Q1250
SCALABLE
quality tools

komax

EN

Q1250 SCALABLE

The scalable Q1250 module offers a suitable technically advanced monitoring of the crimping process for every requirement. The basic version exclusively checks whether the cable has been stripped, i.e. whether the crimp and, if applicable, the seal is present. If desired, high-quality monitoring functions can be added as licenses. In the highest level, the so-called “full package”, all required quality features are checked fully automatically and comprehensively.

Automated visual check

The Q1250 fully automatically checks each individual crimp for the specified quality characteristics. This not only reduces the operator’s workload and significantly improves quality, but also saves a considerable amount of time by eliminating visual checks and tedious adjustments during changeovers.

Reliable user-independent quality

The module inspects 100% of the batch size and never tires. The specified quality parameters are reliably and permanently maintained. The operator’s influence is reduced as far as possible, since the specifications are stored and controlled by a user-independent algorithm.

Attractive entry-level model

The so-called basic unit already provides one hundred percent automatic control of whether the stripping has worked and whether the seal and crimp are present. The data is continuously recorded in the Komax HMI. A significant increase in quality can thus be achieved with very little effort.

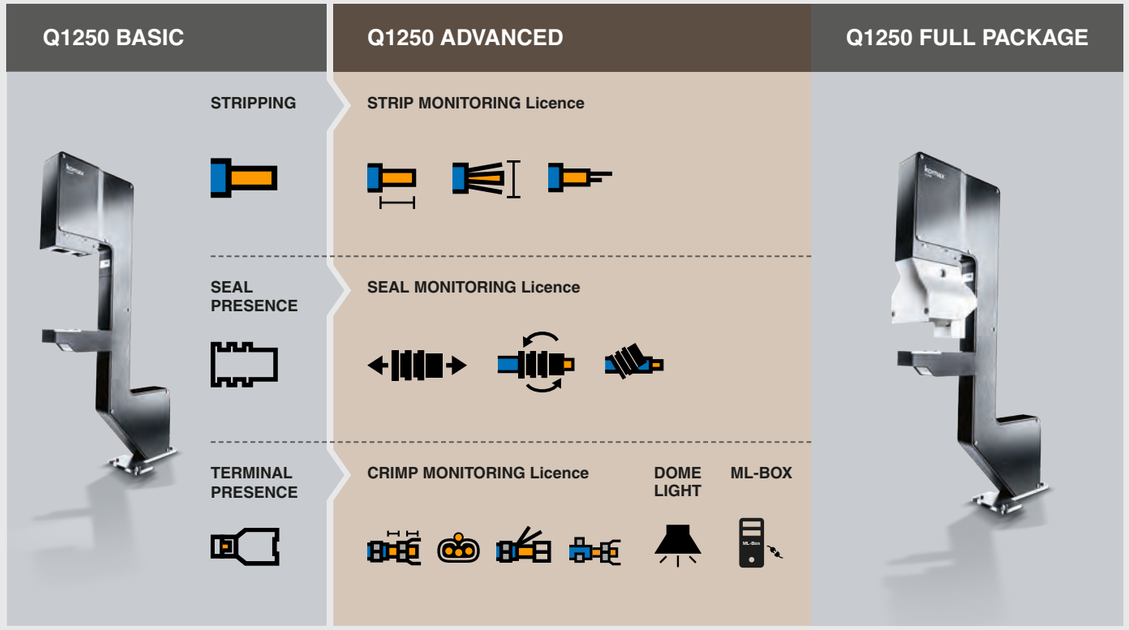
Modular system

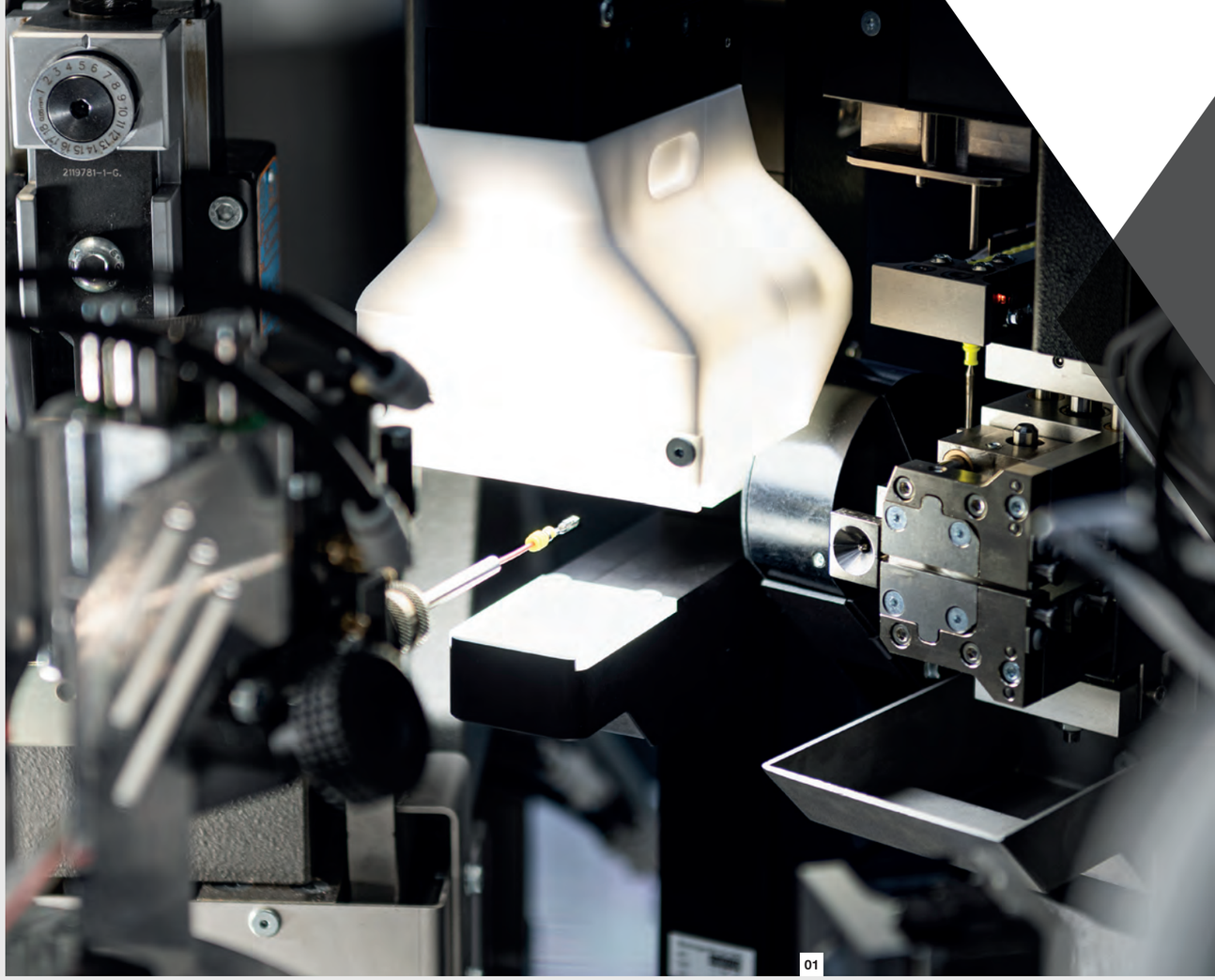
Depending on your needs, you can make your Q1250 even smarter and more powerful at any time. Select the function packages that meet your requirements. A particularly attractive feature of the licensing model is that you start with one set of functions and can easily purchase new licenses as soon as other requirements arise. You make the investments when you need them.

SCALABLE DIGITAL
CABLE DETECTOR

What is the advantage of scalability?

Scalable means that you can purchase exactly the scope of services you need for the tasks at hand. The cost/benefit ratio is therefore very attractive. If the requirements change over time, then the Q1250 can easily be supplemented with additional licenses and/or the dome light. The Q1250 scalable is a sensible and safe investment, because it adapts flexibly to the needs and is future-proof and usable for a long time due to the expansion option.





BASIC

The Q1250 Basic offers a cost-effective entry into crimp production quality monitoring. The operator's random visual inspection is replaced by a fully automatic optical inspection of each individual crimp. It is checked whether stripping has taken place and whether a seal or crimp contact is present.

ADVANCED

The Q1250 is scalable, i.e. depending on the quality specification, licenses for higher-quality monitoring functions can be purchased in stages. The following are available:

- **Strip Monitoring**
  Monitoring of the length and quality of the stripping, protruding, spread and pre-drawn strands.
- **Seal Monitoring**
  Monitoring of seal position, seal alignment and pierced seals.
- **Crimp Monitoring**
  With the dome light, associated license and ML-Box, the Q1250 uses a learned algorithms to assess a color image of the crimp. This function can be used to check for crimped-on and protruding strands. In addition, the conductor in the crimp and conductor protrusion are reliably monitored.

Q1250 FULL PACKAGE

The Full Package contains all previously mentioned licenses and components and is therefore the perfect way to monitor the quality of the crimps 100% automatically.

Innovative technology

Komax uses a neural network to segment and reconstruct the wire end. This leads in a increased reproducibility and robustness of the detection process. The assessment of qualitative parameters using the common proven quality parameters. The operator will notice a significantly improved detection and more efficiency in operation.

Full quality control

When the swivel arm travels to the crimping module, it first checks the stripping and the seal presence. On the return trip, the Q1250 evaluates the quality of the crimps in fractions of a second. In the process, the conductor protrusions, the crimped-on strands and the protruding strands are monitored for each conductor end.

The Q1250 thus provides continuous and reliable monitoring of the entire production process. Visual inspection of the monitored quality features by the operator is no longer necessary. All quality features can be tracked and documented.

01
Q1250 with dome light
02
Monitoring of the strip and seal position
03
Monitoring of the crimp quality

Process overview

			BASIC	ADVANCED			FULL PACKAGE
				Strip Monitoring Licence	Seal Monitoring Licence	Crimp Monitoring Licence incl. dome light and ML-Box	
Cut Strip	Pulled strands			•			•
	Strip recognition		•	•			•
	Strip length			•			•
	Wire splay			•			•
	Partially stripped			•			•
	Insulation burrs			•			•
Seal placement	Seal position				•		•
	Seal presence		•		•		•
	Insulation in front of seal				•		•
	Seal orientation				•		•
	Pierced seal				•		•
Crimp	Missing terminals		•			•	•
	Crimped-on strands					•	•
	Protruding strands					•	•
	Conductor visibility					•	•
	Distance from insulation to conductor crimp					•	•
	Conductor brush length					•	•
	Isolation crimp check					•	•

Technical data

Wire cross sections	0.13 – 6 mm² (AWG 26 – AWG 10)
Full or half stripping	max. 18 mm (0.71 in.)
Field of observation	24 × 16 mm (0.94 × 0.63 in.)*
Dimensions (L × W × H)	290 × 90 × 524 mm (11.42 × 3.54 × 20.63 in.)
Control system	CC: Komax HMI 1.7 or higher, ML-Box: HMI 1.14 or higher HM/TW: TopWin 21.8 or higher
Communication	USB 3.0
Machine types**	Alpha 530***, Alpha 550***, Alpha 560*, Alpha 565, Gamma 450, Omega 740/750, Omega 745/755, Zeta 640, Zeta 650

* The detection range is smaller than the field of observation due to deflections and distortion effects, especially with large objects.
** In combination with tinning on request
*** ML-Box available

Komax – leading the field now and in the future

As a pioneer and market leader in automated wire processing, Komax provides its customers with innovative solutions. Komax manufactures series and customer-specific machinery, catering to every degree of automation and customization. Its range of quality tools, test systems, and intelligent software and networking solutions complete the portfolio, and ensure safe, flexible, and efficient production.
Komax is a globally active Swiss company with highly qualified employees and development and production facilities on several continents. It provides local support to customers worldwide through its unique sales and service network and offers services that help them get the most out of their investments.

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Subject to change