Thermostat — Software Requirements Traceability

Generated 2026-09-24 19:51 UTC · commit 3094610 · reqcov 0.3.1

FAILED — 1 rule violation(s)

Summary

MEASURE	VALUE
Requirements	**8**
Test coverage (testable requirements with a linked test)	**83.3%**
Verified (all linked tests passed)	**83.3%**
With a linked test / verified / uncovered / failing / not testable	**5 / 5 / 1 / 0 / 2**
Unknown ids referenced / tests without requirement	**0 / 1**

Coverage by level

LEVEL	REQUIREMENTS	WITH TEST	VERIFIED	UNCOVERED	WITH SOURCE TRACE	WITH PARENT	TEST COVERAGE
SRS	5	3	3	1	4	4	**75%**
SYS	3	2	2	0	0	0	**100%**

Findings (3)

1 requirement(s) without a linked test are marked uncovered in the matrix.

SEVERITY	CODE	MESSAGE	LOCATION
error	**COVERAGE**	test coverage of requirements 83.3% is below the required 100.0%	
warning	**DERIVED**	SRS-14 has no parent requirement (derived?)	docs/requirements/SRS.md:24
info	**ORPHAN_TEST**	test examples.pytest-project.tests.test_controller::test_default_setpoint is not linked to any requirement	

Sign-off

ROLE	NAME	DATE	SIGNATURE
Prepared by			
Reviewed by			
Approved by			

Traceability matrix

uncovered: no linked test · covered: linked test, no result · verified: all linked tests passed · failing: a linked test failed · n/a: not verified by test

SRS — 5 requirement(s)

REQUIREMENT	TITLE	TRACES UP	VERIF.	TESTS AND RESULTS	IMPLEMENTED IN	STATUS
SRS-10 docs/requirements/SRS.md:3	Hysteresis control	SYS-1	test	test_hysteresis_turns_on_below_band tests/test_controller.py:6 test_hysteresis_turns_off_above_band tests/test_controller.py:12 PASS examples.pytest-project.tests.test_controller::test_hysteresis_turns_on_below_band PASS examples.pytest-project.tests.test_controller::test_hysteresis_turns_off_above_band	src/thermostat/__init__.py:22 update	verified
SRS-11 docs/requirements/SRS.md:8	Over-temperature cut-off	SYS-2	test	test_overtemp_cutoff tests/test_controller.py:19 PASS examples.pytest-project.tests.test_controller::test_overtemp_cutoff	src/thermostat/__init__.py:22 update	verified
SRS-12 docs/requirements/SRS.md:14	Setpoint validation	SYS-3	test	test_setpoint_validation tests/test_controller.py:27 PASS examples.pytest-project.tests.test_controller::test_setpoint_validation[5.0-True] PASS examples.pytest-project.tests.test_controller::test_setpoint_validation[30.0-True] PASS examples.pytest-project.tests.test_controller::test_setpoint_validation[4.9-False] PASS examples.pytest-project.tests.test_controller::test_setpoint_validation[30.1-False]	src/thermostat/__init__.py:15 set_setpoint	verified
SRS-13 docs/requirements/SRS.md:19	Sensor fault handling	SYS-2	test	—	src/thermostat/__init__.py:22 update	uncovered
SRS-14 docs/requirements/SRS.md:24	Logging format	—	inspection	—	—	n/a

SYS — 3 requirement(s)

REQUIREMENT	TITLE	TRACES UP	VERIF.	TESTS AND RESULTS	IMPLEMENTED IN	STATUS
SYS-1 docs/requirements/SYS.md:3	Temperature regulation children: SRS-10	—	demonstration	—	—	n/a
SYS-2 docs/requirements/SYS.md:7	Safety cut-off children: SRS-11, SRS-13	—	test	test_overtemp_cutoff tests/test_controller.py:19 PASS examples.pytest-project.tests.test_controller::test_overtemp_cutoff	—	verified

REQUIREMENT	TITLE	TRACES UP	VERIF.	TESTS AND RESULTS	IMPLEMENTED IN	STATUS
SYS-3 docs/requirements/SYS.md:11	Setpoint range children: SRS-12	—	test	test_setpoint_validation tests/test_controller.py:27 PASS examples.pytest-project.tests.test_controller::test_setpoint_validation[5.0-True] PASS examples.pytest-project.tests.test_controller::test_setpoint_validation[30.0-True] PASS examples.pytest-project.tests.test_controller::test_setpoint_validation[4.9-False] PASS examples.pytest-project.tests.test_controller::test_setpoint_validation[30.1-False]	—	verified

Tests not linked to any requirement (1)

TEST	RESULT
examples.pytest-project.tests.test_controller::test_default_setpoint	passed