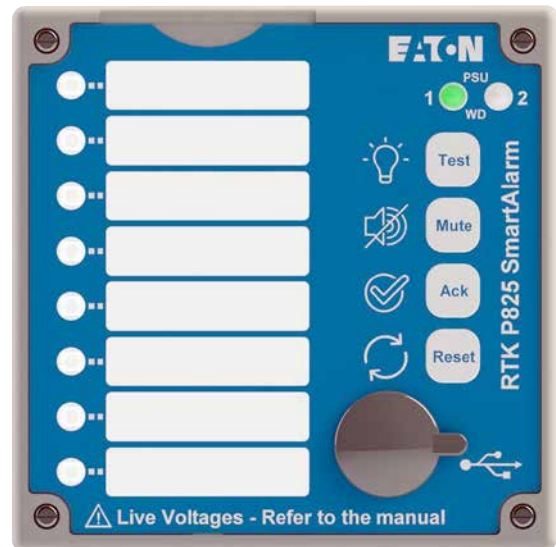


# RTK P825 SmartAlarm

## Fully featured compact annunciator

- DIN Size Module with 8, 16, 24 and 32 channel versions
- Internally generated 24VDC signal supply, with options for powered inputs 24VDC, 125VAC/DC, 48VDC or 250VAC/DC
- Pluggable LED's in five colours, Red, Yellow, White, Blue and Green
- Remote Pushbuttons inputs with mappable functions
- Each channel is fully software configurable through a front panel USB port using the intuitive set-up utility
- Integrated power supply, providing direct connection to 85-264VAC or 88-300VDC.
- Optional wide range DC supply 19-72VDC
- Optional internal redundant power supply
- Full ISA 18.1 Sequences built in, programmable via front panel USB connection
- Optional IP54 protection
- No links required for relay configuration



**The RTK P825 SmartAlarm** brings together many years of development in Alarm Annunciator technology and builds on the functionality of the field proven RTK UC625.

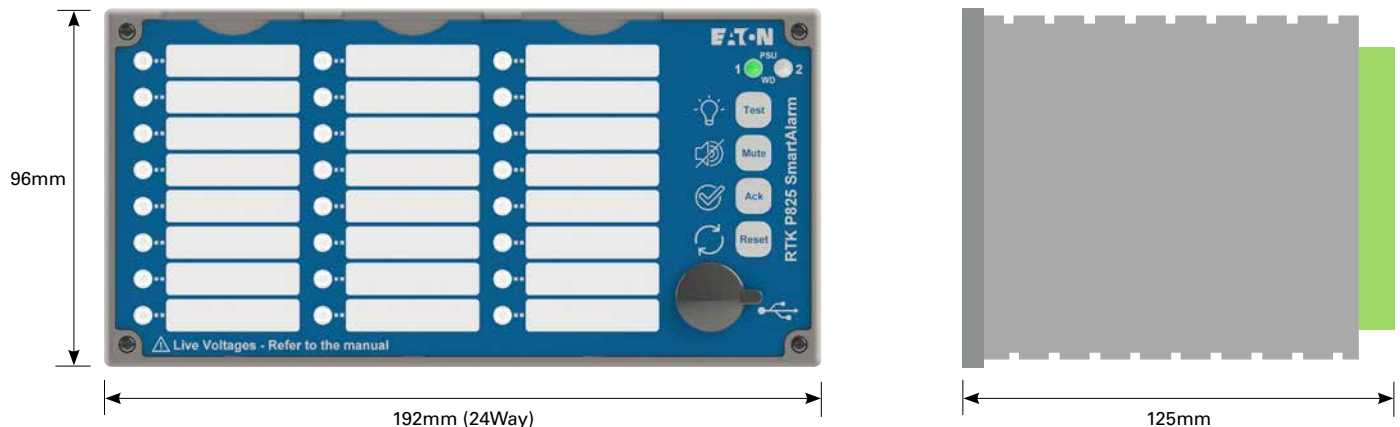
The RTK P825 SmartAlarm is designed as a complete alarm system with integral, audible, relays and pushbuttons for the most cost effective solution for monitoring critical process alarms. Incorporating ISA 18-1 1979 (R1992) alarm sequences which are programmable via the front panel mounted USB connector. The unit provides dual horn relays, LED display, optional signal duplicating relays and / or dual

redundant PSU's, making the RTK P825 SmartAlarm an ideal choice where full functionality is required and space is a premium.

As a world leading supplier of process alarm equipment, Eaton Electric can provide a solution for all safe and hazardous area industrial applications. Used for monitoring critical alarms, our range of Alarm Annunciators are manufactured to meet customer requirements, with a range of options that can be incorporated as required.

## RTK P825 Smart alarm

November 2018



### FEATURES & BENEFITS

#### Modular Construction

The modular design of the SmartAlarm allows units to be assembled in three standard sizes 8, 16, 24, 32 channels, all housed in DIN standard enclosures.

High intensity LEDs are utilised for the SmartAlarm and the following colour options are available ; White, Yellow, Green, Red and Blue. LEDs are designed to be easily interchangeable for on-site maintenance and commissioning.

#### Fully Software Configurable

Each Annunciator has a programming port located behind an IP rated bung on the front panel below the . This is a standard USB mini connection to connect directly to your laptop or PC using the cable provided with the unit, although any standard USB cable will suffice. Each individual channel can be configured to operate exactly as required with the user selecting from a range of functions, features and alarm sequences.

#### Alarm Sequences

All of the standard sequences are available as defined in the ISA publication "Alarm Sequences and Specifications S18-1 1979 (R1992)". The programmed information is safely stored in EEPROM without the need for any battery backup and can also be archived on the PC.

#### Advanced Diagnostics

The SmartAlarm is designed with comprehensive diagnostics to monitor all aspects of the systems operation. Any fault found will be indicated in the diagnostic windows of the configurator when a PC is connected to the unit. When the unit is operating normally without any connection to a PC, errors are indicated to the operator by flashing front panel LED's.

#### Communications

As an option a Modbus RTU RS 485 isolated serial port can be provided on the rear of the unit.

### INPUTS AND OUTPUTS

#### Inputs

All inputs are opto-coupled and comply to the stringent requirements of the European Directive in Electromagnetic Compatibility and the Low Voltage Directive. This greatly reduces the possibility of false alarms. The standard unit provides an isolated +24VDC to power the individual signal inputs. Field contact voltage options of 24VDC/125VAC-DC or 48VDC/250VAC-DC are available.

#### Integral Redundant Power Supplies

In order to maintain the highest level of reliability in safety critical applications, all models can be equipped with optional integrated dual power supplies, whereas the standard unit is equipped with a single fully isolated universal input supply. Each supply is capable of accepting either 85-264VAC or 88-300VDC, or 19-72VDC specified at the time of order.

#### Field Contact Voltage Monitoring

The field contact voltage supply input is fuse protected and monitored for failure. If this supply fails for any reason an output relay is tripped to warn operators that alarm information may be lost.

#### Sleep Mode

All units are equipped with 'Sleep' mode which is typically used in substation applications where the visual and audible outputs are disabled during unmanned periods to reduce drain on the station batteries. Whilst in 'Sleep' mode, the alarm logic will continue to react in the normal way including the operation of the group alarm relays and individual repeat and common alarm relays – ONLY the drive signals to the LEDs and the audibles are disabled until the unit is placed back into the 'Run' mode.



TECHNICAL SPECIFICATION

INPUTS

Alarm Initiation

125-250V inputs are all bipolar so can accept AC or DC voltages. 24/48V inputs are DC only.

Alarm Contacts

The standard unit provides +24VDC to power the Customers volt-free contacts, optional versions are available for use with Customer powered 24VDC/125VAC/DC or 48VDC/250VAC/DC field contact supplies. Each input can be software configured to operate from either a Normally Open or Normally Closed field contact as required.

Isolation

All customer inputs are optically coupled as standard.

Field Contact Voltage

This voltage is distributed through the annunciator to field contacts. As standard this is selectable between 24 and 125V. As an option a different version, which is selectable between 48 and 250V, is available. 125-250V inputs are all bipolar so can accept AC or DC voltages. 24/48V inputs are DC only

Response time

Each Channel is software configurable on each channel from 1ms to 65s. As a default each input is set to 10ms delay.

First-up Discrimination

Better than 10ms

Pushbuttons

Four internal pushbuttons are available, "Test, "Mute" Ack" "Reset" plus five customer terminals for use with external pushbuttons which are mappable as required.

OUTPUTS

Common Relays

All systems are supplied with five relays as standard, providing 1 x watchdog, 2 x horn and 2 common alarm outputs for customer use.

Relay ratings:-

2 x Horn relays

Contact rating

2A @ 30VDC, 2A @ 125VAC

150mA @ 115VDC

Selectable as Energized or De-Energised

2 x Group relays

Contact rating

1A @ 24VDC, 0.2A @ 110VDC

Selectable as N/O, N/C

1 x Watchdog Relay

Contact rating

1 A @ 30VDC, 0.2A @ 110VDC

Selectable as Energised or De-Energised

Repeat relays

The optional Individual channel repeat relays are low power configurable to follow either the input, logic or display. contact rating 0.2A @ 30VDC, 0.2 @ 110VDC Selectable as N/O, N/C

Audible

A 2.4kHz piezoelectric buzzer at 90dB 30cm. Integral audible is included om all models

Communications

An isolated RS485 port providing Modbus RTU protocol is available as an option.

DISPLAY

Pluggable high Intensity LED's

LED Colours

Red, Yellow, White, Green and Blue Each LED is plugged into a base to allow easy serviceability in case of LED failure.

Legends

Laser printed onto standard acetate sheet, or paper using templates provided by Eaton Electric.

GENERAL

Supply Voltage

(Primary) Integral Power Supply:

Universal AC or DC supply 85-264VAC or 88-300VDC

Or optionally

24VDC Nominal (19-72VDC)

(Auxiliary) Integral Power Supply:

(Optional) Optionally Not fitted or

Universal AC or DC supply 85-264VAC or 88-300VDC

Or optionally

24VDC Nominal (19-72VDC)

Or Optionally None

Dimensions

8 way unit:

96 h x 96 w x 125 d mm ( DIN) [<4.5Watt]

16 way unit:

96 h x 144 w x 125 d mm ( DIN) [<5Watt]

24 way unit:

96 h x 192 w x 125 d mm ( DIN) [<5.5Watt]

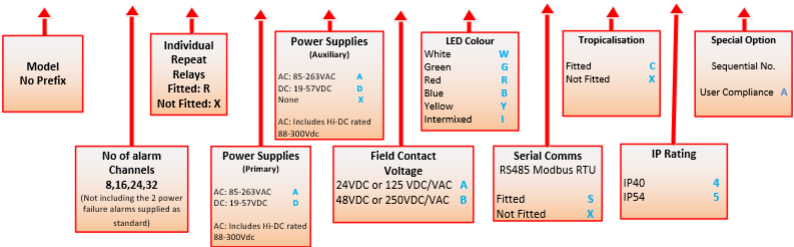
32 way unit:

96 h x 240 w x 125 d mm (DIN) [<6.5Watt]

No. of Ways	Overall In mm		
	HEIGHT	WIDTH	DEPTH
8	96	96	125
16	96	144	125
24	96	192	125
32	96	240	125
No. of Ways	Cut-out In mm		
	91 + 0.5	91 + 0.5	-
8	91 + 0.5	91 + 0.5	-
16	91 + 0.5	139 + 0.5	-
24	91 + 0.5	187 + 0.5	-
32	91 + 0.5	235 + 0.5	-

Order Code

SMA - 16 - R - A - D - A - Y - S - C - 5 - X



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