

## M91-2-UA2

### M91-2-xxx

#### HMI

|                              |                                  |
|------------------------------|----------------------------------|
| Display                      | STN LCD, 2 lines x 16 characters |
| Number of keys               | 15                               |
| Number of definable displays | 80                               |

#### Power supply

|                           |                    |
|---------------------------|--------------------|
| Nominal voltage           | 12 ... 24 V DC     |
| Operating voltage range   | 10.2 ... 28.8 V DC |
| Power consumption AC / DC | - / 6.24 W         |
| Frequency range           | Rated frequency    |

#### Inputs

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Number of digital inputs            | 12                                  |
| Number of encoder inputs*           | 1, 16 Bit, 30 kHz                   |
| Number of analog inputs*            | 2, 14 Bit, 0-10 V, 0-20 mA, 4-20 mA |
| Nominal voltage digital inputs      | 24 V DC                             |
| High level threshold digital inputs | 24 V DC                             |
| Number of temperature inputs        | 2, TC Number of temperature inputs  |

#### Outputs

|                              |        |
|------------------------------|--------|
| Number of high speed outputs | 10 PNP |
| Number of analog outputs     | 1      |
| Rated voltage AC             | 230 V  |
| Rated current                | 5 A    |

#### Memory

|                                        |                                 |
|----------------------------------------|---------------------------------|
| Number of ladder code memory (virtual) | 36 KB                           |
| Number of memory bits (coils)          | 256                             |
| Number of memory integers (registers)  | 256                             |
| Number of timers                       | 64                              |
| Database size                          | 1024 integers (indirect access) |
| Execution time                         | 12 µs / Bit                     |
| Memory card                            | Micro SD-Card                   |

#### Communication

|             |                                     |
|-------------|-------------------------------------|
| Connections | RS232<br>RS485<br>Ethernet optional |
| Protocol    | Modbus, OPC                         |

#### General data

|                                    |                                                                                                     |
|------------------------------------|-----------------------------------------------------------------------------------------------------|
| Storage temperature (no ice)       | -20 ... 60 °C / -4 ... 140 °F                                                                       |
| Operation temperature              | 0 ... 50 °C / 32 ... 122 °F                                                                         |
| Back-up battery                    | CR2450N, 7 years typical at 25 °C, battery back-up for RTC and system data, including variable data |
| Dimensions                         | see fig. 1                                                                                          |
| Mounting                           | DIN rail, Panel with brackets                                                                       |
| Ingress Protection                 | IP 20 / NEMA1 (DIN rail mounted), IP 65 / NEMA4X (Panel mounted)                                    |
| Relative humidity, no condensation | 10 ... 95 %                                                                                         |

#### Product references

| Description                                                                                      | Type      | 24 |
|--------------------------------------------------------------------------------------------------|-----------|----|
| 12 digital, 1 HSC/shaft encoder, 2 analog, 2 TC inputs   10 digital transistor, 1 analog outputs | M91-2-UA2 | ✓  |

Other devices on request. Please contact [support@comatreleco.com](mailto:support@comatreleco.com).

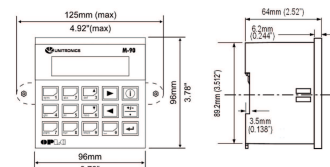
The U90 Ladder software is available free of charge on [www.unitronicsplc.com](http://www.unitronicsplc.com) at downloads.

#### Accessories

|                       |                                                                                                                                         |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| I/O Expansion Modules | IO-AI4-A02, IO-AI8, IO-A06X, IO-ATC8, IO-D16A3-R016, IO-DI16, IO-DI8ACH, IO-DI8-R04, IO-PT400, IO-PT4K, IO-LC1, IO-LC3, IO-R08, IO-R016 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|



fig. 1. Dimensions (mm)



#### Technical approvals, conformities

Approvals   