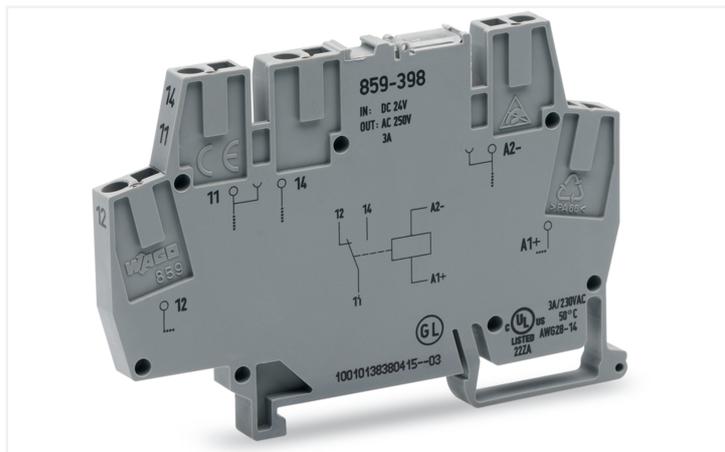


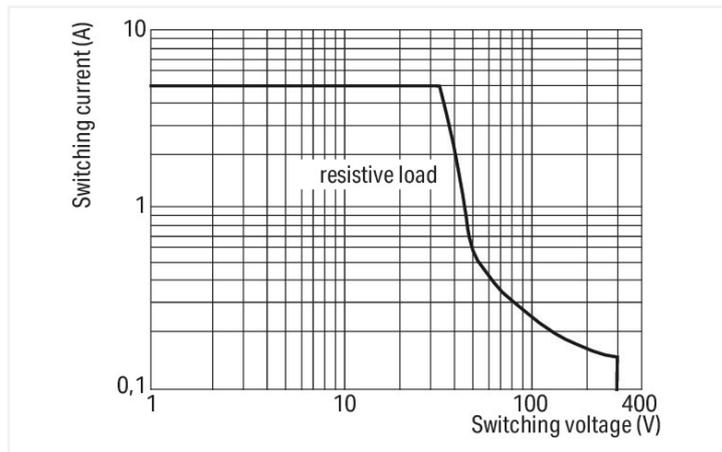
Data Sheet | Item Number: 859-399

Relay module; Nominal input voltage: 110 VDC; 1 changeover contact; Railway; Red status indicator; Module width: 6 mm; 2,50 mm²

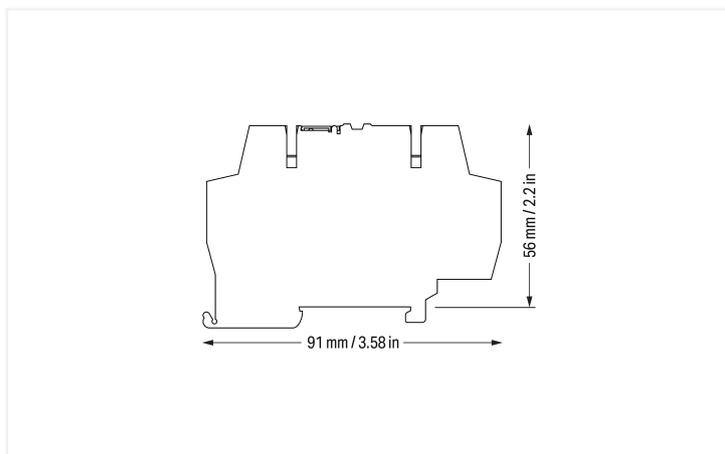
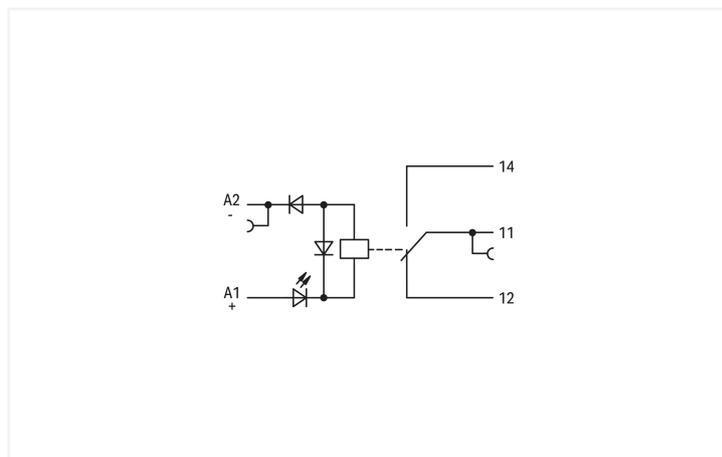
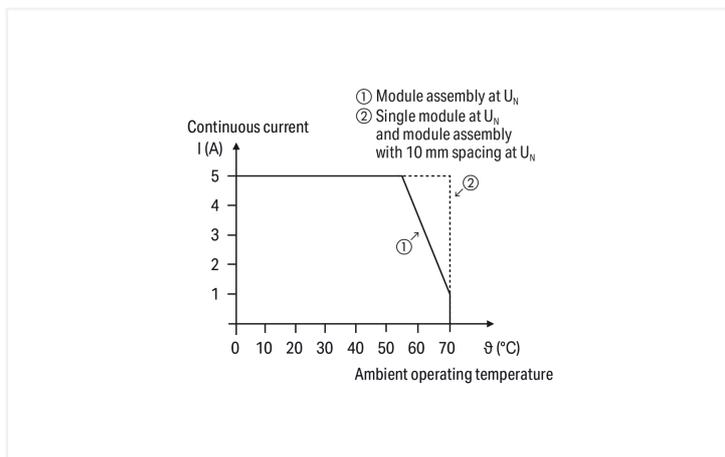
<https://www.wago.com/859-399>



Similar to illustration



DC load limit curve



Notes

Note	To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.
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Technical data

Control circuit

Nominal input voltage U_N	110 VDC
Input voltage range	±40 %
Nominal input current at U_N	4 mA

Load circuit

Number of changeover/switchover contacts	1
Contact material (relay)	AgSnO ₂
Limiting continuous current	5 A
Switching Voltage, Max.	250 VAC
Switching power (resistive) max.	AC 1250 VA; DC (see load limit curve)
Switching capacity	AC-15: 3 A / 250 VAC; DC-13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
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Safety and protection

Rated Voltage	300 V
Rated impulse withstand voltage	4 kV
Overtoltage category	III
Pollution degree	2
Dielectric strength (control/load circuit) (AC, 1 min)	4 kVrms
Dielectric strength (open contact) (AC, 1 min)	1 kVrms
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	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 ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor; with insulated ferrule	0.08 ... 1.5 mm ² / 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)	Information on material specifications can be found here
Insulation material (main housing)	Polyamide (PA66)
Material group	I
Flammability class per UL94	V0
Fire load	0.313 MJ
Weight	23 g

Environmental requirements

Ambient temperature (operation at U_N)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Temperature range of connection cable	$\geq (T_{\text{ambient}} + 20 \text{ K})$
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201 EN 61810-1 EN 61373 DNV
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Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
PU (SPU)	10 pcs
Packaging type	Box
Country of origin	DE
GTIN	4055143604598
Customs tariff number	85364900990

Product Classification

UNSPSC	39122334
eCl@ss 10.0	27-37-16-01
eCl@ss 9.0	27-37-16-01
ETIM 9.0	EC001437
ETIM 10.0	EC001437
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

CAS-No.	7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Lead
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	7(a) 7(c)-I
SCIP notification number (Austria)	da3b1713-9761-41e7-8044-689dc3940513
SCIP notification number (Belgium)	3b9c84a0-e33e-4ee2-981c-09988cc2603f
SCIP notification number (Bulgaria)	a6263f25-8c16-4f1e-ac03-951c556fa050
SCIP notification number (Czech Republic)	fdbbc298f-18cc-48ce-aeaa-f6785ebcfd35
SCIP notification number (Denmark)	52c31211-7c13-4380-8070-e215249fcaa1
SCIP notification number (Finland)	1b382067-f6e0-486f-86d8-1ea8eb0b961e
SCIP notification number (France)	ad53387b-c55d-4149-ac69-09717cbeee7e
SCIP notification number (Germany)	fb02cac5-40e8-4223-942f-f54d21def31f
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SCIP notification number (Italy)	2af4c56a-41a0-4996-937d-ee17ba2c156a
SCIP notification number (Netherlands)	de25115e-c241-462b-b271-b00174aead95
SCIP notification number (Poland)	3021932a-f395-43b2-a194-8f1875bfc7e0
SCIP notification number (Romania)	2af37088-69d8-44fb-915e-f800e5dd6c93
SCIP notification number (Sweden)	a5d9c89b-3d93-4d69-8524-2be3d11f6aea

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	-	-
MFD for Railway WAGO GmbH & Co. KG	-	-

Approvals for marine applications



Approval	Standard	Certificate Name
DNV DNV Germany GmbH	DNV-CG-0339, Aug. 2021	TAA00001D1
PRS Polski Rejestr Statków	-	TE/1098/880590/23

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 859-399



Documentation

Bid Text

859-399	19.02.2019	xml 4.51 KB	
859-399	20.02.2019	docx 16.88 KB	

Instruction Leaflet

Relay modules, Opto-coupler modules	V 2.0.0 19.01.2022	pdf 2066.27 KB	
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CAD/CAE-Data

CAD data

2D/3D Models 859-399



CAE data

EPLAN Data Portal 859-399	
WSCAD Universe 859-399	
ZUKEN Portal 859-399	

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



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

1.1.6 Tool

1.1.6.1 Operating tool

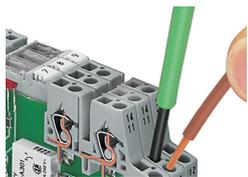


Item No.: 210-720

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

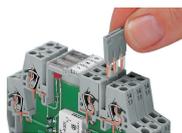
Installation Notes

Conductor termination



Conductor termination

Commoning



Easy commoning using adjacent jumpers

Marking



Marking via Mini-WSB Quick Marking System