Traffic-signal controller procurement verification checklist

Planning aid for an enquiry or design package — not a product specification, certificate, wiring drawing or field-work method.

Intended host page: https://www.led-trafficlight.com/industry/traffic-signal-controller-selection-guide/
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Leave a field blank or mark HOLD when the supporting document is missing. Do not fill typical voltages, clearance times, radio range, battery autonomy, protocol names or certification conclusions from this form.

A. Project scope

ID	Check item	What to record	Responsible party / evidence	Applicability	Status
A1	Identify the country or authority, the site type, and whether the work is a new installation, a replacement, or another stated arrangement (for example a temporary or private-road site).	Country or authority; site type; work type. Do not enter a standard name unless the project actually names that document.	Owner or responsible engineer *Project brief; authority correspondence*	Project-specific	[ ]
A2	State the supply scope to be quoted: the controller only, or a cabinet assembly that may also include an enclosure, terminals and protection equipment.	Requested scope, and a note that the contents of the selected listing must be confirmed on the quotation. Do not treat an output-count label as a complete bill of materials.	Owner or responsible engineer; supplier confirms what the offer includes *Enquiry text; quotation inclusions and exclusions*	Procurement scope, not a regional code	[ ]
A3	State whether existing detectors, push-buttons, signal heads or a cabinet will be reused, and who is responsible for the condition of reused equipment.	Reuse list; responsible party; items that have not yet been inspected.	Owner or responsible engineer *Site photographs; current drawings; written assumption list*	Project-specific	[ ]
A4	Record quantity, delivery location and project timetable so that a quotation can be checked against the actual shipment, not only against a product photograph.	Quantity; destination; timetable if known. These are logistics fields, not performance claims.	Owner or purchaser *Enquiry; logistics instructions*	Project-specific	[ ]
A5	Name the site power and cabling class: a mains or wired cabinet installation, or a solar / cable-limited installation.	Class of installation only. Do not fill radio range, wireless protocol or battery autonomy on this line.	Owner or responsible engineer *Site brief; if solar or wireless, use the dedicated solar/wireless controller page for the remaining questions*	Site constraint, not a product rating	[ ]

B. Movement / phase or stage plan

ID	Check item	What to record	Responsible party / evidence	Applicability	Status
B1	Attach the junction layout or approved site drawing and record its document revision.	Drawing title, revision and date. A one-page movement diagram is enough to start; it does not have to be a final wiring drawing.	Owner or responsible engineer *Layout or approved drawing*	Project-specific	[ ]
B2	Show each vehicle, pedestrian and (if used) bicycle movement, the clearance relationships, and any special condition such as a protected turn or a time-of-day mode.	Movements, conflicts and special conditions. Do not start by counting lamps.	Owner or responsible engineer *Phase, stage or movement diagram — use the term defined in B3*	Project-specific	[ ]
B3	Name the official or authority document that defines the project's terms, and write the terms actually used on the schedule.	For a United States project that uses MUTCD language, a signal phase is the right-of-way, yellow change, and red clearance intervals in a cycle assigned to an independent traffic movement or combination of movements (MUTCD 11th Edition, Revision 1, §1C.02 item 239). For a Great Britain project that uses Traffic Signs Manual Chapter 6 language, a phase can be thought of as a unique electrical circuit from the controller to one or more signal heads, and a stage can be defined as a period of time when one or more non-conflicting phases are given a green signal at the same time (TSM Chapter 6, 2019, §§6.3.1 and 6.4.1). Other authorities: name their document. Leave this line marked HOLD if the document is not yet named.	Owner or responsible engineer *Named official or authority document, with edition or revision*	United States, Great Britain, or another named authority — never as a global default	[ ]
B4	Do not translate a United States phase-and-movement schedule into a United Kingdom phase list, or the other way around, by name alone.	Confirmation that the schedule uses the same term set as the controller worksheet and the governing document.	Owner or responsible engineer; supplier checks the offer against that term set *Schedule; controller configuration worksheet*	Cross-jurisdiction projects in particular	[ ]
B5	Do not enter generic yellow, all-red, walk, pedestrian-change or intergreen times on this form.	Leave timing values on the authority-approved plan. If a value is required for quotation, copy it only from that approved document and record the source. If no approved value exists, mark HOLD.	Owner or responsible engineer *Approved timing or intergreen document, if any*	By the named authority only; not a global typical value	[ ]

C. Signal groups / outputs

ID	Check item	What to record	Responsible party / evidence	Applicability	Status
C1	List every independently switched indication the site requires, including vehicle, arrow, pedestrian, bicycle, countdown, warning-lamp or auxiliary-sign groups where they are used.	One line for each independently controlled group, with a reference to the approved plan.	Owner or responsible engineer *Signal-group or output schedule*	Project-specific	[ ]
C2	Treat shared output channels as a design decision, not as a way to shorten the enquiry. Outputs may share a channel only when the approved design permits it.	Which groups, if any, are proposed to share a channel, and the design reference that permits it.	Owner or responsible engineer *Approved design; output schedule*	Only if the approved design allows sharing	[ ]
C3	Do not use a catalogue output count (for example a listing label) as the first selection factor, and do not treat that number as a verified capacity for every controller.	The output count to be confirmed against the quoted model documents after the plan exists. Leave blank until those documents are in hand.	Owner prepares the plan; supplier confirms the quoted revision *Quoted model datasheet or drawing; not a catalogue photograph*	Procurement practice	[ ]
C4	Record load, voltage and switching-method requirements only from the project package and from the documents for the quoted revision.	Values and units with the document title and revision. If those documents are not available, mark HOLD. Do not copy typical voltage lists from other web pages onto this line.	Owner states site power design; supplier states the quoted revision *Project electrical design; quoted model documents*	Project-specific; no default parameter	[ ]
C5	Identify whether the offered assembly uses an integrated output stage or separate load switches or drivers, where that distinction applies, and which terminals carry interface signals versus lamp load.	Arrangement as shown on the quoted revision drawing. Leave blank if the drawing is not yet provided.	Supplier, against the customer's schedule *Wiring or interface drawing for the quoted revision*	As applicable to the offer	[ ]

D. Detector and request inputs

ID	Check item	What to record	Responsible party / evidence	Applicability	Status
D1	Record which road users or functions must be able to place a call or a request (vehicles, pedestrians, bicycles, and any special inputs such as priority or cabinet status).	User classes and special inputs, referenced to the approved plan.	Owner or responsible engineer *Detection or request plan*	Project-specific	[ ]
D2	Give each detector input, pedestrian or bicycle request, preemption or priority input, and cabinet-status input its own line. Do not bury a push-button request in the same row as a vehicle presence call.	Separated input schedule lines.	Owner or responsible engineer *I/O schedule*	Planning practice	[ ]
D3	For every input, record together: the interface class, the event meaning, and the failure state. Electrical or communications limits belong on the same line only when they come from the documents for the exact revisions under review.	Interface class (for example a contact or isolated output, or a serial or network message); event meaning (for example a call, an extension, a request, a fault or a heartbeat); failure state. 'Contact output' or 'RS-485' alone is not enough.	Owner defines the required meaning; supplier maps the quoted revision *I/O schedule; detector and controller documents for the quoted revisions*	Planning practice; see the detector-inputs guide for the interface discussion, not for product ratings	[ ]
D4	Record any pulse, presence or message mode separately from the physical interface. Do not treat presence as automatically the same as an occupancy measurement, and do not treat a fieldbus name as a complete protocol specification.	Mode or message set, with the document that defines it. No default hold time or sensitivity value.	Owner or responsible engineer; supplier if providing detector electronics *Detector-unit or interface document for the quoted revision*	Where a detector electronics unit is used; U.S. handbook practice is informative only	[ ]
D5	Do not use the detector-input count to establish the number or load rating of independently switched outputs, or the other way around.	Confirmation that the input list and the output list describe the same intersection.	Owner or responsible engineer *I/O schedule compared with the approved plan*	Planning practice	[ ]

E. Interface compatibility

ID	Check item	What to record	Responsible party / evidence	Applicability	Status
E1	Compare the site power design with the input and output voltage of the quoted revision, using those documents only.	Site voltage and the quoted-revision voltage, each with a source. Mark HOLD if either source is missing. Do not assume that a controller described only as '220 V' can operate a different signal voltage.	Owner states site design; supplier states the quoted revision *Electrical design; quoted model documents*	Project-specific; no typical voltage table on this form	[ ]
E2	Record the wiring common, any countdown timing source, and any communications or remote-supervision method as project requirements, not as assumed product features.	Requirement and the document that defines it. Leave protocol names blank unless the project or the quoted-revision document actually names them.	Owner or responsible engineer; supplier confirms the offer *Interface requirement; quoted revision drawing*	Project-specific. Detailed head-to-controller checks belong on the compatibility guide, which is not re-audited in this pack.	[ ]
E3	For a replacement controller, collect photographs of labels and terminal layouts, the current wiring diagram, and a written assumption list for anything that cannot yet be inspected.	Photograph or drawing references; open assumptions.	Owner or installer provides site evidence; supplier states reuse conditions *Photographs; existing wiring diagram; assumption list*	Replacement projects	[ ]
E4	If the project names a cabinet or controller family or standard (for example a stated NEMA TS 2 or ATC document in United States procurement), record it as a document requirement.	Exact document title and revision required by the project. This line is not evidence that any particular model implements that standard.	Owner or responsible engineer names the requirement; supplier states what is offered against it *Project specification; any certificates only if later supplied for the quoted revision*	Only if the project names the document; United States families are not global rules	[ ]
E5	If solar operation, wireless coordination or connection to a central system is requested, record the function required and keep the detailed questions on the dedicated solar/wireless or communications discussion, not as filled-in range, protocol or autonomy figures on this form.	Function requested; pointer to the dedicated page or specification. Mark HOLD for unconfirmed range, protocol and autonomy.	Owner or responsible engineer *Functional requirement; later, documents for the quoted revision*	Only if that function is in scope	[ ]

F. Failure states

ID	Check item	What to record	Responsible party / evidence	Applicability	Status
F1	For each input, record what the controller is expected to do if a required call is missing, if a call remains stuck, or if a detector or communications link is lost, and how recovery is recognized.	Intended behaviour and the observation that would show it. No generic timing value.	Owner or responsible engineer defines the required behaviour; supplier maps the quoted revision *I/O schedule; quoted revision documents*	Project-specific	[ ]
F2	If remote supervision or coordination is in scope, record the required behaviour after a communication failure.	Required behaviour and the document that defines it. Mark HOLD if it has not been defined.	Owner or responsible engineer *Communications or coordination requirement*	Only if communications are in scope	[ ]
F3	Do not use this checklist as a live-cabinet work instruction, a bypass method, or a permission to change safety timing on site.	Confirmation that field diagnosis, if required, will follow the responsible authority and the approved method. This pack only asks what should be observable in an acceptance record.	Owner, contractor and supplier as defined by the contract *Contract or method statement, if any; not this form*	Safety boundary for this pack	[ ]

G. Document pack

ID	Check item	What to record	Responsible party / evidence	Applicability	Status
G1	Owner or engineer: approved detection plan and movement, phase or stage diagram, with revision.	Document titles and revisions.	Owner or responsible engineer *Approved plan set*	Project-specific	[ ]
G2	Owner or engineer: the local documents that govern timing, accessibility and cabinet practice, identified by jurisdiction — not by a global default.	Document titles and jurisdictions. Leave blank rather than inventing a default code.	Owner or responsible engineer *Named local or national documents*	By jurisdiction	[ ]
G3	Owner or engineer: the drawings and test records that will be required at quotation, sample approval and commissioning.	List of required deliverables at each stage.	Owner or responsible engineer *Enquiry or specification*	Project-specific	[ ]
G4	Supplier: model, firmware or hardware revision, and the current wiring or interface drawing for that revision.	Model and revision identifiers; drawing number.	Supplier *Offer documents for the quoted revision only*	As applicable to the offer	[ ]
G5	Supplier: datasheet values for the offered input and output circuits (voltage, current, isolation, connector) taken only from those documents.	Values with document title and revision, or HOLD if the datasheet is not in hand. This pack does not publish a company-wide rating.	Supplier *Datasheet or drawing for the quoted revision*	Quoted revision only	[ ]
G6	Supplier: a marked-up I/O map that matches the customer's schedule, with exceptions written down.	Map reference; list of exceptions.	Supplier *Marked I/O map*	As applicable to the offer	[ ]
G7	Supplier: a list of items included and excluded (for example detector units, racks, buttons, heads, cabinet, conflict monitor, communications devices, as applicable).	Inclusion and exclusion list. Do not infer contents from an output-count label.	Supplier *Quotation bill of materials*	As applicable to the offer	[ ]

H. Acceptance evidence

ID	Check item	What to record	Responsible party / evidence	Applicability	Status
H1	Request the final controller configuration, a test record, a cable schedule and an as-built drawing for handover to the maintenance team. Do not leave the operating sequence to be interpreted only on site.	Deliverable list and the revision that was actually shipped.	Supplier prepares; owner or engineer accepts *Configuration file or printout; test record; cable schedule; as-built drawing*	Commissioning records	[ ]
H2	Request acceptance tests that a witness can repeat for valid calls, missing calls, stuck inputs, lost links and recovery, as those events apply to the approved plan.	Test names and the observations that count as a pass. No default pass/fail timings on this form.	Owner specifies the required observations; supplier proposes the test record for the quoted revision *Written test record*	As applicable to the approved plan	[ ]
H3	Request a parameter backup, or an equivalent record, for the delivered configuration.	Backup identifier or file reference.	Supplier prepares; owner retains *Parameter backup or printed configuration*	As applicable to the offer	[ ]
H4	Treat a test that passed on one configuration as covering only that configuration. A different input type, output load, firmware revision or reused field device needs its own record.	The exact configuration covered by the record.	Owner or responsible engineer *Test record scope statement*	Planning practice	[ ]
H5	Mounting height, sight distance and safety clearance times are not filled as numbers on this checklist. They remain on the authority-approved drawings.	A pointer to the approved drawing, or HOLD if that drawing is not yet issued. No typical dimension or second count.	Owner or responsible engineer *Authority-approved drawings*	By the named authority only	[ ]

Official operating rules remain those of the responsible authority and the approved design. This form does not certify a product, a site, or a person. A completed line is a record that a document was checked, not a test result invented here.