E-T-A IO link Controller CPC10IO (*ControlPlex*®)

Description

The ***ControlPlex***® intelligent power distribution systems offer a genuine IO link device, together with the CPC10IO-S1-001 controller, for direct connection to the control technology in machine construction and process control.

ControlPlex® with IO link requires only a single port on the IO link master for max. 16 ESX50D-S electronic circuit protectors.

- Power distribution via SVS201-PWR power board (4, 8, 12 or 16 slots, further versions upon request)
- Via the IO link interface, up to 16 plug-in type ESX50D-S100 and ESX50D-S110 circuit protectors can be controlled and parameterised by the PLC and additionally measuring values (load current etc.) can be transmitted.
- A standard ESX50D slot can be used for the IO link module CPC10IO-S1-001.
- The IO link bus head has been designed to the IO link standard 1.1.
- The access time (16 circuit protectors) is typically only 400 ms for all cyclical process data.
- Electrical connection of the IO link module is via a PTSM 0.5/ 3-P-2.5“ connector with push-in technology.

Suitable for the following types:

Power distribution boards	**SVS201-PWR-xx**
Electronic circuit protector	**ESX50D-S100** (completely parameterisable by means of the CPC10IO)
Electronic circuit protector	**ESX50D-S110** (current rating adjustable by means of the rotary switch on the circuit protector, otherwise completely parameterisable via the CPC10IO)

Features

- Integral DC24 V power distribution system for power distribution and overcurrent protection
- Complete diagnosis and parameterising of the entire power distribution system
- For electronic circuit protectors ESX50D-S100 / -S110
- Variable configuration of the connection with up to 16 electronic circuit protectors
- Fully-fledged communication interface IO link via a port of the IO link master
- Service and maintenance interface via IO link connection
- Profitability through considerably reduced wiring time
- Reduction of planning, design and installation time
- Ease of maintenance, diagnosis and system extension

Order numbering code

Type

CPC10 Bus terminal controller for ***ControlPlex***® **Board** for SVS201-PWR-xx with ESX50D-S100 / -S110

- integral DC 24 V power distribution system
- for max. 16 psc electronic circuit protectors type ESX50D-S xxx
- communication-capable

Version: Bus system

IO IO link terminal: 3-pin connection sleeve

Version - number of power distribution boards to be connected

S1 pluggable, 1 port

Product versions

001 marking version

CPC10 IO - S1 - 001 ordering example

CPC10IO

Technical data (T_{amb} = 25 °C, U_B = DC 24 V)

Application	
Intelligent DC 24 V Power Distribution System	
Supply feed (1/11)	
Voltage ratings	DC 24 V (18 ... 32 V)
Current ratings	typically 15 mA
Terminals	IO link connection
Mounting method	plug-in mounting on SVS201-PWR-xx
IO link connection with the IO link master (X81)	
X81 COM	connection with the IO link master via inlet plug
	the electrical specification has to meet the requirements of the “IO Link Community”
	connector 1: IO link L+ DC +24 V connector 2: IO link C/Q connector 3: IO link L-
	power supply must also be possible via X81 COM
Terminals	connectors, 3-pin (plugged on) cable cross section flexible with wire end ferrule (without plastic sleeve) 0.25 – 0.5 mm² stripping length 6 mm
Status indication of the CPC10PN-Tx	
LED "PWR"	LED lighted with supply voltage applied.
	LED indication unicolour green
LED “CE/CM“	display shows the status of the communication unit
	LED status indication options: red, green, yellow, orange
	Control input is via the processor of the CPC10IO.

Operating mode	Indication of operating mode	
	LED CE/CM	**LED PWR**
SVS_SYSTEMINIT	yellow	green
SVS_ERROR_CRITICAL	red	green
SVS_ERROR_UNCRITICAL	flashing red	green
SVS_PARAMETERIZATION		green
SVS_STANDALONE	blinking green	green
SVS_NORMAL_MODE	green	green

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Technical data (T_{amb} = 25 °C, U_B = DC 24 V)

General data	
Mounting method	plug-in mounting on SVS201-PWR-xx
Temperature range	0...+50 °C (without condensation)
Storage temperature	-20 ... +70 °C
Housing material	moulded
Degree of protection	terminals IP20 EN60529
Dielectric strength	DC 32 V (load circuit)
Dimensions	see dimensional drawing (tolerances to DIN ISO 286 part 1 IT13)
Mass	CPC10IO-S1-001 approx. 40g
EMC	• EN 61000-6-2: 2005 Electromagnetic compatibility (EMC) part 6-2: Basic standards – noise immunity for industrial areas • EN 61000-6-4: 2007+A1:2011 Electromagnetic compatibility (EMC) - part 6-4: Basic standards – noise immunity for industrial areas
Vibration resistance	3 g, test to IEC 60068-2-6 test Fc

Conformity and approvals

- CE
- PNO certification (IO-Link Manufacturer Declaration)

Markings

CE Declaration of Conformity with the presently valid EMC Directive

Notes

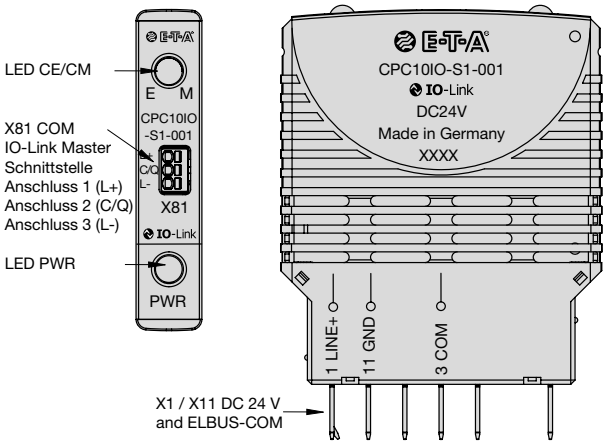
- The CPC10IO-S1 -001 is only intended for use with safety extra-low voltage (=24 V DC).
- Connection to a higher or not reliably disconnected voltage can cause hazardous conditions or damages
- Only the intended power distribution boards must be used.
- The technical data of the used circuit protectors have to be observed
- The entire power distribution system must only be installed by qualified personnel
- Only after expert installation must the device be supplied with power
- After tripping of the circuit protector and before reset, the cause of the failure (short circuit or overload) must be remedied
- The national standards (e.g. for Germany DIN VDE 0100) have to be observed for installation and selection of feed and return cables.
- 0 V ptential load and control voltage connected
- For convenient adjustment and configuration by means of projecting software a master data file (GSDML file) will be made available for downloading on the E-T-A homepage

Please observe the separate user manual for CPC10IO-S1-001.

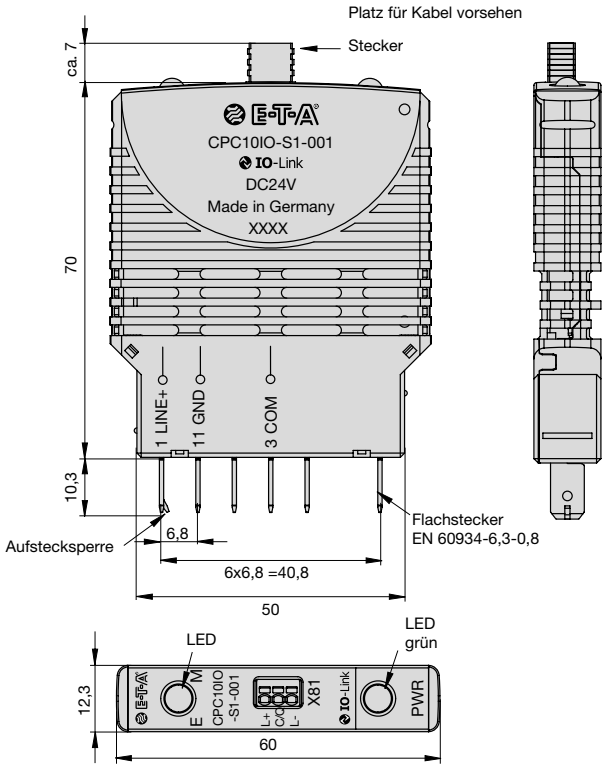
Application example of IO link application

CPC10IO-S1-001 with SVS201-PWR-08-xxx fitted with 5x ESX50D-S100 and 2x ESX50D-S110

Terminal arrangement CPC10IO-S1-xxx



Dimensions CPC10PN-T1-xxx



CAUTION

Caution:
Electrostatically sensitive sub-assemblies can be destroyed by voltages far below the human perception threshold. These voltages already occur if you touch a component or electrical terminals of a sub-assembly without being electrostatically discharged. The damage of a sub-assembly caused by an overvoltage is often not immediately recognised, but will be noticed only after a longer operating time.

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