

Guideline for supplier evaluation

Circulation and Publication subject to prior approval by Schweizer Electronic AG, Schweizer Electronic (Jiangsu) Co., Ltd

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Date:	16.01.2020	Date:	28.01.2020	Date:	28.01.2020

History

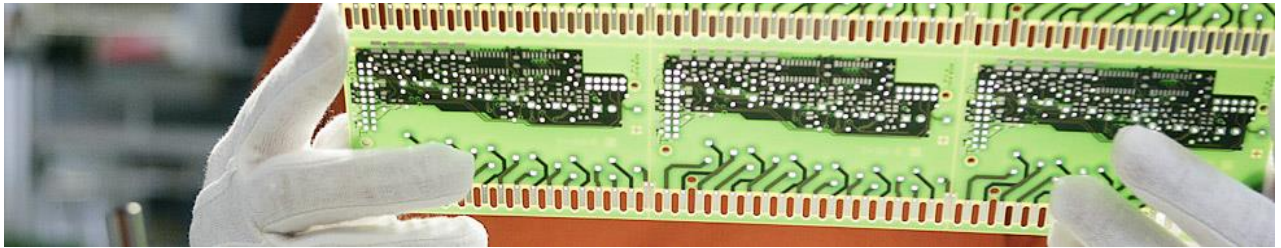
Date	Comment
09.01.2020	Update PLKZ target, add Jiangsu

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1 Guideline



Schweizer Electronic – more than PCB's. Every day this maxim drives us to make innovative products that not everyone can. We are the No. 1 in innovative solutions, reliability and consulting with an unbeatable worldwide partner network.

Very few companies can look back to more than 170 years of company tradition. In all that time reliability has always been the value we stand for. In addition, customers appreciate us for our excellent consulting service and product quality.

To offer the entire value chain, we have partnered with the best companies in their fields: now we supply the full range, from the fastest prototypes to high volume cost-optimized products. Our headquarters in Schramberg, Germany, is the center of our innovative strength. From here, we also ensure that product ramps continue to reflect our very high quality and process know-how.

According to this philosophy, we will maintain the highest quality level together with our suppliers. Therefore we created this guideline, which enables you to understand our supplier evaluation better.

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2 Basis of assessment

The suppliers of Schweizer Electronic AG are periodically assessed for their performance in quality, delivery, purchasing and other areas.

In order to ensure objectivity throughout the evaluation process, general assessment principles were defined. This includes framework conditions for the assessment, as well as the determination of the evaluation results:

- The valuation scheme consists of four main criteria, which are evaluated differently and add up in total to 100%
- The maximum number of point is 100
- A main criteria consists of various single criteria which are as well added up in total to 100%
- Only single criteria are evaluated which are capable of being rated
- If a single criteria can not be rated, the weighting of all remaining single criteria will be averaged

Deviations of the ideal state are punctured with point deduction as a function of the characteristic number

This document is valid for Schweizer Electronic AG (SE), Schweizer Electronic (Jiangsu) Co. (SEC), Ltd. and Schweizer Electronic Singapore Pte. Ltd.(SES). All companies are referred to in the document as “Schweizer”.

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2.1 Structure of evaluation

Main criteria	Sub-criteria	Weighting
Quality 55 %	Goods receipt lot	15 %
	PLKZ (= Problem supplier quality indicator)	30 %
	Reaction time to complaint	10 %
	Quality 8D reports	30 %
	QM system quality	10 %
	Audit results	5 %
Delivery 30 %	Adherence to delivery dates	50 %
	Adherence to quantity stipulations	50 %
Purchasing 10%	Price development	40 %
	Reaction rate	25 %
	Communication / Cooperation	25 %
	Innovation	10 %
	Other	10 %
Other 5%	Environment, energy, occupational safety and health	100 %

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3 Quality

3.1 Goods receipt lot

It is evaluated how many goods receipts were claimed. In accordance with the inspection plan, the incoming inspection is carried out by the quality departments or their service providers for the incoming materials.

Therefore we create an inspection lot.

After the check has been completed, the responsible staff in the quality management, record an outcome and make usage decision for the material, which are recoded in quality numbers for the inspection lot.

All incoming goods inspection lots with their quality numbers have influence in the evaluation, together with the arithmetic averages.

3.2 Quality target

3.2.1 PLKZ target / PLKZ (Problem supplier quality indicator) (SE)

PLKZ (= Problem supplier quality indicator) evaluates the number of weighted complaints.

A distinction is made as to whether the complaint contains a notice of complaint (HW), a service complaint (RS), a product complaint (RP) or a complaint by the customer (FR).

$$\text{PLKZ absolute} = 1 \cdot \text{HW} + 2 \cdot \text{RS} + 3 \cdot \text{RP} + 4 \cdot \text{FR}$$

In order to take account of the delivered quantity or turnover, the suppliers are divided into the following revenue classes:

Classes	Turnover	Target value PLKZ absolute
1	> 4.000.000 €	10
2	> 1.000.000 €	8
3	> 500.000 €	4
4	> 100.000 €	2
5	< 0 €	0

The target values in this table are the yearly target for the delivery quality. This target is not the accepted quality level from Schweizer Electronic AG. The accepted quality level is 0 PLKZ. Each deviation according a specification will be claimed.

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If the target for the evaluation period is exceeded, measures must be taken regardless of the classification, so that the PLKZ targets will be achieved in the following year. The assessment of PLKZ absolute occurs in deviation with the revenue classes. There is a point deduction after the target value has been exceeded. The result of this calculation has influence on the supplier evaluation:

$$\text{PLKZ assessment} = 100 - \frac{\text{PLKZ} - \text{target value}}{\text{Target value}} * 100$$

3.2.2 LAR and DPPM target (SEC)

As quality target LAR (Lot acceptance rate) and DPPM (Defective PPM) will be rated. Both will have an influence to the overall result.

LAR is usually used to evaluate the quality performance of the supplier's products in the selected batches during incoming inspection.

Calculation of LAR:

$$\text{LAR} = \frac{\text{Inspected Lots} - \text{Rejected Lots}}{\text{Inspected Lots}}$$

DPPM is the overall reflection of Class A supplier's product quality, and the defect quantity collection covers: supplier quality issue occurred in incoming inspection, in SEC's process, and customer site. Other supplier will be not rated according DPPM

Calculation of DPPM:

$$\text{DPPM} = \frac{\text{Received QTY (pnl)}}{\text{Defect QTY (pnl)}} * 1\,000\,000$$

Target	Target value
LAR	100%
DPPM	Will be determined for each supplier individually

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3.3 Reaction time to complaints

Suppliers receive an 8D report with notification of the complaints by Schweizer Electronic AG. After receiving the complaint the supplier should revise and send the 8D report back to us within 10 days.

Should this period of ten days be exceeded, without consultation of an extension with the relevant quality employee of Schweizer Electronic Ag, the supplier receives the defined score as shown in the table chart below.

The arithmetic mean of the evaluated reaction times then flows into the supplier evaluation.

Reaction time to complaints = Defined end date 8D – date of completion 8D

Delta	Weighting	Scores
Until 0 days	1	100
0 – 5 days	2	80
> 5 days	3	50
No respond	4	0

3.4 Quality of 8D report

The quality score 8D report shows the results of the evaluation sheets of the 8D reports. The supplier receives together with the 8D report, the evaluation sheet and has to evaluate his report according to the evaluation sheet after executing the 8D-report.

This will be double checked by the Complaint Management department and as long as there aren't any objections, it will be recorded in the system. The scores that have been gained within the valuation period flow into the scores of supplier evaluation.

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3.5 QM-System quality

With the partial criteria QM System quality the efficacy of quality management is evaluated. The following management systems are involved in the valuation:

Managementsystem	Scores
IATF 16949:2016	100
DIN EN 9100:2018 / AS 9100D	100
DIN EN ISO/IEC 17025:2005	100
DIN EN ISO 9001:2015	80
EFQM-Modell (special item)	10

Should it not be possible for the supplier to reach IATF 16949 certification, (e.g. service provider) it will be considered appropriately.

The evaluation only takes into account certifications that are known to us at the time of the valuation.

We won't ask the supplier to hand us their valid certificates. The supplier has to provide valid and existing certificates.

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3.6 Audit results

The partial criteria „audit results“ is included (5%) in the evaluation. The audit results are assessed using the classification given in the audit. If several audits have taken place at different locations, the poorest rating will be included in the valuation. If however, no audits have taken place, the 5% are spread over the other sub criteria-

The assessment is based on the following scheme:

Classification	Scores
A	100
B	60
C	10

3.7 Customer special status

Customer special status have a direct influence to the result of the supplier evaluation. All here described points will be subtracted from the final result of the supplier evaluation. The result afterwards is the result we use for the rating.

We will rate any special status customer notification from us or our customers. We will differ between “new business on hold” and other customer special status.

If you get the special status “new business on hold” or similar we will subtract 10 points from the result.

For all other special status we will subtract 5 points from the result.

If you are responsible for any shipping stop, disruptions or similar at our factory or the factory of our customer we will subtract 2 point for each incident

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4 Delivery

4.1 Adherence to delivery dates/ adherence to quantity stipulations

According to the main criteria „delivery“, the sub criteria „adherence to delivery dates“ and „adherence to quantity stipulations“ are evaluated. To determine the key performance indicators „adherence to delivery dates“, the system checks whether the planned delivery date has been adhered to or whether there are deviations:

Absolute adherence to delivery dates = Goods receipt date – statistical delivery date

Finally, the system checks whether the minimum delivery quantity of 85% has been adhered to.

If the minimum delivery quantity is not reached, a score won't be determined by the system. If the minimum delivery quantity and the delivery date are adhered to, the highest number of points is assigned. For system deviations, the system converts the absolute deviation into a percentage deviation.

In order to evaluate the quantity of the goods, the system automatically checks whether the order quantity matches the quantity of goods received. The gap is automatically converted into a percentage deviation using the formula below.

$$\text{Adherence to quantity stipulations} = \frac{\text{Goods receipt quantity} - \text{order quantity}}{\text{order quantity}} * 100$$

5 Purchasing

5.1 Softfacts evaluation Purchasing Department

- Price development is assessed using the following scheme:

Price development	Scores
Markdown?	100
No markdown	50
Markup	0

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Furthermore we will subtract 2 points from the result of price development for each incident were we have to pay for premium freight caused by supplier.

- Reaction rate is assessed using the following scheme:

Reaction rate	Scores
The queries about current issues are generally handled very quickly	100
The queries for current problems are usually proceeded promptly	80
The queries for current problems are usually proceeded very slowly	40
The supplier does not react to any demand for current problems	0

Evaluation of communication/cooperation is based on the following questions:

- Does the supplier contact us on time in case of a postponement?
- Is the supplier flexible in case of an order amendment?
- Is the supplier willing to give us a special offer?
- Is a EDI connection available?
- Is a consignment stock available?

Assessment of innovation capacity is based on the following questions:

- Does the supplier enable customer specific developments?
- Is he willing to offer technology based workshops?

This result of the questionnaire is included as another factor in the evaluation.

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6 Other

The fourth main criteria („other“) is assessed according to environmental, energy and occupational safety certificates. The evaluation is determined at the sub criteria „QM system quality“ according to an evaluation scheme.

	Scores
Environmental criteria:	
DIN EN ISO 14001 / EMAS	100
Energy criteria:	
DIN EN ISO 50001	100
Occupational safety and health:	
OHSAS / ISO 18001 (other)	100

The evaluation only takes certifications into account that are known to us at the time of the valuation.

We do not query the certificates currently valid for the suppliers. We won't ask the supplier to hand us their valid certificates. The supplier has to provide valid and existing certificates.

7 Result of evaluation

After the evaluation, the results are graded using a defined scale „A, B, and C suppliers“. Subsequently, the suppliers will receive an email about this overview.

Classification	Scores
A	100 - 85
B	84 - 60
C	59 - 0

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8 Feedback to supplier evaluation B/C

If you received classification B or C, please send us a corresponding action plan within 30 days after receipt of the evaluation, to improve your quality performance.

If it happens repeatedly (two times in succession) that the classification is C, Schweizer will internally check, how to phase out the supplier.

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