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Category	■FAQ □ SOP	Related OS	N/A
Abstract	What is the meaning of <i>P</i> - <i>Fail</i> and how does it work on the machines?		
Keyword	P-Fail, Relay, P-Fail LED, Alarm LED, Power Failure, Port Link-down, Fiber Link-down, Dual Power, Single Power		
Related Product	EKI-7700 series, EKI-742	0 series, EKI-7428, EKI-7659, EKI-9612, EKI-9628, EKI-9728	

Problem Description:

Q1: What is the meaning of *P*-Fail, and how does it work on the machines?

Q2: How to set the corresponding P-Fail actions among different models?

Answer:

For Q1:

P-Fail is a relay that we can use it to quickly diagnose the status of switches. P-Fail can stand for *Power-Failure* or *Port-Failure* which means normally it can be related to the power issues or connection problems. When the power or connection on switch fails, the relay circuit will be triggered as on/off which can then trigger gadgets attached onto it, such as LED (*Alarm/P-Fail*) indicators, to inform failure information.

P-Fail relay has two action modes. Users can distinguish it by expressions on switches, and please refer to the **Figure 1** and **Figure 2**.

1. As the expression of figure 1 describes, the arrow directs inward of the P-Fail which means the relay circuit is *CLOSED* when P-Fail is triggered.

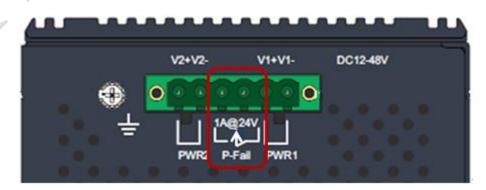


Figure 1. P-Fail graphic expression (Close)

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2. As the expression of Figure 2 describes, the arrow directs outward of the P-Fail which

means the relay circuit is OPENED when P-Fail is triggered.

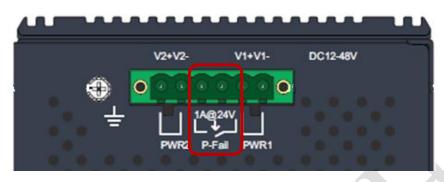


Figure 2. P-Fail graphic expression (Open)

Taking dual power as an example, switches that support dual power will have the P-Fail triggered while one of the power supply failed (please refer to the **Figure 3**). In this mode, LED indicators on these switches will then be activated because its default action is set to be turned on when the circuit is opened.

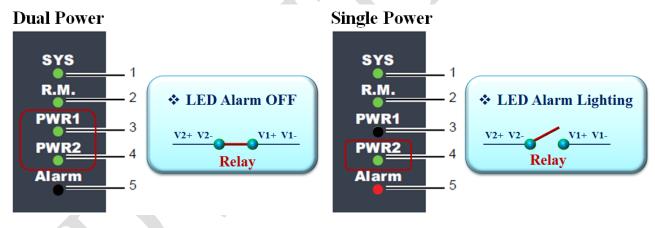


Figure 3. Alarm LED for dual power

For Q2:

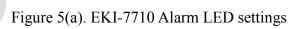
The LED indicators are called *Alarm* or *P-Fail* LED on switches and can be configured to activate when *Power Failure* or *Fiber Link-down* or *Port Link-down* based on different models. **Figure 4** shows the overall P-Fail comparison. Besides, **Figure 5 (a) and (b)** shows examples of how to set the indicators on websites

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	P-Fail Trigger Mode	Functions	LED
EKI-7700 Series EKI-9612	Open	Power Failure Fiber Link-down Port Link-down	Alarm
EKI-7659	Open	Power Failure Fiber Link-down Port Link-down	P-Fail
EKI-7428	Close & Open	Power Failure Fiber Link-down Port Link-down	P-Fail
EKI-9628	Close & Open	Power Failure Fiber Link-down	P-Fail

Figure 4. Overall P-Fail Comparison

System	LED Indication			
	S LED Indication			^
𝗞 MAC Address Table	LED	Alarm	•	
Security	State	• Enabled	O Disabled	
+) QoS	Event	Power Failure		
Management				
Q Diagnostics		Ger Link- down		
Cable Diagnostic		Port Link-	K GE4	
Ping Test				
IPv6 Ping Test		Apply		
 System Log 				
DDM	ED Information			^
LED Indication	LED		State	
🗲 Tools	Alarm		Enabled	



Open all	Fault Relay Alarr	
(§) Main Page System	Power Failure	
System Information	Power 1 Power 2	
IP Configuration DHCP Server	Port Link Down/Broken	
TFTP Transaction	Port 1 Port 2	
🕅 System Event Log	Port 3 Port 4	
Fault Relay Alarm SNTP	Port 5 Port 6	
IP Security	Port 7 Port 8	
(S) User Authentication	Port 9 Port 10	
Port	Apply Help	

Figure 5(b). EKI-7659 P-Fail LED settings

■ <u>EKI-9728G</u>:

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There is a special model **EKI-9728G** that adopts more complicated *event-based* alarm LED settings. The LEDs have three modes: *On*, *Blinking*, and *No action* and it will be activated depend on the severity level of different events (please refer to **Figure 6**). We can set these event severity levels and which events should be triggered by using web GUI. Noted that the *Blinking* LED status can only be seen in the console, it won't be shown on the website.

(EKI-9228G) #sh	ov event seve	rity		*
Severity Level	Event Level	LED	RELAY	
energency(0)	najor	On	On	
alert(1)	major	On	On	
critical(2)	major	On	On	
error(3)	ninor	Blinking	No action	
warning(4)	minor	Blinking	No action	
notice(5)	ignore	No action		
info(6)	ignore	No action	No action	
debug(?)	ignore	No action	No action	
Event Name		Se	verity Level	
cold-start		en	ergency	
warn-start		wa	rning	
link-state-chan	ge	no	tice	
snnp-authentica	tion-fail	no	tice	
firmware-change		no	tice	8
firnware-upgrad	e-fail	no	tice	
config-change			ergency	
login-fail			tice	
xringpro-critic			tice	
rnon-rising-ala			tice	
rnon-falling-al			tice	
rnon-hcrising-a	larn	no	tice	

Figure 6. EKI-9728 Event-based Alarm LED in console