

ISD - Integral System Diagnostics

AES 1135/36, AES 1165/66, AES 1185 and AES 1235/36

Indication
LED on green

Explanation of switching conditions

- Enabling paths closed

LED flashing green

- Enable delay time running, enabling paths open, only for AES 1185

LED flashing yellow
(pulses approx. 0.5 Hz)

- Guard device open

LED flashing yellow
(pulses approx. 2 Hz)

- Guard device closed but no authorised operation. Possible cause: Faulty operation (only one contact actuated when opening the guard)
- Voltage drop
- Feedback circuit not closed
- Start-up test not carried out, only for AES ...6

Indication (yellow)
LED one pulse



Explanation of switching conditions

Only valid for: AES 1165/1166, AES 1185, AES 1265/1266, and AES 2165/2166

- Guard device 1 open

LED two pulses



- Guard device 2 open

LED three pulses



- Guard device 3 open, only for AES 1185

Indication (orange)

LED one pulse



LED two pulses



LED three pulses



LED four pulses



LED five pulses



LED six pulses



LED seven pulses



Fault

- Inputs S1
- Inputs S2, only for AES 1165/1166, AES 1265/1266, AES 2165/2166 and AES 1185
- Inputs S1 + S2, only for AES 1165/1166, AES 1265/1266 and AES 2165/2166
- Inputs S3, only for AES 1185
- Fault signals on the inputs, no secure evaluation, not for AES 1185
- One or both relays not pulled in within a monitored time
- Relay not dropped out on actuation of switch
- Dynamic monitoring of both channels (Cross-Monitoring) not operating correctly
- Fault signals on the inputs, no safe evaluation, only for AES 1185

Cause

- Incoming connection to switch defective
- Switch defective or fitted incorrectly
- Switch at least 5 s only partially actuated*
- Cross-wire monitoring
- See fault inputs S1
- Defective incoming connection to relay or relay contact
- Defective relay
- See fault inputs S2
- Defective incoming connection to relay or relay contact
- Defective relay
- Too high capacitive or inductive coupling on the switch leads or incoming power supply leads
- Operating voltage U_g too low
- Defective relay
- Welded relay contact
- Fault on one channel
- Error in internal data transmission
- Too high capacitive or inductive coupling on input signal leads, only for AES 1185

* Partial actuation

Switch position in which only one contact has been actuated

Deletion of fault indication

The fault indication is deleted, when its cause has been eliminated and the connected switch has been actuated to check all functions.

(Open and re-close guard device)