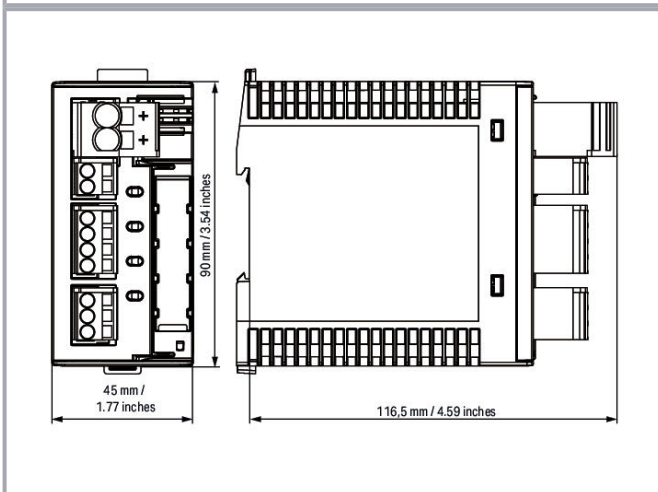
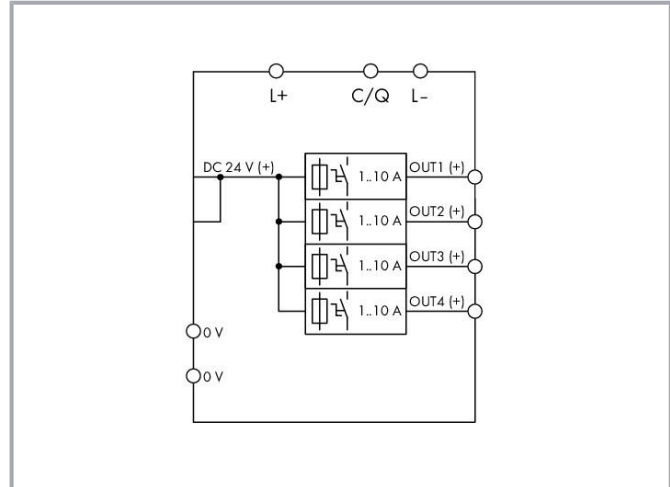


Data sheet | Item number: 787-1664/000-080

Electronic circuit breaker; 4-channel; 24 VDC input voltage; adjustable 1 ...  
10 A; IO-Link



[www.wago.com/787-1664/000-080](http://www.wago.com/787-1664/000-080)



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)

Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.



## Item description

### Features:

- Space-saving ECB with four channels
- Nominal current: 1 ... 10 A (adjustable for each channel via sealable selector switch or IO-Link interface)
- Switch-on capacity > 50000  $\mu$ F per channel
- One illuminated, three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Status message and current measurement of each individual channel via IO-Link interface
- Switch on/off each channel separately via IO-Link interface

## Data

### Technical data

#### Input

Nominal input voltage $U_{i\text{ nom}}$	DC 24 V
Input voltage range	DC 18 ... 30 V

#### Output

Total number of channels (module)	4
Nominal output voltage $U_{o\text{ nom}}$	4 x DC 24 V
Output voltage range	DC 18 ... 30 V ( $U_e$ - voltage drop)
Voltage drop	$\leq$ 200 mV (10 A) (Input (+))
Nominal output current $I_{o\text{ nom}}$	4 x 1 / 2 / 3 / 4 / 6 / 8 / 10 A (Adjustable for each channel via IO-Link interface; 1, 2, 4, 6, 10 A adjustable for each channel via selector switch)
Default setting	DC 10 A; switched off
Trip time	16 ms ... 100 s (Load-dependent)
Switch-on capacity	> 50000 $\mu$ F per channel
Switch-on behavior	Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)
Active current limitation	no

### Signaling and Communication

Signaling	4 x LED (green/red/orange) 1 x IO-Link interface
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Subject to changes. Please also observe the further product documentation!



Operation status indicator	Green LED (channel OK) Red LED (tripped channel)
Remote input	Switching on/off any number of channels via IO-Link interface

### Efficiency/power losses

Power loss $P_1$	$\leq 0.84 \text{ W}; \leq 10 \text{ W (4 x 10 A)}$
Efficiency (typ.)	99 %

### Circuit protection

Internal fuse	T 15 A per channel
---------------	--------------------

### Safety and protection

Protection class	III
Protection type	IP20; per EN 60529
Reverse voltage protection	No
Pollution degree	2
Transient suppression (primary)	Suppressor diode (33 V)
Parallel operation of single channels	Not permitted
Series operation	No
MTBF	> 500,000 h (per IEC 61709)

### Connection data

Connection type 1	Input (+)
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 831 Series
Solid conductor	0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Fine-stranded conductor	0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Strip length	13 ... 15 mm / 0.51 ... 0.59 inches
Connection type 2	Input (-); Output; Signaling
Connection technology 2	CAGE CLAMP®
WAGO connector 2	WAGO 721 Series
Solid conductor 2	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inches

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



## Physical data

Width	45 mm / 1.772 inches
Height	90 mm / 3.543 inches
Depth from upper-edge of DIN-rail	115.5 mm / 4.547 inches

## Mechanical Data

Mounting type	DIN-35 rail
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## Material Data

Fire load	0.651 MJ
Weight	170 g

## Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	≥ 50 °C (see instruction manual)

## Standards and specifications

Conformity marking	CE
Standards/specifications	EN 61000-6-2 EN 61000-6-3 UL 508 UL 2367 DNV

## Commercial data

eCl@ss 10.0	27-37-18-02
eCl@ss 9.0	27-37-18-02
ETIM 8.0	EC001440
ETIM 7.0	EC001440
PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4055143899239

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




Customs tariff number	85363010900
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## Environmental Product Compliance


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


### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C-DE.AM02.B.00115_19
	UL Underwriters Laboratories Inc.	UL 508	E255817
	UR Underwriters Laboratories Inc.	UL 2367	E363438

### Declarations of conformity and manufacturer's declarations

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

### Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA0000281

## Optional accessories

### Ferrule

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



	<b>Item no.: 216-203</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-203">www.wago.com/216-203</a>
	<b>Item no.: 216-206</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; blue	<a href="http://www.wago.com/216-206">www.wago.com/216-206</a>
	<b>Item no.: 216-207</b> Ferrule; Sleeve for 4 mm <sup>2</sup> / AWG 12; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-207">www.wago.com/216-207</a>
	<b>Item no.: 216-202</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-202">www.wago.com/216-202</a>
	<b>Item no.: 216-204</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-204">www.wago.com/216-204</a>
	<b>Item no.: 216-205</b> Ferrule; Sleeve for 2.08 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-205">www.wago.com/216-205</a>
	<b>Item no.: 216-208</b> Ferrule; Sleeve for 6 mm <sup>2</sup> / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow	<a href="http://www.wago.com/216-208">www.wago.com/216-208</a>
	<b>Item no.: 216-201</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-201">www.wago.com/216-201</a>
	<b>Item no.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-223">www.wago.com/216-223</a>
	<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.: 216-222</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-222">www.wago.com/216-222</a>
	<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-221">www.wago.com/216-221</a>
	<b>Item no.: 216-224</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-224">www.wago.com/216-224</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.: 216-263</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/216-263">www.wago.com/216-263</a>
	<b>Item no.: 216-246</b>	

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

	Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	<a href="http://www.wago.com/216-246">www.wago.com/216-246</a>
	<b>Item no.: 216-266</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	<a href="http://www.wago.com/216-266">www.wago.com/216-266</a>
	<b>Item no.: 216-264</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/216-264">www.wago.com/216-264</a>
	<b>Item no.: 216-284</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/216-284">www.wago.com/216-284</a>
	<b>Item no.: 216-286</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	<a href="http://www.wago.com/216-286">www.wago.com/216-286</a>
	<b>Item no.: 216-287</b> Ferrule; Sleeve for 4 mm <sup>2</sup> / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-287">www.wago.com/216-287</a>
	<b>Item no.: 216-262</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/216-262">www.wago.com/216-262</a>
	<b>Item no.: 216-288</b> Ferrule; Sleeve for 6 mm <sup>2</sup> / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow	<a href="http://www.wago.com/216-288">www.wago.com/216-288</a>
	<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-301">www.wago.com/216-301</a>
	<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-321">www.wago.com/216-321</a>
	<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise	<a href="http://www.wago.com/216-322">www.wago.com/216-322</a>
	<b>Item no.: 216-267</b> Ferrule; Sleeve for 4 mm <sup>2</sup> / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-267">www.wago.com/216-267</a>
	<b>Item no.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>

**Marking accessories**

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>
	<b>Item no.: 210-831</b> Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-831">www.wago.com/210-831</a>

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



**Item no.: 210-832**  
Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white

[www.wago.com/210-832](http://www.wago.com/210-832)

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

[www.wago.com/2009-145](http://www.wago.com/2009-145)



**Item no.: 2009-115**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

[www.wago.com/2009-115](http://www.wago.com/2009-115)



**Item no.: 248-501**  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

[www.wago.com/248-501](http://www.wago.com/248-501)



**Item no.: 793-501**  
WMB marking card; as card; not stretchable; plain; snap-on type; white

[www.wago.com/793-501](http://www.wago.com/793-501)



**Item no.: 793-5501**  
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

[www.wago.com/793-5501](http://www.wago.com/793-5501)

Tool

Operating tool



**Item no.: 210-721**  
Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured

[www.wago.com/210-721](http://www.wago.com/210-721)



**Item no.: 210-769**  
SCREWDRIVER; green

[www.wago.com/210-769](http://www.wago.com/210-769)



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

[www.wago.com/210-720](http://www.wago.com/210-720)

Downloads

Documentation

Manual

Product Manual Electronic Circuit Breaker 24 VDC / 4 x 1... 0 A	V 1.1.1 2019 Oct 10	pdf 5.3 MB	Download
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Bid Text

787-1664/000-080 X81 - Datei	2019 Jul 3	xml 7.0 kB	Download
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787-1664/000-080 docx - Datei	2019 Jul 3	docx 20.7 kB	Download
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**Instruction Leaflet**

Electronic Circuit Breaker 24 VDC, 4 x 10 A, Nominal input voltage 24 VDC	23.04.2020 2020 May 19	pdf 2.0 MB	Download
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**Additional Information**

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 Aug 18	pdf 2.2 MB	Download
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**Application Notes****Application note SIEMENS**

Application note Electronic fuse 787-166x/0000-0080 with I/O-Link Interface (a2019004)	2019-06-06 2019 Jun 6	zip 7.4 MB	Download
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This application note describes how the WAGO electronic fuses (787-1668 / 0000-0080 or 787-1664 / 0000-0080) with I/O-Link interface are integrated in the TIA Portal V15. The fuse is operated either on a Wago I/O-Link master or on a Siemens I/O-Link master.

Application note Electronic fuse 787-166x/0000-0080 with I/O-Link Interface (a2019005)	2019-06-06 2019 Jun 6	zip 11.0 MB	Download
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This Application Note explains how the WAGO electronic fuses (787-1668/0000-0080 and 787-1664/0000-0080) with I/O link interface are integrated into the SIMATIC Manager V5.5.

**Application Note e!COCKPIT**

e!COCKPIT Application Note WagoAppFuse (a2019001)	2021-11-08 2021 Dec 6	pdf 561.3 kB	Download
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In this Application Note, an example project for the library "WagoAppFuse" is delivered. The electronic circuit breaker (ECB) is connected to an IO-Link master module 750-657.

**Engineering-Software****WAGO IO-Link Configurator**

WAGO IO-Link Configurator	V5.1.1-6618 2022 Feb 16	ZIP 91.8 MB	Download
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WAGO IO-Link Configurator allows configuration, parameterization, operation and monitoring of WAGO IO-Link Masters in the WAGO I/O System 750 and WAGO I/O System Field, and especially of the WAGO IO-Link devices connected to them.

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



Additionally, WAGO IO-Link Configurator can be used for complete configuration and operation of all IO-Link devices of third-party manufacturers, as long as they comply with the IO-Link specification. A product's process data can be visualized graphically and stored in trend curves. Up to eight elements can be selected for visualization, and the data can be recorded for up to 24 hours.

Device description files for the IO-Link Masters (IOLM) or IO-Link Devices (IODD) can be used to integrate new devices into the tool at any time. Convenient access to the IO-Link user organization's IODDfinder is available for the IODDs. This allows automated, selective download of IODDs when integrating new IO-Link devices. An integrated IODD viewer allows detailed insight into the IODD device description.

WAGO IO-Link Configurator can be used either as a standalone program or integrated into engineering systems with a TCI interface and *WAGO-I/O-CHECK*.

IO-Link Configurator can also be used to integrate the IO-Link Master (750-657) of the WAGO I/O System 750 Series and to access all the configurator's functions. This is made possible by the WAGO I/O System 750 IO-Link Adapter, which can be retrofitted. The WAGO I/O System 750 IO-Link Adapter requires the current version of WAGO IO-Link Configurator and a current version of *WAGO-I/O-CHECK*.

In addition, the download file contains the device descriptions for the respective fieldbus systems of the WAGO I/O System Field modules. These are pre-installed in the Configurator setup.

The WAGO IO-Link Configurator license is assigned to the specific PC on which it is installed (a workstation license).

Register now and test our engineering software for 30 days at no cost.

## CAD/CAE-Data

### CAD data

2D/3D Models 787-1664/000-080	<a href="#">URL</a>	<a href="#">Download</a>
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### CAE data

ZUKEN Portal 787-1664/000-080	<a href="#">URL</a>	<a href="#">Download</a>
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EPLAN Data Portal 787-1664/000-080	<a href="#">URL</a>	<a href="#">Download</a>
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## Device Files

### Device Description File

Device description files 787-1664/000-080 for firmware version 2.39 and higher	1.4.1 2019 Sep 10	zip 166.3 kB	<a href="#">Download</a>
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Device description files 787-1664/000-080 for firmware until version 2.38	1.1 2018 Mar 19	zip 166.1 kB	<a href="#">Download</a>
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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)

Do you have any questions about our products?  
 We are always happy to take your call at +49 (571) 887-44222.



## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 787-1664/000-080	URL	Download
Electronic circuit breaker; 4-channel; 24 VDC input voltage; adjustable 1 ... 10 A; IO-Link		

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## Installation Notes

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

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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)

Do you have any questions about our products?  
We are always happy to take your call at +49 (571) 887-44222.