

## Relay Switching Unit KRE-4172-EFMIL

MTS-No.: 31141

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### Application

The Relay Switching Unit series KRE-4000 can be used for several applications, f.e.:

- Switching Unit for RF-generators, amplifiers and antennas at EMC test laboratories
- RF matrix
- Filter, diplexer attenuator etc. selection unit
- Any automated routing of measurement equipment at test benches

### Description

The Relay Switching Unit series KRE-4000 is for the switching of almost every kind of signals. Due to the modular design, the electrical characteristics of the switches can be adapted to versatile demands. In combination with attenuators, splitters and other modules the usability can be extended.



### Characteristics

- ▶ Configuration:  
1x SP12T relay (R574.403.210 Radiall)  
internal wired by SM86
- ▶ Integrated power supply 100 V - 240 V AC
- ▶ Manual control (colour display with touchpanel)
- ▶ Remote control by USB, LAN and IEEE-488 (other interfaces or web control on request)
- ▶ 19" rack mount case with 3 HU
- ▶ Windows control programs can be offered
- ▶ High quality materials and components for extended durability
- ▶ On request user blocking of separate components (with name / name and keyword available)
- ▶ On request switching cycles of every relay position can be requested
- ▶ Relay Switching Units can be designed according to customer's individual requirements

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## Configuration:

1x SP12T relay (R574.403.210 Radiall) internal wired by SM86

## Technical data:

### 1 RF-specifications relays:

1.1 Relay type (relay 1)	SP12T relay (R574.403.210 Radiall) internal wired by SM86	
1.2 Impedance	50 Ω	
1.3 RF-power max. (throughput power, termination power)	160 W CW @ 3.0 GHz (*) 100 W CW @ 8.0 GHz (*) 80 W CW @ 12.4 GHz (*) 1 W per termination @ relay 1 3 W total terminations @ relay 1	
1.4 Frequency range	DC – 12.4 GHz	
1.5 RF-connections	N female (SMA female internal)	
1.6 Switching time max.	15 ms	
1.7 Operating life min.	2 000 000 cycles	
1.8 VSWR max.	DC – 3.0 GHz	1.30 : 1
	DC – 8.0 GHz	1.60 : 1
	DC – 12.4 GHz	2.80 : 1
1.9 Isolation min.	DC – 3.0 GHz	80 dB
	DC – 8.0 GHz	70 dB
	DC – 12.4 GHz	60 dB
1.10 Insertion loss max.	DC – 3.0 GHz	0.75 dB
	DC – 8.0 GHz	1.50 dB
	DC – 12.4 GHz	2.80 dB

### 2 Connections:

2.1 Front side	RF-connections Power switch with integrated control lamp Colour display with touchpanel
2.2 Rear side	Control card with control interfaces Appliance plug with the integrated fuses F1 and F2 Ground connector

### 3 General specifications:

3.1 Power supply	100 V - 240 V 50 Hz / 60 Hz
3.2 Internal voltage	+5 V DC, +28 V DC
3.3 Control displays	Control lamp in the power switch Colour display with touchpanel
3.4 Control interfaces	USB LAN IEEE-488
3.5 Power consumption primarily	120 mA max. @ 230 V (no relay switched) 150 mA max. @ 230 V (all relays switched)
3.6 Voltage supply	Standard rubber connector
3.7 Operating temperature	0 °C - +50 °C
3.8 Reference temperature for specifications	+25 °C
3.9 Dimensions	19"-unit x 3 HU x 310 mm (dimensions without handles and connections)
3.10 Colour	Front side colourless anodized Rear side colourless anodized
3.11 Weight	7.0 kg

### 4 Delivered parts:

KRE-4172-EFMIL  
Power cable  
CD with operating manual

### 5 Comments:

Warranty	12 months
RoHS-compliant	Yes

### 6 Recommended accessories:

RF-cables  
Terminations  
Attenuators

(\*) Non-switching. The maximum RF-power is shortened depending on present standing waves. Please consult derating factors of the relay manufacturer and consult the specification of used RF connectors.

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Technical subject to change

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