cab information

RFID and cab thermal transfer printer

RFID is the most important issue at exhibitions and in trade journals. Important details about smart labels and the use of RFID transfer printers are provided in this datasheet.

Advantages

The most important advantage of this technology is the contact-free registration of data via ample distances. The data stored on the RFID label can be changed anytime.

Active transponders

An active transponder has its own power supply. The life span of the transponder is determined e.g. by the durability of the battery. These transponders are being employed in livestock husbandry, marking of domestic animals, in palettes and car anti-theft devices. The range for reading and writing data can cover several meters. High costs and the structural shape these transponders make them unsuitable for use in labels.

Passive transponders

Smart labels use passive transponders. These transponders do not have its own power supply. The required electricity for reading and writing is being provided by the measuring device via electromagnetic coupling. The chip and antenna are situated in a carrier which can be placed in labels. The memory capacity of the chips depend on manufacturer and frequency. Different sizes and shapes are available – basically the antenna defines both. Thereby varying distances for data transfer are being realised. Electrographic surfaces can shorten reading distances. Also of their thinness the labels are suited for the use in thermo transfer printers.

Frequencies

Three different bands can be used. Low-frequency range solutions with 125 KHz, high-frequency range with 13.56 MHz, ultra-high-frequency range solutions with 868 MHz (Europe) respectively 915 MHz (USA) determine read/write distances of the transponders. With 125 KHz only distances up to 0.5 m can be covered, with 13.56 MHz distances up to 1.5 m. 868/915 MHz reach up to 8 m coverage. The ability to read stored data can be constrained by metall and damp surfaces. In the ultra-high-frequency range no standardized frequencies are available world-wide. This means there are different use of each frequency in Europe, the U.S. and Asia.

13.56 MHz

ISO Norm (ISO 15693) for high-frequency range 13.56 MHz applies world-wide. This norm defines all read/write commands – therefore transponders of most manufacturers (Infineon, Philips, Texas Instruments) can be used. Most experiences regarding handling, production and utilization have been made with this frequency.

868/915 MHz

For a short time there has been the ISO Norm 18000-6A/B for the ultra-high-frequency range. The first read/write units have been introduced. These units are still too large to install into printers. A disadvantage of this frequency are so-called “reading holes” which can be corrected by the use of multiple reading devices.

Labels

Prices for smart labels are around 40 to 50 cent a piece (13.56 MHz). With growing quantities prices will presumably decrease. For the range of 868/915 MHz only a small number of manufacturers offer labels. At the moment prices are higher as for 13.56 MHz labels.

Technology that excites

cab A-Series with RFID option

The printers A3 and A4 of the cab A-Series can be factory equipped with an RFID unit. At the moment 13.56 MHz range is being supported.

For usage an activeX capable label software (e.g. cablabel Expert, Codesoft Enterprise, Easylabel Platinum) is required. This label software does not need to support RFID. The programm cabRFIDcontrol provides RFID support.The programm is free of charge and delivered with the printer. All printers can be used just like any regular label printer.

The data which is supposed to be written into the transponder can be entered via the input mask of cabRFIDcontrol. The data can also be provided by a database or external data file. In cabRFIDcontrol the label and the quantity of labels which should be printed can be selected.

Before the data is written on the transponder the ID (unique number of the transponder) is being verified. If this ID is given back to the software the writing procedure starts. After writing the data the content of the transponder is being checked automatically and the software starts the printing of the label.

With this solution all customers who work with label software can also work with transponder smart labels using 13,56 MHz frequency.

At the moment the PC needs to have two interfaces for connection – serial and parallel or Ethernet. A processor speed of 1 GHz is minimum.

Please call for additional information or surf to www.cabtechn.com

Examples

	Part No.	Description
For the A3 and A4 with a factory installed RFID Read-Write Unit with Ethernet for the marking of smart labels add to the part no. the coding .102 (see catalog page 16)	**5942300.102**	Transfer Printer A3/200 RFID 13.56 MHz/Ethernet
Do you want the A3 or A4 with metal cover and RFID Read-Write Unit with Ethernet add to the part no. the coding .103 (see catalog page 16)	**5942300.103**	Transfer Printer A3/200 metal cover/RFID 13.56 MHz/ Ehernet

Contents of delivery label printer: Transfer Printer, Power Supply, Operation manual, Windows driver, cablabel Lite, Service manual on CD-ROM

Headquarter

Germany

cab-Produkttechnik GmbH & Co KG

Postfach 1904 D-76007 Karlsruhe
Wilhelm-Schickard-Str. 14 D-76131 Karlsruhe
Germany

Phone +49 721 6626-0
Fax +49 721 6626-249

www.cabgmbh.com
info@cabgmbh.com

cab susidiaries in other countries

France: cab technologies s.à.r.l.
F-67350 Niedermodern
Téléphone +33 388 722 501
info@cab-technologies.fr

España: cab España S.L.
E-08304 Mataró (Barcelona)
Teléfono +34 937 414 605
info@cabsl.com

USA: cab Technology Inc.
Tyngsboro MA, 01879
Phone +1 978 649 0293
info@cabtechn.com

Russia: OOO cab Technology
RUS-123001 Moscow
Phone +7 095 937 38 79
cabrus@co.ru

South Africa: cab Technology (Pty.) Ltd.
2125 Randburg
Phone +27 11-886-3580
info@cabtech.co.za

Asia: cab Technology Co., Ltd.
Taipei, Taiwan, R.O.C.
Phone +886 2 2950 9185
cabasia@cabgmbh.com

All specifications about delivery, design and technical data are given to the best of our current knowledge and are subject to change without prior notice.

Representatives in other countries on request.