

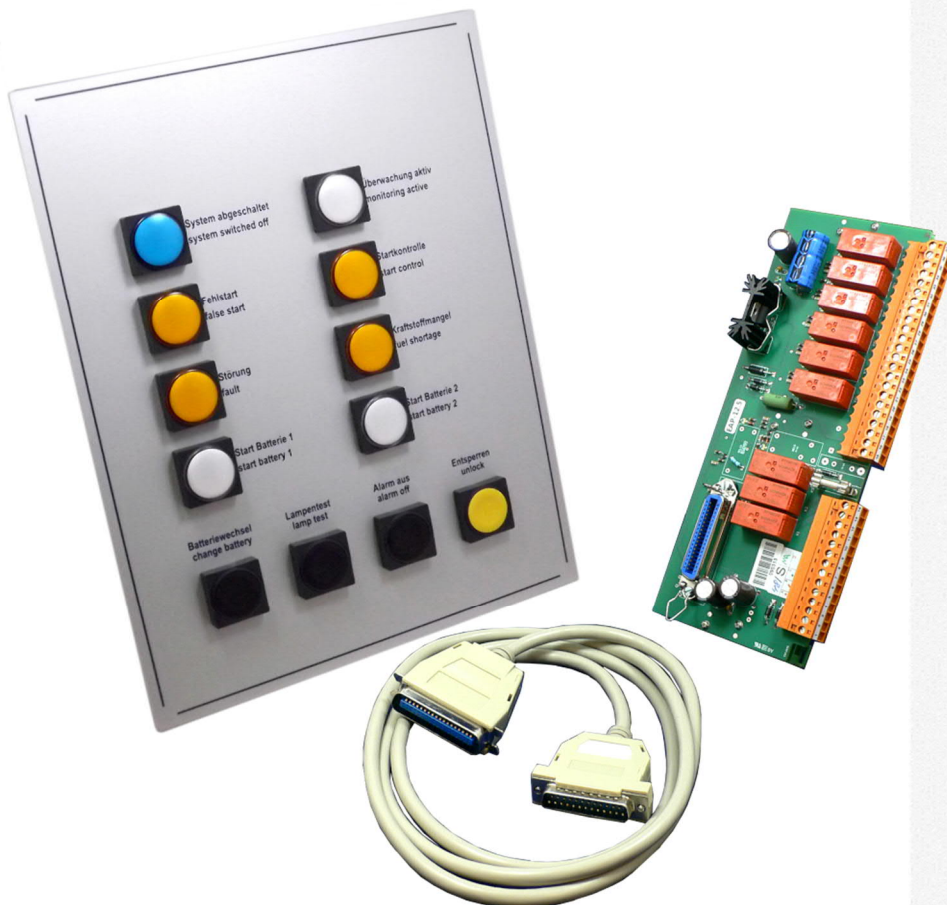
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ATK-32/16 KIE

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Diesel-Sprinkler-Pump-Control





ATK-32/16 KIE

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ATK-32/16 KIE

1 General Remarks

The ATK 32/16 KIE Diesel-Sprinkler-Pump-Control is used to start and monitor a diesel pump unit such as is used in sprinkler systems, for example. Upon request, triggered by one of the two primary-monitored control contacts, the automatic start-stop system starts the diesel engine of the pump unit. As soon as the engine is running, it is monitored. The engine can only be switched off with the stop button (unlock).

The ATK 32/16 KIE Diesel-Sprinkler-Pump-Control is designed as a front panel built-in device.

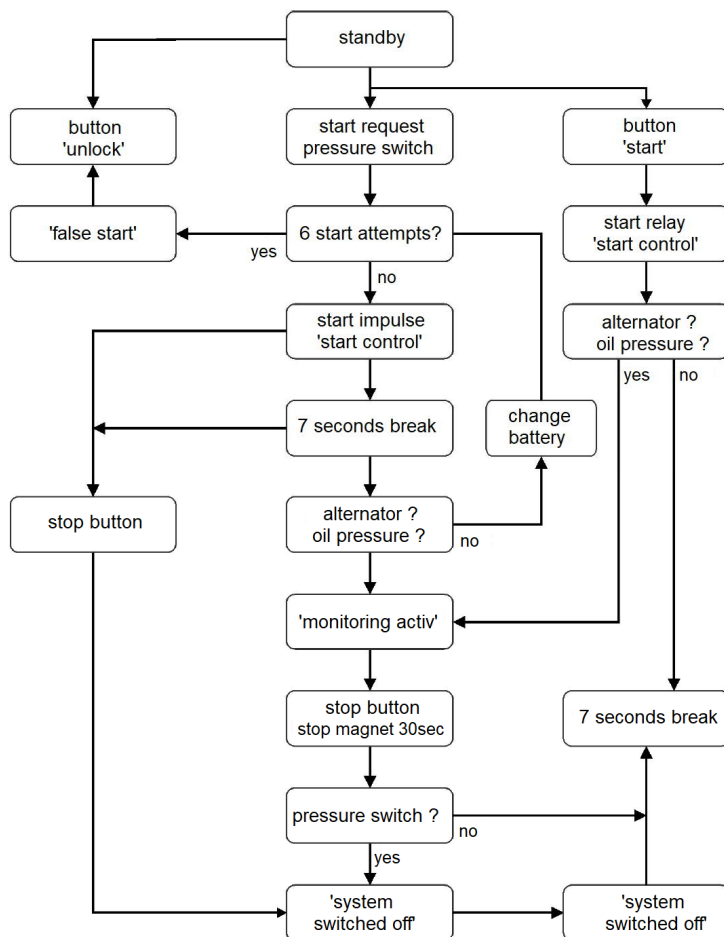
1.1 Control Elements



The front panel of the ATK 32/16 KIE (fig. left) contains the elements, buttons / control lights that are required to operate the ATK 32/16 KIE Diesel-Sprinkler-Pump-Control (for details on functions, see below).

2 Operation

2.1 Program Sequence



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2.1.1 Start-Up Process

The starting process is initiated by closing one of the two primarily monitored pressure switches. If the engine does not start, there are up to 5 start repetitions. The duration of the start attempts (starter operation) and the pauses between the individual start repetitions are each 7 seconds. The battery pack is changed after each start-up process. If the engine has not started even after the sixth start attempt, the automatic system is blocked and a 'false start' signal is reported ('false start' indicator light, horn relay, collective alarm relay).

2.1.2 Motor Monitoring

With an automatic start (start request by a pressure switch) the alternator voltage or the oil pressure are evaluated as indicators for the running engine. With a manual start, only the alternator voltage is evaluated. If the diesel engine is started externally, e.g. by a key switch on the unit, the ATK-32/16 KIE also identifies the running engine based on the alternator voltage.

If the ATK-32/16 KIE has recognized the running engine, the engine monitoring is activated after 7 seconds (control light 'Monitoring active'). From this point on, the indicators of engine temperature, oil pressure and alternator voltage are monitored, and in the event of deviations from the target (overtemperature, insufficient oil pressure, failure of the alternator), a malfunction is reported (collective fault message).



Engine malfunctions do not cause automatic shutdown of the diesel pump unit!

2.1.2.1 Malfunctions

The ATK 32/16 KIE has an output for a 24 V buzzer (KL5- and KL6 +).

The horn relay and an alarm relay are located on the input / output board (EAP-12).

The following visual fault messages are output on the front panel (yellow control lamps, see section 1.1).

The retentive LED messages, listed in the table below, are available for the service technician on the rear.

Control lamp	Triggered by:
' fault '	<ul style="list-style-type: none"> cooling water low overtemperature oil pressure low fuse tripped low voltage battery 1 or 2 (voltage monitor integrated in ATK-32/16 on request) short circuit or cable break on a primary monitored contact (pressure switch 1 and 2)
'false start'	<ul style="list-style-type: none"> after 6 unsuccessful starts (engine run not detected)
'fuel shortage'	<ul style="list-style-type: none"> closing of one of the primary-monitored contacts 'fuel tap' or 'fuel shortage'
'start control'	<ul style="list-style-type: none"> alternator failure with running engine ('monitoring activ') <p><u>note:</u> the control lamp 'start control' also lights up during the start process.</p>

Indication	Meaning
1. pressure switch 2	tripped
2. pressure switch 1	tripped
3. fuel shortage	tripped
4. fuel tap	tripped
5. pressure switch 2	fault
6. pressure switch 1	fault
7. fuel shortage	fault
8. fuel tap	fault
9. low voltage battery 1	fault
10. low voltage battery 2	fault
11. fuse tripped	fault
12. oil pressure low	fault
13. overtemperatur	fault
14. cooling water low	fault

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3 Installation

The front panel is installed by means of 8 threaded bolts (M3 x 8 mm). A cut-out of at least 220 x 240 mm (W x H), maximum 230 x 300 mm (W x H) must be provided for the installation. The installation depth is 120 mm.

4 Technical Data



Installation and commissioning only by trained professionals
Connecting in compliance with VDE 0160

Auxiliary Voltage

- 24 V version: 18 ... 34 V AC (*Voltage drop down to 9.5 V permissible during engine startup*)
- 12 V version: 9,5 ... 20 V AC

Power consumption

- ATK-32/16 KIE on standby 200 mA, 1 A max.
- EAP-12 (input- / output-board) relay contacts 5 A (control voltage)
 relay contacts 10 A (radiator shutter + cooling water preheating)

Climatic conditions

Ambient temperature according to DIN EN 60204-1 (05-2010)

- in operation** -20 °C ... +55 °C
- transport and storage** -25 °C ... +55 °C

Housing dimensions

dimensions: W / H / D : 260 x 330 x 100 mm
 mounting on 35 mm top-hat rail

4.1 Order Reference

Diesel-Sprinkler-Pump-Control	Part number
ATK-32/16 KIE:	E1924
EAP-12:	GY0389
Connection cable:	KC0004



ATK-32/16 KIE

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5 Connection diagram

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ATK-32/16 KIE

