

Catalogue for Time Relays

Passenger Cars and Commercial Vehicles



PKC SEGU Systemelektrik GmbH is located in Barchfeld, Thuringia. We manufacture wiring harnesses as well as electronic and plastic components for commercial vehicle and automotive industries.

As a multinational and dynamic organisation we are focused on constant development of our operations and services. We are convinced that a skilled and committed staff is the foundation of our successful business.

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Catalogue for Time Relays

Passenger Cars and Commercial Vehicles

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Time Relays 24V

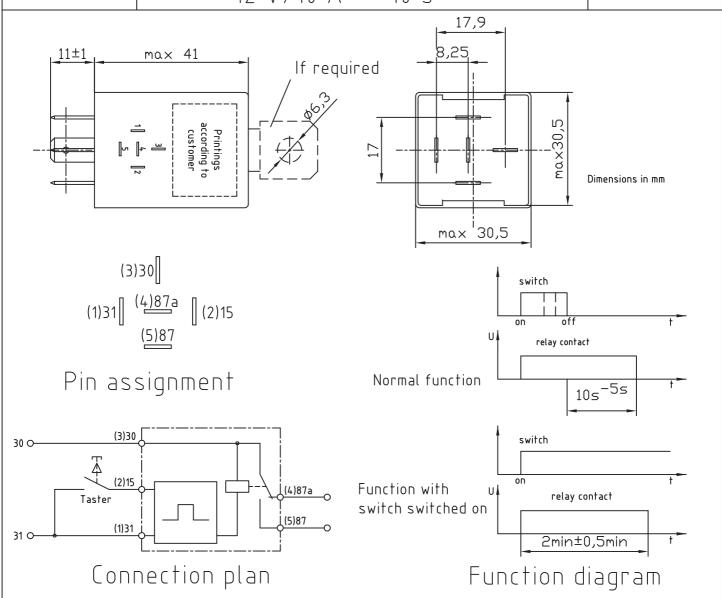
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41 9 4014-001 Pre-Heater Relay 12V 70A

Specification Time Relay 12 V/10 A 10 s

419 4003 S



Order number: 419 4003

Nominal voltage: 12 V
Operating voltage: 9 V...15 V
Test voltage: 13,5 V

Switching current: Normally closed contact 10 A
Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with Terminals according to ISO 7588–2 C, Terminals according to DIN EN ISO 8092–1 6,3x0,8 OH.

Operating temperature -25°C...+80°C

<u>Degree of protection:</u> Housing IP 53 (Terminals downwards) according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when used with a

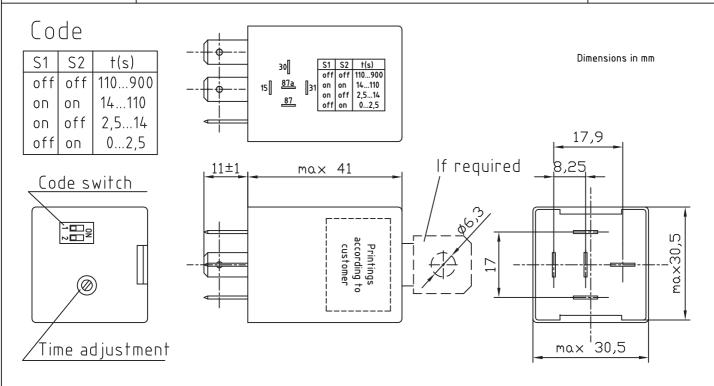
plug-in socket

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

EN ISO 14982

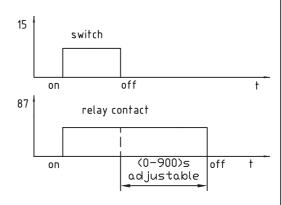
Specification Time Relay, off-delayed 12 V/10 A (0...900) s

419 4005 S



Connection plan

Function diagram



Order number: 419 4005

Nominal voltage: 12 V

<u>Operating voltage:</u> 9 V...17 V <u>Test voltage:</u> 14 V

<u>Switching current:</u> Normally closed contact 10 A

Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -25°C...+80°C

<u>Degree of protection:</u> Housing IP 50 according to DIN 40 050-9

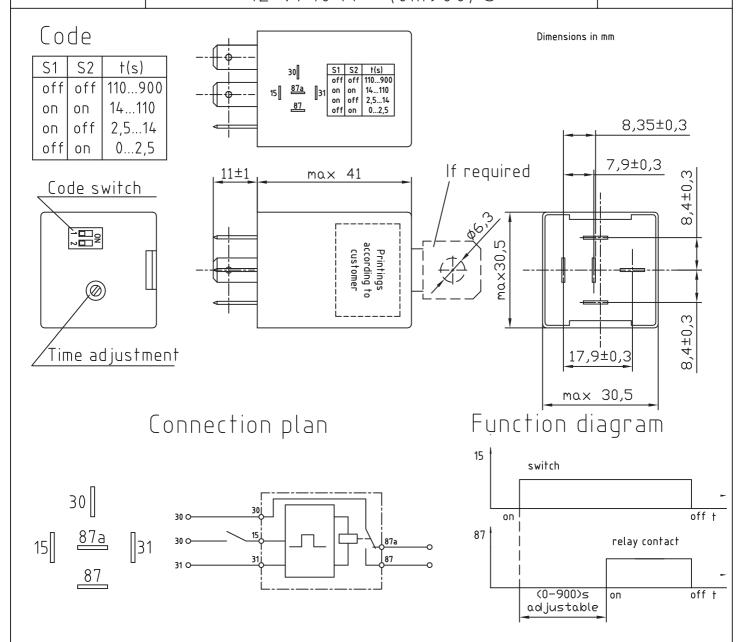
Pins IP 20 according to DIN 40 050-9 when using plug-in socket

Electromagnetic compatibility: Interference immunity and interference emission according to

EN 133309 and ISO 13766

Specification Time Relay, on-delayed 12 V/10 A (0...900) s

419 4006 S



Order number: 419 4006

Nominal voltage: 12 V
Operating voltage: 9 V...16 V
Test voltage: 14 V

<u>Switching current:</u> Normally closed contact 10 A

Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature; -20°C...+80°C

Degree of protection: Housing IP 50 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using a

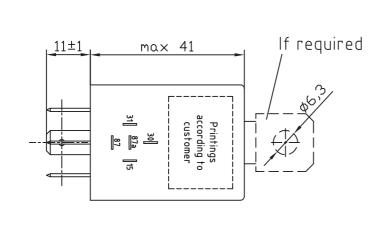
plug-in socket

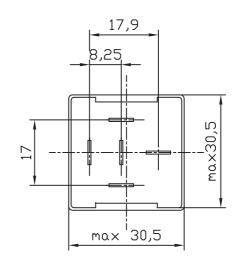
<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

EN 133309 and ISO 13766

Specification Time Relay, off-delayed 12 V/10 A 7,5 s

41 9 4012 S

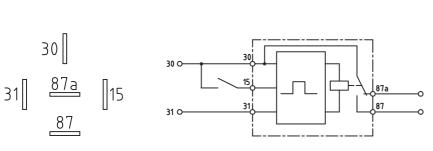




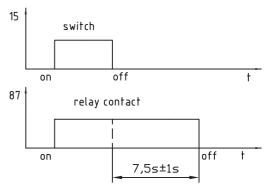
Dimensions in mm

30

Connection plan



Function diagram



Order number: 41 9 4012

12 V Nominal voltage: Operating voltage: 9 V...15 V Test voltage: 13,5 V

Switching current: Normally closed contact 10 A

Normally open contact 20 A

Compliancy: Housing PA 6.6 30% GF with fixation bracket according to

ISO 7588-2 C, Terminals according to DIN EN ISO 8092-1

6,3x0,8 OH CuZn 30 gal. Sn

-30°C...+80°C Operating temperature: Storage temperature: -40°C...+85°C

Degree of protection: Housing IP 53 according to DIN 40 050-9 (Terminals downwards)

Pins IP 20 according to DIN 40 050-9 when using a

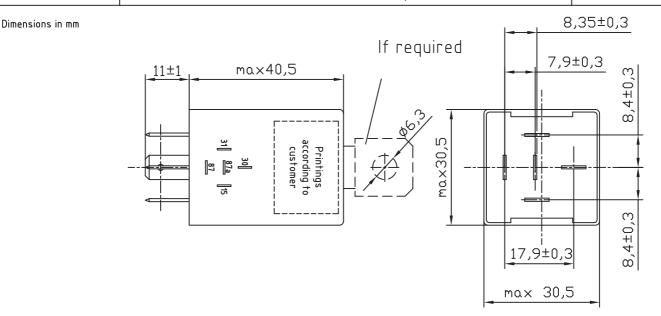
plug-in socket

Interference immunity and interference emission according to Electromagnetic compatibility:

DIN 40 839 and 95/54/EG

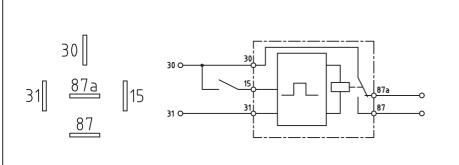
Specification Time Relay, on-delayed 12 V/10 A 7,5 s

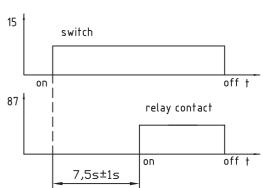
419 4013 S



Connection plan

Function diagram





Order number: 41 9 4013

Nominal voltage: 12 V
Operating voltage: 9 V...16 V
Test voltage: 13,5 V

<u>Switching current:</u> Normally closed contact 10 A

Normally open contact 20 A

<u>Compliancy:</u> Housing PA 6.6 GF30 with fixation bracket according to

ISO 7588-2 C, Terminals according to DIN EN ISO 8092-1,

6,3x0,8 OH CuZn37 gal Sn.

Operating temperature: -40°C...+85°C

Degree of protection: Housing IP 67 according to DIN 40 050-9

(Terminals downwards)

Pins IP 20 according to DIN 40 050-9 when using a

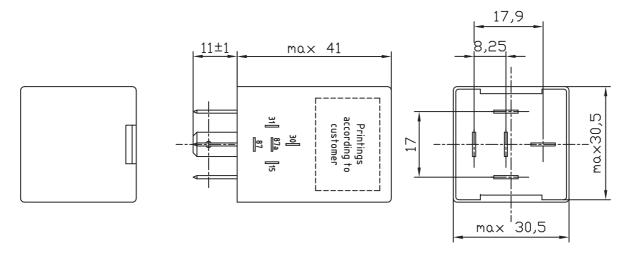
plug-in socket

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

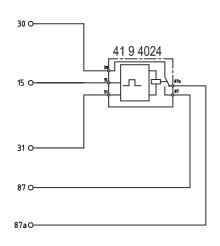
RL 72/245/EWG i.d.F 2006/28/EG, ISO 7637-2

Specification Time Relay, off-delayed 12 V 10 min

419 4024 S



Function diagram time relay



Connection plan

Dimensions in mm

Order number: 419 4024

Nominal voltage: 12 V
Operating voltage: 9 V...17 V
Test voltage: 13,5 V
Overvoltage protection: Up to 80 V

Switching current: Normally closed contact 10 A
Normally open contact 20 A

<u>Compliancy:</u> Housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -20°C...+80°C

Degree of protection: Housing IP 50 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using plug-in socket

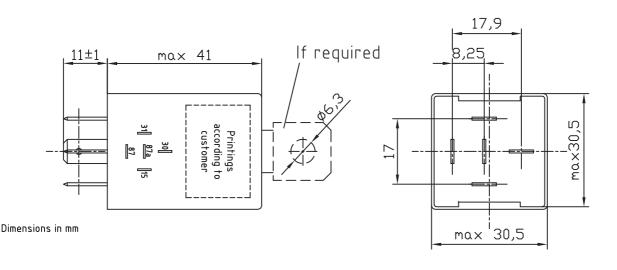
Electromagnetic compatibility: Interference immunity and interference emission according to

RL 72/245/EWG and ISO 7637-2

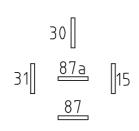
<u>Switching time:</u> 10min ± 10% switch off relay, retriggerable

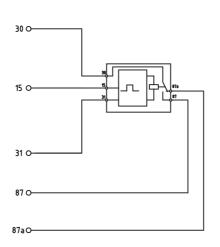
Specification Time Relay, off-delayed 12 V/10 A 9 min

419 4030 S



Connection plan





Order number: 419 4030

Nominal voltage: 12 V
Operating voltage: 9 V...17 V
Test voltage: 13,5 V
Overvoltage protection: Up to 80 V

Switching current: Normally closed contact 10 A
Normally open contact 20 A

<u>Compliancy:</u> Housing PA 6.6 GF30 with fixation bracket according to ISO

7588-2 C.

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -20°C...+80°C

<u>Degree of protection:</u> Housing IP 53 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using plug-in socket

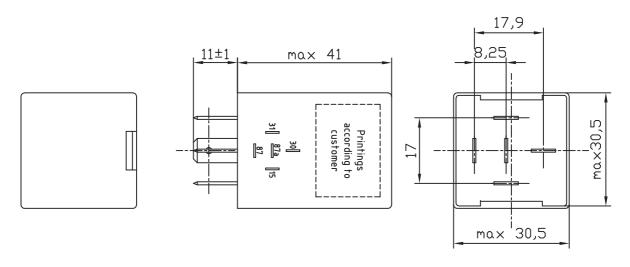
<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

RL 72/245/EWG and ISO 7637-2

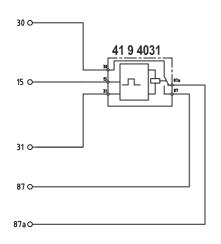
Switching time: 9 min switch off relay, retriggerable

Specification Time Relay, on-delayed 12 V 10s

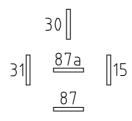
419 4031 S



Function diagram of time relay



Connection plan



Dimensions in mm

Order number: 41 9 4031

Nominal voltage: 12 V
Operating voltage: 9 V...15 V
Test voltage: 13,5 V
Overvoltage protection: Up to 80 V

Switching current: Normally closed contact 10 A
Normally open contact 20 A

<u>Compliancy:</u> Housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -20°C...+80°C

<u>Degree of protection:</u> Housing IP 50 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using plug-in socket

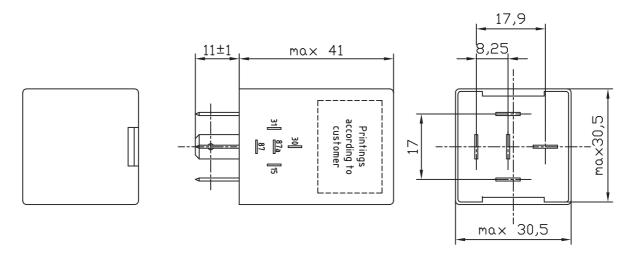
<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

RL 72/245/EWG and ISO 7637-2

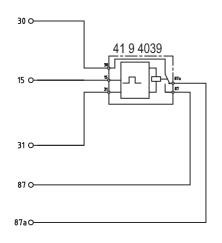
<u>Switching time:</u> 10 seconds ± 10% switch on relay, retriggerable

Specification Time Relay, off-delayed 12 V 1,5s

419 4039 S



Function diagram of time relay



Conntection plan

Dimensions in mm

Order number: 419 4039

Nominal voltage: 12 V
Operating voltage: 9 V...17 V
Test voltage: 13,5 V
Overvoltage protection: Up to 80 V

Switching current: Normally closed contact 10 A
Normally open contact 20 A

<u>Compliancy:</u> Housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -40°C...+80°C

<u>Degree of protection:</u> Housing IP 50 according to DIN 40 050-9

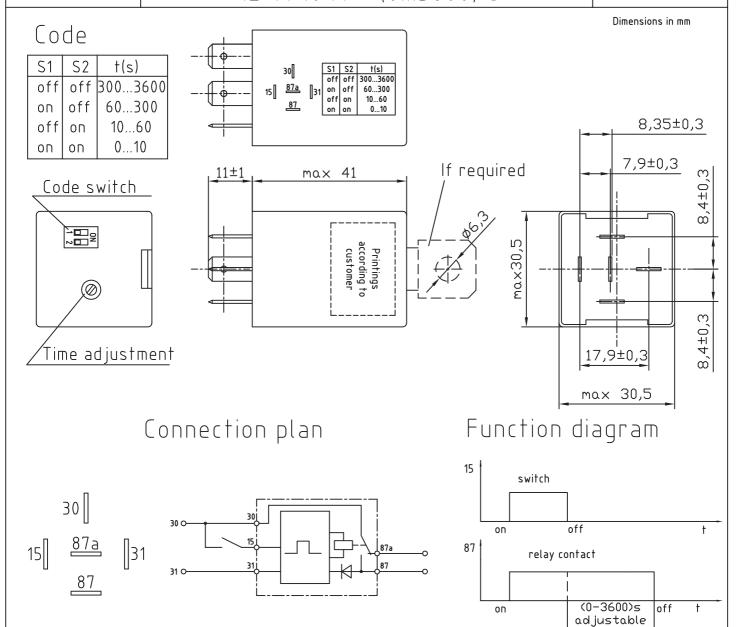
Pins IP 20 according to DIN 40 050-9 when using plug-in socket

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

RL 72/245/EWG and ISO 7637-2

Switching time: $1,5s \pm 20\%$ switch off relay, retriggerable

Specification Time Relay, off-delayed 12 V/10 A (0...3600) s



Order number:

Nominal voltage: 12 V
Operating voltage: 9 V...16 V
Test voltage: 14 V

<u>Switching current:</u> Normally closed contact 10 A

Normally open contact 20 A (30 min)

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature; -25°C...+80°C

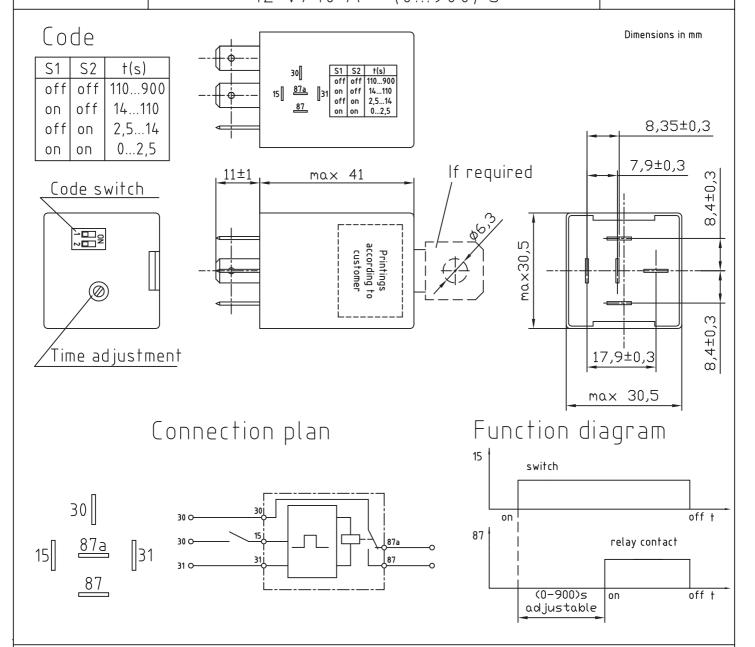
<u>Degree of protection:</u> Housing IP 50 according to DIN 40 050-9

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

RL 72/245/EWG (i.d.F.2006/28/EG) and ISO 7637-1

Specification Time Relay, on-delayed 12 V/10 A (0...900) s

419 4051 S



Order number: 419 4051

Nominal voltage: 12 V
Operating voltage: 9 V...16 V
Test voltage: 14 V

<u>Switching current:</u> Normally closed contact 10 A

Normally open contact 20 A (30 min)

Compliancy: Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature; -25°C...+80°C

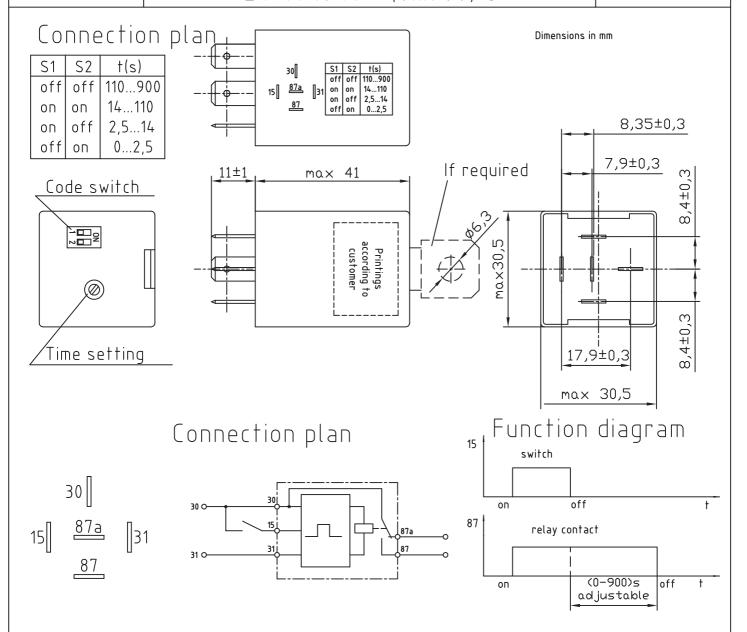
Degree of protection: Housing IP 50 according to DIN 40 050-9

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

RL 72/245/EWG (i.d.F.2006/28/EG) and ISO 7637-1

Specification Time Relay, off-delayed 24 V/10 A (0...900) s

419 4007 S



Order number: 419 4007

Nominal voltage: 24 V

<u>Operating voltage:</u> 18 V...33 V Test voltage: 27 V

<u>Switching current:</u> Normally closed contact 10 A

Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -20°C...+80°C

Degree of protection: Housing IP 53 according to DIN 40 050-9

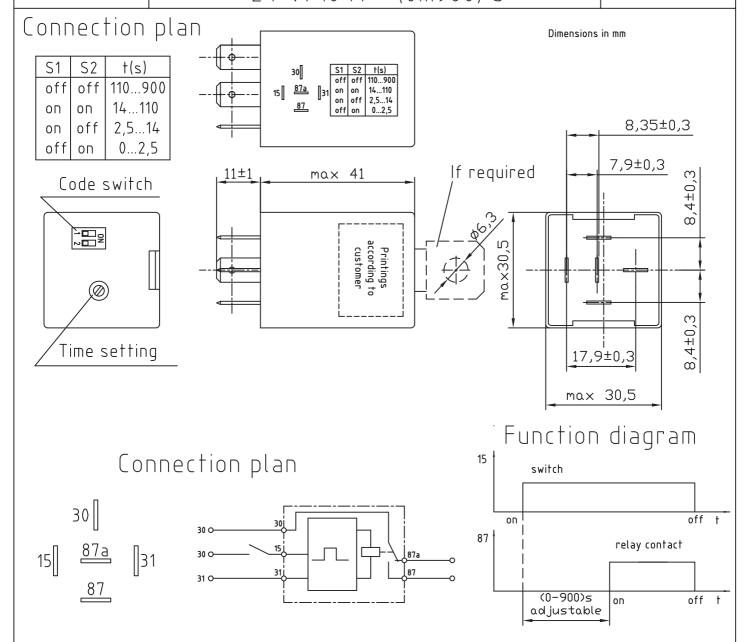
Pins IP 20 according to DIN 40 050–9 when using plug–in socket

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

EN 1333 09 and ISO 13766

Specification Time Relay, on-delayed 24 V/10 A (0...900) s

419 4008 S



Order number: 41 9 4008

Nominal voltage: 24 V

Operating voltage: 18 V...33 V
Test voltage: 27 V

<u>Switching current:</u> Normally closed contact 10 A

Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -20°C...+80°C

Degree of protection: Housing IP 53 according to DIN 40 050-9

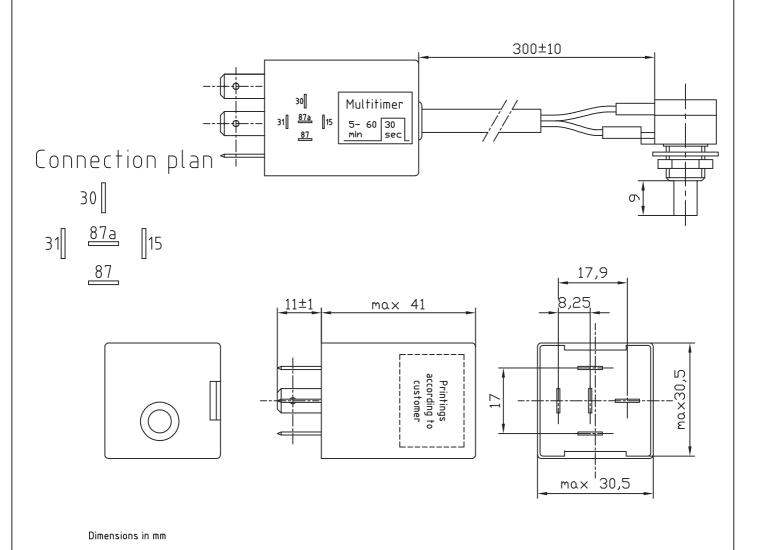
Pins IP 20 according to DIN 40 050-9 when using plug-in socket

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

EN 1333 09 and ISO 13766

Specification Multitimer T100 24 V

41 9 4022 S Page 1



Order number: 419 4022

Nominal voltage: 24 V

Operating voltage: 18 V...32 V
Test voltage: 27 V

Switching current: Normally closed contact 10 A

Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -20°C...+80°C

<u>Degree of protection:</u> Housing IP 53 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using plug-in socket Electromagnetic compatibility: Interference immunity and interference emission according to

RL 72/245/EWG (i.d.F. 95/54/EWG),ISO 7637-2(1990) and

ISO/TR 10605

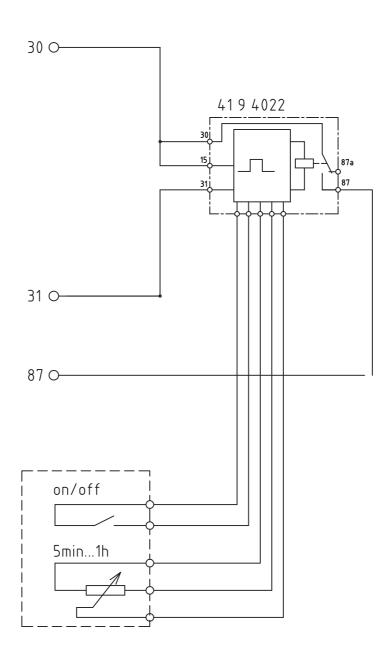
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SEGU
Systemelektrik
GmbH

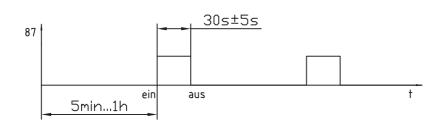
Specification Multitimer T100 24 V

41 9 4022 S Page 2

Plan of functions multitimer T100

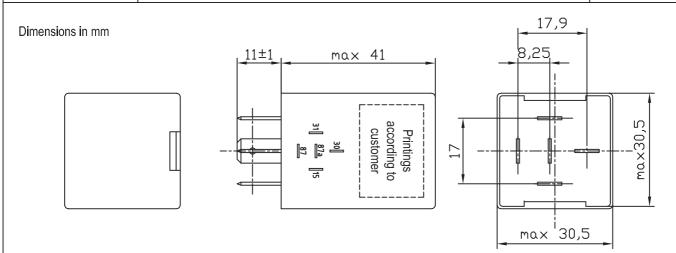


Function diagram

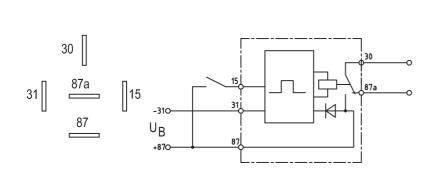


Specification Time relay, off-delayed 24V 60s

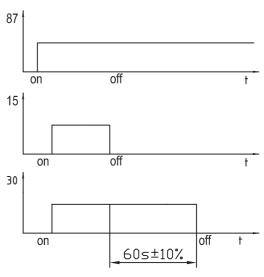
419 4023 S



Connection plan



Function diagram



Order number: 419 4023

Nominal voltage: 24 V

Power supply via Terminal 87 (+) and Terminal 31 (-)

Operating voltage: 18 V...32 V

Test voltage: 27 V

Overvoltage protection: Up to 80 V

<u>Switching current:</u>
Normally closed contact 10 A
Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature; -20°C...+80°C

Electromagnetic compatibility:

<u>Degree of protection:</u> Housing IP 50 according to DIN 40 050-9

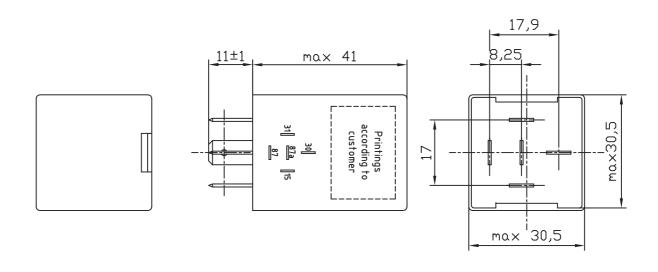
Pins IP 20 according to DIN 40 050-9 when using plug-in socket Interference immunity and interference emission according to

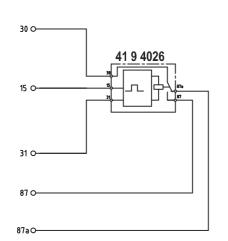
RL 72/245/EWG (i.d.F. 2006/ 28/ EG),ISO 7637-2

<u>Switching time:</u> 60 ±10% seconds off-delayed, retriggerable

Specification Time Relay, on-delayed 24V 15s

419 4026 S





Connection plan

Dimensions in mm

Order number: 419 4026

Nominal voltage: 24 V
Operating voltage: 18 V...32 V
Test voltage: 27 V
Overvoltage protection: Up to 80 V

<u>Switching current:</u> Normally closed contact 10 A

Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -20°C...+80°C

Degree of protection: Housing IP 53 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using plug-in socket

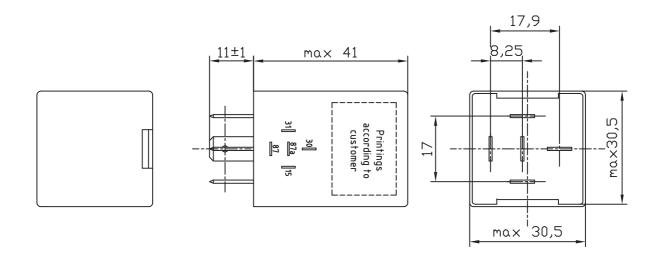
<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

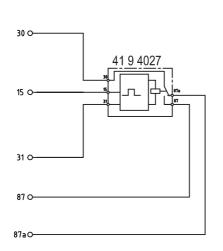
RL 72/245/EWG and ISO 7637-2

<u>Switching time:</u> 15 seconds ±10% on-delayed, retriggerable

Specification Time Relay, off-delayed 24V 150s

419 4027 S





Connection plan

Dimensions in mm

Order number: 419 4027

Nominal voltage: 24 V

<u>Operating voltage:</u> 18 V...32 V <u>Test voltage:</u> 27 V

Overvoltage protection: Up to 80 V

Switching current: Normally closed contact 10 A
Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -20°C...+80°C

Degree of protection: Housing IP 53 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using plug-in socket

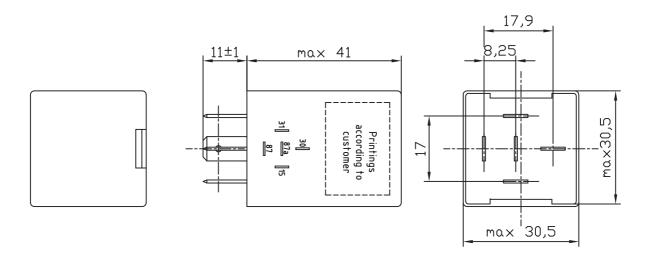
Electromagnetic compatibility: Interference immunity and interference emission according to

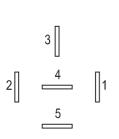
RL 72/245/EWG and ISO 7637-2

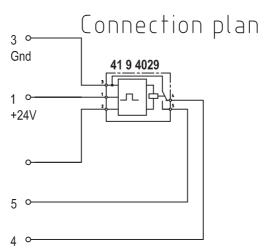
<u>Switching time:</u> 150 seconds ±10% off-delayed, retriggerable

Specification Time Relay, off-delayed 24V 60s

419 4029 S







Dimensions in mm

Order number: 419 4029

Nominal voltage: 24 V
Operating voltage: 18 V...32 V
Test voltage: 27 V
Overvoltage protection: Up to 80 V

Switching current: Normally closed contact 10 A
Normally open contact 20 A

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature: -20°C...+80°C

<u>Degree of protection:</u> Housing IP 53 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using plug-in socket

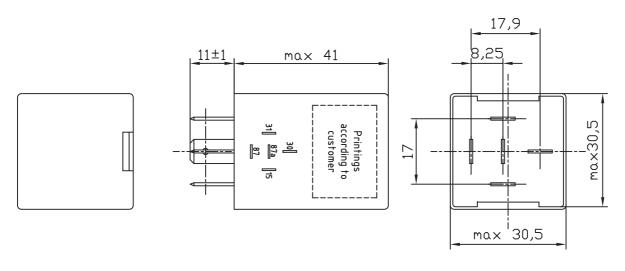
<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

RL 72/245/EWG and ISO 7637-2

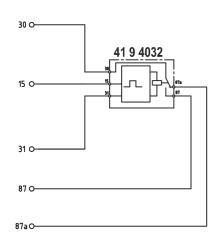
<u>Switching time:</u> 60 seconds ±10% off-delayed, retriggerable

Specification Time Relay, on-delayed 24 V 1,5s

419 4032 S



Function diagram time relay



Connection plan

Dimensions in mm

Order number: 419 4032

Nominal voltage: 24 V

<u>Operating voltage:</u> 18 V...32 V <u>Test voltage:</u> 27 V

Overvoltage protection: Up to 80 V

<u>Switching current:</u>
Normally closed contact 10 A
Normally open contact 20 A

Compliancy: Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature; -40°C...+80°C

<u>Degree of protection:</u> Housing IP 50 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using plug-in socket

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

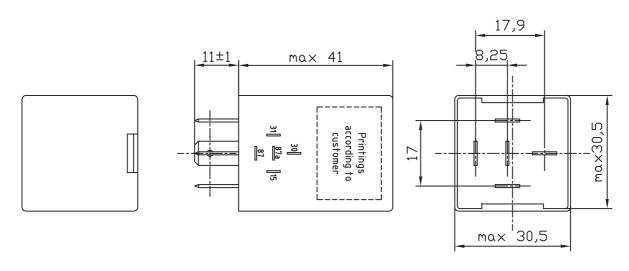
RL 72/245/EWG and ISO 7637-2

Switching time: $1.5 \pm 10\%$ seconds on-delayed, retriggerable,

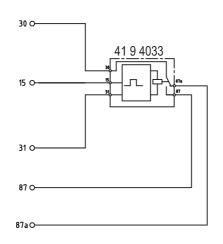
Terminal 15 high-active

Specification Time Relay, off-delayed 24 V 15s

419 4033 S



Function diagram of time relay



Connection plan

Dimensions in mm

Order number: 419 4033

Nominal voltage: 24 V

<u>Operating voltage:</u> 18 V...32 V <u>Test voltage:</u> 27 V

Overvoltage protection: Up to 80 V

<u>Switching current:</u>
Normally closed contact 10 A
Normally open contact 20 A

Compliancy: Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature; -20°C...+80°C

<u>Degree of protection:</u> Housing IP 50 according to DIN 40 050-9

Pins IP 20 according to DIN 40 050-9 when using plug-in socket

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

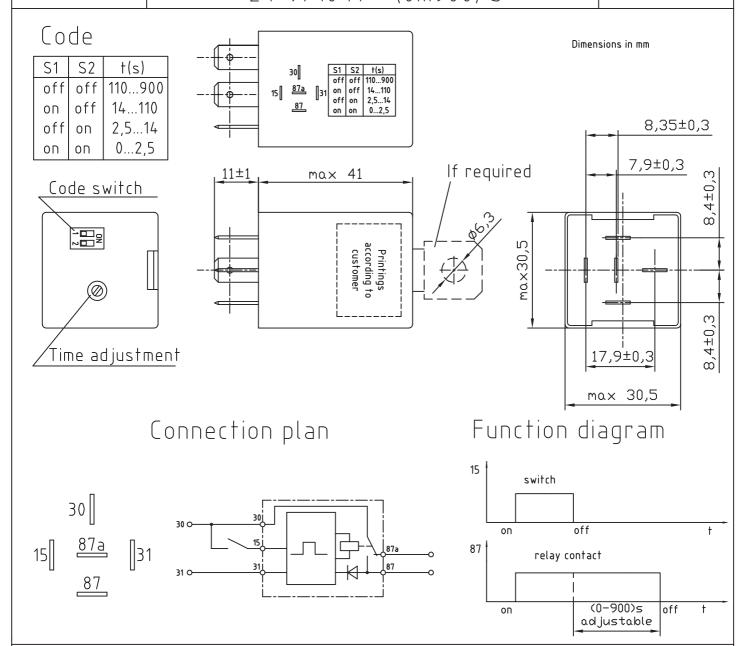
RL 72/245/EWG (i.d.F. 95/54/EWG), ISO 7637-2(1990) and

ISO/TR 10605

Switching time: 15 secondsn (±10%) off-delayed, retriggerable

Specification Time Relay, off-delayed 24 V/10 A (0...900) s

419 4052 S



Order number: 419 4052

Nominal voltage: 24 V

Operating voltage: 18 V...32 V
Test voltage: 28 V

Switching current: (24V, resistive load)

Normally closed contact 10 A

Normally open contact 20 A (30 min)

Compliancy: Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature; -25°C...+80°C

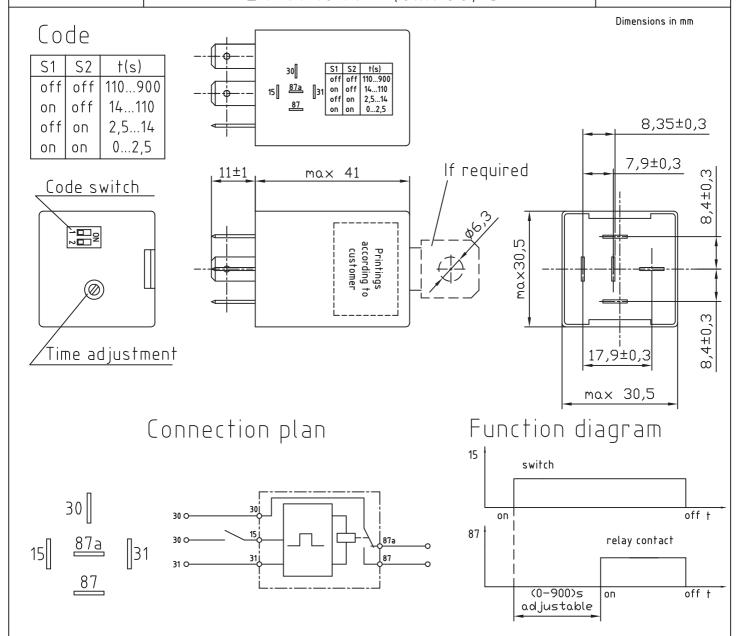
<u>Degree of protection:</u> Housing IP 50 according to DIN 40 050-9

<u>Electromagnetic compatibility:</u> Interference immunity and interference emission according to

RL 72/245/EWG (i.d.F.2006/28/EG) and ISO 7637-1

Specification Time Relay, on-delayed 24 V/10 A (0...900) s

419 4053 S



Order number: 41 9 4053

Nominal voltage: 24 V

<u>Operating voltage:</u> 18 V...32 V Test voltage: 28 V

Switching current: (24V, resistive load)

Normally closed contact 10 A

Normally open contact 20 A (30 min)

<u>Compliancy:</u> Plastic housing with fixation bracket according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 6,3x0,8 OH.

Operating temperature; -25°C...+80°C

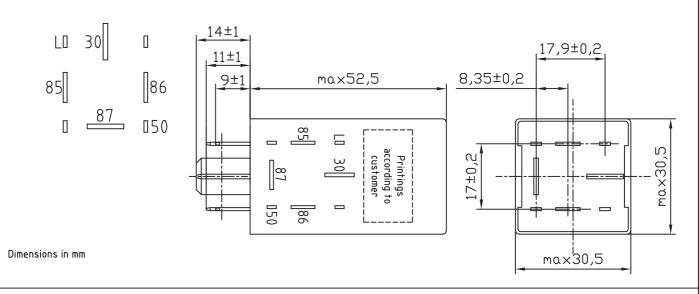
<u>Degree of protection:</u> Housing IP 50 according to DIN 40 050-9

Electromagnetic compatibility: Interference immunity and interference emission according to

RL 72/245/EWG (i.d.F.2006/28/EG) and ISO 7637-2

Specification Pre-Heater Relay 12 V/70 A 6 s

41 9 4014 S Page 1



Order number: 41 9 4014

<u>Usage:</u> Control unit for preheating time of diesel engines

<u>Function:</u> After the supply voltage is applied to Pin85 (–) and Pin 86 (+)

the relay switches on and the control light

(connected to Pin L) lights up. Start of the preheating phase. The relay switches off after 6.5 ± 0.5 s. End of the preheating

phase. Switching the relay on again is not possible.

By actuating the starter switch Pin 50 is connected to positive

potential. Now the lock is removed.

Nominal voltage: 12 V
Operating voltage: 9 V...15 V
Test voltage: 13,5 V

Nominal load: 70 A (permanent load)

Preheating time: (6...7)s

<u>Compliancy:</u> Plastic housing with Terminals according to ISO 7588-2 C,

Terminals according to DIN EN ISO 8092-1 9,5x1,2 OH;

6,3x0,8 OH and 2,8x0,8 OH.

<u>Operating temperature:</u> -20°C...+60°C Storage temperature: -40°C...+85°C

Degree of protection: Housing IP 5K4 according tod DIN 40 050-9

Electrical contacts IP 20 according to DIN 40 050-9

when using a plug-in socket

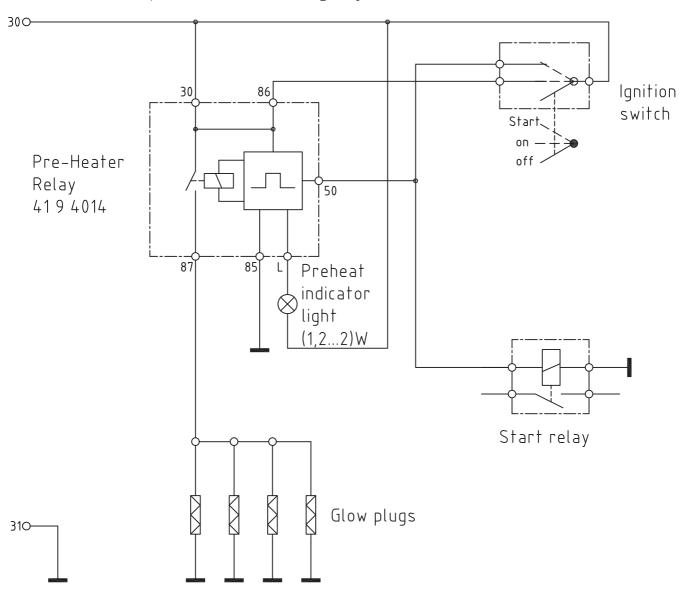
<u>Electromagnetic compatibility:</u> Interference immunity and interference emission

according to DIN EN 12895

Specification
Pre-Heater Relay
12 V/70 A 6 s

41 9 4014 S Page 2

Connection plan Preheating System



Function diagramm

