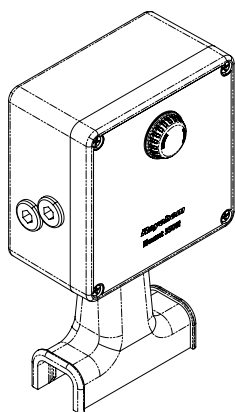


Electronic thermostat

PRODUCT OVERVIEW



The Raychem Elexant 3500i is a family of compact, full-featured, electronic thermostats for heat tracing control and monitoring in freeze protection and process temperature applications.

Designed from a common hardware platform, the Elexant 3500i offers multiple variants with different features to allow the user flexibility in tailoring the control solution to their heat tracing needs. Available features include: alarm relay, RS-485 and Bluetooth connections, load sensing, ground fault detection, automated heat trace system check, mobile app for wireless configuration, and more. The Elexant 3500i is suitable for hazardous and nonhazardous locations, and can be wall mounted or pipe mounted and serve as both thermostat and power connection kit.

Variant	Standard	Alarm	Communicating	Current sensing	Ground fault detecting
Modular design	✓	✓	✓	✓	✓
Quick connect	✓	✓	✓	✓	✓
Local indicator light	✓	✓	✓	✓	✓
Alarm relay		✓	✓	✓	✓
Temperature sensors	1	1	1	2	2
Secured configuration			✓	✓	✓
Central communication			✓	✓	✓
Auto-test				✓	✓
Load sensing				✓	✓

Fast installation with minimal components.

- Quick connect terminals for fast and secure cable connection.
- Power connection and thermostat in one, for up to two heating cables.
- Robust wall-mounted or pipe stand enclosures, minimizing required components and tools.
- Approved to 32 A and 277 Vac, for longer heating cable lengths, thereby minimizing circuits and components.

Flexible design. Reliable performance.

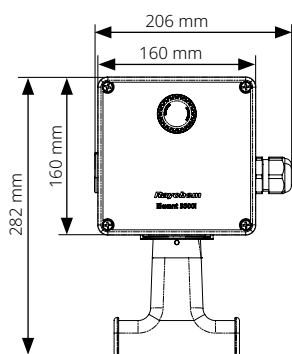
- Five variants of electronic modules to match your needs, from local indication light, to remote communication, current sensing and ground fault detecting.
- Interchangeable electronic modules for hassle free upgrades.
- Globally approved for hazardous areas in extreme environments (–55°C to +60°C).
- Hybrid switching relay (SSR + EMR) rated to 250,000 power cycles for superior product life (IEC 60079).

Connected operation. Automated monitoring.

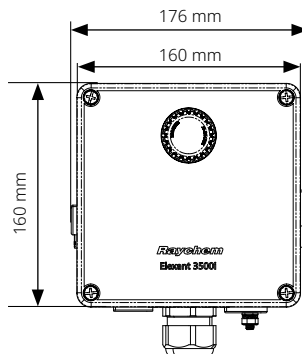
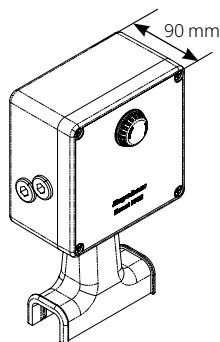
- Configure via Bluetooth on a mobile device or tablet with the Elexant Connect App.
- Connect to your distributed control system (DCS) for remote control & monitoring. Be in full control. Anywhere. Anytime.
- Auto-test performed every 24 hours for early warnings & predictive maintenance.
- "Find Me" feature via Bluetooth connection allows user to quickly identify and locate specific Elexant 3500i thermostats.

PRODUCT SPECIFICATIONS

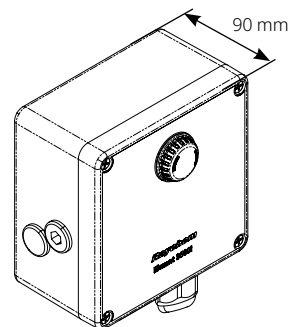
Dimensions



Elexant 3500i pipe mount electronic thermostat



Elexant 3500i wall mount electronic thermostat



Enclosure

Supply voltage	100 Vac to 277 Vac, +/-10%, 50-60 Hz
Wall mount	Wall mounting with 7 predrilled holes: 2 x M16 on left side: 1 stopping plug and 1 rain plug 2 x M20 on right side: 2 stopping plugs 2 x M25 at bottom: 1 stopping plug and 1 rain plug 1 x M32 at bottom: M32 gland
Pipe mount	Pipe mount with 4 predrilled holes: 2 x M16 on left side: 1 stopping plug and 1 rain plug 1 x M32 on right side: cable gland preinstalled 1 x hole at bottom for pipe stand

Environmental

Compliance	RoHS and reach
Protection	IP 66
Ambient operating temperature	-55°C to +60°C
Ambient storage temperature	-55°C to +80°C
Relative humidity	0% to 90%, noncondensing
Max altitude	2,000 m
Maximum pipe temperature	205°C

Control

Current, maximum	32 A at +40°C linearly derated to 24A at +60°C
Control algorithms	On/Off (Deadband), always on, always off
Control temperature	For -ST and -AR variants: -17°C to 550°C For -C, -I and GF variants: -55°C to 550°C

Monitoring

Temperature	Low alarm range (-60°C to +545°C) High alarm range (-50°C to +600°C)
Current	Low current alarm threshold (0.1 A)
Ground fault	GF alarm or GF trip (30 mA or 50 mA). UL1053 compliant
Autocycle	Diagnostic test interval (24 hours)

Temperature sensor inputs

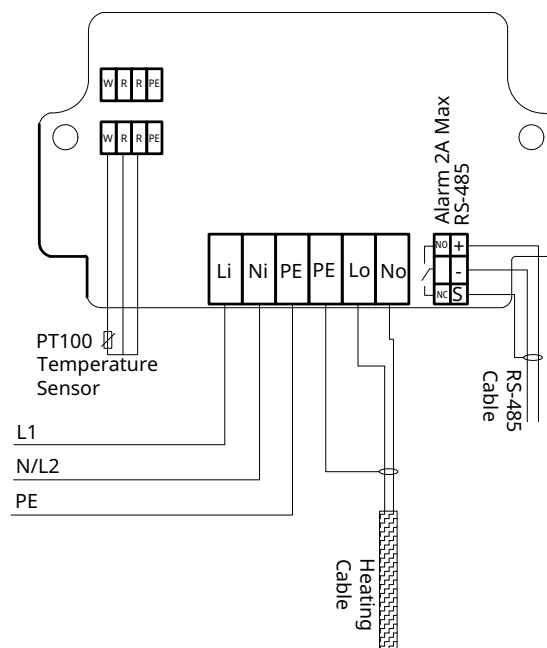
Quantity	1 for standard, alarm, and communicating variants. 2 for current sensing and ground fault detecting variants.
Sensor input type	100 Ω platinum, 3-wire, $\alpha = 0.00385 \Omega/^{\circ}\text{C}$

Alarm outputs

Quantity	1 for alarm, communicating, current sensing and ground fault detecting variants.
Alarm relay	Form-C dry contact: 100 VAC to 277 VAC, 2 A, 50/60 Hz. Software programmable to normally open or normally closed.

Configuration

Method	Setpoint: Rotary dials for standard and alarm variant in 1° increments. Wired via RS-485 Modbus, or wireless configuration via bluetooth device and Elexant Connect App for communicating, current sensing, and ground fault detecting variants. Maximum suggested bluetooth connection range of 40m.		
Units	°C or °F		
Status LED	Color Green Green Yellow Red	LED behaviour Solid 80% on, 20% off (Heartbeat) Solid 50% on, 50% off	Alarms (where applicable) Power on, Heating off Power on, Heating on, Limiter output on High temp, Low temp, Low current, GF alarm, Cycle count, Heater on time alarm TS fail, SW fail, Lim trip, High temp cutout, internal failure, GF Trip, GF CT Failure
Memory	Nonvolatile, restored after power loss, checksum data checking		
Alarm conditions	Low / High temperature, Low current, RTD failure, Loss of programmed values, Ground fault alarm, Ground fault trip, Relay failure, Limiter trip, Relay lifetime exceeded, Heat trace cable lifetime exceeded		
Equipment protection	High temperature limit, Ground fault trip		



Connection terminals

Power supply input	2 x Lever terminal, 0.75 - 25 mm ²
Heating cable output	2 x Lever terminal, 0.75 - 25 mm ²
Ground (earth)	Ground lug on earthing plate
RTD	1 x for standard, alarm, and communicating variant 2 x for current sensing and ground fault detecting variant Cage clamp terminals, 0.08 - 2.5 mm ²
Alarm relay	1 x Cage clamp terminals, 0.08 - 2.5 mm ² (except for standard variant)
RS-485 communications	1 x Cage clamp terminals, 0.08 - 2.5 mm ² (except for standard and alarm variant)

Communications

RS-485 cable	One shielded twisted pair (not included)
Maximum quantity of control units	Up to 247 thermostats can be connected in one network
Parity	None, even, odd
Stop Bits	1 or 2
Tx Delay	1-50 milliseconds
Bluetooth	BLE 5.1

APPROVALS

For use in ordinary and hazardous areas Zone 1, Zone 2 (gas), Zone 21 and Zone 22 (dust).

Temperature classification

T4

Product certification



RTD output provides intrinsically safe output when installed in accordance with the installation instructions. More details about product certification, approvals and conditions of safe use are available in the installation manual at www.chemelex.com.

ORDERING INFORMATION

Elxant 3500i complete thermostat (pipe mount)

Name	Description	Part Number	Weight
Elxant 3500i-ST-P-E	Standard variant pipe mount kit	2000003762	3.4 kg
Elxant 3500i-AR-P-E	Alarm variant pipe mount kit	2000003763	3.4 kg
Elxant 3500i-C-P-E	Communicating variant pipe mount kit	2000002625	3.4 kg
Elxant 3500i-I-P-E	Current sensing variant pipe mount kit	2000003764	3.4 kg
Elxant 3500i-GF-P-E	Ground fault detecting variant pipe mount kit	2000003765	3.4 kg

Elxant 3500i complete thermostat (wall mount)

Name	Description	Part Number	Weight
Elxant 3500i-ST-W-E	Standard variant wall mount kit	2000003752	2.9 kg
Elxant 3500i-AR-W-E	Alarm variant wall mount kit	2000003753	2.9 kg
Elxant 3500i-C-W-E	Communicating variant wall mount kit	2000002627	2.9 kg
Elxant 3500i-I-W-E	Current sensing variant wall mount kit	2000003754	2.9 kg
Elxant 3500i-GF-W-E	Ground fault detecting variant wall mount kit	2000003755	2.9 kg

Elxant 3500i replacement control module

Name	Description	Part Number	Weight
Elxant 3500i-AR-IEC	Alarm variant replacement module	2000006674	1.2 kg
Elxant 3500i-C-IEC	Communicating variant replacement module	2000006675	1.2 kg
Elxant 3500i-I-IEC	Current sensing variant replacement module	2000006676	1.2 kg

Elxant 3500i Replacement Enclosure

Name	Description	Part Number	Weight
Elxant 3500i-W-E	Elxant 3500i wall mount replacement kit	2000003748	1.8 kg
Elxant 3500i-P-E	Elxant 3500i pipe mount replacement kit	2000003761	2.1 kg

Temperature sensors

Name	Description	Part Number
MONI-PT100-260/2	Flexible sensor, maximum 260°C, 2 m length	1244-006615
MONI-PT100-260/5	Flexible sensor, maximum 260°C, 5 m length	1244-020817
MONI-PT100-260/10	Flexible sensor, maximum 260°C, 10 m length	1244-020816
MONI-PT100-EXE	Temperature sensor with MI cable and junction Box	967094-000
MONI-PT100-EXE-SENSOR	Temperature sensor with MI Cable	529022-000
MONI-PT100-EXE-AMB	Ambient temperature sensor with junction box	1244-004451

Bluetooth enabled handheld programming device with customized Raychem software

Name	Description	Part Number
Tab-EX 03 DZ1	Raychem configuration & monitoring assistant Zone 1	1244-022837
Tab-EX 03 DZ2	Raychem configuration & monitoring assistant Zone 2	1244-022743

Support bracket for installation on pipe

Name	Part Number
SB-100	192932-000
SB-101	990944-000
SB-125	1244-00603
SB-130	1244-006602

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