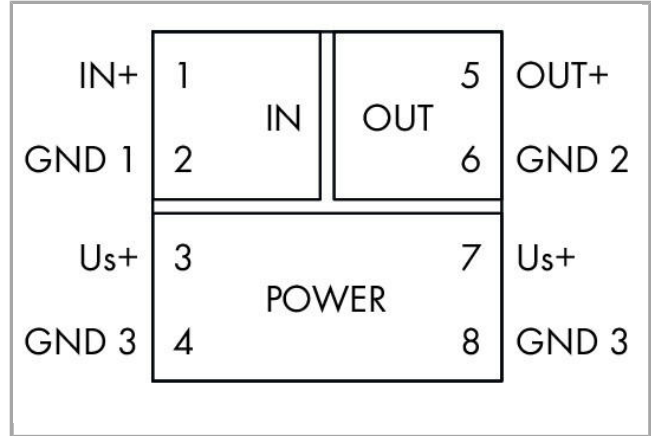
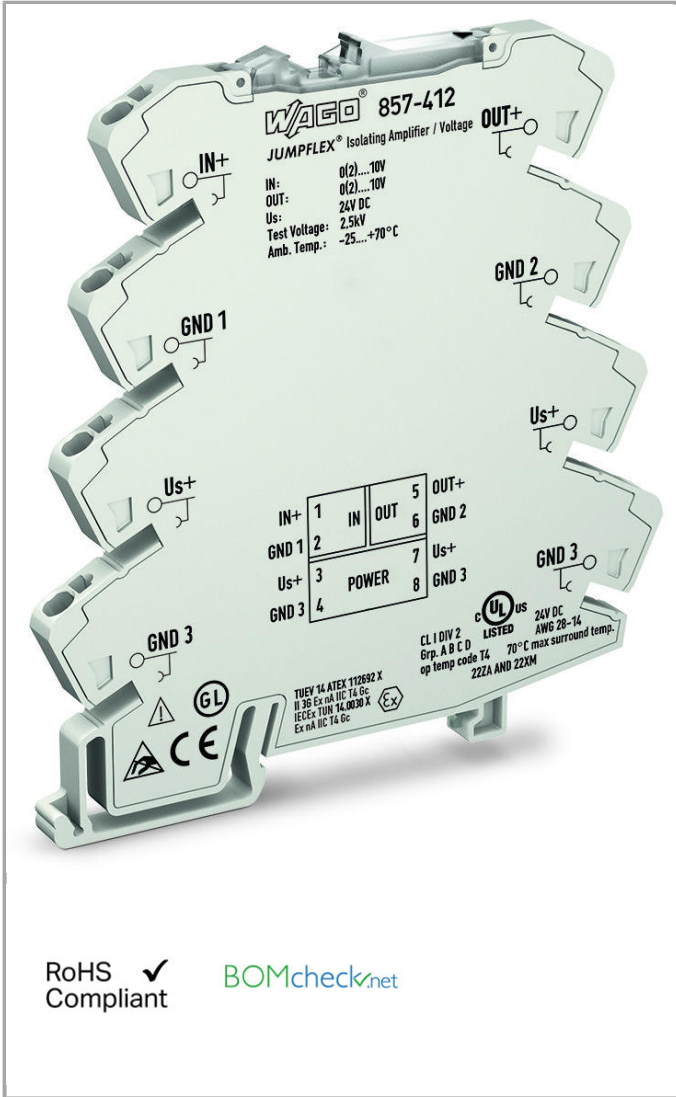


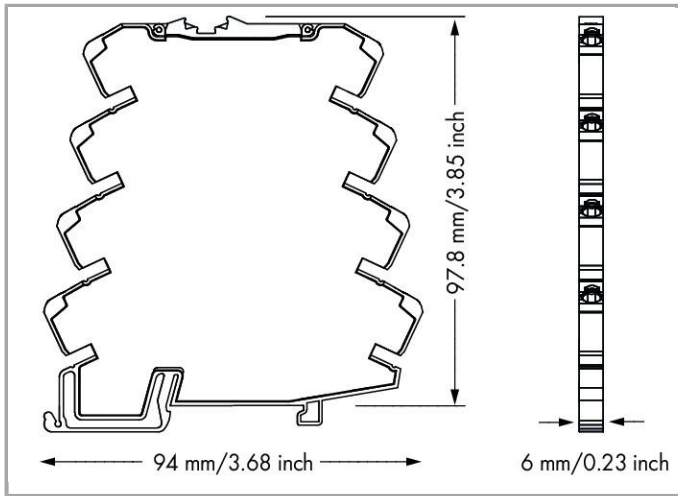
Data sheet | Item number: 857-412

Isolation amplifier; Voltage input signal; Voltage output signal; Supply voltage: 24 VDC; 6 mm module width



857-412





## Item description

### Short description:

The pre-configured isolation amplifier converts, amplifies, filters and electrically isolates standard analog signals.

### Features:

- Input/Output: current/voltage signal
- Safe 3-way isolation with 2.5kV test voltage per EN 61140

## Data

### Technical Data

### Configuration

Configuration options	permanently configured
-----------------------	------------------------

### Input

Input signal type	Voltage
Input signal voltage	0 ... 10 V; 2 ... 10 V
Input resistance (input/voltage)	$\geq 100 \text{ k}\Omega$
Max. input voltage	30 V

### Output

Output signal type	Voltage
Output signal voltage	0 ... 10 V; 2 ... 10 V
Load impedance (output/voltage)	$\geq 2 \text{ k}\Omega$

### Signal processing

Max. operating frequency	100 Hz
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Step response typ.	3.5 ms
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### Measurement error

Transmission error typ.	≤ 0.1 % of upper range value
Temperature coefficient	≤ 0.01 %/K

### Power supply

Type of power supply	24 VDC
Nominal supply voltage $U_S$	DC 24 V
Supply voltage range	±30 %
Current consumption at supply voltage	≤ 25 mA

### Safety and protection:

Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min
Protection class	IP20

### Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 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 inch

### Geometrical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-35 rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

### Mechanical data

Type of mounting	DIN-35 rail
------------------	-------------

### Material Data

Color	light gray
Fire load	0 MJ
Weight	35.6 g

### Environmental Requirements

Surrounding air (operating) temperature	-25 ... 70 °C
Surrounding air (storage) temperature	-40 ... 85 °C

## Standards and specifications

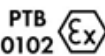

Conformity marking	1
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

## Commercial data





Product Group	6 (Interface Electronics)
Country of origin	DE
GTIN	4045454471309
Customs Tariff No.	85437090300

## Approvals / Certificates


### Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>IECEX</b> TUEV Nord Cert GmbH	EN 60079-0	TÜV_14_ATEX_112692_X
	<b>IECEX</b> TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0030_X











### Ship Approvals
















Logo	Approval	Additional Approval Text	Certificate name
	<b>BV</b> Bureau Veritas S.A.	-	40179_A0
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAA00001D1
	<b>NK</b> Nippon Kaiji Kyokai	-	TA17255M
	<b>PRS</b> Polski Rejestr Statków	-	TE/2186 /880590/18












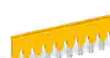




### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.4


### Compatible products

Jumper			
	<b>Item no.: 281-482</b> Comb-style jumper bar; insulated; 2-way; IN = IN terminal block		281-482
	<b>Item no.: 859-402</b> Push-in type jumper bar; 2-way; Nominal current 18 A; insulated		859-402
	<b>Item no.: 859-402/000-005</b> Push-in type jumper bar; 2-way; Nominal current 18 A; insulated	/000-005	859-402
	<b>Item no.: 859-402/000-006</b> Push-in type jumper bar; 2-way; Nominal current 18 A; insulated	/000-006	859-402
	<b>Item no.: 859-402/000-029</b> Push-in type jumper bar; 2-way; Nominal current 18 A; insulated	/000-029	859-402
	<b>Item no.: 859-403</b> Push-in type jumper bar; 3-way; Nominal current 18 A; insulated		859-403
	<b>Item no.: 859-403/000-005</b> Push-in type jumper bar; 3-way; Nominal current 18 A; insulated	/000-005	859-403
	<b>Item no.: 859-403/000-006</b> Push-in type jumper bar; 3-way; Nominal current 18 A; insulated	/000-006	859-403
	<b>Item no.: 859-403/000-029</b> Push-in type jumper bar; 3-way; Nominal current 18 A; insulated	/000-029	859-403
	<b>Item no.: 859-404</b> Push-in type jumper bar; 4-way; Nominal current 18 A; insulated		859-404















	<b>Item no.: 859-404/000-005</b> Push-in type jumper bar; 4-way; Nominal current 18 A; insulated	859-404
		/000-005
	<b>Item no.: 859-404/000-006</b> Push-in type jumper bar; 4-way; Nominal current 18 A; insulated	859-404
		/000-006
	<b>Item no.: 859-404/000-029</b> Push-in type jumper bar; 4-way; Nominal current 18 A; insulated	859-404
		/000-029
	<b>Item no.: 859-405</b> Push-in type jumper bar; 5-way; Nominal current 18 A; insulated	859-405
	<b>Item no.: 859-405/000-005</b> Push-in type jumper bar; 5-way; Nominal current 18 A; insulated	859-405
		/000-005
	<b>Item no.: 859-405/000-006</b> Push-in type jumper bar; 5-way; Nominal current 18 A; insulated	859-405
		/000-006
	<b>Item no.: 859-405/000-029</b> Push-in type jumper bar; 5-way; Nominal current 18 A; insulated	859-405
		/000-029
	<b>Item no.: 859-406</b> Push-in type jumper bar; 6-way; Nominal current 18 A; insulated	859-406
	<b>Item no.: 859-406/000-005</b> Push-in type jumper bar; 6-way; Nominal current 18 A; insulated	859-406
		/000-005
	<b>Item no.: 859-406/000-006</b> Push-in type jumper bar; 6-way; Nominal current 18 A; insulated	859-406
		/000-006
	<b>Item no.: 859-406/000-029</b> Push-in type jumper bar; 6-way; Nominal current 18 A; insulated	859-406
		/000-029
	<b>Item no.: 859-407</b> Push-in type jumper bar; 7-way; Nominal current 18 A; insulated	859-407
	<b>Item no.: 859-407/000-005</b> Push-in type jumper bar; 7-way; Nominal current 18 A; insulated	859-407
		/000-005
	<b>Item no.: 859-407/000-006</b> Push-in type jumper bar; 7-way; Nominal current 18 A; insulated	859-407
		/000-006
	<b>Item no.: 859-407/000-029</b> Push-in type jumper bar; 7-way; Nominal current 18 A; insulated	859-407
		/000-029

	<b>Item no.: 859-408</b> Push-in type jumper bar; 8-way; Nominal current 18 A; insulated	859-408
	<b>Item no.: 859-408/000-005</b> Push-in type jumper bar; 8-way; Nominal current 18 A; insulated	859-408 /000-005
	<b>Item no.: 859-408/000-006</b> Push-in type jumper bar; 8-way; Nominal current 18 A; insulated	859-408 /000-006
	<b>Item no.: 859-408/000-029</b> Push-in type jumper bar; 8-way; Nominal current 18 A; insulated	859-408 /000-029
	<b>Item no.: 859-409</b> Push-in type jumper bar; 9-way; Nominal current 18 A; insulated	859-409
	<b>Item no.: 859-409/000-005</b> Push-in type jumper bar; 9-way; Nominal current 18 A; insulated	859-409 /000-005
	<b>Item no.: 859-409/000-006</b> Push-in type jumper bar; 9-way; Nominal current 18 A; insulated	859-409 /000-006
	<b>Item no.: 859-409/000-029</b> Push-in type jumper bar; 9-way; Nominal current 18 A; insulated	859-409 /000-029
	<b>Item no.: 859-410</b> Push-in type jumper bar; 10-way; Nominal current 18 A; insulated	859-410
	<b>Item no.: 859-410/000-005</b> Push-in type jumper bar; 10-way; Nominal current 18 A; insulated	859-410 /000-005
	<b>Item no.: 859-410/000-006</b> Push-in type jumper bar; 10-way; Nominal current 18 A; insulated	859-410 /000-006
	<b>Item no.: 859-410/000-029</b> Push-in type jumper bar; 10-way; Nominal current 18 A; insulated	859-410 /000-029
<b>General accessories</b>		
	<b>Item no.: 857-979</b> Supply and through module	857-979
<b>assembling</b>		
	<b>Item no.: 249-116</b> Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5	249-116
	<b>Item no.: 249-117</b> Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5	249-117
	<b>Item no.: 249-197</b> Screwless end stop; 14 mm wide; for DIN-rail 35 x 15 and 35 x 7.5	249-197
















## power supply
















	<b>Item no.: 787-2852</b> Switched-mode power supply; for JUMPFLEX® Signal Conditioners; 1-phase; 24 VDC output voltage; 1 A output current	787-2852
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## Marking accessories
















	<b>Item no.: 2009-110</b> Marking strips; on reel; not stretchable; plain; snap-on type	2009-110
	<b>Item no.: 2009-115</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115
	<b>Item no.: 2009-115/000-002</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-002
	<b>Item no.: 2009-115/000-006</b> WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-006
	<b>Item no.: 2009-115/000-007</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-007
	<b>Item no.: 2009-115/000-012</b> WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-012
	<b>Item no.: 2009-115/000-017</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-017
	<b>Item no.: 2009-115/000-023</b> WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-023
	<b>Item no.: 2009-115/000-024</b> WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-024
	<b>Item no.: 793-501</b> WMB marking card; as card; not stretchable; plain; snap-on type	793-501
	<b>Item no.: 793-501/000-002</b> WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-002
	<b>Item no.: 793-501/000-005</b> WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-005
	<b>Item no.: 793-501/000-006</b> WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-006
	<b>Item no.: 793-501/000-007</b> WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-007



	<b>Item no.: 793-501/000-012</b> WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-012
	<b>Item no.: 793-501/000-017</b> WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-017
	<b>Item no.: 793-501/000-023</b> WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-023
	<b>Item no.: 793-501/000-024</b> WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-024
	<b>Item no.: 793-502</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502
	<b>Item no.: 793-502/000-002</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-002
	<b>Item no.: 793-502/000-005</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-005
	<b>Item no.: 793-502/000-006</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-006
	<b>Item no.: 793-502/000-007</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-007
	<b>Item no.: 793-502/000-012</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-012
	<b>Item no.: 793-502/000-017</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-017
	<b>Item no.: 793-502/000-023</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-023
	<b>Item no.: 793-502/000-024</b> WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-024
	<b>Item no.: 793-503</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type	793-503
	<b>Item no.: 793-503/000-002</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type	793-503 /000-002

	<b>Item no.: 793-503/000-005</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type / 000-005	793-503
	<b>Item no.: 793-503/000-006</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type / 000-006	793-503
	<b>Item no.: 793-503/000-007</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type / 000-007	793-503
	<b>Item no.: 793-503/000-012</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type / 000-012	793-503
	<b>Item no.: 793-503/000-017</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type / 000-017	793-503
	<b>Item no.: 793-503/000-023</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type / 000-023	793-503
	<b>Item no.: 793-503/000-024</b> WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type / 000-024	793-503
	<b>Item no.: 793-504</b> WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type	793-504
	<b>Item no.: 793-504/000-002</b> WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type / 000-002	793-504
	<b>Item no.: 793-504/000-005</b> WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type / 000-005	793-504
	<b>Item no.: 793-504/000-006</b> WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type / 000-006	793-504
	<b>Item no.: 793-504/000-012</b> WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type / 000-012	793-504
	<b>Item no.: 793-504/000-017</b> WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type / 000-017	793-504
	<b>Item no.: 793-504/000-023</b> WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type / 000-023	793-504
	<b>Item no.: 793-505</b> WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type	793-505

	<b>Item no.: 793-505/000-005</b> WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type	793-505 /000-005
	<b>Item no.: 793-505/000-006</b> WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type	793-505 /000-006
	<b>Item no.: 793-505/000-007</b> WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type	793-505 /000-007
	<b>Item no.: 793-505/000-012</b> WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type	793-505 /000-012
	<b>Item no.: 793-506</b> WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type	793-506
	<b>Item no.: 793-506/000-005</b> WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type	793-506 /000-005
	<b>Item no.: 793-506/000-006</b> WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type	793-506 /000-006
	<b>Item no.: 793-506/000-012</b> WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type	793-506 /000-012
	<b>Item no.: 793-506/000-017</b> WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type	793-506 /000-017
	<b>Item no.: 793-5501</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501
	<b>Item no.: 793-5501/000-002</b> WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501 /000-002
	<b>Item no.: 793-5501/000-005</b> WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501 /000-005
	<b>Item no.: 793-5501/000-006</b> WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501 /000-006
	<b>Item no.: 793-5501/000-007</b> WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501 /000-007
	<b>Item no.: 793-5501/000-012</b> WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501 /000-012

	<b>Item no.: 793-5501/000-014</b> WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501 /000-014
	<b>Item no.: 793-5501/000-017</b> WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501 /000-017
	<b>Item no.: 793-5501/000-023</b> WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501 /000-023
	<b>Item no.: 793-5501/000-024</b> WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501 /000-024
	<b>Item no.: 793-566</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type	793-566
	<b>Item no.: 793-566/000-002</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type	793-566 /000-002
	<b>Item no.: 793-566/000-005</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type	793-566 /000-005
	<b>Item no.: 793-566/000-006</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type	793-566 /000-006
	<b>Item no.: 793-566/000-007</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type	793-566 /000-007
	<b>Item no.: 793-566/000-012</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type	793-566 /000-012
	<b>Item no.: 793-566/000-017</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type	793-566 /000-017
	<b>Item no.: 793-566/000-023</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type	793-566 /000-023
	<b>Item no.: 793-566/000-024</b> WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type	793-566 /000-024
<b>tools</b>		
	<b>Item no.: 210-720</b> Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm	210-720
<b>transfer module</b>		
	<b>Item no.: 857-980</b> Interface adapter; 16-pole; analog	857-980

**Downloads****Documentation****Bid Text**

857-412 Trennverstärker,	Mar 9, 2016	doc 29.7 kB	Download
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**Instruction Leaflet**

Measurement Transducer and Isolation Amplifier 0(2)...10 V / 0(2)...10 V		pdf 1.5 MB	Download
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**Additional Information**

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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**CAD/CAE - Smart Data****CAD data**

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Subject to changes.

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