

**Data sheet | Item number: 859-712**

Optocoupler module; Nominal input voltage: 230 VAC; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection/low-side switching; Red status indicator; Module width: 6 mm; gray



[www.wago.com/859-712](http://www.wago.com/859-712)



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.

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## Technical data

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## Control Circuit

Nominal input voltage $U_N$	AC 230 V
Input voltage range (low level)	AC 0 ... 90 V
Input voltage range (high level)	AC 175 ... 270 V
Nominal input current at $U_N$	1 mA

## Load circuit

Circuit type	3-wire connection 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.)	$\leq$ DC 1.2 V
Voltage drop	$\leq$ 1.2 VDC
Leakage current at rated voltage	$\leq$ 10 $\mu$ A
Output closed-circuit current (without load) max.	11 mA
Turn-on time	$\leq$ 30 ms
Turn-off time	$\leq$ 30 ms

## Signaling

Status indicator	Red LED
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## Safety and protection

Rated voltage	300 V
Type of circuits	Mains circuits
Overvoltage category	II
Pollution degree	2
Dielectric strength (control/load circuit) (AC, 1 min)	3 kVrms
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
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

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



## 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	15.4 g

## Environmental requirements

Ambient temperature (operation at U <sub>N</sub> )	-25 ... +55 °C
Ambient temperature UL (operation at U <sub>N</sub> )	-25 ... +40 °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
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Subject to changes. Please also observe the further product documentation!

EN 61373  
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
Recupel Type	
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4055144130218
Customs tariff number	85365005000

**Environmental Product Compliance**

CAS-No.	1303-86-2 1317-36-8 7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	7(a) 7(c)-I
SCIP notification number (Austria)	100897eb-1314-4b82-8867-b9c6c6e86187
SCIP notification number (Belgium)	c07a0c21-992b-4d77-8469-1ae95bcc1824
SCIP notification number (Bulgaria)	25af3641-d92a-4797-8b02-ba2215de6706
SCIP notification number (Czech Republic)	1f05f530-2202-4398-a6dd-294f4cbd62da
SCIP notification number (Denmark)	d181df40-dac5-4804-9e65-6f6b7365dba4
SCIP notification number (Finland)	8fe5eb1a-4ad4-42c2-a30d-647cb6220bc6
SCIP notification number (France)	c78dbb24-1d1a-4c9f-a734-a62059b882dc
SCIP notification number (Germany)	00a76a12-8d37-4ca9-9d7c-b2e8466fc8c0
SCIP notification number (Hungary)	e6018d63-bdd4-4068-baa6-dfce07aae4f0
SCIP notification number (Italy)	874b3706-7f93-4553-a528-ff0388c22074
SCIP notification number (Netherlands)	90acae96-e4ff-40df-b180-f69ed6c9b57e

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SCIP notification number (Poland)	83da62e6-ba4f-4920-8124-4132bda69ac6
SCIP notification number (Romania)	582fc0f6-d75f-4aca-8bb5-1ae677f9c441
SCIP notification number (Sweden)	d097a094-e2dd-4617-9c01-202e0473b2ef

## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>EAC</b> Brjansker Zertifizierungsstelle	TP TC 004/2011	EAC RU C-DE.AM02.B.00122/19
	<b>UL</b> 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>UL</b> Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

## Optional accessories

### Jumpers

Logo	Approval	Additional Approval Text	Certificate name
	<b>Item no.: 859-404/000-005</b> Jumper; for jumper slot; 4-way; insulated; red		<a href="http://www.wago.com/859-404/000-005">www.wago.com/859-404/000-005</a>
	<b>Item no.: 859-404/000-006</b> Jumper; for jumper slot; 4-way; insulated; blue		<a href="http://www.wago.com/859-404/000-006">www.wago.com/859-404/000-006</a>
	<b>Item no.: 859-405/000-005</b> Jumper; for jumper slot; 5-way; insulated; red		<a href="http://www.wago.com/859-405/000-005">www.wago.com/859-405/000-005</a>

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<b>Item no.: 859-405/000-029</b> Jumper; for jumper slot; 5-way; insulated; yellow	<a href="http://www.wago.com/859-405/000-029">www.wago.com/859-405/000-029</a>
<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>

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<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>
<b>Item no.: 859-408/000-029</b> 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> 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> 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> 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> 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> Jumper; for jumper slot; 4-way; insulated; light gray	<a href="http://www.wago.com/859-404">www.wago.com/859-404</a>
<b>Item no.: 859-409/000-006</b> 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> 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> 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> 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> 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> 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> 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> 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>

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<b>Item no.: 859-407/000-029</b> 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> Jumper; for jumper slot; 7-way; insulated; light gray	<a href="http://www.wago.com/859-407">www.wago.com/859-407</a>
<b>End plate</b>	
Intermediate plate	
<b>Item no.: 859-525</b> End and intermediate plate; 1 mm thick; gray	<a href="http://www.wago.com/859-525">www.wago.com/859-525</a>
<b>Testing and measuring</b>	
Testing accessories	
<b>Item no.: 859-500</b> 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>	<a href="http://www.wago.com/859-500">www.wago.com/859-500</a>
<b>Marking accessories</b>	
Marking device	
<b>Item no.: 210-110</b> Fiber-tip pen	<a href="http://www.wago.com/210-110">www.wago.com/210-110</a>
Marker	
<b>Item no.: 2009-145</b> 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> 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> 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> 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> 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> 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>Tool</b>	
Operating tool	
<b>Item no.: 210-720</b> 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>
<b>Ferrule</b>	
Ferrule	

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

**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)**Downloads****Documentation****Bid Text**

859-712 docx - Datei	2019 年2月20 日	docx 15.7 kB	Download
859-712 X81 - Datei	2019 年2月19 日	xml 3.8 kB	Download

**Instruction Leaflet**

Relay modules, Optocoupler modules	V 2.0.0 2022 年1月19 日	pdf 2.1 MB	Download
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**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****CAD data**

2D/3D Models 859-712		URL	Download
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**CAE data**

EPLAN Data Portal 859-712

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	URL	Download
WSCAD Universe 859-712	<a href="#">URL</a>	<a href="#">Download</a>
ZUKEN Portal 859-712	<a href="#">URL</a>	<a href="#">Download</a>

## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 859-712	<a href="#">URL</a>	<a href="#">Download</a>
Optocoupler module; Nominal input voltage: 230 VAC; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection/low-side switching; Red status indicator; Module width: 6 mm; gray		

## Installation Notes

### Conductor termination



Conductor termination

### Commoning



Easy commoning using adjacent jumpers

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



Marking



Marking via Mini-WSB Quick Marking System

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