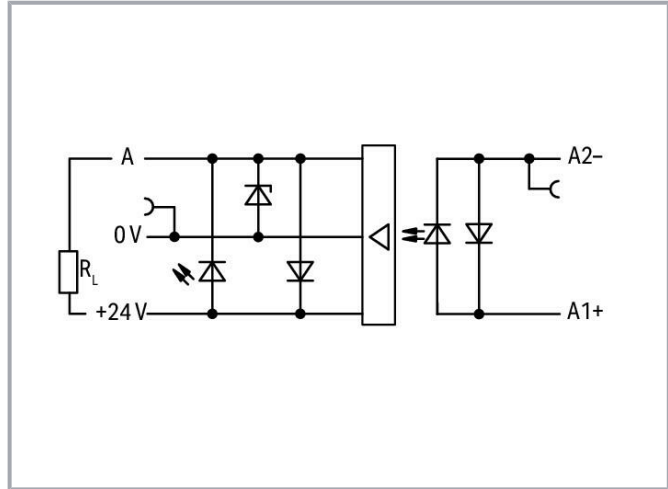


**Data sheet | Item number: 859-702**

Optocoupler module; Nominal input voltage: 5 VDC; Output voltage range: 0 ... 24 VDC; Limiting continuous current: 0.5 A; Frequency: 10 kHz; Module width: 6 mm; gray

[www.wago.com/859-702](http://www.wago.com/859-702)

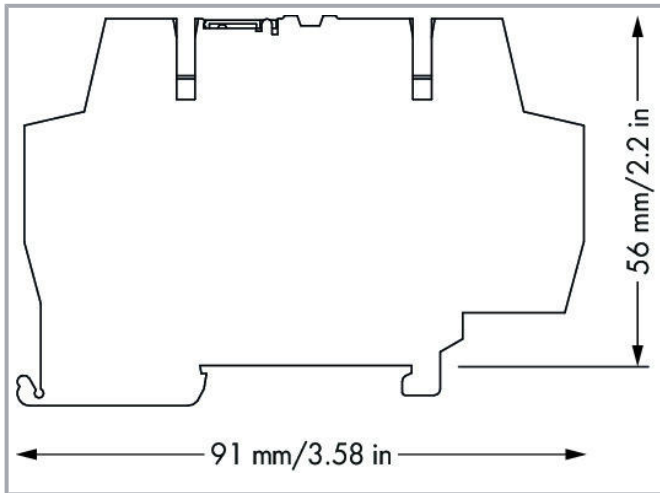


Color: —

Subject to changes. Please also observe the further product documentation!

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Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.

**Data****Notes**

## Note

Optocouplers and solid state relays are designed for use in signal processing networks, which are not supplied by the low-voltage power supply networks.

**Technical data**

|   |   |
|---|---|
| Circuit type  | 3-wire connection<br>Low-side switching |
| Limiting continuous current                         | 0.5 A                                   |
| Nominal output voltage                              | DC 24 V                                 |
| Output voltage range                                | DC 20 ... 30 V                          |
| Voltage drop at output (max.)                       | ≤ DC 1.2 V                              |
| Leakage current at rated voltage                    | ≤ 10 μA                                 |
| Output closed-circuit current (without load) (max.) | 11 mA                                   |
| Turn-on time  | ≤ 7 μs                                  |
| Turn-off time                                       | ≤ 15 μs                                 |
| Switching frequency                                 | ≤ 10 kHz                                |
| Nominal input voltage $U_N$                         | DC 5 V                                  |
| Input voltage range (low level)                     | DC 0 ... 1 V                            |
| Input voltage range (high level)                    | DC 4 ... 6.25 V                         |
| Nominal input current at $U_N$                      | 9.6 mA                                  |

Subject to changes. Please also observe the further product documentation!

|   |  |
|---|--|
| Rated voltage   | 300 V                                  |
| Overvoltage category                                  | II                                     |
| Pollution degree                                      | 2                                      |
| Dielectric strength, control/load circuit (AC, 1 min) | 2.5 kVrms                              |
| Insulation type (control/load circuit)                | Basic insulation                       |
| Insulation type (adjacent devices)                    | Reinforced insulation (safe isolation) |
| Status indicator                                      | Red LED                                |

### Connection data

|                         |  |
|-------------------------|--|
| Connection technology   | CAGE CLAMP®                                  |
| Solid conductor         | 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG |
| Fine-stranded conductor | 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG |
| Strip length            | 5 ... 6 mm / 0.2 ... 0.24 inch               |

### Physical data

|                                   |                    |
|-----------------------------------|--------------------|
| Width                             | 6 mm / 0.236 inch  |
| Height                            | 91 mm / 3.583 inch |
| Depth from upper edge of DIN-rail | 56 mm / 2.205 inch |

### Mechanical data

|               |             |
|---------------|-------------|
| Mounting type | DIN-35 rail |
|---------------|-------------|

### Material data

|           |          |
|-----------|----------|
| Color     | gray     |
| Fire load | 0.313 MJ |
| Weight    | 18.3 g   |

### Environmental requirements

|   |  |
|---|--|
| Surrounding air temperature (operation at $U_N$ ) | -25 ... 55 °C                            |
| Surrounding air temperature (storage)             | -40 ... 70 °C                            |
| Processing temperature                            | -25 ... +50 °C                           |
| Relative humidity                                 | 5 ... 95 % (no condensation permissible) |
| Operating altitude (max.)                         | 2000 m                                   |

Subject to changes. Please also observe the further product documentation!

## Standards and specifications



|                          |  |
|--------------------------|--|
| Standards/Specifications | EN 61010-2-201<br>EN 61000-6-2<br>EN 61000-6-3<br>EN 61373<br>UL 508 |
|--------------------------|--|

## Commercial data


|                       |                           |
|-----------------------|---------------------------|
| Product Group         | 6 (Interface Electronics) |
| PU (SPU)              | 1 Stück                   |
| Packaging type        | box                       |
| Country of origin     | DE                        |
| GTIN                  | 4055143604673             |
| Customs tariff number | 85365005000               |

## Approvals / Certificates

### Ex-Approvals

| Logo   | Approval   | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
| <br>Ex nA IIC T4 Gc | CCCEX<br>CQST/CNEx   | CNCA-C23-01              | 2021312304000982 |
|                      | UL<br>Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | ANSI/ISA 12.12.01        | E198726          |

### UL-Approvals

| Logo   | Approval   | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
|  | UL<br>UL International Netherlands B.V. (ORDINARY LOCATIONS) | UL 508                   | E175199<br>Sec.4 |

## Optional accessories

### Testing and measuring

Testing accessories

Subject to changes. Please also observe the further product documentation!



**Item no.: 859-500**  
Test pin; 1 mm Ø; with solder connection for test wire

[www.wago.com/859-500](http://www.wago.com/859-500)

**Jumpers**

Jumper



**Item no.: 859-408**  
Jumper; for jumper slot; 8-way; insulated; light gray

[www.wago.com/859-408](http://www.wago.com/859-408)



**Item no.: 859-404/000-005**  
Jumper; for jumper slot; 4-way; insulated; red

[www.wago.com/859-404/000-005](http://www.wago.com/859-404/000-005)



**Item no.: 859-404/000-006**  
Jumper; for jumper slot; 4-way; insulated; blue

[www.wago.com/859-404/000-006](http://www.wago.com/859-404/000-006)



**Item no.: 859-405/000-005**  
Jumper; for jumper slot; 5-way; insulated; red

[www.wago.com/859-405/000-005](http://www.wago.com/859-405/000-005)



**Item no.: 859-405/000-029**  
Jumper; for jumper slot; 5-way; insulated; yellow

[www.wago.com/859-405/000-029](http://www.wago.com/859-405/000-029)



**Item no.: 859-405**  
Jumper; for jumper slot; 5-way; insulated; light gray

[www.wago.com/859-405](http://www.wago.com/859-405)



**Item no.: 859-404/000-029**  
Jumper; for jumper slot; 4-way; insulated; yellow

[www.wago.com/859-404/000-029](http://www.wago.com/859-404/000-029)



**Item no.: 859-406**  
Jumper; for jumper slot; 6-way; insulated; light gray

[www.wago.com/859-406](http://www.wago.com/859-406)



**Item no.: 859-405/000-006**  
Jumper; for jumper slot; 5-way; insulated; blue

[www.wago.com/859-405/000-006](http://www.wago.com/859-405/000-006)



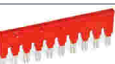
**Item no.: 859-406/000-005**  
Jumper; for jumper slot; 6-way; insulated; red

[www.wago.com/859-406/000-005](http://www.wago.com/859-406/000-005)



**Item no.: 859-409/000-029**  
Jumper; for jumper slot; 9-way; insulated; yellow



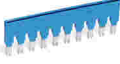











[www.wago.com/859-409/000-029](http://www.wago.com/859-409/000-029)

















**Item no.: 859-410/000-005**  
Jumper; for jumper slot; 10-way; insulated; red

[www.wago.com/859-410/000-005](http://www.wago.com/859-410/000-005)

Subject to changes. Please also observe the further product documentation!

|  |  |  |
|--|--|--|
|    | <b>Item no.: 859-410/000-029</b><br>Jumper; for jumper slot; 10-way; insulated; yellow | <a href="http://www.wago.com/859-410/000-029">www.wago.com/859-410/000-029</a> |
|    | <b>Item no.: 859-410</b><br>Jumper; for jumper slot; 10-way; insulated; light gray     | <a href="http://www.wago.com/859-410">www.wago.com/859-410</a>                 |
|    | <b>Item no.: 859-410/000-006</b><br>Jumper; for jumper slot; 10-way; insulated; blue   | <a href="http://www.wago.com/859-410/000-006">www.wago.com/859-410/000-006</a> |
|     | <b>Item no.: 859-403/000-005</b><br>Jumper; for jumper slot; 3-way; insulated; red     | <a href="http://www.wago.com/859-403/000-005">www.wago.com/859-403/000-005</a> |
|     | <b>Item no.: 859-402/000-029</b><br>Jumper; for jumper slot; 2-way; insulated; yellow  | <a href="http://www.wago.com/859-402/000-029">www.wago.com/859-402/000-029</a> |
|     | <b>Item no.: 859-403/000-029</b><br>Jumper; for jumper slot; 3-way; insulated; yellow  | <a href="http://www.wago.com/859-403/000-029">www.wago.com/859-403/000-029</a> |
|     | <b>Item no.: 859-403/000-006</b><br>Jumper; for jumper slot; 3-way; insulated; blue    | <a href="http://www.wago.com/859-403/000-006">www.wago.com/859-403/000-006</a> |
|    | <b>Item no.: 859-408/000-005</b><br>Jumper; for jumper slot; 8-way; insulated; red     | <a href="http://www.wago.com/859-408/000-005">www.wago.com/859-408/000-005</a> |
|   | <b>Item no.: 859-408/000-029</b><br>Jumper; for jumper slot; 8-way; insulated; yellow  | <a href="http://www.wago.com/859-408/000-029">www.wago.com/859-408/000-029</a> |
|   | <b>Item no.: 859-409</b><br>Jumper; for jumper slot; 9-way; insulated; light gray      | <a href="http://www.wago.com/859-409">www.wago.com/859-409</a>                 |
|   | <b>Item no.: 859-408/000-006</b><br>Jumper; for jumper slot; 8-way; insulated; blue    | <a href="http://www.wago.com/859-408/000-006">www.wago.com/859-408/000-006</a> |
|   | <b>Item no.: 859-403</b><br>Jumper; for jumper slot; 3-way; insulated; light gray      | <a href="http://www.wago.com/859-403">www.wago.com/859-403</a>                 |
|   | <b>Item no.: 859-409/000-005</b><br>Jumper; for jumper slot; 9-way; insulated; red     | <a href="http://www.wago.com/859-409/000-005">www.wago.com/859-409/000-005</a> |
|  | <b>Item no.: 859-404</b><br>Jumper; for jumper slot; 4-way; insulated; light gray      | <a href="http://www.wago.com/859-404">www.wago.com/859-404</a>                 |


Subject to changes. Please also observe the further product documentation!


|  |  |  |
|--|--|--|
|  | <b>Item no.: 859-409/000-006</b><br>Jumper; for jumper slot; 9-way; insulated; blue                                  | <a href="http://www.wago.com/859-409/000-006">www.wago.com/859-409/000-006</a> |
|     | <b>Item no.: 859-402/000-006</b><br>Jumper; for jumper slot; 2-way; insulated; blue                                  | <a href="http://www.wago.com/859-402/000-006">www.wago.com/859-402/000-006</a> |
|     | <b>Item no.: 859-402</b><br>Jumper; for jumper slot; 2-way; insulated; light gray                                    | <a href="http://www.wago.com/859-402">www.wago.com/859-402</a>                 |
|     | <b>Item no.: 859-402/000-005</b><br>Jumper; for jumper slot; 2-way; insulated; red                                   | <a href="http://www.wago.com/859-402/000-005">www.wago.com/859-402/000-005</a> |
|    | <b>Item no.: 859-406/000-006</b><br>Jumper; for jumper slot; 6-way; insulated; blue                                  | <a href="http://www.wago.com/859-406/000-006">www.wago.com/859-406/000-006</a> |
|    | <b>Item no.: 859-406/000-029</b><br>Jumper; for jumper slot; 6-way; insulated; signal yellow                         | <a href="http://www.wago.com/859-406/000-029">www.wago.com/859-406/000-029</a> |
|    | <b>Item no.: 859-407/000-006</b><br>Jumper; for jumper slot; 7-way; insulated; blue                                  | <a href="http://www.wago.com/859-407/000-006">www.wago.com/859-407/000-006</a> |
|   | <b>Item no.: 859-407/000-005</b><br>Jumper; for jumper slot; 7-way; insulated; red                                   | <a href="http://www.wago.com/859-407/000-005">www.wago.com/859-407/000-005</a> |
|  | <b>Item no.: 859-407/000-029</b><br>Jumper; for jumper slot; 7-way; insulated; yellow                                | <a href="http://www.wago.com/859-407/000-029">www.wago.com/859-407/000-029</a> |
|  | <b>Item no.: 859-407</b><br>Jumper; for jumper slot; 7-way; insulated; light gray                                    | <a href="http://www.wago.com/859-407">www.wago.com/859-407</a>                 |
| <b>Ferrule</b>   |  |  |
| Ferrule  |  |  |
|   | <b>Item no.: 216-223</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red       | <a href="http://www.wago.com/216-223">www.wago.com/216-223</a>                 |
|   | <b>Item no.: 216-222</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray   | <a href="http://www.wago.com/216-222">www.wago.com/216-222</a>                 |
|   | <b>Item no.: 216-221</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white   | <a href="http://www.wago.com/216-221">www.wago.com/216-221</a>                 |
|   | <b>Item no.: 216-224</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black   | <a href="http://www.wago.com/216-224">www.wago.com/216-224</a>                 |
|   | <b>Item no.: 216-321</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow | <a href="http://www.wago.com/216-321">www.wago.com/216-321</a>                 |


Subject to changes. Please also observe the further product documentation!


|   |   |  |
|---|---|--|
|  | <b>Item no.: 216-322</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green | <a href="http://www.wago.com/216-322">www.wago.com/216-322</a> |
|---|---|--|


**Marking accessories**


|   |   |  |
|---|---|--|
| Marking device  |   |  |
|  | <b>Item no.: 210-110</b><br>Fiber-tip pen | <a href="http://www.wago.com/210-110">www.wago.com/210-110</a> |


|  |  |  |
|--|--|--|
| Marker   |  |  |
|  | <b>Item no.: 2009-145</b><br>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white | <a href="http://www.wago.com/2009-145">www.wago.com/2009-145</a> |

|  |   |  |
|--|---|--|
|  | <b>Item no.: 248-501</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white | <a href="http://www.wago.com/248-501">www.wago.com/248-501</a> |
|--|---|--|


|  |   |  |
|--|---|--|
|  | <b>Item no.: 248-504</b><br>Mini-WSB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white | <a href="http://www.wago.com/248-504">www.wago.com/248-504</a> |
|--|---|--|

|  |   |  |
|--|---|--|
|  | <b>Item no.: 248-503</b><br>Mini-WSB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white | <a href="http://www.wago.com/248-503">www.wago.com/248-503</a> |
|--|---|--|


|   |   |  |
|---|---|--|
|  | <b>Item no.: 248-506</b><br>Mini-WSB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white | <a href="http://www.wago.com/248-506">www.wago.com/248-506</a> |
|---|---|--|

|   |  |  |
|---|--|--|
|  | <b>Item no.: 248-502</b><br>Mini-WSB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white | <a href="http://www.wago.com/248-502">www.wago.com/248-502</a> |
|---|--|--|

|                  |  |  |
|------------------|--|--|
| <b>End plate</b> |  |  |
| End plate        |  |  |

|  |  |  |
|--|--|--|
|  | <b>Item no.: 859-525</b><br>End and intermediate plate; 1 mm thick; gray | <a href="http://www.wago.com/859-525">www.wago.com/859-525</a> |
|--|--|--|

|                |  |  |
|----------------|--|--|
| <b>Tool</b>    |  |  |
| Operating tool |  |  |

|   |  |  |
|---|--|--|
|  | <b>Item no.: 210-720</b><br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured | <a href="http://www.wago.com/210-720">www.wago.com/210-720</a> |
|---|--|--|

**Downloads**

**Documentation**

**Bid Text**

|              |              |         |          |
|--------------|--------------|---------|----------|
| 859-702      | Feb 20, 2019 | docx    | Download |
| docx - Datei |              | 15.6 kB |          |

859-702  
Subject to changes. Please also observe the further product documentation!





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|             |              |               |          |
|-------------|--------------|---------------|----------|
| X81 - Datei | Feb 19, 2019 | xml<br>3.9 kB | Download |
|-------------|--------------|---------------|----------|

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#### Instruction Leaflet

|                                    |                         |               |          |
|------------------------------------|-------------------------|---------------|----------|
| Relay modules, Optocoupler modules | V 1.2.0<br>Aug 30, 2019 | pdf<br>2.2 MB | Download |
|------------------------------------|-------------------------|---------------|----------|

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#### Additional Information

|  |         |                 |          |
|--|---------|-----------------|----------|
| Disposal; Electrical and electronic equipment, Packaging | V 1.0.0 | pdf<br>265.8 kB | Download |
|--|---------|-----------------|----------|

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#### CAD/CAE-Data

##### CAD data

|                      |  |     |          |
|----------------------|--|-----|----------|
| 2D/3D Models 859-702 |  | URL | Download |
|----------------------|--|-----|----------|

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##### CAE data

|                           |  |     |          |
|---------------------------|--|-----|----------|
| EPLAN Data Portal 859-702 |  | URL | Download |
|---------------------------|--|-----|----------|

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|                        |  |     |          |
|------------------------|--|-----|----------|
| WSCAD Universe 859-702 |  | URL | Download |
|------------------------|--|-----|----------|

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|                      |  |     |          |
|----------------------|--|-----|----------|
| ZUKEN Portal 859-702 |  | URL | Download |
|----------------------|--|-----|----------|

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#### Environmental Product Compliance

##### Compliance Search

|  |  |     |          |
|--|--|-----|----------|
| Environmental Product Compliance 859-702 |  | URL | Download |
|--|--|-----|----------|

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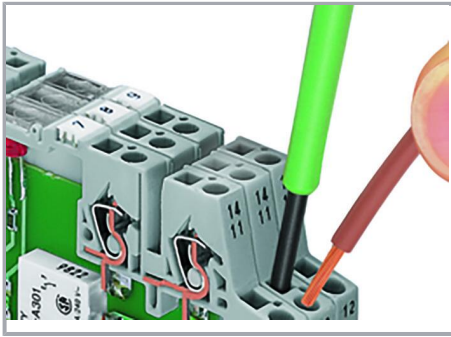
Optocoupler module; Nominal input voltage: 5 VDC; Output voltage range: 0 ... 24 VDC; Limiting continuous current: 0.5 A; Frequency: 10 kHz; Module width: 6 mm; gray

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#### Installation Notes

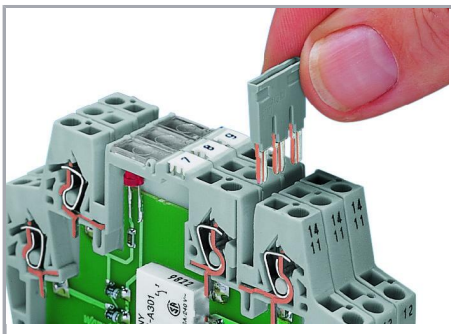
##### Conductor termination

Subject to changes. Please also observe the further product documentation!



Conductor termination

### Commoning



Easy commoning using adjacent jumpers

### Marking



Marking via Mini-WSB Quick Marking System

Subject to changes. Please also observe the further product documentation!