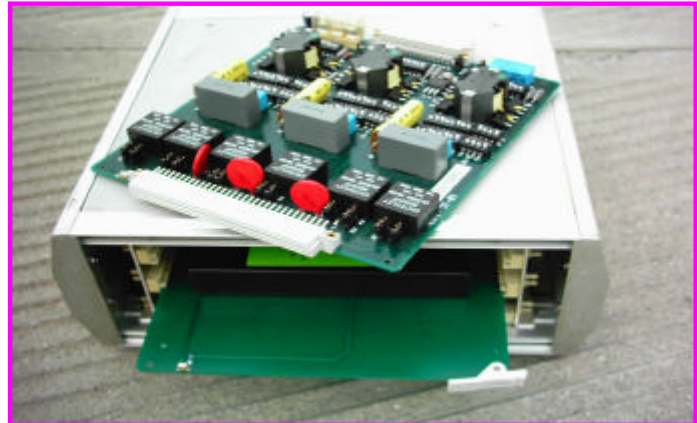


## CCU-3

## UNIVERSAL SIGNALLING CONVERTER

- **Up to 3 fully independent telephone interfaces supported**
- **Full range of 2 wires programmable telephone interfaces**
- **Internal ring generator unit**
- **LED status indicators**
- **Alarms extension port**
- **Desk-top or 19" rack mounting**
- **Low power consumption**
- **Easy installation**
- **Low cost-High reliability**
- **Modular construction**



### USE AND FUNCTION

**UNAOHM CCU-3** is a voice and signalling converter equipment, enabling connection of telephone interfaces to communication equipment operating with 4 wire E&M interface.

### EQUIPMENT DESCRIPTION

**UNAOHM CCU-3** universal signalling converter is a compact and modular desk-top equipment. An optional rack mounting kit is available for equipment installation into 19 inch standard rack.

**CCU-3** provides up to three (3) telephone line interfaces. The card cage carry one (1) MCR3 plug-in voice/signalling converter module, one (1) AL38 power supply unit (optional) and one (1) RGU1 ring generator unit.

The MCR3 signalling converter module implements three individual and independent programmable telephone interface circuits, including the hybrid network for 2 wire to 4wire conversion.

The available/programmable 2 wire telephone interfaces are:

- LB                      Local Battery
- CB/R                  Central Battery with repeated call
- ACB/S                Automatic Central Battery-Subscriber side
- ACB/E                Automatic Central Battery-Exchange side
- EE                     Direct Exchange connection
- a/b+ground        Signalling on 2 VF wires with ground return

**CCU-3** operates directly from a DC supply positive grounded, in the range -21÷-32 VDC. The optional plug-in AL38 power supply extend the equipment supply range from 21 to 56 VDC, allowing **CCU3** to be fed by DC source with positive or negative pole grounded. An external power box is also optionally available for **CCU-3** supply from AC source.

The RGU1 module, provides the AC ringing voltage to telephone line/telephone set, when MCR3 interfaces are configured for LB, CB/R and ACB/S operative modes.

LED's indicators provide the status of the equipment' cards. Dry relay contacts are available for alarms extension.

### CCU-3 Technical Characteristics

<b>Electrical interface</b>	
Voice band	300÷3400 Hz
4 wire impedance	600 ohm
4 wire return loss	≥ 14 dB within 300÷3400 Hz
2 wire impedance	600 ohm
2 wire return loss	≥ 14 dB within 300÷3400 Hz
Balanced attenuation in the voice band	≥ 36 dB
Hybrid loss	10 dB
<b>2 Wire Termination Types</b>	
LB	Local Battery
CB/R	Central Battery with repeated call
ACB/S	Automatic Central Battery / Subscriber
ACB/E	Automatic Central Battery / Exchange
EE	Direct Exchange connection
a/b + ground	Signalling on 2 VF wires with ground return
<b>Power Supply &amp; Consumption</b>	
Input Voltage	-21÷-32 VDC, 21÷56 VDC (with optional AL38 module), 230VAC (with optional external power box)
Power Consumption	18 W Max.
<b>Ring generator</b>	
Output voltage	86 V r.m.s.
Output frequency	20 Hz
<b>Mechanical</b>	
Dimension (mm)	W 214 x D 230 x H 90
Weight (kg)	2,5
<b>Environmental</b>	
Operative temperature	From 0° to 50° C
Storage temperature	From -10° to 70° C
Humidity	Up to 90% not condensing
<b>Monitoring &amp; Alarms</b>	
	LED's status indicators <ul style="list-style-type: none"> <li>- PWR</li> <li>- ALM</li> </ul> Alarms <ul style="list-style-type: none"> <li>- PWR Power Supply</li> <li>- MCR3 Unit</li> <li>- RGU1 Unit</li> </ul>

### CCU-3 Equipment Composition

CCU/CB-DT wired rack	One (1)
MCR3 Signalling Converter Card	One (1) (Three telephone interfaces)
AL38 Power Supply Unit (21÷56 VDC floating)	One (1) <b>Optional</b>
RGU1 Ring Generator Unit	One (1)

### CCU-3 Options

19" Rack mounting kit
Lines interface cable 2w / 4w terminated with KRONE LSA blocks
AL38 Power Supply Unit (21÷56 VDC floating)
External power box 230 VAC / 24 VDC