



Applications

- Dislocated beehives
- Honey-collection monitoring network

Features and Benefits

- Measures hive weight, temperature and humidity
- Robust and durable construction
- Reduced height
- Suitable for all typical beehives
- 24/7 access to measurements
- LCD display for measurements
- Graphical display of data on www.ecebelar.com
- Weather forecast
- Alerts sent via SMS or web app
- Easy setup via SMS or web app
- Vandalism SMS alarm
- Low operation and maintenance costs
- Portable setup and data transfer unit
- 3 years run time on one battery
- 3 years warranty
- More than 50 scales in the Slovenian BeeKeepers Association network
- 20 years of experience

TCM13A is a measuring station for monitoring and prediction of honey production and collection. It is destined for integration in honey-collection control system of Slovenian BeeKeepers Association, as well as for independent bee-keepers, who want regular data on weight, temperature and relative humidity in their dislocated beehives.

TCM13A is an electronic scale with temperature and relative humidity sensors and GSM modem for data transfer. The load sensor is protected from the elements within a high quality stainless steel case, it is also designed to be under load continuously and can, combined with AMES electronics, provide very accurate and reliable data. There are virtually no variations due to changes in temperature and other factors. The communication module contains AMES sensors for temperature and relative humidity, the GSM modem and a replacable battery that can power the device approx. 3 years (sending measurements once a day).

Measured information are accessible via SMS or via the web application. It works on all mobile networks and allow 24/7 access to measurement data on www.ecebelar.si

Automatic clock setting and simple parameters setting via the console or SMS.

As option, station send SMS as vandalism alert and could be installed with a meteorological station that measures wind direction/speed, temperature and relative humidity.

Technical specifications

	WEIGHING CELL	TEMPERATURE	RELATIVE HUMIDITY
Measuring range	0 – 100 kg optional 0 – 200 kg	-40 to + 55 °C	10 – 100 %RH
Accuracy and linearity	<0,02 %	+/- 1 °C	+/- 3 %RH
Resolution	0,1 kg	0,1 °C	1 %RH
Measuring system	load cell with resistive film	sensor SHT-21	sensor SHT-21
Power supply	replacable battery: LSH20, Li-SOCl, 13Ah, D-Cell/R20		
Battery life time	approx. 3 years at normal use - sending measurements once a day		
Operating temperature	-20 to + 55 °C		
Storage temperature	-40 to + 55 °C		
Dimensions	485 x 330 x 80 mm (L x W x H)		
Mass	8,0 kg		
Mounting	adjustable feet		
Material	stainless steel		
Casing protection	IP 65		
GSM modem	GSM/UMTS; all providers		
Optional	meteorological station that measures wind direction/speed, temperature and relative humidity		

