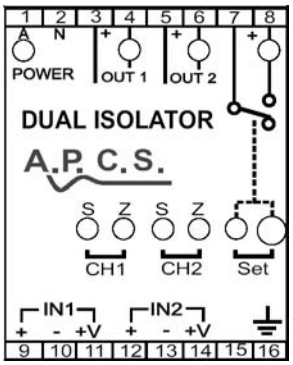
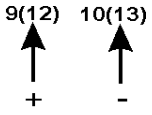
DI739 Optional Inputs



All the input options specified on this document can be applied to IN1 and IN2. Also the various input types may be mixed, for example IN1 could be 4-20mA while IN2 is thermocouple.
All connections will be shown with pin numbers for IN1 and IN2 in brackets.

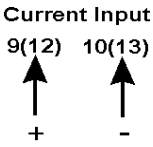
DC Voltage (21), Millivolt (22), Bipolar (23)

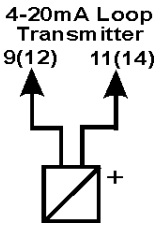
Required calibration range is factory configured.



DC current 10A max (24)

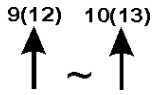
Required calibration range is factory configured. If the input current range is 4-20mA then 24Vdc is also supplied on the +V terminal for loop-powered transmitters.



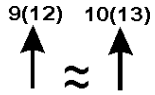


AC voltage 10mV to 500V span (30)

Required calibration range is factory configured.



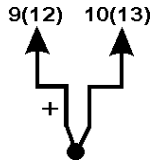
True r.m.s.(32)



Required calibration range is factory configured.

Input range:	10mV up to 500Vac 10mA up to 250mAac via shunt
Input impedance:	12k Ω for 10mV input > 1M Ω for 500V input
Offset:	up to 200% of range
Combined linearity and drift error:	< 0.5% of range

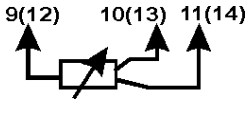
Thermocouple (33)



Required calibration range is factory configured.

Ambient operating temperature range:	-10...+65°C.
Cold junction compensation:	0.02% per °C C/J change.
Input offset adjustment (Zero suppression):	200% of range.
Internal Offset Adjust:	±50%.
Input range:	4mV up to 80mV.
Input impedance:	> 1M Ω.

RTD (34).



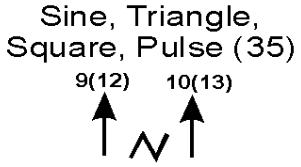
Required calibration range is factory configured.

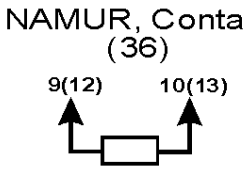
Temperature drift error:	0.02% / °C within operating range.
Input range:	7 Ω up to 230 Ω (20°C up to 650°C, Pt100).
Sensor excitation:	350μA.

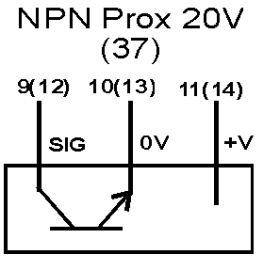
Frequency Inputs (35, 36, 37, 38)

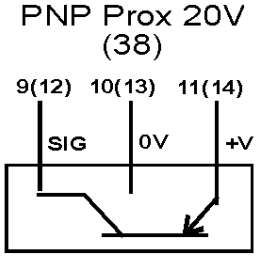
Required calibration range is factory configured.

Calibration accuracy:	<0.2% of range.
Linearity:	<0.2% of range.
Ambient operating temperature range:	-20...+70°C.
Temperature drift error:	< 0.5% within operating range.
Response time for 0.5% ripple at 10% of signal:	$T90 = \frac{20\,\text{sec}}{F\,\text{max}}$
Internal offset adjustment:	±50% typical.
Input range:	5Hz up to 5kHz.
Input level:	0.1Vpp sine up to 50Vdc pulse.
Excitation for NAMUR sensor:	5V/1mA (or contact).

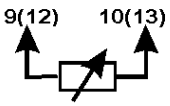








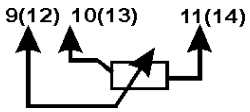
Resistance - constant current excitation (39)



This input card consists of a precision current source adjustable by a 15-turn potentiometer located on the input card. A buffer amplifier is used to condition the input voltage to the uniform card output of 0 - 1V.

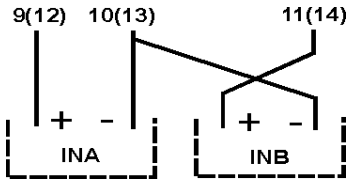
Calibration accuracy:	<0.5%.
Linearity:	<0.5%.
Temperature drift error:	<0.5% within operating range (not taking account of input lead resistance).
Input range:	50 Ω up to 10k Ω.
Excitation current:	0.6mA max.

Potentiometer 3W voltage excited (42)



Excitation voltage: 2.5V.

Adder, 2 inputs 4-20mA floating (61)

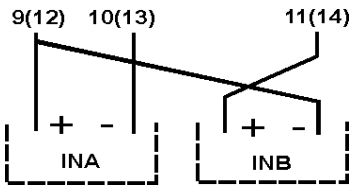


This option is per channel; two floating signals are entering one channel. Signals connected to floating inputs must be electrically isolated from each other.

$I_{OUT} = I_1 + I_2$ OR $I_{OUT} = \frac{I_1 + I_2}{2}$ (Average)

Input loads (4-20mA); $I_1 = 50ohm$, $I_2 = 50ohm + 0.7V$

Subtractor, 2 inputs 4-20mA floating (61)

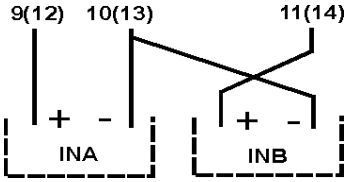


This option is per channel; two floating signals are entering one channel. Signals connected to floating inputs must be electrically isolated from each other.

$I_{OUT} = I_1 - I_2$

Input loads (4-20mA); $I_1 = 50ohm$, $I_2 = 50ohm + 0.7V$

MIN (64)/ MAX (65) select of 2 floating 4-20mA signals



This option is per channel; two floating signals are entering one channel. Signals connected to floating inputs must be electrically isolated from each other. The output signal will follow the lower or the higher of the two input signals.

Input load: 56 Ohm (4-20mA).