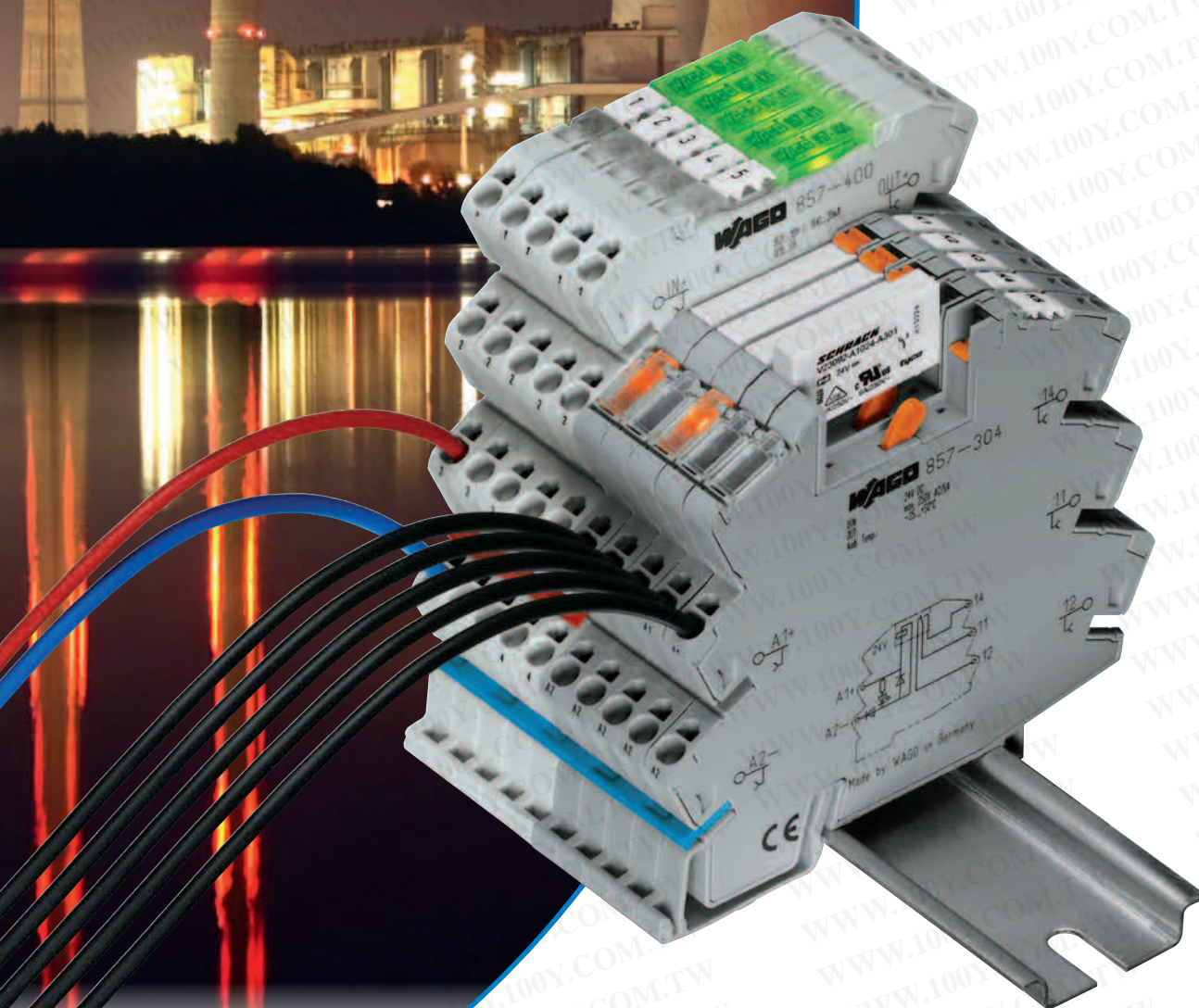


JUMPFLEX® – 857 Series

One Profile, Many Possibilities

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



WAGO®
INNOVATIVE CONNECTIONS

JUMPFLEX® – 857 Series

A Complete Product Line is Available, Bringing Each Signal into Shape.

Perfectly pairing a housing with electronics is key to a highly successful device. This is exactly what WAGO has achieved with the new 857 Series Transducers / Relay and Optocouplers Modules.

Isolation amplifier /
Passive isolator

Repeater power supply /
Signal splitter

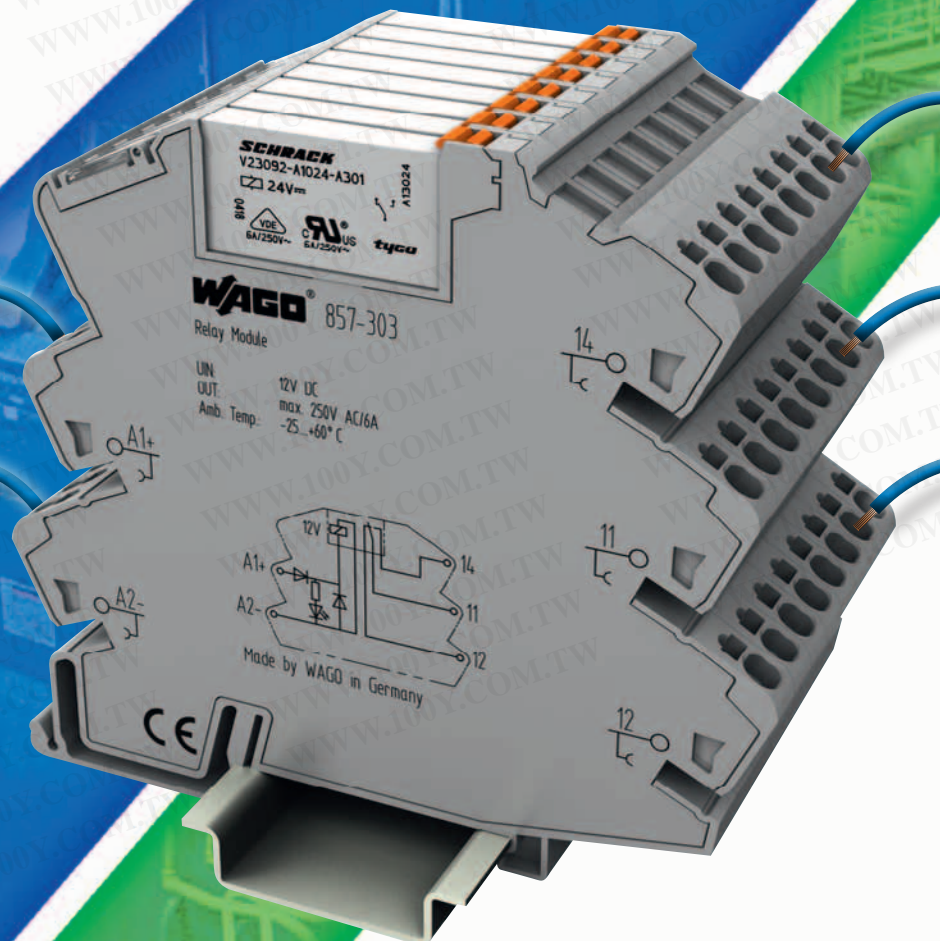
Frequency transducer

Current transducer AC/DC

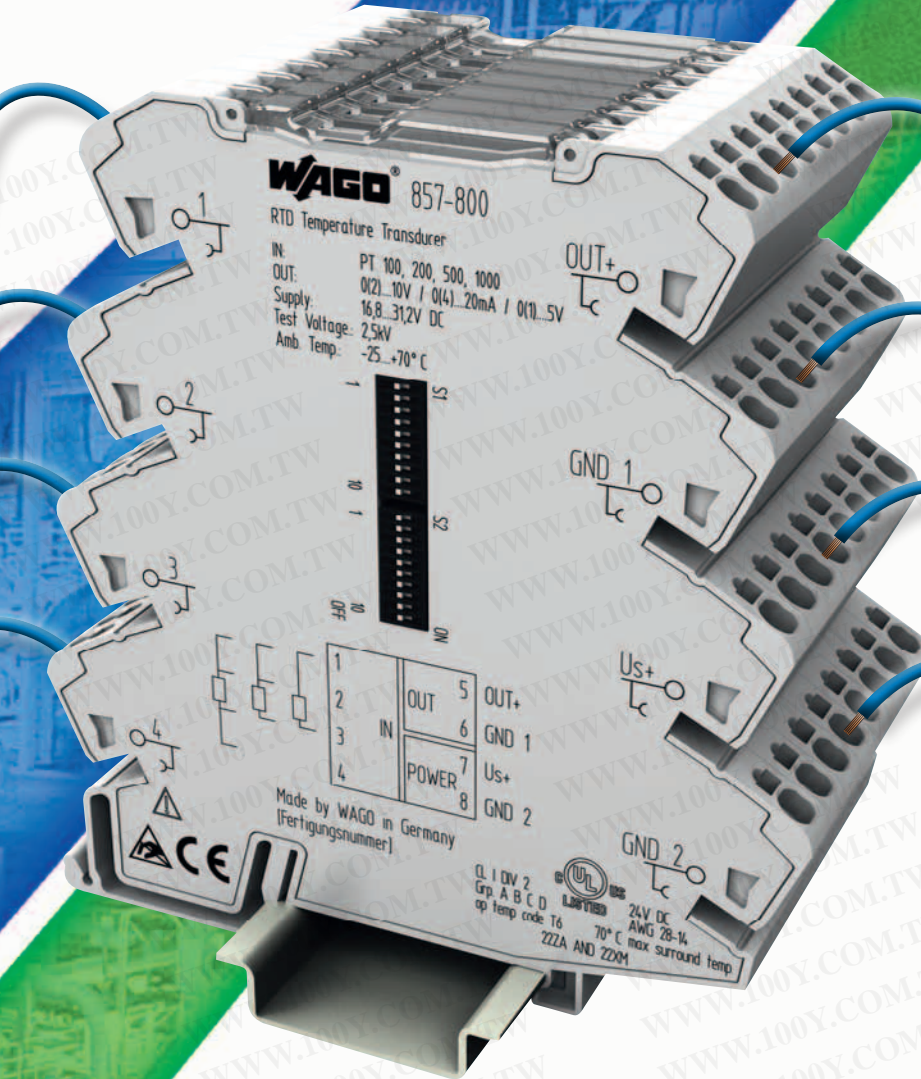
**Relay and
Optocoupler Modules**

DC relay modules

DC relay modules
with gold contacts



Transducers



Millivolt transducer

Threshold value switch

Temperature transducers for RTD

Temperature transducers for thermocouples

Optocouplers

AC/DC relay modules

AC/DC relay modules with gold contacts

JUMPFLEX® – The Intelligent Solution!

Requirement:

Input circuit protection against overcurrent.



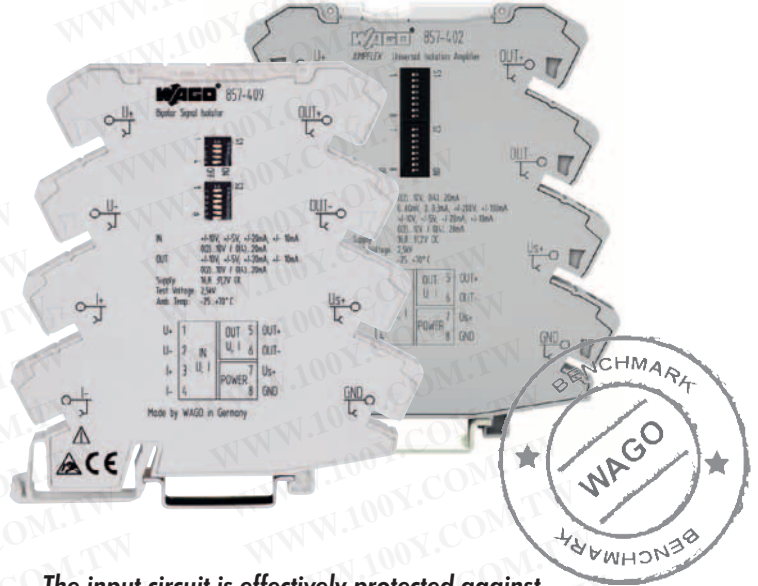
Solution:

Input overcurrent protection via resettable fuse.



Product:

JUMPFLEX® –
857-409 Bipolar Isolator and
857-402 Universal Isolation Amplifier

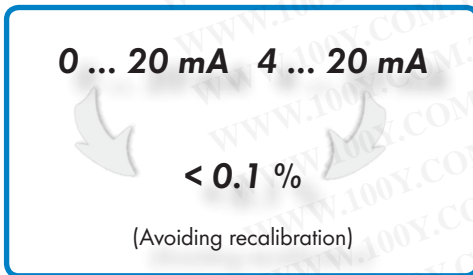


The input circuit is effectively protected against overcurrent.

Always right

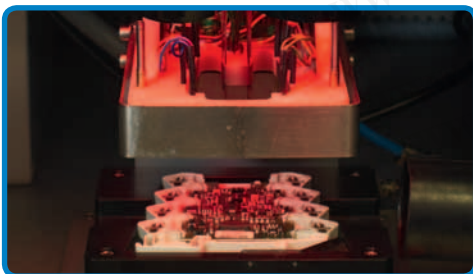
Requirement:

Achieving constant precision values even after range switching.



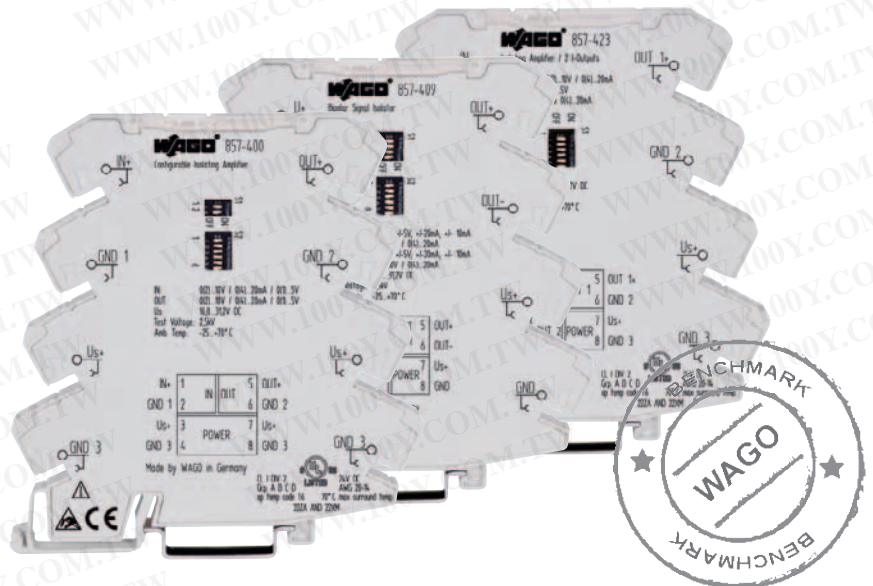
Solution:

Providing laser-capable resistors to each individual DIP switch multiplier.



Product:

JUMPFLEX® –
All 857-4xx Series Isolation Amplifiers
(All 857-xxx Series Transducers are
configurable and calibrated via DIP switch.)



No recalibration is necessary after switching between measuring ranges.

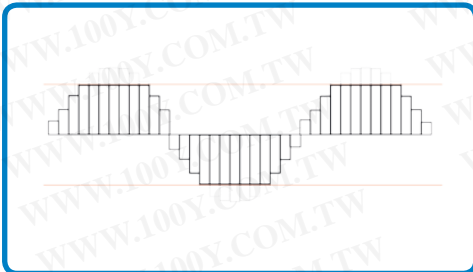
Requirement:

Reaching definable end values for analog standard signals.



Solution:

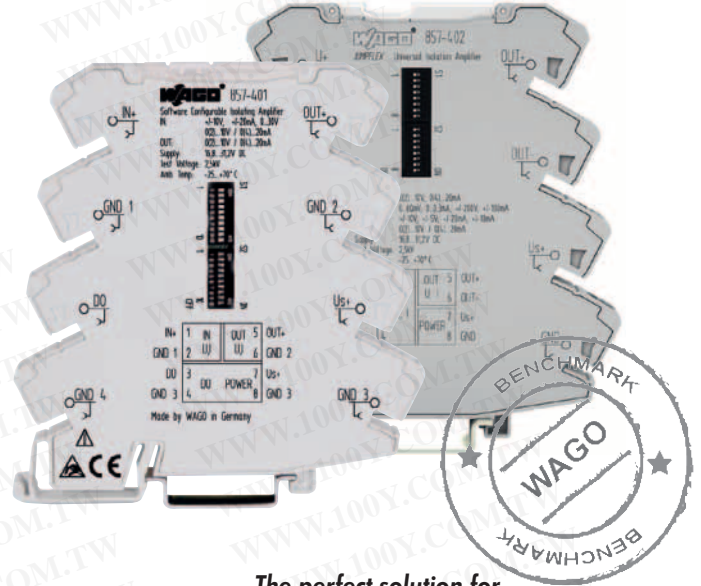
Clipping capability allows analog standard signal limitation to upper-range values.



Product:

JUMPFLEX® –

- 857-401 Software-Configurable Isolation Amplifier (with configurable digital output (DO))
- 857-402 Universal Isolation Amplifier

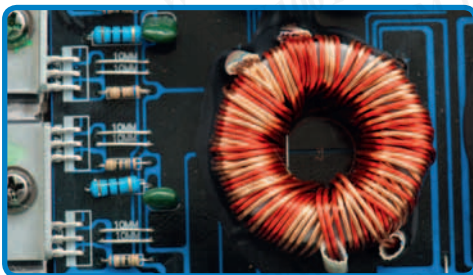


The perfect solution for any application.

Maximum safety

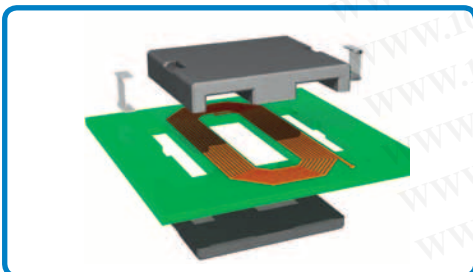
Requirement:

Providing safe electrical isolation of all circuits (input, output and power supply) without additional costs.



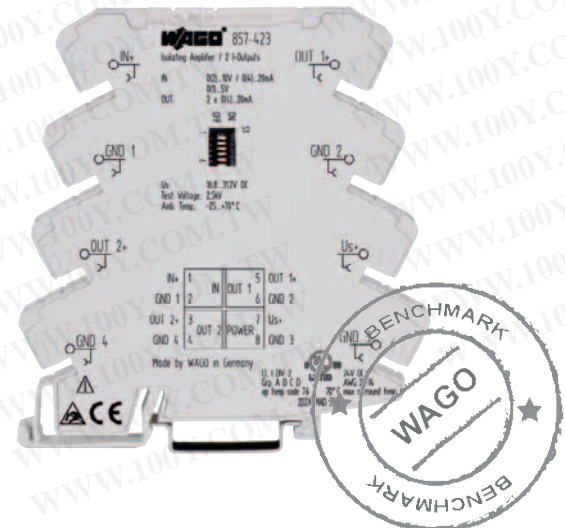
Solution:

Providing multilayer PCB windings with a ferrite core.



Product:

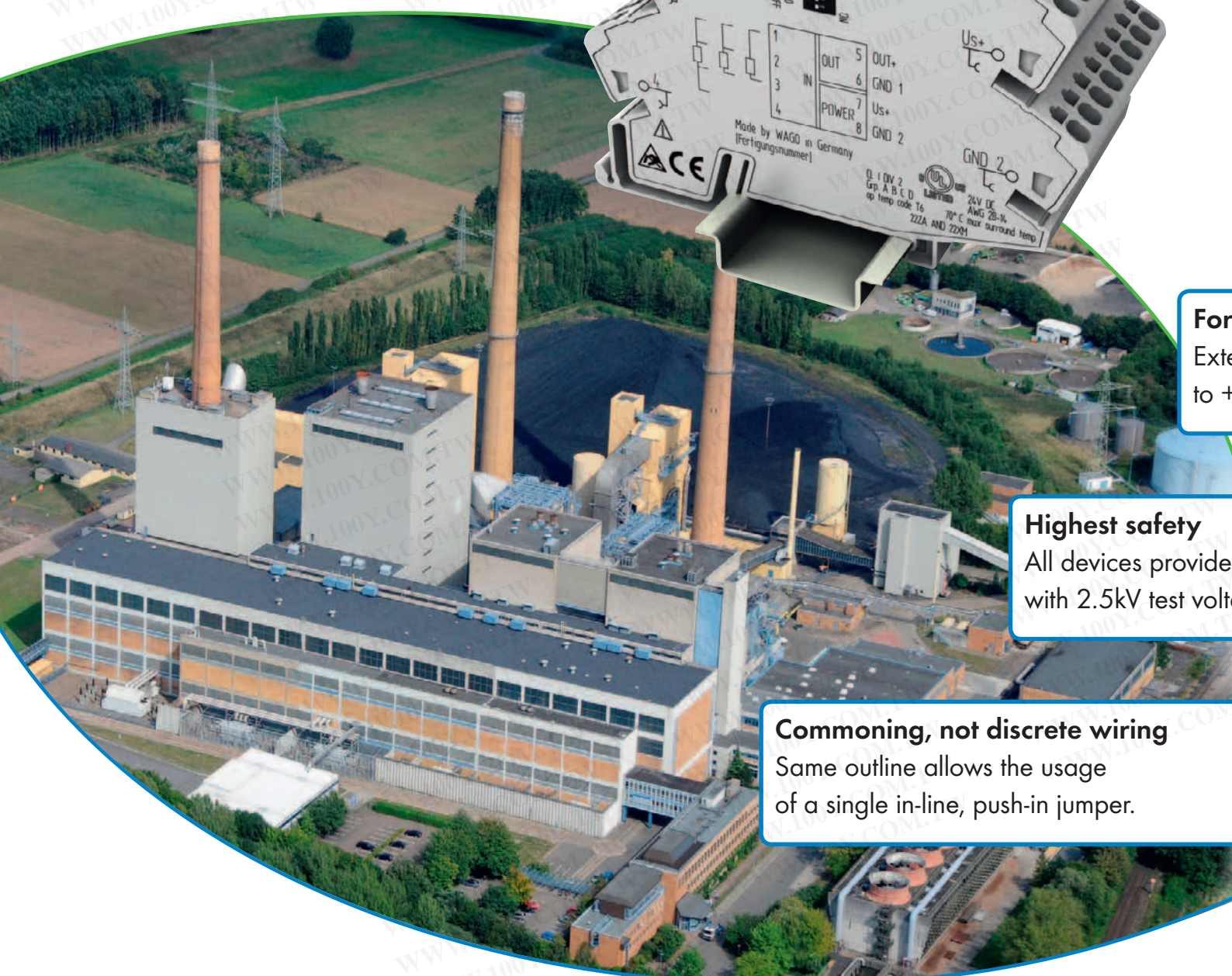
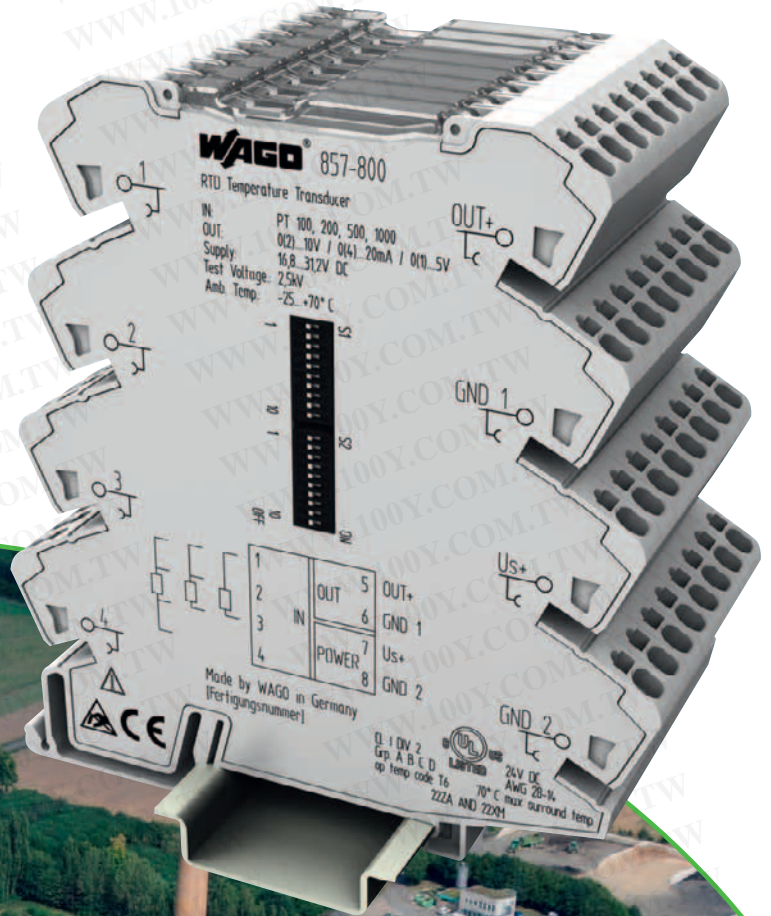
The complete JUMPFLEX® 857 Series (all transducers and isolation amplifiers)



All devices provide "safe isolation" with 2.5kV test voltage to EN 61140.

JUMPFLEX® - Transducers – 857 Series

Housed in a 6 mm-wide package, the 857 Series JUMPFLEX® Transducers feature eight CAGE CLAMP®S connections and a common profile. This enables usage of the same, flexible push-in jumpers for the entire JUMPFLEX® line – every conductor entry has a corresponding jumper slot. These system features provide a comprehensive and successful approach to signal conditioning. Additional features include: “safe isolation” extended operating temperature range and calibrated configurable signals. Combined with excellent technical specifications, these features created advanced products, providing synergies and savings potential.



For
Ext
to +

Highest safety
All devices provide
with 2.5kV test volt

Commoning, not discrete wiring
Same outline allows the usage
of a single in-line, push-in jumper.

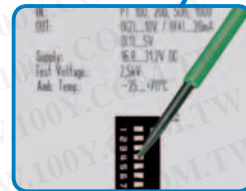
Always right

Laser-capable resistors eliminate recalibration.



Flexibility at its finest

Configuration via DIP switch or configuration tool.



Industry's most compact

"True" 6.0mm (0.23 inch) width maximizes panel space.

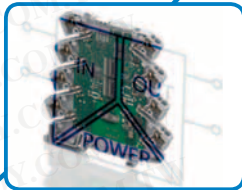


extreme applications

Extended range of temperatures from -25°C to +70°C to suit more applications.



"safe isolation" design to EN 61140.

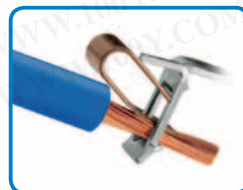


CAGE CLAMP®S

Vibration-proof – fast – maintenance-free
CAGE CLAMP®S termination for all conductor types.



solid



fine-stranded

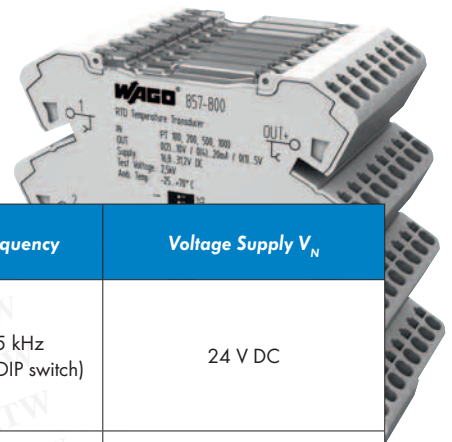


ferruled

Isolation Amplifiers

Description			Item No.	Configuration																					
				Dip Switch	FDT/DTM																				
Isolation amplifier, configurable with zero/span adjustment		<table border="1"> <tr> <td>IN+</td> <td>1</td> <td>IN</td> <td>5</td> <td>OUT+</td> </tr> <tr> <td>GND 1</td> <td>2</td> <td>OUT</td> <td>6</td> <td>GND 2</td> </tr> <tr> <td>Us+</td> <td>3</td> <td rowspan="2">POWER</td> <td>7</td> <td>Us+</td> </tr> <tr> <td>GND 3</td> <td>4</td> <td>8</td> <td>GND 3</td> </tr> </table>	IN+	1	IN	5	OUT+	GND 1	2	OUT	6	GND 2	Us+	3	POWER	7	Us+	GND 3	4	8	GND 3	857-400	x		
IN+	1	IN	5	OUT+																					
GND 1	2	OUT	6	GND 2																					
Us+	3	POWER	7	Us+																					
GND 3	4		8	GND 3																					
Isolation amplifier, configurable with digital output		<table border="1"> <tr> <td>IN+</td> <td>1</td> <td>IN</td> <td>5</td> <td>OUT+</td> </tr> <tr> <td>GND 1</td> <td>2</td> <td>U,I</td> <td>6</td> <td>GND 2</td> </tr> <tr> <td>DO</td> <td>3</td> <td rowspan="2">DO</td> <td>7</td> <td>Us+</td> </tr> <tr> <td>GND 3</td> <td>4</td> <td>POWER</td> <td>8</td> <td>GND 3</td> </tr> </table>	IN+	1	IN	5	OUT+	GND 1	2	U,I	6	GND 2	DO	3	DO	7	Us+	GND 3	4	POWER	8	GND 3	857-401	x	x
IN+	1	IN	5	OUT+																					
GND 1	2	U,I	6	GND 2																					
DO	3	DO	7	Us+																					
GND 3	4		POWER	8	GND 3																				
Universal isolation amplifier		<table border="1"> <tr> <td>IN+</td> <td>1</td> <td>IN</td> <td>5</td> <td>OUT+</td> </tr> <tr> <td>GND 1</td> <td>2</td> <td>U,I</td> <td>6</td> <td>GND 2</td> </tr> <tr> <td>DO</td> <td>3</td> <td rowspan="2">DO</td> <td>7</td> <td>Us+</td> </tr> <tr> <td>GND 3</td> <td>4</td> <td>POWER</td> <td>8</td> <td>GND 3</td> </tr> </table>	IN+	1	IN	5	OUT+	GND 1	2	U,I	6	GND 2	DO	3	DO	7	Us+	GND 3	4	POWER	8	GND 3	857-402	x	
IN+	1	IN	5	OUT+																					
GND 1	2	U,I	6	GND 2																					
DO	3	DO	7	Us+																					
GND 3	4		POWER	8	GND 3																				
Bipolar isolation amplifier		<table border="1"> <tr> <td>U+</td> <td>1</td> <td rowspan="2">IN</td> <td>5</td> <td>OUT+</td> </tr> <tr> <td>U-</td> <td>2</td> <td>OUT U; I</td> <td>6</td> <td>OUT-</td> </tr> <tr> <td>I+</td> <td>3</td> <td rowspan="2">POWER</td> <td>7</td> <td>Us+</td> </tr> <tr> <td>I-</td> <td>4</td> <td>8</td> <td>GND</td> </tr> </table>	U+	1	IN	5	OUT+	U-	2	OUT U; I	6	OUT-	I+	3	POWER	7	Us+	I-	4	8	GND	857-409	x		
U+	1	IN	5	OUT+																					
U-	2		OUT U; I	6	OUT-																				
I+	3	POWER	7	Us+																					
I-	4		8	GND																					
Isolation amplifiers, fixed setting for voltage signals or current signals			857-411	x																					
			857-412																						
			857-413																						
			857-414																						
			857-415																						
857-416																									
Repeater power supply, configurable with current and voltage output		<table border="1"> <tr> <td>U_{sensor}+</td> <td>1</td> <td rowspan="2">IN</td> <td>5</td> <td>OUT+</td> </tr> <tr> <td>IN</td> <td>2</td> <td>OUT</td> <td>6</td> <td>GND 2</td> </tr> <tr> <td>GND 1</td> <td>3</td> <td rowspan="2">POWER</td> <td>7</td> <td>Us+</td> </tr> <tr> <td>GND 1</td> <td>4</td> <td>8</td> <td>GND 3</td> </tr> </table>	U _{sensor} +	1	IN	5	OUT+	IN	2	OUT	6	GND 2	GND 1	3	POWER	7	Us+	GND 1	4	8	GND 3	857-420	x		
U _{sensor} +	1	IN	5	OUT+																					
IN	2		OUT	6	GND 2																				
GND 1	3	POWER	7	Us+																					
GND 1	4		8	GND 3																					
Repeater power supply, HART		<table border="1"> <tr> <td>U_{sensor}+</td> <td>1</td> <td rowspan="2">IN</td> <td>5</td> <td>OUT +</td> </tr> <tr> <td>IN</td> <td>2</td> <td>OUT</td> <td>6</td> <td>GND 2</td> </tr> <tr> <td>N.C.</td> <td>3</td> <td rowspan="2">POWER</td> <td>7</td> <td>Us+</td> </tr> <tr> <td>N.C.</td> <td>4</td> <td>8</td> <td>GND 3</td> </tr> </table>	U _{sensor} +	1	IN	5	OUT +	IN	2	OUT	6	GND 2	N.C.	3	POWER	7	Us+	N.C.	4	8	GND 3	857-421			
U _{sensor} +	1	IN	5	OUT +																					
IN	2		OUT	6	GND 2																				
N.C.	3	POWER	7	Us+																					
N.C.	4		8	GND 3																					
Signal splitter with 2 configurable current outputs		<table border="1"> <tr> <td>IN+</td> <td>1</td> <td>IN</td> <td>5</td> <td>OUT 1+</td> </tr> <tr> <td>GND 1</td> <td>2</td> <td>OUT 1</td> <td>6</td> <td>GND 2</td> </tr> <tr> <td>OUT 2+</td> <td>3</td> <td rowspan="2">POWER</td> <td>7</td> <td>Us+</td> </tr> <tr> <td>GND 4</td> <td>4</td> <td>8</td> <td>GND 3</td> </tr> </table>	IN+	1	IN	5	OUT 1+	GND 1	2	OUT 1	6	GND 2	OUT 2+	3	POWER	7	Us+	GND 4	4	8	GND 3	857-423	x		
IN+	1	IN	5	OUT 1+																					
GND 1	2	OUT 1	6	GND 2																					
OUT 2+	3	POWER	7	Us+																					
GND 4	4		8	GND 3																					
Loop-powered isolation amplifier		<table border="1"> <tr> <td>U+</td> <td>1</td> <td rowspan="2">IN</td> <td>5</td> <td>Us+</td> </tr> <tr> <td>U-</td> <td>2</td> <td>OUT 420mA</td> <td>6</td> <td>OUT 1</td> </tr> <tr> <td>I+</td> <td>3</td> <td rowspan="2">N.C.</td> <td>7</td> <td>N.C.</td> </tr> <tr> <td>I-</td> <td>4</td> <td>8</td> <td>N.C.</td> </tr> </table>	U+	1	IN	5	Us+	U-	2	OUT 420mA	6	OUT 1	I+	3	N.C.	7	N.C.	I-	4	8	N.C.	857-450			
U+	1	IN	5	Us+																					
U-	2		OUT 420mA	6	OUT 1																				
I+	3	N.C.	7	N.C.																					
I-	4		8	N.C.																					
Passive isolator, 1 channel		<table border="1"> <tr> <td>IN+</td> <td>1</td> <td>IN</td> <td>5</td> <td>OUT+</td> </tr> <tr> <td>GND 1</td> <td>2</td> <td>OUT</td> <td>6</td> <td>GND 2</td> </tr> <tr> <td>N.C.</td> <td>3</td> <td rowspan="2">N.C.</td> <td>7</td> <td>N.C.</td> </tr> <tr> <td>N.C.</td> <td>4</td> <td>8</td> <td>N.C.</td> </tr> </table>	IN+	1	IN	5	OUT+	GND 1	2	OUT	6	GND 2	N.C.	3	N.C.	7	N.C.	N.C.	4	8	N.C.	857-451			
IN+	1	IN	5	OUT+																					
GND 1	2	OUT	6	GND 2																					
N.C.	3	N.C.	7	N.C.																					
N.C.	4		8	N.C.																					
Passive isolator, 2 channels		<table border="1"> <tr> <td>IN 1+</td> <td>1</td> <td>IN 1</td> <td>5</td> <td>OUT 1+</td> </tr> <tr> <td>GND 1</td> <td>2</td> <td>OUT 1</td> <td>6</td> <td>GND 2</td> </tr> <tr> <td>IN 2+</td> <td>3</td> <td>IN 2</td> <td>7</td> <td>OUT 2+</td> </tr> <tr> <td>GND 3</td> <td>4</td> <td>OUT 2</td> <td>8</td> <td>GND 4</td> </tr> </table>	IN 1+	1	IN 1	5	OUT 1+	GND 1	2	OUT 1	6	GND 2	IN 2+	3	IN 2	7	OUT 2+	GND 3	4	OUT 2	8	GND 4	857-452		
IN 1+	1	IN 1	5	OUT 1+																					
GND 1	2	OUT 1	6	GND 2																					
IN 2+	3	IN 2	7	OUT 2+																					
GND 3	4	OUT 2	8	GND 4																					

Ambient operating temperature for all devices: - 25 °C ... +70 °C



Input Signal (configurable and calibrated)	Output Signal (configurable and calibrated)	Load Impedance	Operating Frequency	Voltage Supply V_N
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,	600 Ω (I-output) 2 k Ω (U-output)	100 Hz / > 5 kHz (configurable via DIP switch)	24 V DC
-10 ... +10 V, -20 ... +20 mA, 0 ... +30 V	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0 ... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA	\leq 600 Ω (I-output) \geq 2 k Ω (U-output)	125 Hz	24 V DC
Voltage: \pm 60 mV to \pm 200 V 0 ... 60 mV to \pm 0 ... 200 V Current: \pm 0,3 mA to \pm 100 mA 0 ... 0,3 mA to 0 ... 100 mA	Voltage: \pm 10 V, 0 ... 10 V, 2 ... 10 V, \pm 5 V, 0 ... 5 V, 1 ... 5 V Current: \pm 20 mA, 0 ... 20 mA, 4 ... 20 mA, \pm 10 mA, 0 ... 10 mA, 2 ... 10 mA	\leq 600 Ω (I-output) \geq 2 k Ω (U-output)	100 Hz / > 5 kHz (configurable via DIP switch)	24 V DC
Voltage: \pm 5 V, 0 ... 5 V, 1 ... 5 V, \pm 10 V, 0 ... 10 V, 2 ... 10 V, Current: \pm 10 mA, 0 ... 10 mA, 2 ... 10 mA, \pm 20 mA, 0 ... 20 mA, 4 ... 20 mA	Voltage: \pm 5 V, 0 ... 5 V, 1 ... 5 V, \pm 10 V, 0 ... 10 V, 2 ... 10 V, Current: \pm 10 mA, 0 ... 10 mA, 2 ... 10 mA, \pm 20 mA, 0 ... 20 mA, 4 ... 20 mA	\leq 600 Ω (I-output) \geq 2 k Ω (U-output)	100 Hz / > 5 kHz (configurable via DIP switch)	24 V DC
0 (4) ... 20 mA	0 (4) ... 20 mA	\leq 600 Ω (I-output) \geq 2 k Ω (U-output)	100 Hz	24 V DC
0 (2) ... 12 V	0 (2) ... 10 V			
0 ... 10 V	0 ... 20 mA			
0 ... 10 V	4 ... 20 mA			
0 ... 20 mA	0 ... 10 V			
4 ... 20 mA	0 ... 10 V			
0 ... 20 mA, 4 ... 20 mA	0 ... 20 mA, 4 ... 20 mA, 0 ... 5 V, 0 ... 10 V, 2 ... 10 V, 1 ... 5 V	600 Ω (I-output) 2 k Ω (U-output)	100 Hz	24 V DC
4 ... 20 mA	4 ... 20 mA	600 Ω	100 Hz Signal / HART \geq 2.5 kHz	24 V DC
0 ... 20 mA, 4 ... 20 mA, 0 ... 5 V, 0 ... 10 V, 2 ... 10 V, 1 ... 5 V	2 x 0(4) ... 20 mA	2 x 300 Ω	100 Hz / > 1 kHz (configurable via DIP switch)	24 V DC
Voltage: \pm 5 V, 0 ... 5 V, 1 ... 5 V, \pm 10 V, 0 ... 10 V, 2 ... 10 V, \pm 20 V, +2 V, 0 ... 2 V, \pm 1 V, 0 ... 1 V Current: \pm 10 mA, 0 ... 10 mA, 2 ... 10 mA, \pm 20 mA, 0 ... 20 mA, 4 ... 20 mA, \pm 5 mA, 0 ... 5 mA	4 ... 20 mA Loop-powered (for active input cards)	\leq 600 Ω	30 Hz / 100 Hz	
0(4) ... 20 mA	0(4) ... 20 mA	600 Ω	100 Hz	
0(4) ... 20 mA	0(4) ... 20 mA	600 Ω	100 Hz	

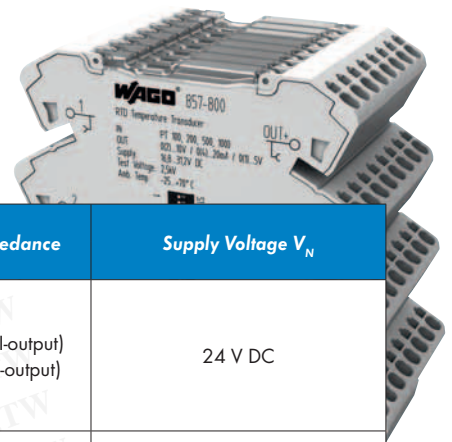
Temperature Transducers and Transducers with Specialty Signals

Description			Item No.	Configuration	
				Dip Switch	FDT/DTM
Temperature transducer for Pt100, Pt200, Pt500 and Pt1000 as well as resistors 0 ... 1 kOhm; 0 ... 4.5 kOhm			857-800	x	
Temperature transducer for Pt100, Pt200, Pt500 and Pt1000 as well as resistors 0 ... 1 kOhm; 0 ... 4.5 kOhm			857-801	x	x
Temperature transducer for thermocouples of types J and K			857-810	x	
Temperature transducer for thermocouples of types J, K, E, R, N, S, T, B, S			857-811	x	x
Ni Transducer for Ni 100, Ni 120, Ni 200, Ni 500, Ni 1000			857-818	x	
Millivolt transducer; Records all mV signals ranging from -100 mV to +100 mV; 0 mV ... 1000 mV			857-819	x	x
KTY transducer			857-820	x	
Frequency transducer			857-500	x	
Threshold value switch with analog input and changeover relay output			857-531	x	FDT/DTM + Teach In
Current transducer			857-550	x	
Supply and through module			857-979		

Ambient operating temperature for all devices: -25 °C ... +70 °C

* KTY81-110, KTY81-120, KTY81-150, KTY82-110, KTY82-120, KTY82-150, KTY81-121, KTY82-121, KTY81-122, KTY82-122, KTY81-210, KTY81-220, KTY82-210, KTY82-220, KTY83-151, KTY84-130, KTY84-150, KTY84-151, KTY16, KTY19, ST13, ST20

** Operating restrictions may occur within the temperature range



Input Signal	Sensor Connection	Sensor Temperature Range	Output Signal	Load Impedance	Supply Voltage V_N
Pt sensors Pt100, Pt200, Pt500, Pt1000 Resistors 0 ... 1 k Ω ; 0 ... 4,5 k Ω	2-wire, 3-wire, 4-wire (switchable)	-200 °C ... +850 °C	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA	$\leq 600 \Omega$ (I-output) $\geq 2 \text{ k}\Omega$ (U-output)	24 V DC
Pt sensors Pt100, Pt200, Pt500, Pt1000 Resistors 0 ... 1 k Ω ; 0 ... 4,5 k Ω	2-wire, 3-wire, 4-wire (switchable)	-200 °C ... +850 °C	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA	$\leq 600 \Omega$ (I-output) $\geq 2 \text{ k}\Omega$ (U-output)	24 V DC
Thermocouples Type J, Type K		Type J: -150 °C ... +1200 °C Type K: -150 °C ... +1350 °C	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA	$\leq 600 \Omega$ (I-output) $\geq 2 \text{ k}\Omega$ (U-output)	24 V DC
Thermocouples Type J, K, E, R, N, S, T, B, S		Type J: -150 °C ... +1200 °C Type K: -150 °C ... +1350 °C	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA	$\leq 600 \Omega$ (I-output) $\geq 2 \text{ k}\Omega$ (U-output)	24 V DC
Ni sensors Ni 100, Ni 120, Ni 200, Ni 500, Ni1000	2-wire, 3-wire, 4-wire (switchable)		0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA	$\leq 600 \Omega$ (I-output) $\geq 2 \text{ k}\Omega$ (U-output)	24 V DC
-100 mV ... +100 mV, 0 mV ... 200 mV bis 0 mV ... 1000 mV (in 100 mV increments)			0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA	$\leq 600 \Omega$ (I-output) $\geq 2 \text{ k}\Omega$ (U-output)	24 V DC
KTY sensors *	2-wire		0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA	$\leq 600 \Omega$ (I-output) $\geq 2 \text{ k}\Omega$ (U-output)	24 V DC
Frequency signals, NAMUR-, NPN or PNP sensors 0.1 Hz bis 120 kHz			0 ... 10 V, 2 ... 10 V, 0 ... 5 V, 1 ... 5 V 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 mA, 2 ... 10 mA	$\leq 600 \Omega$ (I-output) $\geq 2 \text{ k}\Omega$ (U-output)	24 V DC
-10...+10 V, -20...+20 mA 0...+30 V	1 changeover contact, 6 A digital output			24 V DC	
0 ... 1 A AC/DC; 0 ... 5 A AC/DC			0 ... 10 V, 2 ... 10 V, 0 ... 5 V, 1 ... 5 V 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 mA, 2 ... 10 mA	$\leq 600 \Omega$ (I-output)** $\geq 2 \text{ k}\Omega$ (U-output)	24 V DC
33 V AC/DC / 2 A					

0, KTY81-221, KTY82-221, KTY81-222, KTY82-222, KTY81-250, KTY82-250, KTY83-110, KTY83-120, KTY83-150, KTY83-121, KTY83-122,

JUMPFLEX® Transducer Parameter Setting

Select JUMPFLEX® Transducers can also be parameterized via WAGOframe software tool. The WAGOframe FDT/DTM-based configuration tool provides parameterization, start-up and field device diagnostics. DTM device drivers, for the devices employed, are required to use the WAGOframe FDT frame application.

The WAGOframe FDT frame application provides a wizard, simplifying the operation of components, such as WAGO JUMPFLEX® DTM. This wizard guides the user through the different operating modes of DTM device drivers.

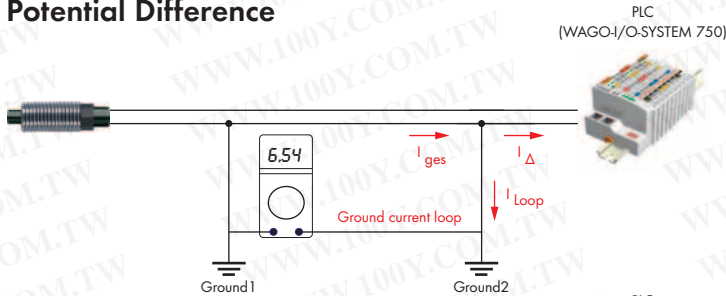
Depending on the PC communication interface used, an appropriate communication cable including DTM is required.



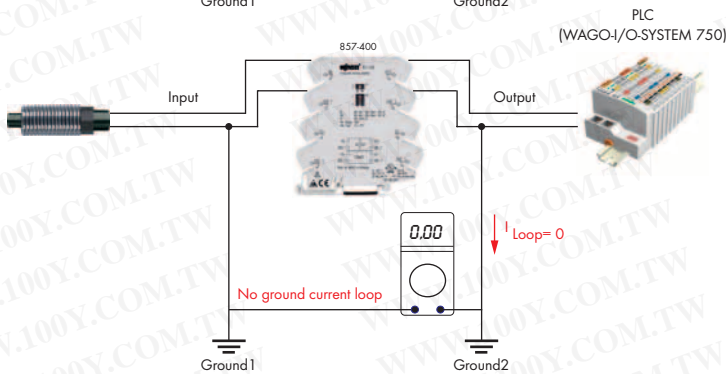
Application Examples for Avoiding Corruption of Analog Signals

In industrial applications, there are several requirements for safe and economical signal matching that demand appropriate solutions. This is precisely where the strengths of analog technology lie. For years it has been used successfully in all branches of industry, including factory automation and process technology.

Potential Difference

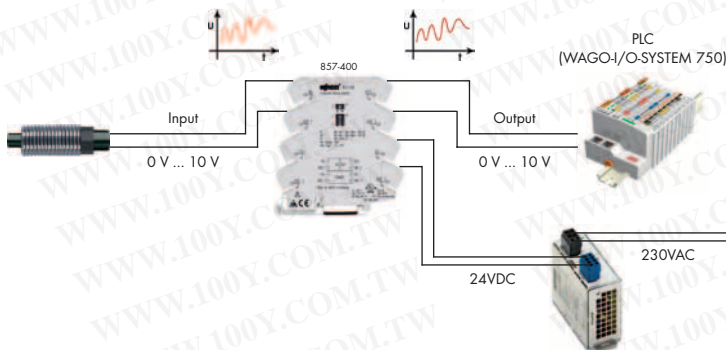


The main cause of analog signal corruptions are potential differences that arise. With increasing transmission lengths, the ground resistance increases. Thus, differences of up to 200V can arise. With signals having ground reference, these ground loops can cause corruptions since particular parts of the signal are not transmitted via analog line, but via ground. Thus, there is a faulty signal assessment.



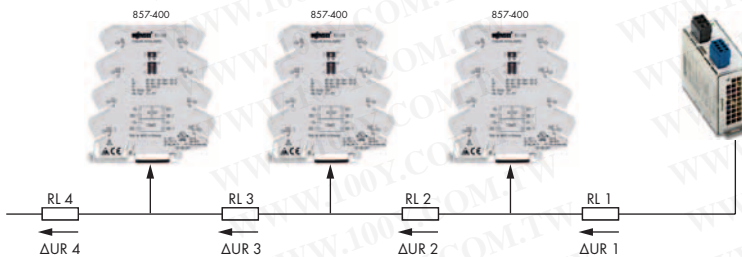
In this instance, an isolation amplifier helps since it prevents the arising of a ground current loop. Galvanic isolation of the input circuit from the output circuit breaks up this ground loop and enables perfect signal transmission. Smaller overvoltages with a lower energy level that can arise due to switching operations are dissipated safely. In addition, the output side downstream controller is protected by the galvanic isolation.

Signal Filtering



If the signal to be processed is burdened with disturbances, it is freed of the disturbances by the signal filtering with an internal filter in the input of the isolation amplifier. The signal is then transmitted to the superior controller. This way, the devices can be adapted flexibly to the frequency range in which the disturbance lies using DIP switches. The disturbances are thus filtered out safely.

Linked Measurement Circuits



A frequent cause of potential differences is linked measurement circuits for which the reference voltage is raised by combining several signal circuits. Thanks to the use of isolation amplifiers, this problem is eliminated since galvanic isolation of the isolation amplifier eliminates the influence of various reference voltages.

The 857 Series JUMPFLEX® Transducers make a solid contribution to system safety for many problems that occur by providing a continuous galvanic 3-way isolation with test voltages of 2.5kV between all channels (input/output/supply).

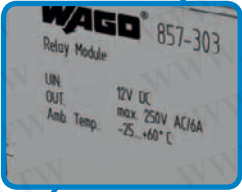
Quick and easy replacement
Pluggable relays and
optocouplers



Industry's most compact
"True" 6.0mm (0.23 inch) width maximizes
panel space.



Highly versatile
Input voltage available in
5-230 V AC/DC variants



Wiring, not discrete wiring
The outline allows the usage
of a single in-line, push-in jumper.

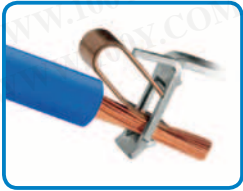


CAGE CLAMP®S

Vibration-proof, fast and maintenance-free
CAGE CLAMP®S termination for all conductor types.



solid


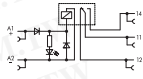
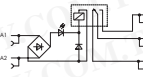


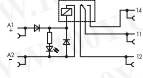
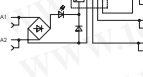

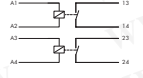



fine-stranded

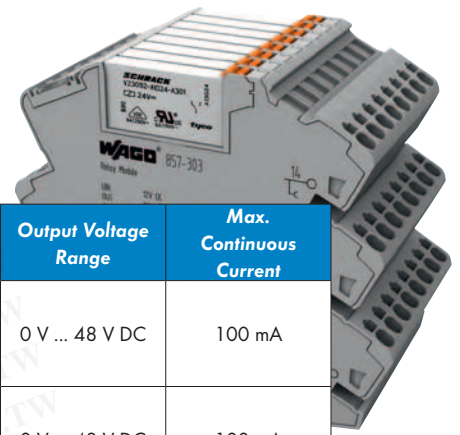


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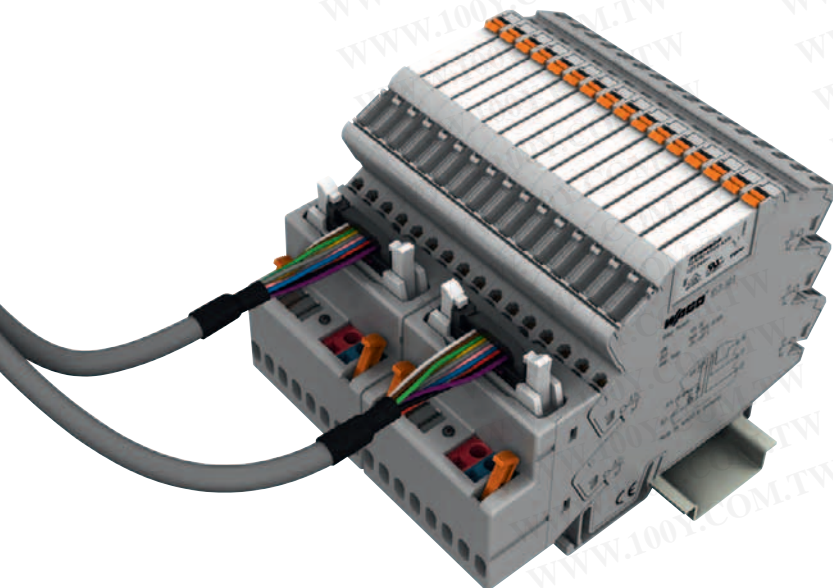
Relays and Optocouplers

Description		Item No.	Input Nominal Voltage V_N	Max. Switching Voltage	Max. Continuous Current
Relay with 1 changeover contact			857-303 857-304 857-305 857-306 857-307 857-308	12 V DC 24 V DC 48 V DC 60 V DC 110 V DC 220 V DC	250 V AC 6 A
			857-354 857-357 857-358	24 V AC/DC 115 V AC/DC 230 V AC/DC	250 V AC 6 A
			857-304/008-000 857-358/008-000	24 V DC 230 V AC/DC	250 V AC 8 A
Relay with 1 changeover contact, with gold contacts			857-314 857-317 857-318	24 V DC 110 V DC 220 V DC	36 V DC* / (250 V AC/DC) 50 mA* / (6 A)
			857-364 857-367 857-368	24 V AC/DC 115 V AC/DC 230 V AC/DC	36 V DC* / (250 V AC/DC) 50 mA* / (6 A)
2 relays, with 1 make contact			857-1330	24 V AC/DC	250 V AC 4 A
Description		Item No.	Input Nominal Voltage V_N	For replacement relays and optocouplers, see accessories on page 16	
Sockets for Miniature switching relay and optocoupler			857-104	AC/24 V DC	
			857-107	AC/DC 110 V	
			857-108	AC/DC 230 V	

* In order to prevent the gold layer from being damaged, these values shall not be exceeded. (In case of damaged gold layer, the values in parens apply). Higher switching power leads to evaporation of the gold layer.



Description		Item No.	Input Nominal Voltage V_N	Output Voltage Range	Max. Continuous Current
Solid state relay		857-704	24 V DC	0 V ... 48 V DC	100 mA
		857-707	115 V AC/DC	0 V ... 48 V DC	100 mA
		857-708	230 V AC/DC	0 V ... 48 V DC	100 mA
Solid state relay		857-714	24 V DC	24 V ... 240 V AC	1 A
		857-717	115 V AC/DC	24 V ... 240 V AC	1 A
		857-718	230 V AC/DC	24 V ... 240 V AC	1 A
Solid state relay		857-724	24 V DC	0 V ... 24 V DC	2 A
		857-727	115 V AC/DC	0 V ... 24 V DC	2 A
		857-728	230 V AC/DC	0 V ... 24 V DC	2 A
Solid state relay		857-1494	2 x 24 V DC	2 x 9 V ... 60 V DC	2 x 0.1 A
		857-1430	2 x 24 V DC	2 x 3 V ... 30 V DC	2 x 3 A
		857-1432	24 V DC	3 V ... 30 V DC	2 x 0.5 A



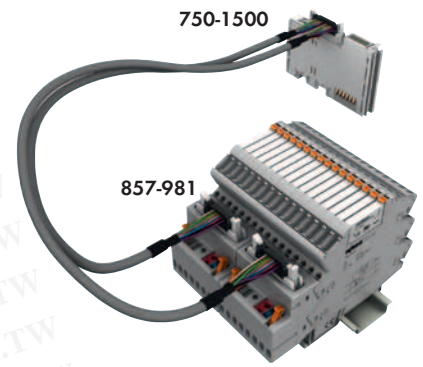
The 857-98x Interface Adapter provides a fast and reliable connection between WAGO I/O modules equipped with ribbon cable connector (e.g., 750-1500 and 750-1502) and JUMPFLEX® relay and optocoupler modules.


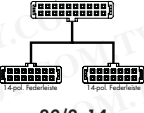







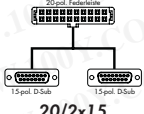


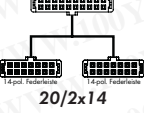



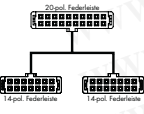


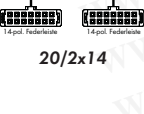


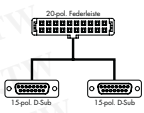


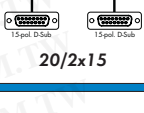


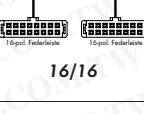


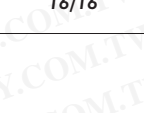


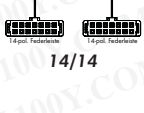





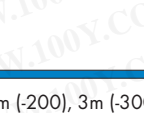


Suitable ribbon cable assemblies are also available as accessories.

WAGO 857 Series Interface Adapter for System Wiring

The WAGO Interface Adapter provides a fast wiring solution for relay and optocoupler modules within the JUMPFLEX® 857 Series. On the module side, preassembled WAGO Ribbon Cables (706 Series) connect to the WAGO-I/O-SYSTEM controllers.






- Simple plug-in connection via jumper slot
- Combines 8 channels within a 857 Series module assembly
- Integrated test ports for each channel



WAGO-I/O -SYSTEM 750		WAGO Ribbon Cables		WAGO Interface Adapter		
	Item No.	I/O Module	Item No.	Item No.	Connection Example	
DI	 750-1400	16 DI 24V DC 3,0 ms ribbon cable	 706-7753/304-xxx		857-982 with 14-pin ribbon cable connector acc. to DIN 41651 Output, positive switching	
	 750-1402	16 DI 24V DC 3,0 ms ribbon cable, low-side switching	 20/2x14		857-982 with 14-pin ribbon cable connector acc. to DIN 41651 Output, positive switching	
DO	 750-1500	16 DO 24V DC 0,5 A ribbon cable	 706-7753/306-xxx		857-986 with SUB-D male connector Input, positive switching	
			 20/2x14		857-981 with 14-pin ribbon cable connector acc. to DIN 41651 Input, positive switching	
DI/DO	 750-1502	8DI 8DO 24V DC 0,5 A ribbon cable	 706-7753/304-xxx		857-982 with 14-pin ribbon cable connector acc. to DIN 41651 Output, positive switching	
			 20/2x14		857-981 with 14-pin ribbon cable connector acc. to DIN 41651 Input, positive switching	
			 706-7753/306-xxx		857-986 with SUB-D male connector Input, positive switching	
			 20/2x15		857-986 with SUB-D male connector Input, positive switching	
			 706-753/301-xxx		857-980 with 16-pin ribbon cable connector acc. to DIN 41651 (suitable for transducers)	
			 16/16		857-980 with 16-pin ribbon cable connector acc. to DIN 41651 (suitable for transducers)	
			 706-753/300-xxx		857-981 with 14-pin ribbon cable connector acc. to DIN 41651 Input, positive switching	
			 14/14		857-981 with 14-pin ribbon cable connector acc. to DIN 41651 Input, positive switching	
			 14/14		857-982 with 14-pin ribbon cable connector acc. to DIN 41651 Output, positive switching	

WAGO Ribbon Cables are available in 1m (-100), 2m (-200), 3m (-300) lengths.
Additional cable types and lengths available upon request.

Accessories

Push-in Type Jumper Bars, Operating Tool, WAGO USB Service Cable, Marking			
Push-in type jumper bars, light gray, insulated, 18 A		2-way	859-402
		3-way	859-403
		4-way	859-404
		5-way	859-405
		6-way	859-406
		7-way	859-407
		8-way	859-408
		9-way	859-409
		10-way	859-410
		Item no. suffix for colored push-in type jumper bars	
red	... /000-005		
blue	... /000-006		
Comb-style jumper bar, insulated	(Jumper for clamping units)	2-way	281-482
Operating tool, with partially insulated shaft	Type 2, blade (3.5 x 0.5) mm		210-720
WAGO USB service cable	Connection between PC (notebook) and service interface of 857 Series transducers		750-923
WAGOframe	FDT frame application for parameterization, commissioning and diagnostics of devices with DTM device driver		759-370
Marking	WMB Multi marking system		see www.wago.com

Replacement Relays and Optocouplers					
		Input Voltage	Item No. Relay	Item No. Socket	Item No. Replacement Relay and Optocoupler
Miniature switching relays		12 V DC	857-303	857-103	857-150
		24 V DC	857-304	857-104	857-152
		48 V DC	857-305	857-105	857-154
		60 V DC	857-306	857-106	857-155
		110 V DC	857-307	857-107	857-155
		220 V DC	857-308	857-108	857-155
		24 V AC/DC	857-354	857-104	857-152
		115 V AC/DC	857-357	857-107	857-155
230 V AC/DC	857-358	857-108	857-155		
Miniature switching relays (gold contacts)		24 V DC	857-314	857-104	857-153
		110 V DC	857-317	857-107	857-157
		220 V DC	857-318	857-108	857-157
		24 V AC/DC	857-364	857-104	857-153
		115 V AC/DC	857-367	857-107	857-157
230 V AC/DC	857-368	857-108	857-157		
Solid state relays		24 V DC	857-704	857-104	857-164
		115 V AC/DC	857-707	857-107	857-165
		230 V AC/DC	857-708	857-108	857-165
		24 V DC	857-714	857-104	857-167
		115 V AC/DC	857-717	857-107	857-168
		230 V AC/DC	857-718	857-108	857-168
		24 V DC	857-724	857-104	857-161
		115 V AC/DC	857-727	857-107	857-162
230 V AC/DC	857-728	857-108	857-162		

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