

## UML-14 CONTROLLER

The ELSAP-14 controller is dedicated for control of conveyor belts and push-plate conveyors. The solution is intended for use in methane and/or coal dust explosive atmospheres. This is Cat. M1 device and can operate continuously at all methane concentration levels.

### Description

The UML-14 controller is intended for automation of conveyor belts and push-plate conveyor. Unlike its predecessor, the UML-05, this model features modules with high-performance 32-bit processors and a visualisation module with a synoptic panel and a large 5.6" graphic display. The interfacing with the dedicated UGS-10 loudspeaking, signalling and lockout system. The controller also serves as an additional I/O block. This allows remote reading of sensors connected to on-off inputs, output status switchover, or communication with the devices connected to the RS-485 bus of the UGS-10 signalling devices.

The UML-14 controller may operate the connected conveyor in four modes:

- Centralised control
- Local control
- Inspection mode
- Personnel carriage

The controller features 16 on-off inputs, 8 relay outputs and 3 galvanic-separated serial data transmission connectors. When properly configured in the program, the on-off inputs may also register 0-15 V voltage signals, 0-50 mA current signals, resistance of up to 15 kΩ, or control diode circuits.

This facilitates e.g. measurement of conveyor belt speed, reading of temperature sensors or belt buckling sensors, or connection of belt pileup sensors. The relay outputs may control e.g. drives or brakes in any configuration desired. Each of the serial connections can be configured to operate in the RS-485, RS-232 or RS422 standard. They can also be used to e.g. control frequency converters or to communicate with sensors with digital outputs.

The controller can broadcast startup signals over the connected UGS-10 system. In the case of a lockout, the user is notified about its cause with voice messages.

The configuration and overview of current operating parameters is output in two ways. The first one is the large full colour graphic display, which comes with a set of selectable option group screens. The functional interaction resembles the one used on mobile phones. The other is a synoptic panel with 8 colour LEDs (red, blue and green) which indicate relevant assigned signals. This solution is a simple and clear communication of key system components.

The UML-14 controllers can be connected in strings. The control is enabled by voltage signals (K-1, K+1) or over the LAP transmission bus when the system is complete with the UMT-14 controller. The UMT-14 controller provides a number of extra options for configuring an entire string of conveyors. See the UMT-14 Controller Product Sheet for details.

### Features/Technical specification

Rated supply voltage	from 12 up to 15 VDC
Maximum current load	1115mA
Ambient temperature range	between -20°C and +40°C
Max. weight	27kg
Outer dimensions	550x550x220mm
ATEX mark	I M1 Ex ia I SYST

CATEGORY:

CONTROL DEVICES

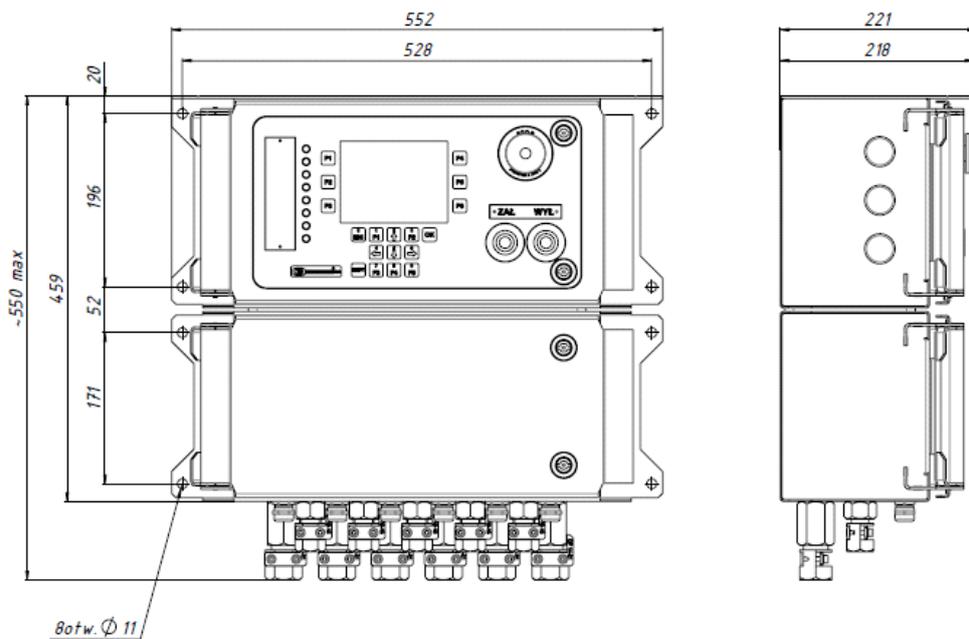
CERTIFICATIONS



Elektrometal SA  
43-400 Cieszyn  
ul. Stawowa 71  
em@elektrometal.com.pl  
tel: +48 33 8575 200  
fax: +48 33 8575 205

[www.elektrometal.eu](http://www.elektrometal.eu)  
version of day: 2019-01-17

0 PRODUKTY TYPU HMC OŚWIETLENIE PRZEMYSŁOWE USŁUGI GÓRNICTWÓ GAZOWNICTWÓ PRODUKTY TYPU HMC OŚWIETLENIE PRZEMYSŁOWE  
 ONAWSTWÓ WDROŻENIE WSPARCIE TECHNICZNE KONSEPCJA PROJEKT WYKONAWSTWÓ WDROŻENIE WSPARCIE TECHNICZNE KONSEPCJA PROJEKT WYKON  
 0 PRODUKTY TYPU HMC OŚWIETLENIE PRZEMYSŁOWE USŁUGI GÓRNICTWÓ GAZOWNICTWÓ PRODUKTY TYPU HMC OŚWIETLENIE PRZEMYSŁOWE  
 ONAWSTWÓ WDROŻENIE WSPARCIE TECHNICZNE KONSEPCJA PROJEKT WYKONAWSTWÓ WDROŻENIE WSPARCIE TECHNICZNE KONSEPCJA PROJEKT WYKON



## The most important features

- Controls conveyors in four modes: centralised control, local control, inspection mode and passenger carriage
- Reads on-off sensor states with line control
- Supports speed sensors
- Outputs warning signals and broadcasts voice messages with the reason of lockout
- Control of conveyors with various drive and brake configurations
- Reads sensors connected to the UGS-10 system
- Controls output in the UGS-10 system
- Reads and sends release voltage or LAP bus signals for conveyor strings
- Control and full configuration over data transmission bus (MODBUS)
- Displays all current parameters and lockouts on the graphic display
- Archives lockout causes and parameter changes
- Takes over the central controller functionality for switching conveyor strings on an off



Elektrometal SA  
 43-400 Cieszyn  
 ul. Stawowa 71  
 em@elektrometal.com.pl  
 tel: +48 33 8575 200  
 fax: +48 33 8575 205

[www.elektrometal.eu](http://www.elektrometal.eu)  
 version of day: 2019-01-17