PSI-MOS - PSM-EG

Mixed operation of FO converters from the PSI-MOS and PSM-EG series

Application note
107088_en_00

1 Description

This application note describes how to operate PSI-MOS devices with PSM-EG devices in a network.

Designation	Description
PSM-EG (FO)	Old series
PSI-MOS	Current series

WARNING:
This application note does **not** replace the device-specific documents.
Please follow the safety notes in the associated package slips and data sheets.

Make sure you always use the latest documentation.
It can be downloaded at phoenixcontact.net/products.

2 Mixed operation

In principle, the PSI-MOS and PSM-EG series can be operated in a network. Mixed operation is required if you need to expand an existing PSM-EG system or replace devices. Please observe the following notes for mixed operation:

Connection

When replacing PSM-EG devices with PSI-MOS devices, you may need to adapt the connection for the data lines. Depending on the bus system, you should use a SUBCON connector or a COMBICON connection terminal block.

Bus system	PSM-EG	PSI-MOS
PROFIBUS	D-SUB 9 or COMBICON	D-SUB 9
RS-485 2-wire		COMBICON
RS-422	D-SUB 15	COMBICON
RS-232	D-SUB 9 or COMBICON	D-SUB 9
Bitbus		No successor
TTY		

Idle setting

The new PSI-MOS devices have permanent FO diagnostics. As a result, the idle setting is defined for “light on”. For PSM-EG devices, the idle setting is defined for “light off”.

If FO converters with different idle settings are used in mixed operation, the devices cannot establish communication.

In mixed operation, the FO converters that are directly connected must have the same idle setting.

– PSM-EG devices **with** INV/NORM DIP switch for the idle setting:
  Set this switch on the PSM-EG device to “inverse”. This enables mixed operation **with** evaluation of the FO signal.
– PSM-EG devices **without** DIP switch for the idle setting:
  Set the corresponding DIP switch on the PSI-MOS device to “NORM”. In this case, the FO diagnostics for the PSI-MOS devices are **not** available. Only the fiber breakage detection function remains possible. The FO signal indicator is out of operation.

Transmission length

The two series have different optical transmitters and receivers. The maximum transmission lengths can therefore vary in mixed operation. The maximum transmission length depends on the FO cable.

Fiber	Maximum length
Polymer fiber (POF)	70 meters
Fiberglass 50/125	1200 meters
Fiberglass 62.5/125	2000 meters
HCS fiber	Not possible with PSM-EG devices

DIP switches

– PSI-MOS devices with 10-pos. DIP switch:
  Set DIP9 to “ON” (COMPATIBILITY).
– PSI-MOS devices with 8-pos. DIP switch:
  This setting is not available.

STEP7 network parameters

You must **not** change the network parameters.