SCHNOOR®

Industrieelektronik - Nachrichtentechnik - Systemtechnik

Universal
Operator Unit
- analogue and digital

Product presentation

Operator Units

Schnoor Universal Operator Unit

General

This operator unit has been conceived for rough conditions and can be used in surroundings which place high demands on devices, as is the case, for example, on motorbikes or ships. The operator unit has been prepared for connection to analogue or digital radios from various manufacturers and is approved for use in the German Federal Armed Forces.

Characteristics:

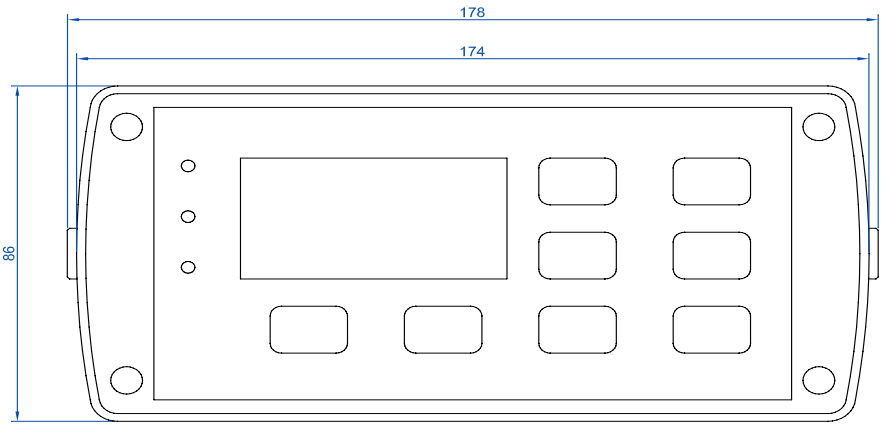
- low susceptibility to interference
- suitable for night operation
- constant illumination of the keys and displays
- high-contrast transflective graphics display
- operating temperature range -10°C... 60°C
- Protection class IP54 (can be raised as option)
- clear visual/acoustic signalling
- adjustable volume in wide ranges
- transmission/receiver display
- key selection
- emergency call key (protected against inadvertent activation)
- connection for transmission keying (push-to-talk button)
- connection for emergency call keying (activation by driver)
- automatic display brightness regulation

Maintenance interface:

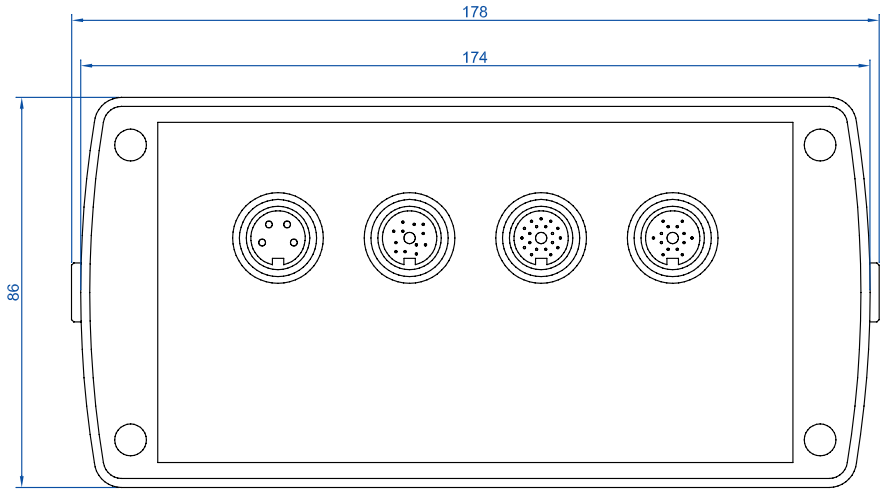
An infra-red interface (IRDA) is available at the front of the device for configuring the operator unit. In this way, the operator unit can be newly configured / personalised without de-installing and opening the respective device.
This allows swift and simple adaption with reference to changing requirements during the device‘s service life.

Schnoor Universal Operator Unit

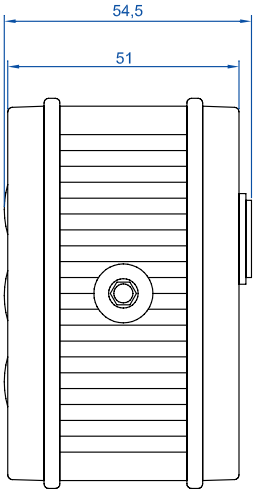
Dimensions



Operator Unit front view



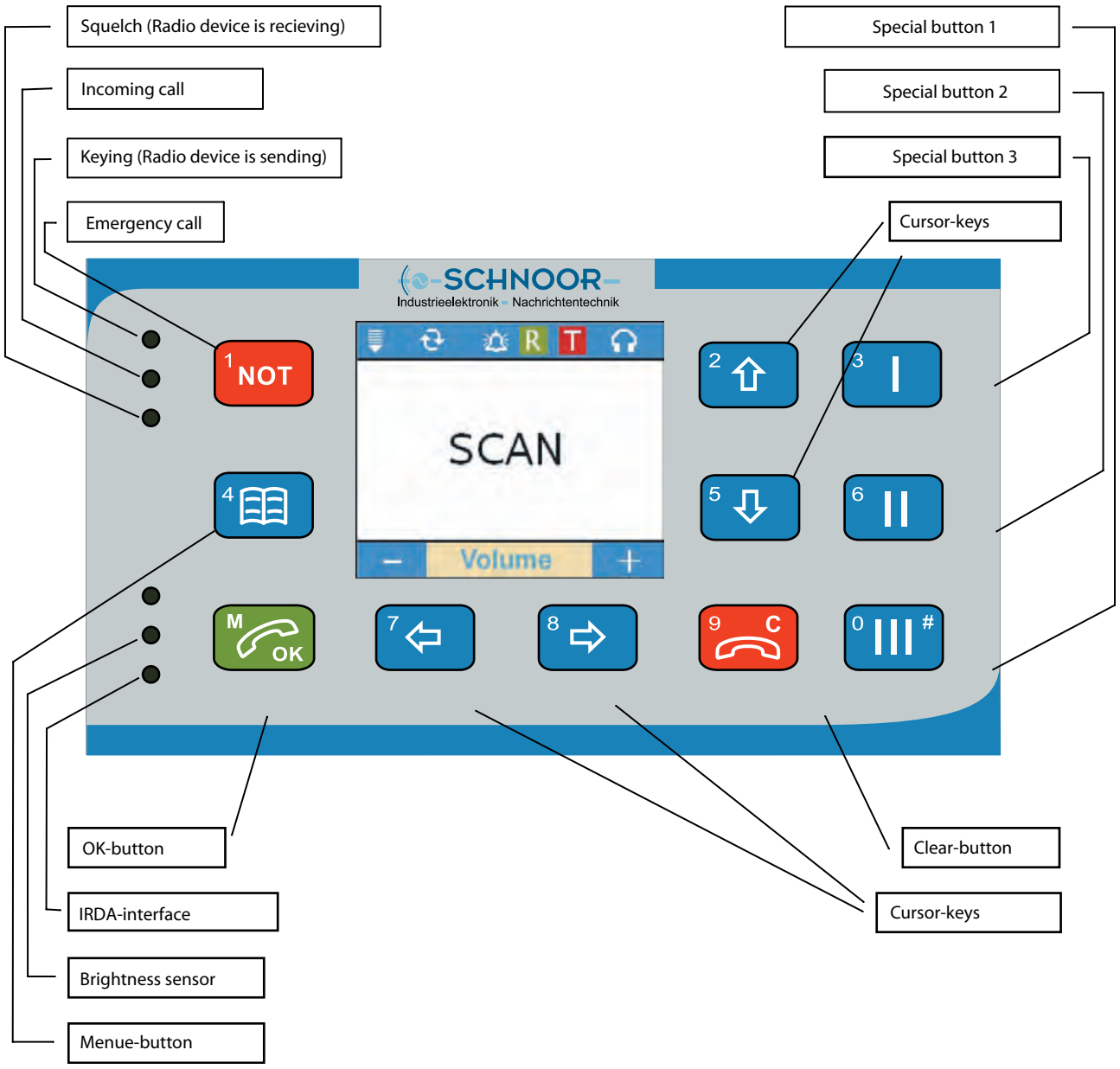
Operator Unit rear view



Operator Unit side view

Schnoor Universal Operator Unit

Operation- and display elements



The operator unit keys are designed for operation when wearing gloves.

The keys can be doubly allocated (by pressing the keys over short and long intervals). The key allocation time for recognising the second function is set to one second.

A second level on the numeral keys is possible.

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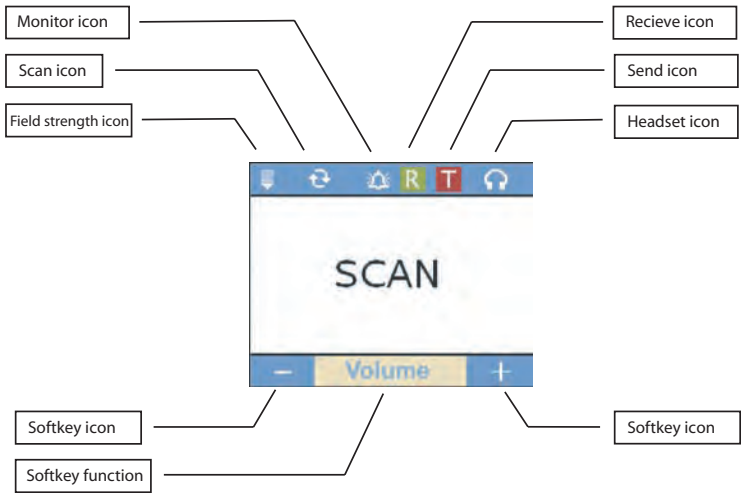
Key allocation and light-emitting diodes



Key allocation

Cursor keys
The cursor keys , , and are used for navigation on the TFT display. Elements can be selected and parameters can be set.

Menu key
The main menu is called up using the menu key. The key is also used to exit the main menu.

OK key
The OK key is used to call up the menu pages in the main menu as well as to activate or deactivate radio functions.

Clear key
The clear key is used to exit the main menu and the submenus. The key is also used to activate or deactivate radio functions.

Emergency call
The emergency call key is used to activate an emergency call defined in the radio.

Special keys 1-3
Pre-programmed functions are activated using the special keys 1-3.

Light-emitting diodes

Keying (red)

The red LED lights up when the radio is transmitting (keying)

Squelch (green)
The green LED lights up, when the radio is receiving (squelch)

Call (yellow)
The yellow LED flashes when a call is received (incoming call).

Schnoor Universal Operator Unit

Interface connections

Bushings at the rear of the operator unit

Bushing ST1 (+ DC 12V –)

The operator unit is fed via bushing ST1 with DC voltage U_e= DC 12V (Range: DC 10V...15V), I_e= 2,5A at 12V, P_e= 30W. The MOBG (motorbike operator unit) is fused internally with an SMD fuse T 3A.

Bushing ST2 (radio)

The radio is connected via bushing ST2 with the operator unit (MOBG, motorbike operator unit). Here, several data cables for control of the radio, several direct signals (e.g.. PTT and SQ), as well as analogue talk paths (audio frequency Transmission, audio frequency Receive) are gathered in one cable.

The radio is not supplied via this bushing, but rather requires, due to its high power consumption of I < 3.5A, a separate in-feed from the battery with its own fuse.

Bushing ST3 (Loudspeaker input/output)

The operator unit provides an audio frequency output stage for an external loudspeaker (8Ω...32Ω/max. 5W), which can either be connected via bushing ST3 or bushing ST4.

There are two optocoupler inputs (for PTT and emergency call) and one output, to which an external relay (optional) can be connected. The call signalling (call) is reported to a floating output (DC 30V, 2A, Ohm resistive load). With this, an optional alarm buzzer (or a lamp) can be switched on and off at intervals in order to signalise an incoming call externally.

When connecting to the bushings, please ensure that no operator unit mass contact (GND) is directly connected to the vehicle mass (chassis), so that there is only one central bonding to the vehicle chassis in the radio.

The feed DC 11V (in total max. 500mA) for the external microphone amplifier with noise filter, the optocoupler inputs and the optional relay is fused internally in the MOBG (motorbike operator unit) with a self-resetting PTC fuse.

If this bushing is not used, it must be closed using a blank cap in order to maintain its waterproof qualities.

Bushing ST4 (Handset)

A helmet headset or a handset, including a hookswitch and a loudspeaker (8Ω...32Ω/max. 5W) is connected to this bushing, and for this a separate audio frequency output stage is installed.

The loudspeaker connection provided on bushing ST3 is also available via bushing ST4, in order to integrate the open listening function into the handset support. The total impedance with a parallel-switched loudspeaker at bushing ST3 should be 8Ω or larger.

The input for the PTT-key (keying), which also lies parallel to bushing ST3, is realised in the form of an optocoupler. One optional output is available to which an external relay (optional) can be connected. An external relay can also be connected at the output call signalising (call), which works synchronously to the floating contact at bushing ST3

The feed DC 11V (in total max. 500mA) for the external microphone amplifier with noise filter, the optocoupler inputs and the optional relay are fused internally in the MOBG (motorbike operator unit) with a self-resetting PTC fuse.

Options:

DECT module
Bluetooth module

It is possible to retrofit an additional board in the operator unit if required.
For this, either a DECT or a Bluetooth module are available for for audio frequency separation.