INFOMASTER B Common Alarm System, Bus Connection
New- / First- /Common Signal Annunciator
RP 5994, RP 5995

Translation
of the original instructions

0255005

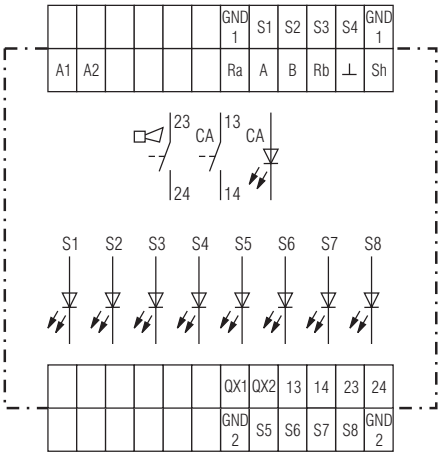

RP 5994

EH 5994


RP 5995

EH 5995

Circuit Diagrams



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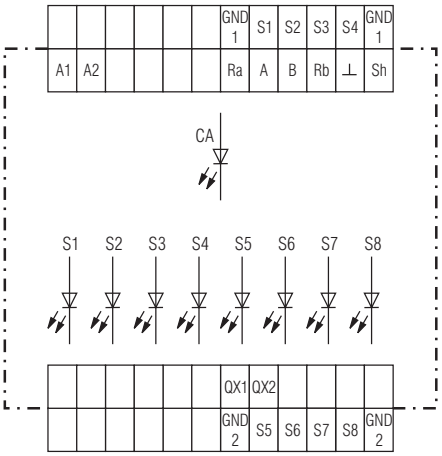
RP 5994



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RP 5995

New- / First- /Common Signal Annunciator RP 5994, RP 5995

- Fast localisation of failures and their causes
- Reduction of standstill times in production
- Adjustable operating modes:
  New- / First signal annunciator according to DIN 19235,
  common alarm annunciator manual reset / auto reset settable
- Expandable from 8 to 88 fault signals
- Open or closed circuit operation settable
- Adjustable on delay for input signals 0 to 10 sec
- Reset buttons for audible alarm and common alarm on front side
- Connection for external reset of audible alarm, common alarm and single alarm according to setting
- Galvanic separation to bus RS485 (optional)
- Accessories: Buzzer RK 8832, display unit EH 5994, EH 5995
  text display unit EH 5996, GMS-module RP 5810
- Width: 70 mm

Base module RP 5994:

- 8 fault signal inputs with indicator LED on the unit
- One relay output each for audible alarm and common alarm
- Reset buttons for audible alarm, common alarm, and single alarm
- Connection of remote reset button. Function according to setting

Extension module RP 5995:

- 8 fault signal inputs with indicator LED on the unit
- One relay output each for audible alarm and common alarm (on request)
- Reset buttons for audible alarm, common alarm, and single alarm
- Connection of remote reset button. Function according to setting

Display unit EH 5994, EH 5995

- Exchangable front label for individual legending
- As option galvanic separated RS458 bus
- Protection degree for front side IP 64
- Enclosure for flush mounting 96 x 96 mm
- **Display unit EH 5994:**
  - 8 fault signal LEDs on the unit
  - Reset buttons for audible alarm, common alarm and alarm signal
- **Display unit EH 5995:**
  - 8 fault signal LEDs on the unit
  - Without reset buttons

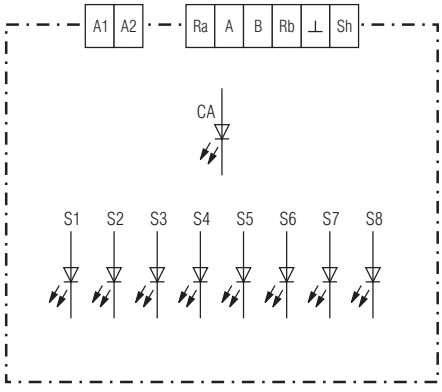
Additional Information about this topic

- General information for INFOMASTER B see data sheet INFOMASTER B, System overview
- Information about the additional text display unit see data sheet EH 5996
- Information about the additional GSM-module for alarm and acknowledgement per SMS see data sheet RP 5810

Approvals and Markings

CE

Circuit Diagram



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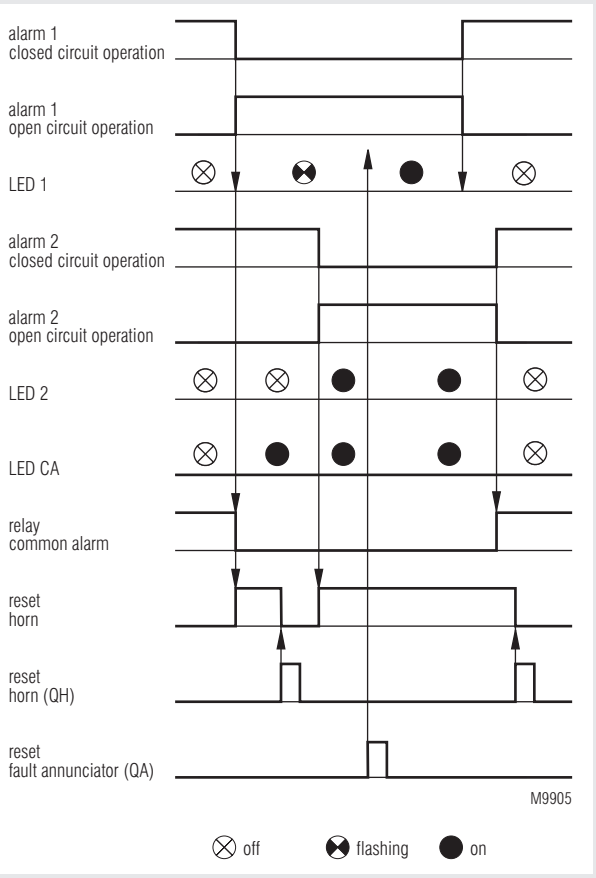
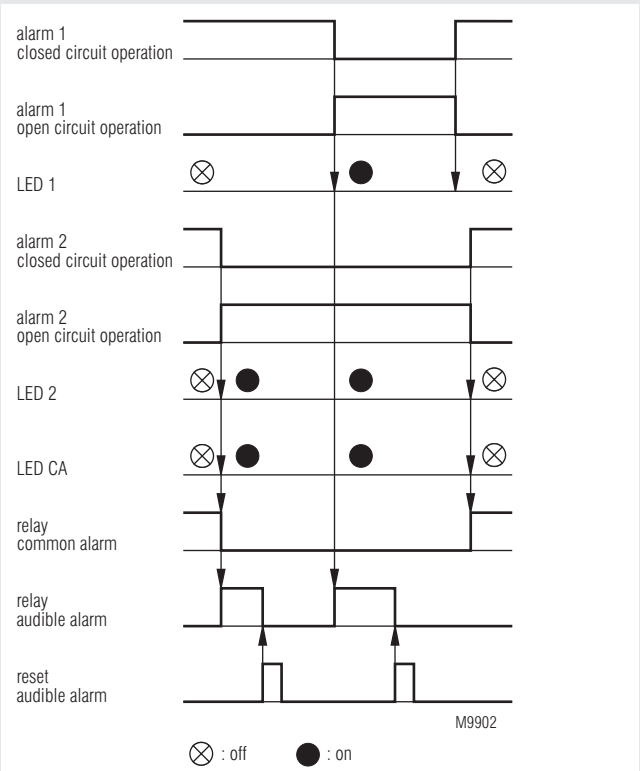
EH 5994, EH 5995

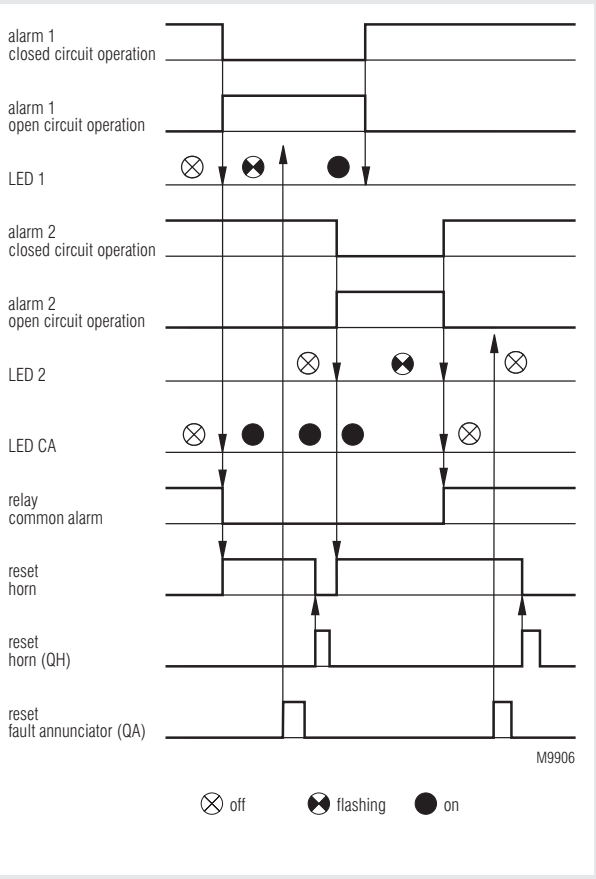
Function Diagram (First Signal Annunciator)



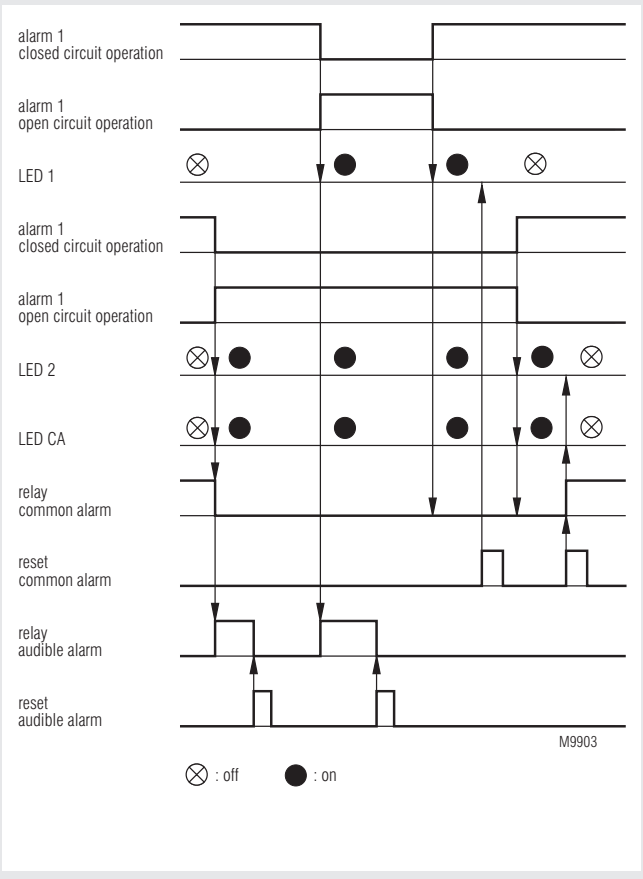
Function Diagram (Common Alarm Annunciator, Auto Reset)



Function Diagram (New Signal Alarm Annunciator)



Function Diagram (Common Alarm Annunciator Manual Reset)



Wiring
Devices with DC 24V auxiliary supply have to be operated on a galvanic separated power supply.

Configuration Cycle
1.) Wire the system
2.) Adjust module address on extension modules with switch “ADR” (different addresses for all modules)
2.1) When display units are integrated into the annunciator system the address setting of each display unit has to be done as follows
- If the display unit should display the state of the base module (RP 5994) set “MODE” switch on back of the unit to position “Basismodul” and adjust an address that is not used by any other display unit.
- If the display unit should display the state of an extension module (RP 5995) set “MODE” switch on back of the unit to position “Erw.modul” and adjust the same address as on the extension module (RP 5995) of which the status should be displayed.

3.) Set “MODE” switch on base module to position “Config”
4.) Choose input mode on extension modules:
Terminals X1/X2 open = Open circuit operation
Terminals X1/X2 linked = Closed circuit operation
5.) Set delay on switch, „td“ 0 ... 10 s
6.) Power up the system
7.) Fault signal LEDs of the base module are flashing for some time
8.) On the detected extension modules the fault signal LEDs are now flashing
9.) Fault signal LEDs change to continuous state and indicate number of detected extension modules in binary code
10.) The detected modules are stored no voltage safe in the base module memory. The fault annunciator only works with the detected modules. If a new module is added, the configuration cycle has to be run again.
11.) Select the required alarm function with switch “MODE” on the base module
12.) Press push buttons QH and QHC to leave the configuration mode.

Function Switch „MODE“

switch „MODE“	description
0	First fault signal
1	New fault signal
2	Common alarm manual reset
3	Common alarm auto reset
Config.	Configuration

Function Switch „Set“

	Function of QX1 / QX2				Function principle of fault signal inputs	
Switch „Set“	Alarm reset QA	Audible alarm reset QH	Common alarm reset QCA	Lamp test LT	open circuit operation	closed circuit operation
0	✔	-	-	-	✔	-
1	-	✔	-	-	✔	-
2	-	-	✔	-	✔	-
3	-	-	-	✔	✔	-
4	✔	-	-	-	-	✔
5	-	✔	-	-	-	✔
6	-	-	✔	-	-	✔
7	-	-	-	✔	-	✔

Setting and Adjustment

Possible Alarm Modes:

Alarm annunciator	Alarm reset QA	Audible alarm reset QH	Common alarm reset QCA
New signal alarm annunciator	✔	✔	-
First signal annunciator	✔	✔	-
Common alarm annunciator manual reset	✔	✔	✔
Common alarm annunciator auto reset	-	✔	-

- : This setting ist not supported by the module

Lamp Test
Pressing the pushbuttons QH and QCA simultaneously during normal operation will force a lamp test function (LT). During lamp test all fault signal LEDs are switched on.
The lamp test function can also be operated by bridging the terminal QX1/QX2 (connection remote reset) if this function is selected on switch “Set” for QX1/QX2

Fault Diagnostics
To indicate failures of the system the unit generates a flash code on the Bus LED. When a failure code 1 to 3 is displayed, the contacts of the common alarm relay switch off.

LED continuously on: System has no failure

Failure 1 ⎍‾‾‾‾ : Configuration failure. One ore more extension modules, that have been detected during configuration do not exist anymore. The address of the first missing extension module is displayed as binary code on the fault signal LEDs.

Failure 2 ⎍⎍‾‾‾‾‾ : The base module cannot communicate with the extension modules. The address of the first extension module that cannot communicate with the base module is displayed as binary code on the fault signal LEDs.

Failure 3 ⎍⎍⎍‾‾‾‾‾‾ : The bus wire is interrupted or the bus is not terminated correctly. The base module does not find any extension modules to communicate with.

Failure 4 ⎍⎍⎍⎍‾‾‾‾‾‾ : In normal operation: the configuration data has been found faulty. A new configuration cycles has to be run.
During configuration: the detected configuration data could not be stored.

Failure 5 ⎍⎍⎍⎍⎍‾‾‾‾‾‾ : New modules unknown to the device software of the base module have to be implemented by a firmware update of the base module.

Remark: 
Different types of devices (device classes) can be connected to the annunciator bus e.g. extension modules RP 5995, display units EH 5994, EH 5995 etc. The base module detects the different module types and adds a device specific number to the adjusted bus module address (address offset). In the case of failure this added number is indicated as binary code on the LEDs of the base module.
Max. 4 text display units EH 5996 can be connected to the Base module RP 5994.
These 4 units has to be designation by adresse 0 up to 3

Device class	adress offset	modules
Extension modules	+ 0	RP 5995
Display unit	+ 10	EH 5994, EH 5995
Textdisplay unit	+ 20	EH 5996

Technical Data

Input

Nominal voltage A1-A2:	AC 230 V, DC 24 V	
Voltage range:	0.8 ... 1.1 U_N	
Nominal consumption A1-A2		
At AC 230 V:	3.4 VA	
At DC 24 V:	1.1 W	
Nominal frequency A1-A2		
At AC 230 V:	50 Hz	

Fault Signal Inputs (only for RP 5994, RP 5995)

Fault signal inputs S1...S8:	AC/DC 24 ... 230 V	
Min. time for input signal:	≥ 70 ms	
Min. time for acknowledgement:	≥ 70 ms	
Operate delay:	Setting with poti 0 ... 10 s	

Output (only for RP 5994, RP 5995)

Contacts:	1 NO contact each for output common alarm and horn	
Thermal current I_{th}:	2 A	
Switching capacity		
According to AC 15:	3 A / AC 230 V	IEC/EN 60947-5-1
Electrical life		
To AC 15 at 1 A, AC 230 V:	≥ 1.5 x 10^5 sw. cycles	IEC/EN 60947-5-1
Short circuit strength		
Max. fuse rating:	4 A gG / gL	IEC/EN 60947-5-1
Mechanical life:	≥ 30 x 10^6 switching cycles	

RS485 Bus

RP 599_, EH 599_:	Not isolated
RP 599_/1_ _, EH 599/1_ _:	Isolated (1KV)
Bus wire:	screened twisted pair
Data transmission rate:	115.2 KB/s
	Attention: Both ends of the twisted pair have to be terminated by inserting the links A/Ra and B/Rb!

General Data

Nominal operating mode:	Continuous operation	
Temperature range:	- 20 ... + 55°C	
clearance and creepage distance		
Rated impulse voltage / pollution degree		
Relay output:	4 kV / 2	IEC 60664-1
Input:	4 kV / 2	IEC 60664-1
EMC		
Electrostatic discharge (ESD):	8 kV (air)	IEC/EN 61000-4-2
HF irradiation:	10 V / m	IEC/EN 61000-4-3
Fast transients:	2 kV	IEC/EN 61000-4-4
Surge voltage		
Between		
wires for power supply:	1 kV	IEC/EN 61000-4-5
Between wire and ground:	2 kV	IEC/EN 61000-4-5
Interference suppression:	Limit value class B	EN 55011
Degree of protection RP 5994, RP 5995:		IEC/EN 60529
Housing		
Cover:	IP 40	
Base:	IP 30	
Terminals:	IP 20	
Degree of protection EH 5994, EH 5995:		IEC/EN 60529
Front:	IP 64	
Enclosure:	IP 20	
Enclosure:	Thermoplastic with VO behaviour according to UL Subjekt 94	
Vibration resistance:	0.35 mm amplitude, frequency 10 ... 55 Hz,	IEC/EN 60068-2-6
Climate resistance:	20 / 055 / 04	IEC/EN 60068-1
Terminal designation:	EN 50005	
Wire connection		DIN 46228/1-/-2/-3/-4
Fixed screw terminal (S):	0.2 ... 4 mm² solid or 0.2 ... 1.5 mm² stranded wire with sleeve	
Plug-in screw terminal (PS):	0,1 ... 2.5 mm² solid or 0.1 ... 1.5 mm² stranded wire with sleeve	
Plug-in cage clamp terminals (PC):	0.2 ... 2.5 mm² solid or 0.2 ... 1.5 mm² stranded wire with sleeve	
Wire fixing		
Fixed screw terminals (S), plug-in screw terminals (PS):	Captive plus-minus-terminal screws M2.5 with self raising terminal box	

Technical Data

Plug-in cage clamp terminals (PC):	Cage clamp terminals for directely plug-in of conductors Screwdriver 0.6 x 3.5 for removing of the cage-clamp	
Mounting:	DIN-rail	IEC/EN 60715
Weight		
RP 5994 S:	260 g	
RP 5995 S:	240 g	
EH 5994, EH 5995		
AC 230 V-versions:	285 g	
DC 24 V-versions:	210 g	

Dimensions

Width x height x depth:	
RP 5994, RP 5995:	70 x 90 x 71 mm
EH 5994, EH 5995:	96 x 96 x 60.5 mm

Standard Types

RP 5994 S AC 230 V 50 Hz
Article number: 0060029

RP 5995 S AC 230 V 50 Hz
Artikelnummer: 0060034

- Nominal voltage U_N: AC 230 V
- Fixed screw terminals
- Width: 70 mm

EH 5994 AC 230 V 50 Hz
Article number: 0060589

- Nominal voltage U_N: AC 230 V
- Reset buttons for audible alarm and common alarmon front side
- Width: 96 mm

EH 5995 AC 230 V 50 Hz
Article number: 0060593

- Nominal voltage U_N: AC 230 V
- Without reset buttons
- Width: 96 mm

Odering Example for RP 599_

RP 599 _ S/_ 00 AC 230 V 50 Hz

- 50 Hz = Nominal frequency
- AC 230 V = Nominal voltage
- S/_ = RS485 Bus
  - 0 = Not isolated (standard)
  - 1 = Isolated
- 00 = Terminals
  - S = Fixed screw terminal
  - PS = Plug-in screw terminal
  - PC = Plug-in cage-terminals
- RP 599 _ = Type
  - 4 = Basis module
  - 5 = Extension module

Odering Example for EH 599_

EH 599 _ /_ 00 AC 230 V 50 Hz

- 50 Hz = Nominal frequency
- AC 230 V = Nominal voltage
- /_ = RS485 Bus
  - 0 = Not isolated (standard)
  - 1 = Isolated
- 00 = Type
  - 4 = With reset buttons on front
  - 5 = Without reset buttons

Accessories

Buzzer RK 8832:	Article number: 0059906
Text Display Unit EH 5996	Article number: 0061784

Connection Example