

INCREMENTAL DISPLAY MODULE MOD 13

Anzeigemodul mit programmierbaren Ausgängen
für inkrementale Drehgeber

*Module avec sortie programmer
par Codeurs optiques incrémentaux*

Display with programmable outputs
for Incremental Encoder



MOD 13 - a programmable multifunctional display module for incremental encoders with output channel push-pull or RS 422 line driver. Display parameters are fully programmable. MOD 13 has the usual standardfunction of a display modul, but additional two control outputs, which can be programmed separately as comparator, cam switch or pulse switch. Easy programming by four front-panel keys.

PRODUCT DESCRIPTION MOD 13:

Case

for panel mounting

Dimensions 111 x 144 x 72 mm
8-digit 7-segment red LED display,
14 mm high

Weight < 0,5 kg

Signal-Inputs

for operation of incremental encoders

- Input-signals
6 channels $A\bar{A} + B\bar{B} / 90^\circ + M\bar{M}$
RS422 line driver
or
3 channels $A + B/90^\circ + M$ with 5 V or 24 V
voltage level
- Input frequency up to 150 kHz
- Optically insulated by optocoupler

Display-Parameter

- **Fully programmable**
- Scale factor
- Decimal point
- Zero offset

Cycle Time approx. 1 ms

1 Programmable control input

1 Control input for storage of indicated value

2 Programmable Control-Outputs

- Programmable separately as comparator, cam switch or pulse switch
- Switching threshold adjustable for complete indicating range
- Switching hysteresis adjustable
- Optocoupler with NPN-Transistor, Open Emitter with PTC
- Supply Voltage max. 35 VDC
- Output current max. 50 mA
- Output voltage min. supply voltage -2 V
- Optically insulated by optocoupler

General Data

- Supply Voltage 10 ... 35 VDC
- Supply Voltage output 5 VDC, max. 350 mA
- Power Consumption <150 mA (without load)
- Operation temperature 0...50° Celsius

Protection

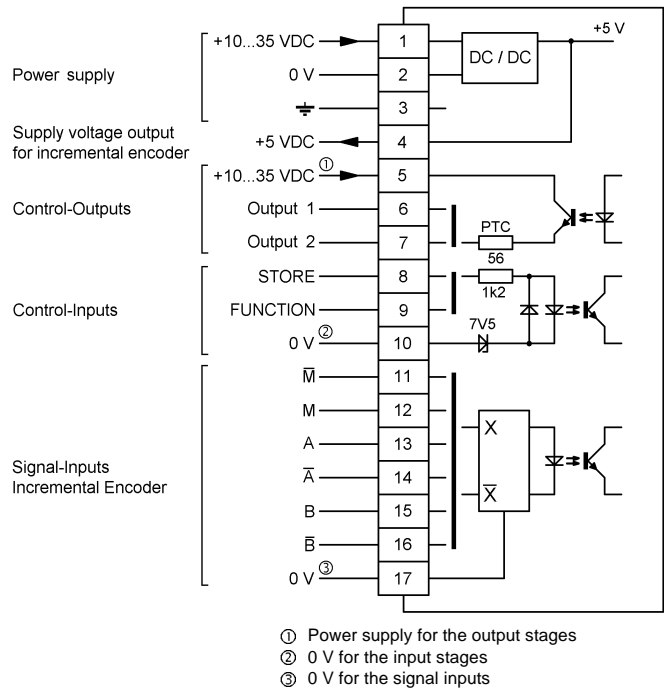
- Front IP 50, with protective cover IP54, rear IP 20

ZE608-203
Änderungen vorbehalten / Subject to change

Technical Data

Supply voltage	+10 ... 35 VDC
Power consumption	<150 mA (without load) at 24 VDC)
Supply voltage output for incremental encoder	5 V max. 350 mA
Cycle time	1 ms
Display range	-9999999 ... 99999999
Display	8 digit 7-segment red LED, 14 mm high
Data memory	EEPROM
Operating temperature	0 ...+ 50°C
Connections	Terminal block, max. 1,5 mm ²
Weight	< 0,5 kg
Protection	front IP 50 with protective cover IP 54 rear IP 20

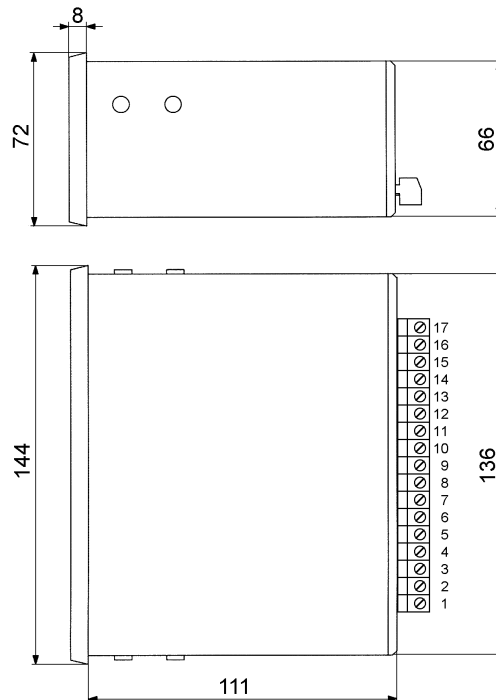
Electrical connection diagram



Signal-Inputs - Incremental Encoder

Number of input-signals	6 = $A\bar{A} + B\bar{B} / 90^\circ + M\bar{M}$
Input circuit	according to RS 422
Input voltage	max. 35 V
Input frequency	max. 150 kHz
Input resistance	3 k Ω at 24 V 350 Ohm at 5 V
pulse width Signal M	min. 2 μ s

Outline drawing



Control-Inputs

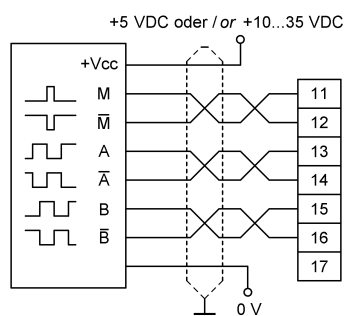
Circuit	Optocoupler
Input level Low	0 ... +5 VDC
Input level High	+10 ... 35 VDC
Input resistance	1,8 k Ω at 24 VDC

Control-Outputs

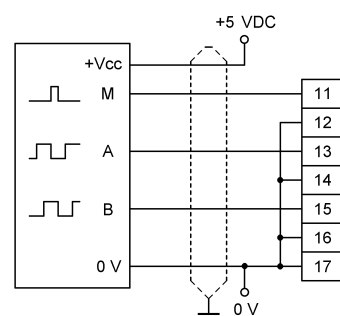
Circuit	Optocoupler NPN-Transistor, Open Emitter with PTC
Power supply	max. +35 VDC
Output voltage	min. $V_{cc} - 3,5$ V at 50 mA min. $V_{cc} - 2,0$ V at 20 mA
Output current	max. 50 mA, short circuit proof

Connection of Incremental Encoder

Incremental Encoder with 6 channels RS422 line driver outputs



Incremental Encoder with 3 channels voltage level +5 V



Incremental Encoder with 3 channels voltage level +10...35 V

