DC LINEAR INTEGRATOR

SELECTION GUIDE

M100-DI1	*Single relay output*
M100-DI2	*Double relay output*

TYPICAL APPLICATIONS

The M100-DI1 is a linear integrator which accepts D.C. Inputs, and integrates the input with respect to time. An ouput is provided via a relay which gives a pulsed output, the frequency of which is directly proportional to the amplitude of the input signal.
One of the main uses of the M100-DI1 is the measurement of Watt and Kilowatt hour. This is achieved by feeding the output of a watt transducer (M100-WA series) into the M100-DI1. The input signal is integrated against time and the resulting output pulses from the relay are proportional to the kW.h being consumed. These pulses then can be fed to an electromechanical counter, digital counter or a computer, where the kW.h consumed can be stored. Another use is the measurement of Ampere hours.
The M100- DI2 is the same as M100-DI1 with the additional feature of having 2 relay outputs, this allows the user to feed one set of pulses to a counter on a switchboard whilst feeding the other set of pulses to a remote computer in a control room.

TECHNICAL SPECIFICATION

INPUT	
Rated value In	*0-1 / 5 / 10 / 20 & 4-20 mA*
Voltage drop	*20mV*
Rated value Un	*0-20mV.....10V*
Impedance	*100 kOhm / V*
Working range	*0-125%*
Overload continuous	*1.5 x Un 4 x In*
OUTPUT	
Contact	*volt free closure*
Pulse rate	*100.....5000 pulse/hr*
Pulse width	*250 msec*
RELAY	
Voltage	*50 V DC / 250 V AC*
Rating	*10W*
Contact material	*Ruthonium*
Initial resistance	*200 mOhm*
Initial capacitance	*0.4 pF*
Electrical life	*5 x 10^6 (250 V DC / 10mA / resistance load)*
Test voltage	*coil to contacts 4kV*
ADJUSTMENT	
Zero	*± 2%*
Span	*± 10%*
AUXILIARY	
A.C. Voltage	*115 / 230 / 400 V (± 25% / 45-65Hz / <2 VA)*
D.C. Voltage	*24 / 48 / 110 V ± 20% galvanically isolated / < 3 W)*
WEIGHT & CASE SIZE	*Approx. 0.4 kg. 55mm case*

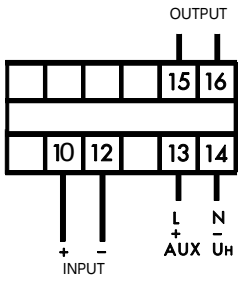
ORDERING INFORMATION

Product Code	*Input In*	*Pulse Rate*	*Aux. Freq.*	*Opt.*
M100-DI1	*10mA*	*100/hour*	*230V 50Hz*	

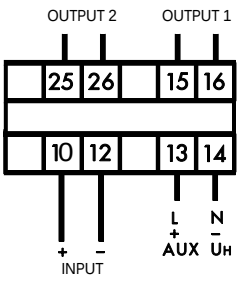
OPTIONS

1. *Non standard inputs / outputs only as far as technically acceptable.*
2. *A.C. Auxiliary in range 57.7 to 450 volts*
3. *Calibration at temperature other than 23°C*

CONNECTION DIAGRAMS



M100-DI1



M100-DI2