



T-INTP DC INTEGRATOR TRANSDUCER

The Carrel Electrade T-INTP integrator converts a dc signal into pulses. The frequency of the pulses is directly proportional to the amplitude of the input. The number of pulses produced is a mathematical integral of the input signal and may be used to derive kW-hour, amp-hour and similar rate quantities. The output pulses are normally available in the form of relay contacts closures (dry contact), but can also be supplied as open collector or opto-coupler outputs suitable for driving counters, PLCs and computers. The unit may also be incorporated into T-W(Watt), T-V(var) and T-VA(VA) transducers, to provide simultaneous watt and Watt-hour, var and var-hour, VA and VA-hour outputs from a single unit (except 3 element/4 wire unbalanced load transducers when, because of limited space, the integrator must be in a separate enclosure).

The unit conforms to IEC 60688. In addition it meets the insulation requirements of IEC 60255-5, clauses 5, 6 and 8 as well as the high frequency disturbance test of IEC 60255-22-1 for Class III test voltage.

Specifications

Input

DC signal, voltage or current
Standard nominal ranges (other on request)
Current $I_{min} - I_{nom}$: 0-10mA, 0-20mA or 4-20mA
Voltage 0 - V_{nom} : 0-50mV, 0-5V, 0-10V
Accurate range : $I_{min} - 120\% I_{nom}$ or 0 - $120\% V_{nom}$
Input burden : 10mA 100 Ω , 20mA 47 Ω , 4-20mA 56 Ω
: Voltage input 47k Ω per volt

Output

Pulse rate proportional to input
(a) Relay contacts, AgNi+Au contacts
Rates available : 0.01Hz to 2Hz full scale
Pulse width : 100ms
Contact rating : min. 10mW 0.1V/1mA
: max. 250Vac 125VA AC1, 25VA AC15, 30V 2A, 110V 0.3A DC1.
Mechanical life : 100M operations

(b) Counter output - open collector - diode protected
Rates available : 0.01Hz to 10Hz
Pulse width : 50ms
Maximum load : <100mA 24V

(c) Opto coupler output
Rates available : 0.01Hz to 100Hz full scale
Pulse width : square wave or pulse to suit
Maximum load : <5mA 30V

Auxiliary Supply

:24V, 110V, 230/240V, 400/415V ac $\pm 20\%$ 2VA
: 12V, 24V, 48V, 110V dc $\pm 20\%$ 2W

Accuracy

: Class 0.5 to IEC 60688
: $\pm 0.5\%$ of nominal input over specified accurate range

Isolation

Galvanic isolation between input and output and the auxiliary supply circuits
Test voltage : 4kV rms 50Hz for 1 minute
Impulse : 5kV 1.2/50 μ sec waveform

Temperature

Operating : -10°C to +20°C to +50°C
Storage : -20°C to +70°C

Housing

Self extinguishing grey polycarbonate to IP40 snap mounting on top hat rail DIN EN 50022-35

Terminals

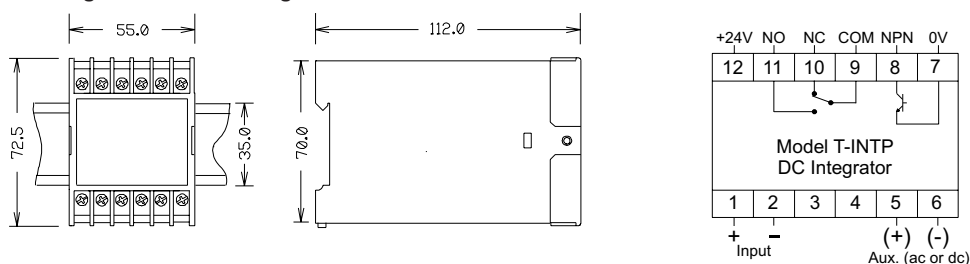
Tinned steel pozi-drive M3 screws with captive square washers suitable for 2 x 2.5mm² conductors (max).
Optional terminal covers raise rating from IP10 to IP20

EMC Approvals

: AS/NZS 61000.6.3:2012



Housing & Connection Diagrams



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