Electronics



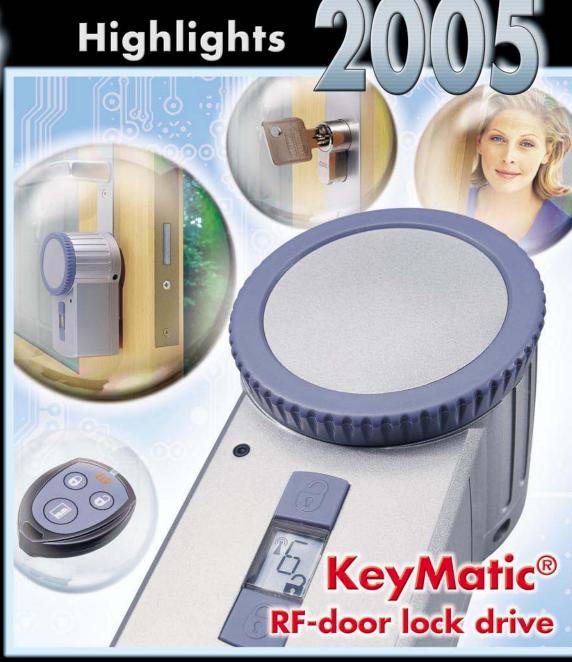
Wireless weather station



Radio smoke detector



Charging center



Competence in Electronics

N.elv.com

Open - Close doors at the press of a button KeyMatic® wireless door lock drive

The electronic key for your home





The latest development from ELV: At last, you can open and close your house door as easily as your car.

The press of a button is enough.

Sensational technology and sensational price. KeyMatic® is unique and patented.

Quick, easy installation

Installation is completed in just a few operations: No need to drill any holes, no power cable and no special tools required. KeyMatic ca be installed on any door equipped with a standard cylinder lock and having the emergency and danger functions. It is only in exceptional cases that the existing cylinder lock needs to be replaced in order to be able to fit the mounting plate.

Simply fix the holder on the cylinder lock above it, mount the drive and screw together - finished!

Reduce the risk of burglary

Only locked doors provide sufficient safety against burglary. Main doors of apartments or houses should be locked during the day or night, even if it is only going to be empty for a few minutes. People often forget this because it's a nuisance. A bunch of keys can scratch the door or you often have your hands full and have to put things down

These are things of the past when you use KeyMatic – People don't leave their cars unlocked, do they?

Whether using remote control, pressing a button on the unit or manually - a complex, cleverly devised electromechanism provides several options.
Unrestricted manual operation requires the use of a cylinder lock with so called

emergency and danger function. This version, generally in use today, ensures that the lock can still be operated by a second key even if one key has been left in on the other side.

Emergency function

The door lock remains fully functional and can be used without any restrictions manually (i.e. with the standard key). If there is a fault in the system, you can still get in and out of the house in the "normal way" without having to contact an expensive lock and key service. A nice, secure feeling





Comfortable

Open, lock or unlock the door by pressing a button - nice and easy via remote control or pressing a button directly on the unit. Before unloading your shopping from your car, press the "Open door" function on the small remote control on the key ring and then enter the house without having to put the shopping down again. Locking it again is just as simple.

Regardless of whether it is a house door, side door, warehouse or apartment door – as long as a standard cylinder lock is installed, KeyMatic can be used. KeyMatic works independently of any mains power and is absolutely fail-safe against power failures, requiring no power outlet near

the door.

KeyMatic can be retrofitted for battery operation easily and no mains power cable is required. The service life of the batteries is approx. 1 year with an average of 8 door closing locking per day. An imminent battery change is indicated in good time (in the display) and also acoustically with each locking procedure when nearing the end of its service life.

If the battery capacity is reduced, there are several audio-visual warnings recompting a change of battery.

prompting a change of battery.



Reliable radio connection

The radio connection is protected against misuse by the rolling code function, known from the automobile industry. Each remote control supplied by ELV has an individual serial number (1 of 268,435,456) and operates with a 16 bit synchronization counter (65,536 possibilities). This results in 17,592,186,044,416 options. To break this code, in this case, would theoretically take 500,000 years! Unlocking as a result of perturbing radiation can also be ruled out.

Always under control

The status messages in the display help during operation and acoustic status signals from the transmitter ensure the current operating status can be determined at all times. The acoustic acknowledgement signals can be adjusted and deactivated. If necessary, an optional signal lamp can be installed which visually accompany acoustic status signals.

Complete set

KeyMatic is supplied as a set: Remote door lock drive system, mounting plate, retaining screws, installation wrench, radio transmitter, set of batteries

KeyMatic set: White

Order no.: 17-577-83 Silver gray Order no.: 17-612-99

Order no.: 17-613-00

Radio remote control RM 300 RC



The super-compact radio transmitter in key ring format has been specially conceived for controlling the KeyMatic door lock. It transmits the control commands in coded form using a scrambling procedure, thus providing a high degree of protection against code theft ("tapping" e.g. by a partly authorized persons such as cleaning personnel or a babysitter). When using the remote control, it is not possible for

this circle of personnel to make copies of keys.

There is also the advantage that if the transmitter is lost, the cylinder lock need not be replaced or a locking system is necessary – the transmitter can simply be deleted

from the reception memory.

When a battery is empty, it is indicated by an integrated signal lamp.

A transmitter is supplied in the scope of delivery with the sets, up to 8 further transmitters can be registered for operation on the radio door lock drive.

Additional remote control, supplied with battery

Order no.: 17-577-78





KeyMatic signal lamp LED

The signal lamp provides an optical acknowledgement, visible externally, of the commands issued from the remote control. This enables visual feedback from some

distance concerning the activities of the door lock drive.
Installation of the lamp is possible using adhesive assembly behind glass or on the door panel. The signal lamp is connected to the door lock drive via a plug connector.

Signal lamp, adhesive assembly, feed line 15 cm Order no.: 17-610-46

KeyMatic LED 30

Signal lamp, adhesive assembly, feed line 30 cm Order no.: 17-612-24

Radio switch



Radio door latch



KeyMatic

3

KeyMatic deluxe - door station code access control

You've left your radio transmitter in the house? No problem, if KeyMatic CAC has been installed. Simply open the door by entering a code. At the same time, the door station can also be used for controlling the existing door latch and an FS20 receiver (e.g. for outdoor lighting or radio controlled door bell).

(e.g. for outdoor lighting or radio controlled door bell).

An integrated display indicates a freely programmable solutation and the system status. It can be used as a name or information label, for example. Both the keypad and the display are provided with back-lighting (either permanently on or timer controlled via key input, depending on the power supply).

The device can be either operated purely with batteries or via an existing doorbell transformer (batteries then serve as a buffer in the event of a power failure, for

Transformer (batteries then serve as a bullot in the signal transmission to the KeyMatic occurs as with the hand transmitter via radio signal and securely coded by means of a KeeLoq procedure. If a radio controlled doorbell should be triggered, the door station can be placed anywhere, the battery supplies the device for up to 3 years regardless of its location. In order, for example, that cleaning personnel do not have uncontrolled access to a building day and night, the individual codes can be assigned access rights with time limits.

The individual actions can be saved related to individuals and be displayed in lists – you are always in control of what happens in front of your door!



Adapted to your surroundings

The wireless door lock drive is available in three different colors, available for delivery adapted to the most popular door colors.



Quick, easy installation



FAZ 3000

radio alarm system

FAZ 3000 System - Main Features:

- All components can be "connected" to the alarm base station without wiring of any sort.
- Long free field range of 500 m.
 High reliability via bi-directional radio links (acknowledgement of each radio message).
- Up to 100 radio sensors can be connected.

- 868 MHz technology ensures excellent protection against interference from other radio services.
- In addition 4 hard-wired alarm lines and a hard-wired sabotage line are provided.
- Long battery life of approximately 3 years.
- Wide range of components available.



868 MHz radio technology - bi-directional

The FAZ 3000 radio alarm system operates at 868 MHz, a frequency specially reserved for uses that require only very short data transfers, i.e. continuous signal transmitters are not permitted. This indicates a clearly increased transfer reliability, as interference by permanently operating systems such as radio headsets, etc is "postally" excluded. For the FAZ 3000, bi-directional means a signal transfer in both

directions, i.e. not only from the sensor to the alarm base station, but also from the alarm base station to the sensor. This method is especially important for acknowledging signals (and to repeat them if necessary).

It is also important for power saving for sensors to receive the command "revert to power saving" when units are inactivated.

After a two-year development programme ELV presents its new radio alarm system designed according to the very latest technology, which leaves nothing to be desired. Special emphasis has been placed on high reliability and freedom from interference, which is the mainstay of a modern alarm system.

The new FAZ 3000 radio alarm unit is designed for burglary and fire protection for flats and houses as well as for accident and emergency alarms. It is based on the very latest microprocessors and radio technology and offers a wide range of functions with easy installation and servicing.

All components are connected by radio so installation is child's play, as there are absolutely no wires to lay between components.

Up to 100 (!) radio sensors, which can be individually provided with userselectable names (max. 11 characters), can be connected. In the event of an alarm the base station display immediately shows where security has been breached. In addition 4 hard-wired alarm lines and a hard-wired sabotage line are provided. The FAZ 3000 can also replace current wired alarm units and the system can be expanded to almost any size required. All sensors (with the exception of the smoke alarms), the peripheral devices and the alarm base station are equipped with an integrated sabotage contact that immediately triggers an alarm on unauthorised opening of the housing. Operation of the sensors is by battery with a life of approximately 3 years. The alarm base station is fed by a plug power supply and naturally also has its own emergency power supply via batteries. An optional external DCF receiver is available to increase the accuracy of the integrated clock.

The completely new development of the FAZ 3000 radio alarm system provides a multitude of essential features.

High reliability provided by a bi-directional 868 MHz radio path.

Probably the most essential criterion of an alarm unit is the reliability and freedom from interference.

The unit must offer reliability with regard to breakdown security/availability as well as recognise an attempted break in. In this respect all FAZ 3000 system components are distinguished by an extremely mature technical design combined with a long battery life. battery voltage is automatically checked at regular intervals and the voltage level is reported to the base station and displayed approximately four weeks before the battery expires.

For the FAZ 3000, freedom from interference has a greater significance. Every 10 minutes each sensor and each peripheral device reports to the alarm hase station in order to indicate it is "live". This ensures that there are no faulty sensors and the radio link is functioning correctly. If the radio link is interrupted for more than 90 minutes then the alarm base station issues an interference message, which does not necessarily lead to an alarm. In this way the operator can recognize possible radio interference without "arousing the



entire neighbourhood" with an alarm. Bi-directional radio technology also ensures long battery life even for heavily used PIR monitors. This is clearly demonstrated by the following example:

A "normal" uni-directional operating PIR monitor located in the hallway of a house does not know whether the base station is activated or inactivated. Even for inactivated units (i.e. if people are in the monitored area), the PIR monitor detects the movement and regularly activates its transmitter in order to send the information to the base station. This uses a great deal of valuable battery capacity. Not so with the FAZ 3000 bidirectional monitor! If a unit is activated it is reported to the monitors, which then go into the "standby" state. Even if people are moving around in the monitored area these sensors do not transmit alarms if a unit is in an inactivated state.

If the unit is now activated, there is by definition nobody left in the monitored area, so that the FAZ 3000 sensors that are activated do not transmit any alarms - an operational method that is especially energy conserving.

868 MHz radio technology provides excellent freedom from interference when transmitting alarm and status reports from the sensors and when communicating between the base station and the peripheral devices. This frequency band was chosen deliberately as no continuous signal transmitters are permitted i.e. interference caused by LPDs, radio headsets, radio loudspeakers or amateur radio transmitters are "postally" excluded.

Superhead receivers are built into all components (with the exception of the key ring remote control). Superhead receivers are distinguished by high sensitivity and narrow bandwidth, i. e. the extremely long free field range and the freedom from interference with regard to adjacent radio bands is superbly quaranteed by the use of this high quality reception technology.

Bi-directional radio links between the base station and all sensors and peripheral devices provide a high degree of security for data transfer and high resistance to interference from external influences.

Almost all commercially available unidirectional radio units operate exclusively in one direction as far as the radio path is concerned i.e. in the event of an alarm, the alarm sensors send a signal to the base station, but do not know whether it has actually been received or not. This is not the case with the new ELV FAZ 3000 radio alarm system. This bi-directional system has a second radio path in the opposite direction for each sensor and peripheral device. If the PIR sensor, for example, detects an alarm, it transmits the information via radio to the base station immediately. The base station receives the information and sends an acknowledgement to the PIR sensor, which receives the acknowledgement signal and now knows for certain that the alarm has definitely been received at the base station, which now proceeds 'as instructed' (sirens switched on, telephone dialing service activated, etc). If the PIR sensor does not receive an acknowledgement signal from the base station it transmits the "alarm activation message" until the base station sends an acknowledgement back.

Convenient start set: FAZ 3000-3 START SET

includes

- FAZ 3000 radio alarm center set, FAZ 3000-FB radio remote
- control FAZ 3000-TF radio door/window
- detector, FAZ 3000-PIR radio movement detector

(all components are excluding batteries)

17-568-73

Optional Components:

FAZ 3000-SI 17-462-89

Sirene Control to add a sirene or flash into wireless alarm system.

FAZ 3000-TF

17-462-98 Door/Window Detector for monitoring the entrances in your house.

FAZ 3000-PC

17-467-39 Computer Interface for configuration and remote control via PC.

FAZ 3000-AW-2

17-562-89 Alarm Dialler to alert programmed members invent of alarm.

FAZ 3000-SE 17-463-00

Remote Switch to activate the alarm unit via switches and buttons.

Domestic radio control unit FHZ 1000



Electronic radiator thermostats

868 MHz bi-directional technology

> Remote switching system **FS 20**

Telephone remote control

to 15 components of the FS20 system, e.g. the FS 20 ST radio switch.

With 4 macro control programmes,

complete control scenarios can be pro-

grammed over the whole system, e.g.

simultaneous starting of the heating, switching on of the outside lights and

coffee machine and lowering the veneti-

The control program can be configured

individually for each device and a name

Alarm indicator

Telephone alarm dialler

FHZ 1000

Controls the whole heating, lighting and equipment system in your house! can be assigned in plain text (10 characters) for each device and each macro - an The central control unit can control up easy overview for each! to 15 FHT 80b room controllers and up

If required, the central control unit can be controlled remotely by means of the telephone radio remote control.

Faults and alarm conditions, e.g. a failure of the heating, can be forwarded to any telephone using the telephone dialling unit.

Power is supplied by a mains power supply and a 9V block battery. For mains operation, the power is supplied via the wall holder; the central control unit can be removed for easy programming.

Programmed data are permanently stored even in the case of power and

In conjunction with the radio actuator, the central control unit directly controls the temperature in the room in which it is situated (up to 8 actuators can be

For controlling the temperature in the other rooms, the central control unit communicates bidirectionally with the FHT 80b room controllers.

Particularly easy to use thanks to the jog dial and illuminated display.

Order no.: 17-478-51

21:43:15

Alle Lichter aus

Alle Rollladen schliessen

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Set FHT 80b room control

The FHT 80b represents the communication module between the radiator actuator and the central control (FHZ 1000/ PC, bidirectional data exchange). It enables the connection of up to 15 further rooms in the system. Can be operated without a central control as an autarkic, single room regulator.

Economy set: 1 FHT 80b, 1 radio controlled actuator Order no.: 17-545-64



Radio controlled switching socket FS20 ST-2

Compact switching socket serves as a mobile switch actor of the FS20 system, operated by radio signal or on the device, timer function, switch output 16 A at 230 V AC (3680 VA). Order no.: 17-577-89

Domestic technology control via PC interface – FHZ 1000 PC



The PC as caretaker - security - ease climate via drag & drop

build upyour ownessy-to-use, comfortable domestic technology system – the FHZ-1000 PC system offers all the options normally reserved for modern household equipment control.

Controlled from a graphic and intuitive programmable Facility software, the radio interface issues switching commands to all components within the FS20, domestic hazard warning system HMS 100 or ELV-FHT FHT 80b radio controlled heating control systems, receives signals from the system sensors and links these with the respective tasks, such as alarm signals, etc.

Once programmed, you no longer need to bother about numerous technical

processes about the house, e.g. weather and time related control of awnings, electrically operated ventilation apertures and windows, blinds, lighting, door/gate control, daylight-dependent lighting, precision signals and simulation, room air conditioning and heating control etc. the PC regulates all the processes independently from now on.
 Advantages of the system:

- Modular and economically expandable overall system – no need to make unnecessary purchases
- Programming the system without programming knowledge using drag
- Complex procedures can be programmed as macros a click of the mouse, a press on the button of

the FS20 remote control or a switch command triggered by a sensor is sufficient to set complete procedures into motion.

- A constant overview of the entire system through graphical, self-designed user interface
- Controls all the receivers in the FS 20, HMS 100 and FHT 80b system – each device can be integrated as an individually programmable module in a macro, modules can be linked as required, e.g. signal and alarm components
- Remote control or alarm signaling possible in the event of critical states via E-mail or telephone
- For PC systems implementing Microsoft Windows® from 98SE and USB port

FHZ 1000 PC interface + software for controlling the FS20 system Order no.: 17-388-78

Set b: FHZ 1000 PC interface + software for controlling the FS20 system, the HMS 100 system and the FHT 80b Order no.: 17-613-03



RM 100 system

The next generation of radio controlled smoke alarms, particularly reliable functioning (application for VdS approval). It operates in conjunction with ELV's HMS 100 domestic control system or ELV's FHZ 1000/PC domestic radio controlled unit. As a result, the alarm can be transferred via telephone when connected to the alarm monitor. Equipped with an additional two-wire interface for connection to cabled smoke alarms.

Order no.: 17-567-94



HMS 100 WD water alarm

Water alarm for diverse use, combines moisture sensor and evaluation/transmission unit in one housing. It is simply placed on the surface to be monitored, the sensor probes touch the surface directly

Order no.: 17-521-13



Radio-controlled radiator thermostat FHT 8

Pleasant warmth and energy saving

A new type of radio-controlled radiator thermostat system for the convenient, completely cable-free control of up to 8 radiator actuators per room. With individually programmable daily/weekly program for radiator control in accor-dance with your personal wishes and habits. The saving in energy costs resulting from this

- Max. warmth Min energy consumption Thermostat is separate from the actuator, control is therefore based on the actual room temperature (measured in the room, not at the radiator!)
- No mains electricity or cable -> simple installation
- Controls up to 8 radiators per room
 Individually programmable daily/weekly program
- Easy to use thanks to clear menu guidance
- Ready for immediate use standard values preprogrammed
- Thermostat with transducer can be removed by means of quick-release fastener for convenient pro-
- gramming
 Modern design with large display, convenient opera-
- tion using jog dial

 High functional reliability due to radio transmission in the particularly reliable 868 MHz band
- Battery operation no mains connection required!
- Simply replace the old valve head with the actuator in next to no time!
- Suitable for all common radiator valves
- Holiday/party function for temporary temperature

- Weekly maintenance function to prevent valve calcification
- Frost protection function prevents the heating from freezing up
- Emergency operation by hand possible

Not compatible with underfloor heating systems.

• 1 Controller • 1 Actuator with adapter set • 1 Set of batteries

Order no.: 17-478-49



Actuator, single (incl. batteries and adapter) Order no.: 17-479-59

The FHT 8 radio-controlled radiator thermostat differs from its big brother, the FHT 80b, only in that it is unable to communicate with the domestic radio control unit. The way of working and the functional scope are identical! The actuator, which is part of the system, is also identical.

FIV

FHT 80 b single room controller – no mains power or cables needed System-capable and with additional radio door/window alarms

Pleasantly warm + energy-saving

This new type of radio controlled heating radiator thermostat system offers several advantages as compared to conventional thermostats. An individually adaptable weekly program enables heating radiators to be regulated in every room in a house according to personal requirements and needs.

Features

- Max. heating comfort min. energy consumption
 Thermostat separate from actuating drive, therefore, no measured value falsification (measures in room, not on heater!)
- No mains power or cables -> simple installation
- Controls up to 8 wireless heater thermostats

- · Individually programmable day/week programs with clear menu structures
- Simple operation, pre-programmed
- Thermostat can be removed from wall holder via snap-in lock
- Modern design with large display, easy input/query functions using the central scrolling wheel High level of efficiency through automatic reduction
- of the heating temperature in rooms when opening a window or door (e.g. patio doors)
- Up to 4 radio controlled door/window alarms per room, additional or existing contacts can be connected

 • Selection for single room regulation or integration
- in the FHZ 1000 and FHZ 1000 PC bidirectional, central radio control system



Radio controlled door/window detectors FHT 8 TF

The magnetic contact can be mounted to the right or left of the alarm. It is also possible to connect an external switch (e.g. additional magnetic contact) and to use its contact instead of an additional one. Each change of status is signaled to the room controller.



1 FHT 80b, 1 actuating drive, batteries Order no.: 17-545-64

1 FHT 80b, 1 actuating drive, 1 FHT8 TF, batteries Order no.: 17-545-65

Additional door/window alarms FHT 80 TF incl. batteries Order no.: 17-562-19



Electronic, radio controlled actuating drive

The system operated by battery power and radio controlled transmission.

Therefore, there is absolutely no cable or power connection necessary. Replacing the old valve head with a new actuating drive is incredibly easy and can be completed by people without any specific technical training in just a few operations (no need to drain the water from the radiators).

The adapter supplied ensures it is suitable for all common radiator valves.

The system cannot be operated with floor heating.

Further features:

 Individually programmable day and night programs

 separately for each weekday

 Holiday/Party function for temporary temperature

changes Weekly limescale protection function prevents the valve blocking

Frost protection function

Key input lock to prevent inadvertent adjustment Automatic summer/winter time adjustment



2/4-channel, surface-mounted wall transmitter. FS20 S4A

Elegant, flat wall transmitter for switching and dimming 2/4 devices, incl. special functions.

Order no.: 17-476-49

FS20 – Home Automation System

The FS20 system brings comfort to the home for little money – it can be expanded practically as necessary, has a modular design and can be implemented everywhere. Install domestic comfort and security piece by piece, with no need for cable – all the components are radio controlled, operating in the disturbance-free 868-MHz bandwidth with a transmission range up to 100 m. Begin with an economic installation in the form of a small control application (e.g. a radio controlled dimmer) and expand the system to a complete domestic system according to your own individual needs. You can control the lighting, ventilators, air-conditioning systems, awnings, blinds – automatically or manually, centrally via the domestic control unit (top hat rail system) or decentrally and flexibly directly at the installation site

The system has various versions available for the remote control: battery or mains powered transmitter, automatic sensors, control units, programmable timers or remote control via the telephone network.

Both stationary actors are available for fixed cabling and mobile actors can be used as receivers.



2/4-channel mini hand transmitter

Compact key ring hand transmitter for controlling 2/4 functions (switching, dimming, special functions) 2/4-channel hand transmitter, FS20 S4

Order no.: 17-575-64



4/8 and 10/20-channel hand transmitter Hand transmitter for controlling 4/8 or 10/20 functions (switching, dimming, special functions)
10/20-channel hand transmitter, FS20 S20

Order no.: 17-386-42

4-/8-channel hand transmitter, FS20 S8

Order no.: 17-386-36



FS20 PIRI

This programmable, radio controlled motion detector can control two FS20 radio receivers separate from each other. Complete room surveillance by means of corner installation and blind spot protection. **Order no.: 17-562-13**



FS20 S4U - 2/4-channel concealed transmitter

A transmitter which can be installed in a concealed socket can be switched by up to 4 external sensors and control FS20 receive devices on 2/4 channels. Operated on 230-V mains power networks. **Order no.: 17-562-10**



2/4-channel battery concealed transmitter, FS20 S4UB

Concealed transmitter for location independent connection for up to four installation sensors and control of 2/4 functions. Battery with 10 years service



Radio controlled dimmer transmitter, FS20 SD

Switches 2 radio receivers independently at programmable ambient light intensity.

Order no.: 17-536-70



Rainfall sensor FS20 SR with sensor heating

Registers when rain begins and sends switching command on two channels, which can be differently programmed, to the FS20 receiver. Add-on switch

Order no.: 17-566-94



Radio controlled, universal thermostat transmitter, FS20 UTS

Temperature control unit for two FS20-channels. With remote temperature sensor, regulation range: -40 °C to +80 °C. For cooling and heating operations.

Order no.: 17-572-73





Radio controlled timer, FS20 ZE

Practical radio controlled timer with up to 12 switching times for max. 4 different radio

signal receivers.

Order no.: 17-386-62



Telephone remote control, FS20 TS
Analog, code-protected, radio telephone control for triggering switching commands or macros on the radio controlled domestic controller via telephone and direct control of FS20 radio signal receivers

Order no.: 17-473-47



Radio signal repeater, FS20 RPT

The use of the signal repeater enables the range of the transmitters (switching command) to be increased up

Order no.: 17-473-75



Radio switching socket, FS20 ST-2

Compact switching socket, serves as a mobile switching actor for the FS20 systems, operated via radio signal or directly on the device, timer function, switching output 16 A at 230 V AC (3680 VA). **Order no.: 17-577-89**



Radio controlled dimmer, FS20 DI-3

Compact FS20 radio controlled dimmer, load up to 200 VA (230 V AC). Operated by radio signal or on the device, timer with slow-on/slow-off function.

Order no.: 17-577-87



Installation radio signal receiver with dimmer, load up to 200 VA (230 V AC). Type DI20-2 for ohm resistive/inductive loads, not suitable for electronic transformers. Type DI22-2 for ohm resistive loads and electronic

Radio controlled dimmer, FS20 DI20-2

Order no.: 17-527-31 Radio controlled dimmer, FS20 DI22-2

Order no.: 17-527-32



Radio controlled LED lamp, FS20 LED Lights rooms with five intense LEDs – ideal as energysaving orientation light. can be switched by radio signal or on the device. With timer function.

Order no.: 17-573-27



Surface-mounted radio switch, FS20 SA

Surface-mounted radio switch for 1 consumer to max. 3680 VA. Type of protection IP 67. Order no.: 17-470-12



4-channel, radio controlled, surface-mounted switch, FS20 AS4

4 consumers up to max. 3680 VA can be switched independent of each other by this IP-67 radio controlled surface-mounted switch

Order no.: 17-461-35



Radio controlled awning control, FS20 MS-2

FS20 RST

For comfortable remote control of electrically operated awnings and blinds. 2 switching contacts, switching output max. 2070 VA (230 V AC, 9 A).

Order no.: 17-536-82

ELV Elektronik AG

CE



For central switching/dimming with control units in the house distributor or subdistributor.

Receiver, FS20 EAM

The FS20 receiver FS20 EAM receives the control signals from the FS20 transmitter and sends them to the FS20 ESH power supply from which it is supplied with power.

Receiver, FS20 EAM Order no.: 17-567-26



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FS20 top hat rail system power supply, FS20 ESH

Amplifies the data coming from the FS20 EAM and, as a result, can trigger up to 36 actors via a 2-wire bus.

At the same time, the FS20 ESH supplies power to the FS20 EAM.

Power supply, FS20 ESH Order no.: 17-568-28



ELV

MIS

Order no.: 17-562-04

For installation in lamps or behind sockets. With timer, dimmer, additionally with slow-on/slow-off Concealed radio controlled dimmer, FS20 DU, 150 VA

Concealed radio controlled switch, FS20 SU, 3680 VA Order no.: 17-562-07

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FS20 top hat rail system switch, FS20 SH

Switches loads up to 16 A (230 V, 3680 VA). With integrated timer function, programmable switching ratio and emergency operation function via button.

Switching actor, FS20 SH Order no.: 17-570-22

Radio controlled blind control FS20 RST

This plug-in radio signal receiver enables remote control of the ECO Roll blind drive unit via the FS20 system transmitter and the FHZ 1000/PC radio controlled domestic control center. Order no.: 17-498-17

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FS20 SH

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ELV



FS20 top hat rail system dimmer, FS20 DH20

Phase-controllable dimmer for connection power up to 200 VA (230 V). For ohm resistive and inductive loads (standard halogen transformer), not suitable for electronic halogen transformer. 3 timers (1 s to 4.5 h, short-term, slow-on/slow-off timer)

Dim actor, FS20 DH20 Order no.: 17-570-14

FS20 DH20 (E ELV 00

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What do you want from a weather station?

If you need to know how the weather is going to develop at a glance, the new WS 200 from ELV is just the thina!

All the aspects of the weather are shown at a glance - weather symbols provide information on the coming weather, a windsock shows the current wind strength, an analog thermometer the current outside temperature. The current phase of the moon is also displayed. One of the most important aspects for weather forecasting is also provided – a bar graph indicating the air pressure over the past 24 hours. Beside it is a diagram indicating the weather tendency.

But, the weather forecast at a glance is even easier: Weather Willy is in the middle and his cloths reflect the current outside temperature range, his waving (and scarf if applicable to the temperature) indicates the current force of the wind and his umbrella shows a probability of rain. So, just a quick look at Weather Willy and you what the weather is like and how it will be. Dress accordingly, you'll always have the right

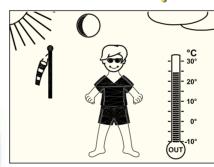
The outdoor data can sent to the weather station by radio signals over a distance of up to 100 m (free field) from the new profi-combi sensor KS 200, meaning it can be set up practically anywhere outside. It can be assembled as required on various masts or an existing mast, a balcony railing or something similar. Up to 8 radio-controlled temperature/relative humidity sensors ASH 2200-1 (see right of page) can be installed within the weather station reception range.



Order no.: 17-575-33

incl. radio sensor KS 200, clamps, stainless steel bar (25 cm) and batteries

Weather Willy



Weather forecast

The weather forecast is indicated by the "clothing status" of Weather Willy and by the weather icons (sun, clouds, rain) at the top of the display.

KS 200 combi-sensor with Q3-1 technology

It contains the sensors for outside temperature/relative humidity, the cup ane-mometer for measuring the force of the wind and the transmitter and batteries. The sensors can be installed or mounted anywhere, even exposed to direct sunlight or precipitation.

Optional accessories:

Sensor mast, for inserting

Metal mast (total length 162 cm), made up of three mast parts and connecting pieces. With pointed tip for ground.

Order no.: 17-577-96

Mast clamps for sensor mast

For universal use, to secure the sensor mast on balcony railings, beams (19-30 mm) etc. Material: steel, chrome-plated.

Order no.: 17-588-21





FEATURES OF THE WS 200 AT A GLANCE

Radio transmission:

868-MHz radio transmission with a range of 100 m (free field)

Temperature:

Up to 9 sensors can be connected, two temperature values are shown simultaneously: 1 x indoor and 1 x optional outdoor temperature, resolution 0.1 °C, accuracy ±0.8 °C, display unit: °C/F, dew point (indoor) or dew point/windchill display (outdoor), comfort zone indicator for indoor display, temperature range: Indoors: 0 °C to 59.9 °C, Outdoors: -29.9 °C to 79.9 °C, additional outside temperature display via analog thermometer graphic

Relative humidity:

Up to 9 sensors can be connected, two humidity values are shown concurrently. range 1-99 %, resolution 1 %, accuracy

Air pressure trend: Display using five arrows (rising, rising steeply, dropping, steeply dropping, no change)

Air pressure history:

Display using bar graph, up to 24-hour tracking

Wind speed:

Optional display in kph, m/s, mph, resolution 0.1 km/h, windsock symbol for light, average and strong winds

Sunrise and sunset:

Adjustable to individual locations Moon phase:

Mood phase display in eight phases

Time & date: Quartz clock Weather forecast:

Weather symbols for: sunny, fair, cloudy, rainy, and Willy's choice of clothing

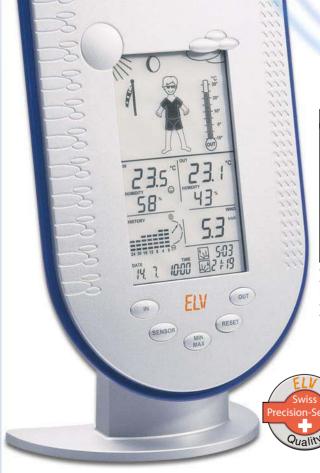
Memory options:

Min./max. values with time & date

Independent of mains power supply:

Base station 4 x LR6/round cell, sensor 3 x LR3/round cell, battery life up to 3 years (station and sensor)

Housing dimensions (W x H x D): 136 x 198 x 35 mm (without stand)



indoor temperature and indoor humidity

Wind speed



Outdoor temperature andoutdoor humidity





pressure trend

Sunrise, sunset, time & date Moon phase display

Willy presents you with the weather

The weather forecast was made vesterday - now here comes Willy. Elegant design, innovative sensor technology, and the weather forecast presented by Willy the weatherman - these are just a few of the features of the new radio weather station from ELV.

It displays not only the weather data but also calculates the weather forecast for your immediate area and registers wind speeds as well as rainfall. It also provides you with other interesting information, such as the current phase of the moon, sunrise and sunset times, weather trends, room climate and more.

To find out quickly what the weather is going to be like, all you have to do is take a look at what clothes Willy is wearing. Whether swimsuit or scarf and umbrella, Willy has over 40 variations for dressing appropriately for the weather just outside your door. As soon as it begins to rain and the sensor detects it, Willy informs you by appearing with an opened umbrella – you don't even have to look outside to know.

The new combi-sensor with mounting mast can be set up anywhere up to a distance of 100 m from the base station without having to lay any cables or drill holes. The ASH 2200-1 sensors for measuring the temperature and relative humidity can be installed in up to 8 additional locations and transmit data via radio to the weather station using low disturbance 868 MHz technology, no cables being necessary.

Unique concept — Fantastic Price



KS 300 Combi-sensor with Q4-1-technology

Profi-sensor implementing protected temperature-relative humidity sensor, ball bearing cup anemometer and rainfall measuring system with immediate signal of first raindrops. Installation on 2 m mast with pointed end for putting in the ground. Battery change without tools.

ASH 2200-1 Outdoor temperature/

humidity sensor 868 MHz

Order no.: 17-563-20

Weather forecast

The weather forecast is indicated by the "clothing status" of Weather Willy and by the weather icons (sun, clouds, rain) at the top of the display.

FEATURES OF THE WS 300 AT A GLANCE

Radio transmission:

868 MHz radio transmission linking all sensors

Temperature:

Up to 9 sensors can be connected, two temperature values are shown simultaneously: 1 x indoor and 1 x optional outdoor temperature, resolution 0.1 °C, accuracy ±0.8 °C, display unit: C/F, dew point (indoor/outdoor) or dew point/windchill display (outside), comfort zone indicator for indoor display, temperature range: 0 °C to 59.9 °C, outdoor temperature range (KS 300): -29.9 °C to +79.9 °C Relative humidity:

Up to 9 sensors can be connected, two humidity values are displayed simultaneously, resolution 1 %, accuracy ±5 %, re. humidity measuring range (indoor/outdoor): 0 % to 99 %

Air pressure trend:

Display using five arrows (rising, rising steeply, dropping, steeply drop-

ping, no change) Air pressure history:

11

Display using bar graph, up to 24hour tracking

Rainfall:

Range 0 to 999 mm, display total since last reset, last 24 hrs. or 1 hr., display in mm, I/m², resolution <0.3 mm Wind speed:

Optional display in kph, m/s, mph, resolution 0.1 km/h, windsock symbol for light, average and strong winds, wind speed: 0 to 200 km/h Sunrise and sunset:

Selectable display of individual loca-

tions Moon phase:
Display of the current moon phase in

six stages Time & date:

Quartz clock

Weather forecast:

With weather icons: sunny, fair, cloudy, rainy, and Willy's choice of clothing Extensive memory options:

Min./max. values with time and date Independent of mains power supply: Base station 4 round cells, sensor 3 round cells, battery life >3 years (station and sensors)

Housing dimensions (W x H x D): 160 x 220 x 35 mm (stand excluded)



indoor temperature and indoor humidity

Wind speed



Outdoor temperature

and outdoor humidity

WS 300 WIRELESS WEATHERSTATION



Air pressure history,

Moon phase display

air pressure trend

Rainfall, immediate Sunrise, Sunset, display on starting to rain Time & date



Hand-held wind meter

Stationary wind meters have not always been available at all sites where they are needed, such as sites for flying model aircraft, para-gliding, sailing, surfing and many other leisure activities. In addition to the excellent portability provided by its compact design and the innovative "packaging" of the wind wheel, the new ELV handheld wind meter permits not only determination of the wind strength, but also the complex assessment of the weather situation at the

The large LC display shows simultaneously • the wind strength in digital and quasi analogue form • the max. or average wind speed • the temperature at the site and • the min. or max. temperature as required.

Short-term changes can be understood more quickly using the analogue bar graph display than the digital display. The wind strength can be displayed in knots, km/h, miles/h, m/s or Beaufort as desired, with the temperature either in °C or °F, or alternatively as a windchill equivalent ("sensed temperature"). The latter display is very useful as it enables you to make a real evaluation of the heat loss of the human body when subject to wind, and therefore prevent hypothermia. In this respect operation of the hand-held device with only two large keys is especially simple. The protective cap that protects the wind wheel against damage in transport can also be used as a stand for the device when in operation, so that a firm and secure mounting is provided. For battery conservation the device has an automatic battery disconnect.

Order no.: 17-391-63





Functional:

The protective cap that protects the wind wheel against damage in transport can also be used to provide a secure mounting for the machine.

	Technical data: ELV hand-held wind meter
	Wind strength: 0 to 200 km/h Measuring range: 0 to 200 km/h Resolution: max. 0.1 km/h Accuracy: ±5 % Temperature: Measuring range: -20 to 70 °C Resolution: max. 0.1 °C Accuracy: ±1 K Voltage supply: 2 x AAA microcells Dims. (HxWxD): 180 x 70 x 60
- 1	

THERMOMETER

T 1100

Datalogger-Temperature-Humidity Measuring Device with USB interface

No matter where you are -

situation directly on site

with the ELV wind egg you can measure

the exact wind strength and weather

TFM100 TEMPERATUR / FEUCHTE MESSGERÄT IISB

The TFM 100 is a portable device for accurate measurement of the temperature and relative humidity as well as for storing measurement data. It determines temperatures within the range from -40 °C to +120 °C and the rel. humidity in the range from 0 to 99.5 % with a resolution of 0.1 °C or 0.5 %

with USB interface

· Hold function Accuracy ±3.5 % Temperature measuring range: -40 °C to +120 °C, resolution of 0.1 °C

· Relative humidity: 0 to 99.5 %, resolution of 0.5 % Accuracy of ±0.5 °C
 Min/Max value display

 Datalogger function with adjustable recording interval

(2000 measurement capacity, interval of 1 s to 1 h) The measured values stored can be read out from the TFM 100 via the USB interface using appropriate Windows software and analyzed. saved, exported and printed on a PC.
Voltage supply: 9 V block
Dim. (W x H x D): 71 x 171 x 28 mm

Order no.: 17-577-19

Mobile, handy precision thermometer with a large measuring range between -40 °C to +1000 °C, a resolution of 0.1 Kand min./max. value detection for compiling extreme values during the current measu-

1000 °C datalogger thermometer

- Temperature measuring range: -40 °C to +1000 °C, resolution of 0.1 °C Accuracy of 2 % ± 1 °C Min/Max value detection

- Min/Max value detection
 Hold function
 Auto Power-Off function
 Datalogger function with adjustable
 recording interval (2000 measurement
 capacity, interval of 1 s to 10 min)
 "Fill level indicator" with bar graph
- indicating used memory capacity

The stored values can be read out via the USB interface using the appropriate

Windows software and processed in standard spreadsheet programs

- High temperature sensor supplied (K-type thermal element sensor) with a measuring range from -40 °C to 250 °C
- Voltage supply: 9 V block
- Dim. (W x H x D): 71 x 171 x 28 mm

Order no.: 17-572-22

Order no.: 17-384-08

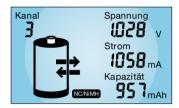
Charge

Battery identification and start of the charging process occurs automatically. Charging is performed to 100% capacity. Then pulse compensation charge.



Discharge

Discharging the battery to its total discharge voltage. Display of discharged capacity.



Discharge/Charge

Discharge, the automatic charging with display of discharged capacity.



Refresh

By applying a current pulse, a possible cell discharge can frequently be cleared. This is followed by several charge/discharge cycles.



Regenerate cycle

Run down or damaged cells should run through the charge/discharge cycle until no more capacity increase can be detected. Then switch to compensation charge.



Test

Complete charge/discharge cycle with measuring and display as well as automatic full charging and transition to compensation charge.

ALC 1000/2000 Expert High performance NiMH, NiCd and also RAM cells can Transparent electronics be charged, single cell management protective cover, Ergonomic, insulated charge well ventilated and swivels through elegantly packed contacts with automatic type detection Illuminated display. simple user guidance all measured values **Additional** at a single glance charging bay compound batteries Additional charge/discharge control display Easy to operate

ALC 1000 EXPERT / ALC 2000 EXPERT

- Suitable for guick charging NC, NiMH batteries and RAM cells

- ALC 2000 Expert has 10 separate, independent charging bays, the ALC 1000 Expert 5 charging bays

- Automatic battery type and technology detection

- Large, back-lighting, multifunction display

Simple operation with graphical user guidance for all models

- Separate monitoring and control for each individual charging bay

- Display of voltage, current and capacity

 6 different charging programs for best possible battery care, data retention following power failure

 Slow charging with reduced charging current (ALC 2000 Expert only)

 Integrated, temperature controlled fan (ALC 2000 Expert only)

Control and operation - clear and simple

unit for regular charging

Mix batteries as desired

Standard operation simply involves inserting the battery - and that's it.

The charging unit detects the battery

Gives run down batteries a

new lease of life - the ALC 2000 Expert can manage up

to 10 batteries at the same

The top model within the new ALC series from ELV for the simultaneous

and independent management of up to 10 batteries of the types NiCd and NiMH as well as RAM cells.

Easy operation, full view of data and

functions for each battery and 6 intel-

ligent battery handling programs distinguish this first class charging

The batteries inserted in the 10 charging

bays is completely flexible, e.g. 8 round cells of various types and 2 x 9 compound batteries. As a result of the fully

independent management of the batte-

ries, even fully run down or damaged batteries can be inserted in any bay at

the same time others are inserted in the

time!

The charging unit detects the battery type and technology automatically, and begins the charging process immediately the battery is inserted correctly and, when the charging process has been completed, automatically activates compensation charge.

pensation charge.
In the case of extended functions, the operating buttons are used to select the required program to manage the batteries. Press the corresponding button and the large back-lighting LCD displays the most important data for each battery, such as voltage, charging current and lost capacity (refer to view of the display for the ALC 1000 Expert). In order to establish the status of all the

batteries (charge/discharge/compensation charge) at a glance, the corresponding LEDs are provided on each charging bay.

Charging - intelligent, quick and battery-friendly

The unit charges NiCd and NiMH batteries according to the ΔU method. Charging occurs as quick charging. RAM cells are charged using constant

RAM cells are charged using constant voltage with the switch off criteria end of charge voltage and wasted cell voltage. To eliminate interfering transition resistances during voltage measurement, it is performed currentless.

After charging, the battery can remain in the unit as long as required. Self-discharge is prevented during storage and the battery alays retains its full capacity. An summary of the 6 charge/discharge programs available is provided on the left.

ALC 1000 Expert

As the ALC 2000 Expert, but with 5 charging bays, no slow charge program and no integrated, temperature controlled fan.



Order no.: 17-384-09



ALC 8500 Expert – Simply the Best

- A total of 4 independent charging channels can be operated simultaneously: 2 channels each with 5 A max. charge current and 5 A max. discharge current 2 channels with 1 A charge current and 1 A discharge current (total, can be distributed as required)
- Max. charge current 30 V (20 cells NiCd/NiMH or 12 cells Pb) at the channels 1 and 2 or 15 V (10 cells NiCd/NiMH or 6 cells Pb) at channels 3 and 4
- 8 charge and service programs incl. battery forming and lead battery activator function
- future-safe for new battery parameters through Flash memory technology
- battery Ri measurement (optional four-wire measuring cable optional)
- battery temperature monitoring (optional measuring cable)
- lead battery activator function

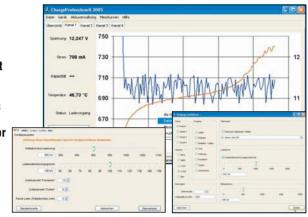
One for all – the new power charger cannot only charge al commercially available battery systems simultaneously, including LiPo batteries, it does very fast on four independent charging channels and operates in a way which protects the batteries.

A newly developed microprocessor-controlled battery management saves bat-tery data individually, compiles it in a database and transfers to a PC via a USB port. The data can be evaluated in detail with the optional "Charge Professional" PC software. You always know the state of all your batteries.

If something new comes onto the battery market – no problem! Thanks to the Flash memory technology, the charging device can fulfill future needs!

ALC 8500 Expert Complete Unit incl. PC software 'Charge Professional"

Order no.: 17-578-37 Four-wire Ri measuring cable Order no.: 17-577-72



Properties and features:

- 4/3 charging channels to connect 4*/3 batteries/battery sets, simultaneous processing on al 4*/3 channels even for different functions
- Accurate determining of battery capacity, e.g. to select battery packs
- Different charge programs for best possible battery care: charging, discharging, discharging and
- charging, refreshing, cycles, test/capacity measurement, forming, retention charging after loading Support for different battery technologies: NiCd, NiMH, lead acid, lead gel, lithium ion, lithium ion
- Lead battery activator function to prevent sulphate precipitation*
- Integrated battery Ri measuring device (optional four-wire measuring line)*
- Integrated datalogger for recording and storing complete charge/discharge trend characteristics*
- Data retention in the case of a power failure, automatic program start USB-PC interface for controlling the ALC 8500 Expert and to read out the datalogger (electrically isolated)
- Display of cell voltage, charge current, discharge current, charged capacity, discharged capacity
- Integrated, temperature controlled fan; temperature protection circuit for transformer and end stage
- Futuristic Flash memory technology possibility of firmware updates and firmware upgrades Easy use through rotary pulse encoder and menu control
- * ALC 8500 Expert only

Temperature sensor Order no.: 17-221-91

Technical data: ALC 8500 Expert

Discharge current: Cl Supports battery technologies: End of charge detection: Negative voltage difference with NiCd and NiMH, Current/Voltage curve with lead, lead gel, Li-ion and LiPo Displays: Graphic display
Operating elements: Buttons, rotary pulse encoder
Special functions: Ri measuring battery, lead battery activator (Channel 2),
Connection for external temperature sensor, integrated datalogger ... Graphic display

Little brother - ALC 8000

The ALC 8000 is equipped with 3 charge/di-scharge channels and is based on technologyused in the ALC 8500 Expert.

Charge channel 1 is designed for up to 20 cells connected in series. Depending on the number

of cells, up to 5 A charge/discharge cur-rents are available. The total charge power of channel 1 is max. 40 VA.

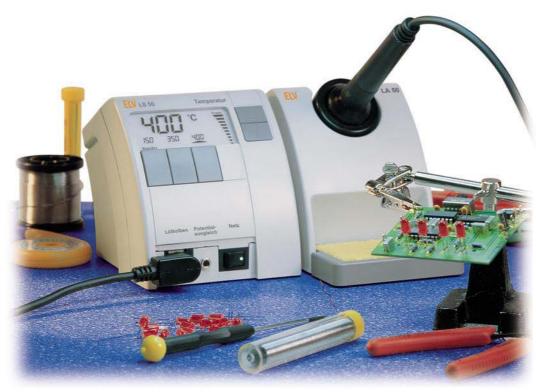
Channels 2 and 3 are designed for rated battery voltages up to 12 V, the total charge current is 1 A, it can be distributed to the two channels as required Apart from that, the ALC 8000 is equipped



with the same features as the ALC 8500 Expert but, since it is a cheaper alternative, it is not equipped with the datalogger, lead battery activator and Ri measuring functions and USB-PC interface.

ALC 8000 Order no.: 17-568-46

LS 50 - The programmable enhanced-feature soldering station



temperature setting

3 temperatures using up/down switch, or 2 temperatures plus standby temperature, can be preset and retrieved at the touch of a button.

High quality 48W soldering iron



Standby / Auto power-off function

After the programmed period of time has elapsed, the LS 50 automatically switches to the preset standby temperature or switches off completely.

Multifunction display

provides a clear overview of all major parameters on the high-contrast LC

Order no.: 17-346-20

Offers numerous useful features and excellent user convenience at an affordable price

ELV Comfort Soldering Station LS 60

The future of soldering has already

Soldering with completely new qualities: Not only the ease of operation and use make this soldering station a pleasure to work with, having a temperature saving option and large, light blue LC display, but even the old, mundane "soldering iron system" offers a comfort unknown until now. After pressing a button, the soldering sponge is moistened with water from an internal tank. The automatically controlled sponge moves in and out of a motor-driven drawer. This prevents the soldering sponge drying out and means you can start work imme-

diately.

A high quality, maintenance-friendly soldering iron version with real temperature of the provides perature measuring at its tip provides perfect soldering points.

- 5 programmable functions
- Back-lighting, jumbo-LC display
- Autom. drawer for soldering sponge
- Auto Standby, Auto Power Off

Complete soldering station with LS 60 base unit, LA 60 soldering iron system and high quality soldering irons 24 V/60 W, 150 °C to 450 °C.

Order no.: 17-317-25



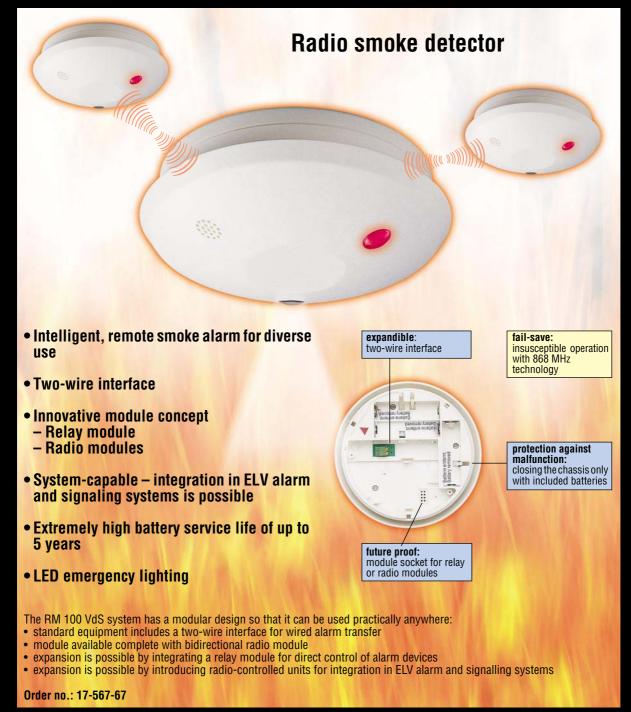
sing a button, one of them can be pro-grammed as a standby temperature. The Auto Standby and Auto Power Off

functions ensure simple operation. Standby and power off times can be programmed in 5 min. intervals (each until 9:55 h)

Large, blue background LC display indicates the set and actual temperatures of the soldering irons, up to three set temperatures, the thermal balance of the soldering iron and all operating states.



- Competence in Electronics



Design
 Research and Development
 Production

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