△ **Leuze electronic**

the sensor people

DCR 200i
IPS 200i

1   Introduction

Tab. 1.1:   Information about the document

Title	
File name	DCR/IPS 200i job parameter
Version	1.2
Status	Changes

Tab. 1.2:   List of changes

Author	Date	Version	Status	Comment
	2016-04-15	1.0	First version	
S. Abraham	14.11.2017	1.1	Changes	Code parameter extension
S. Abraham	2018-08-17	1.2	Change	IPS 200i extension

1.1   Purpose

This document is used to describe job parameters. With the DCR 200i/IPS 200i, these can be read and set using the XML commands (see separate document).

NOTICE
Make certain that only parameters for the appropriate device models (DCR 200i/IPS200i) are transferred. Parameters that cannot be adjusted via webConfig may not be set via XML command. Undefined behavior and error messages may otherwise result.

1.2   Target group

This document should help the customers to read and write parameters on the DCR 200i/IPS 200i.

2   Description of the parameters

2.1   Illumination parameter

2.1.1   Illumination on/off

Parameter name	ila				
Unit	-				
Data type	bool				
Value					
Standard	TRUE	Values	TRUE FALSE		
Valid for	DCR 200i and IPS 200i. With the IPS 200i: valid for the currently active program.				

Description

Illumination can be switched on and off with this parameter.

2.1.2   Exposure time

Parameter name	exp				
Unit	µs				
Data type	int				
Value					
Standard	500	Minimum	68	Maximum	Illumination on: 5000 Illumination off: 60000
Valid for	DCR 200i and IPS 200i. With the IPS 200i: valid for the currently active program.				

Description

The exposure time can be set with this parameter. It must be noted that different values apply to the maximum depending on whether the illumination is switched on or off.

2.1.3   Gain

Parameter name	gan				
Unit	-				
Data type	int				
Value					
Standard	1	Minimum	1	Maximum	7
Valid for	DCR 200i and IPS 200i. With the IPS 200i: valid for the currently active program.				

Description

The gain can be set with this parameter. In order to keep the noise of the imager as low as possible, this value must be as small as possible!

2.1.4 Image resolution

Parameter name	imzs				
Unit	-				
Data type	int				
Value					
Standard	0	Minimum	0	Maximum	1
Valid for	DCR 200i				

Description

The resolution of the sensor can be selected with this parameter.

- 0: Standard resolution
- 1: Reduced resolution

2.2 Code parameter

2.2.1 Code selection

Parameter name	dtyp				
Unit	-				
Data type	int				
Value					
Standard	-	Minimum	0	Maximum	63
Valid for	DCR 200i				

Description

A code is preselected with this parameter. All the following special settings then go into this code.

The code number must be given as a value corresponding to the Leuze code table.

2.2.2 Code enable

Parameter name	dact		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

The previously selected code can be activated or deactivated with this parameter.

2.2.3   Number of digits

Parameter name	dran				
Unit	-				
Data type	string				
Value					
Standard	-	Minimum	-	Maximum	-
Valid for	DCR 200i				

Description

The number of digits allowed can be set for the previously selected code with this parameter.

The following must be noted:

- 1D-codes: The number to be passed corresponds to the desired number of digits. (Exceptions are the EAN and UPC codes)

1D-code exceptions:

Valid for Code EAN and UPC

- 1: EAN 8 or UPC 8
- 2: EAN 8 with Add 2 or UPC 8 with Add 2
- 3: EAN 8 with Add 5 or UPC 8 with Add 5
- 4: EAN 13 or UPC 12
- 5: EAN 13 with Add 2 or UPC 12 with Add 2
- 6: EAN 13 with Add 5 or UPC 12 with Add 5

ℹ️	**NOTICE**
	With Pharmacodes, this value corresponds to the number of bars.

- 2D-codes: The number to be passed corresponds to the position of the number of digits in the matrix that is displayed in the webConfig tool or in the following table.

❗	**NOTICE**
	The transferred string cannot contain any blank spaces.

If multiple numbers of digits must be specified, these can be specified as follows:

- separated by a comma,
- ranges indicated by a –
- mix of both

Example for 1D-code:

If the number of digits is to be set to 10, 29 to 31 and 45, the following value must be set:

10,29-31,45

Example for 2D-code:

If the number of digits for the data matrix is to be set to 10x10, 32x32 to 40x40, 80x80 and 16x48, the following value must be set:

1,10-12,18,30

2.2.4 Check digit transmission

Parameter name	dtcd		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

By setting this parameter, the check digit is output together with the data characters (if supported by the code type).

2.2.5 Send start/stop characters

Parameter name	diss		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

By setting this parameter, the start and stop characters are also output for the Codabar symbology.

2.2.6 Check digit method

Parameter name	dmcs		
Unit	-		
Data type	enum		
Value			
Standard	Code-dependent	Values	See description
Valid for	DCR 200i		

Description

Configuration of the check digit method used to compute the check digit.

Code 2/5 Interleaved:	0: No check
	1: Mod 10/G3
Code 39:	0: No check
	1: Mod 43
Codabar:	0: No check
	2: Mod 16

2.2.7   Conversion UPC-E to UPC-A

Parameter name	dexp		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

By setting this parameter, the decoding result of a UPC-E bar code is converted to the format of the associated UPC-A bar code.

2.2.8   Conversion from Code 39 to Code 32

Parameter name	dc32		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

By setting this parameter, the decoding result of a Code 39 bar code is converted to the format of a code 32 bar code and output.

2.2.9   Output EAN 128 header

Parameter name	dthd		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

By setting this parameter, identifier "]C1" of the EAN-128 symbology is also output.

2.2.10 Include Micro QR Code

Parameter name	dmqr		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

By setting this parameter, the decoder algorithm takes into account the Micro QR code type.

2.2.11 2D components

Parameter name	dcom		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

By setting this parameter, the composite part in the GS1 Databar Stacked code is taken into account and output.

2.2.12 Pharmacode – read direction

Parameter name	ddir		
Unit	-		
Data type	enum		
Value			
Standard	0	Values	0 - 3
Valid for	DCR 200i		

Description

The read direction of the Pharmacode is defined with this parameter.

- 0: Left to right
- 1: Top to bottom
- 2: Right to left
- 3: Bottom to top

2.2.13 Pharmacode – minimum bar width

Parameter name	dbwi				
Unit	-				
Data type	int				
Value					
Standard	2	Minimum	1	Maximum	100
Valid for	DCR 200i				

Description

The minimum bar width of the Pharmacode is defined with this parameter.

2.3 Extended code settings

2.3.1 General valid code settings

Minimum number of codes

Parameter name	icc				
Unit	-				
Data type	int				
Value					
Standard	1	Minimum	1	Maximum	999
Valid for	DCR 200i				

Description

The minimum number of codes to be found is set with this parameter.

Maximum number of codes

Parameter name	acc				
Unit	-				
Data type	int				
Value					
Standard	10	Minimum	1	Maximum	999
Valid for	DCR 200i				

Description

The maximum number of codes to be found is set with this parameter.

2.3.2   Extended 1D-code settings

Max. no. of 1D labels

Parameter name	mc1				
Unit	-				
Data type	int				
Value					
Standard	99	Minimum	1	Maximum	100
Valid for	DCR 200i				

Description

This parameter specifies the maximum number of 1D-codes to be searched for in an image.

2.3.3   Color mode

Parameter name	cm1		
Unit	-		
Data type	enum		
Value			
Standard	1	Values	1 - 3
Valid for	DCR 200i		

Description

This parameter specifies which color mode the code has with respect to the background. If both can occur, automatic can be selected.

- 1: Black on white
- 2: White on black
- 3: Automatic

2.3.4   Extended 2D-code settings

Max. no. of 2D labels

Parameter name	mc2				
Unit	-				
Data type	int				
Value					
Standard	99	Minimum	1	Maximum	100
Valid for	DCR 200i				

Description

This parameter specifies the maximum number of 2D-codes to be searched for in an image.

Color mode

Parameter name	cm2		
Unit	-		
Data type	enum		
Value			
Standard	3	Values	1 - 3
Valid for	DCR 200i		

Description

This parameter specifies which color mode the code has with respect to the background. If both can occur, automatic can be selected.

- 1: Black on white
- 2: White on black
- 3: Automatic

Mirrored

Parameter name	mim		
Unit	-		
Data type	enum		
Value			
Standard	3	Values	1 - 3
Valid for	DCR 200i		

Description

This parameter specifies whether the 2D-code is printed normally or mirrored. If both can occur, automatic can be selected.

- 1: Normal
- 2: Mirrored
- 3: Automatic

2.4   Reference

2.4.1   Activate code comparison

Parameter name	cver		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

Code comparison can be activated or deactivated with this parameter.

2.4.2 The comparison string contains regular expressions

Parameter name	ure		
Unit	-		
Data type	bool		
Value			
Standard	-	Values	TRUE FALSE
Valid for	DCR 200i		

Description

This parameter can be used to specify whether the comparison string contains regular expressions.

2.4.3 Comparison string

Parameter name	vmcd				
Unit	-				
Data type	string				
Value					
Standard	Empty string	Minimum	-	Maximum	-
Valid for	DCR 200i				

Description

The comparison string can be specified with this parameter.

2.5 Marker

2.5.1 Marking

Parameter name	rfht				
Unit	-				
Data type	int				
Value					
Standard	2	Minimum	0	Maximum	2
Valid for	IPS 200i. Valid for the currently active program.				

Description

This parameter specifies whether a light marker (reflector) or dark marker (hole) is detected. If both can occur, light or dark can be selected.

- 0: Dark
- 1: Light
- 2: Light or dark

2.5.2   Distance to marker

Parameter name	rfds				
Unit	mm				
Data type	int				
Value					
Standard	300	Minimum	0	Maximum	10000
Valid for	IPS 200i. Valid for the currently active program.				

Description

This parameter specifies the distance from the sensor to the marker.

2.5.3   Marker diameter

Parameter name	rfdi				
Unit	mm				
Data type	float				
Value					
Standard	13.00	Minimum	0.00	Maximum	10000.00
Valid for	IPS 200i. Valid for the currently active program.				

Description

This parameter specifies the diameter of the marker.

2.5.4   Marker tolerance

Parameter name	rfdt				
Unit	%				
Data type	int				
Value					
Standard	15	Minimum	10	Maximum	40
Valid for	IPS 200i. Valid for the currently active program.				

Description

This parameter specifies the percentage (%) by which the marker diameter may be smaller or larger to still be detected as a valid marker.

2.5.5   Offset X

Parameter name	rfox				
Unit	mm				
Data type	float				
Value					
Standard	0.00	Minimum	-10000.00	Maximum	10000
Valid for	IPS 200i. Valid for the currently active program.				

Description

This parameter specifies the offset that is taken into account in the X-direction during positioning, e.g., when moving goods in and out of storage.

2.5.6   Offset Y

Parameter name	rfoy				
Unit	mm				
Data type	float				
Value					
Standard	0.00	Minimum	-10000.00	Maximum	10000
Valid for	IPS 200i. Valid for the currently active program.				

Description

This parameter specifies the offset that is taken into account in the Y-direction during positioning, e.g., when moving goods in and out of storage.

2.5.7   Tolerance X

Parameter name	rftx				
Unit	mm				
Data type	float				
Value					
Standard	4.00	Minimum	0.00	Maximum	10000.00
Valid for	IPS 200i. Valid for the currently active program.				

Description

This parameter specifies how large the tolerance range is in the X-direction. *Tolerance X* and *tolerance Y* form a symmetric area around the nominal position. If the detected center of the marker (actual position) is located within the tolerance area, all four switching outputs are active for positioning.

2.5.8 Tolerance Y

Parameter name	rfty				
Unit	mm				
Data type	float				
Value					
Standard	4.00	Minimum	0.00	Maximum	10000.00
Valid for	IPS 200i. Valid for the currently active program.				

Description

This parameter specifies how large the tolerance range is in the Y-direction. *Tolerance X* and *tolerance Y* form a symmetric area around the nominal position. If the detected center of the marker (actual position) is located within the tolerance area, all four switching outputs are active for positioning.

2.5.9 Quality threshold

Parameter name	rfgt				
Unit	%				
Data type	int				
Value					
Standard	90	Minimum	0	Maximum	100
Valid for	IPS 200i. Valid for the currently active program.				

Description

This parameter is used to set the threshold, which, if not met, results in the quality being classified as bad. This switching can, for example, be set on an output.

2.6 Region of interest (ROI)

2.6.1 Position / size

Parameter name	shp				
Unit	-				
Data type	string				
Value					
Standard	DEFAULT	Minimum	-	Maximum	-
Valid for	DCR 200i and IPS 200i. With the IPS 200i: valid for the currently active program.				

Description

The ROI is deleted with the value DEFAULT. An ROI is set with the value **rect[(X(upper left);Y(upper left))(X(upper right);Y(upper right))(X(lower right);Y(lower right))(X(lower left);Y(lower left))]**. The values correspond to the pixels on the screen and are to be specified to 3 decimal places.

Example:

rect[(102,667;77,333)(974,667;77,333)(974,667;741,333)(102,667;741,333)]