



# IS interfaces

## 8. Digital inputs – signal isolator

Principle of a galvanic insulation and reminders concerning I.S.

General specifications for galvanic insulation interfaces

Selection guide

Use of galvanic insulation

Table of equivalent references according to type of assembly

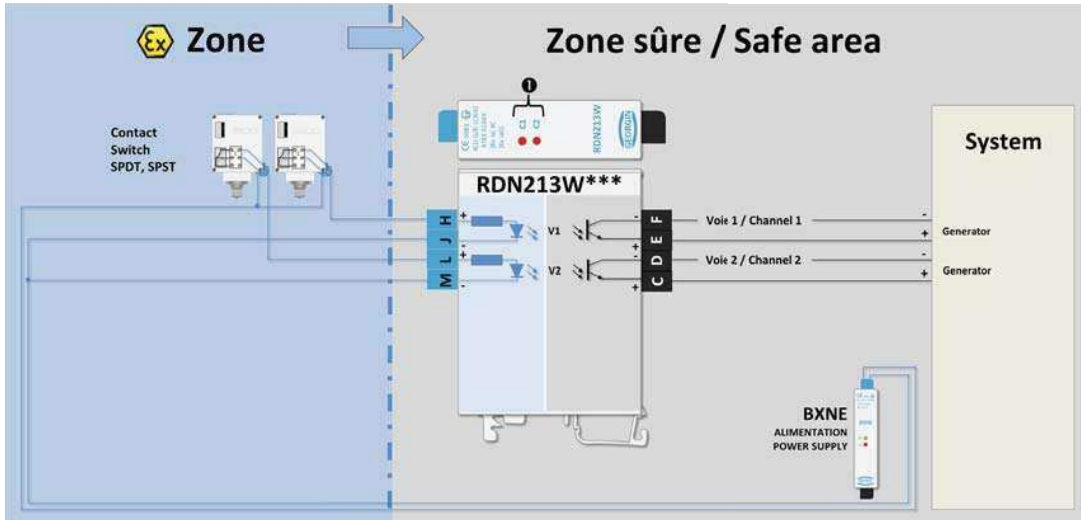
Ref.	Description (see technical data sheet for further information)	IS parameters ATEX marking																													
<b>RDN310</b>	<p>The RDN213W is a digital signal isolator with two independent channels. This intrinsically safe, galvanic-insulated separator uses opto-isolators to transfer the signal from the hazardous area to the safe area. The module operates without a power supply: the voltage source comes from the hazardous area.</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Model</th> <th>Power supply</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td rowspan="2">RDN</td> <td rowspan="2">213</td> <td rowspan="2">W</td> <td rowspan="2">2 channels</td> <td>Opto-isolator IS input / NIS output</td> </tr> <tr> <td>Cage clamp terminals</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>3</td> <td>24 V DC</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>7</td> <td>12 V DC</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>8</td> <td>5 V DC</td> </tr> </tbody> </table> <p>❶ 2 x red LED to indicate that the output transistors (opto-isolators) are conductive.</p>	Type	Model	Power supply	Input	Output	RDN	213	W	2 channels	Opto-isolator IS input / NIS output	Cage clamp terminals					3	24 V DC					7	12 V DC					8	5 V DC	<p>Maximum current on intrinsic safety circuit: 100 mA</p> <p>Marking: II(1)G [Ex ia] IIC II(1)D [Ex iaD] IIC Certificate: 02ATEX6104X</p>
Type	Model	Power supply	Input	Output																											
RDN	213	W	2 channels	Opto-isolator IS input / NIS output																											
				Cage clamp terminals																											
				3	24 V DC																										
				7	12 V DC																										
				8	5 V DC																										
<b>RDN410</b>	<p>Identical to the RDN213W, the RDN213V has four independent channels.</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Model</th> <th>Power supply</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td rowspan="2">RDN</td> <td rowspan="2">213</td> <td rowspan="2">V</td> <td rowspan="2">4 channels</td> <td>Opto-isolator IS input / NIS output</td> </tr> <tr> <td>Cage clamp terminals</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>3</td> <td>24 V DC</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>7</td> <td>12 V DC</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>8</td> <td>5 V DC</td> </tr> </tbody> </table> <p>❶ 4 x red LED to indicate that the output transistors (opto-isolators) are conductive.</p>	Type	Model	Power supply	Input	Output	RDN	213	V	4 channels	Opto-isolator IS input / NIS output	Cage clamp terminals					3	24 V DC					7	12 V DC					8	5 V DC	<p>Maximum current on intrinsic safety circuit: 100 mA</p> <p>Marking: II(1)G [Ex ia] IIC II(1)D [Ex iaD] IIC Certificate: 02ATEX6104X</p>
Type	Model	Power supply	Input	Output																											
RDN	213	V	4 channels	Opto-isolator IS input / NIS output																											
				Cage clamp terminals																											
				3	24 V DC																										
				7	12 V DC																										
				8	5 V DC																										



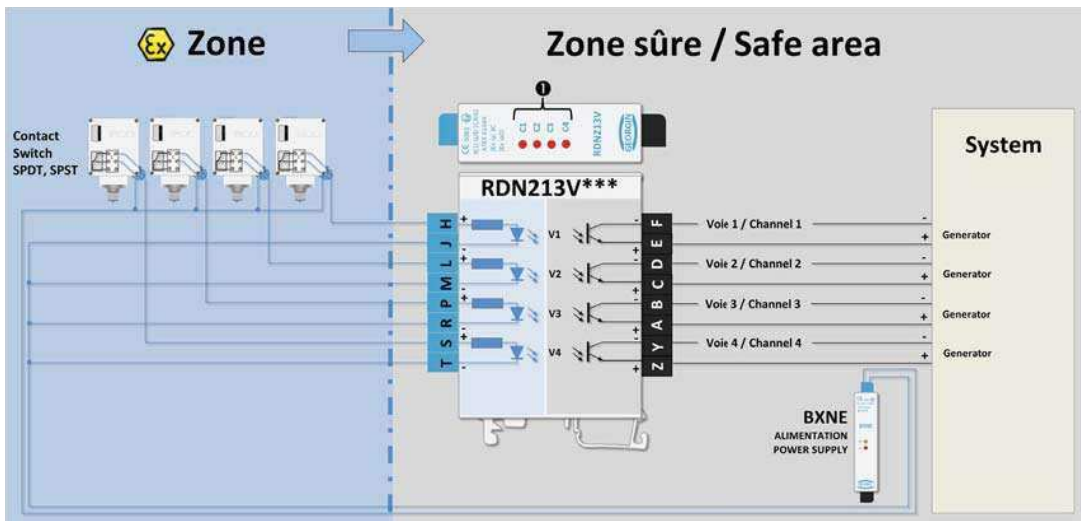


## Explanatory diagram

I/O



2 Inputs / 2 Opto-isolator Outputs



4 Inputs / 4 Opto-isolator Outputs

Principle of a galvanic insulation and reminders concerning I.S.

General specifications for galvanic insulation interfaces

Selection guide

Use of galvanic insulation

Table of equivalent references according to type of assembly