VOL-04B-log47k

General

The volume module is ideal for setting the volume of external audio appliances via the bus. It has four independent channels (electronic potentiometers). The resistance ranges can be changed positively with a logarithm using software between 0 and 47 kOhm. This equals an attenuation of 0dB to -63dB and at mute >-90dB. The signal source (e.g. a CD player) is connected to connection H. Connection L is GND and W is the connection for the amplifier input for the volume setting.

The module is equipped with two microcontrollers and can therefore execute even very complex master commands independently.

The following functions can be performed independently by the VOL module:

- Calculation of increases with time constants from 0.5 seconds to 18 hours
- Independent switch from current ACTUAL analogue values to specified TARGET analogue values with a specified time
- Feedback signal for end of analogue value output after time functions have been performed
- Stop function whilst time functions are being performed
- OVERSAMPLING error correction (the VOL module independently corrects the analogue value skipped by the BUS system cycle times using “OVERSAMPLING”. The analogue values between the BUS cycles are transformed back into the 8-bit resolution by means of linearisation thus preventing, for example, jerky volume adjustment. In programming OVERSAMPLING is called a SOFT function).

In- / Outputs

- 4 electronic potentiometers

Function displays

- 1 red LED indicates the operating voltage
- 1 yellow flashing LED indicates the communication to the master via subnet
- 1 green LED signalise the regulations of the outputs (LED flashes, until the desired final value is reached)

Connections

- 1 connection for the subnet (BUS A and B, RS-485)
- 1 connection for the operating voltage (Ub, 0V)
- 4 H connections (potentiometer inputs)
- 4 W connections (potentiometer outputs)
- 4 L connections (mass) L1 to L4 are internal connected
- 2 P-COM connections (subnet and operating voltage)

Design
• Light grey plastic casing, can be snapped onto 35 mm DIN rail mounting 3 separating units

Special function DIP switch 1
• reserve
  - switch must be OFF

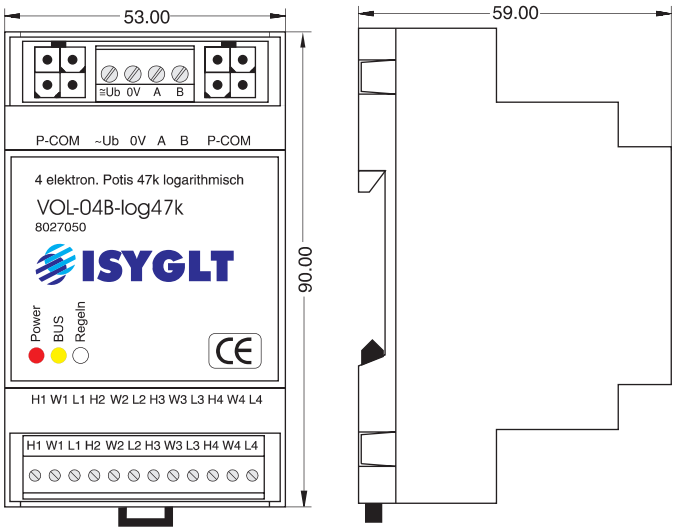
Technical data

Type	VOL-04B-log47k
Art. Nr.	80027050
Operating voltage	18V to 35V DC or 18V to 27V AC
Current consumption	max. 40mA at 24V
Outputs	4 electronic potentiometers 0-47k Ohm 0 to -63dB mute -90dB
Insulation voltage	300V (subnet / analog outputs)
Subnet (RS-485)	max. 5,6V limited by Z-diodes
Dimensions	LxBxH, 53x90x59mm = 3TE
Weight	200g
Connection	Screw terminals pluggable and P-COM connection
Operating temperature	-10...+50°C
Storage temperature	-25...+70°C
Humidity	0 ...85 % r.F. non condensing
Protection class	IP30
ESD immunity	Category 3 according to IEC1000-4-2
EMV immunity	Use in typical industrial enviroment. Category 3 lt. IEC-1000-4-4 (Test was carried out within a whole system)
CE sign	yes

Terminal assignment

≅ Ub	Operating voltage
0V	Operating voltage
A	Subnet (BUS A, RS-485)
B	Subnet (BUS B, RS-485)
H1...4	High, connection to signal source (e.g. CD-Player output)
W1...4	Wiper, connection to signal destination (e.g. Audio amplifier input)
L1...4	Low, connection to system masse (all 4 L connections are connected together)

View



Wiring diagram