CR391U
Universal Controller
Stand-Alone or System-Integrated

LOCAL APPs
Access
Cash loader
Elevator control
Input monitoring
Intrusion (DENIS® does ABC)

Output control
• Geyser
• Irrigation
• Lights
• Pool
• Temperature

Programmable Logic Control
Random check
Vending

SOFTWARE CONTROL SERVICES (PTY) LTD
www.softconserv.com

475 King’s Highway
Lynnwood
Pretoria, South Africa
sales@softconserv.com
t: +27 12 3487301

26B Woodbridge Bpark
Koebelg Rd
Minerton, Cape Town
softcape@mweb.co.za
t: +27 21 551 5728
System functions
- Stand-Alone or System-Integrated
- Token-Card- Finger reader to output control
- Inputs (contacts, temperature, etc.) to output control
- Real Time Clock, time-out and counting control
- Intrusion – DENIS® does ARC (integrates with all I/O)
- Vending cashless control: I/O, Access, MDB/Exec protocols
- Vending machine management DDCMP/DEX/UCS protocols
- Cash loader
- On-board www
- Integration / configuration of all functions to requirement

Access functions
- Anti-pass back, anti-time back control, expire
- Batch loading of void and valid cards
- Adjustable latch and door open detection timeouts
- Vehicle detect provides reader enable and vehicle APB
- Egress / override facility
- Card capture, motorized reader / capture interface
- Multiple illegal entry attempts disable reader
- Multiple integrated random search
- Mantrap
- Output groups
- Link external data (via serial) to card (e.g. weight)

Vending / Cash-loader functions
- Cashless vending – free / quantities per period / subsidies / pre-paid
- and external payment systems
- Product management with low quantity alarms
- Machine management - alarms / warnings, recipe
- Coin / Note reader

Input/output capabilities, functions
- 10 configurable outputs - 4 relay, 6 open-collector
- 16 supervised inputs (short and open circuit)
- Expansion modules (TTL, SPI, RS485, 1-wire)
- Expand to 256 Inputs, 128 outputs
- Built in APPs: Intrusion and Lift-control
- Programmable Logic Control (PLC)
- Timers, counters, triggers and events

Reader interface
- 2 Card readers (expand to 8 via front-end modules / serial readers)
- Data/clock, Wiegand, Touch or serial (RS232 or RS485)
- Pin pads and LCDs – and programmer (via front-ends)
- Sallis Salto / Assa Abloy, OSDP RS485 interface

Communication options
- TCP/IP (100M), USB-2 (host and device)
- 5 Serial (2xRS232 / 4xRS485 / GSM / WiFi / BT / Zigbee)
- LAN controller (TCP / USB / GSM / WiFi / RS485)
- 3 Serial expansion modules (GSM / WiFi / BT / PLD / 20mA)
- GSM – SMS / Clip / APN / Cloud
- I/O expansion (A2D, Output)
- 1-Wire to 8 Output, 8 Digital Thermometers
- Communications encrypted
- Bootloader FW update

Resource specification
- 130k random; 16 hex digit cards with 6 digit PIN
- 10k Transaction buffer
- 128 time groups, each with 8 time zones
- Time accumulation logging (day / week / month)
- 30 holidays. Time groups with weekday, holiday enable
- Transactions are time and date stamped - NOVRAM
- Real time calendar clock with battery back-up
- SD Card

Diagnostic and programming tools
- Software watchdog and power dip reset
- 10 diagnostic LEDs display
- On-line Firmware update
- Configuration via multiple communication channels
- Built-in-Test, diagnostics, statistics

Cable lengths and types
- Reader to CR391: 8 Core multi-strand Mylar, 0.2mm², with screen; 50 m maximum (Reader dependent)
- CR391 to FrontP: 2 Pair twisted multi-strand Mylar, 0.2mm² with screen; 2000m total length
- CR391 to 1-wire modules: 2 Pair twisted multi-strand Mylar, 0.2mm² with screen; 20m total length
- RS485 LAN Cable: 2 Pair twisted multi-strand Mylar, 0.2mm² with screen; 2000m total length

Housing and dimensions
- ABS-flame retard moulded locked enclosure (integrated UPS)
- 110mm (H) x 300mm (W) x 57mm (D)
- SlideTie® cable entries
- Lid open detect (tamper)

Power supply and consumption
- Optional integrated 7AhR-battery backup, mains monitor
- AC or DC power source
- 12V 2.5A/1.4A charge or 12V 4.75A/2.5A charge
- 90-260VAC, 230 to 270W

Environmental conditions
- Storage Temperature: -20 to 65 Degrees C
- Operational Temperature: 0 to 45 Degrees C
- Humidity: 80% non-condensing

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