



*This versatile transmitter is designed for Tank Container Tracking and Monitoring. It includes interfaces for various analog sensors and logical gates. Operations are simple, maintenance reduced to battery change and the ACT-AL can withstand the harsh transportation environment.*

## MAIN FEATURES

The ACT-AL (Argos Container Tracker with Analog/Logical inputs) has been specifically developed to be installed on tank containers that are fitted with temperature-control equipment (a reefer engine or a heating machinery). It comes in two parts: the transmitter and an optional battery pack for more than a year of operations. The ACT-AL is robust and can transmit various sensor derived information.

The ACT-AL comes standard with a CLR-V, a battery pack, a temperature probe and the connectors for the sensors.

## MAIN OPTIONS

- **External power supply.** The ACT-AL comes with a battery pack. Alternatively, it can be powered by any external 12V/1A source (a car battery for instance).
- **Temperature probe.** The ACT-AL comes with the LM35CZ temperature probe to transmit the temperature of a product like the liquid in a tank container. The probe is rated between  $-50^{\circ}\text{C}$  and  $+150^{\circ}\text{C}$ . Optionally, it is possible to use another temperature probe for high temperature readings for instance (over  $150^{\circ}\text{C}$ ).
- **4-20mA interface box.** A special interface box can be used to accommodate 4-20mA inputs such as a thermocouple.
- **Antenna.** For dry boxes or reefers, the ACT-AL may be connected to a CLD antenna instead of a CLR-V.

## PHYSICAL CHARACTERISTICS

<b>Size</b>	80x100x150mm (3.1x3.9x5.9in).
<b>Weight</b>	900g (2 lbs); power Pack is about 6kgs (13 lbs)
<b>Connectors</b>	Power supply, 2 data input ports, BNC for antenna
<b>Environment</b>	Splashproof (IP67)
<b>Installation</b>	Brackets provided (transmitter and power pack)
<b>Antenna</b>	CLR, CLR-V or CLD
<b>Miscellaneous</b>	Transmitter is turned on when connected to the power pack.
<b>Radiated Power</b>	2 W
<b>Operating Temperature</b>	-20°C to +50°C (-4°F to +122°F)
<b>Storage Temperature</b>	-40°C to +80°C (-°40F to +176°F)
<b>Power Supply</b>	12 VDC ±2 VDC
<b>Power Pack size</b>	90x160x360mm (3.5x6.3x14.1in)
<b>Power Consumption</b>	Standard Alkaline battery pack: more than 18 months (Basic Tracking and monitoring, about 6 positions a day)

## OPERATING MODES

The ACT-AL can accommodate the Basic Tracking and Monitoring Service.

Interface to sensors includes:

- 6 logical gates (max 5V, 50kW impedance). State 1 when open, state 0 when closed
  - one analog input 0-100mV
  - one analog input 0-1V
  - one analog input 0-5V
  - one analog input 0-15V
- (three analog inputs can be used among four)

When ordering please provide:

- Antenna required (CLR-V or CLD)
- Temperature range for calibration of the sensor (à100°C range between -50°C and +150°C, default being 0°C-100°C)

## DATA TRANSMITTED

Message is 64 bits long and includes:

- 6 logical gates
- 3 Analog inputs coded on 8 bits each
- Checksum

## APPLICATIONS

- Tracking tank containers and monitoring various parameters such as: temperature of the product, status of a reefer engine (ON/OFF, alarm states, battery status, etc...)
- Tracking and monitoring reefer containers with transmission of data such as supply air temperature, return air temperature, status of the reefer engine (ON/OFF), alarm flags, defrost status, etc...