

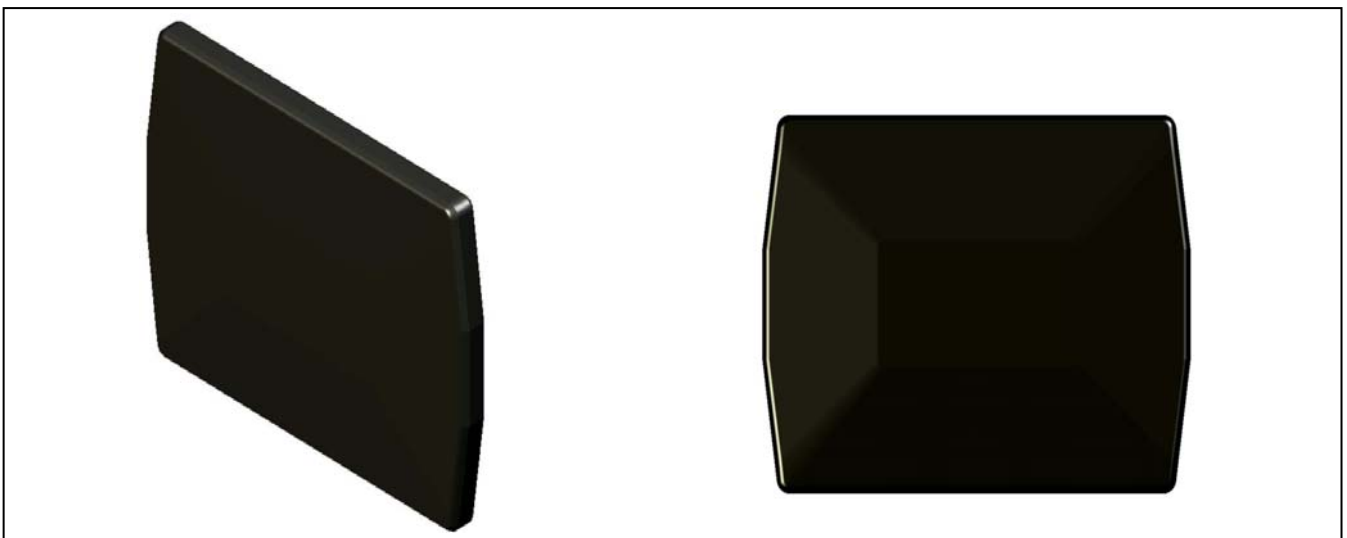
## Data tag T20

*Scirocco AB provides infrared-based ID systems with directional, ultra-compact readers and tags without a battery. Powered by LEDs in the reader or by a separate energizer, the tags can be read at large distance. The zone is well defined, has no blind areas and is unaffected by metal structures, electromagnetic interference and adjacent readers.*

Data tag T20 has a 10 digit unique ID-code and a 128 Byte R/W memory for user data. It is powered by infrared light, e.g. from a Scirocco reader or energizer, and transmits its information in a beam designed to tolerate most installation requirements. T20 can be read at up to 2 m in dim light if an R12 reader alone is used, while reading at up to about 3 m is possible if a separate energizer powers the tag. With R12 and an energizer, writing can be done at up to about 2 m distance, while in dim light the max writing distance with R12 is about 1 m.

The user data is divided in up to eight 16 Byte blocks, and, when energized, T22 repeatedly transmits the used blocks one at a time. Each block is sent with a 32 bit checksum to eliminate any substitution error. T20 can be locked with a password to protect it against reprogramming, and tampering with the user data is prevented by encryption according to the DES algorithm.

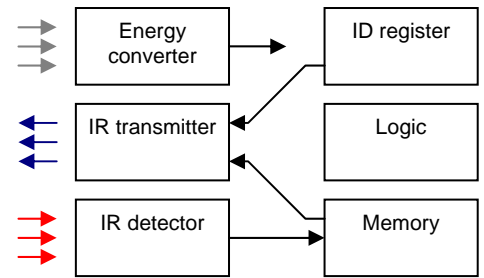
T20 can be used in moist environments, withstands most chemicals and has a sturdy design with good tolerance to shock and vibrations. Fastening is easy using mounting pad A85, e.g. for long-term attachment to a painted surface. The pads are chemically stable and can be removed even many years after the installation. Users with handheld applications appreciate that the tag is designed for easy pick-up and comfortable holding.



- 10 digit ID code
- 128 Byte data memory
- No battery
- Write protect function
- 3 m reading range
- 2 m writing range
- Free orientation
- User data encryption
- Metal and EMI safe
- Watertight and robust
- No substitution errors
- Compact design

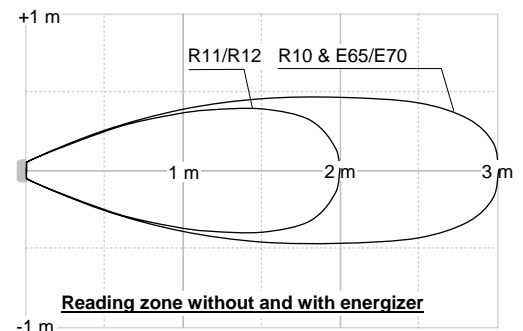
### Working principle

T20 has a photovoltaic converter for internal energy management. As soon as the tag is exposed to infrared light, it repeatedly transmits ID codes and user data (if written). Each message carries a 10 digit ID and a 16 B block with user data, plus CRC. T20 also has an infrared detector for tag set-up and receiving of new data. Logical circuits in the tag operate with the energy converter to efficiently manage the ID frame coding, the repetition interval length and other functions.



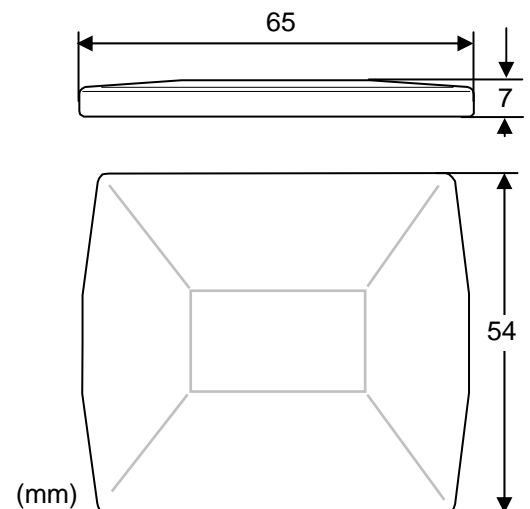
### Performance data

The diagram shows the approximate reading zone in Long Range (LR) mode with different readers and energizers. If in High Speed (HS) mode, the range is slightly shorter. Depending on settings and memory use, 5-20 IDs/sec are transmitted. The Technical Manual gives details about tag reading/writing under different conditions.



### Mechanical data

The cover material is made from a black, chemically, UV and impact resistant polycarbonate. The back surface is marked with the type code and serial number. T20 can be hand-held or fastened with mounting pads to the back- or front surface. The weight is 22 g.



### Environmental data

Temperature	-20 to +70 °C (operating)
Temperature	-40 to +85 °C (storage)
Humidity, non-condensing	95 %
Protection (IEC 529)	IP 68
Solar rad. (IEC68-2-5 Sa C)	56 days 1120 W/m <sup>2</sup>
Bump (IEC 68-2-29 Eb)	1000x 10g 6ms x 3dir
Drop (IEC 68-2-32 Ed)	10x 1m on concrete
Vibration (IEC 68-2-29)	0.02 g <sup>2</sup> /Hz, 0.5 h x 3 dir, 10-2000 Hz
Immunity	EN 61000-6-2:2001 10/3 V/m, 4/8 kV ESD, 1kV transient
Emission	EN 61000-6-3:2001 30/37 dBuV/m @ 10m



### Ordering codes

IRID tag R/W 'Tablet'	T20	Pad mounting
Mounting pad, round	A85	1 mm x 15 mm

DST20H

In a continuing effort to improve our products, Scirocco AB reserves the right to change specifications and features without prior notice.