

- Current measurement in 3-phase mains
- Reinforced insulation of the measuring circuit
- Measured value transmitting via standard bus
- Modular monitoring system
- Width 22.5mm
- Industrial design



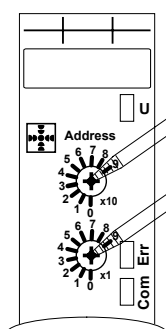
Technical data

1. Functions

WatchDog pro module for current monitoring in 3-phase mains.

2. Address adjustment

Address range: 1-99
Deactivation (Off): address 0



Potentiometer 1:
To adjust the **DECADES**

Potentiometer 2:
To adjust the **UNITS**

e.g.: the address **43** will be adjusted as follows

Potentiometer 1 on position **4**
Potentiometer 2 on position **3**

3. Indicators

Green LED U ON: module is supplied via local interface
Yellow LED Com ON / flashes: data exchange over standard bus is in progress
Red LED Err ON: indication of failure

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP20
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
Tightening torque: max. 1Nm
Terminal capacity:
1 x 0.5 to 2.5mm² with/without multicore cable end
1 x 4mm² without multicore cable end
2 x 0.5 to 1.5mm² with/without multicore cable end
2 x 2.5mm² flexible without multicore cable end

5. Supply

Rated voltage: 24V DC from local interface
Tolerance: -17.5% to +16.5%
Rated consumption: 1W
Rated current: 38mA
Max. supply current: 55mA
Ripple and noise: < 150mV_{pp}
Duty cycle: 100%
Start-up time: 2.2s typ.
Drop-out voltage: > 60% of supply voltage

6. Businterface

Standard bus:

Data link: RS485; yellow LED Com ON
Interface parameter: 115.2kBd, 9 bits data
Number of extension modules:
Local interface: 24* (width 22.5mm)

* dependent on the max. permissible current through local interface of the Central Unit (CU)
(additional extension is possible by the remote bus!)

7. Isolation

Fusing: max. 20A
Overvoltage category: III (in accordance with IEC 60664-1)
Rated surge voltage: 6kV between input circuit and local interface

8. Measuring circuit

Measured variable: AC Sinus (48 to 63Hz)
Measured value: I_{eff}
Measuring input: 5A AC terminals (K - I1, K - I2, K - I3)
If $I_{eff} > 3A \rightarrow$ distance between the devices must be > 5mm !

Overload capacity:
5A AC 6A
If $I_{eff} > 3A \rightarrow$ distance between the devices must be > 5mm !

Input resistance:
5A AC/DC 10mΩ

9. Accuracy

Base accuracy: ± 2% of upper range value
Frequency response: -
Repetition accuracy: ≤ 2%
Voltage influence: -
Temperature influence: ≤ 0.05% / °C

10. Ambient conditions

Ambient temperature: -25 to +55°C (in accordance with IEC 68-1)
-25 to +40°C (in accordance with UL 508)
Storage temperature: -25 to +70°C
Transport temperature: -25 to +70°C
Relative humidity: 15% to 85%
(in accordance with IEC 60721-3-3 class 3K3)
Absolute humidity: 1g to 25g H₂O/m³
(in accordance with IEC 60721-3-3 class 3K3)
Pollution degree: 2 (in accordance with IEC 60664-1)
Vibration resistance: 10 to 55Hz 0.35mm
(in accordance with IEC 68-2-6)
Shock resistance: 15g 11ms (in accordance with IEC 68-2-27)

Operator accessibility of clamps and connectors

The table shows which terminals and connectors can be touched by the operator during normal operation.

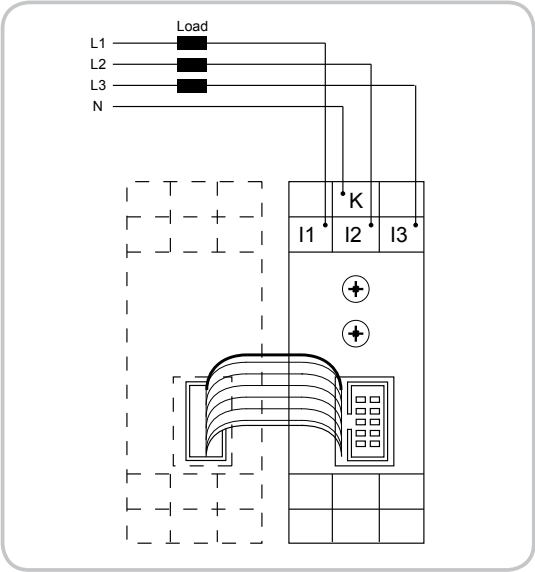
Nr.	Type	Terminal	Touchable
1	AI	Communication interface for local input-/output-extension device	YES
2	Ar	Communication interface for remote input-/output unit	YES
3	Be	Open communication interface, open to external devices as well	YES
4	Bi	Internal communication interface for peripheral modules	NO
5	C	Interface for digital and analog input signals	NO
6	D	Interface for digital and analog output signals	NO
7	E	Serial or parallel communication interface for data communication with external devices	YES
8	F	Terminal for line power supply	NO
9	H	Functional Earth terminal	YES
10	J	Input-/output interface for power supply of sensors and actuators	NO
11	K	Interface for auxiliary supply output and auxiliary supply input	NO

3-phase current measurement: G2JI1 5A - Definition of circuits:

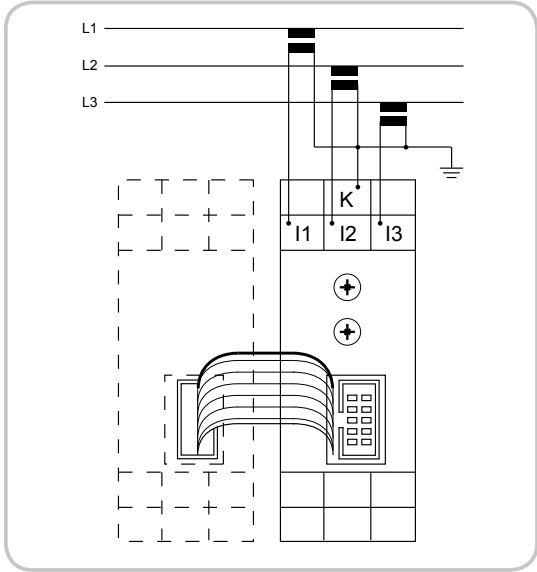
Name	Type	Nr.	Terminals related to the Circuit
Current inputs	C	5	K, I1, I2, I3
Local interface	AI	1	LI Box header; LI plug connector with ribbon cable

Connections

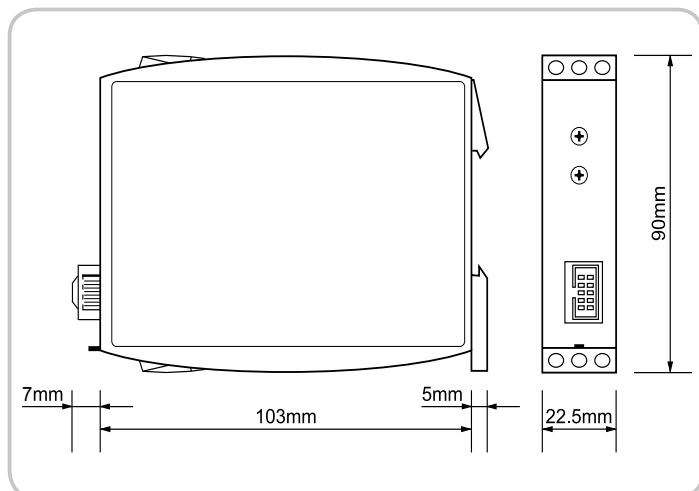
G2JI1 5A without current transformer with common return



G2JI1 5A with current transformer with common return



Dimensions



Ordering information

Type	Address range	LEDs	Part Nr. (PQ 1)
G2JI1 5A	1 to 99	U, Err, Com	2500400