

ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			



**RESEARCH DESIGNS & STANDARDS ORGANIZATION**  
Manak Nagar, Lucknow – 226011

**SI-WI-8.1-3**  
**WORK INSTRUCTIONS FOR VENDOR APPROVAL IN SIGNAL DIRECTORATE**

**1.0 AMENDMENT HISTORY:**

Sl. No.	Amendment date	Version	Reasons for Amendment
1	First Issue	1.0	First issue under the upgraded standard for ISO9001:2015. Approved by ED/Signal/Co-ord at NP-03 of file no. STS/G/ISO-Documents/Vol-IX
2.	28.06.2019	2.0	1. Change in Para 4.0 & 11.0 due to change QO-D-8.1.9 Term Part-I and Part-II 2. Change in Para 6.0 due to change QO-D-8.1.5. 3. Change in Para 7.0,7.1.1 & 23.1 due to change QO-D-8.1.6. 4. Modify Para 12.0,15.0,33.0,34.0 and 35.0 Approved by ED(Co-ord)/Signal at NP-27 of file no.STS/G/ISO-9001/Document/Vol-VIII.
3.	22.08.2019	2.1	1. Change in Para 34 (a) vide Dsig-5 note –STS/E/AFD&SS/ Vol. IV dated 06.08.2019.

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ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

**2.0 PURPOSE:**

This document contains work instructions for vendor approval/vendor registration (multi-sourcing) of signalling developmental items being dealt by Signal Directorate.

**3.0 SCOPE OF APPLICATION:**

3.1 This Guideline is applicable for registration of all new firms by RDSO for signalling developmental items dealt by Signal Directorate on type approval basis and for imported items on cross acceptance basis.

3.2 This Guideline also includes procedure for quality audit/up-gradation of approved firms and down-gradation/deletion of names of firms from approved vendor list.

3.3 These Guidelines are prepared in line with apex level QMS documents and cross acceptance approval procedure policy of Railway Board. However, latest guidelines (as applicable time to time, if any) issued by Railway Board & ISO cell on website <http://www.rdsi.indianrailways.gov.in> shall be followed.

**4.0 DEFINITION:**

Routine test(s) In house test(s) conducted by the firm. These are generally specified in the relevant specification as Routine Tests.

Acceptance test(s) Test(s) conducted by inspecting officer on the sample submitted for assessing the acceptability of the material. These are generally specified in the relevant specification as Acceptance Tests.

Type test(s) Test(s) conducted on a sample to verify conformity to the given specification and design. These are generally specified in the relevant specification as Type Tests.

Approved list Approved list covers the names of all the firms approved by the RDSO for manufacture and supply of electrical/electronic equipments used in signalling installations. The names are listed as 'List of Approved Vendors' and as List of RDSO Vendor for developmental order.

Vendor is a firm, which supplies item(s) to Indian Railways.

**5.0 VENDOR APPROVAL PROCESS GUIDELINES:**

Guidelines for vendor approval process shall be followed as per RDSO's apex level documents available on ISO website <http://10.100.2.70/ISOCeII/> (these are also available on <http://www.rdsi.indianrailways.gov.in/> under vendor interface). A list of documents related to vendor development in vogue at present are given later in this document for ready reference. Latest version of applicable instructions/documents in vogue at the time of dealing the case shall be followed in TOTO. All officials working in Signal Directorate shall completely read all provisions of apex documents and keep themselves abreast of changes in the same from time to time.

**6.0 VENDOR APPLICATION FOR REGISTRATION:**

ISO document no. QO-D-8.1-5 latest version shall be followed. The requisite charges for registration shall be as per document no. QO-D-8.1-14 latest version. Supervisor dealing with ISO-9000 matter (nominated by Director/Jt. Director dealing with ISO-

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		Printed:
Prepared By: JE/Signal/ISO	Issued By: Director/Signal-VII	Page 2 of 14

ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

9000) shall verify the registration charges paid by vendor and there after he will forward the case to concerned official. A register shall also be maintained in this regard.

### 6.1 Quality Assurance Plan:

Document no. QM-RF-8.1-3 (latest version) ‘Guideline for preparation of QAP during registration’ as available on RDSO’s website [www.rdso.indianrailways.gov.in](http://www.rdso.indianrailways.gov.in) (Guidelines for online vendor registration) shall be followed.

#### IMPORTANT NOTE –

**The guidelines as mentioned in para 4.3.3.2 & 4.3.3.3 of QO-D- 8.1-6 (latest version ) shall also be applicable to existing vendors.**

### 7.0 VENDOR APPLICATION PROCESSING:

ISO document no. QO-D-8.1-6 latest version shall be followed.

Note: Para wise Self compliance of the STR should be submitted. (STRs are available on “Online Specification/Drawings” link. No charges are to be paid for STR QM-RF-8.1-3 (latest version) ‘Guideline for preparation of QAP during registration’ as is available on RDSO’s website [www.rdso.indianrailways.gov.in](http://www.rdso.indianrailways.gov.in) (Guidelines for online vendor registration) shall be followed.

#### 7.1 Application screening and clarification (QO-D-8.1-6 latest version):

7.1.1 Concerned SSE/JE shall scrutinize the received on-line application in detail and put up to concerned Director through Dy. Director/ADE, as the case may be, pointing out inadequate information, deficiencies etc. as per para 4.3,4.4 and 4.5 of QO-D-8.1-6. Check list no. QS-C-8.1-1 latest version shall also be prepared while putting up the case.

#### 8.0 Logistics provision by vendors for inspection:

ISO document no. QO-D-8.1-17 latest version shall be followed.

#### 9.0 Relaxation of vendor registration requirements:

ISO document no. QO-D-8.1-7 latest version shall be followed.

#### 10.0 Vendor sample Type Testing:

ISO document no. QO-D-8.1-10 latest version shall be followed.

#### 11.0 Vendor changes of approved status i.e. Up-gradation of vendors from ‘List of RDSO Vendor for developmental order’ to ‘List of Approved Vendors’ in Signal Directorate, Down-gradation of vendors from ‘List of Approved Vendors’ to ‘List of RDSO Vendor for developmental order’, Temporary delisting, Delisting, Outright delisting, Banning of business and reinstatement:

ISO document no. QO-D-8.1-11 latest version shall be followed.

For up-gradation, the firm shall apply for up-gradation in format QS-F 8.1-2 (latest version) along with all supporting documents to Signal Directorate. Relevant

Copy controlled only when viewed on the website. Local/Printed copies permitted, but are uncontrolled.

		Printed:
Prepared By: JE/Signal/ISO	Issued By: Director/Signal-VII	Page 3 of 14

ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

documents regarding up-gradation is to be scrutinized by concerned official, after scrutiny relevant documents along with discrepancies if any shall be sent to concerned Director/QA/S&T/field unit for compliance, verification and recommendation in format QS-F- 8.1-3 (latest version) and further action shall be taken as per apex document. Check List in format SI-C-8.1-1(latest version) shall also be prepared by SSE/JE, while putting up the cases for up gradation.

**12.0 Picking of samples and testing of samples for investigation purpose (Other than fresh registration):**

ISO document no. QO-D-8.1-11 latest version is applicable. In addition, joint procedure order No. STG/GMC dated 5.8.2016 by Directorate Heads of Signal, Telecom and QA/S&T Directorates shall also be followed for testing of picked up samples.

**13.0 Vendor changes in vendor entity:**

ISO document no. QO-D-8.1-12 latest version shall be followed for inclusion of additional item(s), Change in name of the vendor, Change in works address of the vendor and Additional works setup by approved vendor.

**14.0 Product Development:**

For the process of development of new product / design for introduction on the Indian Railways, ISO directives for Product development no. QO-D-8.1-15 latest version will be followed.

**15.0 Quality audit of Approved Vendor:**

ISO document no. QO-D-8.1-13 latest version shall be followed. Besides it:

- i) Regular checks/quality audit of firm shall be conducted by field units of QA/S&T Directorate at an interval of 5 years and concerned field unit doing the Quality Audit shall submit the report to Signal Directorate with recommendation for considering grant of extension in the approved list.
- ii) Acceptance test shall be conducted on all signalling item during the quality audit.
- iii) After receiving of all relevant document, concerned official scrutinized the document as per QS-C-8.1-6 (Check list for evolution of Quality Audit) (Latest Version) and put up to concerned officer for further process.

**16.0 VENDOR LIST:**

The maintenance and updating of approved vendor list for signalling items shall be done by QA/S&T Directorate of RDSO as per QO-D-8.1-9 (latest version).

**17.0 Vendor registration EOI / Publications of EOI:**

ISO document no. QO-D-8.1-8 & QO-D-8.1-16 latest version shall be followed.

**18.0 Creation of new specification for equipment / items:**

ISO document no. QO-D-8.1-1 latest version shall be followed.

Copy controlled only when viewed on the website. Local/Printed copies permitted, but are uncontrolled.

		Printed:
Prepared By: JE/Signal/ISO	Issued By: Director/Signal-VII	Page 4 of 14

ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

**19.0 Change of specification of items:**

ISO document no. QO-D-8.1-2 latest version shall be followed

**20.0 Withdrawal of specification of items:**

ISO document no. QO-D-8.1-3 latest version shall be followed.

**21.0 Change in controlling authority for specification:**

ISO document no. QO-D-8.1-4 latest version shall be followed

**22.0 Final Decision:**

Decision of Directorate head shall be final in all cases of registration, Quality audit, up-gradation, down gradation, de-listing, reinstatement, change in name and change in address etc., except cases where DG approval is required. The firm can appeal against any penal action to ADG/RDSO within 60 days of communication of the impugned order.

**23.0 Management of Test Sample (as per QO-D-8.1-6 latest version):**

**23.1 Manufacture of prototype sample**

- i) The firm shall be asked to manufacture a sample lot as per the specification after successful completion of capability cum capacity assessment.
- ii) Dir/JD of Signal Directorate/RDSO/Lucknow, will then advise the firm to submit the prototype test sample after depositing the testing charges (if applicable) within the specified TIME PERIOD from the date of advice as per para 4.8 of QO-D-7.1-6.. The firm will also be advised to inform its manufacturing schedule to Dir/JD/QA/S&T and Signal Directorate/RDSO/Lucknow to facilitate stage inspection, if required.

**23.2 Type testing for fresh registration:**

- i) On manufacture of the test sample, the firm will conduct routine tests with proper records and advise the Dir/JD/QA/S&T and Signal Directorate/RDSO/Lucknow for conducting acceptance test at firm's premises or at any other approved test house/ laboratory (firm will enclose a copy of routine test results).
- ii) If requested by JD/Dir/QA/S&T, a representative of Signal Directorate/RDSO/Lucknow can be sent (for technical assistance) for conducting Acceptance Tests. After successfully passing the Acceptance tests, the sample will be sent to Signal Directorate along with details on format no. QS-F-8.1-7 (latest version) and forwarding letter (addressed to Signal Dte. and copy marked to Signal lab) for type tests including Acceptance Test reports and Routine Test reports. Samples shall be received by Signal Lab, but the testing shall commence only after getting proper test note from Directorate. The Directorate shall arrange to send test note in format no. QS-F-8.1-8(latest version) henceforth to signal lab.

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		Printed:
Prepared By: JE/Signal/ISO	Issued By: Director/Signal-VII	Page 5 of 14

ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

- iii) The samples may also be got type tested from any other agency or at the firm's premises at the discretion of Directorate Head of Signal Directorate/RDSO/Lucknow.
- iv) Those type tests which are to be done at firm's premises shall invariably be conducted under direct supervision of representative(s) of Signal Directorate.

**23.3 Test samples and charges:**

- i) For items dealt by Signal Directorate, unless otherwise specified, QA/ S&T official(s) shall pick up the test samples as per QO-D-8.1-6 latest version.
- ii) For schedule of charges QO-D-8.1-14 (latest version) to be referred. Wherever applicable in QO-D-8.1-14 latest version, testing charges for Signalling items shall be as per SI-M -8.1-7 latest version.
- iii) Before sending requisition for type tests to RDSO lab, Directorate shall ensure that the complete type test charges, as applicable, have been deposited by the firm.

**23.4** The results of the test shall be communicated to the concerned Signal Directorate officers.

**23.5 Preserving/ Return of old/failed samples:**

- i) The type test samples for which type tests have been done at Signal Lab, shall be kept preserved in Signal Lab for a period of at least ONE year, if no deficiency is noted in the type test samples and the firm is given approval. However, if there is a deficiency observed during the type test and the sample needs to be improved, the sample may be returned to the firm, if written request for it is received from the firm. If no such request is given by the firm, failed samples may be returned to the concerned firm by Signal Lab after keeping such samples for a period of at least ONE year.
- ii) In cases, where type testing is done at firm's premises or any outside agency, such type test samples should be kept preserved under sealed condition by representative of concerned Director/QA/S&T at firm's premises for at least ONE year

**24.0 Aesthetic Improvement in developmental items:**

For type testing, the samples need to be verified and examined first for visual parameters. If any aesthetic improvement is considered essential, the samples need not be tested for type tests and the aesthetic improvements be advised to the firm for improvement and re-submission of samples through concerned Director/QA/S&T. Requirement of any aesthetic improvements shall not be considered a failure in type tests for the purpose of test charges. Further testing shall be done if the samples are found aesthetically acceptable.

**25.0 Sale of hard copies of specification/drawing:**

Hard copies of the specifications and drawings shall be issued after ensuring deposition of requisite amount (as circulated by finance and signal Directorate). The Drawing section of Signal Directorate shall be responsible for this activity.

Copy controlled only when viewed on the website. Local/Printed copies permitted, but are uncontrolled.

		Printed:
Prepared By: JE/Signal/ISO	Issued By: Director/Signal-VII	Page 6 of 14

ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

**26.0 Vendor Sample Type Testing:**

For type tests, failures in type tests and re-testing etc., Document no. QO-D-8.1-10 (latest version) shall be followed.

**27.0 Non-conforming results or inadequate information**

Procedure as per QO-D-8.1-6 latest version to be followed.

**28.0 Approval by Director Head:**

In case the information is in line with the requirement and test results are satisfactory, the case shall be put up to Directorate Head along with the scrutiny sheets for its approval as per QO-D-8.1-6 latest version. While putting up the case for initial type approval, check list in format QS-C-8.1-2 (latest version) shall also be prepared by concerned SSE/JE.

**29.0 Approved copy of QAP**

Procedure as per QO-D-8.1-6 latest version to be followed.

**30.0 Review/up-gradation of QAP :**

Procedure as per QO-D-8.1-6 latest version to be followed.

**31.0 Communication of approval:**

Approval shall be communicated through a letter and status shall also be updated on the website and respective vendor directory as per QO-D-8.1-6 latest version. Following terms or conditions as applicable shall be included in the approval letter:

- a. This Type approval is valid w.e.f.....
- b. The firm’s name, ownership and addresses have not been changed. In case of any change in above the same should be promptly communicated to the issuing authority for appropriate action. Failing to do so may result in immediate de-listing of the firm.
- c. The machinery plant and infrastructure used in manufacture is not changed.
- d. Production design, bill of material is not changed.
- e. Product shall meet the requirements specified in the drawing/specification, unless specific deviation is granted.
- f. Notwithstanding this approval, firm is wholly and completely responsible for quality, performance, reliability and life of the item/items supplied by them.
- g. The firm shall abide by the instructions contained in the vendor approval guidelines of the Signal Directorate of RDSO.

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		Printed:
Prepared By: JE/Signal/ISO	Issued By: Director/Signal-VII	Page 7 of 14



ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

- h. The firm shall ensure compliance to the conditions given in the purchase order(s) of Railway Board/ Zonal Railways/Production Units.
- i. Quality documents approved by RDSO shall be made available to the inspection agency at the time of inspection.
- j. RDSO reserves the right to withdraw the approval granted at any time without assigning any reason thereto.
- k. No modification without prior permission/approval from RDSO is permitted in design (Hardware/Software), process, raw material/components, engineering and/or facilities in the approved model subsequent to the issue of this certificate. Any modification in the product without prior permission/approval of RDSO shall lead to the cancellation of approval.
- l. Manufacturer shall replace the supplied material free of cost in case of any manufacturing defect.
- m. RDSO reserves the right to inspect this product at any premises where it is in use or at the place of manufacturer. If any deterioration of performance of the approved product is noticed during use, RDSO reserves the right to cancel the approval.
- n. In case of any dispute, verdict of the competent authority of RDSO shall be final and binding on the manufacturer.
- o. Approval maybe withdrawn and penal action may be taken in case of tampering of documents noticed at any point of time based on which approval has be sought from RDSO.
- p. Design, Software and Hardware versions are as indicated in the enclosed part list (Annexure).The firm should ensure that this is engraved/ screen printed on equipment/cards/parts.
- q. The details of approved hardware and software checksums (if applicable) are attached as Annexure.
- r. Any other Condition.

**32.0 Type testing of software embedded safety signalling system of Indian Firms:**

- a) In case the nominated official is fully satisfied with capability cum capacity assessment for Indians firms developing software embedded safety signalling systems, then the consolidated report of the assessment shall be put up to the Directorate head for his approval for collection of prototype (software embedded safety signalling item) sample as applicable for testing in RDSO, if required.
- b) The firm may also be advised for validation/assessment of the offered product by Validator/ISA for the required SIL level as per product specification after approval of Directorate Head.

Copy controlled only when viewed on the website. Local/Printed copies permitted, but are uncontrolled.

		Printed:
Prepared By: JE/Signal/ISO	Issued By: Director/Signal-VII	Page 8 of 14



### 33.0 Initial trials for Indigenous software embedded/electronic signalling system.

- a) For developmental items dealt by Signal Directorate as given in table below, the type testing shall also include initial field trial in parallel and standalone as per the details given:

Sl. No.	Item/ Equipt.	Initial trial	
		Number of equipments	Duration
1*.	EI	01	90 days in parallel & 90 days** in standalone mode.
2*.	DAC	01	90 days in parallel & 90 days** in standalone mode.
3*.	AFTC	01	90 days in parallel & 90 days** in standalone mode.
4.	SSBPAC/	1 for Double line 1 for Single line (at-least 1 in RE area)	90 days in parallel & 90 days** in standalone mode.

\*As per Railway Board's letter no. 2003/SIG/SGF/7 dated 18.11.08, (Sl. No. 88 of File no. STS/DOP-SI/ISO 9000, Vol. 2).

\*\* Wherever series trials are necessary the period of standalone trial of 90 days shall be split in series and standalone.

- b) The parallel trials as indicated above shall only be taken up after the prototype sample submitted by the firm passes all the functional tests as per the specification and all necessary required documentation as per RDSO's apex guidelines including satisfactory capacity cum capability assessment. After successful parallel trial for period as above and on completion of Type Tests and receipt of Hardware and Software validation certificates, the field trial in series/ standalone mode shall be conducted on above system.
- c) For the new software embedded signalling systems not covered in the above table, the duration and quantities for initial field trial shall be decided in consultation with Directorate Head.
- d) Eqpt./System for initial trial shall be arranged by vendor at his own cost and expenses including its installation, monitoring etc.

### 34.0 Approval for Field trials:

- a) For developmental items dealt by Signal Directorate after successfully completion of type test and initial trials in accordance with Railway Board's letter no. 2003/SIG/SGF/7 dated 18.11.08 (wherever required), the vendor shall be considered for provisional approval to supply the maximum limited quantity as per Table below for performance evaluation with the approval of Directorate head.

S.N.	Item/ Eqpt.	*Performance assessment after successful type test	
		Max. Quantity to be permitted for supply	Min. Equipment month to be observed for assessment
1*	EI	10	30
2*	DAC	50	150
3*	AFTC	50	150
4*	Data Logger	50	150
5*	IPS	20	60
6*	LED Signal except tunnel Signal	500 Aspects	1500 Aspect
7.	LED Signal for tunnel in metro rail	150 Aspect	450 Aspect
8.	SSBPAC/ BPAC	20 Pair	60
9.	UFSBI	20 Pair	60
10.	FACS	25	75
11.	AFDS	50 Station	150 Station

\*As per Railway Board's letter no. 2003/SIG/SGF/7 dated 18.11.08, (Sl. No. 88 of File no. STS/DOP-SI/ISO 9000, Vol. 2).

- b) For the items not covered in the above table, the duration of trial and quantities required for the performance assessment shall be decided in consultation with Directorate Head.
- c) On completion of performance assessment field trial, if deficiencies are noted, extended field trial of equipment can be undertaken with approval of Directorate Head, based on its past performance. The time period and extended number of quantities for field trials shall be decided in consultation with Directorate Head.
- d) After successful initial trial and performance assessment of items/equipments given as in above table, the vendor's name shall be considered for inclusion in the approved 'List of RDSO Vendor for developmental order'.
- e) In case the results of field trial are not satisfactory, investigation shall be done jointly by RDSO/Lucknow and firm's representative to find the improvements required. An investigation report shall be prepared and intimated to firm to modify the design/ design parameters/circuits etc. (if feasible). In such case (as a one-time exception), firm may be allowed to submit the improved sample along with ISA assessment (If required), within 06 month from the date of intimation. If firm failed to do so, case may be closed.
- f) While approving a vendor for field trial, suitable instructions to ensure that the total ordered quantity does not exceed the permitted quantity for the vendor, following instructions shall be given in the field trial approval.
- i) The purchasing authority shall ensure that just before placing the order on a firm approved for field trials, details about the total supplied quantity and orders in hand is taken from the firm. It shall be ensured by the purchasing authority that the order should be restricted such that the total quantity ordered on the firm (collectively by all railways) does not exceed the total field trial quantity permitted by RDSO.

Copy controlled only when viewed on the website. Local/Printed copies permitted, but are uncontrolled.

ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

- ii) The firm shall also ensure that they do not secure total order quantity more than the quantity permitted for field trials. An undertaking shall also be taken by the purchasing authority from the firm before placing the order on the firm that if it is observed that the firm has taken orders for more total quantity than permitted for field trial for the firm, the order shall be treated as cancelled.

This shall also be a made a condition of the purchase order.

- iii) The inspecting authority of RDSO shall ensure before each inspection that the total inspected quantity does not exceed the permitted quantity on field trials.

- iv) An undertaking shall be taken from the firm by RDSO at the time of granting approval for 'field trial' that under no circumstance, the firm would take orders more than the quantity permitted by RDSO else the firm would be liable for penal action.

Note: Such undertaking shall also be taken from firms which are already under field trials.

### 35.0 Field performance of certain items before inclusion in Approval List

(As approved by Sr. ED/Signal on NP-1,2 of file no. STS/G/Review Committee on the report of he nominated committee).

- a) For Items given below, a few equipments may be supplied by the vendor free of cost in addition to the type test samples, which may be kept on trials by RDSO at suitable location for duration as recommended below. This trial shall be considered as extended type test and completion of type testing shall be considered only after such extended type test is completed. No separate approval of field trial will be given to any vendor.

S. N.	Item/Equipments	For extended type test	
		No. of equipments to be supplied free of cost	Duration for performance assessment
1	Hand Signal Lamps	10	1 Month
2	Tail Lamps	10	1 Month
3	Non Metallic CLS Housing	1 no. of each type	3 Month
4	Failsafe Electronic Flasher	5	3 Month
5	BPAC using UFSBI	1pair on single line & 1 pair on double line ( at least 1 in RE area)	3 Month
6	QTA2, 9 Ohm 4F/2B Relay	10	3 Month
7	QN1K, 1000Ohm, 8F/8B, 12F/4B 24V DC Relay	10	3 Month

		Printed:
Prepared By: JE/Signal/ISO	Issued By: Director/Signal-VII	Page 11 of 14

ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

- I. The above number of equipments supplied in addition to the type test samples, shall be the property of the vendor after completion of such extended type tests.
- II. The specified type test samples shall be kept in the RDSO lab as per existing norms and extended type tests shall be done only on additional equipment.
- III. After completion of type test as well as extended type tests, a vendor may directly be approved in 'List of RDSO Vendor for developmental order'.
- IV. For other items, there should not be any field trial before initial type approval in general. However, there may be specific situation, like newly developed items for the first time, where it is considered desirable to have field trials before initial type approval. In such situation, the decision whether to conduct field trial or not may be taken with the approval of the Directorate head.

**36.0 PROCEDURE ORDER FOR CROSS ACCEPTANCE/APPROVAL OF SOFTWARE EMBEDDED ELECTRONICS SYSTEM AND NEW/IMPROVED TECHNOLOGY PRODUCTS FOR RAILWAY SIGNALLING:**

36.1 These guidelines are meant for evaluating software embedded electronic systems and new/imported technology products including electromechanical, electrical and electronic systems/equipments for Railway signaling, which are already in use on a passenger carrying service anywhere in the world at speed more than 100 KMPH, for uniform adoption on Indian Railways using the concept of cross acceptance/cross approval. These form part of the type approval guidelines already being followed by RDSO. The procedure outlined in relevant CENELEC or any other equivalent standards to define and verify the safety requirements form the basis of these guidelines.

36.2 Railway Board's letter no. 2012/SIG/SGF/7 dt. 08.07.2015 or latest on this matter shall be followed.

**37.0 APEX ISO DOCUMENTS:**

The Responsibility and Authority (as applicable) may be referred in the following table.

S. N.	Document no.	Document name
1.	QO-D-8.1-1 (Latest Ver.)	Creation of new specification for items.
2.	QO-D-8.1-2 (Latest Ver.)	Change of specification of items.
3.	QO-D-8.1-3 (Latest Ver.)	Withdrawal of specification of items.
4.	QO-D-8.1-4 (Latest Ver.)	Change of controlling authority for specification.
5.	QO-D-8.1-5 (Latest Ver.)	Application for registration of Vendor.
6.	QO-D-8.1-6 (Latest Ver.)	Vendor application processing
7.	QO-D-8.1-7 (Latest Ver.)	Relaxation of vendor registration requirements.
8.	QO-D-8.1-8 (Latest Ver.)	Vendor registration EOI.
9.	QO-D-8.1-9 (Latest Ver.)	Vendor list.
10.	QO-D-8.1-10 (Latest Ver.)	Vendor sample type testing.
11.	QO-D-8.1-11 (Latest Ver.)	Vendor changes in approved status.

		Printed:
Prepared By: JE/Signal/ISO	Issued By: Director/Signal-VII	Page 12 of 14

Copy controlled only when viewed on the website. Local/Printed copies permitted, but are uncontrolled.

ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

12	QO-D-8.1-12 (Latest Ver.)	Vendor changes in vendor entity.
13	QO-D-8.1-13 (Latest Ver.)	Quality Audit of Approved Vendor.
14	QO-D-8.1-14 (Latest Ver.)	Vendor registration schedule of charges
15	QO-D-8.1-15 (Latest Ver.)	Product Development.
16	QO-D-8.1-16 (Latest Ver.)	Publishing Expression of Interest.
17	QO-D-8.1-17 (Latest Ver.)	Logistics provision by vendor for inspections
18	QO-F-8.1-1 (Latest Ver.)	Vendor registration form.
19	QO-F-8.1-2 (Latest Ver.)	Intimation of 'Fresh Registration' and Form for deciding 'Quality Audit' of Venders
20	QO-F-8.1-3 (Latest Ver.)	Down gradation/Delisting of approved vendor
21	QO-F-8.1-7 (Latest Ver.)	List of Documents to be sought from Vendor at the time of Registration & Annexure/Forms.
22	QO-8-7.1-8 (Latest Ver.)	Capability Assessment Report for vendor registration
23	QO-8-7.1-9 (Latest Ver.)	Quality Audit Report

### 38. Associated records:

Rec-Ref S. No.	Document No.	Document name
1.	SI-M-8.1-5 ( Latest Ver.)	Master list for Sufficient Quantity for Up – gradation
2.	SI-M-8.1-7 (Latest Ver.)	Master List of Type Test charges
3.	QM-RF-8.1-3(Latest Ver.)	Guidelines for preparation QAP during registration
4.	QS-F-8.1-2 (Latest Ver.)	Format of Firm's application for up gradation from "List of RDSO Vendor for Developmental order" to "List of approved Vendor" be filled by vendors.
5.	QS-F-8.1-3 (Latest Ver.)	Format for recommendation up-gradation "List of RDSO Vendor for Developmental order" to "List of approved Vendor"
6.	QS-F-8.1-7 (Latest Ver.)	Format for forwarding samples for initial type test to RDSO/LKO
7.	QS-F-8.1-8 (Latest Ver.)	Format for test note
8.	QS-C-8.1-1 (Latest Ver.)	Check list for evacuation of application of fresh registration
9.	QS-C-8.1-2 (Latest Ver.)	Check List of Initial Type approval
10.	SI-C-8.1-1 (Latest Ver.)	Check list for up gradation from "List of RDSO Vendor for Developmental order" to "List of approved Vendor"
11.	<b>RB's letter No. 2012/SIG/SGF/7 dt. 08.07.2015</b>	<b>Procedure order for cross acceptance/approval of software embedded electronics system and new/imported technology products for railway signalling.</b>

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ISO 9001:2015	Document No: SI-WI-8.1-3	Version No: 2.1	Date Effective : 06.08.2019
Document Title: Work Instruction for vendor approval			

### 39.0 RESPONSIBILITY AND AUTHORITY:

Activity	Responsibility	Approver	Supporting	Consulted	Informed
Creation, maintenance of this document	Concerned ADE & JE	Head of Directorate	Directorate Staff	All concerned	All concerned through intranet/email
Compliance of directives contained in this document	EDSIG, all DSIGs & all supervisors	Head of Directorate	Directorate Staff		All concerned through intranet/email
Requirement deviation from directive	Head of Directorate	Head of Directorate	Directorate Staff	All concerned	All concerned through intranet/email

### 40.0 ABBREVIATIONS:

ADG	:	Additional Director General
AFTC	:	Audio Frequency Track Circuit
AWS	:	Auxiliary Warning System
CENELEC	:	European Committee for Electro Technical Standardisation
CSTE	:	Chief Signal and Telecom Engineer
Dir	:	Director
Dte	:	Directorate
DOP	:	Directorate Operating Procedure
DG	:	Director General
ED	:	Executive Director
ED/CO-ORD	:	Executive Director/Co-Ordination
EOI	:	Expression of Interest
FRPCY	:	Failure Rate Percentage per Year
IR	:	Indian Railway
IRS	:	Indian Railway Signalling
IRISET	:	Indian Railway Institute for Signal and Telecom
JD	:	Joint Director
MTBF	:	Mean time Between Failure
MTBWSF	:	Mean Time Between Wrong Side Failure
MTTR	:	Mean time to Repair
NSIC	:	National Small Industries Corporation
OEM	:	Original Equipment Manufacturer
P.O.	:	Purchase Order
PU	:	Production Units
QA	:	Quality Assurance
QAP	:	Quality Assurance Plan
RDSO	:	Research Design and Standard Organisation
Sr. ED	:	Senior Executive Director
STR	:	Schedule of Technical Requirements
S&T	:	Signal & Telecom
SIL	:	Safety Integrity Level
SSI	:	Small Scale Industries
SEM	:	Signal Engineering Manual
TPWS	:	Train Protection Warning System

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