

Notes

1.5 Solid State Relays

Application	Type	Pin	Page
CSS Series			
1 pole normally open solid state AC Faston	CSS-I	4	74
1 pole normally open solid state AC Faston	CSS-Z	4	75
1 pole normally open solid state DC Faston	CSS-N	4	76
1 pole normally open solid state DC Faston	CSS-P	4	77
CRINT Series			
1 pole normally open solid state DC	CRINT-1x5	-	78
1 pole normally open solid state AC	CRINT-1x8	-	79

1.5 Solid State Relays

CSS-I

1 pole | normally open solid state AC | Faston

Output	1 NO
Operating range	3 A, 24 ... 250 V AC, 50/60 Hz
Minimum contact load	35 mA

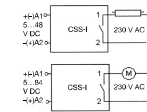
Contact	
Type	1 NO (Solid state AC)
Material	Triac
Rated Load	3 A AC

Control circuit	
Input voltage range	5 ... 48 V DC
Input current	10 mA

Output circuit	
Max. output current	Instantaneous
Min. output current	3 A
Output voltage range	24...250 V AC
Inrush current	150 A/10 ms
Residual current	1 mA
It value	210 A's

Specifications	
Ambient temperature operation/storage	-40 ... 70 °C / -40 ... 85 °C (no ice)
Pick-up time	0,08 ms
Release time	0,06 ms
Weight	28 g

Applications
It is specially suitable to switch inductive loads up to 3A/250 V AC. For switching loads with a high inrush or overcurrent as transformers, motors or fluorescents, the maximum output current will limit to 2 A.



Product References

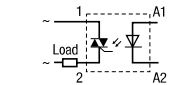
V DC 5-48 **CSS-I12X/DC5-48V**

Accessories

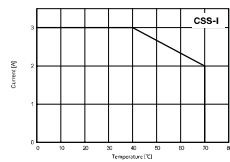
Socket **S10, S10-P**



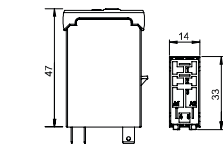
fig. 1 CSS-I diagram



Tab. 2 AC derating curve



Dimensions (mm)



Technical approvals, conformities



1.5 Solid State Relays

CSS-Z

1 pole | normally open solid state AC | Faston

Output	1 NO
Operating range	3 A, 24 ... 250 V AC, 50/60 Hz
Minimum contact load	35 mA

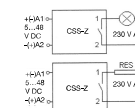
Contact	
Type	1 NO (Solid state AC)
Material	Triac
Rated Load	3 A AC

Control circuit	
Input voltage range	5 ... 48 V DC
Input current	10 mA

Output circuit	
Max. output current	Synchronized zero
Min. output current	3 A
Output voltage range	24 ... 250 V AC
Inrush current	150 A/10 ms
Residual current	1 mA
It value	210 A's

Specifications	
Ambient temperature operation/storage	-40...70 °C / -40 ... 85 °C (no ice)
Pick-up time	10 ms
Release time	10 ms
Weight	28 g

Applications
Switches ohmic AC loads up to 3 A/250 V AC in the zero-point of the tension and avoids any over-current peak in the connection. Suitable for switching resistors, incandescent lamps, signalling equipment, etc. Not suitable for inductive loads.



Product References

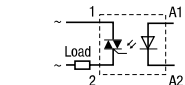
V DC 5-48 **CSS-Z12X/DC5-48V**

Accessories

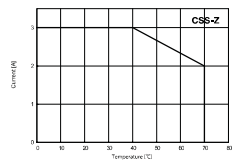
Socket **S10, S10-P**



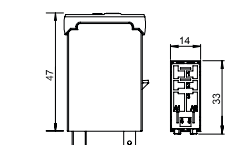
fig. 1 CSS-Z diagram



Tab. 2 AC derating curve



Dimensions (mm)



Technical approvals, conformities



1.5 Solid State Relays

CSS-N

1 pole | normally open solid state DC | Faston

Output	1 NO
Operating range	6 A, 5 ... 48 V DC
Minimum contact load	1 mA

Contact	
Type	1 NO (Solid state DC)
Material	MOSFET
Rated Load	6 A DC

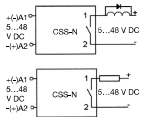
Control circuit	
Input voltage range	5 ... 48 V DC
Input current	4 mA

Output circuit	
Type	NPN
Max. output current	6 A
Output voltage range	5 ... 48 V DC
Max. inrush current	40 A / 10 ms
Max. voltage drop	≤ 0.14 V DC
Residual current	0.1 mA

Specifications	
Ambient temperature operation/storage	-40 ... 70 °C / -40 ... 85 °C (no ice)
Test voltage between input/output	4 kV rms / 1 min.
Turn-on delay	0,06 ms
Release delay	0,06 ms
Weight	28 g

Applications
For switching heating elements, electro valves, motors, PLC input/output signals, solenoids, incandescent and fluorescent lamps, etc. (up to 48 V DC).

Inductive loads must be shunted with an antiparallel diode.

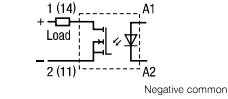


Product References	
V DC 5-48	CSS-N13X/DC5-48V

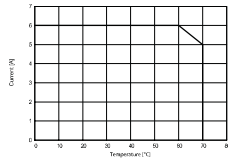
Accessories	
Socket	S10, S10-P



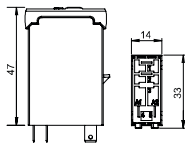
fig. 1 CSS-N diagram



Tab. 2 AC derating curve



Dimensions (mm)



Technical approvals, conformities



IEC/EN 60947

1.5 Solid State Relays

CSS-P

1 pole | normally open solid state DC | Faston

Output	1 NO
Operating range	6 A, 5 ... 48 V DC
Minimum contact load	1 mA

Contact	
Type	1 NO (Solid state DC)
Material	MOSFET
Rated Load	6 A DC

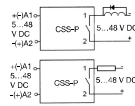
Control circuit	
Input voltage range	5 ... 48 V DC
Input current	4 mA

Output circuit	
Type	PNP
Max. output current	6 A
Output voltage range	5 ... 48 V DC
Max. switch-on current	40 A / 10 ms
Max. voltage drop	0.14 V DC
Residual current	0.1 mA

Specifications	
Ambient temperature operation/storage	-40 ... 70 °C / -40 ... 85 °C (no ice)
Turn-on delay	0,06 ms
Release delay	0,06 ms
Weight	28 g

Applications
For switching heating elements, electro valves, motors, PLC input/output signals, solenoids, incandescent and fluorescent lamps, etc. (up to 48 V DC).

Inductive loads must be shunted with an antiparallel diode.

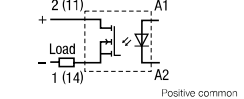


Product References	
V DC 5-48	CSS-P13X/DC5-48V

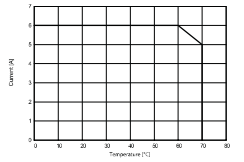
Accessories	
Socket	S10, S10-P



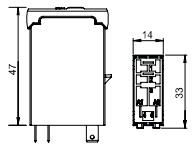
fig. 1 CSS-P diagram



Tab. 2 AC derating curve



Dimensions (mm)



Technical approvals, conformities



IEC/EN 60947

1.5 Solid State Relays
CRINT 1x5 series

1 pole | normally open solid state DC

Maximum contact load	2 A / 24 V DC-1
Recommended minimum contact load	20 mA / 5 V

Contact	
Type	1 NO (Solid state DC)
Material	Mosfet
Max. inrush current (10ms)	48 A

Coil	
Operation voltage DC	0,8 ... 1,25 U _n
Nominal power DC	160 mW

Insulation	
Test voltage I / O	2,5 kV rms / 1 min
Pollution degree	3
Over voltage category	III
Open contact	1000 Vrms dielectric strength 1 min
Standard	EN61810-5

Specifications	
Ambient temperature: operation / storage	-30 ... 70 °C / -40 ... 85 °C (no ice)
Typical response time @ V _n	1 ms
Typical release time @ V _n	1 ms
Cond. cross section screw terminal	2,5 mm ²
Cond. cross section spring cage	0,75 ... 2,5 mm ²
Protection degree	IP 20
Mounting position	any, TS-35 or Back Panel Mounting
Housing material	Polyamide PA 6

Product References	
Screw terminal	
DC 12V, 24V, 60V, 110-125V, 220-240V	CRINT-C115/DC...V

Cage clamp terminal	
DC 12V, 24V, 60V, 110-125V, 220-240V	CRINT-C125/DC...V

Railway EN 50155	CRINT-C125R/DC...V
... * List Coil Voltage to complete	
Product References	

Accessories	
Jumper link	blue: CRINT-BR20-BU (BAG 5 PCS)
	red: CRINT-BR20-RD (BAG 5 PCS)
	black: CRINT-BR20-BK (BAG 5 PCS)

Label plate	CRINT-LAB (BAG 4x16 PCS)
Spacer	CRINT-SEP (BAG 5 PCS)

Replacement relays	
DC 12V, 24V, 48V, 60V*	CRINT-R15/DC...V

... * List Coil Voltage to complete
 Product References
 *60V Relay used for all sockets with a nominal voltage higher or equal 60V

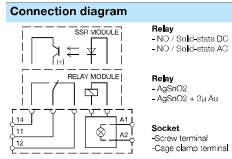


fig. 1 AC voltage endurance

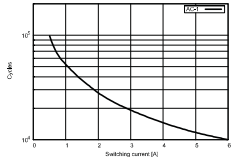
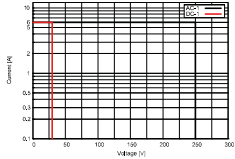
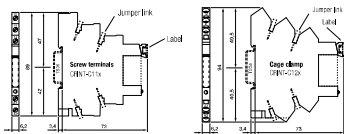


fig. 2 DC load limit curve



Dimensions (mm)



Technical approvals, conformities



1.5 Solid State Relays
CRINT 1x8 series

1 pole | normally open solid state AC

Maximum contact load	2 A
Recommended minimum contact load	20 mA / 5 V

Contact	
Type	1 NO (Solid state AC)
Material	Triac
Max. inrush current (10 ms)	80 A

Coil	
Operation voltage DC	0,8 ... 1,25 U _n
Nominal power DC	150 mW

Insulation	
Test voltage I / O	2,5 kV rms / 1 min
Pollution degree	3
Over voltage category	III
Open contact	1000 Vrms dielectric strength 1 min
Standard	EN61810-5

Specifications	
Ambient temperature: operation / storage	-30 ... 70 °C / -40 ... 85 °C (no ice)
Typical response time @ V _n	1 ms
Typical release time @ V _n	1 ms
Cond. cross section screw terminal	2,5 mm ²
Cond. cross section spring cage	0,75 ... 2,5 mm ²
Protection degree	IP 20
Mounting position	any, TS-35 or Back Panel Mounting
Housing material	Polyamide PA 6

Product References	
Screw terminal	
DC 12V, 24V, 60V, 110-125V, 220-240V	CRINT-C118/DC...V

Cage clamp terminal	
DC 12V, 24V, 60V, 110-125V, 220-240V	CRINT-C128/DC...V

Railway EN 50155	CRINT-C128R/DC...V
... * List Coil Voltage to complete	
Product References	

Accessories	
Jumper link	blue: CRINT-BR20-BU (BAG 5 PCS)
	red: CRINT-BR20-RD (BAG 5 PCS)
	black: CRINT-BR20-BK (BAG 5 PCS)

Label plate	CRINT-LAB (BAG 4x16 PCS)
Spacer	CRINT-SEP (BAG 5 PCS)

Replacement relays	
DC 12V, 24V, 60V*	CRINT-R18/DC...V

... * List Coil Voltage to complete
 Product References
 *60V Relay used for all sockets with a nominal voltage higher or equal 60V

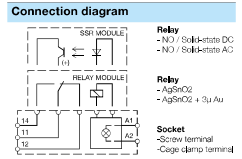


fig. 1 AC voltage endurance

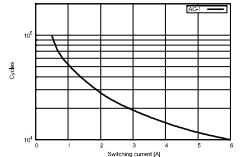
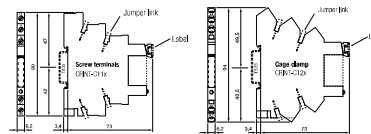


fig. 2 DC load limit curve



Dimensions (mm)



Technical approvals, conformities

