

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

SCHNEIDER ELECTRIC / EUROTHERM / CHESSELL

Schneider Electric / Eurotherm / Chessell 2416 Temperature and Process Controller

Eurotherm 2416 1/16 DIN Temperature / Process Controller Programmer The Eurotherm 2416 is a high-stability 1/16 DIN (48 × 48 × 150 mm) temperature or process controller in the 2400 series (Chessell/Eurotherm family). It configures as PID, on/off, or motorized valve control. Modular hardware accepts up to three plug-in I/O modules plus one communications module. Programmer versions store one or four programs of 16 segments with event outputs. Front panel is IP65, plug-in from the front. Electrical and gas heating; setpoint programming with events; PDSIO load-current monitoring; multi-zone master setpoint to slave 2400 controllers; 1/16 DIN panel upgrades. The Eurotherm 2416 is a high-stability 1/16 DIN (48 × 48 × 150 mm) temperature or process controller in the 2400 series (Chessell/Eurotherm family). It configures as PID, on/off, or motorized valve control. Modular hardware accepts up to three plug-in I/O modules plus one communications module. Programmer versions store one or four programs of 16 segments with event outputs. Front panel is IP65, plug-in from the front. Electrical and gas heating; setpoint programming with events; PDSIO load-current monitoring; multi-zone master setpoint to slave 2400 controllers; 1/16 DIN panel upgrades.

**MODEL****Schneider Electric
/ Eurotherm /
Chessell 2416****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****2416****LISTING**<https://aumictechlabs.com/products/2416-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Schneider Electric Eurotherm Chessell 2416 is a 1/16 DIN (48×48mm) temperature and process controller engineered for precise industrial control across diverse applications. Built on modular hardware architecture, it accepts up to three plug-in I/O modules and one communication module, enabling flexible I/O configuration without redesign. The controller delivers advanced PID control with self-tuning and adaptive tuning algorithms, automatically compensating for processes with evolving characteristics. It includes dedicated cooling algorithms optimized for water and oil-cooled systems.

Technical Specifications

Form Factor & Design 1/16 DIN panel format (48×48mm)

Modular hardware construction Supports up to 3 plug-in I/O modules + 1 communication module

Control Algorithm Advanced PID with self-tuning and adaptive tuning One-shot tuner for initial PID values and overshoot inhibition Adaptive tuner for processes with changing characteristics

Dedicated cooling algorithms for water and oil-cooled systems

Input Stage Universal input circuit with advanced analog-to-digital converter Sampling rate: 9 Hz Drift correction integrated

Supported sensor types: Thermocouples (J, K, T, L, N, R, S, B, C, G, D, E, U), Pt100 resistance thermometer, linear mV, linear mA, DC Volts

Configurable input filtering: OFF to 999.9 seconds

Sensor diagnostics included High noise immunity with 50/60 Hz rejection

Setpoint Programming Standard 8-segment programmer built-in Optional 16-segment single program or 4×16-segment program storage Extended option: up to 20 programs of 16 segments each

Outputs Modular I/O accepts Relay, Logic (non-isolated), Triac, and DC (non-isolated) modules Configurable for heating control, cooling control, alarm output, program event output, and PDSIO modes

Relay/Triac modules feature internal 15nF/100Ω snubber for inductive load switching

PDSIO (Pulse Density Signalling I/O): bi-directional analog and digital transmission with Eurotherm TE10S SSR compatibility and load failure/SSR failure detection

Alarms Up to four process alarms combinable onto single output Alarm types: full scale high/low, deviation from setpoint, rate of change, load failure Latching or non-latching configuration Blocking-type alarms (active after safe state entry) Alarm display flashed on main display

Key Features Advanced PID control with automatic tuning eliminates manual parameter iteration Modular I/O architecture supports mixed output types within single instrument Proprietary PDSIO protocol enables bi-directional SSR communication and load diagnostics Flexible setpoint programming from 8 to 320 segments depending on module configuration Integrated sensor diagnostics detect thermocouple break and sensor faults

Typical Applications Precision heating and cooling control in laboratory and industrial environments Process temperature management in materials processing Water and oil-cooled system control with dedicated algorithms Multi-output applications requiring mixed relay, solid-state, and logic control

Compatibility & Integration The 2416 integrates with Eurotherm TE10S solid-state relays via PDSIO protocol. Communication module slot supports network integration where specified.

Features & description

From manufacturer datasheet

Features

- 48 × 48 × 150 mm, 250 g; IP65 facia
- PID, on/off, or motorized valve; dual PID sets
- Relay 2 A 264 Vac; logic 18 V 24 mA; triac 1 A; analog 0-20 mA / 0-10 V
- Pt100 3-wire 0.2 mA; 22 ohm equal-lead compensation
- Supply 85-264 Vac 10 W or 20-29 Vac/dc 10 W
- EIA-485 1200 to 19200 baud; Modbus / El Bisynch

2416 Characteristics / Specifications

PARAMETER	VALUE
Model	2416
Manufacturer	Eurotherm (Chessell / Eurotherm 2400 series)
Instrument Type	Temperature or Process Controller / Programmer
Series	2400 / 2416
Alias	2416; Eurotherm 2416; Chessell 2416
Dimensions	48 W x 48 H x 150 D mm (1.89 × 1.89 × 5.91 in)
Weight	8.82 oz (250 g)
Display	dual 4-digit 7-segment high intensity LED
Supply High	85 to 264 Vac, 48 to 62 Hz, 10 W max
Supply Low	20 to 29 Vac or dc, 10 W max
Operating Ambient	0 to 55 C, 5 to 90 percent RH noncondensing (datasheet 0-90 percent RH on one leaflet)
Storage	-10 to 70 C (14 to 158 F)
Panel Sealing	IP65, plug-in from front
Relay Rating	FormAmin 12 V 100 mA dc; max 2 A 264 Vac resistive
Logic Rating	18 Vdc at 24 mA non-isolated (leaflet also 18 Vdc 20 mA)
Triac Rating	1 A, 30 to 264 Vac resistive (leaflet 1 A 264 Vac)
Analog Output	non-isolated 0 to 20 mA into 600 ohm max and 0 to 10 Vdc configurable
Pt1	3-wire DIN 43760; bulb current 0.2 mA
Lead Compensation	no error for 22 ohms in all 3 leads
Process Linear	+/-100 mV, 0 to 20 mA, or 0 to 10 Vdc
Nonlinear	square root or custom 8 point
Communications	EIA-485 at 1200, 2400, 4800, 9600, 19200 baud
Protocols	Modbus and EI Bisynch (series)
Programmer	one or four programs of 16 segments; two event outputs per segment (programmer leaflet)

PARAMETER	VALUE
Function Codes	CC controller; CP 1×16 seg; P4 4×16 seg; VC/VP valve; NF on/off
PDSIO Mode	logic heating with load/SSC failure and load current display
I/O Modules	up to three plug-in plus one comms
Control Modes	PID or on/off or motorised valve
Calibration Ambient Examples	0, 45, and 50 C cited on programmer leaflet input notes Notes Specs from Eurotherm 2416 programmer/controller datasheets (Iss 4 and sales leaflet). Confirm CC versus CP/P4 programmer, supply VH versus VL, and module slots on the order code.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	2416
Manufacturer	Eurotherm (Chessell / Eurotherm 2400 series)
Instrument Type	Temperature or Process Controller / Programmer
Series	2400 / 2416
Alias	2416; Eurotherm 2416; Chessell 2416
Dimensions	48 W x 48 H x 150 D mm (1.89 x 1.89 x 5.91 in)
Weight	8.82 oz (250 g)
Display	dual 4-digit 7-segment high intensity LED
Supply High	85 to 264 Vac, 48 to 62 Hz, 10 W max
Supply Low	20 to 29 Vac or dc, 10 W max
Operating Ambient	0 to 55 C, 5 to 90 percent RH noncondensing (datasheet 0-90 percent RH on one leaflet)
Storage	-10 to 70 C (14 to 158 F)
Panel Sealing	IP65, plug-in from front
Relay Rating	FormAmin 12 V 100 mA dc; max 2 A 264 Vac resistive
Logic Rating	18 Vdc at 24 mA non-isolated (leaflet also 18 Vdc 20 mA)
Triac Rating	1 A, 30 to 264 Vac resistive (leaflet 1 A 264 Vac)
Analog Output	non-isolated 0 to 20 mA into 600 ohm max and 0 to 10 Vdc configurable
Pt100	3-wire DIN 43760; bulb current 0.2 mA
Lead Compensation	no error for 22 ohms in all 3 leads
Process Linear	+/-100 mV, 0 to 20 mA, or 0 to 10 Vdc
Nonlinear	square root or custom 8 point
Communications	EIA-485 at 1200, 2400, 4800, 9600, 19200 baud
Protocols	Modbus and EI Bisynch (series)
Programmer	one or four programs of 16 segments; two event outputs per segment (programmer leaflet)

PARAMETER	VALUE
Function Codes	CC controller; CP 1x16 seg; P4 4x16 seg; VC/VP valve; NF on/off
PDSIO Mode 1	logic heating with load failure alarm
PDSIO Mode 2	logic heating with load/SSC failure and load current display
I/O Modules	up to three plug-in plus one comms
Control Modes	PID or on/off or motorised valve
Calibration Ambient Examples	0, 45, and 50 C cited on programmer leaflet input notes

Notes

Specs from Eurotherm 2416 programmer/controller datasheets (Iss 4 and sales leaflet). Confirm CC versus CP/P4 programmer, supply VH versus VL, and module slots on the order code.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 13, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.