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# DTSD5 GPRS

## Communicating Polyphase Meter Via GPRS/CDMA module

- Powerful AMR functionality
- Removable GSM/GPRS/CDMA communication module
- Advanced metering capability & accuracy
- Remote field ungradable
- Exchangeable SIM card - separately sealed
- Flexible I/O


- Multi-phasing
- External CT/PT (Option)
- LCD Display
- UP to 4 Tariffs
- Internal clock (RTC)
- Maximum Demand (option)
- Load profile

The **DTSD5 GPRS** meter range is a cost-effective solution for commercial & industrial electricity metering with high quality communication technology. Removable communication module design offers numerous advantages, including remote reading and configuration, easy field installation and replacement, and keep the individual measurement parts a high stability.

**DTSD5 GPRS** is designed for advanced **A**utomatic **M**eter **R**eading (AMR) applications, a growing sector of the metering industry in today's competitive market. By sending commands and receiving data from meter, the AMR system offers significant savings in three major areas: meter reading, data processing, and customer services.

The meter can be seamlessly integrated into Pax GR System, a powerful AMR system which provides an open architecture for large scale applications.

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With proven electronic technology, long-life components and special care in the manufacturing process, DTSD5 GPRS guarantees precise accuracy and high reliability throughout its life span.

**Fast and Easy Installation procedure**

This design is easy to handle and extremely efficient for large-scale installations. Adapted to current connection standards the meter is compatible with existing installations and test benches.

**Local metering data display (LCD):**

- Automatic Scroll mode
- Manual scroll (by button)

Programmable data set and sequence
LCD back-light: optional
LCD display when power absent: optional

**Flexible Tariff Management**

Benefit from an internal RTC, full Time of Use (TOU) function is realized.

A tariff program are managed by the RTC which suitable for the most complex metering applications.

The meter is able to generate “End of Period” information as defined by the user, usually based around billing dates.

The non-volatile memory is able to save energy information for up to 12 billing periods. This removes the need to visit the meter on a frequent basis.

DTSD5 GPRS supports 4 kinds of tariffs and 12 intervals in 24 hours for each day, which can be programmed flexibly. Interval 1 to 12 of each day can be combined with tariff 1 to 4 according to various requirements, these combination is called Tariff Set.

In addition, the meter supports holidays & weekends, which can be individually set with different kinds of combination of tariffs and intervals.

**Events log & Alarm**

-Over voltage and under voltage
-Over current and under current
-Reverse energy flow
-Phase rotation
-Demand overload
-Program events
-Open of terminal cover and meter cover

**Anti-Tamper Features**

-Measures the absolute sum of total and export energy
-Optional abnormalities alarms & logs
-Independent sealing of the meter body and terminal cover
-Not programmable via keyboards

**Max. Demand & Load Profile**

Maximum Demand information can also be measured for all tariff rates allowing optimum billing of high consumption customers in particular.

DTSD5 GPRS meter has 6 load profile channels which can store optional data for up to 16M capacity. And the interval length can be set from 1 to 60 minutes.

**Instantaneous Value**

DTSD5 GPRS Measures all kinds of parameters:

- kW sum of phases and per phase
- kvar sum of phases and per phase
- kVA sum of phases and per phase
- Frequency per phase
- Power factor
- Current per phase
- Voltage per phase

**Freezing Function**

The meter have the optional function to freeze appointed variable parameters at the appointed time. Operators can read out these parameters to analyse.


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## Smart communicating meter

The DTSD5 GPRS meter has a module uses GSM/GPRS/CDMA communication technology to create a simple access to the AMR System local network. Taking advantage of global GPRS network coverage, it guarantees reliable remote access to any meter in all environmental condition wherever there is a GSM/CDMA signal:

- Extended GSM/CDMA aerial option for low signal areas
- Secure accessible SIM card for choice of network provider.

Installation and connection of DTSD5-G to the AMR System are facilitated by:

- Instantaneous display of current signal strength on LCD display
- Smart SMS configuration support
- Indicating real-time connection instance via LEDs on module
- Indicating on LCD whenever meter is transporting or receiving data

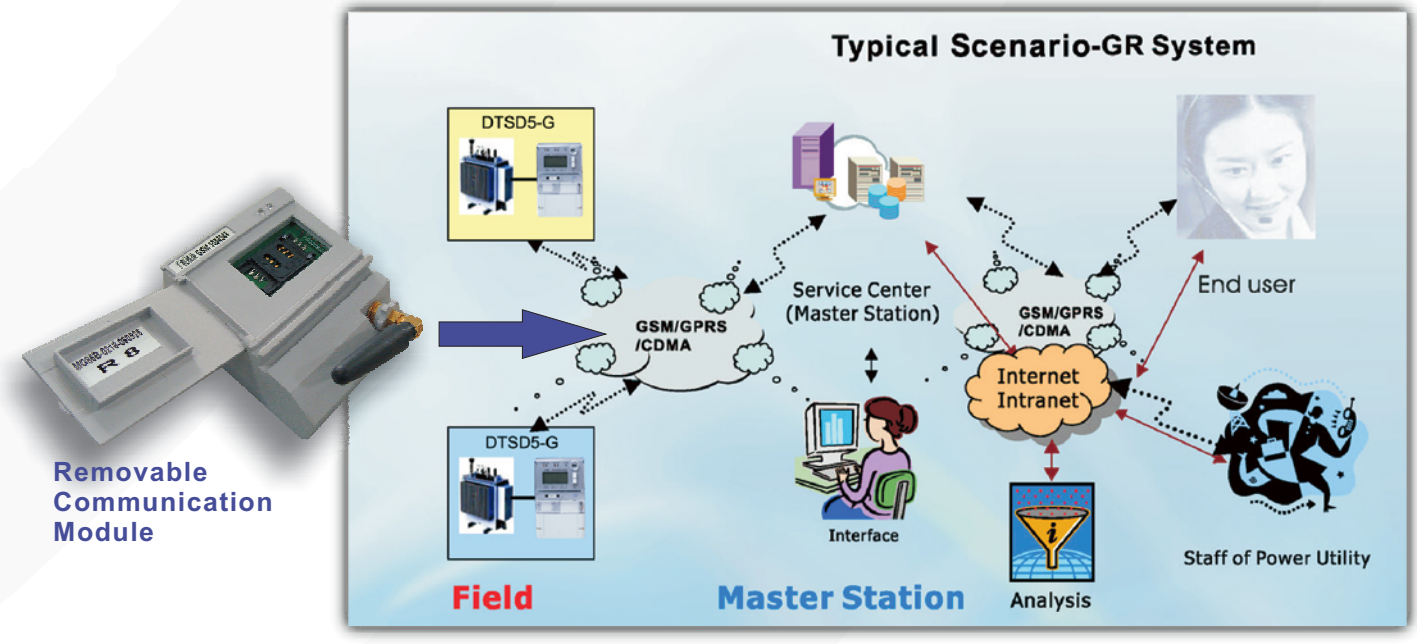
## Improved customer services

With a permanent available connection between DTSD5 GPRS and the utility, all the billing data can be automatically read at the appointed time. Customers no longer have to be disturbed by meter readers.

Besides giving reliable and accurate readings and immediately being integrated into the billing system, the DTSD5 GPRS also supports the function of reminding customers the network abnormities (eg. power off, over current, phase rotation, etc.) by SMS, so that can help customers to reduce unexpected loss from accidents.

Fully monitored by the GR System, metering data can be analyzed for various kinds of usage, like collocate different load to different areas, and finally reduce the energy waste.

DTSD5 GPRS also supports the function of remote field upgrade, to meet different kinds of requirements under different conditions.



# DTSD5 GPRS

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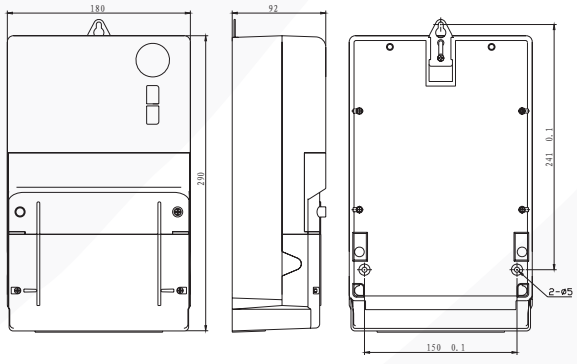
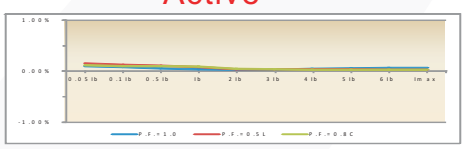
## Technical Specification

| | | |
|---|---|---|
| Voltage | Reference Voltage | 57.7V/100V/110V/220V/230V/240V |
| | Operation Voltage Range | 0.9Un—1.1Un |
| | Limit Voltage Range | 0.7Un—1.2Un |
| Frequency | Reference Frequency | 50Hz/60Hz |
| Current | Base Current | Selectable 1A、1.5A、3A、5A、10A、20A、30A |
| | Max Current | Selectable 2A、6A、20A、60A、80A、100A |
| Measurement Accuracy | Active energy to IEC62053-22, IEC62053-21 | Class 0.5S or Class 1 |
| | Reactive energy to IEC62053-23 | Class 2 |
| | Starting Current | 0.1%In to class 0.5S, and 0.4%In to class 1 |
| Power consumption | Voltage circuit | ≤2W, 4VA |
| | Current circuit | ≤1VA |
| Environment Influences | Temperature Range | To IEC 62052-11 |
| | Operation | -25℃ to +55℃ |
| | Storage | -40℃ to +70℃ |
| | Impermeability according to IEC62059 | IP52 |
| Insulation Strength | Insulation Strength | 4kV at 50Hz during 1 min |
| | Impulse voltage | 1.2/50us 6kV |
| | Protection class Ⅱ according to IEC62052-11 | |
| Calendar Clock | Accuracy | ≤0.5S/day |
| | With battery | ≥10 years |
| Display | Type | LCD |
| | Digit size in value field | 12.5mm 5.5mm |
| | Number of positions in value field | 8 digits with programmable decimal point |
| Outputs | Test pulse output | LED / Photocoupler series |
| | Alarm | LED |
| Communication Interfaces | Optical interface | According to IEC62056-21 |
| | RS485 interface | Optional |
| | Communication module | Under GSM/GPRS/CDMA network |
| Dimensions | Width | 180mm |
| | Height | 290mm |
| | Depth | 92mm |




Dimension

Active



Reactive