

HEAG 158

Precision interpolator / splitter

Converting of SinCos signals into TTL and HTL signals

Overview

- Converting of SinCos signals into TTL and HTL signals
- Additional interpolation of the signals (multiplying or dividing)
- Oversampling with 24 MHz
- Digitally pre-filter
- Very high output frequency possible



Technical data

Technical data - electrical ratings

Voltage supply	10...30 VDC
Consumption	≤150 mA (15 VDC)
Inputs	SinCos 2x SinCos
Input signals	A+, A-, B+, B-, R+, R-
Outputs	HTL TTL Error output
Output signals	A+, B+, R+, A-, B-, R- Option: A+, B+, R+, A-, B-, R-, Error-
Output frequency	≤2 MHz (HTL) ≤5 MHz (TTL)
Interpolation factor for HTL output (multiplying)	1...2048
Interpolation factor for HTL output (dividing)	1/2...1/2048

Technical data - electrical ratings

Interpolation factor for TTL output (multiplying)	1...2048
Interpolation factor for TTL output (dividing)	1/2...1/2048
Approval	CE
Technical data - mechanical design	
Dimensions W x H x L	122 x 122 x 80 mm
Protection EN 60529	IP 65
Operating temperature	0...+50 °C
Resistance	IEC 60068-2-6 Vibration 1 g, 50-2000 Hz IEC 60068-2-27 Shock 30 g, 11 ms
Weight approx.	1 kg
Connection	Connector M23, 12-pin Connector, 3-pin, external voltage supply

Optional

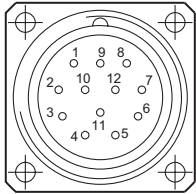
- Internal pre-amplifier
- Two sine inputs for compensating radial runout
- Error output, external voltage supply

Terminal assignment

View A (see dimension)

Input encoder signals

Assignment flange connector



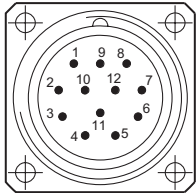
Flange connector M23, female, 12-pin, counter-clockwise (CCW)

Pin	Assignment
1	B-
2	5 VDC
3	R+
4	R-
5	A+
6	A-
7	dnu
8	B+
9	dnu
10	0V (\perp)
11	0V (\perp)
12	5 VDC

View B (see dimension)

Converter output

Assignment flange connector



Flange connector M23, male, 12-pin, counter-clockwise (CCW)

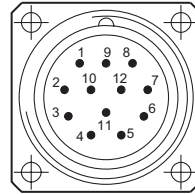
Pin	Assignment
1	B _{HTL} -
2	5 VDC
3	R _{HTL} +
4	R _{HTL} -
5	A _{HTL} +
6	A _{HTL} -
7	dnu (with error output: Err-)
8	B _{HTL} +
9	dnu
10	0V (\perp)
11	dnu
12	10...30 VDC (with external voltage supply: dnu)

Terminal assignment

View C (see dimension)

Counter output

Assignment flange connector

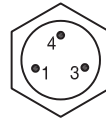


Flange connector M23, male, 12-pin, counter-clockwise (CCW)

Pin	Assignment
1	B _{TTL} -
2	dnu
3	R _{TTL} +
4	R _{TTL} -
5	A _{TTL} +
6	A _{TTL} -
7	dnu
8	B _{TTL} +
9	dnu
10	0V (\perp)
11	0V (\perp)
12	dnu

View D (see dimension)

External power supply



male, 3-pin, counter-clockwise (CCW)

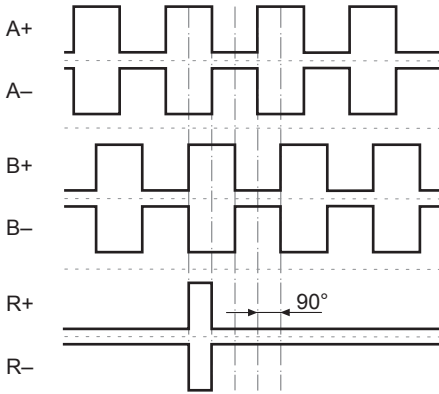
Pin	Assignment
1	10...30 VDC
3	\perp (0 V)
4	Shield

Terminal significance

... VDC	Voltage supply
0V (\perp)	Ground
A+	Output signal channel 1
A-	Output signal channel 1 inverted
B+	Output signal channel 2 (offset by 90° to channel 1)
B-	Output signal channel 2 inverted
R+	Zero pulse (reference signal)
R-	Zero pulse inverted
Err-	Error output
dnu	Do not use

Output signals

HTL/TTL

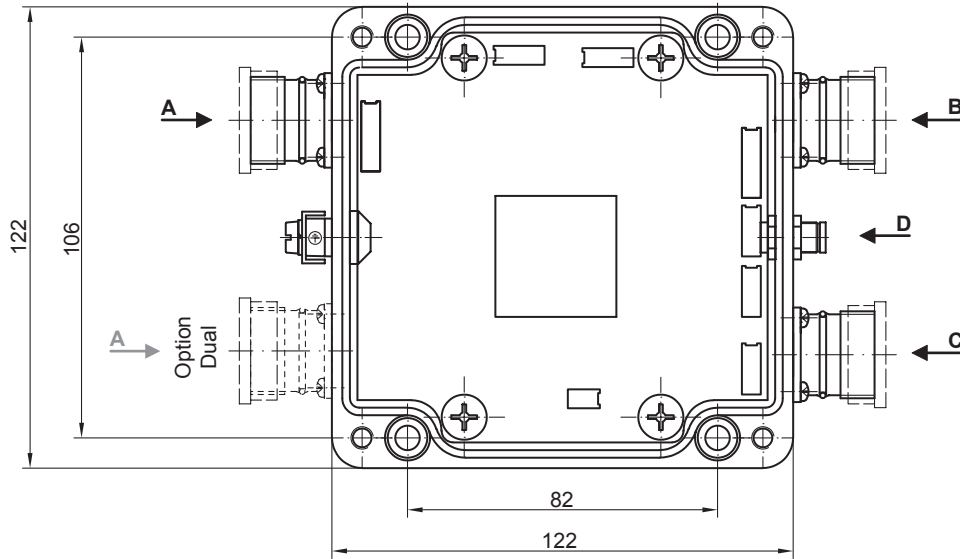


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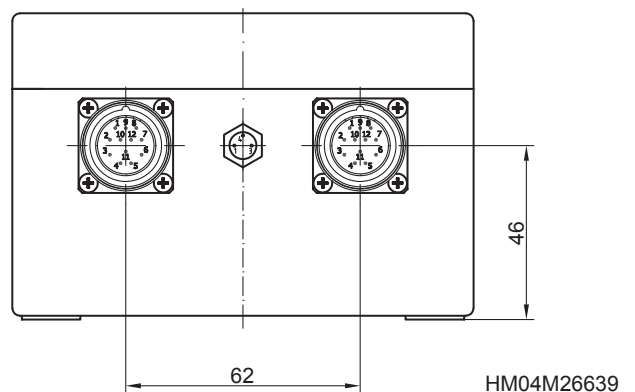
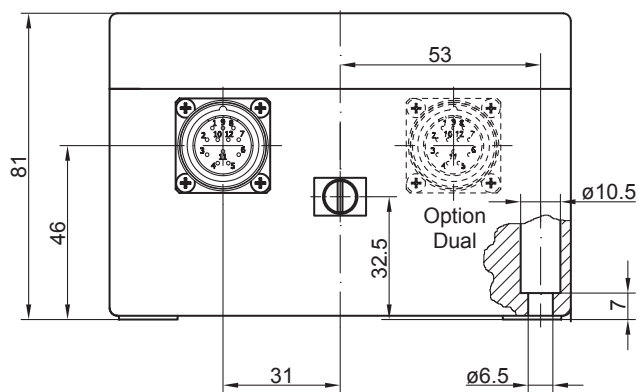
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Dimensions



View A

View B/C/D



HM04M26639

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Converting of SinCos signals into TTL and HTL signals

Ordering reference

		HEAG158	-	#	#	-	H	#####	-	T	#####	-	##	-	##
Product		Signal Processing													
		HEAG158													
Internal pre-amplifier															
Without integrated pre-amplifier															
With integrated pre-amplifier															
Dual sine input															
One sine input (standard)															
Two sine inputs for compensating radial runout of the connected encoder															
HTL output															
HTL output															
Interpolation factor for HTL output															
1															
2															
4															
8															
32															
64															
128															
256															
512															
1024															
2048															
1/2															
1/4															
1/8															
1/16															
1/32															
1/64															
1/128															
1/256															
1/512															
1/1024															
1/2048															
TTL output															
TTL output															

T

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Converting of SinCos signals into TTL and HTL signals

Ordering reference

		HEAG158	-	#	#	-	H	#####	-	T	#####	-	##	-	##
Interpolation factor for TTL output															
1											1				
2											2				
4											4				
8											8				
32											32				
64											64				
128											128				
256											256				
512											512				
1024											1024				
2048											2048				
1/2											1/2				
1/4											1/4				
1/8											1/8				
1/16											1/16				
1/32											1/32				
1/64											1/64				
1/128											1/128				
1/128											1/128				
1/512											1/512				
1/1024											1/1024				
1/2048											1/2048				
Error output															
Without error output															-
With error output															ER
External voltage supply															
Without external supply															-
With external supply															EXT