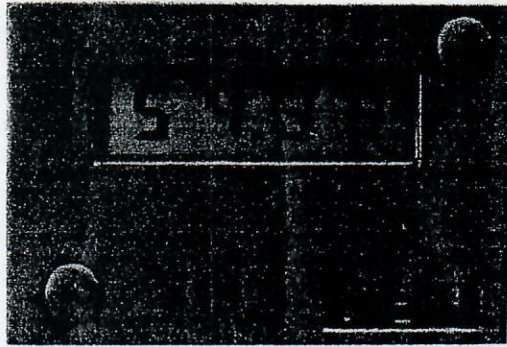


# FLOW TOTALIZER & AMPERE-HOUR/INTEGRATOR DPM "Flat Pack" No Panel Cut Out Required (NEMA 3 or NEMA 4X)

**MODEL**

**520**



FLAT PACK

**Features**

- A-HR, .1A-HR, .01A-HR Readout
- Capacity of 9999 with Latched Overflow
- Low Power LCD
- Splashproof
- 4-20mA Loop Totalizer
- Display Hold
- 0.5" LCD
- MTBFC: 80,000 Hours



SANITARY

**DESCRIPTION:** The main purpose of the 520 is to integrate the input signal with respect to time. Example: Assume a process uses 1000 Amps and it requires 2500 Amps-Hour to complete such a process. By using a 50 mV Shunt at 1000 Amps, the 520 will measure the Ampere-Hours by integrating the 50 mV Signal. That is, if the current for the first hour is 500 Amps (25 mV), the second and third hour is 1000 Amps (50 mV), the 520 will display 500 counts after the first hour, 1500 counts after the second hour and 2500 counts after the third hour, which indicates the end of the process. In addition, Counter Clear, Counter Hold and Display Hold are standard. The 520 will accommodate special scales, but the customer must specify the number of counts after a specified time with a constant input voltage.

**CALIBRATION:** The Model 520 will be calibrated to read 1000 counts with full input after 1 hour. Example: If a 5206XXX (X=any option) is ordered, the 520 will read 1000 counts if the input is held at 50 mV for one hour. If another scaling is desired, specify the input voltage, the count desired after a specified time and signify with an X after the model number. (Example 5202000X =100 mV, to read 685 after 30 minutes). **Specify desired decimal point X.XXX, XX.XX or XXX.X.**

**HOUSING:** Otek's Flat Pack requires no panel cut out. Just drill a 10mm (3/8") Ø hole, pass the wires through, attach the provided double-sided tape (to prevent rotation), align the flat pack, tighten the nut and make the connections to the wires. No connector or tools required! No behind the panel space needed! The case is U.L. approved ABS Polycarbonate 94VO rated. **NEMA 4X housing option does not have access to the adjustments. If other than Otek's standard setting is required, please specify at the time of ordering.** Our New Sanitary housing is wall, pipe or panel mount and can include 2 flat packs, please specify.

**POWER:** Since a power failure while the 520 is operating will cause the accumulated count to be lost, a rechargeable battery pack is recommended.

**POWER SUPPLIES:** Externally mounted. Two types are available, the "Open Frame" style accepts 120/240VAC and delivers 12VDC @ up to 400mADC. The "Power Pack" is a wall plug in module available only for 120VAC input and delivers 12VDC up to 100mADC.

SPECIFICATIONS AT 25°C

Input Resistance .....	See Ordering Information
Frequency Response .....	(50% Duty Cycle) 10 KHz
Display .....	4 Digit Reflective LCD
Drift .....	75 ppm/°C
Warm-up Time To Rated Accuracy .....	1 Minute
Accuracy and Linearity .....	±0.1% of Full Scale
Power Input .....	7.5V to 15VDC at 5 mA
Operating Temperature Range .....	-10° to +60°C
Storage Temperature Range .....	-20° to +70°C
Decimal Point .....	Specify X.XXX, XX.XX, XXX.X
Overflow .....	Indicated by XX:XX on Display
MTBF .....	80,000 Hour
Sanitary Case .....	NEMA 4X up to 250°F Steam Cleaning

LEAD COLOR

TERMINAL DESCRIPTION

- BROWN
- GREEN
- VIOLET
- RED
- GRAY
- BLACK
- BLUE
- YELLOW
- WHITE
- ORANGE

**F OUT:** Frequency output only used for calibration purposes.  
**+IN:** +Input of signal.  
**DISPLAY HOLD:** Normally grounded. When left open, the 520 will hold the display.  
**VCC IN:** Connect a 7.5 VDC to 15 VDC (12VDC Nominal) + power input.  
**-IN:** Return path for +IN.  
**GROUND:** Return for VCC.  
**COUNTER HOLD:** When grounded, the 520 will hold the count, normally left open.  
**RESET:** When grounded momentarily, the 520 will reset to 0; Normally left open.  
**ANALOG GROUND:** Connect to Gray for single ended, leave open for differential.  
**CARRY:** This lead will provide a logic "1" pulse on the count transition from 9999 to 0000.

ORDERING INFORMATION (11/1/00)

<b>MODEL</b>	5	2	0	□	□	□	□	□	□
<b>INPUT RANGE/ INPUT RESISTANCE</b>	0	1	2	3	4	5	6		
	4 to 20mA/50Ω	1 to 5mA/200Ω	0 to 100mV/100KΩ	0 to 1 Volt/100KΩ	0 to 5 Volt/300kΩ	0 to 10 Volt/400KΩ	0 to 50mV/100KΩ		
									<b>POWER INPUT(2)</b>
									0 ..... 12VDC
									1 .... Open Frame 120/240VAC
									2 ..... Power Pack 120VAC
									(2) See "Power Supplies" section above
									<b>HOUSING (1)</b>
									0 ..... NEMA 3
									1 ..... NEMA 4X
									2 ..... Sanitary
									(1) See NEMA 4X note in "Housing" section above.
Standard display is 1000 Counts after 1 hr.									

**MIL-SPEC & MISC.**

