SIEMENS

Sinteso™

Test units and accessories

FDUL2901, FDUD2912, FDUD2911, FDUL221, FDUD29x, FDUD29x-E, RE6, REF8, REF8-S, REF8-C, RE8, RE8-S, RE8-C, RE7T, RE8ST, RE8STCO, RE8-CO, RE7T-x, RE10, FDUM293, FDLU291, LE3, StabexHF, T-229/4P, 3415MZ0-EX

Test units to test detectors and detector lines for FS20 fire detection installations

- FDUD291 detector exchanger for efficient insertion and removal of Sinteso point detectors
- Detector exchanger FDUD2911 for inserting and removing of FD20/FD40 fire detectors
- Electronic detector tester FDUD2912 for inserting, removing and testing of FD20/FD40 fire detectors and testing addressed manual pull stations
- Detector exchanger and tester FDUD292 and intelligent detector tester FDUD293
- FDUD29x-E Bluetooth extension kit for wireless communication between the FDUD292 detector exchanger and tester and a mobile terminal device
- Fire Field Assist FDUL2901 for diagnosis of detector circuits
- FDUL221 line tester for diagnosis of detector lines
- RE6 detector tester for use with environmentally friendly test gases REF8, REF8-S, REF8-C
- RE7T detector tester with hot air generator, RE8ST detector tester with RE8-S smoke capsule, RE8ST-CO detector tester with RE8-S smoke capsule, RE8-CO capsule and CO capsule
- RE10 detector tester for function checking of linear smoke detectors
- FDUM293 telescope rod as extension for detector exchangers / detector exchangers and testers and other testers
- Test lamps for FDF242, FDF242-EX infrared flame detectors

Line tester FDUL221

Properties

- 4-line display with 20 characters per line
- Menu-guided operation
- Supply with battery or via network adapter
- Possible to update the device software (firmware) via the MCL-USB adapter (radio) FDUZ227 and via a PC
- Environmentally friendly processing
- Reusable materials
- Electronic parts and synthetic materials can be easily separated

Function

Different functions can be called up, e.g.,:

- Number of devices found at A and B connection
- Line errors found, location of the line error
- Short-circuit, open line, ground fault with indication of which conductor/s
- Total resistance is too high and/or charge voltage at the line end is too low
- Data transmission fault due to line capacitance being too high
- Browsing from detector to detector with screen displaying type and serial number
- Display of branches and choice of branch for scrolling
- Activating the internal alarm indicator of the selected detector and recognizing the connected alarm sounder
- Extended operation and functionality on PC with line tester software FXS2017
- The line tester software FXS2017 is included in the scope of delivery of the line tester FDUL221.

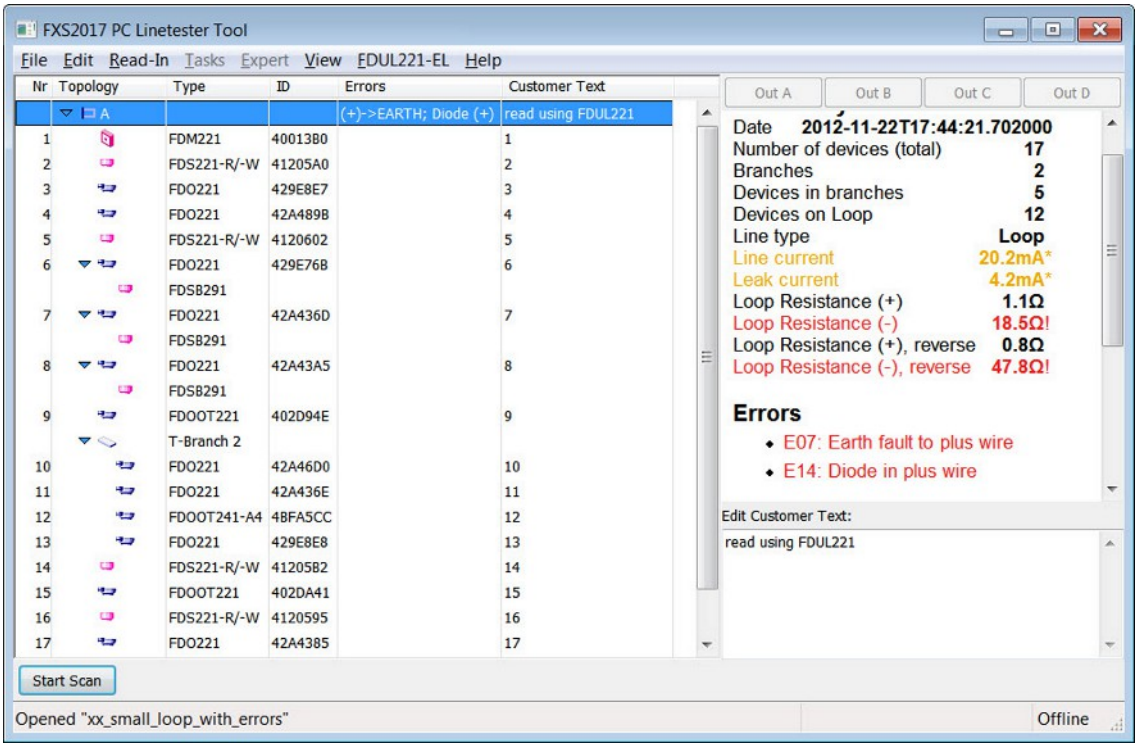


Fig. 1: Line tester software FXS2017

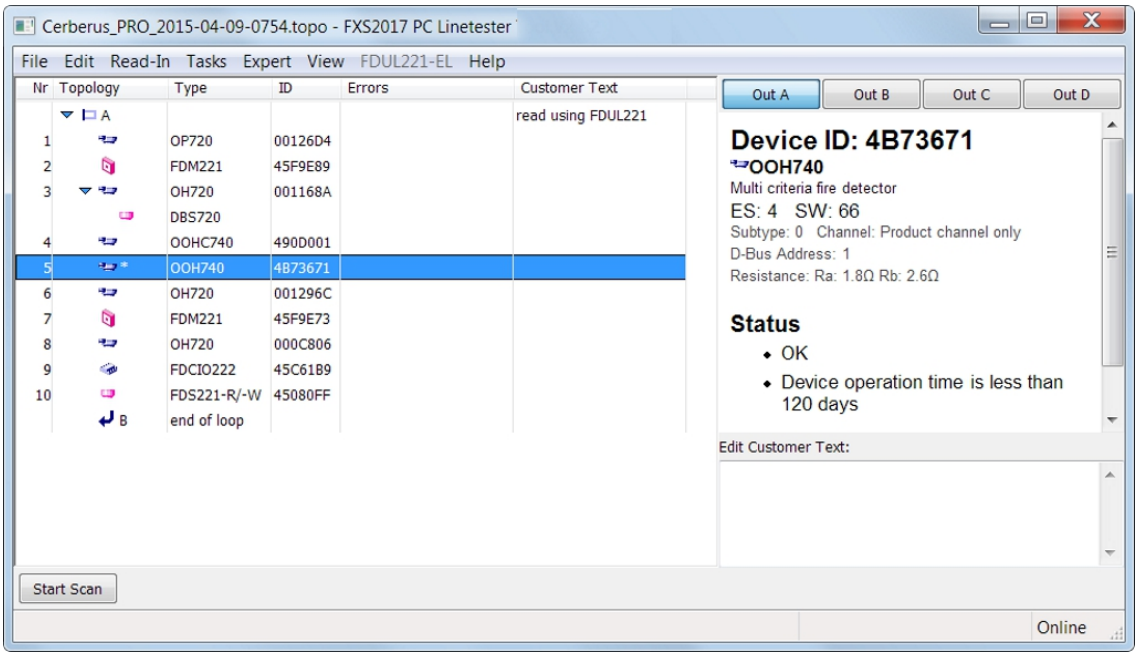
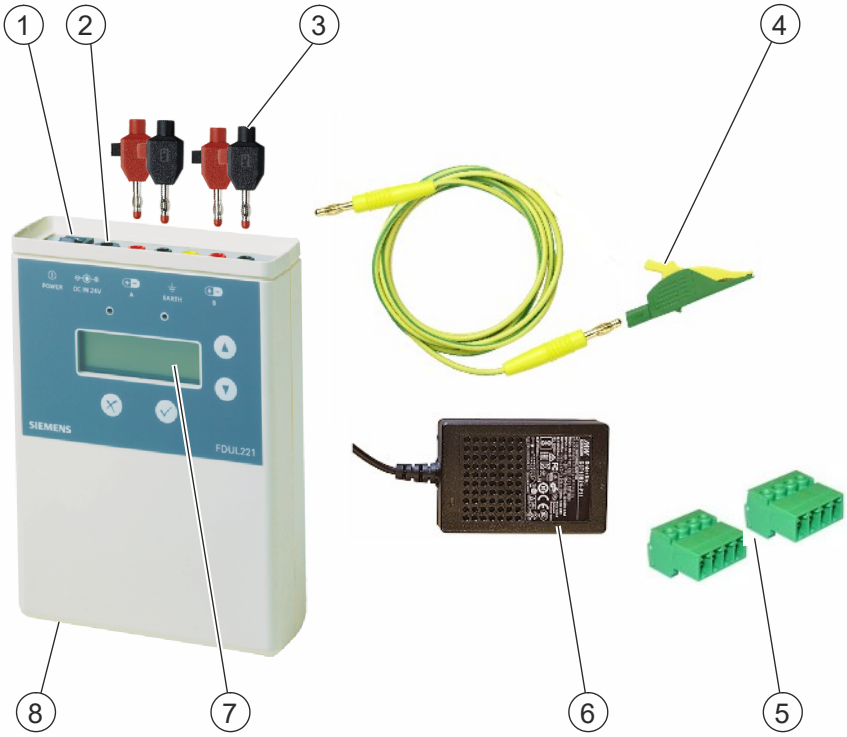


Fig. 2: Line tester software FXS2017

Use

The line tester FDUL221 is a universal device for the final testing of fully installed FDnet fire detector lines if a control panel is not connected. The device is used to for error searches by the electrician, installer, or service technician.



1 On/Off switch
2 USB connection
3 Connection of a loop or stub line
4 Shielding
5 2x terminal strips for the detector line
6 network adapter
7 Display
8 Battery compartment on the underside for 2x 9 V lithium batteries, not included in scope of delivery

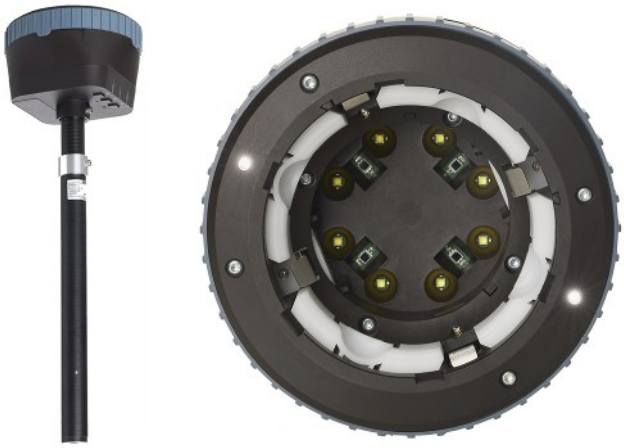
Fig. 3: Scope of delivery FDUL221

FDUL2901 Fire Field Assist

Features

- Controlled via the 'Building X Fire Install' app (Bluetooth®)
- Communicating via the software 'PC Linetester-Tool' FXS2017 (USB-C)
- Detects wiring errors on the detector circuit
- Performs resistance measurement on the detector circuit
- Detects the arrangement of devices on the detector circuit
- Detects the status of devices on the detector circuit
- Reads the topologies of circuits
- Saves the topologies of circuits
- Battery powered or mains powered (USB-C)

Electronic detector tester FDUD2912



Features FDUD2912

- Inserting and removing FD20 and FD40 fire detectors
- Testing FD20 and FD40 fire detectors and manual call points
- User interface
  - ON/OFF button
  - 2 Function keys
  - 3 LEDs for status displays
- One-step commissioning
- Operation via the 'Building X Fire Connect' app or in stand-alone mode
- Bluetooth® for communication with the 'Building X Fire Connect' app (Android and iOS)
- USB-C port for communication (Android) and for charging the battery
- Battery 'ANSMANN Li-Ion 18650 3500mAh' (not included in the scope of delivery)
- Lamp (2 LEDs)

Detector exchanger FDUD2911

Features FDUD2911

- Inserting and removing FD20 and FD40 fire detectors
- Detectors can be changed in rooms up to a height of 8.5 m, using the telescope rod FDUM293

Detector exchanger FDUD291

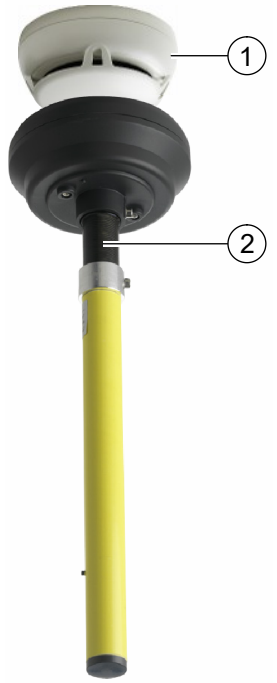
This product is discontinued and is replaced by the FDUD2911.

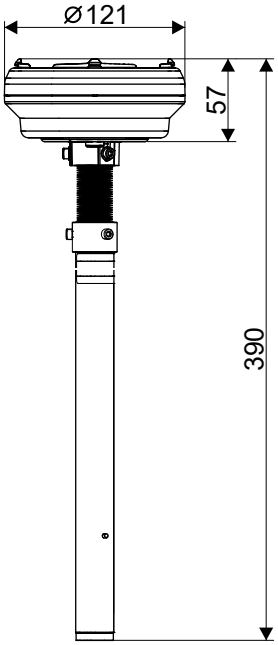
Properties

- In rooms up to a height of 8 m, detectors can be changed without using ladders (using telescope rods)
- Joint springs permit insertion or removal of point detectors in any direction and at any desired angle.
- The point detector can be fastened in four rotational positions. This facilitates efficient working.
- Specially developed springs hold the point detector in the detector exchanger.
- Compatible with
  - telescope rod FDUM293
  - previous extension connectors VR10/11/12/13
  - MP/MT retaining rods and extension connectors
- Environmentally friendly processing
- Reusable materials

Function

- Efficient installation and removal of the point detectors FDO, FDOOT, FDT, FDOOTC





1	Point detectors FDO, FDOOT, FDT, FDOOTC		Dimensioned drawing FDUD291
2	Joint springs of the FDUD291		

Detector exchanger and tester FDUD292 and intelligent detector tester FDUD293

This product is discontinued and is replaced by the FDUD2912.

The detector exchanger and tester FDUD292 and the intelligent detector tester FDUD293 are universal tools for inserting and removing point detectors. The FDUD292 is used for commissioning and maintenance, the FDUD293 is used for maintenance of FDnet devices. The following devices are excluded from this:

- Flame detector FDF2x1-9
- loop separators FDCL221 and FDCL221-M
- Radio gateway FDCW241
- Radio manual pull station FDM273
- Neuronal radio fire detector FDOOT271

Properties

- Efficient and environmentally friendly testing of detectors without using gas
- In rooms up to a height of 8 m, detectors can be changed without using ladders (using telescope rods)
- Flexible springs permit insertion and removal of point detectors in any direction and at any desired angle.
- The point detector can be fastened in four rotational positions. This facilitates efficient working.
- Specially developed springs hold the point detector in the detector exchanger and tester.
- Efficient operation thanks to alphanumeric display including lighting and keyboard
- Easy-to-read LED displays for 'Test OK.', 'Detector exchange recommended', 'Detector exchange urgently required'
- 9-V battery operation
- Compatible with
  - telescope rod FDUM293
  - previous extension connectors VR10/11/12/13
  - MP/MT retaining rods and extension connectors
- The device software (firmware) can be updated via the MCL-USB adapter (radio) FDUZ227 and via a PC
- Environmentally friendly processing
- Reusable materials
- Electronic parts and synthetic materials can be easily separated

Function FDUD292

- Efficient installation and removal of the point detectors FDO, FDOOT, FDT, FDOOTC
- Commissioning, maintenance, status checking, and testing of detectors with further diagnosis information directly on site
- Requesting parameters such as the bus address and changing detector settings
- Efficient error search on the detector and the control panel, particularly during installation
- Access levels with different functional scope
- Efficient testing through communication with the 'Sinteso Test' smartphone app; only with optional Bluetooth extension kit FDUD29x-E

Function FDUD293

- Efficient installation and removal of the point detectors FDO, FDOOT, FDT, FDOOTC
- Testing and triggering detectors

- Efficient error search on the detector and the control panel, particularly during installation

Use

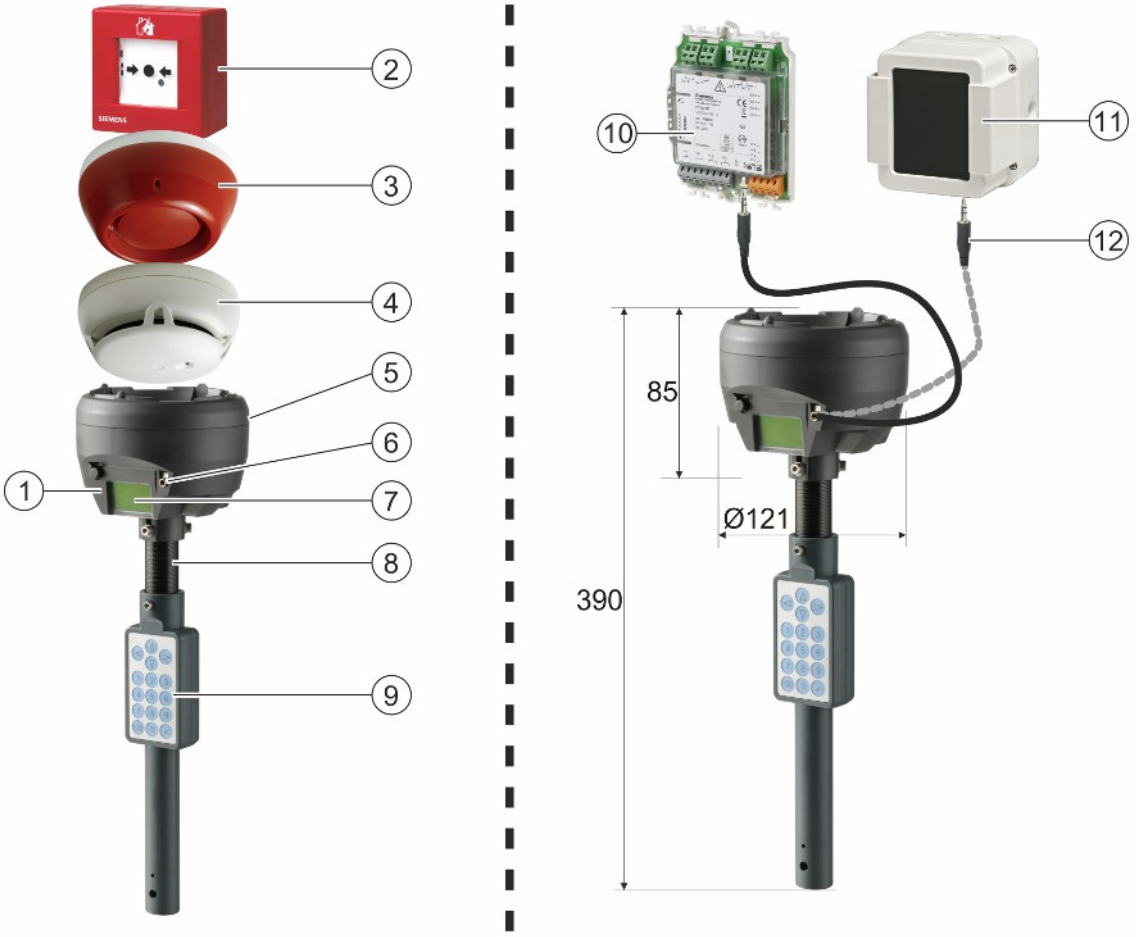
The test device and line device communicate either wirelessly or via the MC link (Maintenance and Commissioning Link) with an adapter cable.

A wireless connection is possible with the following line devices:

Device	Exceptions
All point detectors from the 'Sinteso™' product line: FDO, FDOOT, FDT, FDOOTC	FDOOT271
All manual call points FDM	FDM231, FDM233, FDM234, FDM243H, FDM273
All alarm sounders FDS	—

A connection via the adapter cable FDUD292-A is possible with the following line devices:

Device	Exceptions
All modules FDCI and FDCIO	FDCI221, FDCI223, FDCIO221
Linear smoke detector FDL	—

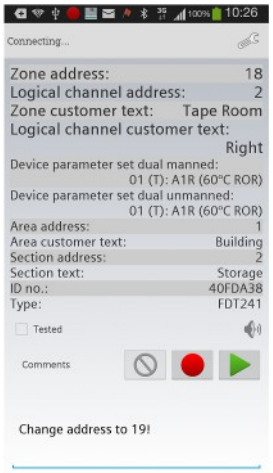


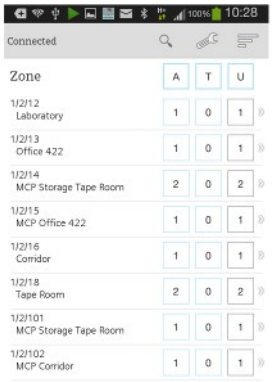
1 LEDs
2 Manual call point FDM
3 Alarm sounder FDS
4 Point detectors FDO, FDOOT, FDOOTC, FDT
5 Battery compartment on the rear
6 Adapter cable connection FDUD292-A
7 Display
8 Joint springs
9 Keyboard
10 Modules FDC
11 Linear smoke detector FDL
12 Adapter cable FDUD292-A

Bluetooth extension kit FDUD29x-E

- For connecting the detector exchanger and tester FDUD292 to a mobile terminal
- Enables wireless data exchange between a detector exchanger and tester and a mobile terminal
- Compatible with detector exchanger and tester FDUD292

'Sinteso Test' Android app





'Sinteso Test' simplifies the process of comparing the data stored in the detection tree with the device information for installed peripheral devices. 'Sinteso Test' is installed on a mobile terminal – for example, a smartphone – and used alongside a detector exchanger and tester FDUD292 and a Bluetooth extension kit FDUD29x-E.

The detector exchanger and tester FDUD292 with Bluetooth extension kit FDUD29x-E installed sends the 'serial no.', or 'ID no.', of an installed peripheral device to 'Sinteso Test'. 'Sinteso Test' displays the data assigned to the 'serial no.', or 'ID no.', in the detection tree. The detector exchanger and tester allows you to query the device information for the installed peripheral device and compare this with data from the detection tree.

Detector tester RE6

- The RE6 detector tester is used together with a REF8, REF8-S or REF8-C test gas can. It is intended for testing optical smoke detectors together with ionization smoke detectors and CO detectors.
- For the test procedure, the detector tester is pushed over the detector. Briefly pressing it on causes the test gas to flow into the measuring chamber of the detector, thus simulating the presence of fire aerosols. Within a short response time the detector trips and triggers the alarm.
- REF8 and REF8-S are environmentally friendly test gases and satisfy strict environmental protection regulations. They do however contain flammable substances. REF8 is used within the temperature range 0…+40 °C, REF8-S is used within the temperature range -20…+40 °C in both dry and moist ambient conditions. REF8-S is used primarily for temperatures lower than 0 °C or for point detectors which raise the alarm only at high smoke densities or after long periods of signal integration.
- REF8-C is used for testing the CO functionality of detectors with a CO sensor. REF8-C can be used in dry and moist ambient conditions at temperatures from -20 °C to +50 °C.
- In high rooms, use the telescope rod. (Order the FDUM293 telescope rod separately)

During transport (for instance in a car) it is recommended that detector testers and test gas cans are protected against heat.

For operation, see the instructions on the detector tester.

Detector tester RE7T – Solo461 heat detector tester kit

The heat detector tester kit consists of

- 1x heat detector tester,
- 2x rechargeable batteries,
- 1x battery charger (with 12-V connection cable) and
- 2x mains cables (AC 110/120-220/240 V).

The heat detector tester contains a hot air generator. For the function check, the heat detector tester is pushed over the detector. The hot air that flows out heats up the detector, which responds by triggering the alarm.

Adapters and telescope rods can be used to access and test detectors in high rooms, even if they are in angled positions.

The RE7T-A adapter and the FDUM293 telescope rod must be ordered separately.

Heat detector testers must not be used in electrical switchgear cabinets or in explosion hazard areas.

RE8ST detector tester (Testifire 1001-045 ST test kit)

The RE8ST test kit consists of

- 1X 1001-045 Testifire tester,
- 1X RE8-S smoke capsule,
- 2x rechargeable batteries,
- 1x battery charger (with 12-V connection cable),
- 2x mains cables (AC 110/120-220/240 V),
- 1x USB cable.

The detector tester contains a smoke capsule. For the function check, the detector tester is pushed over the detector. The smoke that flows out triggers the alarm.

The detector tester can also be used to test thermal fire detectors.

Adapters and telescope rods can be used to access and test detectors in high rooms, even if they are in angled positions.

The RE7T-A adapter and the FDUM293 telescope rod must be ordered separately.

Detector testers must not be used in electrical switchgear cabinets or in explosion hazard areas.

RE8STCO detector tester (Testifire 2001-045 STCO test kit)

Fig. 4:

The RE8STCO test kit consists of

- 1X 2001-045 Testifire tester,
- 1X RE8-S smoke capsule,
- 1X RE8-CO CO capsule,
- 2x rechargeable batteries,
- 1x battery charger (with 12-V connection cable),
- 2x mains cables (AC 110/120-220/240 V),
- 1x USB cable.

The detector tester contains a smoke capsule or CO capsule. For the function check, the detector tester is pushed over the detector. The smoke that flows out or the gas that flows out triggers the alarm .

The detector tester can also be used to test thermal fire detectors.

Adapters and telescope rods can be used to access and test detectors in high rooms, even if they are in angled positions.

The RE7T-A adapter and the FDUM293 telescope rod must be ordered separately.

Detector testers must not be used in electrical switchgear cabinets or in explosion hazard areas.

Accessories and spare parts for RE7T/ RE8ST/RE8STCO

RE7T-A (Solo719 adapter for FDUM293)

Installation adapter for the RE7T, RE8ST and RE8STCO detector testers on the FDUM293 telescope rod

RE7T-B1 (Solo770 battery)

Battery as a spare part

RE7T-C1 (Solo727 battery charger)

Battery charger as a spare part for charging RE7T-B1 batteries

RE8-S (smoke capsule) for RE8ST and RE8STCO

RE8-CO (CO capsule) for RE8STCO

Telescope rod FDUM293

Properties

- Light and robust yellow plastic pipes, non-conductive material
- Plastic sockets and friction bearings ensure that the pipes run into each other easily.
- Quick spring-type locking mechanisms allow continuous adjustment of the length.
- The pipes can be extended to their maximum length. A stop is used to prevent them from extending further.
- Existing testers can be used.
- The telescope rods cannot be extended.

⚠ WARNING	
	Falling objects Danger of injury ● Always wear a hardhat when working with telescope rods.

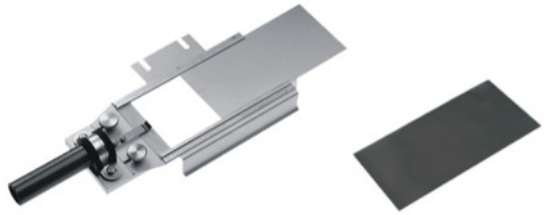
⚠ WARNING	
	Approaching or touching live lines Electric shock ● Only use testers with telescope rods in volt-free areas.

⚠ CAUTION	
	Uncontrolled movements of sections of rod Injuries to hands ● Keep a tight hold of the section of rod during the insertion process. ● Starting at the bottom, insert the sections of rod one after the other, largest diameter first. ● Maintain the safety distance between the sections of rod. ● Use a spring-type locking mechanism to secure each section of rod.

FDUM293

- The telescope rod is a 2-in-1 product consisting of five segments
- The maximum length of the telescope rod is 7.3 m. It is suitable for ceiling heights up to 8.5 m
- Both the upper inner segments are removable and can be used separately as a smaller rod with a length range 1.7…3.2 m
- Thanks to the buckle fasteners the length is steplessly adjustable
- Scope of delivery:
  - Telescope rod
  - Separate foot for the inner rod
  - Padded bag with adjustable shoulder strap and hand carrying strap, internal Velcro straps and loops for secure transport of the telescope rod

Detector tester RE10, alarm test filter TF04



- For function checking of the FDL241-9 linear smoke detector. The TF04 alarm test filter is inserted into the detector tester in accordance with the type of detector to be tested.
  An alarm test filter is also included in the FDLU291 adjustment kit.
- To perform the test, the detector tester is held in front of the optical receiver of the detector (in the IR beam). After a few seconds, the detector trips.

Adjustment kit FDLU291

The adjustment kit is used for commissioning the linear smoke detector FDL241-9. The lens of the linear smoke detector can be efficiently aligned to the reflector by one man.

Scope of delivery:

- Case with adjustment device
- Alarm test filter
- Visor
- Magnet
- Spiral cable
- MC link cable
- 9 V battery
- Suspension fixture with cable grippers and chain

LE3 Test lamp

The LE3 test lamp is used for functional checking of the FDF241-9 flame detector at distances up to 10 m. It is accommodated in a case that is suitable for transport. The case is suitable for dust-free storage of the test lamp.

The quartz halogen lamp that is used generates an intensive ray of light with which the lamp can be directed to the detector that is to be tested. The ray of light is modulated during the testing of the detector. The light intensity can be adjusted to suit the distance.

Power is provided by a rechargeable battery. Since the color of the light is dependent on the state of charge of the battery, this must be continually topped up in buffer mode. A special battery charger is available for this purpose.

⚠ WARNING	
EX	**Test lamps in explosion hazard areas** Explosion risk ● Do not use the LE3 test lamp in explosion hazard areas.

Test lamp Stabex HF

The Stabex HF test lamp can be used for function checking of the DF1101-EX intrinsically safe flame detector in explosion hazard areas of zones 1 and 2.

To perform the test, the lamp is placed immediately in front of the detector. The slide switch must then be used to pulse the light beam at half second intervals.

⚠ WARNING	
EX	**Opening test lamps in areas at risk of explosion** Risk of explosion ● Do not open the test lamp Stabex HF in areas at risk of explosion.

Flame detector test lamp T-229/4P

The test lamp is suitable for reliable checking of the functionality of the FDF242 flame detector in non-explosion hazard areas.

With a range of 6 to 10 meters this portable lamp emits a pulsed light at a frequency that will effectively trip the flame detector.

The test lamp is supplied with all the necessary accessories including a protective case, a battery charger and a rechargeable battery.

⚠ WARNING	
EX	**Test lamps in explosion hazard areas** Explosion risk ● Do not use the T-229/4P test lamp in explosion hazard areas.

Test lamp 3415MZ0-EX

The test lamp can be used for function checking of the FDF242-EX intrinsically safe flame detector in explosion hazard areas.

Details for ordering

	Type	Item number	Designation	Weight
Diagnostic device	FDUL2901	S54370-S31-A1	Fire Field Assist	0.440 kg
Accessories	FDUL2901-X	S54370-S33-A1	Fire Field Assist kit	–
	FDULZ2901	S54370-S37-A1	Accessories kit	–
	FDZA2902	S54370-S35-A1	Lithium ion battery	0.200 kg

	Type	Item number	Designation	Weight
Line tester	FDUL221	A5Q00004397	Line tester with line connection kit FDUL221-A, power unit set FDUL221-B and carry case Lithium battery not included in scope of delivery	1.567 kg
Accessories	–	A5Q00004142	Lithium manganese dioxide battery 9 V / 1.2 Ah	0.035 kg
Spare part	FDUL221-A	A5Q00008436	Line connection kit	0.088 kg
	FDUL221-B	A5Q00008437	Power unit kit	0.278 kg
	FDUL221-C	A5Q00008438	RS232 PC cable as spare part for FDUL221 with RS232 interface	0.037 kg
	FDUL221-3	S54370-S30-A1	Line tester without accessories	0.440 kg

	Type	Item number	Designation	Weight
Detector tester	FDUD2912	S54370-S50-A1	Electronic detector tester Lithium ion battery not included in scope of delivery	0.730 kg
Accessories	FDZA2901	S54370-S52-A1	Lithium ion battery ANSMANN Li-Ion 18650 3500mAh	0.050 kg

	Type	Item number	Designation	Weight
Detector exchanger	FDUD2911	S54370-S51-A1	Detector exchanger	0.577 kg

	Type	Item number	Designation	Weight
Detector exchanger	FDUD291	A5Q00003585	Detector exchanger	0.594 kg
Detector exchanger and tester	FDUD292	A5Q00003357	Detector exchanger and tester incl. adapter cable FDUD292-A Lithium battery not included in scope of delivery	1.079 kg
Intelligent detector tester	FDUD293	A5Q00018261	Intelligent detector tester incl. adapter cable FDUD292-A Lithium battery not included in scope of delivery	1.079 kg
Accessories	–	A5Q00004142	Lithium manganese dioxide battery 9 V / 1.2 Ah	0.035 kg
Spare part	FDUD292-A	A5Q00004990	Adapter cable, audio stereo cable with 3.5 mm jack plug	0.040 kg

	Type	Item number	Designation	Weight
Bluetooth extension kit	FDUD29x-E	S54319-Z30-A1	Bluetooth extension kit	0.028 kg

	Type	Item number	Designation	Weight
Detector tester	RE6	BPZ:3680300001	Detector tester for smoke detectors	0.950 kg
Accessories	REF8	A5Q00011687	Test gas can	0.194 kg
	REF8-S	A5Q00011688	Test gas can	0.186 kg
	REF8-C	S54370-N2-A1	Test gas can CO	0.203 kg

	Type	Item number	Designation	Weight
Detector tester	RE7T	S54370-S3-A1	Solo461 heat detector tester kit consisting of tester, 2 batteries, charger, cable	2.800 kg
Accessories	RE7T-A	S54370-N4-A1	Solo719 adapter for FDUM293	0.260 kg
Spare part	RE7T-B1	S54370-N7-A1	Solo770 battery for RE7T	1.090 kg
	RE7T-C1	S54370-N8-A1	Solo727 charger for RE7T	1.210 kg

	Type	Item number	Designation	Weight
Detector tester	RE8ST	S54370-S23-A1	Testifire 1001-045 ST test kit	3.470 kg
	RE8STCO	S54370-S24-A1	Testifire 2001-045 STCO test kit	3.750 kg
Capsule	RE8-S	S54370-N25-A1	TS3 smoke capsules, 6 items	0.079 kg
	RE8-CO	S54370-N22-A1	TS3 CO capsules, 6 items	0.077 kg
Accessories	RE7T-A	S54370-N4-A1	Solo719 adapter for FDUM293	0.260 kg
Spare part	RE7T-B1	S54370-N7-A1	Solo770 battery for RE7T [1]	1.090 kg
	RE7T-C1	S54370-N8-A1	Solo727 charger for RE7T [1]	1.210 kg

[1] Compatible with RE8ST and RE8STCO

	Type	Item number	Designation	Weight
Telescope rod	FDUM293	S54370-S40-A1	Telescope rod, 5 segments, 1.7… 7.3 m	2.3 kg

	Type	Item number	Designation	Weight
Detector tester	RE10	BPZ:3685190001	Detector tester for linear smoke detectors	0.345 kg
Alarm test filter for RE10	TF04	BPZ:4931090001	Alarm test filter, absorption 77 %	0.005 kg

	Type	Item number	Designation	Weight
Adjustment kit	FDLU291	A5Q00004905	Adjustment kit for linear smoke detector incl. case	0.840 kg

	Type	Item number	Designation	Weight
Test lamp	LE3	BPZ:3669510001	Test lamp for flame detector incl. case and charger, without battery	5.260 kg
Accessories	FA2003-A1	A5Q00019353	Battery 12 V / 7 Ah / VdS	2.293 kg
Spare part		BPZ:3679630001	Halogen lamp 12 V / 50 W	0.395 kg

	Type	Item number	Designation	Weight
Test lamp	Stabex HF	BPZ:4620910001	Test lamp for areas at risk of explosion	0.175 kg

	Type	Item number	Designation	Weight
Test lamp	T-229/4P	S54330-Z10-A1	Flame detector test lamp	5.0 kg

	Type	Item number	Designation	Weight
Test lamp	3415MZ0-EX	S54330-Z11-A1	Test lamp for EX flame detectors	0.3 kg

Applicable documents

Document ID	Name
008331	List of compatibility (for 'Sinteso™' product line)
008164	Equipment overview Sinteso™ Detector system FD20
A6V16464958	Technical manual Electronic detector tester FDUD2912
007227	Technical manual Detector exchanger and tester FDUD292
009718	Technical Manual Intelligent detector tester FDUD293
A6V10254740	Operating instructions Solo461 heat detector tester kit RE7T
A6V10387053	Installation RE8ST Testifire 1001-045 ST test kit, RE8STCO Testifire 2001-045 STCO test kit
A6V10260320	Operation RE7T-C Solo726 charger for RE7T-B
A6V11432110	Operation RE7T-C1 Solo727 charger for RE7T-B1 Solo770
A6V16522201	Technical manual Fire Field Assist FDUL2901
008250	Technical Manual Line tester FDUL221
A6V10395483	Line tester – operating instructions for electricians
A6V10424692	Installation, Commissioning Sinteso Test
A6V10405496	Installation Bluetooth extension kit FDUD29x-E
007016	Technical manual Linear smoke detector FDL241-9
000257	Operating instructions Test lamp LE3
Safety data sheets	
A5Q00011687D	Safety data sheet REF8
A5Q00011688D	Safety data sheet REF8-S
A5Q00035329C	Safety data sheet REF8-C

MCL-USB adapter (radio) FDUZ227, see data sheet A6V10355605.

Technical data

Fire Field Assist FDUL2901	
Operating voltage	DC 5…20 V
Operating temperature	-20…+40 °C
Storage temperature	With battery: +25 °C (room temperature) Without battery: −30…+75 °C
Air humidity	≤95 % rel. (no condensation)
Protection category	IP30
Dimensions	209 × 136 × 56 mm

Line tester FDUL221	
Supply voltage Lithium manganese dioxide battery or via network adapter	Min. DC 10 V, max. DC 30 V ULTRALIFE U9VL or U9VL-J or EVE CR9V/P-S, 2x 9 V AC 240 V / DC 24 V, 750 mA
Power consumption during measurement	Depends on the number of devices and the display backlight
Detector line voltage: FDnet (FS20, AlgoRex) FDnet (SIGMASYS)	 DC 32 V DC 28 V

Line tester FDUL221	
Max. detector key figures (MK) per line MK with network adapter MK with battery	 Min. 550 Min. 150
Operating temperature	-25…+40 °C
Storage temperature without battery Storage temperature with battery	−30…+75 °C -25…+60 °C
Air humidity (no condensation permitted)	≤95 % rel.

Electronic detector tester FDUD2912	
Operating voltage	DC 3.6 V
Operating temperature	-20…+40 °C
Storage temperature	With battery: −20…+20 °C (max. 1 year) Without battery: −30…+75 °C
Air humidity	≤95 % rel. (no condensation)
Protection category	IP20
Dimensions	Test head Ø × H: 140 × 99 mm Overall length, with retaining rod: 417 mm

Detector exchanger FDUD2911	
Dimensions	Exchanger head: Ø × H: 140 × 67 mm Overall length, with retaining rod: 385 mm

Detector exchanger and tester FDUD292, intelligent detector tester FDUD293	
Supply voltage	DC 9 V
Alkaline battery	Standard 9 V battery
Lithium manganese dioxide battery for temperatures below -10 °C	ULTRALIFE U9VL or U9VL-J or EVE CR9V/P-S Capacity 950–1200 mAh
Operating current: Ready – light on/off Communication – 3 LEDs + buzzer	 2 mA / 42 mA 95 mA
Operating temperature	-20…+40 °C
Storage temperature Storage temperature with battery	−30…+75 °C -25…+60 °C
Air humidity (no condensation permitted)	≤95 % rel.

Detector tester RE6	
Operating temperature REF8 REF8-S REF8-C	 0…+40 °C -20…+40 °C -20…+50 °C
Storage temperature	-20…+40 °C
Number of detector tests, depending on detector type	Max. 400

Heat detector tester RE7T	
Operating temperature	5…+45 °C
Storage temperature	-10…+50 °C
Air humidity (no condensation permitted)	≤95 % rel.

Heat detector tester RE7T	
Voltage	Auto: DC 12 V Mains: AC 110/120-220/240 V
Charging time	Approx. 1 hour per battery

Detector tester RE8ST/RE8STCO	
Operating temperature	5…+45 °C
Storage temperature	-10…+50 °C
Air humidity (no condensation permitted)	≤95 % rel.
Voltage	Auto: DC 12 V Mains: AC 110/120-220/240 V
Charging time	Approx. 1 hour per battery

Adjustment kit FDLU291	
Dimensions of the adjustment device	120 x 65 x 22 mm

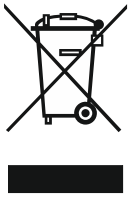
Test lamp LE3	
Power consumption	50 W
Modulation frequency	4 Hz
Max. distance for alarm activation	10 m
Measuring capacity with charged battery and max. distance Number of detectors	~ 50
Operating and storage temperature	-20...+ 45 °C
Areas of use	Areas not at risk of explosion
Incandescent lamp	Halogen 12 V / 50 W
Battery	12 V / 7 Ah, lead, gas tight
Charging time	Min. 16 h
Power supply connection charger	AC 220 / 240 V, 50…60 Hz
Dimensions ● Test lamp ● Battery	 178 x 180 x 369 mm 153 x 103 x 67 mm

Test lamp Stabex HF	
Max. distance for alarm activation	A few cm
Operating and storage temperature	-20...+ 40 °C
Explosion protection	II 2G Ex e ib IIC T4 Gb
Ex approvals	BVS 11 ATEX E174
Areas of use	Zones 1 and 2
Protection category	IP65
Incandescent lamp	Halogen 2.8 V / 0.5 A
Battery	2x alkaline batteries 1.5 V Mono cell UM-1

Flame detector test lamp T-229/4P	
Operating temperature	4…40 °C
Protection category	IP30
Dimensions	160 × 140 × 260 mm
Battery	DC 12 V / 2,7 Ah

Test lamp 3415MZ0-EX	
Dimensions	189 x 20 x 20 mm
Ex classification	II 1 G Ex ia op is IIC T4 Ga
Ex approvals	ITS17ATEX201830X
Battery	Energizer™ E91, Philips™ LR6, Panasonic™ LR6, PELI™ P-NiMH-AA
The technical specifications in this document refer to a third-party product. They have been compiled to the best of our knowledge but are provided for informational purposes only and do not constitute a guarantee of accuracy or completeness. In case of doubt, the manufacturer's specifications apply.	

Disposal



The device is considered an electronic device for disposal in accordance with European Directive and may not be disposed of as domestic waste.

- Use only designated channels for disposing the devices.
- Comply with all local and currently applicable laws and regulations.
- Dispose of empty batteries at designated collection points.

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Siemens Switzerland Ltd
Smart Infrastructure
Global Headquarters
Theilerstrasse 1a
CH-6300 Zug
+41 58 724 2424
www.siemens.com/buildingtechnologies

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