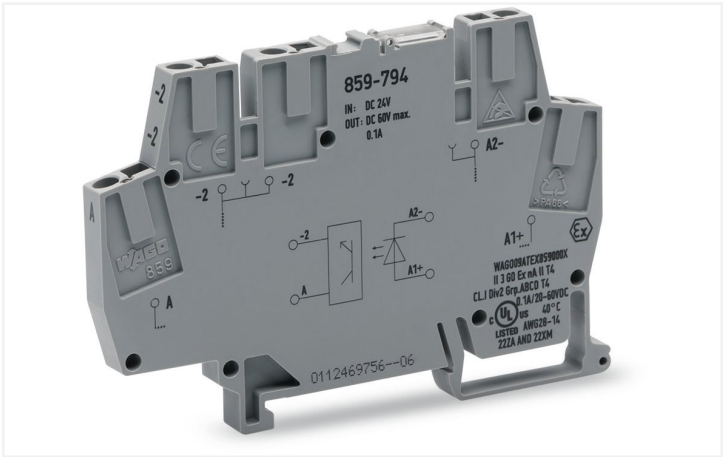


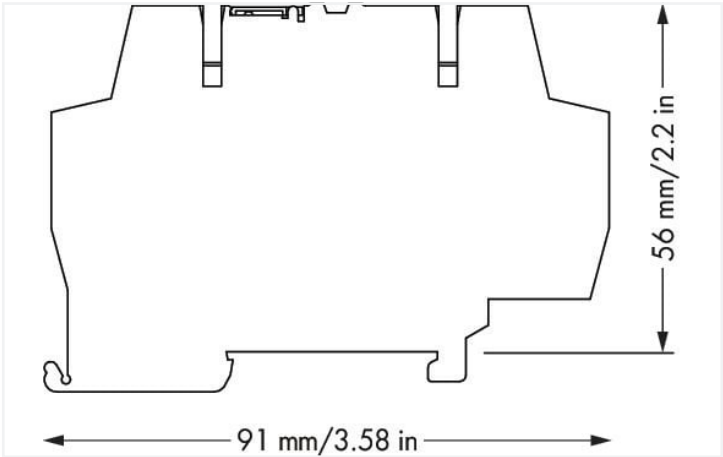
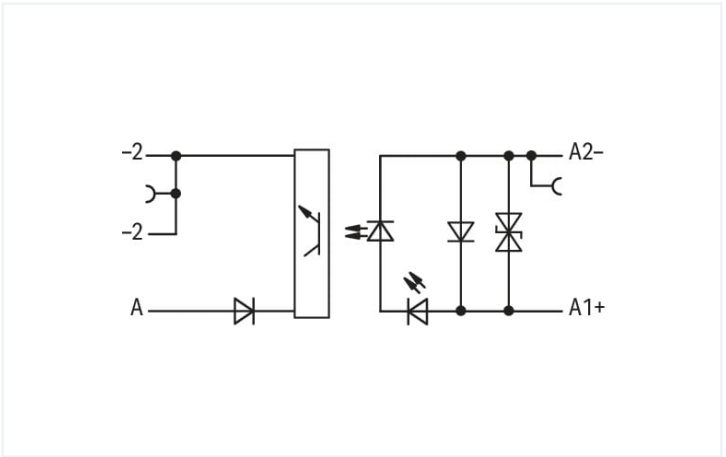
Data Sheet | Item Number: 859-794

Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 9 ... 60 VDC; Limiting continuous current: 0.1 A; Railway; Module width: 6 mm; gray

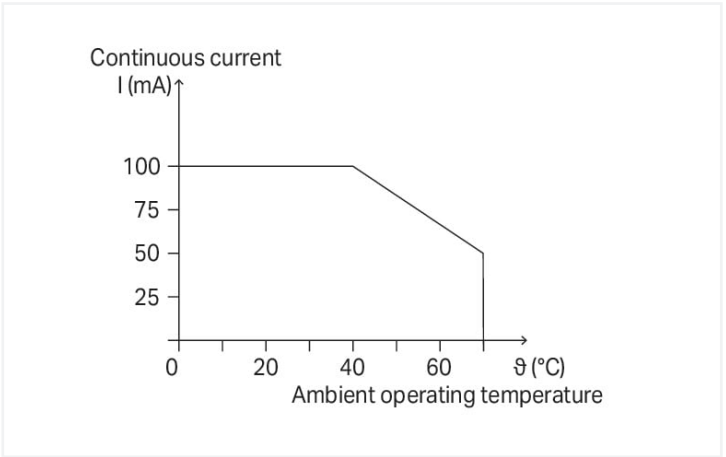
<https://www.wago.com/859-794>



Color: ■ gray



Dimensions in mm



Current-carrying capacity curve

| 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                   |                |                                  |                   |
|----------------------------------|----------------|----------------------------------|-------------------|
| Control circuit                  |                | Load circuit                     |                   |
| Nominal input voltage $U_N$      | DC 24 V        | Circuit type                     | 2-wire connection |
| Input voltage range (low level)  | DC 0 ... 5 V   | Limiting continuous current      | 0.1 A             |
| Input voltage range (high level) | DC 16 ... 30 V | Output voltage range             | DC 9 ... 60 V     |
| Nominal input current at $U_N$   | 5 mA           | Voltage drop                     | ≤ 2 VDC           |
|                                  |                | Leakage current at rated voltage | ≤ 25 μA           |
|                                  |                | Turn-on time                     | ≤ 20 μs           |
|                                  |                | Turn-off time                    | ≤ 120 μs          |
|                                  |                | Switching frequency              | ≤ 1.5 kHz         |

### Signaling

|                  |         |
|------------------|---------|
| Status indicator | Red LED |
|------------------|---------|

### Safety and protection

|                                                             |                                                          |
|-------------------------------------------------------------|----------------------------------------------------------|
| 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 (between adjacent devices of the same type) | Reinforced insulation (safe isolation)                   |
| Insulation type (to adjacent devices of different types)    | Basic insulation                                         |
| Protection type                                             | IP20; in connected state or when using 859-525 end plate |

### 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 |
| Fine-stranded conductor; with insulated ferrule | 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG |
| Strip length                                    | 5 ... 6 mm / 0.2 ... 0.24 inches             |

### Physical data

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

### Mechanical data

|                   |                                       |
|-------------------|---------------------------------------|
| Mounting type     | DIN-35 rail                           |
| Mounting position | horizontal (standing/lying); vertical |

### Material data

|           |          |
|-----------|----------|
| Color     | gray     |
| Fire load | 0.338 MJ |
| Weight    | 17.7 g   |

### Environmental requirements

|                                                    |                                          |
|----------------------------------------------------|------------------------------------------|
| Ambient temperature (operation at U <sub>N</sub> ) | -40 ... +70 °C                           |
| Ambient temperature (storage)                      | -40 ... +70 °C                           |
| Processing temperature                             | -25 ... +50 °C                           |
| Temperature range of connection cable              | ≥ (T <sub>ambient</sub> + 20 K)          |
| Relative humidity                                  | 5 ... 95 % (no condensation permissible) |
| Operating altitude (max.)                          | 2000 m                                   |



| Standards and specifications |                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------|
| Standards/specifications     | EN 61010-2-201<br>EN 61000-6-2<br>EN 61000-6-3<br>EN 50121-3-2<br>EN 61373<br>UL 508 |

| Commercial data       |                          |
|-----------------------|--------------------------|
| Product Group         | 6 (INTERFACE ELECTRONIC) |
| eCl@ss 10.0           | 27-26-15-03              |
| eCl@ss 9.0            | 27-26-15-03              |
| ETIM 8.0              | EC001504                 |
| ETIM 7.0              | EC001504                 |
| PU (SPU)              | 10 pcs                   |
| Packaging type        | Box                      |
| Country of origin     | CN                       |
| GTIN                  | 4066966278989            |
| Customs tariff number | 85365005000              |

| Environmental Product Compliance          |                                                          |
|-------------------------------------------|----------------------------------------------------------|
| CAS-No.                                   | 7439-92-1<br>79-94-7                                     |
| REACH Candidate List Substance            | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol<br>Lead |
| RoHS Compliance Status                    | Compliant,With Exemption                                 |
| RoHS Exemption                            | 7(a)<br>7(c)-I                                           |
| SCIP notification number (Austria)        | 97e20fec-7ef8-4308-9df4-b9beadf1ef91                     |
| SCIP notification number (Belgium)        | afaadc22-038e-4c5d-ac39-69df25e85c26                     |
| SCIP notification number (Bulgaria)       | 93632ac1-b492-4946-9ed7-377e0daaed60                     |
| SCIP notification number (Czech Republic) | b9cd1975-f211-470e-b780-095c63e5f498                     |
| SCIP notification number (Denmark)        | dee75a1a-c78d-4336-b2de-81d6bff7d37a                     |
| SCIP notification number (Finland)        | f2bcdabd1-947a-4580-b997-80bd91b96611                    |
| SCIP notification number (France)         | efa2c40b-aac0-4647-8b02-79ce02e41cee                     |
| SCIP notification number (Germany)        | cc674ec4-4da2-402f-872f-414caffff011                     |
| SCIP notification number (Hungary)        | ba812f41-53db-45a6-b453-93d6ef534a9b                     |
| SCIP notification number (Italy)          | e7f6eb14-bc4e-46df-b8d3-7fbbebba411b7                    |
| SCIP notification number (Netherlands)    | 81e30e1d-6dcd-47c8-a3c3-d049af7b1761                     |
| SCIP notification number (Poland)         | 02b6ce32-a5c5-4957-be86-6b44c3b6f522                     |
| SCIP notification number (Romania)        | 15bbf093-9f9b-4fb4-be0c-e91eb4f3f17f                     |
| SCIP notification number (Sweden)         | 9a68c8aa-c768-4c87-a1ea-e685293e288d                     |

| Approvals / Certificates                                          |                |                                                            |
|-------------------------------------------------------------------|----------------|------------------------------------------------------------|
| General approvals                                                 |                | Declarations of conformity and manufacturer's declarations |
|                                                                   |                |                                                            |
| Approval                                                          | Standard       | Certificate Name                                           |
| EAC<br>Brjansker Zertifizierungs-<br>stelle                       | TP TC 020/2011 | EAC_Certificate_RU_C-<br>DE.AM02.B.00115_19                |
| UL<br>Underwriters Laboratories<br>Inc. (ORDINARY LOCATI-<br>ONS) | UL 508         | E175199 Sec.4                                              |



Approvals for hazardous areas



| Approval                                                           | Standard          | Certificate Name                      |
|--------------------------------------------------------------------|-------------------|---------------------------------------|
| CCC<br>CNEX                                                        | CNCA-C23-01       | 2021312304000982 (Ex<br>ec IIC T4 Gc) |
| UKEx<br>WAGO GmbH & Co. KG                                         | EN 60079-0        | WAGO22UKEX007X_ec                     |
| UL<br>Underwriters Laboratories<br>Inc. (HAZARDOUS LOCA-<br>TIONS) | ANSI/ISA 12.12.01 | E198726                               |

Downloads

Environmental Product Compliance

| Compliance Search                           |
|---------------------------------------------|
| Environmental Product<br>Compliance 859-794 |



Documentation

| Bid Text |            |                  |  |
|----------|------------|------------------|--|
| 859-794  | 19.02.2019 | xml<br>3.86 KB   |  |
| 859-794  | 20.02.2019 | docx<br>15.42 KB |  |

| Instruction Leaflet                     |                       |                   |  |
|-----------------------------------------|-----------------------|-------------------|--|
| CCC Ex (Additional in-<br>formation)    | 26.04.2023            | pdf<br>132.68 KB  |  |
| Relay modules, Opto-<br>coupler modules | V 2.0.0<br>19.01.2022 | pdf<br>2066.27 KB |  |

CAD/CAE-Data

| CAD data             |
|----------------------|
| 2D/3D Models 859-794 |



| CAE data                     |
|------------------------------|
| EPLAN Data Portal<br>859-794 |
| WSCAD Universe<br>859-794    |
| ZUKEN Portal 859-794         |





1 Compatible Products

1.1 Optional Accessories

1.1.1 End plate

1.1.1.1 End plate



[Item No.: 859-525](#)  
End and intermediate plate; 1 mm thick; gray

1.1.1.2 Intermediate plate



[Item No.: 859-525](#)  
End and intermediate plate; 1 mm thick; gray

1.1.2 Ferrule

1.1.2.1 Ferrule



[Item No.: 216-321](#)  
Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow



[Item No.: 216-322](#)  
Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise



[Item No.: 216-221](#)  
Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white



[Item No.: 216-222](#)  
Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray



[Item No.: 216-223](#)  
Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red



[Item No.: 216-224](#)  
Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

1.1.3 Jumper

1.1.3.1 Jumper



[Item No.: 859-410/000-006](#)  
Jumper; for jumper slot; 10-way; insulated; blue



[Item No.: 859-410](#)  
Jumper; for jumper slot; 10-way; insulated; light gray



[Item No.: 859-410/000-005](#)  
Jumper; for jumper slot; 10-way; insulated; red



[Item No.: 859-410/000-029](#)  
Jumper; for jumper slot; 10-way; insulated; yellow



[Item No.: 859-402/000-006](#)  
Jumper; for jumper slot; 2-way; insulated; blue



[Item No.: 859-402](#)  
Jumper; for jumper slot; 2-way; insulated; light gray



[Item No.: 859-402/000-005](#)  
Jumper; for jumper slot; 2-way; insulated; red



[Item No.: 859-402/000-029](#)  
Jumper; for jumper slot; 2-way; insulated; yellow



[Item No.: 859-403/000-006](#)  
Jumper; for jumper slot; 3-way; insulated; blue



[Item No.: 859-403](#)  
Jumper; for jumper slot; 3-way; insulated; light gray



[Item No.: 859-403/000-005](#)  
Jumper; for jumper slot; 3-way; insulated; red



[Item No.: 859-403/000-029](#)  
Jumper; for jumper slot; 3-way; insulated; yellow



[Item No.: 859-404/000-006](#)  
Jumper; for jumper slot; 4-way; insulated; blue



[Item No.: 859-404](#)  
Jumper; for jumper slot; 4-way; insulated; light gray



[Item No.: 859-404/000-005](#)  
Jumper; for jumper slot; 4-way; insulated; red



[Item No.: 859-404/000-029](#)  
Jumper; for jumper slot; 4-way; insulated; yellow



1.1.3.1 Jumper



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



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



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



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



**Item No.: 859-406/000-006**  
Jumper; for jumper slot; 6-way; insulated; blue



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



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



**Item No.: 859-406/000-029**  
Jumper; for jumper slot; 6-way; insulated; signal yellow



**Item No.: 859-407/000-006**  
Jumper; for jumper slot; 7-way; insulated; blue



**Item No.: 859-407**  
Jumper; for jumper slot; 7-way; insulated; light gray



**Item No.: 859-407/000-005**  
Jumper; for jumper slot; 7-way; insulated; red



**Item No.: 859-407/000-029**  
Jumper; for jumper slot; 7-way; insulated; yellow



**Item No.: 859-408/000-006**  
Jumper; for jumper slot; 8-way; insulated; blue



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



**Item No.: 859-408/000-005**  
Jumper; for jumper slot; 8-way; insulated; red



**Item No.: 859-408/000-029**  
Jumper; for jumper slot; 8-way; insulated; yellow



**Item No.: 859-409/000-006**  
Jumper; for jumper slot; 9-way; insulated; blue



**Item No.: 859-409**  
Jumper; for jumper slot; 9-way; insulated; light gray



**Item No.: 859-409/000-005**  
Jumper; for jumper slot; 9-way; insulated; red



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

1.1.4 Marking

1.1.4.1 Marker



**Item No.: 2009-145**  
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



**Item No.: 248-502**  
Mini-WSB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 248-503**  
Mini-WSB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 248-504**  
Mini-WSB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 248-506**  
Mini-WSB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white



**Item No.: 248-501**  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

1.1.4.2 Marking device



**Item No.: 210-110**  
Fiber-tip pen

## 1.1.5 Test and measurement

### 1.1.5.1 Testing accessories

**Item No.: 859-500**

WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 10 mm uninsulated; Test lead for soldering up to 0,5mm²

## 1.1.6 Tool

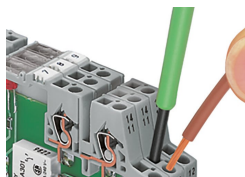
### 1.1.6.1 Operating tool

**Item No.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

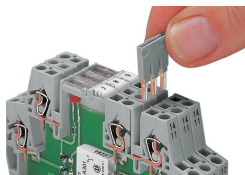
## Installation Notes

### Conductor termination



Conductor termination

### Commoning



Easy commoning using adjacent jumpers

### Marking



Marking via Mini-WSB Quick Marking System