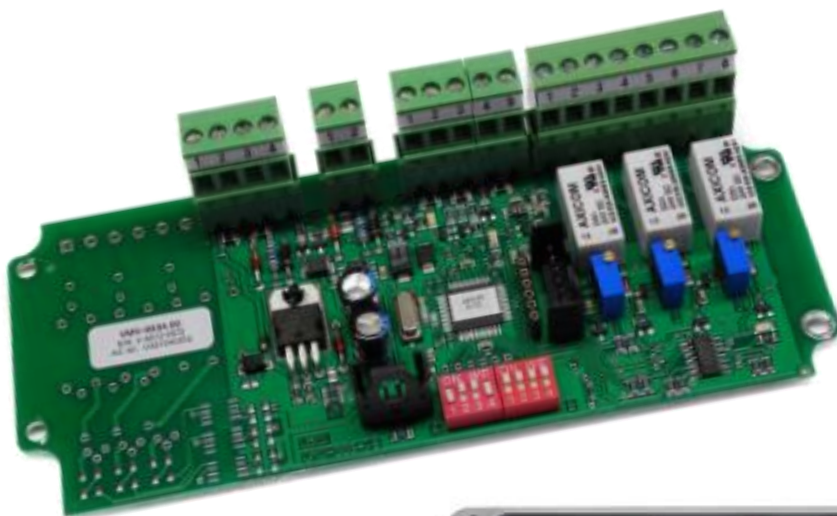




Digital load monitoring VMV-0034



Digital load monitoring VMV-0034

The VMV-0034 limit value switch operates as a triple comparator for sensors with current output.

The sensor input can be configured for the 1 ... 9 mA or 4 ... 20 mA signal current range.

One adjustment potentiometer each enables the setting of a switching threshold that corresponds to a specific load of the connected strain gauge force transducer.

An 8-bit microcontroller measures the signal currents and switches three relays depending on the threshold value and setting.

Features:

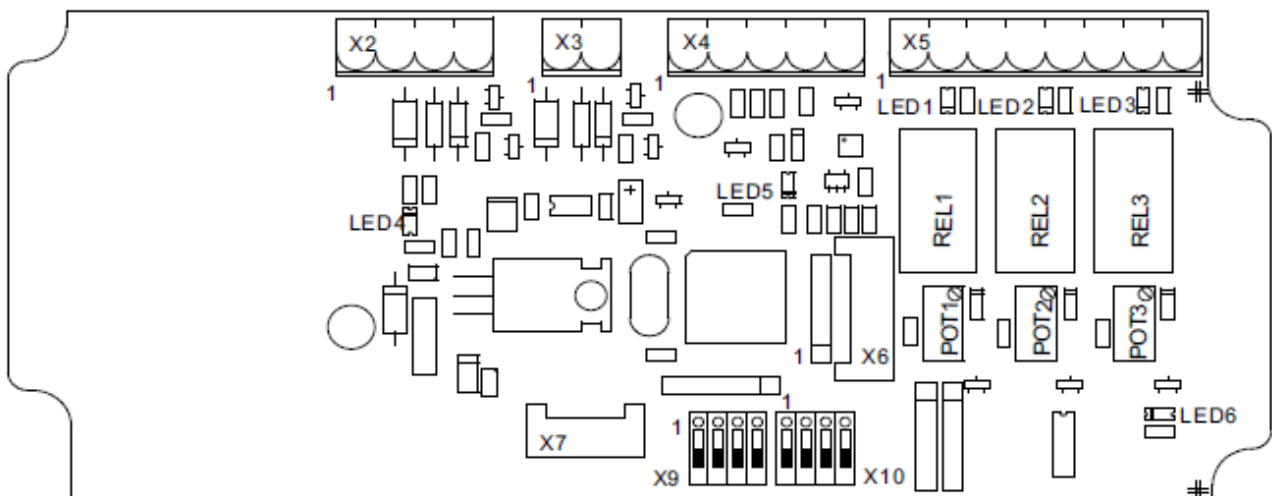
- Settings via 8 DIL switches
- Switching function via 3 relays when threshold value is exceeded, can be configured to switch on or off as required (normally closed or normally open contact)
- Internal controller with self-monitoring switches the relays to the de-energised state in the event of a fault
- Reset of the module via push-button connection or by disconnecting from the power supply
- In the event of a cable break: relays switch to the overload state
- Interference and noise suppression with two digital filters and 3 s delay
- LEDs indicate the current operating status

The module can be connected to a PC via the communication connection X7 using RS232 or USB.

Technical Data

Power supply:	24 V DC
Current consumption:	max. 100 mA (without sensor)
Sensor supply:	21 V DC
Strain gauge sensor input:	Current input 1 ... 9 mA / 4 ... 20 mA
Load resistance:	360 Ω / 180 Ω
Output:	Aluminium die-cast housing Euromas A 115
Housing dimensions:	175 mm x 80 mm; Height 57 mm

Pin-assignment



X2 Power supply

Connection	Description	Remark
1	+24 V	Positive supply voltage
2	GND	Ground
3	CC	Calibration check
4	GND	Ground

Pin-assignment

X3 Button		
Connection	Description	Remark
1	TAST	Push-button connection
2	GND	Ground

X4 Sensor			
Connection	Description	Remark	Cable colour
1	+Ub	Positive supply voltage	Brown
2	GND	Ground	Green
3	Is	Sensor signal 1 ... 9 mA or 4 ... 20 mA	Yellow
4	CC	Calibration check	White
5	Screen	Screen of the connection cable	Blue

X5 Relay		
Connection	Description	Remark
1	AK1	Normally open contact relay 1
2	MK1	Middle contact relay 1
3	AK2	Normally open contact relay 2
4	RK2	Break contact relay 2
5	MK2	Middle contact relay 2
6	AK3	Normally open contact relay 3
7	RK3	Break contact relay 3
8	MK3	Middle contact relay 3

X6 Service connection		
Connection	Description	Remark
1	+Ub	Positive sensor supply
2	GND	Ground
3	Um	Tension over load
4	POT1	Threshold voltage POT1
5	POT2	Threshold voltage POT2
6	POT3	Threshold voltage POT3

X7 Communication connection		
Connection	Description	Remark
1	TX	TX transmit signal
2	RX	RX receive signal
3	Ub	+5 V internal supply voltage
4	GND	Ground

Pin-assignment

X9 DIL- Switches 1

Switches	Description	Setting
1	REL1	NC contact / NO contact Relay 1
2	REL2	NC contact / NO contact Relay 2
3	REL3	NC contact / NO contact Relay 3
4	Sensor connection	1 ... 9 mA / 4 ... 20 mA

X10 DIL-Switches 2

Switches	Description	Setting
1	HYST	Hysteresis
2	FILT1	Filter 1
3	FILT2	Filter 2
4	HALTF	Hold function (relay 3)

LEDs

LED	Colour	Setting
1	Green	Relay 1 active
2	Green	Relay 2 active
3	Green	Relay 3 active
4	Yellow	Power supply connected
5	Green	Controller active
6	Red	Error state

Housing

