

# Output Relay Subrack

# SACO 128 R4

## Product Guide





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## Features

- Rugged, compact and flexible auxiliary relay subrack with withdrawable modules
- Max. 128 output relays in one 19", 3U sub-rack
- Flat cable snap-on connections to SACO 64D4 and SACO 148D4
- Secured auxiliary supply from two different sources
- Versatile signal grouping with separate grouping matrix unit SACO 64C5
- Member of the SPACOM product family and ABB's Distribution Automation system
- CE marking according to the EC directive for EMC

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## Application

The relay subrack type SACO 128R4 is an extension rack used in association with the annunciator units SACO 64D4 and SACO 148D4 to increase the number of available output contacts for group alarms or individual realarm of alarm channels. Typical applications include separate annunciator lamp panels and annunciator applications requiring a separate output contact from each channel.

If the signals from the SACO 64D4 and SACO 148D4 need to be grouped before they are routed to the relay subrack SACO 128R4 this can easily be done with the signal grouping unit SACO 64C5.

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## Design

The relay subrack is composed of ten modules, i.e. eight relay modules, a connection module and a power module, housed in a rugged 19 inch subrack, height 3U (~133 mm). The relay subracks are normally mounted in 19 inch cabinets but they can also be panel-mounted. In the latter case the subracks can be provided with a raising frame, which reduces the depth behind the panel by 40 mm.

Each relay module holds 16 output relays. The relay subrack can incorporate 1...8 relay modules, i.e. from 16 to 128 output relays.

### Auxiliary supply voltage

The auxiliary supply of the relay is obtained from an internal plug-in type power supply module. Two auxiliary power module types are available: type SWSM 220R48 with two inputs, 17...70 V dc and 80...265 V ac/dc and type SWSM 220R220, also with two inputs, 80...265 V dc and 80...265 V ac/dc. The power supply module forms the internal voltages required by the annunciator.

## Technical data

Table 1: General

Maximum capacity	128 relays (8 relay modules)
Output contact type	Normally open
Rated contact voltage	250 V, 50 Hz
Rated contact current	3 A
Breaking capacity at the circuit $L/R \leq 40$ ms and 48 V/110V/220V	1 A/0.25 A/0.15 A

Table 2: Auxiliary supply modules

Type of module	SWSM 220R48	Supply 1	17...70 V dc	
		Supply 2	80...265 V ac/dc	
	SWSM 220R220	Supply 1	80...265 V dc	
		Supply 2	80...265 V ac/dc	
	Power consumption per relay when the relay is activated			~0.5 W

Table 3: Tests and standards

Test voltages	Between relay inputs and frame	
	Between relay outputs and frame	
	Between supply circuits and frame	
	Dielectric test voltage (IEC 60255-5)	2 kV, 50 Hz, 1 min
	Impulse test voltage (IEC 60255-5)	5 kV, 1.2/50 $\mu$ s, 0.5 J
Disturbance tests	High frequency test voltage (IEC 60255-6)	2.5 kV, 1 MHz
Environmental conditions	Service temperature range	-10...+55°C
	Storage temperature range	-40...+70°C
	Long term damp heat withstand (IEC 60068-2-3)	<95%, +40°C, 56 d/a
	Degree of protection by enclosure when panel-mounted	IP 40
	Weight of relay subrack	~7 kg

Block diagram

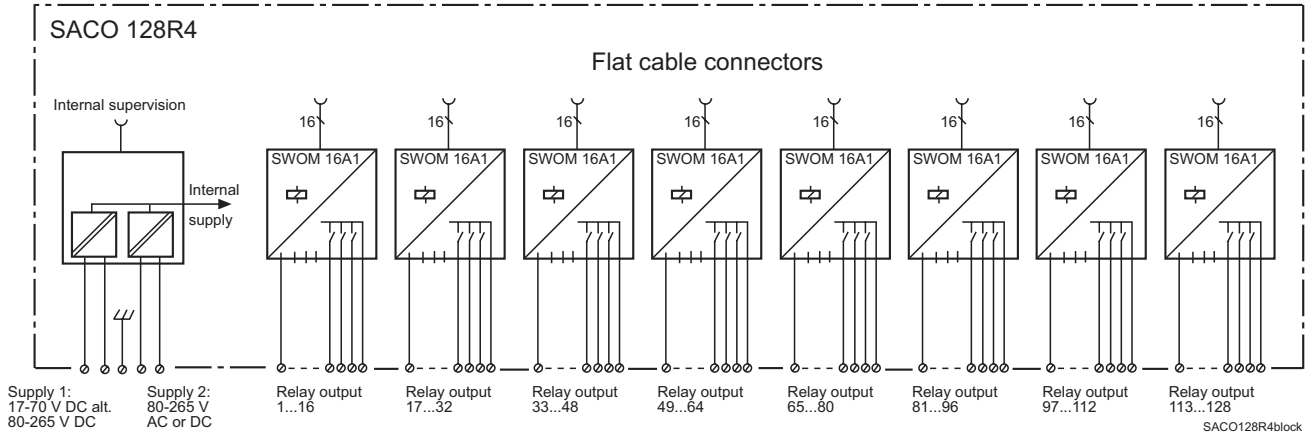


Fig. 1 SACO 128R4 block diagram

**Ordering****When ordering, please specify:**

Ordering information	Ordering example
1. Type designation and quantity	SACO 128R4, 1 piece
2. Order number	RS 813 288-BA
3. Auxiliary voltages	$U_{aux1} = 110 \text{ V dc}$ , $U_{aux2} = 220 \text{ V ac}$
4. Accessories	-
5. Special requirements	-

**Order numbers**

Relay subrack type SACO 128R4_	
Type SACO 128R4-0, power module, no relay modules	RS 813 280-AA, -BA
Type SACO 128R4-1, power module, 1 relay module	RS 813 281-AA, -BA
Type SACO 128R4-2, power module, 2 relay modules	RS 813 282-AA, -BA
Type SACO 128R4-3, power module, 3 relay modules	RS 813 283-AA, -BA
Type SACO 128R4-4, power module, 4 relay modules	RS 813 284-AA, -BA
Type SACO 128R4-5, power module, 5 relay modules	RS 813 285-AA, -BA
Type SACO 128R4-6, power module, 6 relay modules	RS 813 286-AA, -BA
Type SACO 128R4-7, power module, 7 relay modules	RS 813 287-AA, -BA
Type SACO 128R4, power module, 8 relay modules	RS 813 288-AA, -BA
The last two letters of the order number indicate the auxiliary voltage $U_{aux}$ of the annunciator unit as follows:	BA equals supply 1 = 17...70 V dc, supply 2 = 80...265 V ac/dc
	AA equals supply 1 = 80...265 V dc, supply 2 = 80...265 V ac/dc

**References****Additional information**

Auxiliary relay unit, Technical reference manual	1MRS755112
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