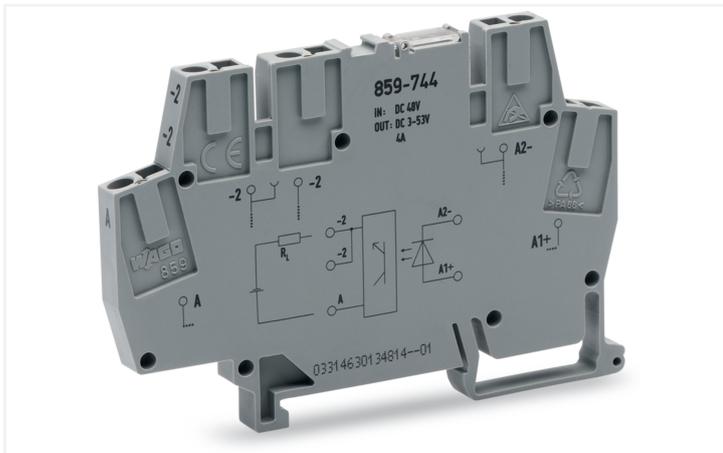


# Data Sheet | Item Number: 859-744

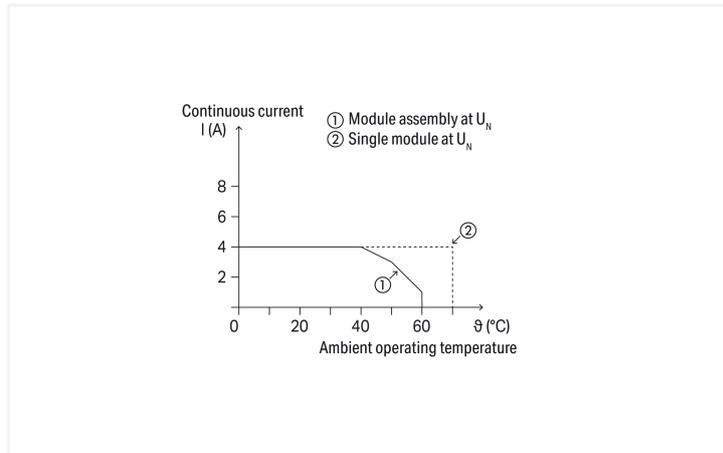
Optocoupler module; Nominal input voltage: 12 ... 48 VDC; Output voltage range 3 ... 53VDC; Limiting continuous current: 4 A; 2-wire connection; Module width: 6 mm; gray



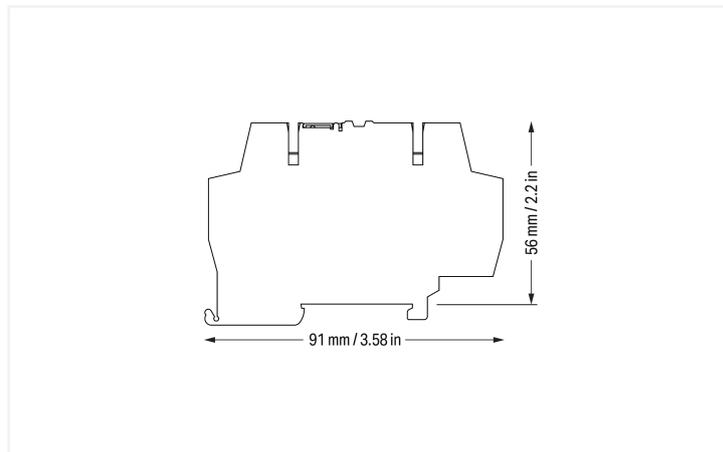
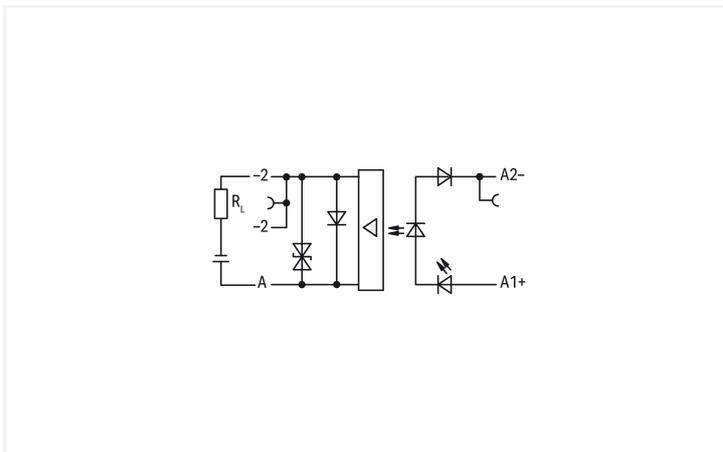
<https://www.wago.com/859-744>



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 $U_N$	12 ... 48 VDC
Input voltage range (low level)	0 ... 4 VDC
Input voltage range (high level)	10 ... 53 VDC
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	3 ... 53 VDC
Voltage drop	$\leq 0.2$ VDC
Turn-on time	$\leq 200$ $\mu$ s
Turn-off time	$\leq 420$ $\mu$ s
Switching frequency	$\leq 100$ Hz

### 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 (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 <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

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	19.3 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 61373
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### Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
PU (SPU)	10 pcs
Packaging type	Box
Country of origin	DE
GTIN	4055143605458
Customs tariff number	85365005000

### Product Classification

UNSPSC	39121524
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

CAS-No.	1303-86-2 7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 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
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



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081

Declarations of conformity and manufacturer's declarations

Approval Standard Certificate Name

EU-Declaration of Confor-  
mity  
WAGO GmbH & Co. KG

Approvals for hazardous areas



Approval	Standard	Certificate Name
CCC CNEX	CNCA-C23-01	2021312304000982 (Ex ec IIC T4 Gc)
UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX007X_ec

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 859-744	<a href="#">↓</a>
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Documentation

Bid Text			
859-744	19.02.2019	xml 3.83 KB	<a href="#">↓</a>
859-744	20.02.2019	docx 15.43 KB	<a href="#">↓</a>

Instruction Leaflet			
CCC Ex (Additional in- formation)	26.04.2023	pdf 132.68 KB	<a href="#">↓</a>
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 859-744

CAE data
EPLAN Data Portal 859-744
WSCAD Universe 859-744
ZUKEN Portal 859-744

## 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; 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 0,5mm<sup>2</sup>

## 1.1.6 Tool

### 1.1.6.1 Operating tool

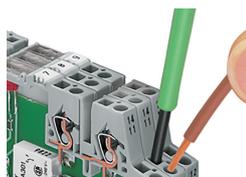


**Item No.: 210-720**

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

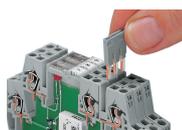
## Installation Notes

### Conductor termination



Conductor termination

### Commoning



Easy commoning using adjacent jumpers

### Marking



Marking via Mini-WSB Quick Marking System