INTELLIGENT POWER DISTRIBUTION SYSTEMS
RCI11

RCI11

The **RCI11** Remote Control Interface allows remote control and monitoring of the system and its connected loads, reducing maintenance costs and providing maximum transparency. It helps integrate the ***ControlPlex***® **Rack** system into the network surroundings and into the centralised corporate management system. The RCI11 provides access to all installed ESX300-S circuit protectors via the internal bus system and can enquire or store individual measuring data, status conditions and fault indications and forward them to the superordinate control unit or execute commands from the control unit for controlling purposes. The RCI11 Remote Control Interface can be extended during operation “Hot Plug & Play“.

TYPICAL FEATURES

- Rated voltage DC 20...75 V
- Integrated web server
- Integrated BUS interface
- External terminal, RJ45 socket

YOUR BENEFITS

- Limited maintenance time on site due to manual remote control and monitoring of loads
- Remote power reset of the application in the event of a fault
- Increased system availability through parameter-dependent / automatic switching of loads
- Easy integration into an existing centralised management system thanks to SNMP and Modbus TCP/IP or remote control and monitoring via web browser surface.
- Early detection of errors by continuous recording of measuring data
- Energy data collection for each connected load

TYPICAL APPLICATIONS

Telecommunications and datacom, energy providers, industrial switching and control systems, rail engineering, infrastructure

COMPLIANCE

CE

WEB LINKS

Further information, Instruction manual, Open Source licenses, International approvals, Technical basics, REACH, RoHS, Contact

GENERAL INFORMATION

FURTHER INFORMATION

Instruction manual
https://www.e-t-a.com/datei/17796

TECHNICAL DATA (T_u = +25 °C, U_b = DC 48 V)

ELECTRICAL DATA

Rated voltage range	DC 20...75 V (***Power-D-Box*® CP** - input voltage)
Dielectric strength	DC 100 V for 1 ms
Power consumption I	Typ. 25 mA at DC 48 V operating voltage
Power consumption	Typ. 3 W (max. power consumption 5 W)
External connection	10 / 100 Mbit/s, 10 Base-T Ethernet, RJ45-connection sleeve for standard network cable of category Cat-5, type "Shielded Twisted Pair"
LED for operating condition signalling	**Multicoloured (red, green, blue)** • Status LEDs
Insulation co-ordination (IEC 60934)	1000 V (according to EN 60934 – table 20 rated voltage > 50. ≤ 125 V)

MECHANICAL DATA

Mounting position	Vertical, cooling Convection cooling
Mass	Approx. 100 g

PROTOCOLS

HTTP / HTTPS (Hypertext Transfer Protocol)	Integrated web server
Tested browsers	Google Chrome: v115.0.5790.110 Firefox: v116.0.3 Edge: 115.0.1901.203
SNMP v1, v2c, v3 protocol	Protocol for integration into a management system
SNMP-MIB (Management Information Base)	File: CP-RCIxx_SNMP-MIB_Vxx.mib
Modbus TCP/IP	Protocol for integration into a management system
SSH v2 (Secure Shell)	System configuration and safety settings
Recommended SSH v2 terminal programme	LePuttyc 1997-2006 Simon Tathman
NTP (Network Time Protocol)	Automatic time synchronisation via an NTP server
IP protocol (internet protocol)	IPv4 and IPv6 address formats are supported
DHCP server (Dynamic Host Config. Protocol)	Is supported, allows automatic assignment of network parameters, e.g. the IP address

SYSTEM DATA

Processor	RM Cortex-A53, 64 Bit, 1.2GHz
OS	Linux Kernel 4.14
Volatile	1GB-LPDDR2-SDRAM-memory
Non-Volatile	8GB-eMMC-Flash 8MB NOR-Flash 1MB MRAM

AMBIENT CONDITIONS

Ambient temperature	-20...+60 °C (without condensation, cf. EN 60204-1)
Storage temperature	-30...+70 °C

Damp heat	**Test according to IEC 60068-2-78, 3K6 climate class according to EN 60721** 96 hours at 95 % relative humidity, 40 °C
Vibration	**Test according to IEC 60068-2-6, test Fc** 3 g
Actuating area IP code (standard)	IP20 (when rack is fully populated and SUB-D connectors are plugged in)
Terminal area IP code (standard)	IP00
ESD	4 kV / air 8 kV
EMC requirements (EMC directive, CE logo) emitted interference	EN 61000-6-3
EMC requirements (EMC directive, CE logo) resistance to disturbances	EN 61000-6-2

FURTHER INFORMATION

OPERATING CONDITIONS: LED STATUS INDICATION

Momentary switch	Status LED colour	Status LED	Importance	Description
-	Green	ON	Normal operation	Continuously ON when booting is completed and the RCI11 is operating faultlessly. Network connection can be established after another 10 sec.
Pushed down for 35 sec	Green	Blinking	Reset IP address to factory settings	By pushing the reset button for 35 seconds, the IP settings can be reset to factory settings. For visual control that the reset button has been pushed down long enough, the green LED will blink for 5 seconds (see fig. 1).
-	Red	ON	Internal failure RCI11	Serious internal fault in the RCI11 module. The module is no longer operational. The RCI11 module should be replaced.
-	Red	ON	Serious internal failure BUS (EL-BUS)	ELBus® Failure Impaired communication to the ESX300-S circuit protectors and the RCI11 module.
-	Blue	ON	Ethernet link available	If a network connection is established in operation (layer 1), the LED will be lighted blue for some 10 seconds.
-	Blue	ON	Reset IP address to factory settings	The blue LED will be lighted for 10 seconds when the IP address has successfully been reset to factory settings, see fig. 1 Automatic booting will follow, this can last up to 60 seconds.
-	-	OFF	Booting	The RCI11 module is booting. Booting can take up to 60 seconds.
-	-	OFF	No supply voltage	No supply voltage or wrong polarity.

Pushed down for 3 sec	-	OFF	Warm boot	The system can be reset by pushing the reset button for 3 seconds (warm boot)
-	-	OFF	RCI11 module defective	Serious internal fault in the RCI11 module. LED remains dark after booting (max. 60 sec). The RCI11 module must be replaced.

ORDERING NUMBER CODE

R	C	I	-	1	1	-	0	0	0	-	A
1				2			3	4	5		6

1 TYPE NUMBER	
RCI	Remote Control Interface

2 VERSION	
11	Standard, pluggable (front plate, without enclosure)

3 INTERNAL INTERFACES	
0	With EL-BUS interface (standard)

4 VOLTAGE RANGE (SUPPLY)	
0	DC 20...75 V

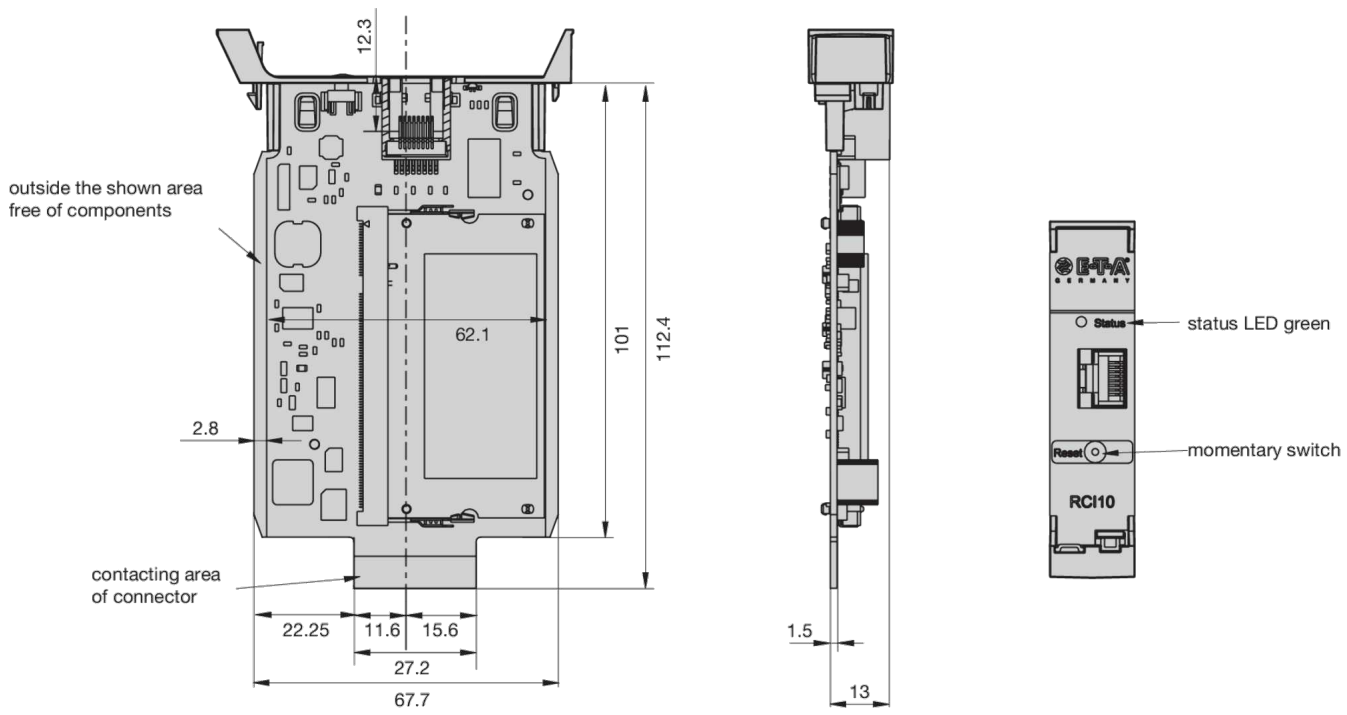
5 EXTERNAL INTERFACES	
0	Ethernet with RJ45 connection

6 SOFTWARE PROTOCOLS	
A	IPv4, IPv6, SNMP v1, v2c, v3, http, https, SSH v2, Modbus-TCP, LDAP,NTP

COMPLIANCE	
CE	CE according to EMC directive (EN 61000-6-3 & EN 61000-3-2)
Compliance according to	EN60950-1 / UL60950-1

DIMENSIONS

DIMENSIONS



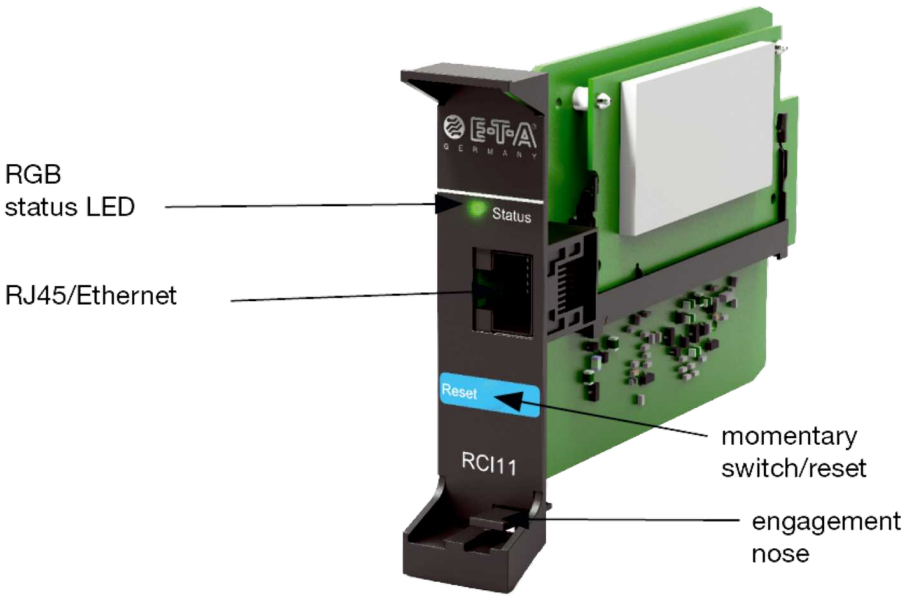
SCHEMATIC DIAGRAMS

PIN ASSIGNMENT OF 20-POLE PCB CONNECTOR

Shield	A1	B1	Shield
NC	A2	B2	NC
NC	A3	B3	NC
Suppy (+)	A4	B4	Suppy (+)
NC	A5	B5	NC
NC	A6	B6	NC
Supply (-)	A7	B7	Supply (-)
NC	A8	B8	Supply (-)
EL-BUS	A9	B9	Red_Sys
Supply (-)	A10	B10	Supply (-)

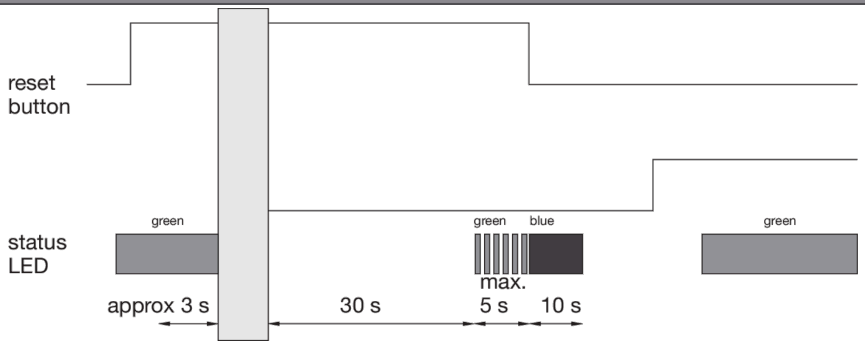
APPLICATION EXAMPLES

FRONT RCI11



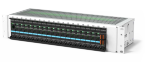
FUNCTIONAL DIAGRAMS

FIG. 1: FUNCTION IP-RESET BY PRESSING THE RESET BUTTON WITH LED

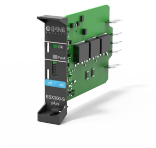
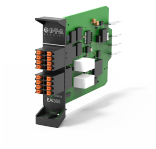


ACCESSORIES

OPTIONAL ACCESSORIES FROM

CP Power-D-Box® for ControlPlex® Rack	The ***Power-D-Box®*** **CP** is a modular power distribution system. Depending on the respective application, the compact 2 HU enclosure can accommodate these system components: ESX300-S, RSI10, RCI11 oder EAI300. User friendliness is of top priority in the event of a system extension with the system live without causing downtimes. All sub-assemblies are hot-swappable without affecting neighbouring components. Depending on the application, termination can be placed both on the front or on the rear. Major application areas of the ***ControlPlex®*** **Rack** system are communication technology equipment both in the negative (DC -48 V or DC -60 V) and in the positive voltage range (DC 24 V, 48 V, 60 V).	

FURTHER PRODUCTS

RELATED PRODUCTS		
ESX300-S minus	The hot pluggable **ESX300-S minus** electronic circuit protector ensures reliable overcurrent protection by means of electronic current limitation and load disconnection. It reliably prevents the destruction of electronic sub-assemblies or load lines in power supply systems in a voltage range of DC -48 V and DC -60 V. Thanks to a selective load disconnection, a voltage dip is prevented in the event of a failure and other faultless devices in the circuit remain working. The integral bus interface can transmit the recorded measuring values and status messages to the RCI11 control interface, where they can be used to automatically trigger actions or for data collection and monitoring.	
ESX300-S plus	The hot pluggable **ESX300-S plus** electronic circuit protector ensures reliable overcurrent protection by means of electronic current limitation and load disconnection. It reliably prevents the destruction of electronic sub-assemblies or load lines in power supply systems in DC +24 V, DC +48 V and DC +60 V voltage ranges. Thanks to its selective load disconnection, a voltage dip is prevented in the event of a failure and fault-free devices can be further operated. The integral bus interface can transmit the recorded measuring values and status messages to the RCI11 control interface, where they can be used to automatically trigger actions or for data collection and monitoring.	
EAI300	Combined with the RCI11, the **EAI300** External Alarm Interface allows recording of external sensor data and alarm signalling in the management system. It includes e.g. additional monitoring and indication of door contacts or temperature sensors in the technical room. This provides high system transparency and fast intervention in the event of alarms. Thanks to programmable logical links, operating conditions of the ESX300-S can be linked to external encoder signals that enable automatic switching operations. Instead of the ESX300-S electronic circuit protector, the EAI300 can be easily plugged into an empty slot of the ***ControlPlex***® **Rack** system without shutting down the connected loads. This allows connection of external signalling devices in the control cabinets without requiring additional space.	
RSI10	The **RSI10** Remote Signalling Interface ensures reliable and early detection of critical system conditions. It can communicate with all circuit protectors installed in the ***ControlPlex***® **Rack** via internal BUS connection. When one of the circuit protectors is disconnected from the related load due to an overcurrent etc., the RSI10 will externally indicate this status via a potential-free group signal, e.g. to a monitoring system. It is the perfect way to minimise downtimes and reduce operational and maintenance costs.	

All information and data given on our products are accurate and reliable to the best of our knowledge, but E-T-A does not accept any responsibility for the use in applications which are not in accordance with the present specification. E-T-A reserves the right to change specifications at any time in the interest of technical improvement. Dimensions are subject to change without notice. Please enquire for the latest dimensional drawing with tolerances if required. All dimensions, data, pictures and descriptions are for information only and are not binding. Amendments, errors and omissions excepted. Ordering part numbers may differ from the device marking.