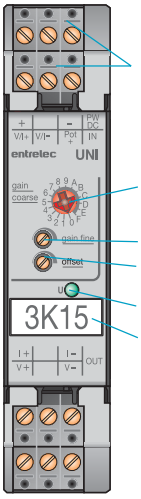
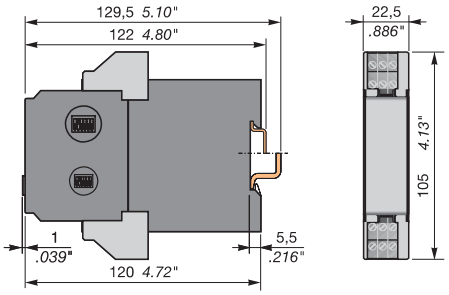
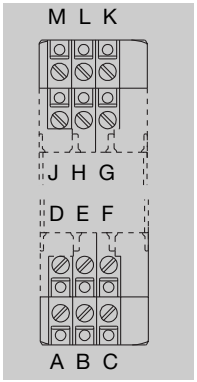
Analog signal converters C.A.I.S.
series 40 000

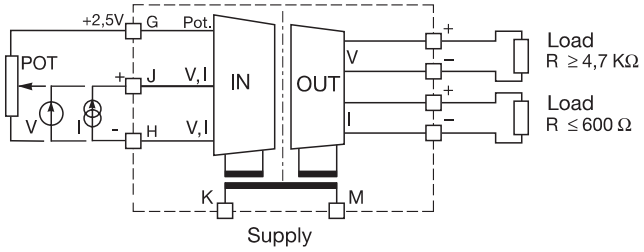




Universal signal converter for standard signals (electrical 3-way isolated)
C.A.I.S. UNI

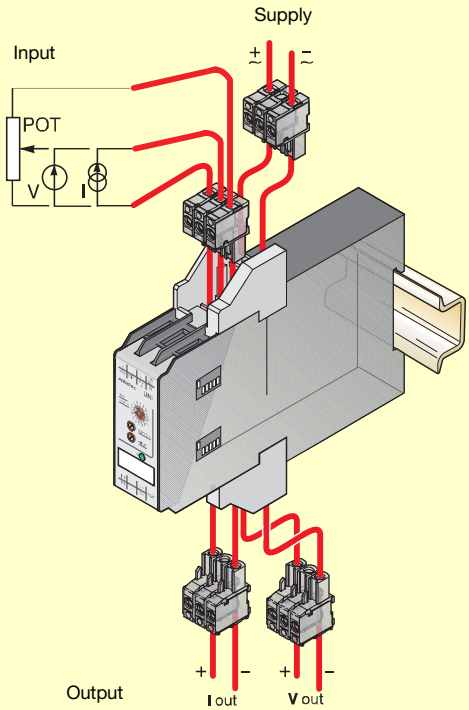
Width 22.5 mm .886"





- More than 120 different configurations of standard signal conversion, e. g., for PLC inputs and outputs.
- Configurable output signals in case of interrupts (**L**OW **F**AIL **S**AFE/ **H**IGH **F**AIL **S**AFE).
- Easy wiring with plug-in ***omniconnect*** terminals for inputs, outputs and supply
- 3-way isolation
- Short-circuit proof signal outputs prevents damage
- Supply voltages: 24...48 V DC or 110...240 V AC
- CE certified.

Approvals: UL1604 Class I and II, Div. 2



Supply voltage	Type	P/N
24...48 V DC/ 24 V AC, *50/60 Hz*	**C.A.I.S. UNI**	**0 040 000 17**
110...240 V AC, *50/60 Hz* / 100...300 V DC	**C.A.I.S. UNI**	**0 040 001 04**

Technical data

Input circuits G - J - H	Current	Voltage	Potentiometer
Input signals (see also configuration diagram)	0...20mA/4...20mA 10...50mA/0...1mA	0...100mV/0...1V/0...5V 1...5V/0...10V/2...10V/±10V	470 Ω ... 1MΩ
Input signal limitation	± 55 mA	± 11 V	10 KΩ*
Adjusting range of amplification	0.9 ...110 mA continuously	45 mV ... 22 V continuously	
Offset	Adjustable range -137.5 % ... +62.5 % continuously		
Input impedances	for different fields		
Without detection of input interrupt	51 Ω	6 MΩ	3 GΩ
With detection of input interrupt	51 Ω	3.5 MΩ	9.5 MΩ

Output circuits D - F | A - C	Current	Voltage
Output signal	0...20 mA / 4...20 mA	0...5V/1...5V/0...10V/2...10V/±10V
Output load	≤ 600 Ω	≥ 4.7 KΩ
Accuracy	0.1 % of end value	
Temperature coefficient	± 150 ppm / °C	
Residual ripple	< 0.15 %	
Response time	200 µS	
Transmission frequency	1 KHz	

Supply circuits K - M		
Supply voltages	24...48 V DC/ 24 V DC	110...240 V AC/ 100...300 V DC
Supply voltage tolerance	DC : -15% ... +15%	AC : -15% ... +10%
Power consumption	2 W at 24 V DC	4.5 VA at 230 V AC

General data	
Isolation between all isolated circuits	1.5 kV
EMC tests	EN 50 081-2; EN 50 082-2
Operating temperature range	-20 °C ... +60 °C
Storage temperature range	-40 °C ... +80 °C
Mounting position	any
Mounting on DIN rail (EN 50 022)	Snap-on mounting/ Screw mounting by adapter
Wire size stranded with end ferrules	omniconnect plug connectors with screw terminals 1.5 mm²
	**with detection of an input signal interrupt and resistance values > 10 KΩ the non linearity is ± 0.2 %*

DIP switch configuration, switch settings

INPUT	SW1 1	2	3	4	5	6	7	8	Gain Coarse	Typ
Potentiometer		■							A...D	C
0...100 mV									4...5	5
0...1 V		■							3...4	3
0...5 V			■						5...7	6
0...10 V			■						2	2
2...10 V			■		■	■			2...4	3
1...5 V			■		■	■			7...9	8
-10...+10 V			■	■		■			0	0
0...20 mA	■	■							2...4	3
4...20 mA	■	■			■	■			4...5	4
10...50 mA	■	■			■	■			0...1	1
LOW FAIL SAFE							■		-	-
HIGH FAIL SAFE								■	-	-
NO FAIL SAFE									-	-

OUTPUT	SW2 1	2	3	4	5	6
0...10 V					■	
2...10 V	■	■	■			
0...5 V			■		■	
1...5 V	■	■	■		■	
-10...+10 V				■		
-5...+5 V				■	■	
0...1 mA					■	
0...20 mA					■	■
4...20 mA	■	■	■			■
0...10 mA			■		■	■
2...10 mA	■	■	■		■	■

Legend	
■	ON
	OFF
▒	no influence

Accessories

R	See section on markers	for ***omniconnect*** terminals
	Type of marker	(21) Marker strips RB 5 A

C.A.I.S. UNI
Additional converter functions

Tab. 1

a) INPUT STANDARD	SW1								Gain coarse	
	1	2	3	4	5	6	7	8		typ.
Potentiometer		■							A ... D	C
0 ... 50 mV									A ... D	C
0 ... 100 mV									4 ... 5	5
0 ... 250 mV									0 ... 1	1
0 ... 500 mV		■							7 ... 9	8
0 ... 1 V		■							3 ... 4	3
0 ... 2,5 V		■							0	0
0 ... 5 V			■						5 ... 7	6
0 ... 10 V			■						2	2
1 ... 5 V			■		■	■			7 ... 9	8
2 ... 10 V			■		■	■			2 ... 4	3
-10 ... 10 V			■	■		■			0	0
0 ... 1 mA	■								A ... D	B
0 ... 20 mA	■	■							2 ... 4	3
4 ... 20 mA	■	■			■	■			4 ... 5	4
10 ... 50 mA	■	■			■	■			0 ... 1	1
High fail safe							■			
Low fail safe								■		
No fail safe										
b) NONSTANDARD										
0 ... 125 mV									3 ... 4	3
0 ... 8 V			■						3 ... 4	3
-22,5 ... +22,5 mV				■		■			B ... F	D
-11 ... + 11 V			■	■		■			0	0
2,5 ... 7,5 V			■			■			5 ... 7	6
3,33 ... 9,99 V			■			■			3 ... 4	4
10 ... 0 V			■	■					2	2
100 ... 0 mV				■					4 ... 5	5
20 ... 4 mA	■	■		■	■				4 ... 5	4
20 ... 0 mA	■	■		■					4 ... 2	3
-0,45 ... + 0,45 mA	■			■		■			B ... F	D
-55 ... +55 mA	■		■	■		■			4 ... 6	5

Tab. 2

a) OUTPUT STANDARD	SW2					
	1	2	3	4	5	6
0 ... 5 V			■		■	
0 ... 10 V					■	
1 ... 5 V	■	■	■		■	
2 ... 10 V	■	■	■			
-10 ... 10 V				■		
0 ... 1 mA					■	
0 ... 20 mA					■	■
4 ... 20 mA	■	■	■			■
b) NONSTANDARD						
-5 ... 5 V				■	■	
-10 ... 0 V			■	■		
-5 ... 0 V			■	■	■	
0 ... 6,66 V		■			■	
-10 ... 3,33 V		■		■		
-5 ... 1,66 V		■		■	■	
0 ... 8 V		■	■			
0 ... 4 V		■	■		■	
-10 ... -2 V		■	■	■		
-5 ... -1 V		■	■	■	■	
1,25 ... 6,25 V	■		■		■	
-7,5 ... 2,5 V	■		■	■		
-3,75 ... 1,25 V	■		■	■	■	
1,66 ... 8,33 V	■	■			■	
-6,66 ... 6,66 V	■	■		■		
-3,33 ... 3,33 V	■	■		■	■	
-8 ... 0 V	■	■	■	■		
-4 ... 0 V	■	■	■	■	■	
0 ... 10 mA			■		■	■
0 ... 0,5 mA			■		■	
0 ... 13,33 mA		■			■	■
0 ... 666 µA		■			■	
0 ... 16 mA		■	■			■
0 ... 800 µA		■	■			
0 ... 8 mA		■	■		■	■
0 ... 400 µA		■	■		■	
2,5 ... 12,5 mA	■		■		■	■
125 ... 625 µA	■		■		■	
3,33 ... 16,66 mA	■	■			■	■
166 ... 833 µA	■	■			■	
0,2 ... 1 mA	■	■	■			
2 ... 10 mA	■	■	■		■	■
100 ... 500 µA	■	■	■		■	

Legend:

■	ON
	OFF