



Miniature Circuit Breaker and Modular DIN-Rail Devices

Control and Automation Products

Electronic Energy Meter

Energy Meter Cabinet and Plastic Injection Products

Energy Saving

TOOS FUSE CO. ■ شرکت توس فیوز

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MTF301

Three-phase direct connection meter



**MTF301**  
**Three-phase direct connection meter**

- German technology & design
- Suitable for LV application with currents of up to 100 A
- Different communication systems and external battery module
- Recording load Profile data
- Multilingual PC software (English & Farsi)

Toos Fuse Co. has a **5-year warranty** on all products.

**TFC**

TOOS FUSE CO.

**MTF301**

Three-phase direct connection meter

**Features**

<b>Power supply</b>	
Nominal voltage	3 x 230 (400) V
Tolerance	80% ... 115% $U_n$
Consumption	0.74 W; 0.9 VA
Frequency	50 Hz
<b>Voltage measurement</b>	
Connection	Asymmetrical (DIN)
Reference voltage	3 x 230 (400) V
Frequency	50 Hz
Voltage consumption of the circuit	0.74 W; 0.9 VA
<b>Current measurement</b>	
Connection	Asymmetrical (DIN)
Nominal reference current $I_b$ ( $I_{max}$ )	5 (100) A
Start-up current $I_{st}$	20 mA
Minimum current $I_{min}$	0.2 A
Current consumption of the circuit	0.05 VA
<b>Accuracy class</b>	
Meter constant	400 imp / kWh   400 imp / kvarh
Accuracy measured in active energy	Class 1 (IEC 62053-21)
Accuracy measured in reactive energy	Class 2 (IEC 62053-23)
<b>Memory</b>	
Data	Non-volatile memory
Setup and events	Serial flash
<b>Battery</b>	
Type	Lithium
Working life	> 20 years at 30 °C
Battery change	Additional external battery (sealed)
<b>Clock</b>	
Type	Persian (Shamsi) calendar
Source	Temperature compensated oscillator
Accuracy	< 0.5 s / day at 23 °C

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**Features**

<b>Environmental influence</b>		<b>Insulation</b>	
Operating temperature range	-40 ... +70 °C	Insulating voltage	4 kV a 50 Hz during 1 min
Storage temperature range	-40 ... +85 °C	Impulse voltage 1.2/50 $\mu$ s	8 kV
Temperature coefficient	< 15 ppm/K	Protection degree	II
Humidity	max. 98 %	<b>Optical IR interface</b>	
<b>Display</b>		Protocol	IEC 62056-21
Type	LCD	Communication	4.800 baud, mode C
Number of data digits	up to 8	<b>Electrical RS485 interface</b>	
Size of data digits	11 mm	Protocol	IEC 62056-21
Data read without power (RWP)	Yes	Communication	4.800 baud, mode C
<b>Tampering detector</b>		<b>Construction features</b>	
Detection	Opening the meter cover or the terminal cover	Connection	Asymmetrical (DIN)
Type	Micro-switch	Material	Polycarbonate glass fiber reinforced
Function	Detects unauthorized access to the meter	Protection against dust and water	IP54
<b>Tariff features</b>		<b>Load profile</b>	
Number of tariffs	4	Number of channels	4
Types of days	28	Sampling time	Programmable: 15 ... 180 min
Holidays / special days	30	Recording depth	2976

**Dimensions and connections**