

DESCRIPTION

The DKM-0224 is a 24 channel, 144x144mm alarm annunciator, designed to be used in energy and automation systems.

Optically isolated digital inputs are equipped with noise cancelling filters and are capable of operating smoothly in high electrical noise environments. The detection delay of inputs are adjustable between 2 and 500ms.

The module features 3 relay outputs rated at 5Amp. Relays provide Horn, Bell and Internal Failure functions. An additional buzzer is provided inside the unit for audible alarms.

The unit features ultra-bright, bicolor (red-green) led indicators. Alarms may be assigned to different priority levels in order to reduce confusion.

Using front panel pushbuttons, alarms may be acknowledged and reset, the unit tested.

The configuration of the module is performed with DIP Switches placed on the back panel. Additional programming may be performed from the front panel or through programming software.

The isolated RS-485 MODBUS RTU communication port is free from ground potential differences and allows safe transfer of measured parameters to automation and monitoring systems.

It is possible to monitor the module and keep records with Datakom Rainbow+ software.

The supply input is isolated from other terminals. The module has two supply versions being 19-150V-DC or 85-305V-AC (88-400V-DC).



DKM-0224

ALARM ANNUNCIATOR

ALARM LEDS

FAST FLASH: at the first detection of the fault.

SLOW FLASH: activated when the ACK (alarm acknowledge) pushbutton is pressed and if the fault signal is still active.

STEADY ON: activated if the fault signal disappears at SLOW FLASH condition.

LED OFF: the alarm led turns off when RESET pushbutton is pressed and fault signal is not present.

AUDIBLE WARNINGS

When a fault signal is detected, the internal buzzer turns on with a period of 1 second. If ACK pushbutton is pressed, the buzzer turns off. If ACK is not pressed within 1 minute, then it switches to slow sound mode (beeps once every 10 seconds.)

RELAY OUTPUTS

HORN RELAY: If any "red" alarm led turns on, then the horn relay will also turn on. The relay turns off when ACK pushbutton is pressed.

BELL RELAY: If any "green" alarm led turns on, then the bell relay will turn on. The relay turns off when ACK pushbutton is pressed.

WATCHDOG RELAY: At startup the relay turns on. If the board fails, then the watchdog relay turns off.

OTHER LEDS

HORN/BELL LED: If the HORN relay turns on, the "red" led turns on. If the HORN relay is not on and if the BELL relay is on, then the "green" led turns on. If both relays are off then the led is off.

SAFE/FAIL LED: If an internal fault condition is detected at self-test, then this led will turn on "red", else it turns on "green".

PUSHBUTTON FUNCTIONS

ACK: When ACK is pressed, fast flashing leds switch to slow flash (or steady on) mode, the internal buzzer turns off, horn and bell relays turn off.

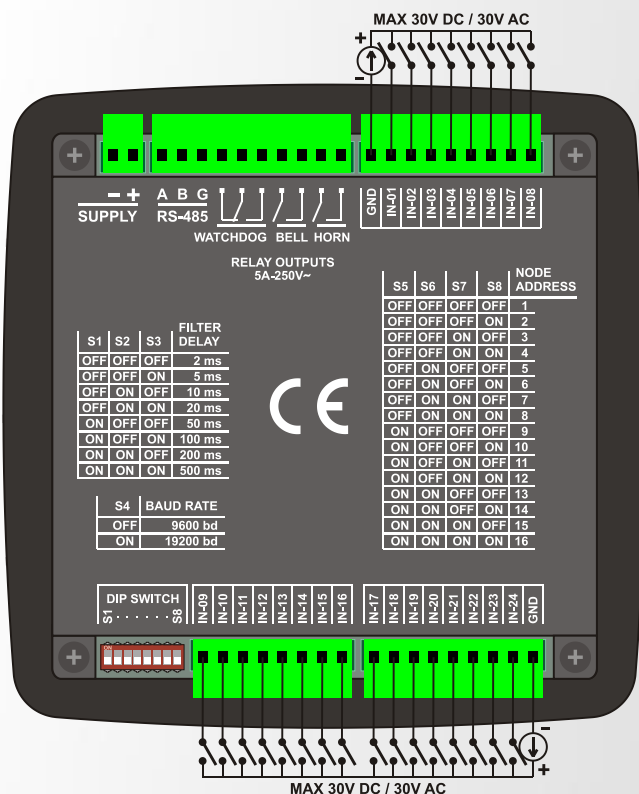
RESET: When RESET is pressed, all alarm leds, horn and bell relays turn off. If fault signal is present, then the alarm will occur again.

TEST: When pressed, all leds will turn on "red/green" alternatively and the buzzer sounds.

HORN: When pressed, HORN and BELL relays will turn on alternatively for 1 second.



BACK VIEW



TECHNICAL SPECIFICATIONS

Supply input: 19-150VDC

(optional 88-400VDC, 85-270VAC)

Power Consumption: < 4 VA

Fault Inputs: 24 opto-isolated inputs, with positive inputs and common negative terminal, protected against high voltage and electrical noise.

Input Impedance: 40K-ohms (opt. 130K-ohms)

Input Current: max. 3mA @ 110VDC

Surge Protection: 1000V / 50us

Isolation: 1000VAC, 1 minute

Filter Delay: 2-5-10-20-50-100-200-500ms selectable

Visual Warnings: 26 ultra-bright and bicolor leds (red-green).

Audible Warning: Internal 23mm buzzer, 80dB

Relay Outputs: 3 outputs, 5A @ 250V AC

Serial Port:

Signal Type: RS-485

Protocol: Modbus RTU

Data Rate: 9600-19200baud

Isolation: 1000V AC, 1 minute

Operating Temp. Range: -20°C...+70 °C

Storage Temp. Range: -40°C...+85 °C

Max. Relative Humidity: %95 non-condensing.

Protection Degree: IP 65 (Front, with gasket)
IP 30 (Back panel)

Enclosure: Flame retardant, ROHS compliant, high temperature ABS/PC (UL94-V0)

Installation: Flush mount with rear retaining plastic brackets.

Connectors: Two part connection system.

Cable Section: max. 2.5mm²

Dimensions: 164x164x60mm (WxHxD)

Panel Cutout: 140x140mm

Weight: 400 gr

EU Directives:

2006/95/EC (LVD)

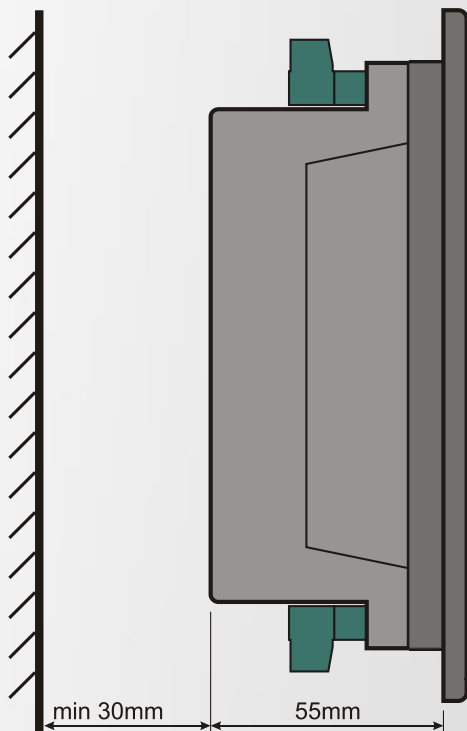
2004/108/EC (EMC)

Reference Standards:

EN 61010 (safety)

EN 61326 (EMC)

INSTALLATION TOLERANCES



PANEL CUT-OUT

