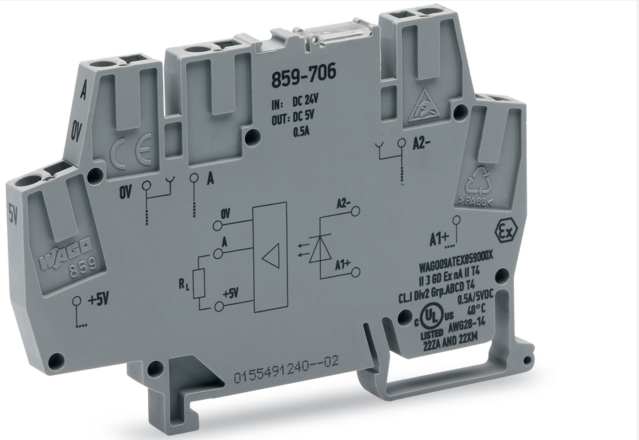
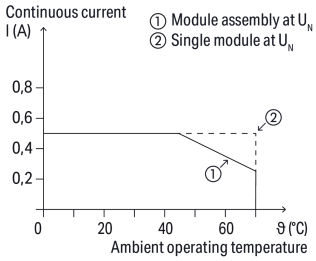
Data Sheet | Item Number: 859-706

Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 4 … 6.25 VDC; Limiting continuous current: 0.5 A; 3-wire connection/low-side switching; Frequency 20 kHz; Red status indicator; Module width: 6 mm; gray

https://www.wago.com/859-706





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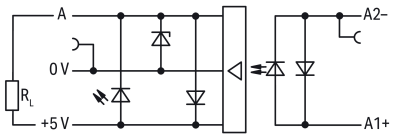
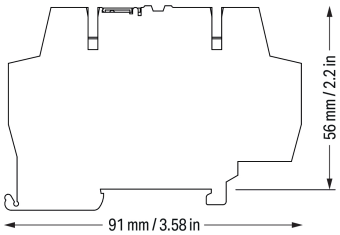




Notes

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	24 VDC
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	16 … 30 VDC
Nominal input current at U_N	12.3 mA

Load circuit

Circuit type	3-wire connection Low-side switching
Limiting continuous current	0.5 A
Nominal output voltage	5 VDC
Output voltage range	4 … 6.25 VDC
Voltage drop	≤ 0.8 VDC
Leakage current at rated voltage	≤ 1 µA
Turn-on time	≤ 3 µs
Turn-off time	≤ 13 µs
Switching frequency	≤ 20 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	0.283 MJ
Weight	146.9 g

Environmental requirements

Ambient temperature (operation at U_N)	-40 … +70 °C
Ambient temperature UL (operation at U_N)	-40 … +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

Continued on next page

Standards and Specifications

Standards/specifications	EN 61010-2-201 EN 61000-6-2 EN 61000-6-3 EN 61373 UL 508

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4066966423686
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 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)	6318c01b-0a70-48bd-9161-02957a783b8a
SCIP notification number (Belgium)	242f89b0-7912-4c88-8d23-7d5ef3f9db8a
SCIP notification number (Bulgaria)	e5d92170-3ed4-4a81-89fc-aabd25fb0b5f
SCIP notification number (Czech Republic)	7b142b70-e95d-4faa-9180-e2653b5062d9
SCIP notification number (Denmark)	652efbcb-f729-4ac5-82dd-d78b9ea8cc93
SCIP notification number (Finland)	96a0bbb5-85a8-4333-8b2d-0bee0b8ba819
SCIP notification number (France)	3075466b-8c94-4f27-a162-17f3bdff67ad
SCIP notification number (Germany)	a255cf19-b730-42a2-85b9-fc740ce38d35
SCIP notification number (Hungary)	abfb4596-d432-44d9-8ef4-09bfcce93a7b
SCIP notification number (Italy)	0a530d8e-0a15-41ed-9850-8c890a4030d4
SCIP notification number (Netherlands)	d2a565de-f8c0-4959-9fdb-0e3ba43b9035
SCIP notification number (Poland)	c89d8b55-d35b-41c3-b023-5db40c0f0f80
SCIP notification number (Romania)	54a360b1-b5bd-4de7-86b8-5321289fe7a0
SCIP notification number (Sweden)	036ac102-5c42-4e78-843e-5c8217f85582

Continued on next page

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 859-706

Documentation

Bid Text

859-706	19.02.2019	xml 3.82 KB	
859-706	20.02.2019	docx 15.47 KB	

Instruction Leaflet

CCC Ex (Additional information)	26.04.2023	pdf 132.68 KB	
Relay modules, Optocoupler modules	V 2.0.0 19.01.2022	pdf 2066.27 KB	

CAD/CAE-Data

CAD data

2D/3D Models 859-706

CAE data

EPLAN Data Portal 859-706

WSCAD Universe 859-706

ZUKEN Portal 859-706

Continued on next page

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



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

Continued on next page

1.1.3.1 Jumper



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 0,5mm²

Continued on next page

1.1.6 Tool

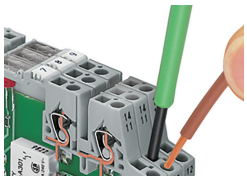
1.1.6.1 Operating tool



Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

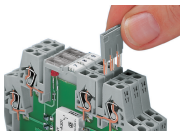
Installation Notes

Conductor termination



Conductor termination

Commoning



Easy commoning using adjacent jumpers

Marking



Marking via Mini-WSB Quick Marking System