Power Limiting Module, IP20, 22,5 mm

2x inputs (In1 galvanically isolated to In2) to
2x current controlled outputs (Out1 galvanically isolated to Out2)

(Figure similar)

Limited Energy Circuits in accordance with:
- **UL 61010-1 and UL 61010-2-201**
- **CAN/CSA C22.2 No. 61010-1 and CAN/CSA C22.2 No. 61010-2-201**

Output current limited at ≤ 3 A per output

Electronic self-resetting fuses

Operating voltage 19 ... 32 V

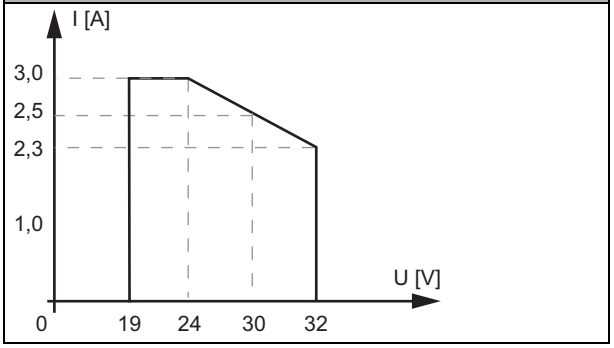
Figure	Type	Inputs	Output	Operating voltage	Output current	Connections	Article No.
	IP20, 22,5 mm x 114 mm, 2 x 4 contacts	2	2 x (Limited Energy Circuits)	ASi or 19 … 32 V_{DC}	≤ 3 A per output	Push-in terminals	**BWU4189**

Article no.		**BWU4189**
General data		
Device type		power limiting module
Connection		
Input connection		Push-in terminals
Output connection		Push-in terminals
Input		
Number		2 (In1 galvanically isolated to In2)
Input voltage		ASi or 19 … 32 V_{DC} (1) (2)
Input current		depending on network configuration
Output		
Number		2 (Out1 galvanically isolated to Out2) (3) Limited Energy Circuits in accordance with: • UL 61010-1 and UL 61010-2-201 • CAN/CSA C22.2 No. 61010-1 and CAN/CSA C22.2 No. 61010-2-201
Output voltage		ASi or 19 … 32 V_{DC}
Output current	up to +40 °C	≤ 3 A per output (4) ≤ 2,3 A per output at 32 V_{DC} (1)
	at +55 °C	≤ 3 A per output (4) at 24 V_{DC} (1) ≤ 2,3 A per output at 32 V_{DC} (1)
	at +70 °C	≤ 2 A per output (4)
Display		
LED In1, In2 (green)		on: input voltage on off: no input voltage
LED FLT1, FLT2 (red)		on: overload output or overvoltage or undervoltage input

Article no.	BWU4189
Environment	
Applied standards	EN 61000-6-2 EN 61000-6-3 EN 61131 EN 60529
Operating altitude	max. 2000 m
Ambient temperature	-25 °C ... +70 °C
	no condensation permitted
Storage temperature	-25 °C … +85 °C
Housing	plastic, for DIN rail mounting
Pollution Degree	2
Protection category	IP20
Overvoltage category	II
Tolerable loading referring to humidity	according to EN 61131-2 10% to 95%, non-condensing, according to EN 61131-2
Voltage of insulation	≥ 860 V_{AC} (valid between the both channels (In1+Out1 to In2+Out2))
Weight	150 g
Dimensions (W / H / D in mm)	22,5 / 99 / 114
Mounting position	vertical (mounting rail horizontal, clamps pointing upwards and downwards) (5)
Mounting	Can be combined with Bihl+Wiedemann devices of the same design and neighboring devices up to an ambient temperature of +40 °C. For higher temperatures a minimum distance of 10 mm to neighboring active devices must be provided.

(1)

BWU4189
Output current depending on the input voltage

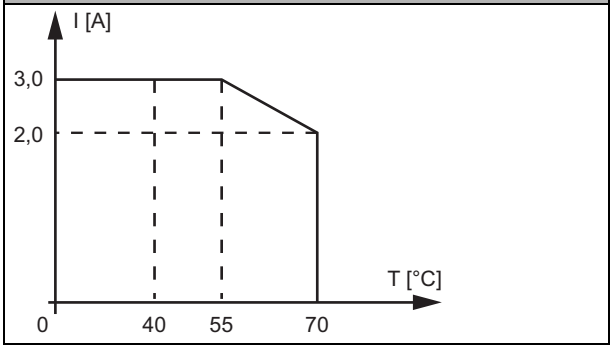


(2) The power supply unit for supply must have safe mains isolation acc. to IEC 60742.

(3) The outputs of the both channels (Out1, Out2) must not be connected in parallel and both channels must not be connected in series.

(4)

BWU4189
Derating output current



(5) Make sure there is adequate ventilation. The supply air temperature at the bottom of the housing may not exceed values specified under ambient temperature.

Power Limiting Module, IP20, 22,5 mm

Please observe the following instructions. For more information see installation instructions.

- *Safety precautions and warnings are designated by the ⚠ symbol.*
- *Bihl und Wiedemann GmbH is not liable for damage resulting from improper use of its equipment. Familiarity with these instructions constitutes part of the knowledge required for proper use.*
- *The device should be installed in a control cabinet with a protection type of at least IP54!*
- *The device may only be operated within the limits of its technical specifications. It may only be operated with the specified current and voltage values.*
- *The 24 V must be supplied by a PELV power supply.*

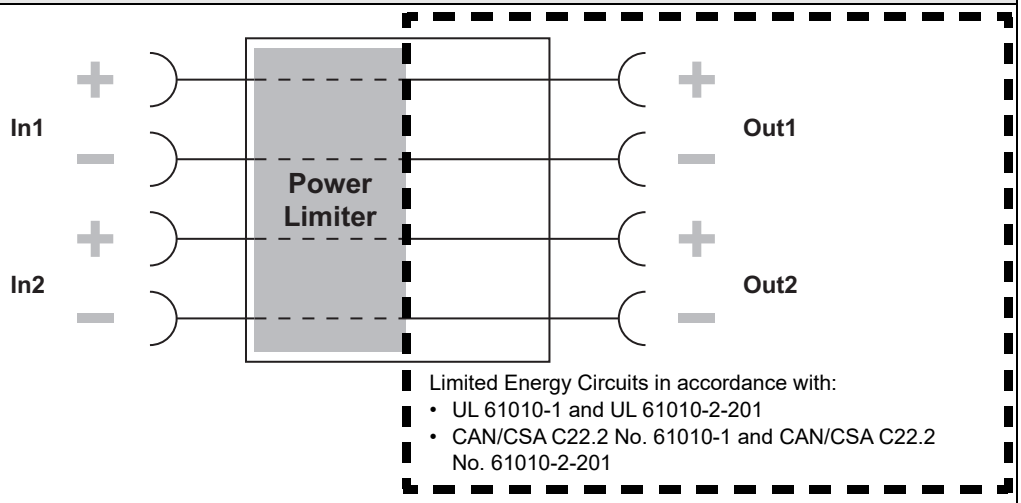
Wiring rules

	Push-in terminals, 2 /3 /4 poles (pitch 5 mm)
General	
Nominal cross section	2.5 mm^2
Conductor cross section	
Conductor cross section solid	0.2 ... 2.5 mm^2
Conductor cross section flexible	0.2 ... 2.5 mm^2
Conductor cross section flexible, with ferrule	without plastic sleeve: 0.25 ... 2.5 mm^2
	with plastic sleeve: 0.25 ... 2.5 mm^2
2 conductors with same cross section, stranded, with TWIN ferrules	without plastic sleeve: 0.5 ... 1.5 mm^2
AWG	24 ... 14
Stripped insulation length	10 mm

Connections

Name	**Explanation**
In x	input x
Out x	output x (corresponding with input x but current controlled) Limited Energy Circuits in accordance with: • UL 61010-1 and UL 61010-2-201 • CAN/CSA C22.2 No. 61010-1 and CAN/CSA C22.2 No. 61010-2-201

Connections	**Functional diagram**
BWU4189	**BWU4189**



- In case of an overload at the output (Out1, Out2) above the specified current limit, the according channel is switched off.
- When the output current is decreased below the specified current limit, the channel is switched on as long as the output current remains within the specified limit.
- It can take up to 60 s until the channel is switched on again after an output overload.