



Global Data Transmitter Multiple

The purpose of the Global Data Transmitter Multiple (modem) of Eijkelkamp is to connect to the e-SENSE sensor product line and transmit sensor data to our customers anywhere in the world. The Global Data Transmitter (GDT) Multiple is designed for extended use in the field and to transmit data in a secure way.

- **Designed for field use**
- **Always a complete data set**
- **Internal barometric and temperature sensor**
- **GPRS or UMTS coverage**
- **Smart while efficient**
- **Secure data transmission**
- **Easy to use**



Always a complete data set

The primary function of the Global Data Transmitter Multiple is to deliver an uninterrupted series of environmental measurements to the customer. The GDT Multiple is designed with data protection in mind. Multiple fail-safes make sure that no data is lost in case of network connectivity problems or hardware failure. If needed Eijkelkamp can make sure there is always a backup of the data available. In contrast, if environmental measurements are sensitive, Eijkelkamp can assure that no data is retained on its servers and thus provide a secure service that offers protection against data-leaks.

The GDT Multiple provides barometric and temperature data via an internal barometric sensor. Leaving six ports to connect e-SENSE sensors.

To ensure world-wide connectivity we offer various designs of the GDT. We have a Global Data Transmitter that can operate in countries that provide 3G/GPRS coverage and one that operates in countries that only can provide UMTS coverage.

Smart while efficient

Besides transmitting sensor data, the GDT can detect problems with sensors, barometrically compensate pressure data, produce alarms based on measurements and equipment status, and much more. By distributing the workload between the hardware on the GDT and the Eijkelkamp data infrastructure the GDT can perform all these advanced functions while drawing only a small current from a battery. The GDT can be used in the field continuously for up to three years on a single battery. The GDT can also be attached to a fixed power-supply in situations where high-frequency measurements are needed or when battery powered operation is not desirable.

Secure

Communication between the GDT and the Eijkelkamp Data Infrastructure is encrypted. The GDT communicates using an industrial grade encryption protocol (AES). The data is sent from the servers in the Eijkelkamp data infrastructure to the customer over an encrypted (SSL) connection (if needed).

Easy to use

The GDT Multiple can be quickly employed. It determines by itself which sensors are connected to it so very little configuration is necessary. Resulting in a modem with only one physical button. Data is sent to the customer either by e-mail, via a web-portal or directly into existing systems and databases.

All it takes for environmental research



Technical data

Mechanical specifications

Specification	Dimensions
Enclosure (LxWxH)	160x160x60 mm
Enclosure with M12- sensor connector and antenna connector (LxWxH)	Depending on connector type 250 x 160 x 110, 140 or 190 mm

Specification	Weight
Global Data Transmitter (incl. battery pack)	approx. 1200 g

Specification	Materials
Enclosure	ABS
Mounting brackets	Stainless steel

Electrical specifications

Item	Specification
Battery pack (internal)	7.2 V
Power supply (external)	DC 5.5 - 18 V
Life time of the battery pack	> 3 years (at a 1 hour interval)
Maximum rated power usage	4.2 W (800 mA)
Modem time accuracy	better than 1 minute/day

Connections

Messaging	Specification
Message mode	web portal, e-mail, SMS alarm, other
GSM	Quad band type (850, 900, 1800, 1900 MHz)
UMTS (optional)	2100 MHz
SIM card	Vodafone NL M2M *
Antenna connector	SMB connector
Sensor port	4-pin male connector (with possibility to connect a 5-pole contra connector), A-coded
External power connector	4-pin female connector, A-coded
USB port **	mini USB buccaneer type B receptacle

* SIM card exchangeable by the user. The functionality of SIM cards other than Vodafone M2M is guaranteed only after the functionality tests are fulfilled by Eijkelkamp. Therefore it is advised to use tested SIM cards only.

** For service purposes only

Integrated barometer sensor	Specification
Barometer measuring range	10 ... 1200 mbar *
Resolution	0.01 mbar
Accuracy barometer	± 2 mbar (at 300 ... 1100 mbar, 0 ...50 °C)
Temperature measuring range	-40 ... +85 °C
Resolution	0.01 °C
Accuracy temperature	± 0.8 °C (at 25 °C) ± 2.0 °C (0 ... 50 °C)

* 1 mbar is approximately 1 cmH₂O

Antenna *	Specification
GSM	Quad band type (850, 900, 1800, 1900 MHz)
UMTS (optional)	2100 MHz
Connector	Bulgin buccaneer SMB (RG-174 coaxial cable)
Ingress Protection	IP67 or better

* Other antenna types are available on request

Sensor ports	Specification
Number of sensor ports	6
Port 1 - 6	sensor (e+ logger or Diver) via sensor cable

Ambient conditions

Item	Specification
Temperature	-20 ... +50 °C
Ingression protection (enclosure)UMTS (optional)	IP67 (30 min.@1mH ₂ O)
Max. operation height	2000 m

Certifications

Item	Specification
CE	CE compliant
EMC / ESD	EN 61000-6-1, EN 61000-6-3

All information contained in this flyer is current at the time of publication. Our commitment to product improvement requires that we reserve the right to change equipment, procedures and specifications at any time.



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