

PISA-M 4-KANALS ELEKTRONISK SIKRING

PISA-M-4ADJ

4-kanals elek.sikr. 4x1,2,3,4,6 og 8A

- 4-kanaler (4x1-8A)
- Kun 22,5 mm bredde
- Felles eller individuell alarm
- Kvikk eller treg karakteristikk



PRODUKTBESKRIVELSE

Puls PISA-M elektronisk sikring er en 4-kanals DIN-skinne monterbar sikring for 12 og 24 V DC systemer. Den er meget liten fysisk og bygger kun 22,5 mm i bredden på DIN-Skinnen.

PISA-M er meget universell og strømforsyninger fra 90-480 W (24 V DC) kan brukes foran denne.

- 4 kanaler
- Kun 22,5 mm bredde
- Hver kanal kan justeres til: 1/2/3/4/6/8 A (Maks 20 A totalt)
- Man kan velge kvikk eller treg karakteristikk (eks. treg for startstrømkrevende utstyr)
- Push in tilkobling
- Lokal eller fjernreset

Kursene kan skrus av og på via de 4 knappene i front. Kursen er på om den lyser grønt og av om den lyser rødt med fast lys.

De 4 kursene starter opp med ca. 100 ms intervall.

Fabrikkinnstillingene er at alle kanaler er slått på med en innstilling på 1A og kvikk karakteristikk.

Om en kurs er trippet, blinker respektive LED rødt 1 gang for overbelastning eller kortslutning og rødt 2 ganger for (a) den totale overbelastningsbeskyttelsen på 20 A i sek er aktivert eller (b) beskyttelsesmodus for strømforsyning er aktivert. Les mer i brukermanualen punkt 9. Får å resette kursen hold respektive kurs-knapp inne 1 sek.

For å sjekke hva de forskjellige kanalene er satt til i Amp nivå:

Trykk knapp 1 og 4 samtidig i et kort øyeblikk (50 ms)

Da blinker LED 1, 2, 3 og 4 grønt raskt det antall Amp som er satt. (1 gang for 1 A, 2 ganger 2 A osv.)

Dette skjer i 2 sekvenser.

For å endre de forskjellige Amp nivåene på de forskjellige kanalene: (Maks. 20 A totalt)

Trykk knapp 1 og 4 samtidig over 1 sek. (da lyser alle kanaler oransje)

Trykk på knapp 1 kort (50 ms) så innen 4 sek trykk antall ganger som ønsket amp nivå, eks 3 ganger tilsvarer 3 A. Da blinker det raskt 3 ganger (oransje) (i 2 sekvenser) Trykk så knapp 1 i 1 sek for å lagre. Da blinker den grønt det antall amp som er lagret. Repeter for kanal 2, 3 og 4. For å komme ut av programmeringsmodus trykke knapp 1 og 4 samtidig et kort øyeblikk (50 ms)

For å se og endre om sikringen er satt til kvikk eller treg karakteristikk:

Trykk knapp 1 og 3 samtidig i et kort øyeblikk (50 ms)

Da blinker LED 1-4 grønt i rask takt for kvikk eller sakte for treg karakteristikk (løpelys)

Trykk igjen knapp 1 og 3 samtidig i et kort øyeblikk (50 ms). (innen 4 sek). Da endres karakteristikken.

Dette lagres automatisk.

Hvis ingen knapper trykkes innen 10 sek, går den automatisk ut av programmeringsmodus.

Fjern reset

Hvis en kurs har trippet / løst ut kan man tilføre en spenning 10-30 V DC (over 1 sek) på klemme 3.3 (+) og 3.4 (-), når årsaken er funnet og feilen fikset. De

andre kanalene berøres ikke uansett om de er av eller på.

Alarm kontakt Fra fabrikk kommer den som tripping alarm. Se de 4 forskjellige alarm mulighetene under. Les mer i brukermanualen punkt 12.

12. Select Communication Mode

• The device will exit setting mode automatically after 4 s inactivity.

The device is equipped with two signal ports. Signal status output (pin 3.1 – 3.2) and signal control input (pin 3.3 – 3.4). These ports can be configured as follows:

Tripping Alarm:

Switch closes when at least one or more output channels are tripped.

- Status Signal Output ON → one or more output channels are tripped
- Status Signal Output OFF → no output channel tripped

Digital Coded Interface (DCI):

For more detailed information regarding DCI mode, please refer to the product datasheet.

Output Channel Off Alarm:

Switch closes when one or more channels are tripped or manually turned off.

- Status Signal Output ON → one or more output channels are tripped / turned off
- Status Signal Output OFF → all output channels are turned on

OK-Signal:

Switch closes if all output channels are turned on.

- Status Signal Output ON → all output channels are turned on
- Status Signal Output OFF → one or more output channels are tripped / turned off

Man kan parallellkoble flere PISA-M moduler for å flere kurser. Hver (+) på PISA-M modulen skal tilkobles direkte til strømforsyning.

Vi anbefaler en fri avstand på 40 mm over og 30 mm under. 0 mm på sidene, 15 mm hvis komponenten på siden avgir varme. (eks strømforsyning).

Karakteristikk: (se ellers punkt 6 i databladet)

Kvikk: < 2 ms - 0,22 sek ved kortslutning og 1,5 x I_n.

Treg: < 10 ms - 1,1 sek ved kortslutning og 1,5 x I_n.

TEKNISKE DATA

INNGANGSDATA

Inngangsspenning DC min.	9,6 V DC
Inngangsspenning DC maks.	30 V DC

UTGANGSDATA

Utgangsstrøm maks.	20 A
Utgangsstrøm per kanal	Channel 1-4 :1, 2, 3, 4, 6, 8 A

VIRKNINGSGRAD/LEVETID/MTBF

Virkningsgrad	98 %
Levetid	268 000 h 4x5 A 40 C
MTBF (IEC 61709)	1 142 000 h 4x5 A 40 C

MÅL

Bredde	23 mm
Høyde	104 mm
Dybde	98 mm
Vekt	0,1 kg

ØVRIGE DATA

Godkjenninger	CE, UL 61010-1
---------------	----------------

IP-klasse	IP20
Tilkoblingstype	Push-In
Kabelareal flerleder maks.	2,5 mm ²
Materiale kapsling	Plast
Spenningsfall over halvlederen	130 mV
Statusutgang	Alarmkontakt NO 10-30 V DC 10 mA. Se punkt 12 i brukermanual
Strømforbruk	30 mA ved 24 V DC, 20 mA ved 12 V DC

Tilkobling utgang	Push-In
Tilbakeføring av last	30 V DC
Tilkobling inngang	Push-In

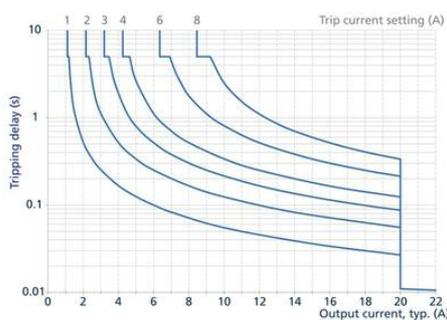


Fig. 6-2: Tripping delay depending on current slow tripping characteristic

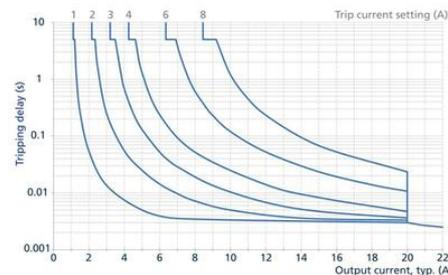


Fig. 6-1: Tripping delay depending on current fast tripping characteristic

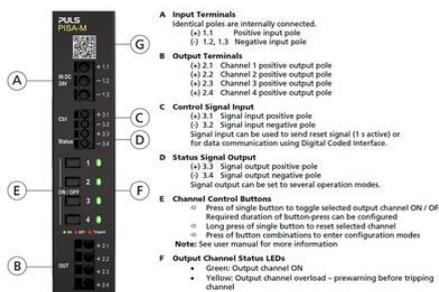
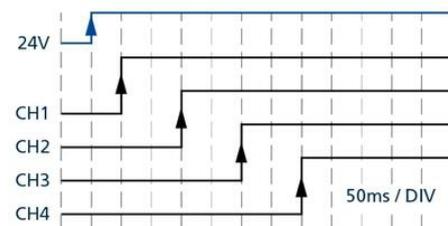
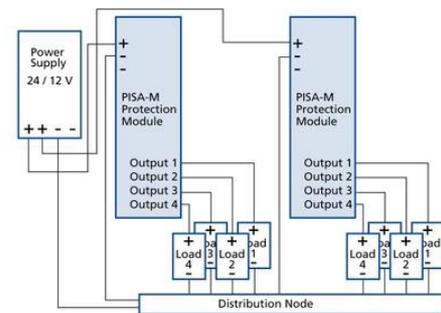
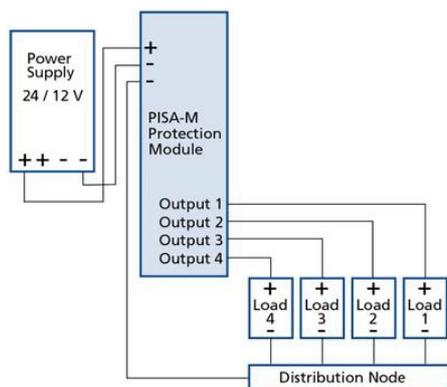


Fig. 14-1: Front view

- A Input Terminals**
Identical poles are internally connected.
(+) 1.1 Positive input pole
(-) 1.2, 1.3 Negative input pole
- B Output Terminals**
(+) 2.1 Channel 1 positive output pole
(+) 2.2 Channel 2 positive output pole
(+) 2.3 Channel 3 positive output pole
(+) 2.4 Channel 4 positive output pole
- C Control Signal Input**
(+) 3.1 Signal input positive pole
(-) 3.2 Signal input negative pole
Signal input can be used to send reset signal (1 active) or for data communication using Digital Coded Interface.
- D Status Signal Output**
(+) 3.3 Signal output positive pole
(-) 3.4 Signal output negative pole
Signal output can be set to several operation modes.
- E Channel Control Buttons**
Signal output can be set to several operation modes.
Press of single button to toggle selected output channel ON / OFF
Required duration of button-press can be configured
Long press of single button to reset selected channel
Press of button combinations to enter configuration modes
Note: See user manual for more information
- F Output Channel Status LEDs**
Green: Output channel ON
Yellow: Output channel overload - prewarning before tripping channel
Red: Output channel turned OFF (manually or remotely)
Red (flashing): Output channel tripped due to overload of this channel
Red (double-flashing): Output channel tripped due to device overload protection or power supply protection, see chapter 9 and 10
LED OFF: Device is not powered
Note: For other blinking codes, see user manual
- G QR code for direct access to documentation**

5. Turn Output Channels ON or OFF

Each output channel can be switched ON and OFF individually. The required duration of button press can be configured, see chapter 10 "Button Reaction Style".

- Output channel is ON → LED lights up green
- Output channel is OFF → LED lights up red



- Press the Channel Control Button (CCB) for the output channel to be modified depending on the selected button reaction style:
 - 50 ms in standard mode or
 - 1 s in long press mode
- The output channel will switch between ON and OFF.

6. Check Current Tripping Setpoint of Each Output Channel

Each LED indicates the current tripping setpoint for each output channel. For example: LED 1 shows setting of output channel 1.

- The number of flashes indicates current setting in amperes. For example: LED 1 flashes 4 x, set current tripping setpoint for output channel 1 is 4 A.
- The sequence will be shown two times.
- The device exits the checking mode and will return to regular operation.



- Press CCB1 and CCB4 simultaneously for 50 ms.
- Each LED will indicate the current tripping setpoint for each output channel by flashing green.
- Pressing any button during LED flashing stops the checking mode immediately.

12. Select Communication Mode

- The device will exit setting mode automatically after 4 s inactivity.

The device is equipped with two signal ports. Signal status output (pin 3.1 – 3.2) and signal control input (pin 3.3 – 3.4). These ports can be configured as follows:

Tripping Alarm:

Switch closes when at least one or more output channels are tripped.

- Status Signal Output ON → one or more output channels are tripped
- Status Signal Output OFF → no output channel tripped

Digital Coded Interface (DCI):

For more detailed information regarding DCI mode, please refer to the product datasheet.

Output Channel Off Alarm:

Switch closes when one or more channels are tripped or manually turned off.

- Status Signal Output ON → one or more output channels are tripped if turned off
- Status Signal Output OFF → all output channels are turned on

OK-Signal:

Switch closes if all output channels are turned on.

- Status Signal Output ON → all output channels are turned on
- Status Signal Output OFF → one or more output channels are tripped / turned off

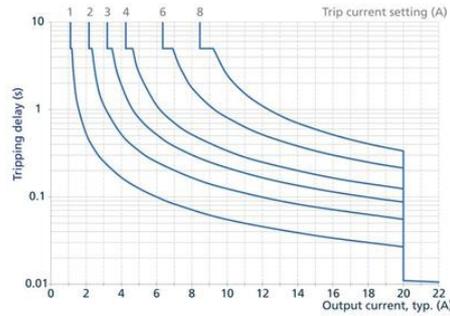
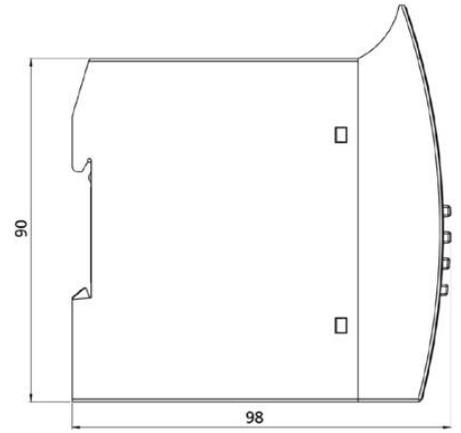
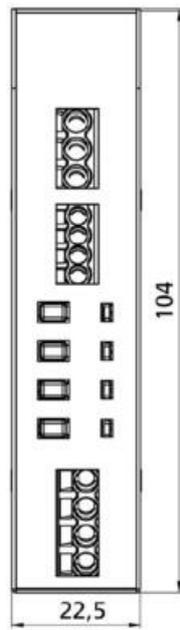


Fig. 6-2: Tripping delay depending on current
slow tripping characteristic

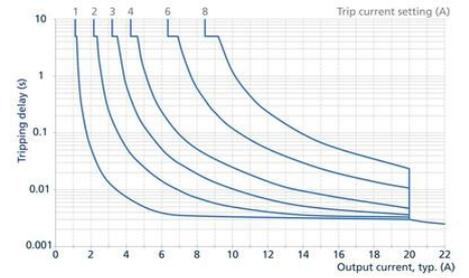


Fig. 6-1: Tripping delay depending on current
fast tripping characteristic

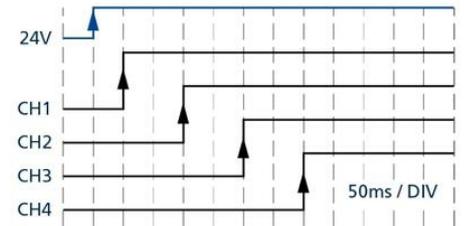
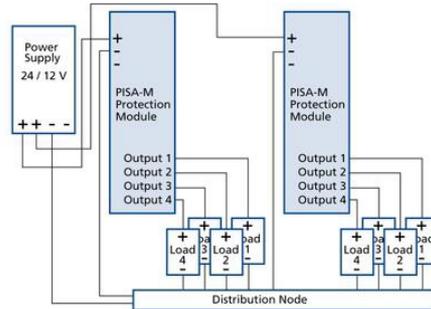
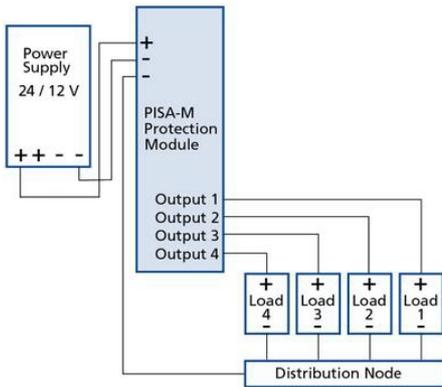




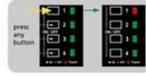
Fig. 16-1: Front side

- A Input Terminals**
Identical poles are internally connected.
(+) 1.1 Positive input pole
(-) 1.2, 1.3 Negative input pole
- B Output Terminals**
(+) 2.1 Channel 1 positive output pole
(+) 2.2 Channel 2 positive output pole
(+) 2.3 Channel 3 positive output pole
(+) 2.4 Channel 4 positive output pole
- C Control Signal Input**
(+) 3.1 Signal input positive pole
(-) 3.2 Signal input negative pole
Signal input can be used to send reset signal (1 s active) or for data communication using Digital Coded Interface.
- D Status Signal Output**
(+) 3.3 Signal output positive pole
(-) 3.4 Signal output negative pole
Signal output can be set to several operation modes.
- E Channel Control Buttons**
Press of single button to toggle selected output channel ON / OFF
Required duration of button press can be configured
Long press of single button to reset selected channel
Press of button combinations to enter configuration modes
Note: See user manual for more information
- F Output Channel Status LEDs**
Green: Output channel ON
Yellow: Output channel overload – prewarning before tripping channel
Red: Output channel turned OFF (manually or remotely)
Red (flashing): Output channel tripped due to overload of this channel
Red (double-flashing): Output channel tripped due to device overload protection or power supply protection, see chapter 9 and 10
LED OFF: Device is not powered
Note: For other blinking codes, see user manual
- G QR code for direct access to documentation**

5. Turn Output Channels ON or OFF

Each output channel can be switched ON and OFF individually.
The required duration of button press can be configured, see chapter 10 "Button Reaction Style".

- Output channel is ON → LED lights up green
- Output channel is OFF → LED lights up red

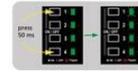


- Press the Channel Control Button (CCB) for the output channel to be modified depending on the selected button reaction style:
 - 50 ms in standard mode or
 - 1 s in long press mode
- The output channel will switch between ON and OFF.

6. Check Current Tripping Setpoint of Each Output Channel

Each LED indicates the current tripping setpoint for each output channel.
For example: LED 1 shows setting of output channel 1.

- The number of flashes indicates current setting in amperes.
For example: LED 1 flashes 4 x, set current tripping setpoint for output channel 1 is 4 A.
- The sequence will be shown two times.
- The device exits the checking mode and will return to regular operation.



- Press CCB1 and CCB4 simultaneously for 50 ms.
- Each LED will indicate the current tripping setpoint for each output channel by flashing green.
- Pressing any button during LED flashing stops the checking mode immediately.

12. Select Communication Mode

- The device will exit setting mode automatically after 4 s inactivity.

The device is equipped with two signal ports: Signal status output (pin 3.1 – 3.2) and signal control input (pin 3.3 – 3.4). These ports can be configured as follows:

Tripping Alarm:

- Switch closes when at least one or more output channels are tripped.
- Status Signal Output ON → one or more output channels are tripped
- Status Signal Output OFF → no output channel tripped

Digital Coded Interface (DCI):

For more detailed information regarding DCI mode, please refer to the product datasheet.

Output Channel OFF Alarm:

- Switch closes when one or more channels are tripped or manually turned off.
- Status Signal Output ON → one or more output channels are tripped if turned off
- Status Signal Output OFF → all output channels are turned on

OK Signal:

Switch closes if all output channels are turned on.

- Status Signal Output ON → all output channels are turned on
- Status Signal Output OFF → one or more output channels are tripped / turned off

