

**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



[www.wago.com/859-794](http://www.wago.com/859-794)

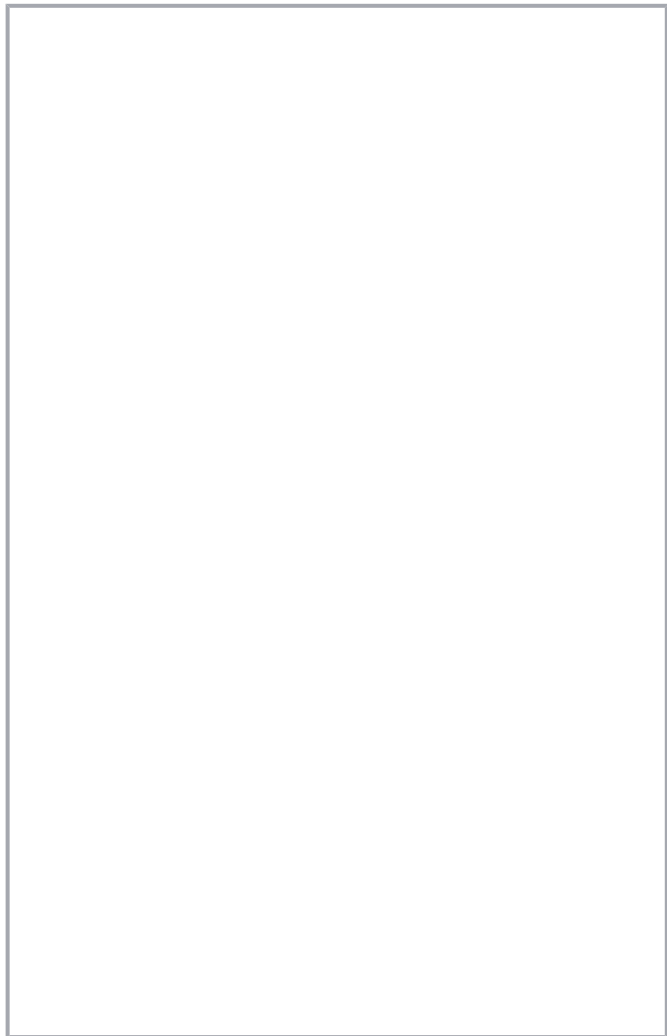
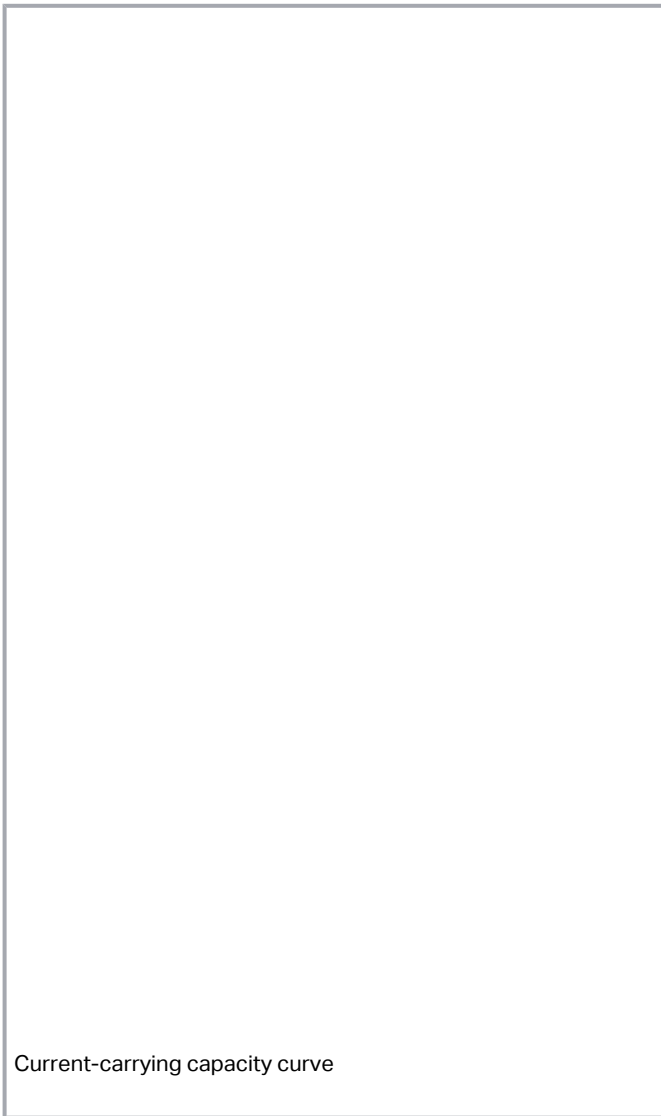


Color:

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

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**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.

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**Technical data**

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## Control Circuit

Nominal input voltage $U_N$	DC 24 V
Input voltage range (low level)	DC 0 ... 5 V
Input voltage range (high level)	DC 16 ... 30 V
Nominal input current at $U_N$	5 mA

## Load circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	DC 9 ... 60 V
Voltage drop at output (max.)	$\leq$ DC 2 V
Voltage drop	$\leq$ 2 VDC
Leakage current at rated voltage	$\leq$ 25 $\mu$ A
Turn-on time	$\leq$ 20 $\mu$ s
Turn-off time	$\leq$ 120 $\mu$ s
Switching frequency	$\leq$ 1.5 kHz

## Signaling

Status indicator	Red LED
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## 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 (adjacent devices)	Reinforced insulation (safe isolation)
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

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



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 EN 61000-6-2 EN 61000-6-3 EN 50121-3-2 EN 61373 UL 508
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### Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
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eCl@ss 10.0	27-26-15-03
eCl@ss 9.0	27-26-15-03
ETIM 8.0	EC001504
ETIM 7.0	EC001504
Recupel Type	
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 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
SCIP notification number (Austria)	97e20fec-7ef8-4308-9df4-b9bead1ef91
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)	f2bcdbd1-947a-4580-b997-80bd91b96611
SCIP notification number (France)	efa2c40b-aac0-4647-8b02-79ce02e41cee
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SCIP notification number (Italy)	e7f6eb14-bc4e-46df-b8d3-7fbebba411b7
SCIP notification number (Netherlands)	81e30e1d-6dcd-47c8-a3c3-d049af7b1761
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SCIP notification number (Romania)	15bbf093-9f9b-4fb4-be0c-e91eb4f3f17f
SCIP notification number (Sweden)	9a68c8aa-c768-4c87-a1ea-e685293e288d

## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	EAC	TP TC 020/2011	EAC_Certificate_RU_C-

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Brjansker Zertifizierungsstelle

DE.AM02.B.00115\_19

**UL**  
Underwriters Laboratories Inc. (ORDINARY  
LOCATIONS)

UL 508

E175199 Sec.4

## Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	<b>EU-Declaration of Conformity</b> WAGO GmbH & Co. KG	-	-

## Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	<b>CCC</b> CNEX	CNCA-C23-01	2021312304000982 (Ex ec IIC T4 Gc)
	<b>UKEx</b> WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX007X_ec
	<b>UL</b> Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

## Optional accessories

## End plate

Intermediate plate

**Item no.: 859-525**  
End and intermediate plate; 1 mm thick; gray

[www.wago.com/859-525](http://www.wago.com/859-525)

## Jumpers

Jumper

**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)

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<b>Item no.: 859-405</b> Jumper; for jumper slot; 5-way; insulated; light gray	<a href="http://www.wago.com/859-405">www.wago.com/859-405</a>
<b>Item no.: 859-404/000-029</b> Jumper; for jumper slot; 4-way; insulated; yellow	<a href="http://www.wago.com/859-404/000-029">www.wago.com/859-404/000-029</a>
<b>Item no.: 859-405/000-006</b> Jumper; for jumper slot; 5-way; insulated; blue	<a href="http://www.wago.com/859-405/000-006">www.wago.com/859-405/000-006</a>
<b>Item no.: 859-406/000-005</b> Jumper; for jumper slot; 6-way; insulated; red	<a href="http://www.wago.com/859-406/000-005">www.wago.com/859-406/000-005</a>
<b>Item no.: 859-409/000-029</b> Jumper; for jumper slot; 9-way; insulated; yellow	<a href="http://www.wago.com/859-409/000-029">www.wago.com/859-409/000-029</a>
<b>Item no.: 859-410/000-005</b> Jumper; for jumper slot; 10-way; insulated; red	<a href="http://www.wago.com/859-410/000-005">www.wago.com/859-410/000-005</a>
<b>Item no.: 859-410/000-029</b> 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> 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> 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> 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> 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> 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> 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> 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>

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



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

[www.wago.com/859-408/000-029](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://www.wago.com/859-402)

**Item no.: 859-402/000-005**  
Jumper; for jumper slot; 2-way; insulated; red

[www.wago.com/859-402/000-005](http://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](http://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](http://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](http://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](http://www.wago.com/859-407/000-005)

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**Item no.: 859-407/000-029**

Jumper; for jumper slot; 7-way; insulated; yellow

[www.wago.com/859-407/000-029](http://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](http://www.wago.com/859-407)**Ferrule**

## Ferrule

**Item no.: 216-223**Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red[www.wago.com/216-223](http://www.wago.com/216-223)**Item no.: 216-222**Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray[www.wago.com/216-222](http://www.wago.com/216-222)**Item no.: 216-221**Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white[www.wago.com/216-221](http://www.wago.com/216-221)**Item no.: 216-224**Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black[www.wago.com/216-224](http://www.wago.com/216-224)**Item no.: 216-321**Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow[www.wago.com/216-321](http://www.wago.com/216-321)**Item no.: 216-322**Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise[www.wago.com/216-322](http://www.wago.com/216-322)**Marking accessories**

## Marking device

**Item no.: 210-110**

Fiber-tip pen

[www.wago.com/210-110](http://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](http://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](http://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](http://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](http://www.wago.com/248-503)**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](http://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](http://www.wago.com/248-502)

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## 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](http://www.wago.com/210-720)

## 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<sup>2</sup>

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

## Downloads

### Documentation

#### Bid Text

859-794 docx - Datei	2019 年2月20 日	docx 15.8 kB	Download
859-794 X81 - Datei	2019 年2月19 日	xml 4.0 kB	Download

#### Instruction Leaflet

CCC Ex (Additional information) 859_***	2023 年4月26 日	pdf 135.9 kB	Download
Relay modules, Optocoupler modules	V 2.0.0 2022 年1月19 日	pdf 2.1 MB	Download

#### Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 年8月18 日	pdf 2.2 MB	Download
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## CAD/CAE-Data

### CAE data

EPLAN Data Portal 859-794		URL	Download
WSCAD Universe 859-794		URL	Download
ZUKEN Portal 859-794		URL	Download

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## CAD data

2D/3D Models 859-794

[URL](#)

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 859-794

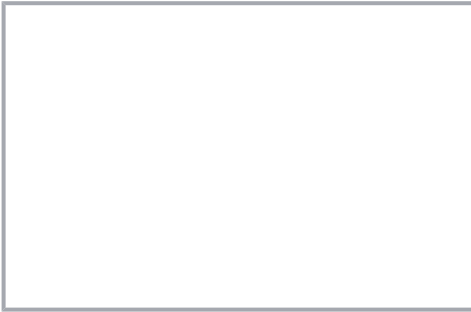
[URL](#)

[Download](#)

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

## Installation Notes

### Conductor termination



Conductor termination

### Commoning



Easy commoning using adjacent jumpers

## Marking

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

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[www.wago.com/859-794](http://www.wago.com/859-794)



Marking via Mini-WSB Quick Marking System

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