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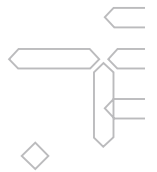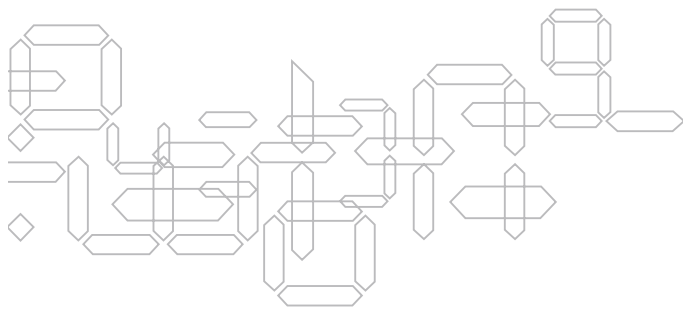
simplifying process

RTU-COM
µRTU with integrated modem

4000 µRTU/RTU-COM

TYPE	UCR-10IO/RCzxx.Dx	UCR-10IO/RCzxx.Px
INPUTS/OUTPUTS		
Digital inputs	4 (2 DI can be used as counter inputs).	4 (2 DI can be used as counter inputs).
Digital outputs	4	4
Counter inputs	2 S0 compliant (max. 60Hz).	2 S0 compliant (max. 60Hz).
Analogue process signal input	2	-
Pt100 sensor input	-	2
Galvanic isolation	Optocoupler/switched capacitor.	Optocoupler.
Terminals	Screw connector type.	Screw connector type.
COMMUNICATION		
Protocol	ModbusRTU, EN/IEC60870-5-101 (slave).	ModbusRTU, EN/IEC60870-5-101 (slave).
Data transmission	Integrated GSM or PSTN modem and serial cable.	Integrated GSM or PSTN modem and serial cable.
Speed	Max. 19200 Bit/sec.	Max. 19200 Bit/sec.
Data formats	8, 1, None.	8, 1, None.
Security	Password and Dial Back.	Password and Dial Back.
Log capacity	480 Kbytes - resizeable 5-100%	480 Kbytes - resizeable 5-100%
Dial-up	Yes.	Yes.
SMS	Yes, with GSM modem.	Yes, with GSM modem.
BUILT-IN MODEM		
GSM	Dual band 900/1800 MHz.	Dual band 900/1800 MHz.
PIN code	Yes, selectable.	Yes, selectable.
PSTN	Dial-up modem V.32+.	Dial-up modem V.32+.
Modem config	Yes. Standard AT Hayes compatible.	Yes. Standard AT Hayes compatible.
CONFIGURATION/PROGRAMMING		
Programming interface	RS232 via RJ11 Modular plug.	RS232 via RJ11 Modular plug.
Config.software, EN61131 programming	IOTOOL32Pro.	IOTOOL32Pro.
I/O database, log upload	IOTOOL32Pro.	IOTOOL32Pro.
Max. program size	23 Kbyte.	23 Kbyte.
POWER SUPPLY		
Power save mode	Yes, controlled via application program.	Yes, controlled via application program.
MOUNTING		
DIN rail	35 mm symmetrical.	35 mm symmetrical.
Housing	Anodized aluminium.	Anodized aluminium.
Size	80 x 162 x 62 mm.	80 x 162 x 62 mm.
/RS OPTIONS (/RSZXX)		
Modem option (z)		
RC1xx	MODEM GSM DUAL BAND 900/1800MHZ	MODEM GSM DUAL BAND 900/1800MHZ
RC2xx	MODEM PSTN DIAL-UP V32+	MODEM PSTN DIAL-UP V32+
Power supply options (xx)		
RCz00	PS (12VDC), NO ISOLATION	PS (12VDC), NO ISOLATION
RCz10	PS (110-240V)	PS (110-240V)
RCz40	PS (12VDC), BATTERY/SOLAR PANEL CONTROLLER	PS (12VDC), BATTERY/SOLAR PANEL CONTROLLER
RCz50	PS (24-60VDC)	PS (24-60VDC)
Analogue inputs Dx/Px:		
D1	0-10V	
D2	4-20mA	
D6	0-20mA	
P1		PT100 -50 - 100 °C
P2		PT100 -50 - 300 °C

UCR-4DIO/RCzxx.P1	UCR-4DI/RCzxx.P1	DESCRIPTION	PART NUMBER
		CABLES	
4 (2 DI can be used as counter inputs).	4 (2 DI can be used as counter inputs).		
4	-	Programming cable	
2 S0 compliant (max. 60Hz).	2 S0 compliant (max. 60Hz).	RS232	**UCC-301**
-	-		
-	-		
Optocoupler.	Galvanic isolation-optocoupler		
Screw connector type.	Screw connector type.	**SOFTWARE**	
		Windows based	
		IEC1131-3	
		programming	
ModbusRTU, EN/IEC60870-5-101 (slave).	ModbusRTU, EN/IEC60870-5-101 (slave).	software.	
Integrated GSM or PSTN modem and serial cable.	Integrated GSM or PSTN modem and serial cable.	Object oriented	**IOTOOL32 Pro**
Max. 19200 Bit/sec.	Max. 19200 Bit/sec.	programming	
8, 1, None.	8, 1, None.	software.	
Password and Dial Back.	Password and Dial Back.	Drivers and tools,	
480 Kbytes - resizeable 5-100%	480 Kbytes - resizeable 5-100%	incl. DDE/DLL/API	
Yes.	Yes.	support.	
Yes, with GSM modem.	Yes, with GSM modem.		
Dual band 900/1800 MHz.	Dual band 900/1800 MHz.		
Yes, selectable.	Yes, selectable.		
Dial-up modem V.32+.	Dial-up modem V.32+.		
Yes. Standard AT Hayes compatible.	Yes. Standard AT Hayes compatible.		
RS232 via RJ11 Modular plug.	RS232 via RJ11 Modular plug.		
IOTOOL32Pro.	IOTOOL32Pro.		
IOTOOL32Pro.	IOTOOL32Pro.		
23 Kbyte.	23 Kbyte.		
Yes, controlled via application program.	Yes, controlled via application program.		
35 mm symmetrical.	35 mm symmetrical.		
Anodized aluminium.	Anodized aluminium.		
80 x 162 x 62 mm.	80 x 162 x 62 mm.		
MODEM GSM DUAL BAND 900/1800MHZ	MODEM GSM DUAL BAND 900/1800MHZ		
MODEM PSTN DIAL-UP V32+	MODEM PSTN DIAL-UP V32+		
PS (12VDC), NO ISOLATION	PS (12VDC), NO ISOLATION		
PS (110-240V)	PS (110-240V)		
PS (12VDC), BATTERY/SOLAR PANEL CONTROL	PS (12VDC), BATTERY/SOLAR PANEL CONTROL		
PS (24-60VDC)	PS (24-60VDC)		
-	-		
-	-		
-	-		
-	-		
-	-		

TELEMETRY/REMOTE DATA LOGGING

CONCEPT

Brodersen µRTU RTU-COM allows you to convey plant condition in terms of process signals, logged data, intelligent alarms, SMS messages etc. from remote/isolated sites to a central control room (PC/Server) via the telephone network (PSTN) or by mobile telephone network (GSM, GPRS etc.).

The remote site could be just a few kilometres away or in another country, or indeed, another continent. It does not matter - telemetry can span the globe. Telemetry can be just as effective if the remote site is only a couple of hundred metres away, across a road or railway line.

With its 480 Kbytes memory, the RTU-COM Micro Outstation offers data logging facility and real-time clock for time stamping of data. Its user-friendly software and low cost now makes it an ideal choice for many applications within water, gas, railways, electricity, traffic and environmental telemetry systems.

The extended SMS functionality provided with the RTU-COM enables your mobile phone or email server be used to receive alarm messages. Indeed, even control function can be performed via SMS with a simple syntax. Only your imagination limits the use of the RTU-COM.

POWER MANAGEMENT

A wide range of AC/DC power options are possible with the RTU-COM including the *Power Save* option. When mains power is not available, a solar panel fitted with battery and charger can be used instead. This makes the RTU-COM an ideal choice for environmental monitoring, pipeline monitoring and metering applications.

PRINCIPLE

The communication to the RTU-COM is based on a master/slave principle where a standard PC (master) can communicate with a large number of RTUs (slaves).

A typical installation consists of an RTU-COM Micro Outstation connected to the sensors and the actual PSTN or GSM modem to the remote central monitoring station.

At the central monitoring station, the PC is equipped with communication software (IOTOOL32 Pro), which handles the communication to the RTU-COM and any other RTU modules in the Brodersen product range. The PC addresses an RTU-COM by dialling the site telephone number, and the RTU-COM can likewise alert the central monitoring station by calling the station's telephone number. Once communication is established, the data is transmitted in both directions as if the RTU-COM is directly cabled to the PC. Another option is to use the enhanced SMS facility which supports duplex communication.

Local application in the RTU-COM, independent of the communication to the central monitoring station, can be configured and downloaded from a PC with IOTOOL32 Pro installed. Each RTU-COM works independently of other RTUs.

Concept

TELEMETRY/REMOTE DATA LOGGING

TYPICAL RTU-COM INSTALLATIONS

Independant site alarm application
Many sites with critical or high cost related operations must be monitored by an independant alarm and monitoring system. In these applications the RTU-COM offer the function as a stand-alone module for alarm monitoring in case of main controller failure. And added with a UPS supply like UCS-58 and two redundant Master PC stations, the RTU-COM alarm system will meet most requirements.

Water Supply/Treatment
In this application, the RTU-COM is monitoring an unmanned pumping station which pumps ground water from boreholes to the treatment plant. Data, such as the amount of water pumped, running time of pumps, condition of filters etc., can all be monitored and logged. All data can be transferred to the control centre and, in the event of a failure, the RTU-COM will contact the PC and report the problem. In addition it can send the local service engineer an alarm SMS message, and damage control is quickly established.

Plant Monitoring and Fault Diagnosis – Remote Service Engineer.
A piece of plant can be fitted with an RTU-COM to monitor and log its performance. In the event of a fault, a diagnosis can often be made by connection to the RTU-COM, without the need of a service engineer to attend the site. Such applications using the RTU-COM include filtration plants, stand-by generators and waste water treatment.
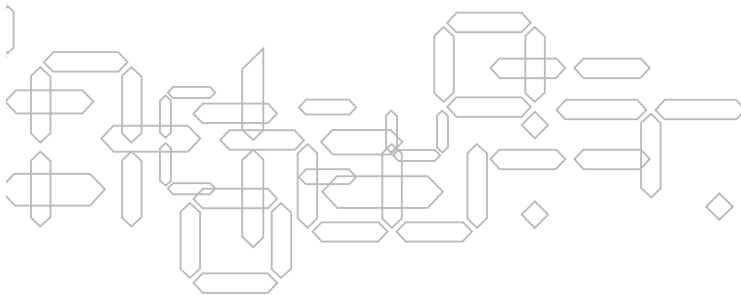
Applications

BRODERSEN

simplifying process

The **BRODERSEN** group has for more than 30 years supplied industrial process components including remote outstations, data loggers and communication modules for the process and automation industry.

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