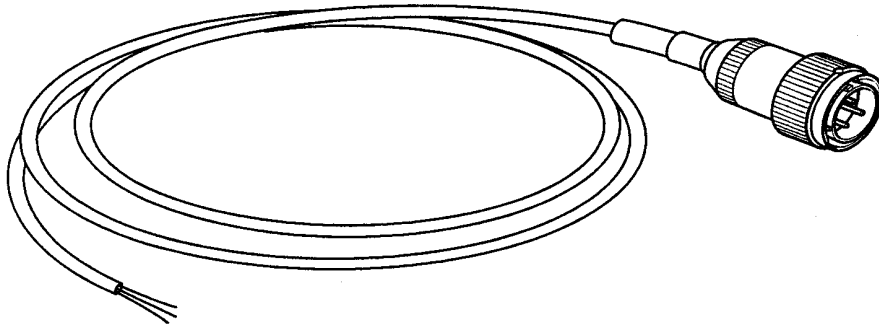


Application Notes

Newlog 3 Input Cable

Issue: TAN049/A

Date: 25/10/01



Newlog Input Cable - Colour Code

Connector	Function	Cable	Connector	Function	Cable
pin A	Channel 1	White	pin G	Channel 7	White/Black
pin B	Channel 2	Orange	pin H	Channel 8	Orange/Black
pin C	Channel 3	Blue	pin J	Control Output 1	Blue/White
pin D	Channel 4	Green	pin K	Control Output 2	Green/White
pin E	Channel 5	Blue/Black	pin L	Positive Supply	Red
pin F	Channel 6	Green/Black	pin M	Ground	Black

Input Type	Description
State:	Newlog 3 records the date and time of each change in the state of the input. Suitable input types are switch closure and voltage level.
Event:	Newlog 3 records the date and time of each event. Events may be very brief but should not repeat at more than 10Hz. Suitable input types are switch closure and voltage pulse.
Count:	Newlog 3 totalises the events that occur in the logging period, stores the value and zeros the counter. Suitable input types are switch closure and voltage pulse.
Analogue:	At each logging interval, Newlog 3 samples the input signal and converts it to a digital value. Suitable input types are analogue voltage and 4-20mA inputs.

Application Notes

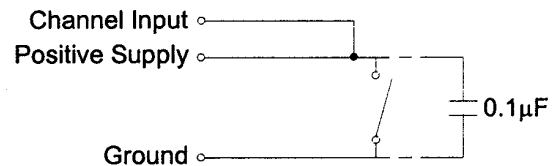
Newlog 3 Input Cable

Issue: TAN049/A Date: 25/10/01

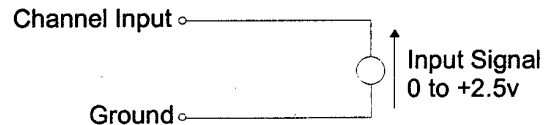
Switch Input Connection

When connecting an R5 gas meter output or Kent Helix 2/3000 water meter, wiring connections are as shown:

Note: Some switch closure contacts may "bounce", resulting in Newlog 3 recording high values. This may be solved by fitting a 0.1µF capacitor across the switch, as shown.

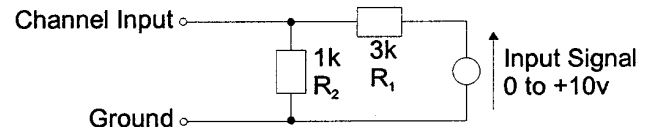


0 - 2.5 Volt Analogue Input Connection



0 - 10 Volt Analogue Input Connection

Note: All resistors to be precision components.



Calculation of R₁ and R₂ for Other Analogue Inputs

Rule 1 $(R_1 + R_2) \leq 10k\Omega$

Rule 2 $R_2 = \frac{2.5v}{\text{"V" input}} \times (R_1 + R_2)$

For example: Input voltage of 0 - 18v

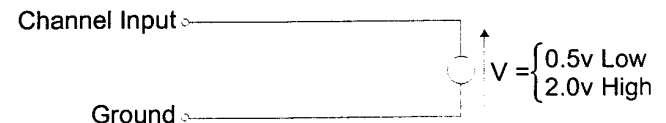
Apply Rule 1: Let $R_1 + R_2 = 7.2 k\Omega$

Apply Rule 2: $R_2 = \frac{2.5}{18} \times 6k$ i.e. $R_2 = 1k$

Hence: $R_1 = 6k2$ (use 6k 19)

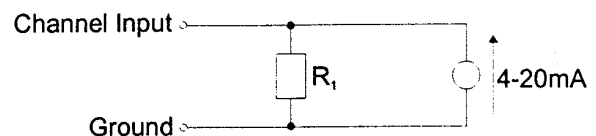
Note: Applying these rules may take some practice. If you cannot find suitable values for R₁ and R₂ then aim to change the total of R₁ and R₂. In the example above we could have set R₁ + R₂ to be 4 kΩ, however, this would have meant R₂ would need to be 698R and R₁ would be 3k 32.

Voltage Level or Pulse Input



4-20mA Input

Note: Cables with built-in resistors for 4-20mA applications are available from Technolog.



(R₁ being a precision 100R resistor)