

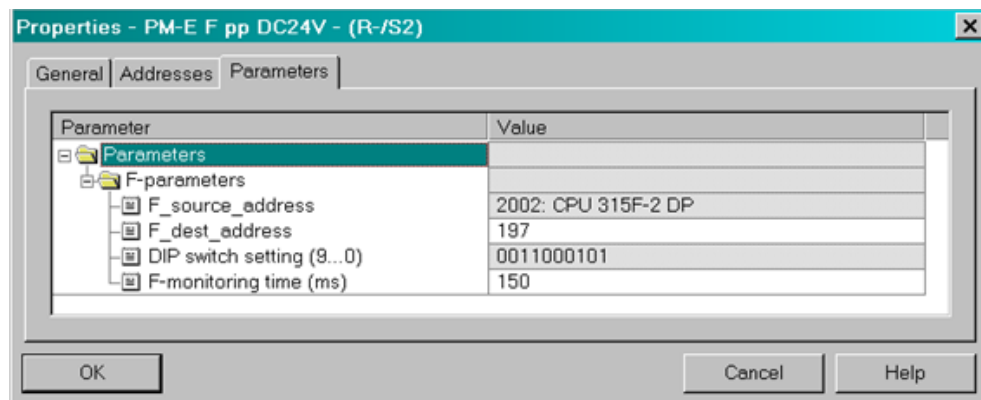
2 PM-E F pp DC24V (6ES7 138-4CF42-0AB0)

With this power module the bit pattern test does not affect the actuator.

2.1 Parameter Options for the PM-E F pp

There are no channel-specific parameters for in this module.

Figure 2-1

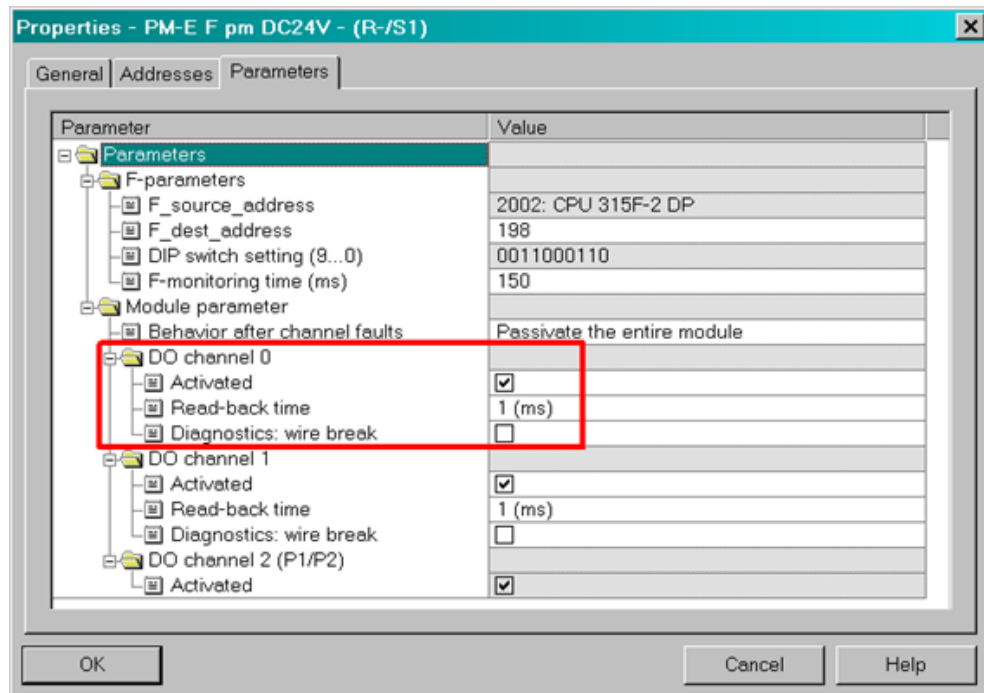


3 PM-E F pm DC24V (6ES7 138-4CF03-0AB0)

3.1 Parameter Options for the PM-E F pm

With this module you have the option of parameterizing both channels. You can either enable or disable the channels, change the read-back time and enable or disable the wire-break diagnostics.

Figure 3-1



3.2 Parameter-independent Properties of the Bit Pattern Test

Table 3-1

Property	Effect
Test interval	The P-switch and the M-switch are switched on/off twice about every 15 minutes (about every minute if there is a fault). Four test pulses are used.
Number of test pulses	8 test pulses are used per bit pattern test, 4 each for the light and dark test.
Test procedure	The P-switch and the M-switch of a channel are tested one after the other and never simultaneously.
Light test pulse duration	The test pulse for the light test is less than or equal to 4ms.

3.3 Effects of Parameter Changes on the Bit Pattern Test

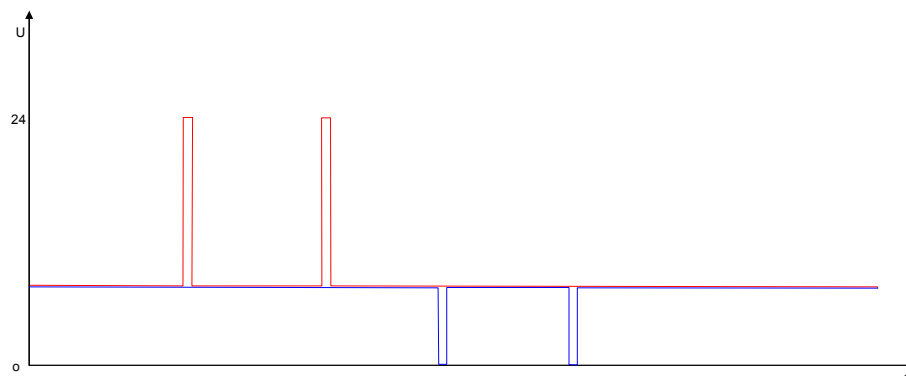
Table 3-2

Parameter	Effect
Wire break	A change of wire-break parameter does not affect the test pulse.
Read-back time	The test pulse duration for the dark test depends on the load and is less than or equal to the parameterized read-back time.

3.4 Effects of the Bit Pattern Test on the Actuator

Light test

Figure 3-2



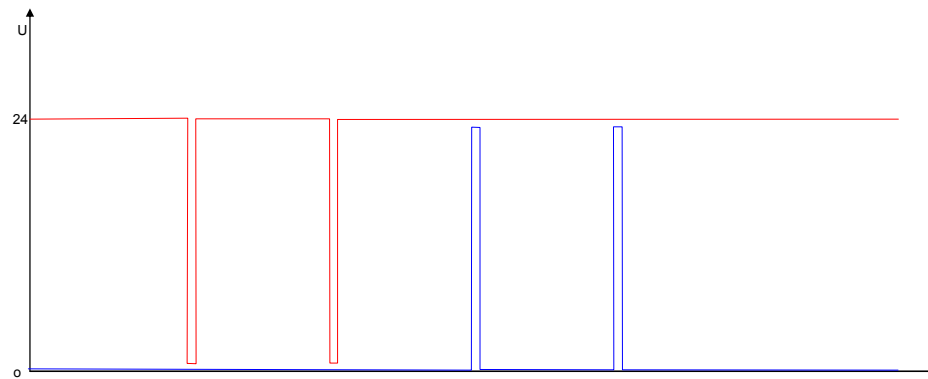
- If the actuator is connected between Px and Mx, it is not enabled by the light test with output value 0, because both switches are tested one after the other.
- If two actuators are connected between Px and ground or P24 and Mx, they are briefly enabled twice each one after the other (if the actuators react to signals $\leq 4\text{ms}$). 4 test pulses are used.

Note

Px and Mx stand for the outputs of both channels of the module, P0 and M0 for channel 0 and P1 and M1 for channel 1, etc.

Dark test

Figure 3-3



- If the actuator is connected between Px and Mx, it is disabled briefly four times by the dark test with output value 1 (2x M-switch and 2x P-switch). (If the actuator reacts quickly enough).
- If two actuators are connected between Px and ground or P24 and Mx, they are briefly disabled twice each one after the other. 4 test pulses are used.

Note

Px and Mx stand for the outputs of both channels of the module, P0 and M0 for channel 0 and P1 and M1 for channel 1, etc.

WARNING

If you use actuators whose reaction time is fast enough to react to the test pulses, you must switch relays in between so that your actuators are not briefly disabled during the dark test.