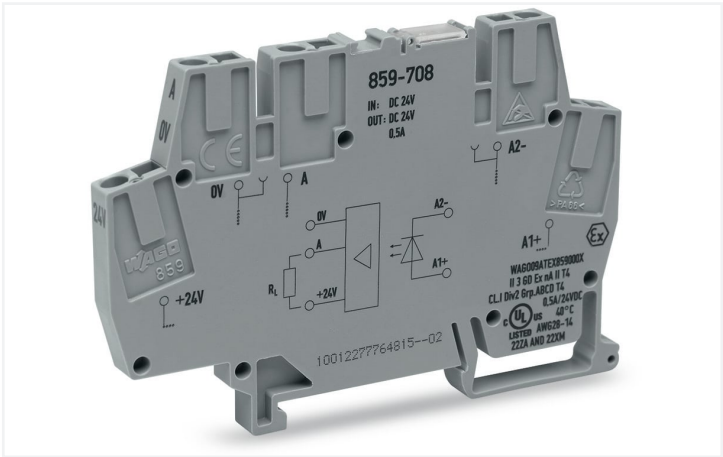


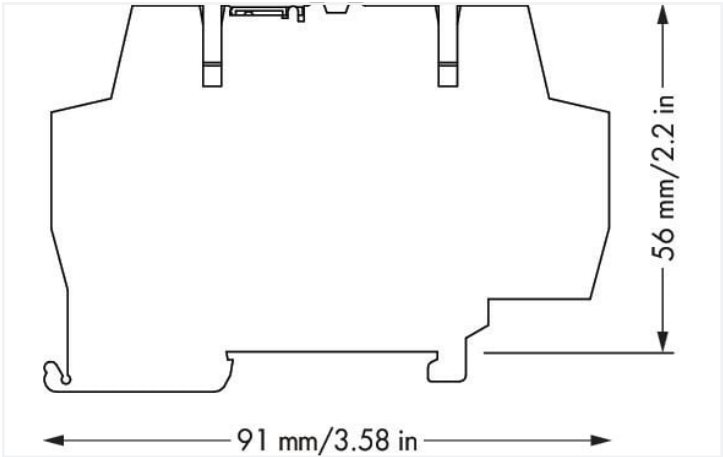
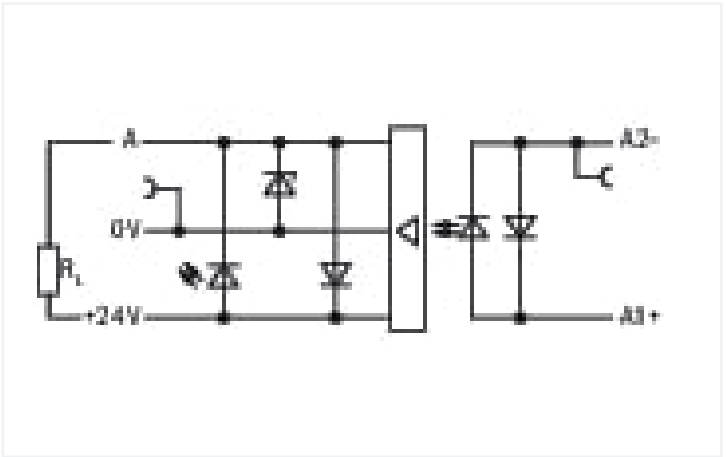
Data Sheet | Item Number: 859-708

Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 0 ... 24 VDC; Limiting continuous current: 1 A; Frequency: 10 kHz; Module width: 6 mm; gray

<https://www.wago.com/859-708>



Color: ■ gray



Dimensions in mm

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		Load circuit	
Nominal input voltage U_N	DC 24 V	Circuit type	3-wire connection Low-side switching
Input voltage range	DC 22 ... 30 V	Limiting continuous current	1 A
Input voltage range (low level)	DC 0 ... 5 V	Nominal output voltage	DC 24 V
Input voltage range (high level)	DC 19 ... 30 V	Output voltage range	DC 14 ... 30 V
Nominal input current at U_N	9 mA	Voltage drop	≤ 1.2 VDC
Input current range	5.5 ... 15.7 mA	Leakage current at rated voltage	≤ 5 μ A
		Output closed-circuit current (without load) max.	11 mA
		Turn-on time	≤ 7 μ s
		Turn-off time	≤ 14 μ s
		Rise time (t_{10-90})	3 μ s
		Drop-out time (t_{90-10})	3 μ s
		Switching frequency	≤ 15 kHz



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
Insulation type (control/load circuit)	Basic insulation
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 mm² / 24 ... 14 AWG
Fine-stranded conductor	0.14 ... 2.5 mm² / 26 ... 14 AWG
Fine-stranded conductor; with insulated ferrule	0.14 ... 1.5 mm² / 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)	Information on material specifications can be found here
Color	gray
Insulation material (main housing)	Polyamide (PA66)
Material group	I
Flammability class per UL94	V0
Fire load	0.338 MJ
Weight	18.4 g

Environmental requirements	
Ambient temperature (operation at U _N)	-25 ... +70 °C
Ambient temperature UL (operation at U _N)	-25 ... +40 °C
Ambient temperature (storage)	-40 ... +85 °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



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)
eCl@ss 10.0	27-26-15-03
eCl@ss 9.0	27-26-15-03
ETIM 9.0	EC001504
ETIM 8.0	EC001504
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4055143604727
Customs tariff number	85365005000

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1 75980-60-8 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	7(a) 7(c)-I
SCIP notification number (Austria)	f5d8c893-72b4-47d3-bfb8-25286d16375d
SCIP notification number (Belgium)	e466a4e7-a5db-4a87-9eed-29db5f29edb6
SCIP notification number (Bulgaria)	df74fea2-cd3a-4d23-abaf-f1eb6fb122b7
SCIP notification number (Czech Republic)	0813c877-68d9-44eb-be8d-9e925d6b3ed2
SCIP notification number (Denmark)	9dda3256-8840-4bf0-aab3-24cb655a8970
SCIP notification number (Finland)	aa125b3b-c76d-43ed-bc70-b9485beb7504
SCIP notification number (France)	9fc971a1-b627-43f6-aadd-2e7f56cf1d2e
SCIP notification number (Germany)	3ad47a8b-2c64-4e0e-94e0-e2c39a9b12f0
SCIP notification number (Hungary)	48a3ceea-d41f-4664-a126-3a7915249ef1
SCIP notification number (Italy)	de135a20-bffa-4b95-abdd-b7336ffdaa6f
SCIP notification number (Netherlands)	36e278be-026c-4782-a24e-aa1a54eae51
SCIP notification number (Poland)	34cff21e-d35f-4780-8f86-150ab828bb92
SCIP notification number (Romania)	17950ad7-e814-4615-98c6-c7158a2aa5a6
SCIP notification number (Sweden)	2e5d9a36-de77-4c49-be5e-35148f1c8202



Approvals / Certificates

General approvals



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

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
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 859-708 

Documentation

Bid Text
859-708 19.02.2019 xml 3.78 KB 
859-708 20.02.2019 docx 15.40 KB 

Instruction Leaflet
CCC Ex (Additional information) 26.04.2023 pdf 132.68 KB 
Relay modules, Opto-coupler modules V 2.0.0 19.01.2022 pdf 2066.27 KB 

CAD/CAE-Data

CAD data
2D/3D Models 859-708 

CAE data
EPLAN Data Portal 859-708 
WSCAD Universe 859-708 
ZUKEN Portal 859-708 



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 mm² / AWG 24; insulated; electro-tin plated; yellow



[Item No.: 216-322](#)
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



[Item No.: 216-221](#)
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white



[Item No.: 216-222](#)
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



[Item No.: 216-223](#)
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



[Item No.: 216-224](#)
Ferrule; Sleeve for 1.5 mm² / 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; signal 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 0,5mm²

1.1.6 Tool

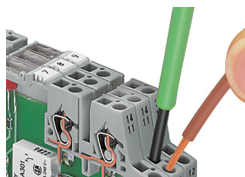
1.1.6.1 Operating tool

**Item No.: 210-720**

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

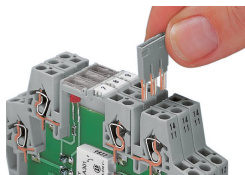
Installation Notes

Conductor termination



Conductor termination

Commoning



Easy commoning using adjacent jumpers

Marking



Marking via Mini-WSB Quick Marking System