

Gas and Oil Display Design Checklist

10 customer questions to de-risk display selection for oil, gas, energy, and hazardous industrial environments

How to use the checklist

For each question, capture the application context, the display requirement, the acceptance evidence, and any residual risk. Escalate any unknown response where the display affects safety, uptime, operator decision-making, regulatory evidence, or customer experience. Escalate any unknown response where the display is used in hazardous areas, process control, emergency response, safety monitoring, or remote field operation.

#	Customer design question	Why this matters	Evidence to request / acceptance criteria	Status / notes
1	What process, monitoring, or operator task does the display support?	Process HMIs must make abnormal states and operator actions clear.	Task analysis; alarm and trend hierarchy; critical screen list; risk assessment.	OK / Gap / N/A
2	Is the installation in a hazardous area, and what certification route is required?	Hazardous locations can dictate enclosure, power, thermal, and component choices.	Zone/classification statement; certification requirement; approved enclosure strategy; compliance responsibility matrix.	OK / Gap / N/A
3	What environmental exposure applies: temperature, sunlight, dust, water, chemicals, salt, or vibration?	Energy sites can combine outdoor exposure with industrial contaminants.	Environmental profile; IP/IK target; chemical compatibility; vibration profile; thermal analysis.	OK / Gap / N/A
4	What readability is required for outdoor, night, and emergency conditions?	Operators need rapid recognition in sunlight, low light, and urgent scenarios.	Brightness/dimming specification; anti-glare treatment; viewing-angle requirement; emergency-screen validation.	OK / Gap / N/A
5	What touch or input method is safe and reliable with gloves, rain, and contaminants?	Field users may need confirmed input while wearing PPE or standing in poor weather.	Glove/wet-touch test; physical button requirement; confirmation logic; false-touch mitigation.	OK / Gap / N/A
6	What power, EMC, grounding, and surge conditions must be addressed?	Industrial energy infrastructure can expose equipment to noise, transients, and grounding constraints.	Power specification; surge/EMC plan; grounding and cable-shielding diagram; isolation requirements.	OK / Gap / N/A
7	How will the display support alarms, trends, and stale-data indication?	Misleading or stale process information can create operational risk.	Alarm hierarchy; trend update requirements; data-loss indication; event log and acknowledgement rules.	OK / Gap / N/A
8	What maintainability and remote support model is required?	Remote or offshore sites need robust diagnostics and straightforward replacement.	Remote monitoring; spares plan; field replacement procedure; service access; configuration backup.	OK / Gap / N/A
9	What lifecycle and documentation support is required for the asset life?	Energy assets often require long service periods and controlled documentation.	PCN/EOL plan; serialisation; drawing pack; inspection/test records; revision-control process.	OK / Gap / N/A
10	What verification evidence is required before site deployment?	Evidence should match the installation risk and classification.	Qualification matrix; environmental/EMC/certification evidence; FAT/SAT; commissioning checklist.	OK / Gap / N/A

Recommended review outputs

- Display subsystem requirements specification: optical, mechanical, electrical, environmental, touch, software-interface, mounting, and lifecycle requirements.
 - Risk and application traceability: each display-related risk or customer-experience issue linked to a design control and verification method.
- Evidence pack: drawings, interface specifications, environmental assumptions, test reports, supplier declarations, support/lifecycle plan, and controlled change documentation.

Reference prompts for the project team

- Confirm all customer, site, and regulatory requirements before final specification or quotation.
- Define testable acceptance criteria for every requirement that affects readability, touch operation, reliability, safety, or maintainability.
- Record any assumptions on duty cycle, lighting, environmental exposure, mounting, electrical interfaces, content, and long-term availability.
- Review the final display selection jointly with mechanical, electrical, software, operations, service, and commercial stakeholders.

Use this checklist for control-room, field, kiosk, monitoring, inspection, and process-interface displays in oil, gas, and energy applications. This is a practical customer-discovery guide. Its is not a substitute for project-specific engineering, safety, legal, or compliance assessment, in conjunction with discussion with CDS engineers and/or technical sales team.

For more information or to discuss your project and requirements please contact our technical sales team.