

# Byram Laboratories' FT-21 Switchboard Meter

The Byram FT-21 Switchboard Meter provides a complete system for complex energy and power measurement, for all types of electric utility billing requirements.

This version of the Alpha meter includes a switchboard mounting enclosure. A3 meters provide a complete system for complex energy and power measurement, for all types of electric utility billing requirements. The A3 is user programmable with standard PC computers and Metercat™ software.



## Key Features

- Multiple rates - up to 4 tariff periods per day
- Real & reactive measurements for energy & maximum power
- Bidirectional power measurements with advanced 4-quadrant reactive metering
- Programmable load control activated by time or maximum demand
- Form C relay pulse outputs of energy quantities, and programmable load control relays
- Complete load profile data recording for up to 4 energy quantities, and for the entire billing period
- Complete ANSI C12 protocol capable
- Easily upgradeable through software and optional hardware
- Wide operating ranges for voltage, current, and temperature

## Advantages of the FT-21:

The FT-21 meter is designed to allow one unit to be applied at all line voltages ranging from 96V to 528V. Because the meter adjusts to the voltage source, the user no longer has to worry about installing a meter with the wrong voltage rating; and, for the switchgear and control panel manufacturer, this wide voltage range option permits reductions in inventory, standardization of designs and improved delivery.

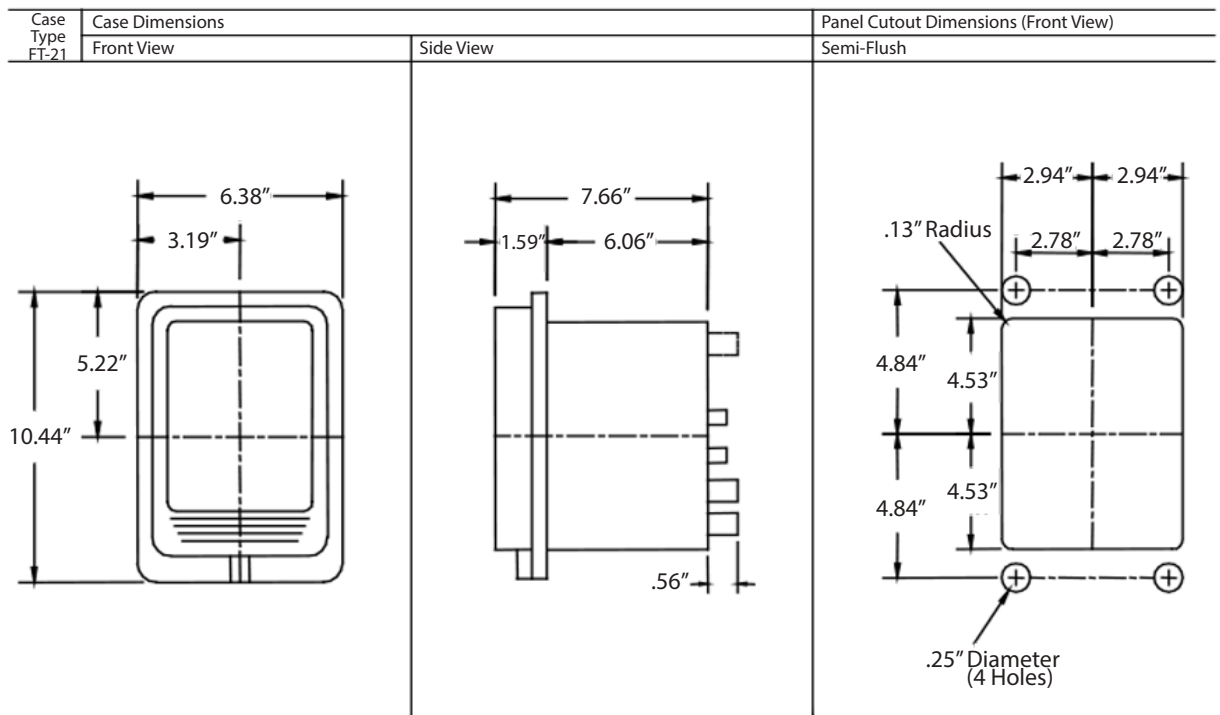
## Drawout Assembly

The FT-21 switchboard meter is built into the Flexitest™ relay enclosure. This consists of a panel-mounted housing with all necessary power and control terminals on the rear of the enclosure; plus a drawout mounting cage for the meter electronics. The complete meter chassis is mounted on a drawout assembly and all connections are made when the drawout chassis is inserted into the panel-mounted enclosure. Following assembly, an appropriate meter chassis with the desired features, may be inserted into the housing and connected in a matter of moments. Current transformer switches are self-shorting when the CT disconnect switch is opened.

### Specifications

#### Byram FT-21

Maximum voltage	Continuous 528 VAC (AnyPhase option: L-L or L-N)	
Surge voltage withstand	ANSI C37.90.1 oscillatory	2.5kV, 2500 strikes
	Fast transient	5kV, 2500 strikes
	ANSI C62.41	kV at 1.2/50 $\mu$ s, 10 strikes
	IEC 61000-4-4	4 kV, 2.5 kHz repetitive burst for 1 minute
Voltage range	ANSI C12.1 Insulation	2.5 kV, 60 Hz for 1 minute
	Nameplate nominal range	120 V to 480 V
	Operating range	96 V to 528 V
Frequency range	Nominal 50 Hz or 60 Hz $\pm$ 5 %	
Temperature range	-40 °F to +185 °F inside the meter cover	
Humidity range	0 % to 100 % non-condensing	
Accuracy	Meets ANSI C12.21 accuracy for accuracy Class 0.2%	
Starting Current	5 mA	
ANSI Standards	C12.1;C12.10;C12.18;C12.19;C12.20;C12.21	
Ordering #	FT-21 Byram, 3P4W, Fm 6Z	1C6778
	FT-21 Byram, 3P4W, Fm 9Z	1C6779
	FT-21 Byram, 3P3W, Fm 5Z	1C6780
	FT-21 Byram, 1P3W, Fm 4Z	1C6781



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