■ Signal Converter CM 9001 for incremental encoder signals

Characteristics

- **LED-Display, red, 6 decades, 8 mm**
- **Display range -99999 .. 999999**
- **DIN Rail Mounted**
- **Operating mode programmable**
- **Data storage at power fail**
- **Analog output 0(2) - 10 V oder 0(4) - 20 m**A
- **2 alarm relay**
- **Plug-In screw terminal**

Modes

- Incremental A 90° B x 1
  A 90° B x 2, A 90° B x 4
- UP/DOWN + Direction
- Puls counter A
  A-B, A+B, A/B, (A-B)/A, (B-A)/A
- Frequency-/Rotation speed measurement A
  A-B, A+B, A/B, (A-B)/A, (B-A)/A
- Cycle duration measurement
- Pulse duration measurement
- Time meter about Start/Stop

Software functions

The universal counter is equipped with following functions:

- Scaling factor 0,00001 .. 9,99999
- programmable offset value
- MIN/MAX value detection
- Auto-Reset for MIN/MAX value
- Displaytest and displayhold
- Setting of alarm points during measurement

Signal inputs

The signal inputs are programmable to several encoder output logic:

- PNP- or NPN-Logic
- 5 V (TTL), 12 V or 24 V signal level
- 25 Hz signal input filter

Push buttons at the front

Three of the push buttons could be programmed to following functions:

- No function
- Reseting Measured value or MIN/MAX value
- Displaying Measured-, MIN- or MAX-Value
- Manual alarm point reset
- Displaying and setting of alarm points

Digital Input Channel

These both input are low active and could be programmed to following functions:

- No function
- Reseting Measured- or MIN/MAX-value
- Displaying Measured-, MIN- or MAX-value
- Manual alarm point reset
- Displayhold or displaytest

Alarm outputs

Two programmable alarm outputs with free allocation allows the monitoring of production operation.
Programmable parameters:

- Alarm point and hysteresis
- Relay function (high or low alarm)
- Alarm response time (Fall off and put on time)
- Data source (Measured-, Hold-, MIN- or MAX-value)

Analog output

The analog output is provided with a current output and a voltage output. Both output are isolated from the further electronic.

- To scale (offset and final value)
- Output 0(2) - 10 V or 0(4) - 20 mA
- Data source (Measured-, Hold-, MIN- or MAX-value)

Optionen serial interfaces

Addition to data communication or to a printer

- RS 485

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Digital Signal Converter

Elektrical Datas

Counter incremantal	counter steps 24 Bit
Count frequency	max. 4,5 kHz
UP/DOWN-counter + direction	counter steps 24 Bit
count frequency	max. 10 kHz
Puls counter	counter steps 24 Bit
Count frequency	max. 10 kHz
Frequency/rotation speed	
1-channel mode	max. 20 kHz
Resolution	0,01 Hz auto., 0,1 Hz, 1 Hz
2-channel mode	max. 10 kHz
Resolution	1 Hz
Cycle duration	0,0001 s .. 999999 s
Pulse duration	0,0001 s .. 999999 s
Time meter	0,0001 s .. 999999 s
or	00.00.00 h .. 99.59.59 h
Accuracy	
Frequency measurings	< 0,01 %
Time measurings	< 0,02 %
Update rate	
Counter modes	60 ms
Frequency-/Time meter	100 ms
Signal input filter	25 Hz programmable
Data storage	> 10 years (NOVRAM)
Signal inputs	4, input A, B, Reset, Tor
Logic	PNP-, NPN
Signal level	5 V (TTL), 12 V, 24 V
Digital user inputs	2, programmable function
Logic	NPN, max. 30 V
Alarm outputs	2 Relays (programmable as opened contace or closed contact)
Signaling	2 LEDs at the front
Switch voltage	250 V AC / 250 V DC
Switch current	5 A AC / 5 A DC
Switch power	750 VA / 100 W
Analog ouput	resolution 16 bit
Accuracy	± 0,2% of final valuet
Nonlinearity	± 0,012 %
Voltage	0(2) - 10 V, max. 10 mA
Current	0(4) - 20 mA; max. 500 Ω
Isolation voltage	3 kV / 1 min
Interfaces	RS 485
Protocol	DIN 66 019 / ISO 1745
Isolation voltage	1,6 kV / 1 min
Power supply voltage DC	18 .. 36 V DC
Isolation voltage	500 V / 1 min
Power consumption	70 mA

Mechanical Datas

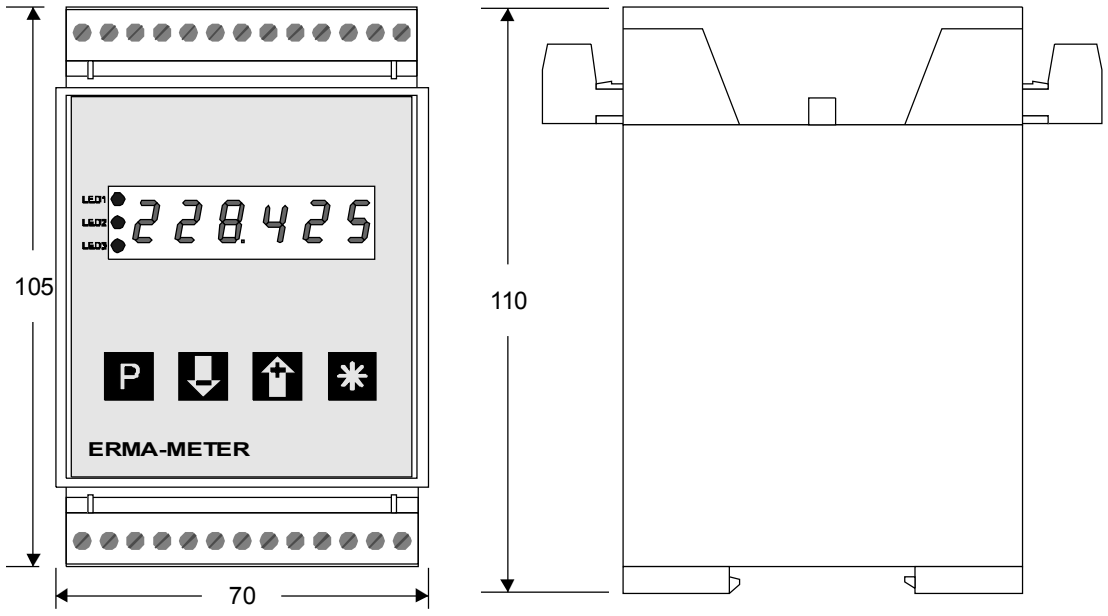
Display	6 decades, 8 mm, red Decimal point programmable preliminary zero suppression - sign at negative values
Operation, keyboard design	front membrane with push buttons
Case	DIN rail mounted
Dimensions (B x H x T)	67,5 x 75 x 105 mm
Weight	ca. 300 g
Connection	Plug-In screw terminal

Environmental conditions

Operating temperature	0 .. 50 °C
Storage temperature	-20 .. 70 °C
Humidity	< 80 %, not-condensing
Protection	protective class II
Front protection	IP 40; connections IP 20
Field of application	class 2, overvoltage protection II
CE	in conform with 89/336/EWG NSR 73/23/EWG

Ordering information

CM 9001 -		
		Reserve
		Front design
		0 No logo
	Power supply	
	0	5 V DC, +/- 10 %, isolated
	1	12 V DC, +/- 10 %, isolated
	2	18 .. 36 V DC, isolated
	Option interface RS 485	
	0	No interface
	1	RS 485



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