

TECHNICAL DETAILS

See page 45 for an explanation of the symbols used.

	Description	Item No.	Image	Circuit Diagram	Input	Output	Special Functions	Configuration	Power Supply									
Isolation Amplifiers	Isolation Amplifiers																	
	Universal isolation amplifier	2857-401			0 ... 1 mA 0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA 0 ... 100 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V 0 ... 220 V	$\pm 1 \text{ mA}$ $\pm 10 \text{ mA}$ $\pm 20 \text{ mA}$ $\pm 100 \text{ mA}$	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	$\pm 10 \text{ mA}$ $\pm 20 \text{ mA}$	X	X	X	X	X	X	24 VDC	
	Isolation amplifier, configurable, with zero/span adjustment	857-400			0 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V			X	X				24 VDC	
	Isolation amplifier, configurable, with digital output	857-401			0 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	$\pm 20 \text{ mA}$	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		X	X	X	X	X	24 VDC		
	Universal isolation amplifier	857-402			0 ... 0.3 mA 0 ... 100 mA	0 ... 60 mV to 0 ... 200 V	$\pm 0.3 \text{ mA}$ to $\pm 100 \text{ mA}$	0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	$\pm 10 \text{ mA}$ $\pm 20 \text{ mA}$		X	X	X	X		24 VDC	
	Bipolar isolation amplifier	857-409			0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	$\pm 10 \text{ mA}$ $\pm 20 \text{ mA}$	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	$\pm 10 \text{ mA}$ $\pm 20 \text{ mA}$		X	X				24 VDC	
Isolation amplifiers, pre-configured	857-411				0(4) ... 20 mA			0(4) ... 20 mA										
	857-412				0(2) ... 10 V			0(2) ... 10 V										
	857-413				0 ... 10 V			0 ... 20 mA										
	857-414				0 ... 10 V			4 ... 20 mA										
	857-415				0 ... 20 mA				0 ... 10 V									
	857-416				4 ... 20 mA				0 ... 10 V									24 VDC

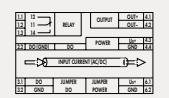
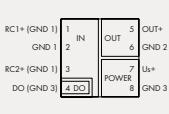
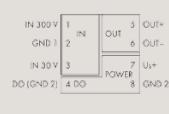
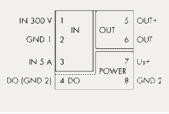
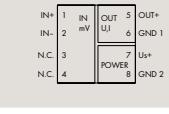
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	Description	Item No.	Image	Circuit Diagram	Input	Output	Special Functions	Configuration	Power Supply	
	Isolation Amplifiers									
Repeater Power Supplies	Repeater power supply	857-420	A photograph of the repeater power supply unit.	A detailed circuit diagram showing the internal connections for the repeater power supply. It includes pins 1 through 8, ground connections, and power supply components.	0 ... 20 mA 4 ... 20 mA	0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		X	24 VDC
	HART repeater power supply	857-421	A photograph of the HART repeater power supply unit.	A detailed circuit diagram showing the internal connections for the HART repeater power supply. It includes pins 1 through 8, ground connections, and power supply components.	4 ... 20 mA	4 ... 20 mA				24 VDC
Signal Splitters	Signal splitter, with current output	857-423	A photograph of the signal splitter unit.	A detailed circuit diagram showing the internal connections for the signal splitter. It includes pins 1 through 8, ground connections, and power supply components.	0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	2 x 0(4) ... 20 mA		X	24 VDC
	Signal splitter, with voltage/ current output	857-424	A photograph of the signal splitter unit.	A detailed circuit diagram showing the internal connections for the signal splitter. It includes pins 1 through 8, ground connections, and power supply components.	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	2 x 0 ... 20 mA 4 ... 20 mA		X	24 VDC
Passive Isolators	Loop-powered isolation amplifier	857-450	A photograph of the loop-powered isolation amplifier unit.	A detailed circuit diagram showing the internal connections for the loop-powered isolation amplifier. It includes pins 1 through 8, ground connections, and power supply components.	0 ... 5 mA 0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 1 V 0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	$\pm 5 \text{ mA}$ $\pm 10 \text{ mA}$ $\pm 20 \text{ mA}$		X	Power via output circuit
	Passive isolator, 1-channel	857-451	A photograph of the 1-channel passive isolator unit.	A detailed circuit diagram showing the internal connections for the 1-channel passive isolator. It includes pins 1 through 8, ground connections, and power supply components.	0(4) ... 20 mA	0(4) ... 20 mA				Power via input circuit
	Passive isolator, 2-channel	857-452	A photograph of the 2-channel passive isolator unit.	A detailed circuit diagram showing the internal connections for the 2-channel passive isolator. It includes pins 1 through 8, ground connections, and power supply components.	2 x 0(4) ... 20 mA	2 x 0(4) ... 20 mA				Power via input circuit

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	Description	Item No.	Image	Circuit Diagram	Input	Output	Special Functions	Configuration	Power Supply		
Current and Voltage Signal Conditioners	  Current and Voltage Signal Conditioners							    	   		
	Through-hole current signal conditioner	2857-550			100 A AC/DC	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	    	  	24 VDC	
	Current signal conditioner	857-550			1 A AC/DC 5 A AC/DC	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	 	  	24 VDC	
	Current signal conditioner, for Rogowski coils	857-552			Rogowski coils 500 AAC 2000 AAC 4000 AAC	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	 	  	24 VDC	
	Voltage signal conditioner	857-560			300 V AC/DC	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	 	  	24 VDC	
	Power signal conditioner	857-569			300 V AC/DC (5 A)	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	 	  	24 VDC	
	Millivolt signal conditioner	857-819			0 ... 200 mV 0 ... 1000 mV	±100 mV	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	 	  	24 VDC

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	Description	Item No.	Image	Circuit Diagram	Input	Output	Special Functions	Configuration	Power Supply
Temperature Signal Conditioners	Temperature signal conditioner, for Pt and resistance sensors	857-800	A photograph of the 857-800 temperature signal conditioner module, showing its front panel with various connection terminals and a small display or indicator.	A detailed circuit diagram showing the internal connections for the 857-800 module. It includes a bridge circuit for Pt sensors, power supply connections, and output amplifiers.					24 VDC
	Temperature signal conditioner, for Pt and resistance sensors	857-801	A photograph of the 857-801 temperature signal conditioner module, similar in design to the 857-800 but with a different component layout.	A detailed circuit diagram showing the internal connections for the 857-801 module, similar to the 857-800 but with specific modifications for different sensor types.					24 VDC
	Temperature signal conditioner, for Pt46 and Cu53 sensors	857-808	A photograph of the 857-808 temperature signal conditioner module, designed for Pt46 and Cu53 sensors.	A detailed circuit diagram showing the internal connections for the 857-808 module, specifically for Pt46 and Cu53 sensors.					24 VDC
	Temperature signal conditioner, for thermocouples	857-810	A photograph of the 857-810 temperature signal conditioner module, designed for Type J and K thermocouples.	A detailed circuit diagram showing the internal connections for the 857-810 module, specifically for Type J and K thermocouples.					24 VDC
	Temperature signal conditioner, for thermocouples	857-811	A photograph of the 857-811 temperature signal conditioner module, designed for Type J, K, E, R, N, S, T, B, and S thermocouples.	A detailed circuit diagram showing the internal connections for the 857-811 module, capable of handling multiple thermocouple types.					24 VDC
	Temperature signal conditioner, for thermocouples	857-812	A photograph of the 857-812 temperature signal conditioner module, designed for Type K, S, B, and R thermocouples.	A detailed circuit diagram showing the internal connections for the 857-812 module, specifically for Type K, S, B, and R thermocouples.					24 VDC
	Loop-powered RTD temperature signal conditioner	857-815	A photograph of the 857-815 loop-powered RTD temperature signal conditioner module, designed for Pt100, Pt200, Pt500, and Pt1000 RTDs.	A detailed circuit diagram showing the internal connections for the 857-815 module, featuring a loop-powered design for Pt sensors.					Power via output circuit
	Temperature signal conditioner, for Ni sensors	857-818	A photograph of the 857-818 temperature signal conditioner module, designed for Ni100, Ni120, Ni200, Ni500, and Ni1000 Ni sensors.	A detailed circuit diagram showing the internal connections for the 857-818 module, specifically for Ni sensors.					24 VDC
	Temperature signal conditioner, for KTY sensors	857-820	A photograph of the 857-820 temperature signal conditioner module, designed for KTY sensors.	A detailed circuit diagram showing the internal connections for the 857-820 module, specifically for KTY sensors.					24 VDC

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Temperature Signal Conditioners	Description	Item No.	Image	Circuit Diagram	Input	Output	Special Functions			Configuration					Power Supply		
	Temperature Signal Conditioners																
RTD/TC temperature signal conditioner, analog	2857-535				RTD sensors Potentiometers	2 conductors 3 conductors 4 conductors	-24 ... +24 mA (load impedance ≤ 600 Ω)	-12 ... +12 V (load impedance ≥ 2 kΩ)		X	X	X	X	X	X		9.6 ... 31.2 VDC
RTD/TC temperature signal conditioner, serial	2857-535/000-001				Resistors Thermocouples	Differential measurement Potentiometer			Modbus RTU		X	X	X	X	X		

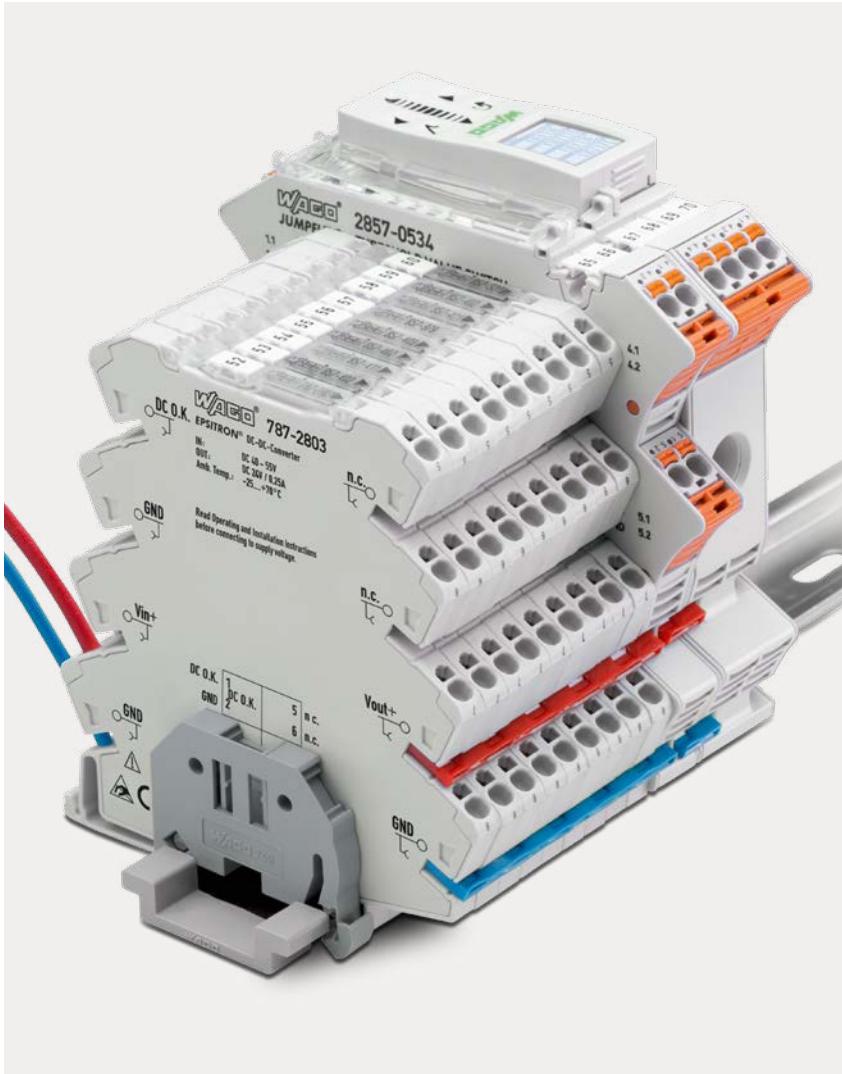
Frequency Signal Conditioners	Description	Item No.	Image	Circuit Diagram	Input	Output	Special Functions			Configuration					Power Supply		
	Frequency Signal Conditioners																
Frequency signal conditioner	857-500				+8.2V(Norm) 1 I _{in} 2 IN 3 GND 4 NPN/PNP 5 POWER 6 GND 7 Us+ 8 GND 9 Us- 10 GND 11 DO 12 DO 13 DO 14	Frequency signals, NAMUR, NPN, or PNP sensors: 0.1 ... 120 kHz	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		X			X	X	X		24 VDC

Threshold Value Switches	Description	Item No.	Image	Circuit Diagram	Input	Output	Special Functions			Configuration					Power Supply	
	Threshold Value Switches															
RTD threshold value switch	2857-533						2 conductors 3 conductors 4 conductors	Potentiometer 0 ... 100 kΩ	0 ... 100 kΩ	250 VAC 6 A	X	X	X	X	X	24 VDC
Thermocouple threshold value switch	2857-534								Type J, K, E, N, R, S, T, B, C	250 VAC 6 A	X	X	X	X	X	24 VDC
Analog threshold value switch	857-531				DO 1 ... DO 4 IN 5 ... IN 14 POWER 7 ... POWER 14	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	±10 mA ±20 mA		250 VAC 6 A	X	X	X	X	X	24 VDC

Potentiometer Signal Conditioners	Description	Item No.	Image	Circuit Diagram	Input	Output	Special Functions			Configuration					Power Supply	
	Potentiometer Signal Conditioners															
Potentiometer signal conditioner	857-809				Potentiometer 0 ... 100 kΩ	10 ... 100 kΩ		0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	X	X		X	X	X	24 VDC

EPSITRON® – DC/DC CONVERTERS

Packaged in a 6 mm Wide Housing



The DC/DC Converter in a 6 mm housing is ideal for applications in which only one power supply can be installed in the control cabinet, yet an additional voltage is needed for smaller devices.

This is particularly applicable if 857 Series relays or JUMPFLEX® Signal Conditioners need to be supplied, but only one 48 V power supply is available in the control cabinet.

Advantages:

- Saves control cabinet space
- Can be commoned to the 857 and 2857 Series
- Eliminates the need for an extra power supply
- Ready for global use in many industries thanks to both UL* and GL* approvals

Item Number	U IN	U OUT	I OUT
787-2801	24 VDC	5 VDC	0.5 A
787-2802	24 VDC	10 VDC	0.5 A
787-2803	48 VDC	24 VDC	0.5 A
787-2805	24 VDC	12 VDC	0.5 A
787-2810 (configurable)	24 VDC	5/10/12 VDC	0.5 A

*pending

JUMPFLEX® SIGNS AND SYMBOLS

Signal Conditioners and Isolation Amplifiers



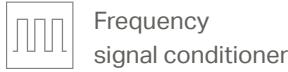
Isolation amplifier



Temperature signal conditioner



Threshold value switch



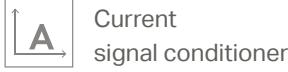
Frequency signal conditioner



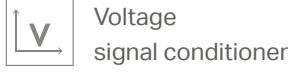
Potentiometer signal conditioner



Resistance signal conditioner

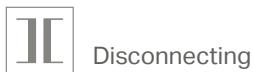


Current signal conditioner

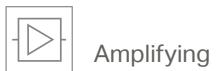


Voltage signal conditioner

Isolation Technologies



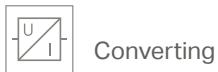
Disconnecting



Amplifying



Filtering



Converting

Special Functions



Zero/span adjustment



Clipping capability



Digital output (DO)



Relay,
1 changeover contact



Relay,
1 make contact

Configuration



DIP switch



Rotary coding switch



Interface configuration software



Interface configuration app



Configuration display for interface modules



Push/slide switch



Save



Simulation

General



Temperature sensors



Connection technology



Supply voltage

Input Signals



Frequencies



Potentiometer



Resistors



Current



Voltage



Bipolar signals
Current and voltage

Output Signals



Current



Voltage



Bipolar signals
Current and voltage



RS-485 interface