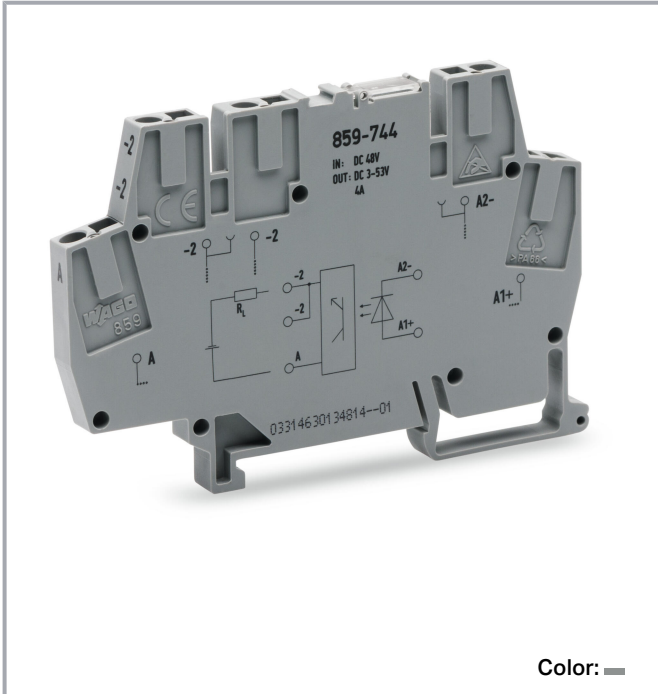


Data sheet | Item number: 859-744

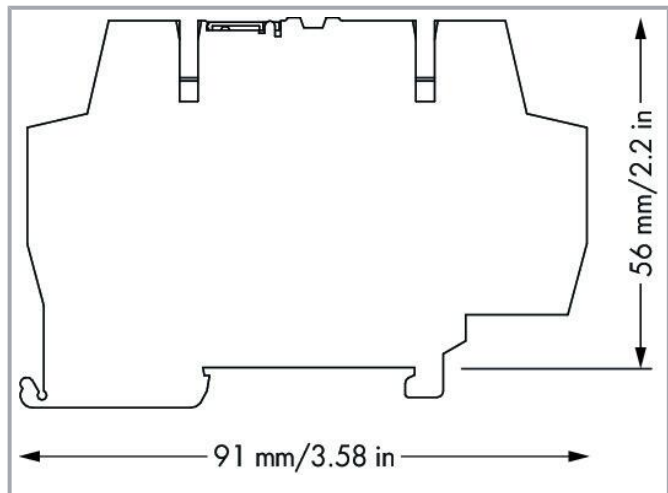
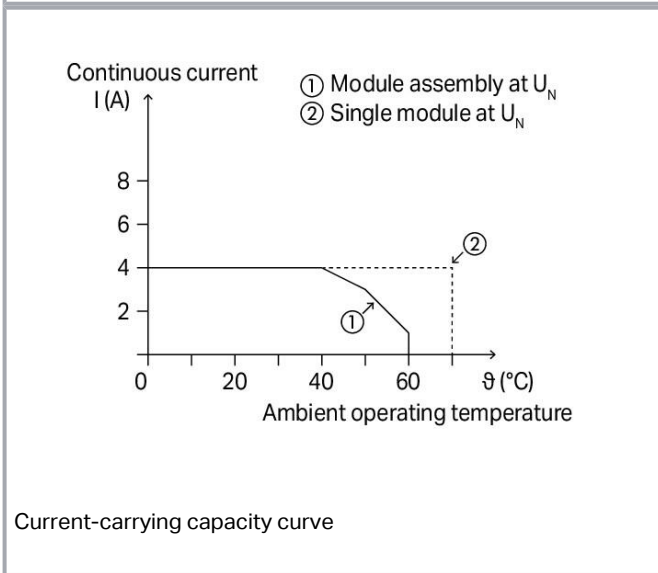
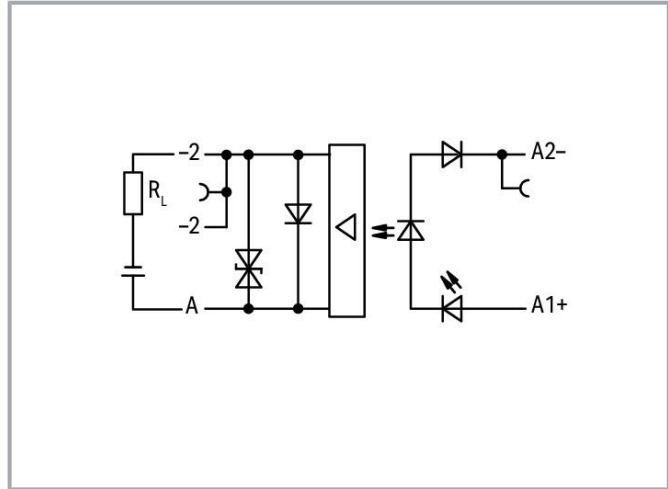
Optocoupler module; Nominal input voltage: 12 ... 48 VDC; Output voltage range: 10 ... 53 VDC; Limiting continuous current: 4 A; 2-wire connection; Module width: 6 mm; gray



www.wago.com/859-744



Color: —



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

WAGO GmbH & Co. KG
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32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

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**Control Circuit**

| | |
|----------------------------------|----------------|
| Nominal input voltage U_N | DC 12 ... 48 V |
| Input voltage range (low level) | DC 0 ... 4 V |
| Input voltage range (high level) | DC 10 ... 53 V |
| Nominal input current at U_N | 5 mA |

Load circuit

| | |
|-------------------------------|--------------------|
| Circuit type | 2-wire connection |
| Limiting continuous current | 4 A |
| Peak output current | 30 A |
| Output voltage range | DC 3 ... 53 V |
| Voltage drop at output (max.) | \leq DC 0.2 V |
| Turn-on time | \leq 200 μ s |
| Turn-off time | \leq 420 μ s |
| Switching frequency | \leq 100 Hz |

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 |

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



| | |
|--|--|
| Insulation type (control/load circuit) | Basic insulation |
| Insulation type (adjacent devices) | Reinforced insulation (safe isolation) |
| Insulation type (to adjacent devices of different types) | Reinforced insulation (safe isolation) |
| 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 ² / 28 ... 14 AWG |
| Fine-stranded conductor | 0.08 ... 2.5 mm ² / 28 ... 14 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.08 ... 1.5 mm ² / 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 | 19.3 g |

Environmental requirements

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

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Standards and specifications

| | |
|--------------------------|----------------|
| Standards/specifications | EN 61010-2-201 |
| | EN 61000-6-2 |
| | EN 61000-6-3 |
| | EN 61373 |

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 | DE |
| GTIN | 4055143605458 |
| Customs tariff number | 85365005000 |

Environmental Product Compliance

| | |
|---|--|
| CAS-No. | 7439-92-1 79-94-7 |
| REACH Candidate List Substance | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Lead |
| RoHS Compliance Status | Compliant,With Exemption |
| RoHS Exemption | 7(a) 7(c)-I 7(c)-II |
| SCIP notification number (Austria) | 3c5ae91d-3dbd-47fe-ba95-831f3d0ae746 |
| SCIP notification number (Belgium) | ee379b01-b66c-49de-8871-6c3ace50d6e7 |
| SCIP notification number (Bulgaria) | 5d98808b-3c3c-453a-9d5c-5dd2603e77c8 |
| SCIP notification number (Czech Republic) | 78d8ffd8-b8e3-4c75-923e-292ba881a9c3 |
| SCIP notification number (Denmark) | ffd6563d-fd6e-4e02-b2d8-b11c5438db60 |
| SCIP notification number (Finland) | f2c5bd8b-07d9-4d80-bbd3-01b6ff376fce |
| SCIP notification number (France) | 9f84d13f-4e6f-4215-8b5d-adc883494d63 |
| SCIP notification number (Germany) | 90204e81-23c3-491d-bdfe-8bc653cfef2f |
| SCIP notification number (Hungary) | 13b3e647-e5b2-4699-aaa3-7d7773feb5c8 |
| SCIP notification number (Italy) | 88a674a7-888f-442e-9f55-7d19bf03705c |

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| | |
|--|--------------------------------------|
| SCIP notification number (Netherlands) | 040bf4f5-5d5a-41e6-a48b-3d5c45b4fe2e |
| SCIP notification number (Poland) | c6ab1053-0506-4ff9-97a1-89685d5f8c35 |
| SCIP notification number (Romania) | 4deaca40-f499-4e29-a025-3ba7ab2f01db |
| SCIP notification number (Sweden) | 10c93826-46fb-4fa6-86ca-a24b9fb4b9f5 |

Approvals / Certificates



General approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|--|--|--------------------------|---|
|  | EAC Brjansker Zertifizierungsstelle | TP TC 020/2011 | EAC_Certificate_RU_C-DE.AM02.B.00115_19 |

Declarations of conformity and manufacturer's declarations



| Logo | Approval | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
|  | EU-Declaration of Conformity WAGO GmbH & Co. KG | - | - |

Approvals for hazardous areas

| Logo | Approval | Additional Approval Text | Certificate name |
|--|----------------------------|--------------------------|---------------------------------------|
|  | CCC CNEX | CNCA-C23-01 | 2021312304000982 (Ex ec IIC T4 Gc) |
|  | UKEx WAGO GmbH & Co. KG | EN 60079-0 | WAGO22UKEX007X_ec |

Optional accessories

Jumpers

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

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



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

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



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

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



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

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



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

www.wago.com/859-405/000-006



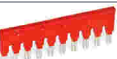
Item no.: 859-406/000-005
Jumper; for jumper slot; 6-way; insulated; red

www.wago.com/859-406/000-005



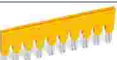
Item no.: 859-409/000-029
Jumper; for jumper slot; 9-way; insulated; yellow

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



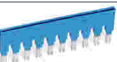
Item no.: 859-410/000-029
Jumper; for jumper slot; 10-way; insulated; yellow

www.wago.com/859-410/000-029



Item no.: 859-410
Jumper; for jumper slot; 10-way; insulated; light gray

www.wago.com/859-410

















Item no.: 859-410/000-006
Jumper; for jumper slot; 10-way; insulated; blue

www.wago.com/859-410/000-006



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


| | | |
|---|---|--|
|  | Item no.: 859-403/000-005 Jumper; for jumper slot; 3-way; insulated; red | www.wago.com/859-403/000-005 |
|  | Item no.: 859-402/000-029 Jumper; for jumper slot; 2-way; insulated; yellow | www.wago.com/859-402/000-029 |
|  | Item no.: 859-403/000-029 Jumper; for jumper slot; 3-way; insulated; yellow | www.wago.com/859-403/000-029 |
|  | Item no.: 859-403/000-006 Jumper; for jumper slot; 3-way; insulated; blue | www.wago.com/859-403/000-006 |
|  | Item no.: 859-408/000-005 Jumper; for jumper slot; 8-way; insulated; red | www.wago.com/859-408/000-005 |
|  | Item no.: 859-408/000-029 Jumper; for jumper slot; 8-way; insulated; yellow | www.wago.com/859-408/000-029 |
|  | Item no.: 859-409 Jumper; for jumper slot; 9-way; insulated; light gray | www.wago.com/859-409 |
|  | Item no.: 859-408/000-006 Jumper; for jumper slot; 8-way; insulated; blue | www.wago.com/859-408/000-006 |
|  | Item no.: 859-403 Jumper; for jumper slot; 3-way; insulated; light gray | www.wago.com/859-403 |
|  | Item no.: 859-409/000-005 Jumper; for jumper slot; 9-way; insulated; red | www.wago.com/859-409/000-005 |
|  | Item no.: 859-404 Jumper; for jumper slot; 4-way; insulated; light gray | www.wago.com/859-404 |
|  | Item no.: 859-409/000-006 Jumper; for jumper slot; 9-way; insulated; blue | www.wago.com/859-409/000-006 |
|  | Item no.: 859-402/000-006 Jumper; for jumper slot; 2-way; insulated; blue | www.wago.com/859-402/000-006 |
|  | Item no.: 859-402 Jumper; for jumper slot; 2-way; insulated; light gray | www.wago.com/859-402 |

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

| | | |
|--|--|--|
|  | Item no.: 859-402/000-005 Jumper; for jumper slot; 2-way; insulated; red | www.wago.com/859-402/000-005 |
|  | Item no.: 859-406/000-006 Jumper; for jumper slot; 6-way; insulated; blue | www.wago.com/859-406/000-006 |
|  | Item no.: 859-406/000-029 Jumper; for jumper slot; 6-way; insulated; signal yellow | www.wago.com/859-406/000-029 |
|  | Item no.: 859-407/000-006 Jumper; for jumper slot; 7-way; insulated; blue | www.wago.com/859-407/000-006 |
|  | Item no.: 859-407/000-005 Jumper; for jumper slot; 7-way; insulated; red | www.wago.com/859-407/000-005 |
|  | Item no.: 859-407/000-029 Jumper; for jumper slot; 7-way; insulated; yellow | www.wago.com/859-407/000-029 |
|  | Item no.: 859-407 Jumper; for jumper slot; 7-way; insulated; light gray | www.wago.com/859-407 |

Testing and measuring

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 0,5mm ² | www.wago.com/859-500 |
|--|--|--|

Marking accessories

Marking devices

| | | |
|---|---|--|
|  | Item no.: 210-110 Fiber-tip pen | www.wago.com/210-110 |
|---|---|--|

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 | www.wago.com/2009-145 |
|  | Item no.: 248-501 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white | www.wago.com/248-501 |
|  | Item no.: 248-504 Mini-WSB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white | www.wago.com/248-504 |
|  | Item no.: 248-503 Mini-WSB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white | www.wago.com/248-503 |

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

**Item no.: 248-506**

Mini-WSB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white

www.wago.com/248-506**Item no.: 248-502**

Mini-WSB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white

www.wago.com/248-502**End plate**

Intermediate plate

**Item no.: 859-525**

End and intermediate plate; 1 mm thick; gray

www.wago.com/859-525**Tool**

Operating tool

**Item no.: 210-720**

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

www.wago.com/210-720**Ferrule**

Ferrule

**Item no.: 216-223**Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; redwww.wago.com/216-223**Item no.: 216-222**Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; graywww.wago.com/216-222**Item no.: 216-221**Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; whitewww.wago.com/216-221**Item no.: 216-224**Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; blackwww.wago.com/216-224**Item no.: 216-321**Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellowwww.wago.com/216-321**Item no.: 216-322**Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoisewww.wago.com/216-322**Downloads****Documentation****Bid Text**

| | | | |
|-------------------------|-------------|-----------------|----------|
| 859-744 docx - Datei | 2019 Feb 20 | docx 15.8 kB | Download |
| 859-744 X81 - Datei | 2019 Feb 19 | xml 3.9 kB | Download |

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



Instruction Leaflet

| | | | |
|--|------------------------|-----------------|----------|
| CCC Ex (Additional information) 859-*** | 2023 Apr 26 | pdf 135.9 kB | Download |
| Relay modules, Optocoupler modules | V 2.0.0 2022 Jan 19 | pdf 2.1 MB | Download |

Additional Information

| | | | |
|---|------------------------|---------------|----------|
| Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging | V 1.1.0 2022 Aug 18 | pdf 2.2 MB | Download |
|---|------------------------|---------------|----------|

CAD/CAE-Data

CAE data

| | | | |
|---------------------------|--|-----|----------|
| WSCAD Universe 859-744 | | URL | Download |
| EPLAN Data Portal 859-744 | | URL | Download |
| ZUKEN Portal 859-744 | | URL | Download |

CAD data

| | | | |
|----------------------|--|-----|----------|
| 2D/3D Models 859-744 | | URL | Download |
|----------------------|--|-----|----------|

Environmental Product Compliance

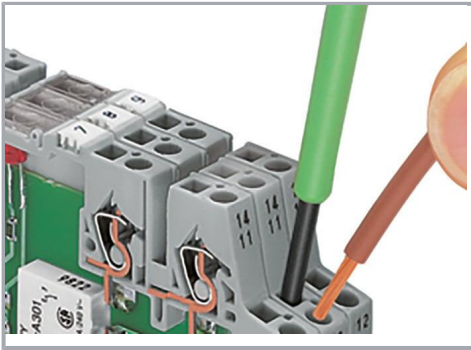
Compliance Search

| | | | |
|--|--|-----|----------|
| Environmental Product Compliance 859-744 Optocoupler module; Nominal input voltage: 12 ... 48 VDC; Output voltage range: 10 ... 53 VDC; Limiting continuous current: 4 A; 2-wire connection; Module width: 6 mm; gray | | URL | Download |
|--|--|-----|----------|

Installation Notes

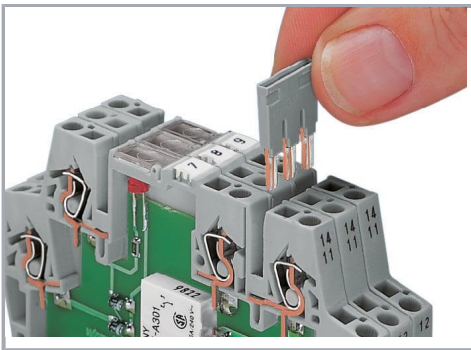
Conductor termination

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!