol - (UDCMLILO)

This object represent the protocol status.

Multistate	Commands											
	1-Ack	2-Reset	4-Arm	8-Disarm	16-Test	32-Active	64-Quiet	128-Disc	256-Conn	512-Block	1024-Man	2048-Status

1000 Quiet

No abnormal conditions present.

1999 Fault Ack

The protocol is in fault. The event has been acknowledged.

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