

Technical data

Power Supply

Power Supply	
Operating voltage	AC 24 V ($\pm 20\%$)
Frequency	48 to 63 Hz
Power consumption	Max. 9 VA
Max. power supply current	4 A current limited

Radio Data

Radio Parameter	
Frequency band	2.4 to 2.4835 GHz
Maximum radio-frequency power	18 dBm
WLAN standard	IEEE 802.11b/g/n (HT20)
WLAN channel	1-11

Inputs

Connections to Multifunctional Inputs X1 - M - X2	
Passive temperature sensors - Cable length max. (copper cable section) - NTC type Room temperature range Outdoor temperature range	300 ft (90 m) (16 AWG wire), 230 ft (70 m) (18 AWG wire) 200 ft (60 m) (18 AWG wire), 130 ft (40 m) (20 AWG wire) NTC10K Type 2 Thermistor 32 to 122 °F (0...50 °C) -32 to 176 °F (-50...80 °C)
- Ni type Room temperature range Outdoor temperature range	Ni1000 at 32 °F (0 °C) RTD 32 to 122 °F (0...50 °C) -32 to 176 °F (-50...80 °C)
- Pt type Room temperature range Outdoor temperature range	Pt1000_375/Pt1000_385 at 32 °F (0 °C) RTD 32 to 122 °F (0...50 °C) -32 to 176 °F (-50...80 °C)
Active DC 0 V to 10 V sensors - Room temperature range (default) - Outdoor temperature range (default) - Humidity range (default) - CO ₂ range (default)	Note: min./max. configurable via parameters 32 to 122 °F (0...50 °C) -32 to 176 °F (-50...80 °C) 0 to 100% 0 to 2000 ppm
Digital contacts - Operating action - Contact sensing - Parallel connection - Input function	Selectable N.O./N.C. DC 14 to 40 V, 8 mA (typical) Max. 20 thermostats per switch Selectable

Outputs

Relay Contact Capacity	
Voltage	AC 24 V (±20%)
Current	Min. 0.02 A, Max. 1 A per output

Operational Data

Setpoint Range
45 to 95 °F (7...35 °C)

Built-in Room Temperature Sensor		
Temperature range	Accuracy at 77 °F (25 °C)	Display resolution
32 to 122 °F	±0.9 °F or 0.5 °C	1 °F (0.5 °C)

Built-in Room Humidity Sensor		
Humidity range	Accuracy at 77 °F (25 °C)	Display resolution
0% to 100%	± 5% r.h.	1%

System Compatibility

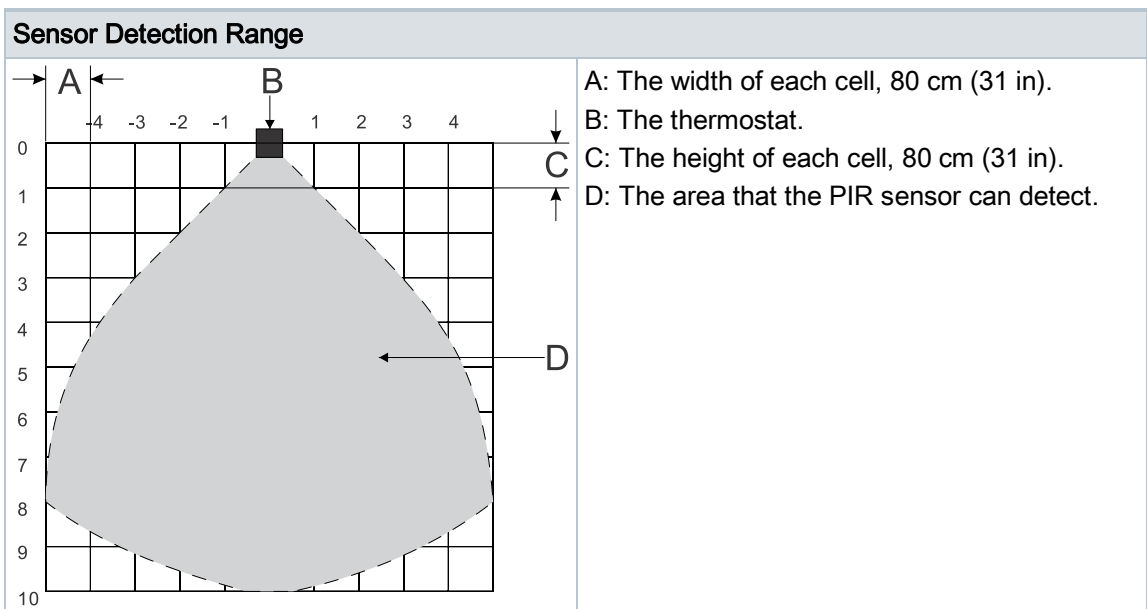
System Compatibility	
Conventional	2 stages cooling, 3 stages heating
Heat pump	2 stages cooling and 2 stages heating (+2 stages auxiliary heating)

Connections

Interfaces	
Micro USB	A service port is provided for firmware upgrade

Wiring Connections	
Screw terminals	Solid wires or prepared stranded wires: Max. 1 x16 to 20 AWG

PIR Sensor



Conformity

Ambient Conditions and Protection Classification	
Safety class according to EN60730	Class III
Degree of protection of housing as per EN 60529	IP30 (NEMA 1)
Classification as per EN 60730	
Function of automatic control devices	Type 1
Degree of contamination	2
Overvoltage category	III
Climatic ambient conditions	
Storage as per EN 60721-3-1	Class 1K3 Temperature -13 to 149 °F (-25 to 65 °C) Humidity 5 to 95%
Transport (packaged for transport) as per EN 60721-3-2	Class 2K3 Temperature -13 to 149 °F (-25 to 65 °C) Humidity 5 to 95%
Operation as per EN 60721-3-3	Class 3K5 Temperature 23 to 122 °F (-5 to 50 °C) Humidity 5 to 95%
Mechanical ambient conditions	
Storage as per EN 60721-3-1	Class 1M2
Transport as per EN 60721-3-2	Class 2M2
Operation as per EN 60721-3-3	Class 3M2

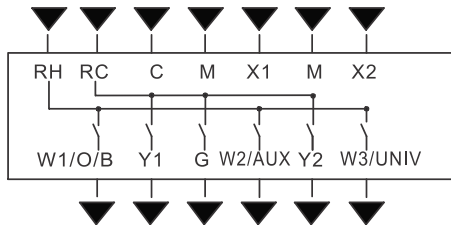
Standards, Directives and Approvals			
EU conformity (CE)	A5W90002476 ^{*)}		
RCM conformity	A5W90002477 ^{*)}		
FCC standards	FCC CFR 47 Part 15 Class C		
IC standards	RSS-247 issue 1 May 2015, RSS-GEN issue 4 November 2014		
UL	UL916		
The United Arab Emirates	Authorization Number of TRA: ER54733/17 <table border="1" style="float: right; margin-left: 20px;"> <tr> <td style="text-align: center;">TRA</td> </tr> <tr> <td style="text-align: center;">REGISTERED No: ER54733/17 DEALER No: DA64762/17</td> </tr> </table>	TRA	REGISTERED No: ER54733/17 DEALER No: DA64762/17
TRA			
REGISTERED No: ER54733/17 DEALER No: DA64762/17			
Environmental compatibility	The product environmental declaration A5W90003412 ^{*)} contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).		

General Data

General		
Dimension	H 3.58" x W 3.58" x D 1.02"	
Weight	Thermostat with package, user document and accessory	15.3 oz (435 g)
	Thermostat	9.5 oz (268 g)
Color	Silver plating Housing: Pantone black	

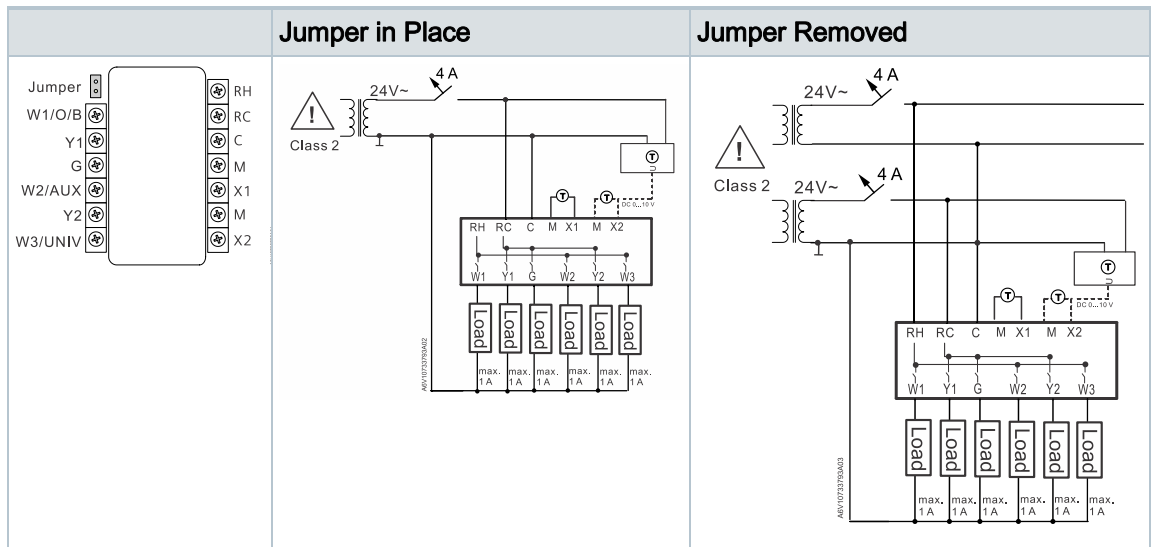
Diagrams

Connection Terminals



Terminal	Use
RH	AC 24 V, heating system
RC	AC 24 V, cooling system
C	AC 24 V, common
W1/O/B	Stage 1 heating (W1) in conventional system or reversing valve O/B in heat pump system
W2/AUX	Stage 2 heating in conventional system, Stage 1 Aux Heat in heat pump system
W3/UNIV	Stage 3 heating or universal output in conventional system, or Stage 2 auxiliary heat or universal output in heat pump system
Y1, Y2	Stages 1 and 2 cooling in conventional system or Stages 1 and 2 compressor in heat pump system
G	Fan
X1, X2	Configurable input
M	Common for X1/X2 inputs

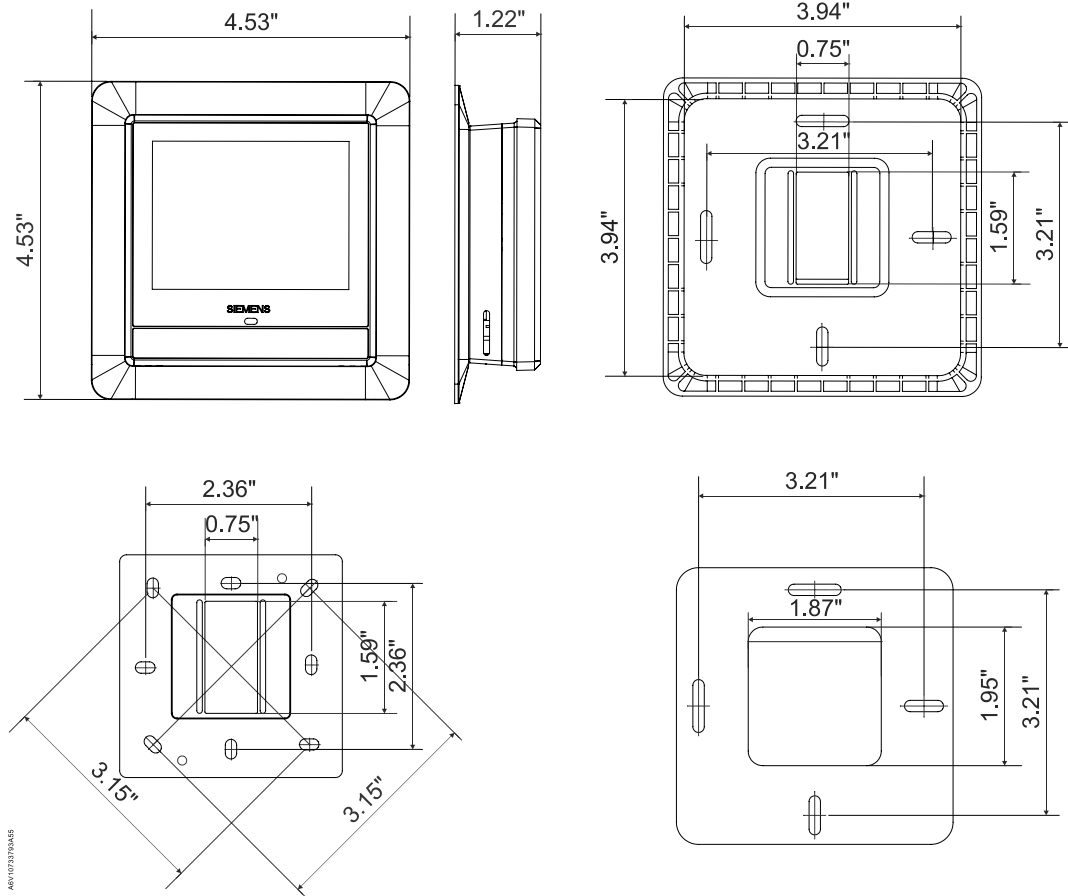
Wiring Diagrams



Note:

- For US installations use Class 2 rated power source. For other installations, use current protection with current rated at max. 4 A.
- If a single transformer is used, keep jumper RH-RC in place. Connect AC 24 V to the RC terminal, and neutral to terminal C. If separate transformers are used for heating and cooling systems, remove jumper RH-RC. Connect cooling AC 24 V to terminal RC, neutral to terminal C and heating AC 24 V to terminal RH.

Dimensions



Revision history

Edition	Date	Software version	Changes	Section	Pages
1	April 2018	32.2.16	New document	---	---

Issued by
 Siemens Industry, Inc.
 Building Technologies Division
 1000 Deerfield Pkwy
 Buffalo Grove IL 60089
 Tel. +1 847-215-1000

© Siemens Industry, Inc., 2018
 Technical specifications and availability subject to change without notice.