

FALLBACK SWITCH KU113

Technical Reference

22.02.2002

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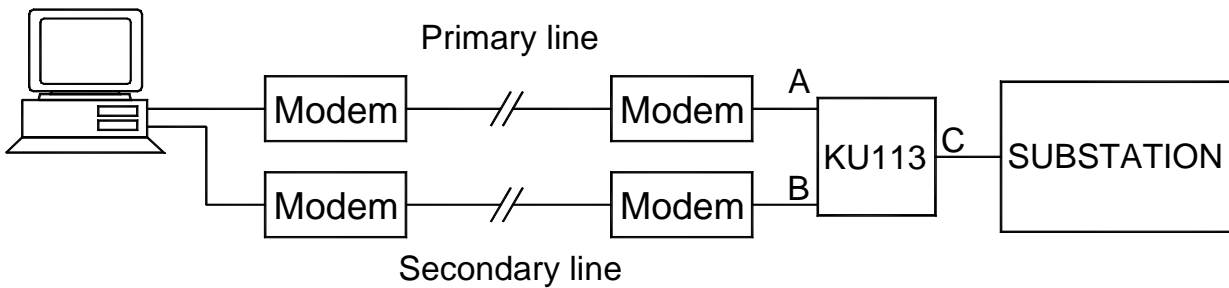
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1. GENERAL

1.1. INTRODUCTION

1.1.1. Basic functions



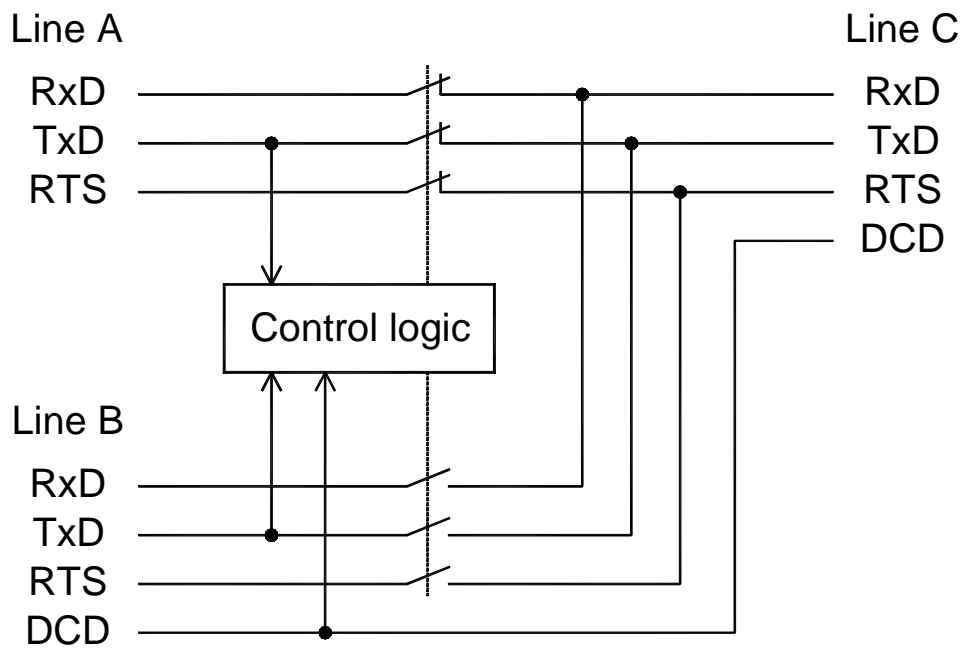
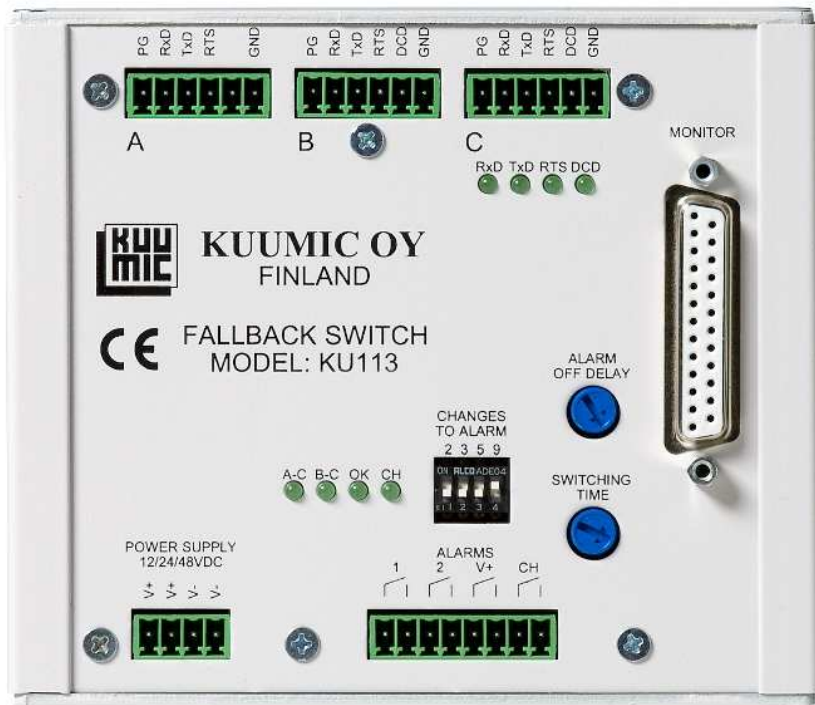
Connecting according the respond

Fall Back Switch KU113 is used to select the functioning communication line for the RTU. The selection criteria is based on the responding frequency of the RTU. FBS switching time must be adjusted to match with the polling period of the RTU. If there is no poll for the RTU and no response, the FBS is changing the line continuously. Suddenly the RTU receives the good poll and responds, this will satisfy the control logic and make the current selection permanent. If the polling is stopped then the FBS starts to hunt for the good line again.

Connecting according the backup line carrier detect

If there is no communication the FBS hunts for the good line. The dispatch centre uses the main line for polling and FBS selects that line as the permanent communication line. Dispatch centre changes the communication over the backup line. Backup line carrier detect is connected to the FBS line B.

When the carrier detect rise up the FBS line B is selected and it stays selected as long as the carrier detect is on. Dropping the carrier detect line down starts the good line hunting again.



1.2. TECHNICAL SPECIFICATIONS

1.2.1. CONNECTORS

A Communication port A

Pin	Signal name	Direction	Description
1	PG	-	Protective ground
2	RxD	Input	Received data
3	TxD	Output	Transmitted data
4	RTS	Input/output	Request to send
5	-	-	-
6	GND	-	Signal ground

B Communication port B

Pin	Signal name	Direction	Description
1	PG	-	Protective ground
2	RxD	Input	Received data
3	TxD	Output	Transmitted data
4	RTS	Input/output	Request to send
5	DCD	Input	Data carrier detect
6	GND	-	Signal ground

C Communication port C (Common line)

Pin	Signal name	Direction	Description
1	PG	-	Protective ground
2	RxD	Output	Received data
3	TxD	Input	Transmitted data
4	RTS	Input/output	Request to send
5	DCD	Output	Data carrier detect
6	GND	-	Signal ground









MONITOR Data communication monitoring

Pin	Signal name	Direction	Description
1	PG	-	Protective ground
2	RxD	Output	Received data
3	TxD	Output	Transmitted data
4	RTS	Output	Request to send
7	GND	-	Signal ground
8	DCD	Output	Data carrier detect

POWER SUPPLY

Pin	Signal name	Direction	Description
1	+	Input	Power supply +
2	+	Input	Power supply +
3	-	Input	Power supply -
4	-	Input	Power supply -

ALARMS 4 pcs. insulated solid state relay contacts

Pin	Signal		Description
1	1		Alarm 1
2			
3	2		Alarm 2
4			
5	V+		Power supply alarm
6			
7	CH		Switch changed alarm
8			

1.2.2. LED INDICATORS

Communication status LEDs are connected to the line C

RxD	Received data
TxD	Transmitted data
RTS	Request to send
DCD	Data carrier detect
A-C	Indicates the switch position from Line A to Line C
B-C	Indicates the switch position from Line B to Line C
OK	Indicates the connection is good
CH	Indicates the switch position is changed and alarm off delay is on

1.2.3. JUMPERS AND SETTINGS

CHANGES TO ALARM	Is used to configure the number of the switch changes to generate alarm
ALARM OFF DELAY	Adjustable delay to set alarm off when connection is good
SWITCHING TIME	Adjustable time (150ms -15s) to change switch position when data is lost

1.2.4. ALARMS

1	Alarm is generated when data is lost and switch position has changed specified times
2	Same as alarm 1
V+	Alarm is generated when power supply is off
CH	Alarm is generated everytime the switch position is changed

The alarms are realised on the solid state relays for AC and DC voltages.

Max. voltage	350 VDC/VAC peak
Max. DC current	100 mA
Max. AC current	100 mA
Insulation voltage	2000 V
Max. on resistance	35 Ω
Leak current	<10 μA

1.2.5. POWER SUPPLY

Supply voltage range	8 - 62 VDC
Power consumption	0,75W max.

1.2.6. MECHANICAL DIMENSIONS

Width	128 mm
Height	110 mm
Depth (including connectors)	71 mm
Weight	374 g

Designed for installation onto standard 35 mm DIN rail.

1.2.7. ENVIRONMENTAL CONDITIONS

Operating temperature	0 to 50 °C
Storage temperature	-40 to 85 °C
Relative humidity	10 to 90 % (noncondensing)