

# Q-Report

## Quality protocol for codes

### Verification of quality readability

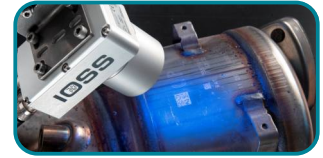
In addition to the identification of codes, the quality evaluation of codes is becoming increasingly important. Incorrect codes can thus be detected at an early stage and complete traceability of products is possible. The DMR210 and DMR220 stationary reading systems from IOSS enable reproducible quality evaluation. Directly marked data matrix codes are detected and at the same time reliably classified according to common quality standards.

The PC-based "Q-Report" software is a useful supplement to an IOSS data matrix reading and rating system for quality control in the laboratory or offline in the manufacturing process. The Q-Report software receives the code content and the quality data and the actually captured image from the system. The "Q-Report" automatically controls the

connected system in the standardised range of brightness. The quality evaluation according to ISO/IEC 29158 with all criteria only starts and compares them with the specifications defined by the customer once this so-called ML value is reached. This involves various measurable variables such as cell contrast or errors in the rest zone and peripheral zone. The Q-Report can of course also be used for the "rated reading" of dot matrix codes. In addition, the software includes a GS1 test. However, only the format is checked.

With the "Q-Report" you can easily and quickly generate a quality protocol (PDF document) of your code, which you can save for documentation or as verification of the delivered quality and readability of the code or send to the customer.





## Sample report (example)

**Quality Report**  
 ISO/IEC 29158

Code Content	(01)07640114631238(11)200206(10)A213B1(21)1234		
Part	Ser: 4711	Verificationsystem	DMR210
Enduser	Sample AG	Date of calibration	23.06.2021, 14:43:55
Checker	IOSS AG	Codetyp	ECC200 / 22x22
Comment	pls. check	Print Growth	51
Date/Time	07.09.2021, 11:06:40	Software	DM 8.4.0
Setup	DPM4.0/08/660/D	Pixels per Module	14.6
Cellcontrast	61%		

ID	Description	Rating	Target	Result
ML	Mean Light	83	70-86	✔
CC	Cellcontrast	4.0 (A)	B	✔
CM	Cell Modulation	4.0 (A)	B	✔
DD	Distributed Damage	4.0 (A)	B	✔
FD	Finder Damage	4.0 (A)	B	✔
AN	Axial Nonuniformity	4.0 (A)	B	✔
GN	Global Nonuniformity	4.0 (A)	B	✔
UE	Unused Error Correction	4.0 (A)	B	✔
MR	Minimum Reflectance	4.0 (A)	B	✔
Total ISO/IEC 29158		4.0 (A)	B	✔

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ID	GS1 check		Result
01	GTIN	04250381854822	✔
10	BATCH/LOT	913241	✔
11	PROD DATE	181005	✔
21	SERIAL	01	✔
240	ADDITIONAL ID	20-722-15	✔

Criteria	Measurement Parameter
Cellcontrast [CC]	This describes the brightness difference (standardised) between bright and dark dots determined from their average values.
Minimum Reflectance [MR]	This describes the brightness difference between the bright modules and the determined brightness of the bright modules in the calibration template.
Cell Modulation [CM]	This describes the grey value uniformity in the bright or dark modules.
Finder Damage [FD]	Damage in the Finder and Alternating Grid and Quietzone.
Distributed Damage [DD]	Summarised assessment of the individual Fixed Pattern zones.
Axial Nonuniformity [AN]	This describes the distortion of code along its main axes in X and Y direction.
Global Nonuniformity [GN]	Deformity of the grid. Evaluates the position of the individual module relative to an ideal uniform grid.
Unused Error Correction [UE]	Unused error correction. A measure of the number of bit errors that had to be corrected using the Reed/Solomon error correction.

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## Advantages of the Q-Report software

- Quality protocol for codes
- Verification of delivered quality and readability of the code as a PDF document
- Quality evaluation according to ISO/IEC 29158 as well as for dot matrixcodes according to the "rated reading"
- GS1 test possible

Make use of the advantages of the Q-Report also for your quality control.  
 Please do not hesitate to contact us if you have any questions.

Subject to change without prior notice. If you require additional information, please contact us.

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