

OVERVIEW

AUTOMATION



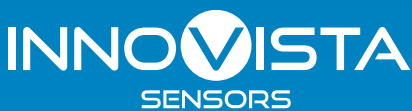
MILLENIUM 3
MILLENIUM 3 ACCESSORIES

em4

ABOUT CROUZET

Supported by an experienced technical team, Crouzet is a pioneer in the simplification of programming. The brand offers the easiest-to-use and most adaptable alternative automation solution for specialized and demanding needs.

Crouzet is a brand of InnoVista Sensors™.



InnoVista Sensors™ is a worldwide industrial specialist of sensors, controllers and actuators for automated systems.

Through its brands, Crouzet and Systron Donner Inertial, InnoVista Sensors™ offers a wide range of reliable, efficient and customizable components dedicated to the Aerospace & Defense, Transportation and Industrial markets and segments.

Thanks to the recognized expertise of its teams and a strong innovation policy, InnoVista Sensors™ brings performance enhancing solutions to its customers worldwide.

InnoVista Sensors™: your trusted partner of choice to face industrial challenges of today and tomorrow.

www.innovistasensors.com

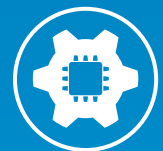
Designs & Manufactures



Sensors



Controls



Actuators

For



Aerospace & Defense



Transportation



Industry

ADAPTATION WHEEL

To meet market expectations and provide customers with the right solutions within the shortest timeframes, Crouzet has structured its processes around different types of products: standard products, adapted products and products specially developed for a customer. Introducing the adaptation wheel...



1 STANDARD COMPONENTS

A complete range of logic controllers immediately available to create your automation application.

2 COMPONENTS WITH ADDED VALUE

Standard products complemented by factory-mounted auxiliaries or accessories (connectors, wire outputs, cables, etc.) in order to assist integration into your equipment, simplify your logistics and maximize the reliability of your installation.

3 ADAPTED PRODUCTS

Defined jointly with our technical sales teams, these adapted products offer the exact performance and functions you need for your application.

4 SPECIFIC PRODUCTS

All our design and industrialization expertise in automation systems at your service, to design and create specific products dedicated to your application.

WHICH SOLUTION DO YOU NEED?

em4 is more than just a nano-PLC: it is a leading edge device supported by best-in-class tools that enables you to create and implement the smartest automation applications with em4 soft.

NANO-PLC

em4 remote

The first all-in-one solution to bring your application into the Internet of Things

Remotely manage your equipment and application programs



Remotely display or control data values with a web platform



Receive and manage notifications when an event occurs in your application

Periodically receive data log reports by email or FTP



Remotely display or control data values with SMS



Receive an SMS or an email when an event occurs in your application

em4 alert

The PLC which sends alerts via SMS, stores data logs in .csv (Excel) and sends them by email or FTP

Embedded configurable 0-10V/4-20mA accurate analog inputs



Powerful & up to 24 analog inputs included



0-10V
4-20mA



Modbus RS485 slave interface option for connection Touch HMI

em4 local/ethernet

The em4 for stand alone use or local area network

The **Millenium 3 Smart** logic controller is the easiest programmable module to use on the market. Easy to program thanks to M3 Soft, it enables the control and monitoring of machines and automation installations with up to 50 I/Os.

LOGIC CONTROLLER

Smart Expandable

Offers a large variety of expansions (digital, analog I/Os...), up to 50 I/Os



Smart Expandable

Smart Compact

The easiest logic controller to implement, to program and to use on the market



Smart Compact

Essential

The right product to tackle simple applications that still require a powerful logic controller



Essential

Application example

Access Control

Millenium 3 offers both standard and customized product solutions for a range of applications, including automatic barriers, automatic doors, turnstiles, sectional doors and disabled access ramps.

em4 soft

The most intuitive programming software on the market



em4 web



Provides powerful application and device management



em4 local

* Network-compatible 2G/3G.



em4 alert



em4 remote

Water treatment

Application example

With the capability to manage pump circulation, monitor liquid levels, and measure the temperature and conductivity of water, em4 can help you take your application to the next level.

M3 soft

The M3 Soft is a high-performance software platform used to program the Millennium 3 logic controller and optimize design times.

Digital expansions (up to 50 I/Os) & analog (0-10V, 4-20mA, Pt100)



50 I/Os
0-10V
4-20mA



Modbus RTU and Modbus TCP/IP expansions



Additional application specific functions (autotuning PID, astronomical clock, ...)

Direct connection of NTC temperature probes and LDR luminosity sensors



Enhanced visibility on the display with high contrast, blue back lit LCD screen



Extended temperature range (-20 °C to +70 °C)



Powerful and cost effective



Bluetooth® connection accessory for all the range for applications that are complex in terms of access



WHICH SOLUTION DO YOU NEED?

The Millenium 3 logic controller and the em4 nano-PLC are the easiest to use programmable modules for various applications. With simple and intuitive software, controlling and monitoring of machines and automation installations is incredibly simple.



Millenium 3 Smart Expandable

Offers a large variety of expansions (digital, analog I/Os...), up to 50 I/Os

- › Expandable versions: 10 I/Os and 26 I/Os
- › With or without display, in 24 V $\overline{\text{--}}$, 12 V $\overline{\text{--}}$, 24 V \sim and 100 \rightarrow 240 V \sim versions



Multiple configuration options derived from an extensive product range with numerous accessories

Millenium 3 toolbox

M3 soft

| | | | |
|--|---|--|---|
| | Digital expansions up to 50 I/Os | | Highly visible blue LCD |
| | Analog 0-10V, 4-20 mA, Pt100 expansions | | Direct connection of NTC temperature probes |
| | Modbus RTU and Modbus TCP/IP expansions | | Additional application specific functions |
| | | | Extended temperature range (-20 °C to +70 °C) |
| | | | Bluetooth® connection accessory |



Millenium 3 Smart Compact

The easiest logic controller to implement, to program and to use on the market

- › Compact versions: 12 I/Os and 20 I/Os
- › With or without display, in 24 V $\overline{\text{--}}$, 12 V $\overline{\text{--}}$, 24 V \sim and 100 \rightarrow 240 V \sim versions



Application-specific solutions thanks to dedicated and easy to use specific function blocks

Millenium 3 toolbox

M3 soft

| | |
|--|---|
| | Highly visible blue LCD |
| | Direct connection of NTC temperature probes |
| | Additional application specific functions |
| | Extended temperature range (-20 °C to +70 °C) |
| | Bluetooth® connection accessory |



Millenium 3 Essential

The right product to tackle simple applications that still require a powerful logic controller

- › Compact versions: 12 I/Os and 20 I/Os
- › Expandable versions: 10 I/Os and 26 I/Os
- › With or without display, in 24 V $\overline{\text{--}}$, 12 V $\overline{\text{--}}$ versions



The Millenium 3 Essential range is the cost effective solution for simple applications

Millenium 3 toolbox

M3 soft

| | |
|--|--|
| | Powerful and cost effective |
| | Digital expansions up to 50 I/Os |
| | Analog 0-10 V, 4-20 mA, Pt100 expansions |
| | Modbus RTU and Modbus TCP/IP expansions |
| | Simplified Bluetooth® connectivity |



em4 remote

The first all-in-one solution to bring your application into the Internet of Things

- › First PLC capable of fleet management including map localisation
- › Highly secured solution, using e-banking practices and infrastructure
- › Expandable from: 26 I/Os up to 46 I/Os



SIM card (2G version) & remote management subscription included for one year (em4 web, em4 app)

| | | | |
|--|--------------------------------------|--|---|
| | Machine / Equipment fleet management | | Advanced event management |
| | Secured platform and connections | | Advanced data history |
| | Device maintenance & management | | Advanced monitoring and control functions |
| | Map localization | | Advanced remote services for your customers |
| | Automatic clock synchronization | | Customizable web interface |



em4 toolbox

em4 soft

em4 web



em4 alert

Nano-PLC that can alert you via SMS and email

- › Needs only GSM network to operate (SMS)
- › Secured solution, only users identified in the PLC can interact
- › Expandable from: 26 I/Os up to 46 I/Os



* Compatible réseau 2G/3G.



No need to perform complicated integration between the PLC and a modem/gateway

| | | | |
|--|---|--|--|
| | Event management via SMS and email | | Monitoring and control functions via SMS |
| | Data report via SMS and datalogs via email or FTP | | PLC to PLC SMS communication |
| | Remote application program update | | Remote directory management |

em4 toolbox

em4 soft

em4 local/ethernet

The em4 for stand alone use or local area network

- › The most compact and powerful of its category
- › Includes highly accurate 4-20 mA analog inputs for industrial sensors
- › Expandable from: 26 I/Os up to 46 I/Os



Easily swap from one version to another version (remote and alert), enabling the upgrade of the equipment

| | | | |
|--|-------------------------------|--|--|
| | PLC with local functions only | | Modbus RS485 slave option interface |
| | 0-10V 4-20mA | | The most intuitive graphical function block language |
| | Modbus TCP/IP | | Modbus TCP/IP client and server |

em4 toolbox

em4 soft

SELECT YOUR CONTROLLER

Our products are specifically suited for integration in a wide range of applications.



- › Highly visible blue LCD with 4 lines of 18 characters and configurable backlighting
- › Allow the use of the entire library of specific function blocks in the software workshop
- › Extended temperature range (-20 °C to +70 °C)
- › Analog inputs 0-10 V_{DC}, Potentiometer, NTC, LDR (0-20 mA/Pt100 with converters)



- › Save time designing your application and remote functions using the most intuitive graphical function block language on the market
- › Accurately measure your high end industrial sensors with the embedded configurable analog inputs (including 4-20 mA)
- › Easily integrate one of our three high tech designs in your machine
- › Adapt your application during its lifecycle thanks to the enhanced controlling performances

Smart



Essential



Glossy black



| | Millenium 3 range | em4 range |
|------------------------|---|--|
| Power Supply | 12 V _{DC} , 24 V _{DC} 24 V _{AC} , 100 → 240 V _{AC} | 24 V _{DC} |
| Highly Visible HMI | Blue (Smart) or Green (Essential) | Black on white / white on black |
| Versions | Compact versions: 12 and 20 I/Os Expandable versions: 10 and 26 I/Os up to 50 I/Os | Expandable version: 26 I/Os up to 46 I/Os |
| Inputs on the base | Digital, High speed 6kHz Analog 0-10V 5%, Potentiometer, NTC, LDR | Digital, High speed 60kHz Analog 0-10 V, 4-20 mA 1%, Potentiometer, NTC, LDR |
| Outputs on the base | Relays 8 A or 5 A Static Digital or PWM | Relays 8 A or 6 A Static Digital or PWM |
| Inputs on expansions | Digital Analog 0-10V 2% 4-20 mA 1% PT100 1,5°C | Digital Analog 0-10 V 1% 4-20 mA 1% |
| Outputs on expansions | Relay 8 A or 5 A 0-10V 5% Static Digital or PWM | Relay 8 A or 6 A 0-10 V 1% 4-20 mA 1% Static Digital or PWM |
| Programming interface | USB cable | USB interface Ethernet port Remote download |
| Ethernet /Com | Ethernet Modbus TCP/IP (server) Modbus RS485 (slave) on expansion | Ethernet version: on base (Modbus TCP/IP server & client) Wireless 2G and 3G versions |
| Interface | USB, Bluetooth, memory, RS232 | USB, Modbus RS485 (slave) |
| Programming language | FBD/SFC or LD 400 Function Blocks 200 Ladder lines | FBD/SFC 1000 Function Blocks |
| Temperature range | -20 °C +55 °C (Essential range) -20 °C +70 °C (Smart range) | -20 °C +60 °C |
| Real time clock backup | 10 years | |

COMPLETE YOUR EXPERIENCE!

Sensors, power supplies, converters, remote screens and communication accessories offer solutions to control your automation systems with the greatest ease of use.

Millenium3

Memory cartridge

Bluetooth® interface

USB cable

Light sensor

Temperature probes

Ventilation duct temperature sensor

Ambient temperature sensor

WIDE RANGE OF ACCESSORIES FOR BOTH

Power supplies from 7.5 to 240 W
5, 12 or 24 V $\overline{\text{--}}$

Potentiometer

Temperature and current/voltage converters

Programmable touchpanels

USB interface

Wireless antennas

Modbus RS485 slave interface

em4

MOST INTUITIVE PROGRAMMING SOFTWARE ON THE MARKET

Simple

- › Quick, simple and intuitive programming which does not require specialist knowledge
- › Self-teaching made easier thanks to a user-friendly online help guide and programming examples
- › A simulation mode that consistently represents controller operation

Powerful

- › A complete range of more than 100 function blocks
- › All basic functions: counting, timing, comparison, display, logic, gain, sin/cos, etc. are also available
- › A wide range of dedicated functions: pump rotation, PID regulation, movement, pressure, level, water ratio, solar tracking, and flow

User-friendly and ergonomic

- › Software available in 5 languages: English, French, Italian, German and Spanish
- › Function block programming is fun and very visual
- › Programming languages:
 - FBD (Function Bloc Diagram)
 - SFC (Sequential Function Chart/Grafcet)
 - LD (Ladder Diagram) only on M3 soft

User-definable and effective

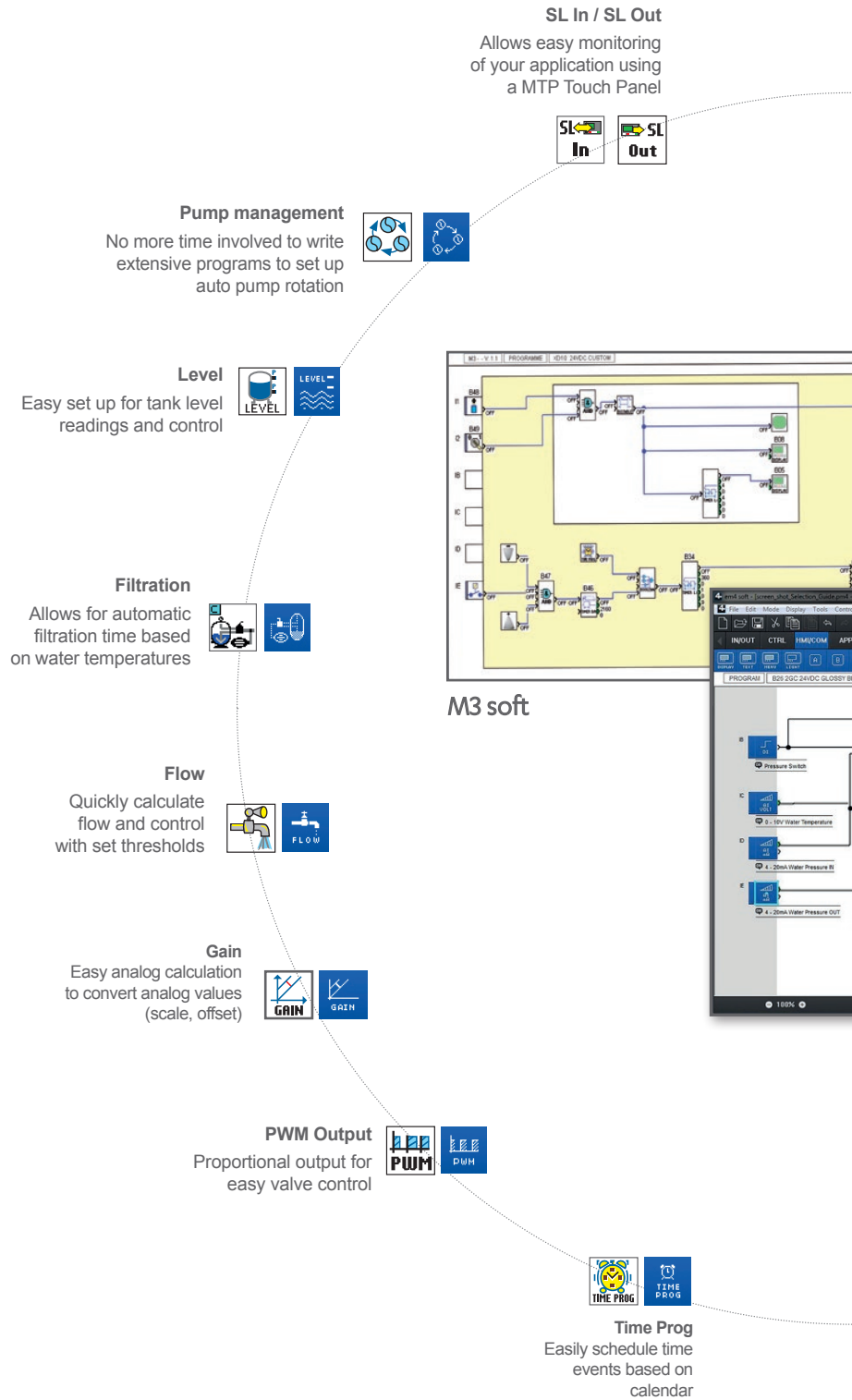
- › Possibility of creating and saving custom macros allowing the user to simplify programs
- › Possibility of locking macros with a password for greater security

M3 SOFT

M3 Soft is the easiest programming software to use on the market. It is also incredibly powerful and user-friendly. Thanks to the most comprehensive library of application-specific function blocks in the industry, it allows you to customise your applications.



M3 soft
Function blocks



em4 SOFT



em4 soft integrates all the remote management features in a single tool. Based on our strong experience in Millenium programming software development, em4 soft is the new easy-to-use programming tool dedicated to em4.

em4 soft Function blocks

Event

Allows up to 24 events
SMS/email messages including 2 attached analog values



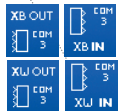
Data Logging

Allows up to 3 blocks of 8 values to be logged at a specified time interval or on command signal



Monitoring

Allows easy remote monitoring and control of your application



32 bit function blocks

Allows high speed count, tachometer, power management, calculation with 32 bit values



Display

Large 4x18 character display allows user to visualize text, status, times and control values in the program



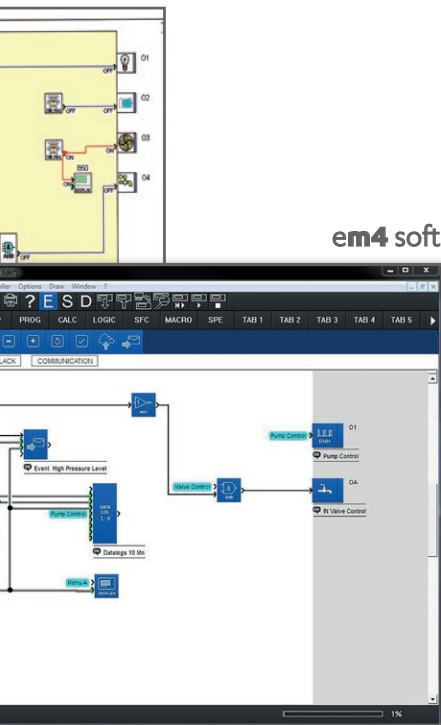
PID Regulator

Will interface with water booster drives for pressure needs based on demand



Sunset / Sunrise

Calculate the sunrise and sunset time



em4 WEB

With em4 remote, your equipment gets the simplest access to the Internet of Things

- The em4 web provides you with a powerful **device management** web-based platform.
- There is no need to configure the communication: log on, identify your em4 remote and instantly get connected!
- It allows you to easily manage your em4 fleet on demand:
 - manage your access rights, as well as your customers
 - **download** your application program or firmware
 - **monitor** and control your devices
 - **locate** them on a map
 - display your **data history**
 - receive **event notifications** by email and SMS

Last but not least, it implements the latest security systems and protocols.

Map localisation



Your em4 fleet available anywhere, anytime

Download your software:




Download M3 soft



Download em4 soft

MAKE UP YOUR OWN SOLUTION

MILLENIUM 3 RANGE


| | | | | | | Availability/Compatibility | | | | |
|---|---|--------------------|--------------------|-------------------------------|-----------------------------------|-------------------------------|------------------------------|----------------------|---|---|
| Type | Part number | Supply | Inputs | Outputs | 12 V \dots | 24 V \dots | Solid State Output 0.5 A/PWM | Essential version ** | | |
| M3 Smart kits | | | | | | | | | | |
|  | Kit 12 Smart* | 88 974 080 | 24 V \dots | 8 (4 configurable as analog) | 4 relays 8 A | | | | | |
| | Kit 12 Smart* | 88 974 081 | 100 → 240 V \sim | 8 | 4 relays 8 A | | | | | |
| | Kit 20 Smart* | 88 974 082 | 24 V \dots | 12 (6 configurable as analog) | 8 relays 8 A | | | | | |
| | Kit 20 Smart* | 88 974 083 | 100 → 240 V \sim | 12 | 8 relays 8 A | | | | | |
| | Kit 26 Smart* | 88 974 084 | 24 V \dots | 16 (6 configurable as analog) | 8 relays 8 A and 2 relays 5 A | | | | | |
| | Kit 26 Smart* | 88 974 085 | 100 → 240 V \sim | 16 | 8 relays 8 A and 2 relays 5 A | | | | | |
| Compact versions | | | | | | | | | | |
|  | CD12 Smart* | 88 974 041 | 24 V \dots | 8 (4 configurable as analog) | 4 relays 8 A | ✓ | | ✓ | ✓ | |
| | CD12 Smart* | 88 974 043 | 100 → 240 V \sim | 8 | 4 relays 8 A | | ✓ | | | |
| | CD20 Smart* | 88 974 051 | 24 V \dots | 12 (6 configurable as analog) | 8 relays 8 A | ✓ | | ✓ | ✓ | |
| | CD20 Smart* | 88 974 053 | 100 → 240 V \sim | 12 | 8 relays 8 A | | ✓ | | | |
| | CB12 Smart* | 88 974 021 | 24 V \dots | 8 (4 configurable as analog) | 4 relays 8 A | ✓ | | | ✓ | |
| | CB12 Smart* | 88 974 023 | 100 → 240 V \sim | 8 | 4 relays 8 A | | ✓ | | | |
|  | CB20 Smart* | 88 974 031 | 24 V \dots | 12 (6 configurable as analog) | 8 relays 8 A | | | | ✓ | |
| | CB20 Smart* | 88 974 033 | 100 → 240 V \sim | 12 | 8 relays 8 A | | ✓ | | | |
| | Expandable versions | | | | | | | | | |
| |  | XD10 Smart* | 88 974 141 | 24 V \dots | 6 (4 configurable as analog) | 4 relays 8 A | ✓ | | ✓ | ✓ |
| XD10 Smart* | | 88 974 143 | 100 → 240 V \sim | 6 | 4 relays 8 A | | ✓ | | | |
| XD26 Smart* | | 88 974 161 | 24 V \dots | 16 (6 configurable as analog) | 8 relays 8 A and 2 relays 5 A | ✓ | | ✓ | ✓ | |
| XD26 Smart* | | 88 974 163 | 100 → 240 V \sim | 16 | 8 relays 8 A and 2 relays 5 A | | ✓ | | | |
| XB10 Smart* | | 88 974 131 | 24 V \dots | 6 (4 configurable as analog) | 4 relays 8 A | ✓ | | ✓ | ✓ | |
| XB10 Smart* | | 88 974 133 | 100 → 240 V \sim | 6 | 4 relays 8 A | | ✓ | | | |
|  | XB26 Smart* | 88 974 151 | 24 V \dots | 16 (6 configurable as analog) | 8 relays 8 A and 2 relays 5 A | ✓ | | ✓ | ✓ | |
| | XB26 Smart* | 88 974 153 | 100 → 240 V \sim | 16 | 8 relays 8 A and 2 relays 5 A | | ✓ | | | |
| | With Removable Terminal Blocks | | | | | | | | | |
| |  | CD12 RBT Smart* | 88 974 441 | 24 V \dots | 8 (4 configurable as analog) | 4 relays 8 A | | | | |
| XD26 RBT Smart* | | 88 974 561 | 24 V \dots | 16 (6 configurable as analog) | 8 relays 8 A and 2 relays 5 A | | | | | |
| Sandwich extensions | | | | | | | | | | |
|  | Communication | XN05 Modbus TCP/IP | 88 970 270 | 24 V \dots | | | | | ✓ | |
| | | XN06 Modbus RS485 | 88 972 250 | 24 V \dots | | | | | ✓ | |
| | | XN07 Master RS485 | 88 974 250 | 24 V \dots | | | | | | |
|  | Digital | XE10 | 88 970 321 | 24 V \dots | 6 | | | | ✓ | |
| | | XE10 | 88 970 323 | 100 → 240 V \sim | 6 | 4 relays 5 A | | ✓ | ✓ | |
| Termination Extensions | | | | | | | | | | |
|  | Digital | XR06 | 88 970 211 | 24 V \dots | 4 | 2 relays 8 A | ✓ | | ✓ | |
| | | XR06 | 88 970 213 | 100 → 240 V \sim | 4 | 2 relays 8 A | | ✓ | ✓ | |
| | | XR10 | 88 970 221 | 24 V \dots | 6 | 4 relays 8 A | ✓ | | ✓ | |
| | | XR10 | 88 970 223 | 100 → 240 V \sim | 6 | 4 relays 8 A | | ✓ | ✓ | |
| | | XR14 | 88 970 231 | 24 V \dots | 8 | 4 relays 8 A and 2 relays 5 A | ✓ | | ✓ | |
| | | XR14 | 88 970 233 | 100 → 240 V \sim | 8 | 4 relays 8 A and 2 relays 5 A | | ✓ | ✓ | |
|  | Analog | XA03 3xPt100 | 88 970 800 | 24 V \dots | 3 analog (Pt100) | | | | | |
| | | XA04 2AI/2AO | 88 970 241 | 24 V \dots | 2 analog 0-10 V/0-20 mA (1 Pt100) | 2 analog 0-10V/PWM | | | ✓ | |
| Bare board and resin board versions | | | | | | | | | | |
|  | Bare board | NB12 | 88 970 001 | 24 V \dots | 8 (4 configurable as analog) | 4 relays 8 A | ✓ | | | |
| | | NB12 | 88 970 003 | 100 → 240 V \sim | 8 | 4 relays 8 A | | | | |
| | | NB20 | 88 970 011 | 24 V \dots | 12 (6 configurable as analog) | 8 relays 8 A | | | | |
| | | NB20 | 88 970 013 | 100 → 240 V \sim | 12 | 8 relays 8 A | | | | |
|  | Resin board | NBR12 | 88 973 001 | 24 V \dots | 8 (4 configurable as analog) | 4 relays 8 A | ✓ | | ✓ | |
| | | NBR26 | 88 973 061 | 24 V \dots | 16 (6 configurable as analog) | 10 relays 8 A | ✓ | | ✓ | |
| | | NBR32 | 88 973 211 | 24 V \dots | 20 (6 configurable as analog) | 12 relays 8 A | ✓ | | | |
| | | NBR40 | 88 973 231 | 24 V \dots | 24 (6 configurable as analog) | 16 relays 8 A | ✓ | | | |

* Millennium 3 Smart: backlit blue LCD display. Extended operating temperature range and function block library


**Millennium 3 Essential: Logic Controller with green screen and industrial temperature range

MILLENIUM 3 ACCESSORIES

Power supplies and DC/DC converters in modular casings

| | Part number | Input Voltage | Output voltage | Nominal power | Output current |
|---|-------------|---------------|----------------|---------------|----------------|
|  | 88 950 303 | 100 → 240 V~ | 24 V--- | 7.5 W | 0.3 A |
| | 88 950 304 | 100 → 240 V~ | 24 V--- | 15 W | 0.6 A |
| | 88 950 307 | 100 → 240 V~ | 24 V--- | 30 W | 1.2 A |
| | 88 950 302 | 100 → 240 V~ | 24 V--- | 60 W | 2.5 A |
| | 88 950 305 | 100 → 240 V~ | 5 V--- | 20 W | 4 A |
| | 88 950 306 | 100 → 240 V~ | 12 V--- | 24 W | 2 A |
| | 88 950 320 | 9,2 → 18 V~ | 12 V--- | 10 W | 0.8 A |
| | 88 950 321 | 9,2 → 36 V~ | 24 V--- | 6 → 10 W | 0.4 A |

Connection accessories, tools and programming software

| | Part number | Description |
|--|-------------|---|
|  | 88 970 111 | M3 Soft: Millenium 3 programming software (CD-ROM) |
| | 88 970 108 | Memory cartridge for transfer and saving of programs |
| | 88 970 102 | 3 m serial link cable: PC DB9 F → Millenium 3 |
| | 88 970 104 | Millenium 3 → Bluetooth® interface (class A 10 m) |
| | 88 970 109 | 3 m USB link cable: PC → Millenium 3 |
| | 88 970 110 | Bluetooth® adaptor → USB (class A 10 m) |
| | 88 970 123 | 1.80 m serial link cable: DB9 M/DB9 F |
| | 88 970 510 | 0.5 m serial link cable: Millenium 3 → DB9 M |
| | 88 974 106 | Ready to use Millenium 3 Smart democase including: |
| | | - a CD12 Smart, a CTN probe, a LDR probe, an I/O simulator - a 3 m USB link cable: PC → Millenium 3, a M3 Soft CD - a power supply 110-230 V~ |

Millenium 3 Virtual Display



Android smartphone and tablet as well as Windows XP/7 PC application

Man/Machine interface



TFT-LCD compact 4.3" and 7" resistive touch panels - MTP6/50, MTP8/50 & MTP8/70

Plug & Play remote LCD displays/keypads

Remote LED display - Input 0-10 V

Temperature probes and light sensors



NTC Temperature probes

LDR Light sensors

0-10 V Temperature sensors

Temperature probes Pt100 & Thermocouple

Temperature and signal converters



Thermocouple Pt100/Pt1000 → 0-10 V

PWM to 0-10 V/4-20 mA to 0-10 V

Other accessories and kits

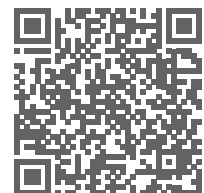


Standard Smart and Essential product kits

Removable connectors

Potentiometer Ø 22 mm

Faceplates



Check out the Millenium 3 datasheets!

em4 RANGE

| Product description | | Connection type | | | | Glossy black | Details | | |
|-------------------------|--------------------------------|-----------------|---|---|---|--------------|--|--|--------------------------|
| | | | | | | | | | |
| Bases | | | | | | | Common characteristics: | | |
| | em4 remote 2G* | | ✓ | | | 88 981 153 | - Supply: 24V--- - Inputs: 16 digital inputs (including 4 high speed, 8 analog 0-10 V / potentiometers and 4 analog 0-10 V / 4-20 mA) - Outputs: 10 digital outputs (including 2 static 0.5 A PWM, 2 relays 6 A and 6 relays 8 A) | | |
| | em4 alert 2G | | ✓ | | | 88 981 113 | | | |
| | em4 alert 3G | | | ✓ | | 88 981 123 | | | |
| | em4 local | ✓ | | | | 88 981 103 | | | |
| | em4 Ethernet | | | | ✓ | 88 981 133 | | | |
| Starter kits | | | | | | | An em4 starter kit includes: | | |
| | Starter kit em4 remote 2G* | | ✓ | | | 88 981 156 | - The em4 remote nano-PLC - The standard 3 m antenna | - The USB interface - The USB programming cable | - The em4 soft (USB key) |
| | Starter kit em4 alert 2G | | ✓ | | | 88 981 116 | - The em4 alert nano-PLC - The standard 3 m antenna | - The USB interface - The USB programming cable | |
| | Starter kit em4 alert 3G | | | ✓ | | 88 981 126 | | | |
| | Starter kit em4 local | ✓ | | | | 88 981 106 | | | |
| | Starter kit em4 Ethernet | | | | ✓ | 88 981 136 | - The em4 local nano-PLC | - The Ethernet cable | |
| Evaluation cases | | | | | | | The ready-to-use evaluation case includes: | | |
| | Evaluation case em4 remote 2G* | | ✓ | | | 88 980 185 | - The starter kit (description above) - The power supply 110-230 Va with Europe and US adaptor - The simulator PCB for the 16 Inputs with switches, potentiometers and terminals to connect your sensor for evaluation - The simulator PCB for the 10 Outputs with 11 LEDs and terminals to connect the 2 static outputs to a device for evaluation | | |
| | Evaluation case em4 alert 2G | | ✓ | | | 88 980 181 | | | |
| | Evaluation case em4 alert 3G | | | ✓ | | 88 980 182 | | | |
| | Evaluation case em4 local | ✓ | | | | 88 980 180 | | | |
| | Evaluation case em4 Ethernet | | | | ✓ | 88 980 183 | | | |

* em4 remote 2G, include the first year of subscription to em4 remote access (em4 web & em4 app), with a SIM card.

| Product description | Inputs | Outputs | Glossy black |
|----------------------------|---|--|--------------|
| Expansions | | | |
| em4 digital expansion E10R | 6 digital inputs (configurable as analog 0-10 V or potentiometer) | 4 digital outputs (2 relays 6 A and 2 relays 8 A) | 88 982 113 |
| em4 analog expansion E10A | 6 digital inputs (configurable as analog 0-10 V / 4-20 mA) | 4 outputs (2 static 0.5 A PWM and 2 analog 0-10 V) | 88 982 213 |

| | Product description | Part number |
|-----------------------|--|-------------|
| Interfaces | em4 USB interface black | 88 980 110 |
| | em4 interface RS485 Modbus slave black | 88 980 120 |
| Accessories | em4 Set of I/O simulator for bases | 88 980 150 |
| | Antenna 3 m standard | 88 980 160 |
| | Antenna 3 m int/ext flat | 88 980 161 |
| | Antenna 10 m ext | 88 980 162 |
| | USB cable 3 m B type | 88 980 170 |
| | em4 soft (USB key) | 88 980 140 |
| Power supplies | Modular power supply 24 V--- 7.5 W | 88 950 303 |
| | Modular power supply 24 V--- 15 W | 88 950 304 |
| | Modular power supply 24 V--- 30 W | 88 950 307 |
| | Modular power supply 24 V--- 60 W | 88 950 302 |

| Description | Key features | Part number |
|--|---|-------------|
| Programmable touch panels | | |
| MTP6/50 user kit* | - 4.3" color touch panel - Modbus RS232/RS485 serial port - USB port | 88 970 492 |
| MTP8/50 user kit* | - 4.3" color touch panel - Modbus RS232/RS485 serial port - Ethernet TCP/IP port | 88 970 494 |
| Cable em4-MTP6/50 & MTP8/50 | For use with em4 interface RS485 Modbus interface (88 980 120) | 88 980 171 |
| MTP8/70 user kit* | - 7" color touch panel - 2x Modbus RS232/RS485 serial port - USB port, Ethernet TCP/IP port | 88 970 496 |
| Cable em4-MTP8/70 | For use with em4 interface RS485 Modbus (88 980 120) | 88 980 172 |
| MTP6/50 - MTP8/70 programming kit (USB) | - USB - Mini USB cable - EB Software (CD) | 88 970 501 |
| MTP8/50 - MTP8/70 programming kit (Ethernet) | - Ethernet crossover cable - EB Software (CD) | 88 970 502 |

* em4 cable not included in User Kit

PERFECTLY MATCH ALL OF YOUR REQUIREMENTS

Crouzet has identified six major applications for which Millenium 3 and em4 are particularly suitable:



ACCESS CONTROL

Control opening and closing of doors. Allow or restrict access with automatic detection, on a timer, or on certain days/time.



TEMPERATURES

Management of various parameters such as heating, cooling, fluid temperatures, operation, calendar-based function, frost protection mode, alarm management, etc.



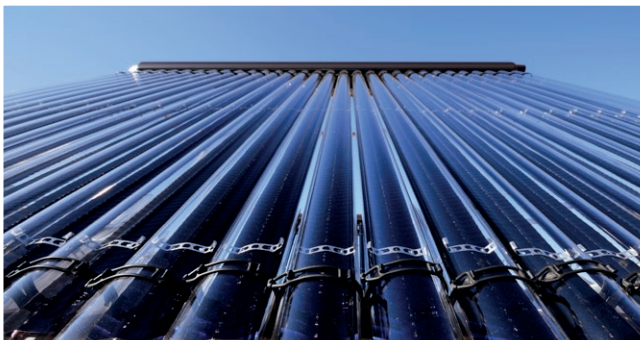
WATER TREATMENT

Managing circulation pumps, monitoring levels, temperature and conductivity of the water. Irrigation control based on temperature, humidity, and day/night cycle



SMALL INDUSTRIAL MACHINES

Controlling the motor that unrolls the packing film. Controls cutting of the film after heat sealing and monitors the duration of the motor cycles. Controlling heat sealing times on blister packs, packaging bags, etc.



SOLAR WATER HEATING

Automation of operation and heating regulation, remote management of the installation.



LIGHTING

Managing flashing on illuminated signs

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