

8AC114.60-2

1 General information

The AC114 plug-in module can be used in an ACOPOS slot. The module is equipped with a POWERLINK V2 interface. This fieldbus interface is used for communication and setting parameters on the ACOPOS servo drive for complex and time critical applications.

The plug-in module is a 2x hub. This makes it easy to establish a device-to-device connection (line topology).

2 Order data


| Model number | Short description | Figure |
|-----------------|---|--|
| | Plug-in modules |  |
| 8AC114.60-2 | ACOPOS plug-in module, POWERLINK V2 interface | |
| | Optional accessories | |
| | POWERLINK cable | |
| X20CA0E61.00020 | POWERLINK connection cable, RJ45 to RJ45, 02 m | |
| X20CA0E61.00050 | POWERLINK connection cable, RJ45 to RJ45, 0.5 m | |
| X20CA0E61.00100 | POWERLINK connection cable, RJ45 to RJ45, 1 m | |
| X20CA0E61.00200 | POWERLINK connection cable, RJ45 to RJ45, 2 m | |
| X20CA0E61.00500 | POWERLINK connection cable, RJ45 to RJ45, 5 m | |
| X20CA0E61.01000 | POWERLINK connection cable, RJ45 to RJ45, 10 m | |

Table 1: 8AC114.60-2 - Order data

3 Technical data

| Product ID | 8AC114.60-2 |
|----------------------------------|--|
| General information | |
| Module type | ACOPOS plug-in module |
| B&R ID code | 0xA5C1 |
| Slot | Slot 1 |
| Power consumption | Max. 3 W |
| Certification | |
| CE | Yes |
| cULus | Yes |
| KC | Yes |
| Interfaces | |
| POWERLINK | |
| Quantity | 1 |
| Module-side connection | 2x RJ45 port |
| Status indicators | Status LED + 2x Link LED |
| Transfer rate | 100 Mbit/s |
| Hub, 2x | Yes |
| Possible station operating modes | Synchronous to POWERLINK cycle |
| Electrical isolation | Yes |
| Cabling topology | Star or tree with level 2 hubs |
| Maximum number of hub levels | 10 |
| Cable length | Max. 100 m between two stations (segment length) ¹⁾ |
| Network-capable | Yes |
| Watchdog functionality | |
| Hardware | Yes (via ACOPOS servo drive) |
| Software | Yes (via ACOPOS servo drive) |

Table 2: 8AC114.60-2 - Technical data

| Product ID | 8AC114.60-2 |
|---------------------------------|------------------|
| Environmental conditions | |
| Temperature | |
| Operation | |
| Nominal | 5 to 40°C |
| Maximum | 55°C |
| Storage | -25 to 55°C |
| Transport | -25 to 70°C |
| Relative humidity | |
| Operation | 5 to 85% |
| Storage | 5 to 95% |
| Transport | Max. 95% at 40°C |

Table 2: 8AC114.60-2 - Technical data

1) With 10 ACOPOS servo drives and a cycle time of 400 µs, the maximum total cable length becomes 200 m.

4 Setting the POWERLINK node number

The POWERLINK node number can be set using two HEX switches:


| Image | Code switch | POWERLINK node number |
|--|-------------|-----------------------|
|  | ① | 16s position (high) |
| | ② | 1s position (low) |
| A changed POWERLINK node number will take effect the next time the ACOPOS servo drive is switched on. | | |
| <p>Information:</p> <p>In principle, node numbers between \$01 and \$FD are permitted. However, node numbers between \$F0 and \$FD are intended for future system expansions. To ensure compatibility, these node numbers should be avoided.</p> <p>Node numbers \$00, \$FE and \$FF are reserved and may therefore not be set.</p> | | |

Table 3: Setting the POWERLINK node number

5 Status indicators


| Figure | LED | Labeling | Color | Function | Description |
|---|-----|----------|-----------|----------------------|---|
|  | ① | R/E | Green/Red | Ready/Error | See "POWERLINK - LED status indicators" on page 2 |
| | ② | RX | Green | Link / data activity | |

Table 4: AC114 - Status LEDs

| Labeling | Color | Function | Description | |
|----------|-----------|----------------------|---------------------------|---|
| R/E | Green/Red | Ready/Error | LED not lit | The module is not receiving power or initialization of the network interface has failed. |
| | | | Red (lit) | The POWERLINK station number of the module is 0. |
| | | | Red/green, blinking | The client is in an error state (drops out of cyclic operation). |
| | | | Green (blinking) (single) | The client detects a valid POWERLINK frame on the network. |
| | | | Green (blinking) (2x) | Cyclic operation on the network is taking place, but the client itself is not yet a participant. |
| | | | Green (blinking) (3x) | Cyclic operation of the client is in preparation. |
| | | | Green (lit) | The client is participating in cyclic operation. |
| | | | Green (flickering) | The client is not participating in cyclic operation and also does not detect any other stations on the network participating in cyclic operation. |
| RX | Green | Link / data activity | Green (not lit) | Hardware not connected |
| | | | Green (lit) | Hardware connected |
| | | | Green (flickering) | Activity on port |

Table 5: POWERLINK - LED status indicators

6 Firmware

The firmware is part of the operating system for the ACOPOS servo drives. Firmware is updated by updating the ACOPOS operating system.

7 Wiring

7.1 Pinout




| Figure | IF2 | Pin | Name | Function | |
|--|---|--------|--------|--------------------------|----------|
|  |  | 1 | RXD | Receive signal | |
| | | 2 | RXD\ | Receive signal inverted | |
| | | 3 | TXD | Transmit signal | |
| | | 4 | Shield | Shield | |
| | | 5 | Shield | Shield | |
| | | 6 | TXD\ | Transmit signal inverted | |
| | | 7 | Shield | Shield | |
| | | 8 | Shield | Shield | |
| | | IF1 | Pin | Name | Function |
| |  | 1 | RXD | Receive signal | |
| | | 2 | RXD\ | Receive signal inverted | |
| | | 3 | TXD | Transmit signal | |
| | | 4 | Shield | Shield | |
| | | 5 | Shield | Shield | |
| | | 6 | TXD\ | Transmit signal inverted | |
| | | 7 | Shield | Shield | |
| 8 | | Shield | Shield | | |

Table 6: AC114 POWERLINK V2 interface - Pinout

Information:

In general, crossover Ethernet cables must be used for POWERLINK connections!

Cables should be plugged in and unplugged carefully. Otherwise, the shield connection could break between the RJ45 connector and the cable shield which could then cause connection disturbances!

7.2 Input/output diagram

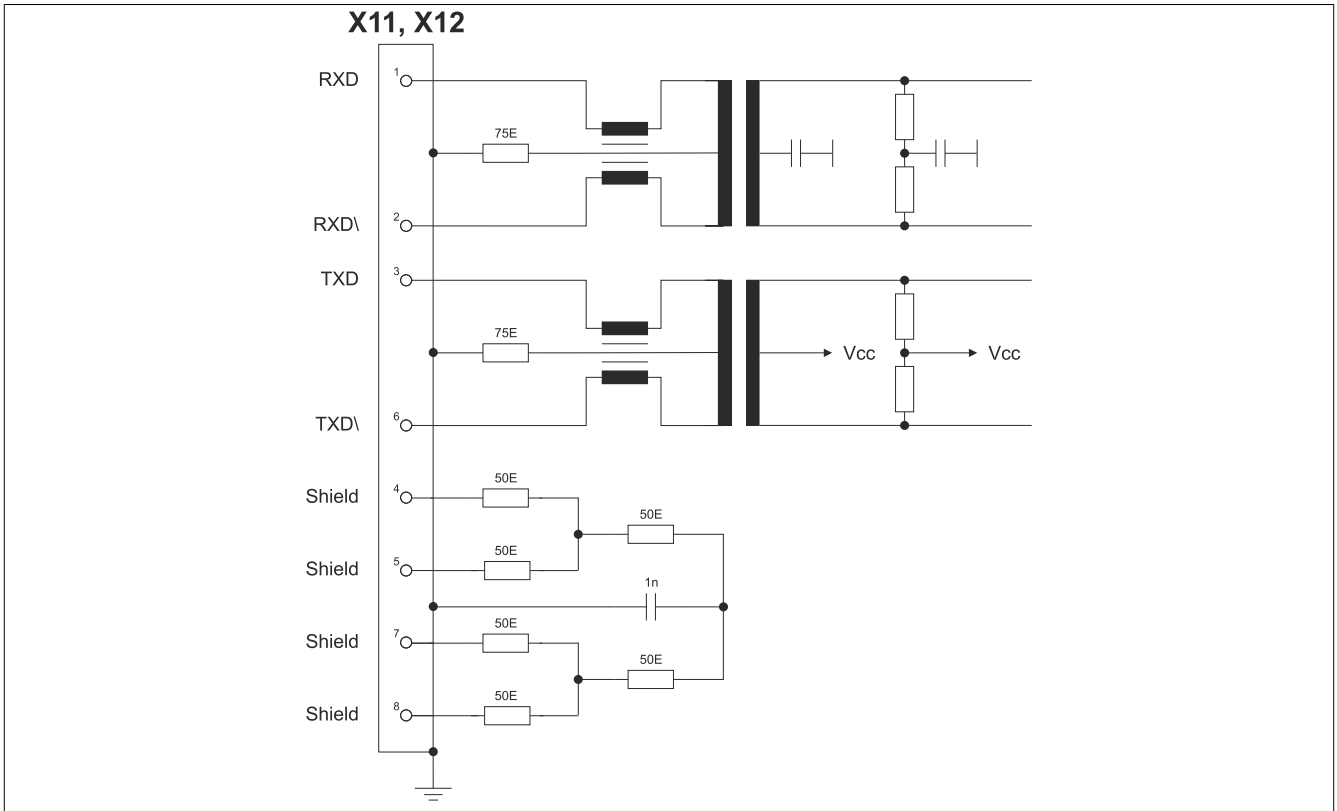


Figure 1: AC114 - Input/Output circuit diagram