

RISH MIT 30 Analog Digital Multimeter with Insulation Resistance Measurement

Analog Digital Multimeter
with Insulation resistance



Protocol for Rish mit 30

Output format

Baud rate: **8192**
Data bits: **6**
parity: **no**
stop bits: **1**

Data bits 0 ...3 contain the actual information.
Bits 4 and 5 mark the beginning of a block.

Data formats

1. Functions V,A, Ω ,Diode,MOIT

- a) Device measurement functions and special characters
Output for resistance ranges after each 2nd, for Volts,
Amps,Diode,Insulation resistance after each 10th value.

Byte-No.	Output unit	Bit5	Bit4	
1	Type	0	0	
2	measurement function and range	1	1	
3	special char 1	1	1	On, Beep, Low Bat, FUSE
4	special char 2	1	1	MIN, MAN, F mA, MAX
5	dec pt, sign AC/ DC	1	1	

b) Measurement data

Output when updating analog display.

Byte-Nr.	Output	Bit5	Bit4	
1	dec. pt, sign, AC/DC	0	1	*1)
		1	0	
2	5th dig (not in LCD)	1	1	*2)
3	Ones	1	1	
4	Tens	1	1	
5	Hundreds	1	1	
6	Thousands	1	1	

*1) First value within average: Bit4 = 1, Bit5 = 0
Following 10 values: Bit4 = 0, Bit5 = 1

*2) With overflow 5.digit = 0

2. Functions Hz,%,F,°C,FmA

Measurement data, measurement type and special characters.
Output with each update of the numerical display.

Byte-No.	Description	Bit5	Bit4
1	Type	0	0
2	measurement function and range	1	1
3	special char 1	1	1
4	special char 2	1	1
5	dec pt, sign AC/ DC	1	1
6	5th digit (always 0)	1	1
7	Ones	1	1
8	Tens	1	1
9	Hundreds	1	1
10	Thousands	1	1

Protocol for Rish mit 30

Output data (Bit0..3)

1. Type

Device	Value	
Rish mit30	1011	Except for Ω and M Ω IT.
	0110	For Ω and M Ω IT.

2. Measurement range and measurement value

Measurement	Code	Measurement	Code
mV DC	0001	Ω °C	1001 (°C if Dec.pt.=0)
V DC	0010	k Ω °C	1010 (°C if Dec.pt.=0)
V AC+DC	0011	M Ω °C	1011
V AC	0100	nF	1100
Hz	0101	μ F	1101
KHZ	0110	mA μ A	1110 (μ A if Dec.pt.=0)
%	0111	A	1111
Diode	1000	Space	0000

3. Special character 1

Display	Code
	abcd
On	1
Beeper	1
Low Bat	1
FUSE	1

4. Special character 2

Display	Code
	abcd
MIN	1
MAN	1
MAX	1

5. Dec pt, sign and AC/DC for current

Display	Code
0 0 0 0 V	ab00
0 0 0.0 μ A	ab00
0 0 0.0 °C	ab00
0.0 0 0	ab01
0 0.0 0	ab10
0 0 0.0	ab11
without sign	b = 0
'-' sign	b = 1

DC for current a = 0
ACDC for current a = 1

6. Digital display

Code of Bits

Display	Code	Display	Code
0	0000	6	0110
1	0001	7	0111
2	0010	8	1000
3	0011	9	1001
4	0100	L	1010
5	0101	Space	1011
		-	1100

