

GENERAL DESCRIPTION

Interpolation electronic SIM 250 digitizes and subdivides sinusoidal signals from a linear or rotary measuring encoder. When an input signal fault occurs due to encoder error (cable damage, light element error, sensors error, measuring glass contamination, etc), SIM250 generates E impulse and can switch output signals to high impedance state. Subdivision factors can be set to: 1, 2, 4, 5, 8, 10, 16, 20, 25, 50. Input sinusoidal signals can be current (SI) or voltage (SV) type.

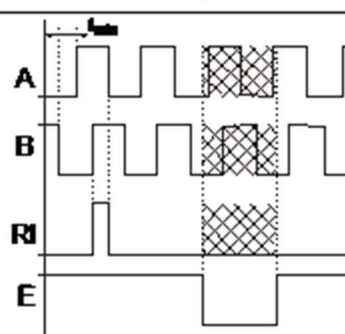
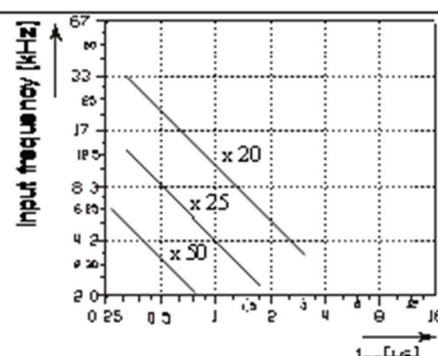
MECHANICAL DATA

Operating temperature	0°C to 50°C
Storage temperature	-10°C to 50°C
Weight	cca 0.4 kg
Degree of mechanical protection	IP 53
Cable length	max. 20 m

ELECTRICAL DATA

Supply voltage	5 V \pm 5%
Supply current (without transducer)	70 mA \pm 10%

Output signals:

 $t_{min} = f$ (input frequency):

Output signals	
Differential digital signals in accordance with RS 422 A EIA standard A, \bar{A}, B, \bar{B}, RI, \bar{RI}, E	
Incremental signals level:	Error signal E-:
$I_{sink} = 20 \text{ mA}$ $U_{OL} \leq 0.5 \text{ V}$ $I_{source} = -20 \text{ mA}$ $U_{OH} \geq 2.5 \text{ V}$	Error signal has the same fan out as incremental. When E signal is aktiv (LOW), signals go to high impedance state.

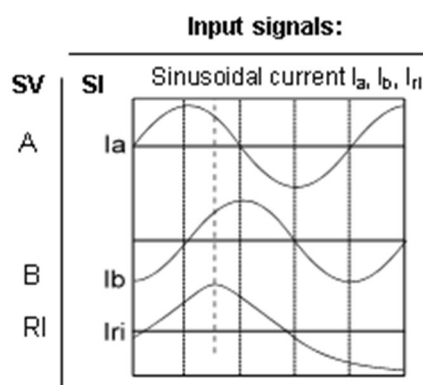
Standard output connector - Contact 12 pin male



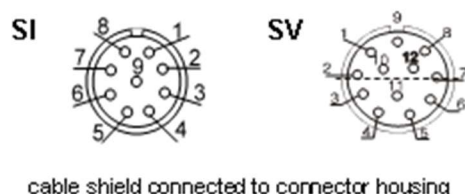
pin	1	2	3	4	5	6	7	8	9	10	11	12
signal	\bar{B}	5 V	RI	\bar{RI}	A	\bar{A}	\bar{E}	B	nc	0 V	0 V	5 V
color	pink	blue	red	black	brown	green	violet	grey		white	white	blue

cable shield connected to a connector housing

ELECTRICAL DATA



Standard input connector
(contact view) female socket



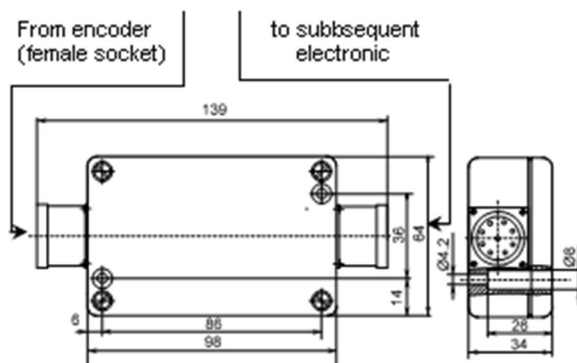
Amplitude:							
SI				SV			
8 μA ≤ Ia ≤ 16 μA				0,6 V ≤ Ua ≤ 1,2 V			
8 μA ≤ Ib ≤ 16 μA				0,6 V ≤ Ub ≤ 1,2 V			
2 μA ≤ Iri ≤ 8 μA				0,2 V ≤ Uri ≤ 0,85 V			
Input frequencies							
interpolations				interpolations			
1-5	10	20	50	1-5	10	20	50
200 kHz	100 kHz	50 kHz	20 kHz	200 kHz	100 kHz	50 kHz	20 kHz

pin	1	2	3	4	5	6	7	8	9
signal	I_a^+	I_a^-	+5 V	0 V	I_b^+	I_b^-	I_{ri}^+	I_{ri}^-	nc

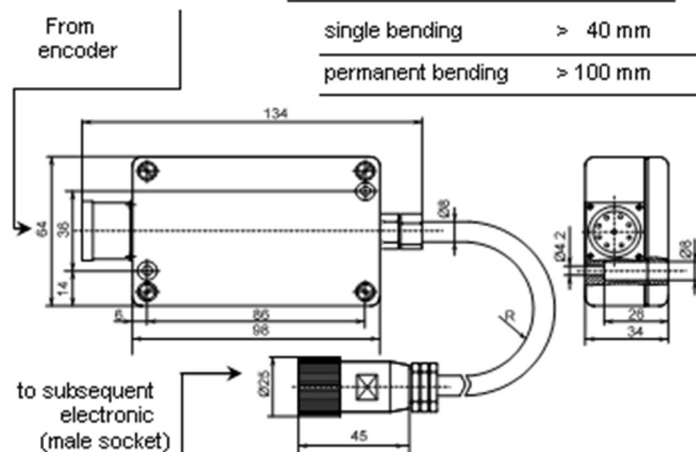
pin	5	6	8	1	3	4	12	10	2	11
signal	A+	A-	B+	B-	RI+	RI-	5V	0V	5V sense	0V sense

DIMENSIONS

SIM 250 A



SIM 250 B



ORDERING DATA

SIM 250 - X - - X - - X

Output connector version:

A ... on housing
B ... on cable (standard 1m)

Interpolation factor:

1, 2, 4, 5, 8, 10,
16, 20, 25, 50

Input signals

SI - 11 μA signals
SV - 1 Vpp signals

Cable length over 1m or different output connector on request

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