

# iCON Isolating Signal Conditioners



- Ultra-slim Housing
- Full Isolation
- Fast response time
- High Accuracy
- AC/DC supply
- Loop Powered (option)



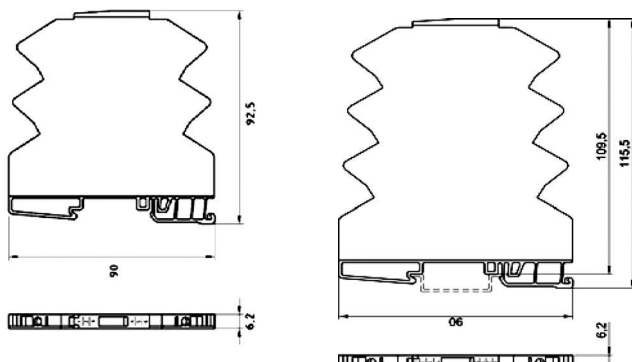
The iCON family of Isolating Signal Conditioners features a unique design which enables a wide range of input signals to be accurately isolated and converted. The ultra slim 6.2mm case design provides minimum rail occupancy whilst the circuit design allows units to be mounted without air gap ensuring reliable and efficient operation.

Full 3-port isolation (powered models) up to 1.5kV enables usage in the most harsh of electrical environments and guarantees protection from ground loops and voltage surges. The iCON family can be powered with either 24Vdc or ac and has a low current consumption making it simple and low cost to install.

To further lower the time and cost of installation, the iCON family is available with either Screw or Spring Clamp terminals.



## Dimensions



## Part Selection

	iCON-A-C	iCON-A-S	iCON-LP-C	iCON-LP-S	iCON-TLP-C	iCON-TLP-S	iCON-RTD-C	iCON-RTD-S	iCON-TC-J-C	iCON-TC-J-S	iCON-TCK-C	iCON-TCK-S
<b>POWER</b>												
24Vac/dc	●	●					●	●	●	●	●	●
Loop			●	●	●	●						
<b>CONNECTION</b>												
Screw Clamp	●	●	●	●	●	●	●	●	●	●	●	●
Spring Clamp		●		●		●		●		●		●
<b>INPUT</b>												
0(4) – 20mA	●	●	●	●	● <sup>2</sup>	● <sup>2</sup>						
0 – 10V / 1 – 5V	●	●										
PT100							●	●				
TC – J									●	●		
TC – K											●	●
<b>OUTPUT</b>												
0(4) – 20mA	●	●	●	●	● <sup>2</sup>	● <sup>2</sup>	●	●	●	●	●	●
0 – 10V	●	●					●	●	●	●	●	●

## General Specification

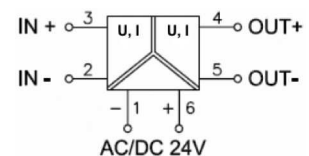
Description	iCON-A-C	iCON-A-S	iCON-LP-C	iCON-LP-S	iCON-TLP-C	iCON-TLP-S	iCON-RTD-C	iCON-RTD-S	iCON-TCJ-C	iCON-TCJ-S	iCON-TCK-C	iCON-TCK-S
Screw Clamp	●		●		●		●		●		●	
Spring Clamp		●		●		●		●		●		●
Operating Voltage	16.8 – 30Vdc, 19.2 – 28.8Vac		Passive				16.8 – 30Vdc, 19.2 – 28.8Vac					
Input Current	-		35mA				-					
Rated Current	12mA		-				8mA		13mA			
Status Indication	LED Yellow		-				LED Yellow					
Input Protection	Over Voltage – 30Vac/dc		-				Over Voltage – 30Vac/dc					
Output Protection	Short Circuit											
Accuracy	0.1% FSR (23°C)						0.3% FSR		0.5% + 2K FSR			
Linearity	0.10%		-				0.1%					
Voltage Drop @ 20mA	-		4V				-					
Rise Time (10-90%)	10mS		-				30mS					
Build up Time Accuracy	30mS		6mS				60mS					
Error coeff. of meas. line	<30Hz		-				0.1K+0.1%Ω		-			
Transmission Frequency	30Hz @ 3dB						10Hz					
Temperature coefficient	<150ppm / K FSR		0.02% / K FSR				150ppm / K FSR					
Isolation Voltage	1.5Kv											
Housing	PPE											
Installation	Rail TS 35 (EN50022)											
Protection	IP20											
Operating Temperature	-25°C - +60°C											
Storage Temperature	-40°C - +85°C											
Weight	0.035kG		0.055Kg				0.04Kg					
Approvals	CULus, CE											
Standards	-						EN60721-3-3; EN55011; EN61000-4-2/6; EN50178					

## Input / Output Specifications

### iCON-A-C/S

Input	0 – 10V	1 – 5V	4 – 20mA
Input selection	Adjustable via Dip Switch S1		
Galvanic Isolation	3-way Isolation		
Zero / Span	Pre-calibrated		
Transmission Frequency	30Hz @ 3dB		
Input Resistance	330kΩ		100Ω
Output	0 – 10V	0 – 20mA	4 – 20mA
Output selection	Adjustable via Dip Switch S1		
Max. Load Impedance	> 1kΩ	400Ω	
Load Impedance	55Ω	-	-
Output Current	21mA Max.	-	-
Ripple	<5mV		

### Connections



### Range Selection

● → Switch On	S1						
Input	Output	1	2	3	4	5	6
4-20mA	0-10V	●					
4-20mA	0-20mA	●	●				
4-20mA	4-20mA	●	●	●			
1-5V	0-10V				●		
1-5V	0-20mA					●	
1-5V	4-20mA				●	●	
0-10V	0-10V				●	●	●
0-10V	0-20mA				●	●	●
0-10V	4-20mA				●	●	●

## Input / Output Specifications continued

### iCON-LP-C/S

Input	0(4) – 20mA
Galvanic Isolation	2-way Isolation
Zero / Span	Pre-calibrated
Cut-off Frequency	30Hz @ 3dB
Input Resistance	100Ω
Output	0(4) – 20mA
Max. Load Impedence	1kΩ
Load Error	<0.06% of measured value + 100Ω load resistance
Output Current	21mA Max.
Ripple	<5mV (Load 100Ω)

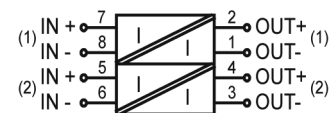
### Connections



### iCON-TLP-C/S

Input	2 x 0(4) – 20mA
Galvanic Isolation	2-way Isolation
Zero / Span	Pre-calibrated
Cut-off Frequency	30Hz @ 3dB
Input Resistance	100Ω
Output	2 x 0(4) – 20mA
Max. Load Impedence	1kΩ
Load Error	<0.06% of measured value + 100Ω load resistance
Output Current	21mA Max.
Ripple	<5mV (Load 100Ω)

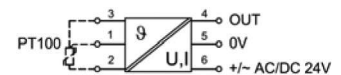
### Connections



### iCON-RTD-C/S

Input	PT100, 3 wire		
Galvanic Isolation	2-way Isolation		
Temperature Range	-50 – 150°C / 0 – 100°C / 0 – 200°C		
Range Selection	Adjustable via Dip Switch S1		
Transmission Frequency	10Hz		
Input Resistance	240kΩ		
Sensor Current	0.5mA		
Zero / Span	Pre-calibrated		
Output	0 – 10V	0 – 20mA	4 – 20mA
Output selection	Adjustable via Dip Switch S1		
Max. Load Impedence	> 1kΩ	400Ω	
Output Current	21mA Max.		
Ripple	<5mV		

### Connections



### Range Selection

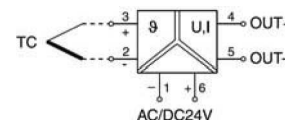
Range	Output	S1					
		1	2	3	4	5	6
-50-150°C	0-10V						
-50-150°C	0-20mA			●			
-50-150°C	4-20mA				●		
0-100°C	0-10V	●	●				
0-100°C	0-20mA				●		
0-100°C	4-20mA	●	●				
0-200°C	0-10V	●	●	●			
0-200°C	0-20mA	●	●	●	●		
0-200°C	4-20mA					●	

## Input / Output Specifications continued

### ICON-TCJ-C/S

Input	Type J (FeCuNi) acc. DIN/IEC 584-1		
Galvanic Isolation	3-way Isolation		
Temperature Range	-50 – 200°C / 0 – 400°C / 0 – 600°C		
Range Selection	Adjustable via Dip Switch S1		
Transmission Frequency	10Hz		
Input Resistance	330kΩ		
Zero / Span	Pre-calibrated		
Output	0 – 10V	0 – 20mA	4 – 20mA
Output selection	Adjustable via Dip Switch S1		
Max. Load Impedence	> 1kΩ	400Ω	
Output Current	21mA Max.		
Ripple	<5mV (Load 100Ω)		

### Connections



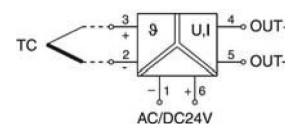
### Range Selection

Range	Output	S1					
		1	2	3	4	5	6
-50 – 200°C	0-10V						
-50 – 200°C	0-20mA	•					
-50 – 200°C	4-20mA		•				
0 – 400°C	0-10V			•			
0 – 400°C	0-20mA				•		
0 – 400°C	4-20mA					•	
0 – 600°C	0-10V						•
0 – 600°C	0-20mA						
0 – 600°C	4-20mA						•

### ICON-TCK-C/S

Input	Type K (NiCrNi) acc. DIN/IEC 584-1		
Galvanic Isolation	3-way Isolation		
Temperature Range	-50 – 200°C / 0 – 400°C / 0 – 600°C		
Range Selection	Adjustable via Dip Switch S1		
Transmission Frequency	10Hz		
Input Resistance	330kΩ		
Zero / Span	Pre-calibrated		
Output	0 – 10V	0 – 20mA	4 – 20mA
Output selection	Adjustable via Dip Switch S1		
Max. Load Impedence	> 1kΩ	400Ω	
Output Current	21mA Max.		
Ripple	<5mV (Load 100Ω)		

### Connections



### Range Selection

Range	Output	S1					
		1	2	3	4	5	6
-50 – 200°C	0-10V						
-50 – 200°C	0-20mA	•					
-50 – 200°C	4-20mA		•				
0 – 400°C	0-10V			•			
0 – 400°C	0-20mA				•		
0 – 400°C	4-20mA					•	
0 – 600°C	0-10V						•
0 – 600°C	0-20mA						
0 – 600°C	4-20mA						•