

# INSS Component and Validator

Link towards TFS: User Story 58500.

Info for analyst.

As user of a web application, I must be able to enter a correct INSS, using a visual component on the screen.

Must be revalidated, because it was changed.  
@ Vincent Van De Walle

- Content of page can only be changed after new validation.
- Link to future user stories will be updated without validation.

## Goal of User Story

- Having checks on a filled in INSS number.

## Used definitions and Three Letter Words

Link towards overview: (Glossary)

- INSS.

## Precedents - User Stories that call this functionality

- Building block: Input Text Component (Link) (User Story 58545).
- Building block: It is possible that an error message is linked to it: Error Label Component (Link) (User Story 60112).
- Building block: It is possible that a success message is linked to it: Success Label Component (Link) (User Story 60112).

## Scenarios

- Checks: On being a valid number.
- Checks: CheckDigits.
- Action: Having a correct format.
- Action: Copy Pasting and typing.
- Content: Month.
- Content: Day.
- Content: FollowNumber.
- Checks: Date in the future.

Every Rule defined below can be used in combination with other Rules. The complete check are all the rules together.

Checks are executed	Examples	Results Examples
<ul style="list-style-type: none"><li>• The moment you have lost focus on the component.</li></ul>	<ul style="list-style-type: none"><li>• When incorrect value is entered, show warning that it is wrong. (Warning in UX element)</li><li>• The warning labels (and translations) can differ on where the component is used.</li></ul>	
<b>Format (# represents a digit)</b>  Format: ##.##.##-##.## (Year).(Month).(Day)-(FollowNumber). (CheckDigits)	<ul style="list-style-type: none"><li>• 82.03.20-153.20</li><li>• 79.06.12-403.65</li></ul>	
<b>Only typing or copy pasting digits are allowed</b>  It should be impossible to type or copy paste other characters than (0..9).	<b>Examples (starting point is empty INSS)</b> <ul style="list-style-type: none"><li>• Typing / Copy "ABC".</li><li>• Typing / Copy "ABC111".</li><li>• Typing / Copy "77.10.31-285.84"</li><li>• Typing / Copy "77103128584"</li></ul>	<b>Results Examples</b> <ul style="list-style-type: none"><li>• "ABC" Empty field with no error warning.</li><li>• "ABC111" Value "111" is shown with error warning.</li><li>• "77.10.31-285.84" Value "77.10.31-285.84" is shown, no warning.</li><li>• "77103128584" Value "77.10.31-285.84" is shown, no warning.</li></ul>

Month	Examples	Results Examples
Can be the values between (00, 01 .. 11, 12) and (20 .. 32) and (40 .. 52).  • Border values included.	<ul style="list-style-type: none"> <li>• 00</li> <li>• 12</li> <li>• 35</li> <li>• 51</li> <li>• 88</li> </ul>	<ul style="list-style-type: none"> <li>• 00 Accepted</li> <li>• 12 Accepted</li> <li>• 35 Not Accepted</li> <li>• 51 Accepted</li> <li>• 88 Not Accepted</li> </ul>
Day	Examples	Results Examples
Can be the values between (00, 01 .. 30, 31).  • Border values included.	<ul style="list-style-type: none"> <li>• 00</li> <li>• 15</li> <li>• 32</li> </ul>	<ul style="list-style-type: none"> <li>• 00 Accepted</li> <li>• 15 Accepted</li> <li>• 32 Not Accepted</li> </ul>
FollowNumber	Examples	Results Examples
Can be the values between (001, 002 .. 997, 998).  • Border values included.	<ul style="list-style-type: none"> <li>• 000</li> <li>• 001</li> <li>• 500</li> <li>• 999</li> </ul>	<ul style="list-style-type: none"> <li>• 000 Not Accepted</li> <li>• 001 Accepted</li> <li>• 500 Accepted</li> <li>• 999 Not Accepted</li> </ul>
CheckDigits	Examples	Results Examples
The first 9 digits from INSS formed with (Year)(Month)(Day)(FollowNumber) are used to calculate the (CheckDigits).  I call this 9 digits the basenumber.	<p>Starting point is given INSS "02.04.20-789.68"</p> <p>The basenumber is "020420789"</p> <ul style="list-style-type: none"> <li>• Take the modulo of basenumber by 97 58 (a)</li> <li>• <math>97 - 58 \text{ (a)} = 39</math></li> <li>• 39 is different than CheckDigits 68 <ul style="list-style-type: none"> <li>• 02 is not representing 1902</li> </ul> </li> <li>• The basenumber becomes "2020420789"</li> <li>Take the modulo of basenumber by 97 29 (b)</li> <li>• <math>97 - 29 \text{ (b)} = 68</math></li> <li>• 68 is equal with CheckDigits 68 <ul style="list-style-type: none"> <li>• 02 represents 2002</li> </ul> </li> </ul> <p>The given INSS is correct.</p>	<ul style="list-style-type: none"> <li>• 02.04.20-789.68 Accepted</li> <li>• 02.04.20-789.39 Accepted</li> <li>• 77.10.31-285.84 Accepted</li> <li>• 82.03.20-153.20 Accepted</li> <li>• 90.09.27-200.70 Accepted</li> <li>• 91.09.05-631.30 Not Accepted</li> <li>• 03.08.12-303.69 Not Accepted</li> <li>• 00.02.15-409.28 Accepted</li> <li>• 00.02.15-409.57 Accepted</li> <li>• 00.02.15-409.55 Not Accepted</li> <li>• 85.12.18-355.04 Accepted</li> <li>• 92.68.05-667.39 Not Accepted</li> <li>• 92.08.34-667.10 Not Accepted</li> <li>• 91.01.30-999.19 Not Accepted</li> <li>• 00.00.00-998.69 Accepted</li> <li>• 00.00.00-998.01 Accepted</li> <li>• 70.02.29-123.06 Accepted</li> </ul>

Date in the future	Examples	Results Examples
We want to check that the date of birth is not a date in the future. When the date of birth is in the future, we show an error message.  How to calculate the date of birth out of the INSS, can be found in this Confluence page.	<ul style="list-style-type: none"> <li>• 02.04.20-789.68</li> <li>• 70.02.29-123.35</li> </ul>	<ul style="list-style-type: none"> <li>• 02.04.20-789.68 Accepted</li> <li>• 70.02.29-123.35 Correct INSS, but not accepted because it represents a date in the future. An error message is shown.</li> </ul>

## Dependents - User Stories that are based on this functionality

- All screens where an INSS is needed.

## Translations

Item	English	Dutch	French
Error message	No valid national number	Geen geldig rijksregisternummer	Le numéro national est invalide
Error message	The national number contains a date of birth in the future. This is not possible.	Het rijksregisternummer bevat een geboortedatum in de toekomst. Dit is niet mogelijk.	Le numéro national contient une date de naissance dans le futur. Ce n'est pas possible.

## Acceptance Criteria

- I got the error messages / warnings in the correct language as defined for the UX component.
- All examples in this document are executed and passes.