

The SAES-O Series

The current security standards — SAES-O-201 to O-211, O-313 and O-317 — with supporting standards SAES-P-119, SAEP-120 and the SAES-T series, and how they relate to the SAIS 2017 directives.

Where the SAES-O Series Comes From

01

Ministry of Interior

The Supreme Authority for Industrial Security (SAIS) is the national regulator for security, safety and fire protection at industrial facilities.

02

SAIS Directives

SAIS issues Security Directives (SEC-01 to SEC-12) and Safety & Fire Protection Directives (SAF series). Compliance is a statutory requirement.

03

SAES-O Series

Saudi Aramco engineering standards that translate those directives into buildable technical requirements for company facilities.

How the Series Is Numbered

- Each SAES-O standard is tied to a specific SAIS directive and must be used in conjunction with it — the directive carries the detailed requirements.
- SAES-O-2xx maps one-to-one to the Security Directives: O-201 to SEC-01, O-202 to SEC-02, through to O-211 and SEC-11.
- SAES-O-3xx aligns to the Safety and Fire Protection Directives on the same pattern — O-313 to SAF-13, O-317 to SAF-17.
- Applicability is set by Facility Security Classification (Class 1 to 4) as defined in SAES-O-201, Section 4.2.

Governing rule

Where a conflict exists between a SAIS directive and a Saudi Aramco standard, the directive governs. Waivers and deviations from the O-series are initiated by the project management team through the prescribed route.

ONE STANDARD PER SLIDE

The SAES-O Standards

Application of Security Directives

The gateway standard — it decides which of the other standards apply to your facility.

- States that the SAES-O series defines security requirements at company facilities, based on the SAIS Security Directives.
- Confirms that implementing the directives is a statutory requirement, not a discretionary company policy.
- Identifies the twelve Security Directives, SEC-01 through SEC-12, and the one-to-one numbering correspondence with the O-series.
- Section 4.2 sets the Facility Security Classification (Class 1 to 4) that every other standard references for its scope.

Start here on every project: fix the facility classification before any security design work begins.

Security Fencing Systems

Perimeter fencing, consolidated into a single modern standard.

- Mandatory requirements for the design and installation of security fencing systems at classified facilities.
- Replaces the legacy category-by-category fence standards with one document covering Category 1 to 4 fencing systems.
- Covers clearances, shared fencing between adjacent facilities, outer property fence and fencing component design.
- Main gates and emergency/heavy equipment gates are addressed in coordination with the gate standard.

Fence category follows from the facility classification in SAES-O-201 — it is not a design preference.

Plant Security Gate

The controlled entry point, treated as a complete system rather than a single barrier.

- Mandatory requirements for the design and installation of security gatehouses at facilities classified under SAES-O-201, Section 4.2.
- The directive covers the preliminary inspection checkpoint, vehicle approach speed management, auxiliary gates and traffic management.
- Also addresses overwatch positions, additional inspection areas, response zones and gate clearances.
- Gatehouse services — communications, lighting, power systems and environmental provisions — are part of the scope.

Gate design drives plot space and road geometry: resolve it during preliminary design, not detail design.

Security Lighting

Illumination as a detection and deterrence measure, not general area lighting.

- Mandatory requirements for the design and installation of security lighting at classified facilities.
- Applies to facilities classified under SAES-O-201, Section 4.2, with detail contained in the directive.
- Supports surveillance performance along the perimeter, at gates and in response zones.
- Coordinates with the electrical standards for supply, distribution and fixture selection.

Lighting levels must suit the camera system — design O-204 and O-205 together, not sequentially.

Integrated Security System

The system layer that ties detection, surveillance and access control together.

- Mandatory requirements for the design and installation of security systems at classified facilities.
- Brings intrusion detection, video surveillance and access control into a single integrated architecture.
- Applies to facilities classified under SAES-O-201, Section 4.2.
- System selection and architecture are subject to Industrial Security and SAIS review.

The largest single scope item on most security projects — plan long-lead procurement and approvals early.

Security Devices

The field devices the integrated system depends on.

- Minimum mandatory requirements for the design, installation and usage of security devices at classified facilities.
- Covers the device population — detection, surveillance and access hardware — at Saudi Aramco facilities.
- Applies per the Facility Security Classification in SAES-O-201.
- Used in conjunction with SEC-06 as issued in the 2017 directive set.

Device selection is constrained by the directive — confirm approved types before specifying a vendor.

Power Supply for Security Systems

Security systems must keep working when normal power does not.

- Mandatory requirements for power supply arrangements serving security systems.
- Addresses continuity of supply so that detection, surveillance and access control survive a power interruption.
- Drives UPS, standby and distribution provisions dedicated to the security load.
- Read alongside the electrical standards for the supplying substation and distribution design.

Interfaces directly with SAES-P-119 where the security load is fed from a facility substation.

Communications for Security Systems

The voice and data links used by security personnel and systems.

- Mandatory requirements governing communication systems and devices used by Saudi Aramco security personnel.
- Covers the links between gates, guard posts, control rooms and the wider security organisation.
- Used in conjunction with SEC-08 of the SAIS directives.
- Depends on the telecom infrastructure standards for pathways, cabling and network provision.

Physical delivery of this scope sits with the SAES-T series — coordinate the two disciplines early.

Security Doors

Hardened door assemblies protecting critical rooms and buildings.

- Mandatory requirements governing security doors used at Class 1, 2 and 3 facilities.
- Applies to doors protecting control rooms, equipment rooms and other sensitive internal spaces.
- Used in conjunction with SEC-09 of the SAIS directives.
- Door specification must be consistent with the access control and surveillance provisions serving the same opening.

A door is only as strong as its frame, hardware and access control — specify the assembly, not the leaf.

Identification Cards

The credential that the whole access control regime is built on.

- Mandatory requirements governing identification cards used at Class 1, 2, 3 and 4 facilities.
- Applies across the widest facility range of any standard in the set — all four classes.
- Used in conjunction with SEC-11, which carries the detailed requirements.
- Card technology must be compatible with the access control elements of the integrated security system.

Card and reader technology decisions lock in the access control system — settle them before procurement.

Safety Directive Alignment — SAF-13

Where the O-series crosses from security into the safety and fire protection directives.

- Part of the SAES-O-3xx group, which aligns to the SAIS Safety and Fire Protection Directives rather than the Security Directives.
- Follows the same numbering convention: the last two digits match the corresponding SAF directive.
- SAF-13 addresses work permit requirements at facilities under SAIS jurisdiction.
- Applied in conjunction with the directive, which carries the detailed requirements.

Confirm the current controlled title and issue of this standard against the Saudi Aramco standards index before project use.

Safety Directive Alignment — SAF-17

The offshore counterpart within the safety and fire protection directive family.

- Also part of the SAES-O-3xx group aligned to the SAIS Safety and Fire Protection Directives.
- SAF-17 addresses requirements for offshore installations, which are not simply an extension of the onshore rules.
- Applies where the facility falls outside the onshore directive scope.
- Used in conjunction with the directive text, which governs in the event of conflict.

Confirm the current controlled title and issue of this standard against the Saudi Aramco standards index before project use.

WHAT SITS ALONGSIDE THE O-SERIES

Supporting Standards and Procedures

Substations

The electrical standard most often read alongside the O-series on security projects.

- Mandatory requirements for the design and installation of onshore — and where specified, offshore — power substations.
- Covers substation buildings, substation yard, bus configurations, definitions and general requirements.
- Drives layout, clearances, fire and safety provisions, and power system SCADA interfaces for substations.
- Takes precedence over associated project and engineering documents unless an approved waiver applies.

Relevance to SAES-O: substations serving classified facilities inherit fencing, gate, lighting and power-supply requirements from the O-series.

Execution Requirements for Security Projects

The "how to execute" companion to the "what to build" O-series standards.

- An engineering procedure rather than a technical standard — it defines process, roles and deliverables.
- Sets execution requirements specifically for security projects across the project lifecycle.
- Provides the terminology and workflow used when applying the security standards on a project.
- Complements the O-series by governing how compliance is planned, reviewed and demonstrated.

Rule of thumb: SAES tells you what the design must achieve; SAEP tells you how the work is carried out and approved.

Telecommunications Standards

The infrastructure layer that the integrated security system physically runs on.

- SAES-T-000 introduces the series and indexes the SAES-T standards, 18-SAMSS specifications, standard drawings and procedures.
- SAES-T-911 — Telecommunication Conduit System Design: conduit, duct bank and manhole design for site-wide pathways.
- SAES-T-916 — Communications Building Cable: engineering, design and installation of building pathways and cable systems.
- SAES-T-628 — Telecommunications Underground Cable: underground cable design, installation, testing and inspection.

Why it matters: the surveillance, access control and detection scope of SAES-O-205 to O-208 depends on compliant SAES-T pathways and cabling.

COMPARISON

SAIS 2017 Directives vs the SAES-O Series

	SAIS 2017 Directives	SAES-O Series
Issued by	Supreme Authority for Industrial Security, Ministry of Interior	Saudi Aramco Security Standards Committee
Legal status	Statutory law of the Kingdom; compliance is mandatory and SAIS approval is a prerequisite to operate	Company engineering standards; mandatory internally, deviations need an approved waiver
Applies to	All in-scope sectors Kingdom-wide: petroleum, power, petrochemical, water, gas, mining, ports, railroads	Saudi Aramco facilities only, graded by Facility Security Classification
Nature	Carries the detailed requirements and the approval stages to be satisfied	Engineering translation for company use: applicability, references and design requirements
Structure	Security Directives SEC-01 to SEC-12, plus the SAF safety and fire protection directives	SAES-O-2xx mapped to SEC directives; SAES-O-3xx aligned to SAF directives
If they conflict	The SAIS directive governs	Yields to the directive; the standard is aligned or a waiver is raised

What the Difference Means on a Project

Two approval tracks

SAIS approval runs in stages — risk assessment, preliminary design, detail design and operational readiness. Internal SAES compliance runs in parallel and does not substitute for it.

Detail lives in the directive

The O-2xx standards are deliberately short: they set applicability and references, then point to the SEC directive for the substance. Do not design from the SAES alone.

Classification drives everything

SAES-O-201, Section 4.2 fixes the Facility Security Classification. Fencing category, door class, card scope and system extent all follow from it.

Scope breadth

SAIS covers the whole Kingdom's in-scope industry; the O-series covers Saudi Aramco facilities. Contractors and joint ventures may face both, and the stricter requirement applies.

S U M M A R Y

Key Takeaways

- The SAES-O series is Saudi Aramco's engineering translation of the SAIS directives — it does not replace them, and the directive governs any conflict.
- SAES-O-201 is the entry point: it sets the Facility Security Classification that determines which standards apply and to what extent.
- O-202 to O-211 cover the physical and electronic security scope — fencing, gates, lighting, integrated systems, devices, power, communications, doors and credentials.
- O-313 and O-317 extend the same numbering logic into the SAF safety and fire protection directives.
- SAES-P-119, SAEP-120 and the SAES-T series supply the substation, execution-process and telecom-infrastructure requirements the security scope depends on.

Standard titles and scopes summarised from published Saudi Aramco engineering standards and SAIS directive materials. Verify against the current controlled issue before project use.