

SIEMENS

***MK8000 OPC Server Interface
Specification for CZ10***

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CZ10

The CZ10 is a danger detection control unit handling the risk sectors Fire, Extinguishing, Gas and Building Services.

The basic control unit (master) permits the connection of 24 collective or 24 individually addressable signal lines. The number of collective connections can be increased (in stages of 24) to 96 by connecting up to three slaves. Together master and slaves can contain up to 96 control inputs and outputs.

The CZ10 system is logically organized as follows:

- Fire section --> Zone --> Element
- Extinguishing Section --> Zone
- Gas Section --> Zone
- Building Service Section --> Zone --> Element

System limits:

- Max. no of zones 96
- Max. no of lines 24
- Max. no of detectors 50 per line

Cz10 Application - (FINOAPMN)

The `CZ10 Application` object represents the entire CZ10 and the geographical area it covers.

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

1000 Quiet ✓

No abnormal conditions present.

1351 Anomaly Ack ✓

At least one part of the control unit has been disconnected.

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

A faulty condition has been detected on the CZ10 or on the communication link to it;

2000 Fault Unack ✓ ✓

The event should now be acknowledged by the operator.

2051 Vitality Fault

The control unit transmits a presence telegram every 30s (or 60s) and these telegrams are supervised by the OPC-server. A Vitality Fault indicates that communication to the control unit has been lost.

Control unit - (FINOCCUD)

The `Control unit` object presents the possible faulty conditions related to the CZ10 control unit and to the general health of the physical subsystem.

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

1999 Fault Ack

Collective message for general control unit faults e.g. power supply, battery operation, communication to a terminal, incorrect HW-configuration, RT-clock not set, paper out on printer,

Alarm transmission - (FINORDAL)

The CZ10 can be configured to automatically transmit an alarm to the fire brigade (or similar). This object indicates whether such a transmission has been activated or not.

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

Remote transmission ALARM has been activated

1000 Quiet

No abnormal conditions present.

Fault transmission - (FINORDFL)

The CZ10 can be configured to automatically transmit a fault to the service department (or similar). This object indicates whether such a transmission has been activated or not.

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

Remote transmission FAULT has been activated

1000 Quiet

Fire element - (FIDEDEEL)

The 'Fire element' object represents the conditions of a single detector or manual call point.

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

946 Active Unack

✓

✓

This status is only present in ULC Mode. The detector has reacted to the presence of smoke or heat (depending on the type of detector). The event should now be acknowledged by the operator.

948 Active Unreset

✓

✓

This status is only present in ULC Mode. The detector has reacted to the presence of smoke or heat (depending on the type of detector). The event should now be reset by the operator.

950 Active

✓

The detector has reacted to the presence of smoke or heat (depending on the type of detector). The decision whether this should be treated as an Alarm is made at the higher (zone) level.

1000 Quiet

✓

1100 Test

✓

The parent zone is in the TEST state

1111 Test-Alarm Ack

✓

The detector has been activated while the parent zone was in the TEST state.

1400 Disconnected

✓

Incoming events are not processed.

1998 Fault Unreset

✓

✓

A contact Fault or base electronics Fault has been detected. The event should now be reset by the operator.

1999 Fault Ack

✓

A contact Fault or base electronics Fault has been detected.

2000 Fault Unack



A contact Fault or base electronics Fault has been detected. The event should now be acknowledged by the operator.

Gas element - (GSDEDEEL)

In a CZ10 the gas detection is handled by an external system (e.g. MZ2411) which can only support collective lines. A gas element is not used in the CZ10.

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

946 Active Unack

✓

✓

This status is only present in ULC Mode. The detector has reacted to the presence of gas. The event should now be acknowledged by the operator.

948 Active Unreset

✓

✓

This status is only present in ULC Mode. The detector has reacted to the presence of gas. The event should now be reset by the operator.

950 Active

✓

The detector has reacted to the presence of gas. The decision whether this represents an Alarm is made at the higher level (zone level).

1000 Quiet

✓

1100 Test

✓

1111 Test-Alarm Ack

✓

The detector has been activated while the parent zone was in the TEST state

1400 Disconnected

✓

Incoming events are not processed.

1998 Fault Unreset

✓

✓

A contact Fault or base electronics Fault has been detected. The event should now be reset by the operator.

1999 Fault Ack

✓

A contact Fault or base electronics Fault has been detected.

2000 Fault Unack



A contact Fault or base electronics Fault has been detected. The event should now be acknowledged by the operator.

Extinguishing element - (FIEXDEEL)

In a CZ10 the extinguishing is handled by an associated CZ1-02 unit, which can only support collective lines. An extinguishing element is not used in the CZ10.

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

946 Active Unack

✓

✓

This status is only present in ULC Mode. The event should now be acknowledged by the operator.

948 Active Unreset

✓

✓

This status is only present in ULC Mode. The event should now be reset by the operator.

950 Active

✓

Not used

1000 Quiet

✓

Not used

1100 Test

✓

Not used

1111 Test-Alarm Ack

✓

Not used

1400 Disconnected

✓

Not used

1998 Fault Unreset

✓

✓

A contact Fault or base electronics Fault has been detected. The event should now be reset by the operator.

1999 Fault Ack

✓

A contact Fault or base electronics Fault has been detected.

2000 Fault Unack



A contact Fault or base electronics Fault has been detected. The event should now be acknowledged by the operator.

Digital I/O - (BSCOIOGE)

This object indicates the state of the corresponding unmonitored signal contact (MUX-input) or control contact (DEMUX-output). Within the CZ10 these I/O are associated to the Building Service section E1.

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 corresponding input has been activated.

1000 Quiet

✓

✓

1999 Fault Ack

Not used

Gas sector - (GSESEGE)

In the CZ10 the gas detection is handled by a separate unit e.g. MZ2411. The 'Gas section' (not sector) represents the state of this connected unit. A CZ10 can support up to 8 gas sections.

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

500 Alarm Unack ✓

A gas alarm zone (2nd zone) has been activated.

502 Alarm Unreset ✓

510 Alarm & Fault Unack ✓

An gas alarm has been activated and part of the external gas detection system (e.g. MZ2411) is in Fault.

511 Alarm & Fault Ack

800 Prealarm Unack ✓

A pre-warning zone (1st zone) has been activated.

802 Prealarm Unreset ✓

810 Prealarm & Fault Unack ✓

A pre-warning has been activated and part of the external gas detection system (e.g. MZ2411) is in Fault.

811 Prealarm & Fault Ack

1000 Quiet

1351 Anomaly Ack

1999 Fault Ack

2000 Fault Unack



Extinguishing sector - (FIEXSEGE)

In the CZ10 the extinguishing mechanisms are controlled via a separate unit - the CZ102. The `extinguishing section` (not sector) represents the state of this connected unit. A CZ10 can support up to 8 extinguishing sectors.

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
500	Alarm Unack	✓			✓				✓	✓			
An extinguishing alarm has been activated. This is caused by the 2nd zone of the extinguishing section being activated (or the extinguishing has been manually released via the CZ1-02).													
502	Alarm Unreset		✓		✓				✓	✓			
An extinguishing alarm has been activated and part of the external extinguishing control unit CZ1-02 is in Fault.													
510	Alarm & Fault Unack	✓			✓				✓	✓			
An extinguishing alarm has been activated and part of the external extinguishing control unit CZ1-02 is in Fault.													
511	Alarm & Fault Ack		✓		✓				✓	✓			
An extinguishing alarm has been activated and part of the external extinguishing control unit CZ1-02 is in Fault.													
800	Prealarm Unack	✓			✓				✓	✓			
A pre-alarm has been activated This is caused by the 1st zone of the extinguishing section being activated.													
802	Prealarm Unreset		✓		✓				✓	✓			
A pre-alarm has been activated and part of the external extinguishing control unit CZ1-02 is in Fault.													
810	Prealarm & Fault Unack	✓			✓				✓	✓			
A pre-alarm has been activated and part of the external extinguishing control unit CZ1-02 is in Fault.													
811	Prealarm & Fault Ack		✓		✓				✓	✓			
A pre-alarm has been activated and part of the external extinguishing control unit CZ1-02 is in Fault.													
1000	Quiet				✓				✓				

1300 Disarmed ✓

The manual (or automatic) activation of the extinguishing mechanism is inhibited.

1351 Anomaly Ack ✓ ✓ ✓

1400 Disconnected ✓ ✓

The extinguishing mechanism has been switched OFF. Incoming signals from the field will not be processed.

1999 Fault Ack ✓ ✓ ✓

Part of the external extinguishing control unit CZ1-02 is in Fault.

2000 Fault Unack ✓ ✓ ✓ ✓

Fire sector - (FIDSEGE)

The 'Fire section' (not sector) is used to perform certain collective operations on the corresponding zones (e.g. acknowledging, resetting, switching of alarm organisation etc). A section may contain up to 96 zones.

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
500	Alarm Unack	✓		✓	✓								
Not used													
502	Alarm Unreset		✓	✓	✓								
Not used													
510	Alarm & Fault Unack	✓		✓	✓								
Not used													
511	Alarm & Fault Ack		✓	✓	✓								
Not used													
800	Prealarm Unack	✓		✓	✓								
Not used													
802	Prealarm Unreset		✓	✓	✓								
Not used													
810	Prealarm & Fault Unack	✓		✓	✓								
Not used													
811	Prealarm & Fault Ack		✓	✓	✓								
Not used													
1000	Quiet				✓								

1300 Disarmed ✓

The Alarm organisation (Day/Night) of the Fire section is in DAY mode

1351 Anomaly Ack ✓ ✓

At least one zone (or element) in the Fire section is in the state OFF, TEST or ACTIVE

1999 Fault Ack ✓ ✓

At least one zone (or element) in the Fire section is in the state FAULT (line, element etc)

2000 Fault Unack ✓ ✓ ✓

Fire zone - (FIDEZOGE)

A `Fire zone` represents a supervised object, such as a room, office etc. In an addressable system each zone contains one or more detectors, which are logically allocated to the zone. In a collective system the zone represents the state of the entire line.

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

500 Alarm Unack ✓ ✓

The zone is in the ALARM state as a result of at least one of the detectors within the zone becoming ACTIVE.

502 Alarm Unreset ✓ ✓

A zone Alarm has been acknowledged and can now accept a reset command. If the detector still detects the presence of smoke (or heat) Alarm will be re-generated.

1000 Quiet ✓ ✓

1100 Test ✓ ✓ ✓

1111 Test-Alarm Ack ✓

When a Zone is in Test mode and when a detector within this zone is activated

1400 Disconnected ✓ ✓

The zone has been switched OFF. Any information coming from the `child`-detectors will not be processed.

1999 Fault Ack ✓

Short circuit or line breakage, wrong number of detectors, return line open, leakage current, detector defect or fault in the detector base electronics.

Gas zone - (GSDEZOG)

A `Gas zone` represents the state of one or more gas detection elements connected to the (auxiliary) gas detection system e.g. MZ2411. The activation of these zones is reported by the parent gas section - the state of the individual gas zones is not visible to the end user.

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
500	Alarm Unack	✓							✓				
Not used													
502	Alarm Unreset		✓						✓				
Not used													
1000	Quiet					✓			✓				
Not used													
1100	Test							✓	✓	✓			
Not used													
1111	Test-Alarm Ack								✓				
Not used													
1400	Disconnected					✓				✓			
Not used													
1999	Fault Ack								✓				
Not used													

Extinguishing zone - (FIEXZOG E)

An `extinguishing zone` represents the state of one of the two collective lines, which are connected to the (auxiliary) extinguishing control unit CZ1-02. The activation of these zones is reported by the parent extinguishing section - the state of the individual extinguishing zones is not visible to the end user.

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
500	Alarm Unack	✓							✓				
Not used													
502	Alarm Unreset		✓						✓				
Not used													
1000	Quiet					✓			✓				
Not used													
1100	Test							✓	✓	✓			
Not used													
1111	Test-Alarm Ack								✓				
Not used													
1400	Disconnected					✓				✓			
Not used													
1999	Fault Ack								✓				
Not used													

Building services sector - (BSDESEGE)

The 'Building service section' is essentially limited to the signaling and monitoring of contacts.

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
800	Prealarm Unack	✓		✓	✓								
Not used													
802	Prealarm Unreset		✓	✓	✓								
Not used													
810	Prealarm & Fault Unack	✓		✓	✓								
Not used													
811	Prealarm & Fault Ack		✓	✓	✓								
Not used													
1000	Quiet				✓								
1300	Disarmed			✓									
The alarm organisation of the section is in DAY mode													
1351	Anomaly Ack			✓	✓								
Part of the section is OFF													
1999	Fault Ack			✓	✓								
Part of the section is in FAULT													
2000	Fault Unack	✓		✓	✓								

Technological zone - (BSCOZOG)

This object represents the state of `control zones` which are used for controlling monitored contacts. Up to 96 such control zones can be configured. Within the CZ10 these I/O are associated to the Building Service section E2.

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

500 Alarm Unack ✓ ✓

An input used to supervise external technical equipment has been activated and this input has been configured to generate a `technical` Alarm.

502 Alarm Unreset ✓ ✓

1000 Quiet ✓ ✓

1100 Test ✓ ✓ ✓

The zone is in TEST mode. If the corresponding contact is activated then the zone switches temporarily (10s) to the `Test-alarm` (or Test-active) state.

1111 Test-Alarm Ack ✓

1400 Disconnected ✓ ✓

The zone has been switched OFF. Any information coming from the `child`-inputs will not be processed.

1999 Fault Ack ✓

Short circuit or interruption on the line.

Technological element - (BSDEDEEL)

The 'Technological element' object represents the conditions of a single input (or output) contact, which is used to supervise (or control) technical equipment via the CZ10. Within the CZ10 these I/O are associated to the Building Service section E2.

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

946 Active Unack ✓ ✓

This status is only present in ULC Mode. The event should now be acknowledged by the operator.

948 Active Unreset ✓ ✓

This status is only present in ULC Mode. The event should now be reset by the operator.

950 Active ✓

1000 Quiet ✓

1100 Test ✓

The parent zone is in TEST mode.

1111 Test-Alarm Ack ✓

The input has been activated, but the parent zone is in TEST mode.

1351 Anomaly Ack ✓

The feedback (confirmation) contact has been activated.

1400 Disconnected ✓

Incoming events are not processed.

1998 Fault Unreset ✓ ✓

A contact Fault or base electronics Fault has been detected. The event should now be reset by the operator.

1999 Fault Ack



A contact Fault or base electronics Fault has been detected. The event has been acknowledged.

2000 Fault Unack



A contact Fault or base electronics Fault has been detected. The event should now be acknowledged by the operator.

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