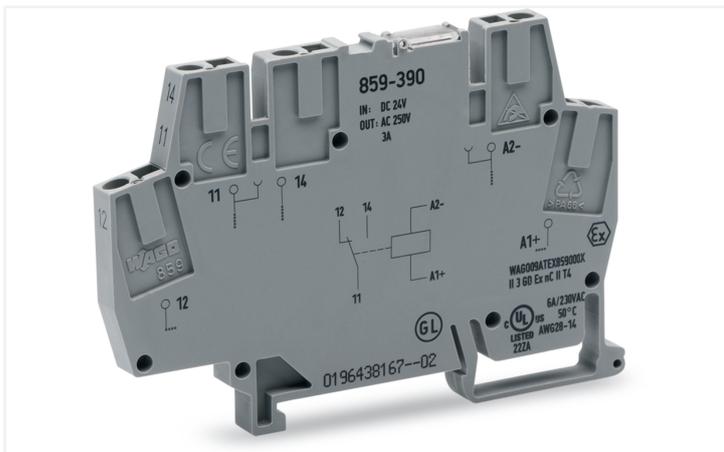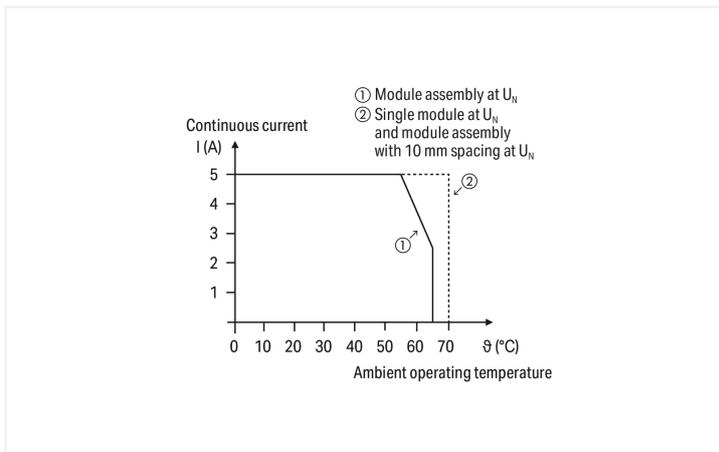# Data Sheet | Item Number: 859-390

Relay module; Nominal input voltage: 24 VDC; 1 changeover contact; Railway; Red status indicator; Module width: 6 mm; 2,50 mm²; gray
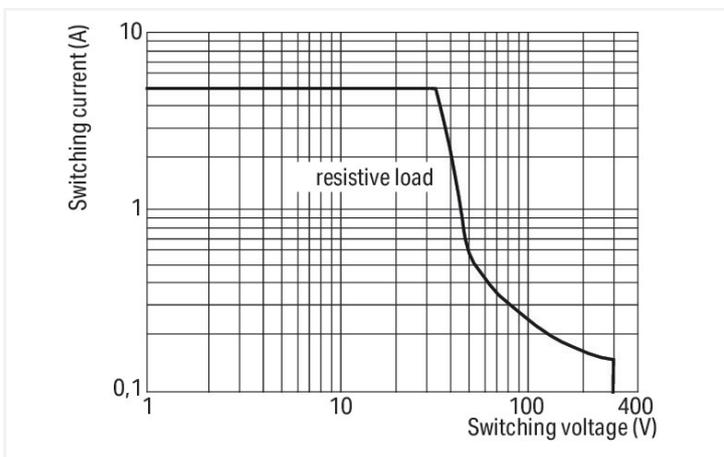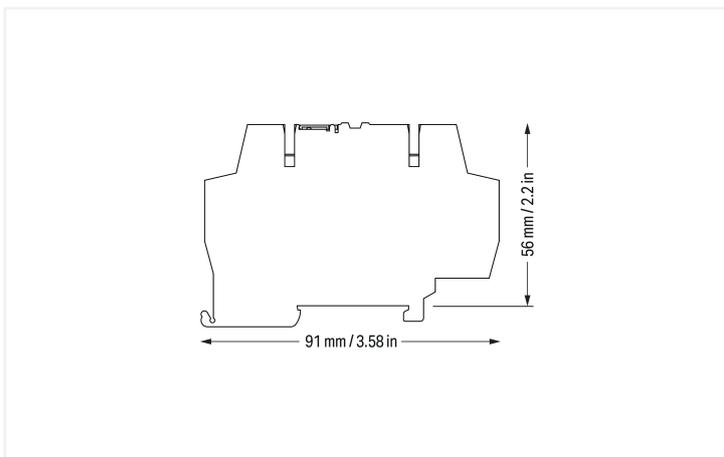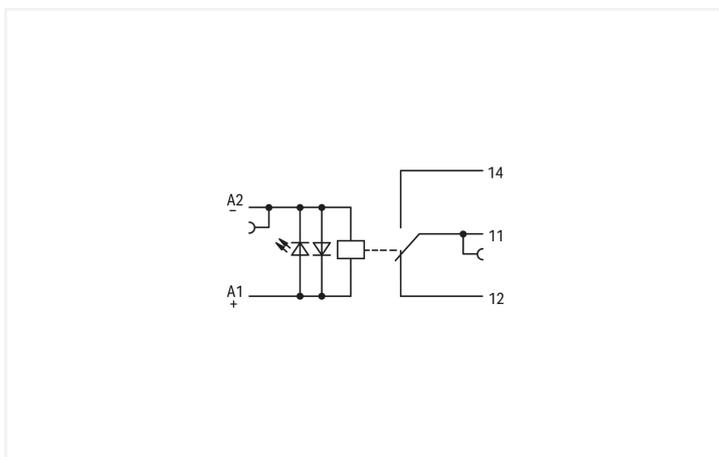
https://www.wago.com/859-390

Current-carrying capacity curve

Color: ■ gray

DC load limit curve

W/AGO

Notes

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

Technical data

Control circuit

Nominal input voltage U_N	24 VDC
Input voltage range	-30 … +25 %
Nominal input current at U_N	12 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.)	6 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50×10^3 switching operations
Mechanical life	5×10^6 switching operations
Switching frequency with/without load (max.)	$6 \ min^{-1}$ / $180 \ min^{-1}$

Signaling

Status indicator	Red LED

Safety and protection

Rated Voltage	300 V
Rated impulse withstand voltage	4 kV
Overvoltage 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 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor; with insulated ferrule	0.08 … 1.5 mm² / 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
Color	gray
Insulation material (main housing)	Polyamide (PA66)
Material group	I
Flammability class per UL94	V0
Fire load	1.249 MJ
Weight	22.9 g

Environmental requirements

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

Standards and Specifications

Standards/specifications	EN 61010-2-201
	EN 61810-1
	EN 61373
	UL 508
	DNV

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
PU (SPU)	10 pcs
Packaging type	Box
Country of origin	CN
GTIN	4055143607629
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)
SCIP notification number (Austria)	b80ae32e-17e3-494b-bd67-c82e462fb581
SCIP notification number (Belgium)	7bca437d-7163-4314-ad00-6d5c2e89959c
SCIP notification number (Bulgaria)	b4d2cc36-ab4c-496b-9e7e-7bb7c557d2e3
SCIP notification number (Czech Republic)	4e3021bc-9521-4bc5-97ba-9760738bca56
SCIP notification number (Denmark)	00cad622-a5a6-4fb2-8481-9e7bbf96c3f4
SCIP notification number (Finland)	4c744e47-cbe4-427d-bbe2-9253e56145f5
SCIP notification number (France)	97e502b0-2db1-430e-a345-cd6118c123b2
SCIP notification number (Germany)	e8d89f4c-5b4d-4810-b2e5-eaa149c4b9a4
SCIP notification number (Hungary)	5f5a0e35-6873-4a2c-bd24-e453f0c7a31e
SCIP notification number (Italy)	741e839c-bbd6-47d1-8d3d-d6c1d1bc11ce
SCIP notification number (Netherlands)	1721e0ca-aa62-442e-b50e-073d56d21186
SCIP notification number (Poland)	fffd907d-c5ea-4395-a795-4496c3dadb1f
SCIP notification number (Romania)	bb944c68-d93e-4936-a2c6-f83d009e6f49
SCIP notification number (Sweden)	6cab1041-53ac-4e56-b2f4-c32162d6086f

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 004/2011	EAC CoC 03078
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	-	-
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Approval	Standard	Certificate Name
DNV DNV Germany GmbH	DNV-CG-0339,Aug.2021	TAA00001D1

Approvals for hazardous areas

Approval	Standard	Certificate Name
CCC CNEX	CNCA-C23-01	2021312304000982 (Ex ec nC IIC T4 Gc)
UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WAGO22UKEX007X_ec nC

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 859-390	↓

Documentation

Bid Text

859-390	19.02.2019	xml 4.51 KB	↓
859-390	20.02.2019	docx 17.00 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 859-390	↓

CAE data

EPLAN Data Portal 859-390	↓
WSCAD Universe 859-390	↓
ZUKEN Portal 859-390	↓

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
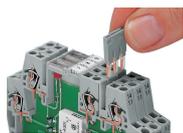
Installation Notes

Conductor termination

Conductor termination

Commoning

Easy commoning using adjacent jumpers

Marking

Marking via Mini-WSB Quick Marking System