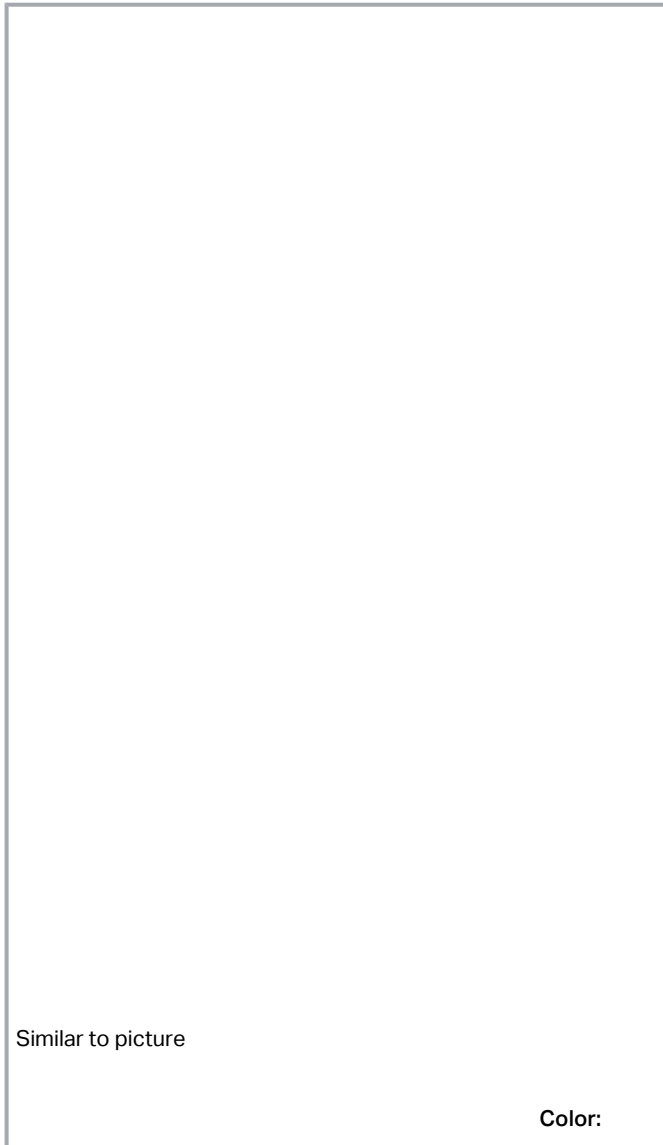


**Data sheet | Item number: 788-412**

Relay module; Nominal input voltage: 24 VDC; 2 changeover contacts;  
Limiting continuous current: 8 A; with gold contacts; Red status indicator;  
Module width: 15 mm; 2,50 mm<sup>2</sup>; gray



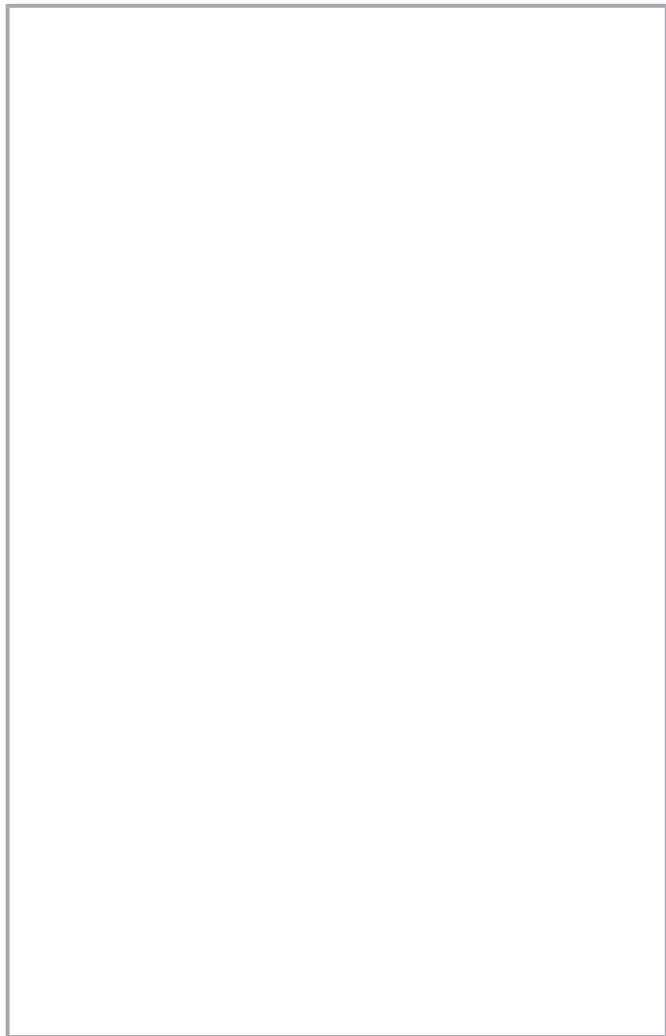
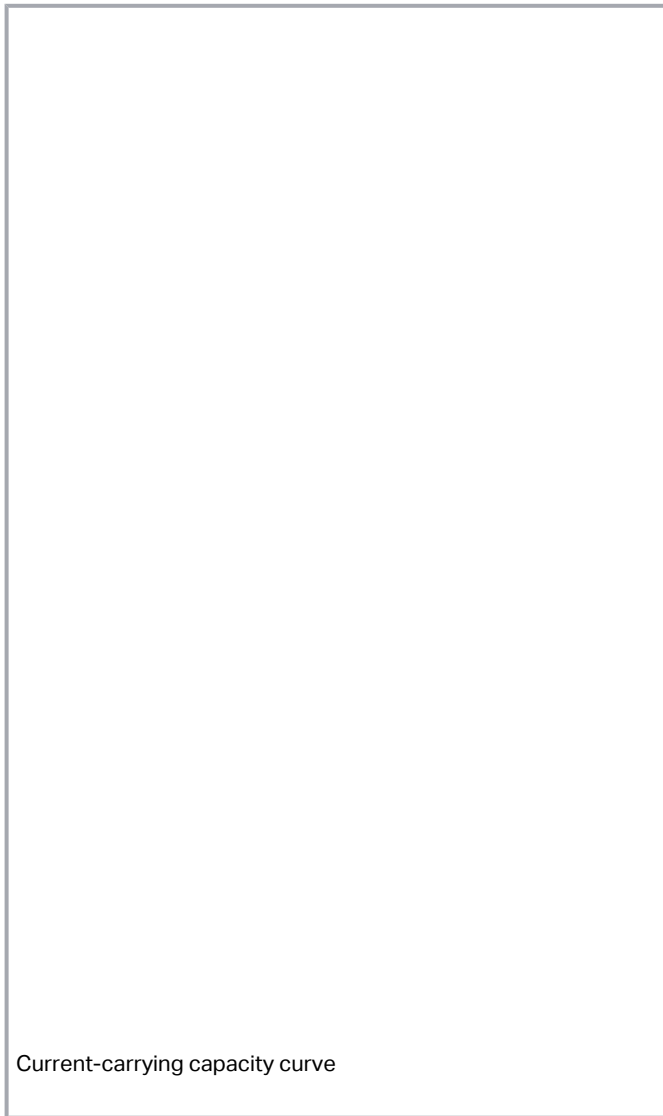
[www.wago.com/788-412](http://www.wago.com/788-412)



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WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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## Data

### Notes

Safety information

A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.

Note

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- Reinforced insulation between coil and contacts
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

---

## Technical data

### Control Circuit

Nominal input voltage $U_N$	DC 24 V
Input voltage range	$\pm 10\%$
Nominal input current at $U_N$	17 mA

### Load circuit

Number of changeover/switchover contacts	2
Contact material (relay)	AgNi + Au
Limiting continuous current	8 A
Switching voltage (max.)	AC 250 V
Switching power (resistive) max.	AC 2000 VA; DC (see load limit curve)
Switching capacity	AC-15: 3 A / AC 250 V; DC-13: 2 A / DC 24 V
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 <sup>3</sup> switching operations
Mechanical life	30 x 10 <sup>6</sup> switching operations
Switching frequency with/without load (max.)	10 min <sup>-1</sup> / 1200 min <sup>-1</sup>

### Signaling

Status indicator	Red LED
------------------	---------

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## Safety and protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength (control/load circuit) (AC, 1 min)	5 kVrms
Dielectric strength (open contact) (AC, 1 min)	1 kVrms
Dielectric strength (load/load circuit) (AC, 1 min)	2.5 kVrms
Safety information	A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
Protection type	IP20

## Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm <sup>2</sup> / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

## Physical data

Width	15 mm / 0.591 inches
Height	86 mm / 3.386 inches
Depth from upper-edge of DIN-rail	54 mm / 2.126 inches

## Mechanical data

Mounting type	DIN-35 rail
---------------	-------------

## Material Data

Color	gray
Fire load	0.677 MJ
Weight	47.6 g

## Environmental requirements

Ambient temperature (operation at U <sub>N</sub> )	-40 ... +70 °C
Ambient temperature UL (operation at U <sub>N</sub> )	-40 ... +50 °C

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Ambient temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Temperature range of connection cable	$\geq (T_{\text{ambient}} + 20 \text{ K})$

## Standards and specifications

Standards/specifications	EN 61010-2-201 EN 61810-1 EN 61373 UL 508
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## Basic relay

WAGO Basic Relay	788-157
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## Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-37-16-01
eCl@ss 9.0	27-37-16-01
ETIM 8.0	EC001437
ETIM 7.0	EC001437
Recupel Type	
PU (SPU)	20 (1) pcs
Packaging type	box
Country of origin	DE
GTIN	4045454352165
Customs tariff number	85364900990

## Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>EAC</b> Brjansker Zertifizierungsstelle	TP TC 004/2011	EAC RU C-DE.AM02.B.00122/19
	<b>UL</b>	UL 508	E175199

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## Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	<b>EU-Declaration of Conformity</b> WAGO GmbH & Co. KG	-	-

## Optional accessories

## Indicators

Status indication		
	<b>Item no.: 788-120</b> Accessories for relay modules; Operation status indicator: red; Nominal operating voltage: 24 VDC	<a href="http://www.wago.com/788-120">www.wago.com/788-120</a>

## Ferrule

Ferrule		
	<b>Item no.: 216-241</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
	<b>Item no.: 216-242</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
	<b>Item no.: 216-243</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-243">www.wago.com/216-243</a>
	<b>Item no.: 216-244</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-244">www.wago.com/216-244</a>
	<b>Item no.: 216-542</b> Twin ferrule; Sleeve for 2 x 1 mm <sup>2</sup> / AWG 2 x 18; red, insulated; 12 mm long; red	<a href="http://www.wago.com/216-542">www.wago.com/216-542</a>

## Tool

Operating tool		
	<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>

## Basic Relay

Basic relay		
	<b>Item no.: 788-157</b> Basic relay; Nominal input voltage: 24 VDC; 2 changeover contacts; Limiting continuous current: 8 A; with gold contacts; Module width: 13 mm; Module height: 15 mm	<a href="http://www.wago.com/788-157">www.wago.com/788-157</a>

## Jumpers

Jumper		
	<b>Item no.: 788-116</b>	

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Jumper; for jumper slot; 6-way; insulated; light gray	<a href="http://www.wago.com/788-116">www.wago.com/788-116</a>
<b>Item no.: 788-117</b> Jumper; for jumper slot; 8-way; insulated; light gray	<a href="http://www.wago.com/788-117">www.wago.com/788-117</a>
<b>Item no.: 788-114</b> Jumper; for jumper slot; 3-way; insulated; light gray	<a href="http://www.wago.com/788-114">www.wago.com/788-114</a>
<b>Item no.: 788-113</b> Jumper; for jumper slot; 2-way; insulated; light gray	<a href="http://www.wago.com/788-113">www.wago.com/788-113</a>
<b>Item no.: 788-115</b> Jumper; for jumper slot; 4-way; insulated; light gray	<a href="http://www.wago.com/788-115">www.wago.com/788-115</a>
<b>Item no.: 859-402</b> Jumper; for jumper slot; 2-way; insulated; light gray	<a href="http://www.wago.com/859-402">www.wago.com/859-402</a>
<b>Item no.: 788-118</b> Jumper; for jumper slot; 2-way; from 1 to 3; insulated; light gray	<a href="http://www.wago.com/788-118">www.wago.com/788-118</a>
<b>Marking accessories</b>	
Marking strip	
<b>Item no.: 2009-110</b> Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/2009-110">www.wago.com/2009-110</a>
Marking device	
<b>Item no.: 210-110</b> Fiber-tip pen	<a href="http://www.wago.com/210-110">www.wago.com/210-110</a>
Double marker carrier	
<b>Item no.: 209-128</b> Adaptor; gray	<a href="http://www.wago.com/209-128">www.wago.com/209-128</a>
Protective marker cover	
<b>Item no.: 209-184</b> Protection cover; transparent	<a href="http://www.wago.com/209-184">www.wago.com/209-184</a>
Marker	
<b>Item no.: 2009-115</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/2009-115">www.wago.com/2009-115</a>
<b>Item no.: 209-183</b> Marker; white	<a href="http://www.wago.com/209-183">www.wago.com/209-183</a>
<b>Item no.: 793-501</b> WMB marking card; as card; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/793-501">www.wago.com/793-501</a>
<b>Item no.: 793-502</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white	<a href="http://www.wago.com/793-502">www.wago.com/793-502</a>
<b>Item no.: 793-503</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type;	<a href="http://www.wago.com/793-503">www.wago.com/793-503</a>

Subject to changes. Please also observe the further product documentation!





white

**Item no.: 793-504**WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; [www.wago.com/793-504](http://www.wago.com/793-504)  
white**Item no.: 793-505**WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; [www.wago.com/793-505](http://www.wago.com/793-505)  
white

Group marker carrier

**Item no.: 209-145**

Group marker carrier; white

[www.wago.com/209-145](http://www.wago.com/209-145)**Item no.: 249-105**

Group marker carrier; gray

[www.wago.com/249-105](http://www.wago.com/249-105)**Downloads****Documentation****Bid Text**

788-412 X81 - Datei	2019 年2月19 日	xml 5.1 kB	Download
788-412 docx - Datei	2019 年1月25 日	docx 17.2 kB	Download

**Instruction Leaflet**

Sockets with Elementary Relay/ SSR	V 1.0.1 2020 年10月9 日	pdf 2.3 MB	Download
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**Additional Information**

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 年8月18 日	pdf 2.2 MB	Download
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**CAD/CAE-Data****CAE data**

EPLAN Data Portal 788-412		URL	Download
ZUKEN Portal 788-412		URL	Download
WSCAD Universe 788-412		URL	Download

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WAGO GmbH & Co. KG  
 Hansastr. 27  
 32423 Minden  
 Phone: +49571 887-0 | Fax: +49571 887-169  
 Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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## CAD data

2D/3D Models 788-412

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 788-412

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Relay module; Nominal input voltage: 24 VDC; 2 changeover contacts; Limiting continuous current: 8 A; with gold contacts; Red status indicator; Module width: 15 mm; 2,50 mm<sup>2</sup>; gray

## Installation Notes

### Conductor termination



Conductor termination

### Commoning



Easy commoning using adjacent jumpers

## Marking

Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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Marking using WMB Multi markers and group marker carriers.

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