REMIO

EUROTHERM
CONTROLS

Communicating Interface

CE

ODVA

Invensys
An Invensys company

REMIO

A new communications interface

Allows use of digital communications (Profibus-DP®, Modbus ® and DeviceNet™) with the Eurotherm TE10S, 7100S, 425S TE200S and TE300 Solid State Contactors.

Reducing your installation costs

Your control cabinet is sited some distance away from your process, and the cost of cabling represents a significant cost -

REMIO allows you to distribute your power units, bringing important benefits:

The length of power bearing cables is reduced

Only two wires are required to control and operate the power units.

Time proportioning of the Solid State Contactors is off loaded to the REMIO, thus freeing up valuable processing time to perform other tasks in PC or PLC™ based control system.

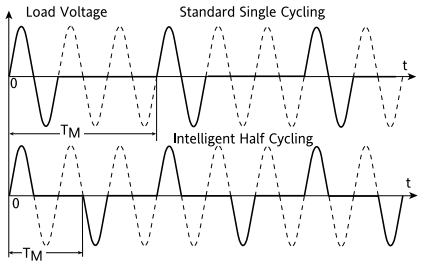
You wish to drive your heating elements using a conduction mode best suited to your application (short wave infrared, for example) -

REMIO allows use of two conduction modes for power units, Intelligent Half Cycling and Fast Cycling.

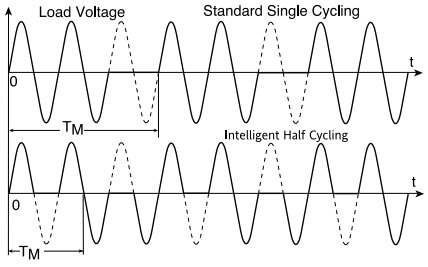
REMIO, using Fast Cycling, controls the Solid State Contactors like more expensive zero-fired SCR Power Controllers. Fast cycle firing is available to control single phase (TE10S), 425S and three phase (TE200S/TE300) loads.

You want to extend the life of your heating elements -

REMIO, using Intelligent Half Cycling (single phase loads only), reduces thermal shock to



Example: 33% of Maximum Output



Example: 66% of Maximum Output

heating elements by reducing the OFF time and thereby lengthens their life.

PLC™ Digital output modules represent a high proportion of the cost of your system -

Replace them with a Modbus®, Profibus® or DeviceNet™ module and REMIO units. The

REMIO can have up to three digital I/O modules monitoring sixteen digital outputs per module or eight digital inputs and outputs.

The REMIO Range comprises 2 types of device:

TECHNICAL SPECIFICATION

Digital Interface

Base Digital Module
1 logical Output port (8 Outputs)
1 Configurable Port: 8 Outputs or 8 Inputs

Expansion Modules (Maximum of 2)
1st Logic Module, configuration as base module
2nd Logic Module, configuration as base module

Digital Outputs or Digital Inputs:
  20VDC Modulated, internal 6.5mA current limit
  8 Bit resolution
Contact Closure Alarm
  +20VDC common, 6.5mA maximum
Conduction Mode: On/Off

Time Proportioning Output Unit (TPO)

Base TPO Module:
2 ports - 16 time proportioned outputs

Expansion Modules (Maximum of 1, 32 outputs max.)
Each with 2 ports, as Base Module (16 outputs).

TPO Output:
  20VDC Modulated with time proportioned output variable between 0 and 100% internal 10mA current limit
  8 bit resolution
TPO Output Conduction mode
  Fast Cycling or Intelligent Half Cycling
  The choice is made by the power supply type to the REMIO unit:
  24VDC : fast cycling (8 periods on + 8 periods off at 50% output)
  24VAC : Intelligent Half Cycling

Common Features

Communication Protocol: Profibus-DP®, Modbus ® or DeviceNet™
Transmission Speed:
  Profibus-DP®: up to 1.5Mbaud, with Auto Baud Rate detection
  Modbus®: 9600 or 19200 Baud (Configurable)
  DeviceNet™: 125Kbaud, 250Kbaud or 500KBaud (Configurable)
Diagnostics via front panel LEDs or Digital Communications
PSU: 24VAC or 24VDC (24VA Maximum)
User Voltage +24VDC available at all ports (for logic outputs)
Removable Connector Blocks
Configuration via DIN switches.
Configurable Digital Communications address (via communications)
DIN Rail or back of cabinet mountable
Dimensions: 115mm (H), 92.5mm (D), base modules 87.5mm (W); with 1 expansion 105mm(W); with 2 expansions 122.5mm(W)

ORDERING CODE - REMIO Communication interface

Basic product	Base Module	Expansion1		Protocol	Baud Rate	Manual Language	
REMIO							00

Module Type	Port Configuration	Base Module	Expansion 1	Expansion 2
Logic	Outputs/Inputs	D	-	_-
	Outputs/Inputs	D	D	-
	Outputs/Inputs and Alarm module or Outputs/Alarms	D	D	D
Time Prop Output	Time Proportioned Output	TP	-	-
		TP	TP	-
	Time Proportioned Output with Logic Inputs/Outputs	TP	TP	D

D: Digital Logic Module with the following configuration:
16 Logic Outputs (20V) or 8 inputs and 8 logic outputs (20v)
or in base position and in 1st expansion:

TP: Time proportioned Output module. 16 Time Proportioned Outputs
(20V modulating 0 to 100%)

Protocol		
Modbus®		MOP
Profibus-DP®		PFP
DeviceNet™		DNP

Baud Rate		
Modbus®	9.6Kbaud	96
	19.2Kbaud	192
Profibus-DP®	Automatic	AUTO
DeviceNet™	125Kbaud	125
	250Kbaud	250
	500Kbaud	500

Manual Language	
English	ENG
French	FRA

Examples of coding:
Interface between 16 outputs and 16 inputs and a Profibus-DP® master control system, English manual
REMIO/D/D/PFP/ENG/00

Time proportioned output for 32 TE10S units and a Modbus® supervisor, English Manual
REMIO/TP/TP/-/MOP/ENG/00

CONFIGURATION (By externally accessible DIP switches)

D: Ports are configurable between logic inputs or logic outputs default configuration: logic outputs
Modbus® baud rate 9600 or 19200 baud (default 9600)
Bus termination (by default termination resistors not connected)

TP: Modbus® baud rate 9600 or 19200 baud (default 9600)
Bus termination (by default termination resistors not connected)

REMIO address: configured by digital communications. Default 32

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