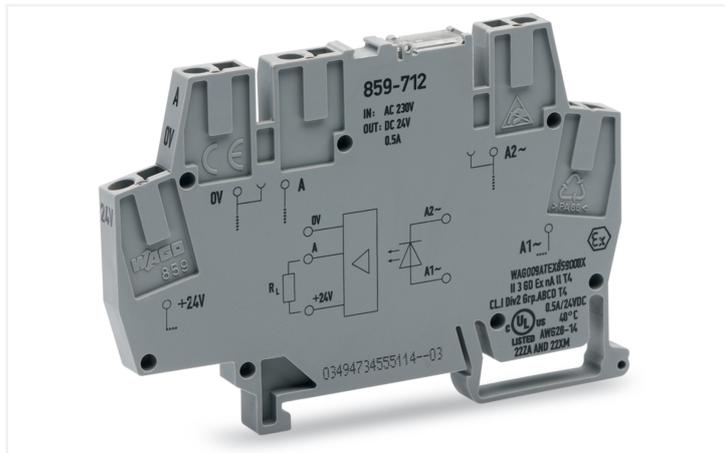


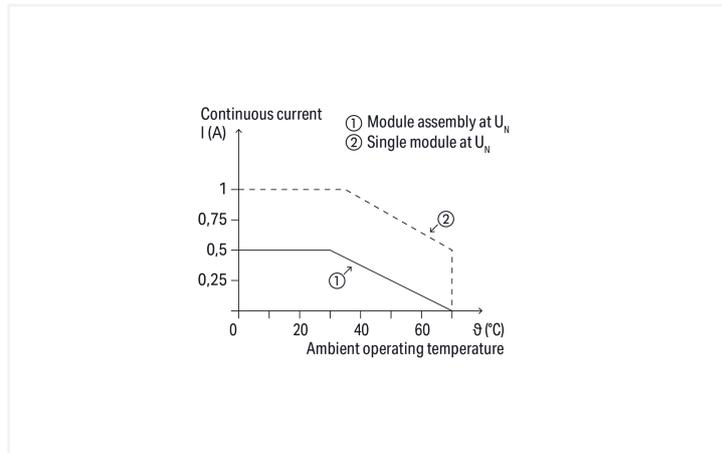
## Data Sheet | Item Number: 859-712

Optocoupler module; Nominal input voltage: 230 VAC; Output voltage range: 15 ... 30 VDC; Limiting continuous current: 1 A; 3-wire connection/low-side switching; Red status indicator; Module width: 6 mm; gray

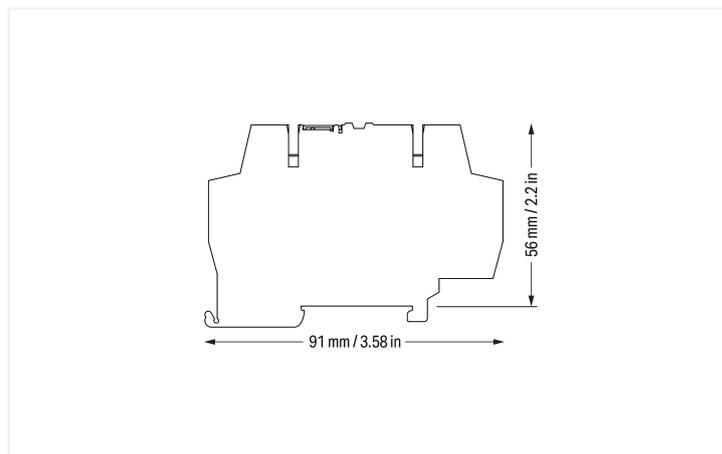
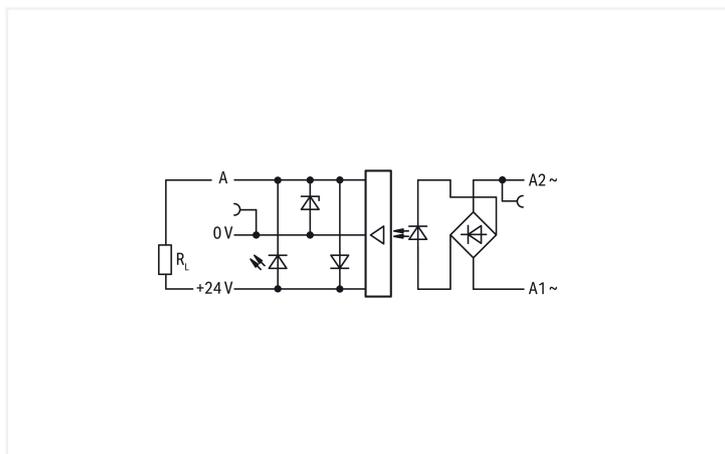
<https://www.wago.com/859-712>



Color: ■ gray



Current-carrying capacity curve



### Notes

Note

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

### Technical data

#### Control circuit

Nominal input voltage $U_N$	230 VAC
Input voltage range (low level)	0 ... 90 VAC
Input voltage range (high level)	175 ... 253 VAC
Nominal input current at $U_N$	0.8 mA

#### Load circuit

Circuit type	3-wire connection Low-side switching
Limiting continuous current	1 A
Peak output current	4 A
Nominal output voltage	24 VDC
Output voltage range	15 ... 30 VDC
Voltage drop	$\leq 1.5$ VDC
Leakage current at rated voltage	$\leq 10$ $\mu$ A

### 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)	2.5 kVrms
Insulation type (control/load circuit)	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	0.2 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor	0.14 ... 2.5 mm <sup>2</sup> / 26 ... 14 AWG
Fine-stranded conductor; with insulated ferrule	0.14 ... 1.5 mm <sup>2</sup> / 26 ... 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

Note (material data)	<a href="#">Information on material specifications can be found here</a>
Color	gray
Insulation material (main housing)	Polyamide (PA66)
Material group	I
Flammability class per UL94	V0
Fire load	0.313 MJ
Weight	20.2 g

### Environmental requirements

Ambient temperature (operation at U <sub>N</sub> )	-40 ... +70 °C
Ambient temperature UL (operation at U <sub>N</sub> )	-40 ... +40 °C
Ambient temperature (storage)	-40 ... +85 °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 61373 UL 508
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### Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4066966831078
Customs tariff number	85365005000

### Product Classification

UNSPSC	39121522
eCl@ss 10.0	27-26-15-03
eCl@ss 9.0	27-26-15-03
ETIM 9.0	EC001504
ETIM 10.0	EC001504
ECCN	NO US CLASSIFICATION

### Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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
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

		
Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 004/2011	EAC CoC 03078
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.4

#### Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for hazardous areas



Approval	Standard	Certificate Name
UL Underwriters Laboratories Inc. (HAZARDOUS LOCA- TIONS)	ANSI/ISA 12.12.01	E198726

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 859-712 <a href="#">↓</a>

Documentation

Bid Text			
859-712	19.02.2019	xml 3.73 KB	<a href="#">↓</a>
859-712	20.02.2019	docx 15.30 KB	<a href="#">↓</a>

Instruction Leaflet			
Relay modules, Opto- coupler modules	V 2.0.0 19.01.2022	pdf 2066.27 KB	<a href="#">↓</a>

CAD/CAE-Data

CAD data
2D/3D Models 859-712 <a href="#">↓</a>

CAE data	
EPLAN Data Portal 859-712	<a href="#">↓</a>
WSCAD Universe 859-712	<a href="#">↓</a>
ZUKEN Portal 859-712	<a href="#">↓</a>

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



**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; 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

1.1.3.1 Jumper



**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 0,5mm<sup>2</sup>

1.1.6 Tool

1.1.6.1 Operating tool

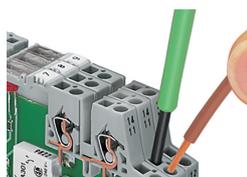


**Item No.: 210-720**

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

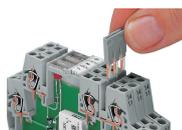
## Installation Notes

### Conductor termination



Conductor termination

### Commoning



Easy commoning using adjacent jumpers

### Marking



Marking via Mini-WSB Quick Marking System