MODEL 519

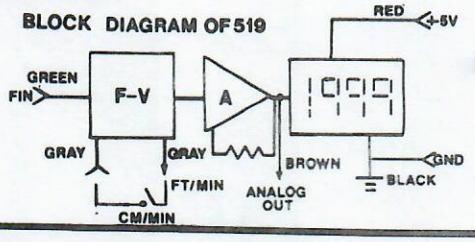
FLAT PACK DIGITAL INDICATOR

For RPM — Conveyor Speed — Line Receiver

FEATURES

- Simple Calibration
- No Special Time Base or Special Gear Required
- No Display Flickering for Slow Speeds.
- Analog Output On Request

BLOCK DIAGRAM OF 519



DESCRIPTION

The Series 519 Digital Indicator is a versatile and compact instrument useful in measuring RPM, conveyor speed, rate and a variety of process signals over long transmission lines such as flow, pressure, weight, etc.

The first stage is a frequency to voltage converter with accuracy and linearity of .06% which converts the rate of the input pulses into a voltage proportional to this frequency. The scaler section is calibrated at the factory for the range selected. A full scale adjustment potentiometer is accessible to the user thru a hole on the lower left corner of the case for other than full scale factory calibrated readings. The A-D converter is a single IC type with direct LED drive capabilities. The LED display has 3½ digits (1999) capacity and decimal points (if any) are internally set at the factory unless otherwise specified.

The 519 has been successfully tested over lines in excess of 1000 meters (3300 feet) using shielded cable.

SPECIFICATIONS @ 25°C

Frequency Ranges	0-200Hz, 2KHz, 20KHz & 100KHz
Accuracy and Linearity	±0.1%
Maximum Input Signal	15V Peak
Minimum Input Signal	1V Peak
Warm-Up Time	1 Minute
Temperature Drift	±0.02%/°C
Accuracy vs. Power Supply	±0.05%/V
Power Requirements	180mA @ 5Vdc ±5%
Temperature Storage	−10 to + 60°C
Temperature Operating	0 to +50°C
Display Type	.3" RED LED, 1999 Counts
Full Scale Adjustment	±500 Counts Nominal
Input Impedance	10K ohms
Analog Output	1mA Load Maximum

ORDERING INFORMATION

MODEL 519 X X X

RANGE

0 . . . . 0-200Hz
1 . . . . 0-2KHz
2 . . . . 0-20KHz
3 . . . . 0-100KHz

DECIMAL POINT

0 . . . . None
1 . . . . 1.999
2 . . . . 19.99
3 . . . . 199.9

EXTERNAL POWER SUPPLY

0 . . . . None
1 . . . . Open Frame
2 . . . . Power Pack

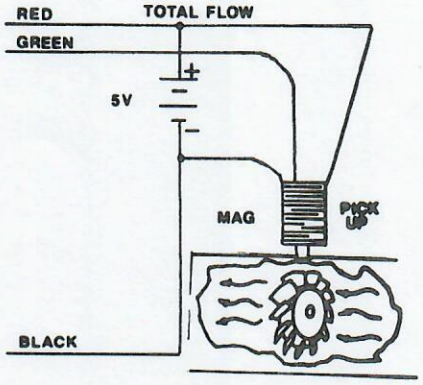
Note: Sealed Units On Request

See page 29 for P.S. Specifications.

INTERFACE

Any frequency generating device with maximum output of 15V peak can be used. IMC offers magnetic pick-ups, photo electric detectors and rotary encoders that interface directly to the 519. For best results (stability) the frequency input should be as high as possible usually from the motor's shaft and over 20Hz.

If other than direct frequency reading is desired such as RPM, conveyor speed or rate, the 519 can be calibrated with reference to another instrument such as a digital hand tachometer for slow moving objects such as conveyors. The speed can be calculated knowing the motor's RPM X number of teeth of the pick-up gear divided by the reduction gear ratio X circumference of the roller.



DIGITAL MAGNETIC SENSORS FOR NON-CONTACT MEASUREMENT

These devices contain a built-in level detector amplifier which produces a clean pulse without external components. The wide range excitation voltage (5 to 15Vdc) makes them suitable to be used with all IMC Series counters timers. The shell and pole piece are common to the power ground diminishing the effects of RFI & EMI noise.s Their rugged construction makes them ideal companions of IMC instruments for industrial control applications.
See page 26.

TYPICAL LINEAR RATE