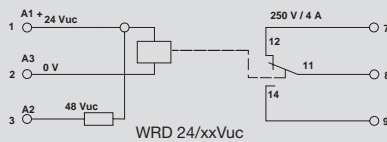
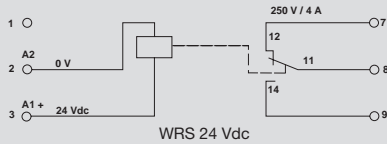
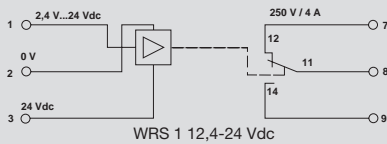


WAVESERIES

1 change-over contact



Output

| | |
|--|-------------------------------------|
| Max. switching voltage AC/Continuous current | 250V/5A |
| Min. switching power | 100mA/5Vdc |
| Response time / Release time | 7ms/6ms |
| Contact base material | Ag alloy |
| Mechanical endurance | 20x10 ⁶ switching cycles |
| Max. switching frequency at rated load | 0.1Hz |

Rated data

| | |
|---|---|
| Status indicator/Free wheel diode/Reverse volt. prot. | LED green/Yes/available |
| Ambient temp., fitted w. distance | -25 °C...+50 °C |
| Storage temperature | -40 °C...+60 °C |
| Climate | 40°C/93% rel. humidity without condensation |
| Approvals | UL / CSA |

Insulation coordinates (EN 50 178)

| | |
|---|-----------------|
| Standards | EN 50178 |
| Rated voltage | 300 V |
| Impulse withstand voltage | 6 kV (1.2/50 μ) |
| Creepage and clearance path input - output | =>5.5mm |
| Overvoltage category | III |
| Pollution severity | 2 |
| Secure separation acc. to VDE 0106 Part 101 | Yes |

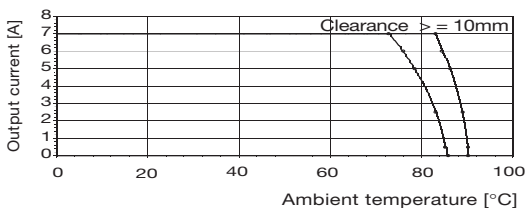
Dimensions

| | Screw connection | Tension clamp connection |
|--|---------------------------------|--------------------------|
| Clamping range (rating- / min. / max.) | mm ² 1.5 / 0.5 / 2.5 | |
| Length x width x height | mm 72.0 / 22.5 / 92.4 | |

Information

Applications

Mounted horizontally



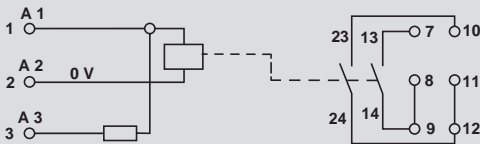
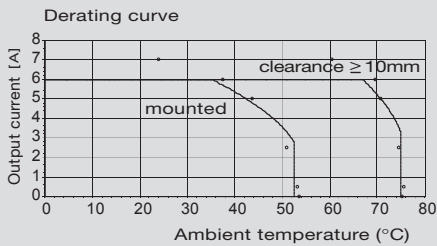
WAVESERIES

1 change-over contact

| Ordering data | 2.4-24VDC 1CO | 24VDC 1CO | 24/48VUC 1CO | 24/60VUC 1CO |
|---|--------------------------------|--------------------------------|----------------------------|--------------------------------|
| Input | | | | |
| Rated voltage | 2.4...24 Vdc +/- 10 % | 24 Vdc +/- 10 % | 24 Vuc // 48 Vuc, +/- 10 % | 24 Vuc // 60 Vuc, +/- 10 % |
| Rated current AC | | | approx. 14mA | approx. 11mA |
| Rated current DC | 4.6mA | 9mA | 14 mA | approx. 10mA |
| Power rating | 200 mW | 220mW | 0.35VA(W) // 0.5VA(W) | 0.22W / 0.34VA // 0.6W / 0.7VA |
| Oper.-/drop-out volt. AC-coil | | | 16 V/9.5 V // 29 V/15 V | 16 V/9.5 V // 31 V/20 V |
| Oper.-/drop-out volt. DC-coil | 1.9 V | 16 V/7.5 V | 16 V/9.5 V // 29 V/15 V | 15 V/8.5V // 34 V/15 V |
| Pull-in curr./release curr. AC-coil | | | 9 mA/4.5 mA // 8.3mA/4.1mA | 5.6mA/2.3mA // 5.6mA/2.1mA |
| Pull-in curr./release curr. DC-coil | 3.88mA | 5.7 mA/2.2 mA | 9 mA/4.5 mA // 8.3mA/4.1mA | 5.8 mA/3.9 mA // 5.6 mA/3.4 mA |
| Ordering data Complete module | | | | |
| Screw connection Type | WRS1 2.4-24VDC 1U | WRS1 24VDC 1U | WRS1 24/48VUC 1U | WRS1 24/60VUC 1U |
| Order No. | 8275320000 | 8275350000 | 8286280000 | 8418210000 |
| Tension clamp connection Type | | | | |
| Order No. | | | | |
| Ordering data Spare relay, pluggable | | | | |
| Type | | | | |
| Order No. | | | | |
| Information | | | | |
| Ordering data | 24/115VUC 1CO | 24VUC/230VAC 1CO | | |
| Input | | | | |
| Rated voltage | 24 Vuc // 115 Vuc, +/- 10 % | 24 Vuc // 230 Vac, +/- 10 % | | |
| Rated current AC | approx. 11mA | approx. 15mA | | |
| Rated current DC | approx. 10mA | 14mA (24Vdc) | | |
| Power rating | 0.22W / 0.34VA // 1.2W / 1.3VA | 0.34VA / 0.32W // 3.5VA | | |
| Oper.-/drop-out volt. AC-coil | 15 V/12 V // 60 V/34 V | 13 V/9 V // 115 V/66 V | | |
| Oper.-/drop-out volt. DC-coil | 16V/8.5V // 64V/26V | 13 V/9 V (24Vdc) | | |
| Pull-in curr./release curr. AC-coil | 5.8mA/3.9mA // 5.5mA/3mA | 7.5 mA/4.7 mA // 7.4 mA/4.3 mA | | |
| Pull-in curr./release curr. DC-coil | 5.6mA/2.3mA // 5.7mA/2.2mA | 7.5 mA/4.7 mA | | |
| Ordering data Complete module | | | | |
| Screw connection Type | WRS1 24/115VUC 1U | WRS1 24VUC/230VAC 1U | | |
| Order No. | 8418220000 | 8418230000 | | |
| Tension clamp connection Type | | | | |
| Order No. | | | | |
| Ordering data Spare relay, pluggable | | | | |
| Type | | | | |
| Order No. | | | | |
| Information | | | | |

WAVESERIES

2 NO contacts



| Output | |
|---|---|
| Max. switching voltage AC/Continuous current | 250V/5A |
| Min. switching power | 100mA/5Vdc |
| Response time / Release time | 5ms/6ms |
| Contact base material | AgSnO2 |
| Mechanical endurance | 50x10^6 switching cycles |
| Max. switching frequency at rated load | 0.1Hz |
| Rated data | |
| Status indicator/Free wheel diode/Reverse volt. prot. | LED green/Yes/available |
| Ambient temp., fitted w. distance | -25 °C...+50 °C |
| Storage temperature | -40 °C...+60 °C |
| Climate | 40°C/93% rel. humidity without condensation |
| Approvals | UL / CSA |
| Insulation coordinates (EN 50 178) | |
| Standards | EN 50178 |
| Rated voltage | 300 V |
| Impulse withstand voltage | 6 kV (1.2/50 μ) |
| Creepage and clearance path input - output | =>8mm |
| Overvoltage category | III |
| Pollution severity | 2 |
| Secure separation acc. to VDE 0106 Part 101 | Yes |

| Dimensions | Screw connection | Tension clamp connection |
|--|------------------------|--------------------------|
| Clamping range (rating- / min. / max.) | mm² 1.5 / 0.5 / 2.5 | |
| Length x width x height | mm 92.4 / 22.5 / 112.4 | |

Information

Ordering data

Input

| | |
|-------------------------------------|-------------------------------|
| Rated voltage | 12 Vdc // 24 Vdc, +/- 10 % |
| Rated current AC | |
| Rated current DC | approx. 20mA |
| Power rating | 0.24W // 0.5W |
| Oper.-/drop-out volt. AC-coil | |
| Oper.-/drop-out volt. DC-coil | 7.5 V / 3.5 V // 14.5 V/6.1 V |
| Pull-in curr./release curr. AC-coil | |
| Pull-in curr./release curr. DC-coil | 10 mA/4.2 mA // 10 mA/4 mA |

12/24VDC 2A

24/48VUC 2A

| | |
|-------------------------------------|---------------------------------|
| Rated voltage | 24 Vuc // 48 Vuc, +/- 10 % |
| Rated current AC | approx. 11mA |
| Rated current DC | approx. 8.5mA |
| Power rating | 0.17W / 0.21VA // 0.4W / 0.48VA |
| Oper.-/drop-out volt. AC-coil | 13.5 V / 9 V // 24 V/16 V |
| Oper.-/drop-out volt. DC-coil | 16 V / 7.8 V // 28 V/12 V |
| Pull-in curr./release curr. AC-coil | 4.4 mA/2.7 mA // 4.3 mA/2.6 mA |
| Pull-in curr./release curr. DC-coil | 4.3 mA/1.6 mA // 4.4 mA/1.6 mA |

115VUC/230VAC 2A

| | |
|-------------------------------------|------------------------------|
| Rated voltage | 115 Vuc // 230 Vac, +/- 10 % |
| Rated current AC | approx. 10mA |
| Rated current DC | 9mA (115Vdc) |
| Power rating | 1VA / 0.9W // 2.5VA |
| Oper.-/drop-out volt. AC-coil | 58 V / 22 V // 110 V/40 V |
| Oper.-/drop-out volt. DC-coil | 54 V / 20 V (115Vdc) |
| Pull-in curr./release curr. AC-coil | 4.8 mA/1.7 mA // 5 mA/2 mA |
| Pull-in curr./release curr. DC-coil | 4 mA/2 mA |

Ordering data

Complete module

| | |
|--------------------------|------|
| Screw connection | Type |
| Order No. | |
| Tension clamp connection | Type |
| Order No. | |

WRS2 12/24VDC 2A
8418240000

WRS2 24/48VUC 2A
8418250000

WRS2 115VUC/230VAC 2A
8418260000

Ordering data

Spare relay, pluggable

| | |
|-----------|--|
| Type | |
| Order No. | |

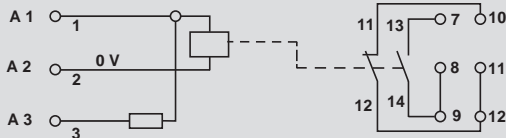
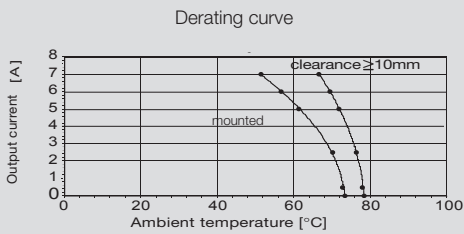
Information

WAVESERIES

1 NC contact / 1 NO contact



Relay coupler



| Output | |
|---|---|
| Max. switching voltage AC/Continuous current | 250V/5A |
| Min. switching power | 100mA/5V |
| Response time / Release time | 7ms/5ms |
| Contact base material | AgSnO2 |
| Mechanical endurance | 50x10^6 switching cycles |
| Max. switching frequency at rated load | 0.1Hz |
| Rated data | |
| Status indicator/Free wheel diode/Reverse volt. prot. | LED green/Yes/available |
| Ambient temp., fitted w. distance | -25 °C...+50 °C |
| Storage temperature | -40 °C...+60 °C |
| Climate | 40°C/93% rel. humidity without condensation |
| Approvals | UL / CSA |
| Insulation coordinates (EN 50 178) | |
| Standards | EN 50178 |
| Rated voltage | 300 V |
| Impulse withstand voltage | 6 kV (1.2/50 µ) |
| Creepage and clearance path input - output | =>8mm |
| Overvoltage category | III |
| Pollution severity | 2 |
| Secure separation acc. to VDE 0106 Part 101 | Yes |

| Dimensions | Screw connection | Tension clamp connection |
|--|------------------|--------------------------|
| Clamping range (rating- / min. / max.) | mm² | 1.5 / 0.5 / 2.5 |
| Length x width x height | mm | 92.4 / 22.5 / 112.4 |

Information

Ordering data

| Input | 12/24VDC 1A 1R | 24/48VUC 1A1R | 115VUC/230VAC 1A 1R | |
|-------------------------------------|-------------------------------|---------------------------------|------------------------------|--|
| Rated voltage | 12 Vdc // 24 Vdc, +/- 10 % | 24 Vuc // 48 Vuc, +/- 10 % | 115 Vuc // 230 Vac, +/- 10 % | |
| Rated current AC | | approx. 11mA | approx. 10mA | |
| Rated current DC | approx. 20mA | approx. 8.5mA | 9mA (115Vdc) | |
| Power rating | 0.24W // 0.5W | 0.17W / 0.21VA // 0.4W / 0.48VA | 1VA / 0.9W // 2.5VA | |
| Oper.-/drop-out volt. AC-coil | | 13.5 V / 9 V // 24 V/16 V | 58 V / 22 V // 110 V/40 V | |
| Oper.-/drop-out volt. DC-coil | 7.5 V / 3.5 V // 14.5 V/6.1 V | 13.5 V / 9 V // 24 V/16 V | 54 V / 20 V (115Vdc) | |
| Pull-in curr./release curr. AC-coil | | 4.4 mA/2.7 mA // 4.3 mA/1.6 mA | 4.8 mA/1.7 mA // 5 mA/2 mA | |
| Pull-in curr./release curr. DC-coil | 10 mA/4.2 mA // 10 mA/4 mA | 4.3 mA/1.6 mA // 4.4 mA/1.6 mA | 4 mA/1.6 mA | |

Ordering data

| Complete module | | | | |
|--------------------------|-----------|--------------------|--------------------|-------------------------|
| Screw connection | Type | WRS2 12/24VDC 1A1R | WRS2 24/48VUC 1A1R | WRS2 115VUC/230VAC 1A1R |
| | Order No. | 8418270000 | 8418280000 | 8418290000 |
| Tension clamp connection | Type | | | |
| | Order No. | | | |

Ordering data

| Spare relay, pluggable | | | | |
|------------------------|-----------|--|--|--|
| | Type | | | |
| | Order No. | | | |

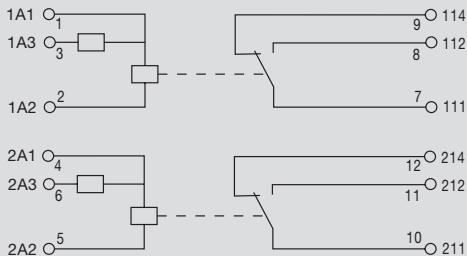
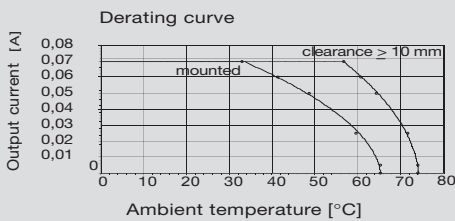
Information

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

K

WAVESERIES

2 change-over contacts



| Output | |
|---|---|
| Max. switching voltage AC/Continuous current | 250V/5A |
| Min. switching power | 100mA/5Vdc |
| Response time / Release time | 6ms/10ms |
| Contact base material | Ag alloy |
| Mechanical endurance | 20x10^6 switching cycles |
| Max. switching frequency at rated load | 0.1Hz |
| Rated data | |
| Status indicator/Free wheel diode/Reverse volt. prot. | LED green/Yes/available |
| Ambient temp., fitted w. distance | -25 °C...+50 °C |
| Storage temperature | -40 °C...+60 °C |
| Climate | 40°C/93% rel. humidity without condensation |
| Approvals | UL / CSA |
| Insulation coordinates (EN 50 178) | |
| Standards | EN 50178 |
| Rated voltage | 300 V |
| Impulse withstand voltage | 6 kV (1.2/50 μ) |
| Creepage and clearance path input - output | =>5.5mm |
| Overvoltage category | III |
| Pollution severity | 2 |
| Secure separation acc. to VDE 0106 Part 101 | Yes |

| Dimensions | Screw connection | Tension clamp connection |
|--|------------------|--------------------------|
| Clamping range (rating- / min. / max.) | mm² | 1.5 / 0.5 / 2.5 |
| Length x width x height | mm | 92.4 / 22.5 / 112.4 |

Information

Ordering data

Input

| | |
|-------------------------------------|----------------------------------|
| Rated voltage | 12 Vdc // 24 Vdc, +/- 10 % |
| Rated current AC | |
| Rated current DC | approx. 23mA |
| Power rating | 0.26W // 0.53W |
| Oper.-/drop-out volt. AC-coil | |
| Oper.-/drop-out volt. DC-coil | 8.5 V / 3 V // 15 V/4.8 V |
| Pull-in curr./release curr. AC-coil | |
| Pull-in curr./release curr. DC-coil | 15.2 mA/5.7 mA // 15.3 mA/5.6 mA |

12/24VDC 2CO

24/48VUC 2CO

| |
|----------------------------|
| 24 Vuc // 48 Vuc, +/- 10 % |
| approx. 15mA |
| 14 mA |
| 0.35VA(W) // 0.7VA(W) |
| 16V/9.5V // 29V/15V |
| 9 mA/4.5 mA // 8.3mA/4.1mA |
| 9 mA/4.5 mA // 8.3mA/4.1mA |

24VUC/230VAC 2CO

| |
|--------------------------------|
| 24 Vuc // 230 Vac, +/- 10 % |
| approx. 15mA |
| 14mA (24Vdc) |
| 0.35W // 3.45VA |
| 13 V/9 V // 115 V/66 V |
| 13 V/9 V (24Vdc) |
| 7.5 mA/4.7 mA // 7.4 mA/4.3 mA |
| 7.5 mA/4.7 mA |

Ordering data

Complete module

| | | |
|--------------------------|-----------|------------------|
| Screw connection | Type | WRS2 12/24VDC 2U |
| | Order No. | 841830000 |
| Tension clamp connection | Type | |
| | Order No. | |

WRS2 24/48VUC 2U
841831000

WRS2 24VUC/230VAC 2U
841832000

Ordering data

Spare relay, pluggable

| | |
|-----------|--|
| Type | |
| Order No. | |

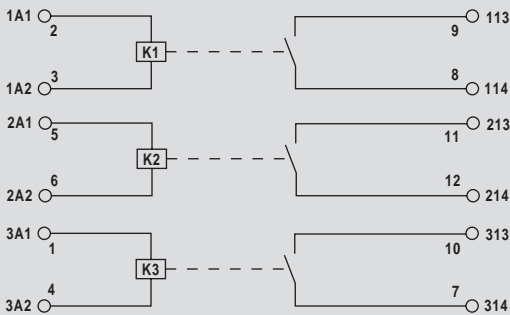
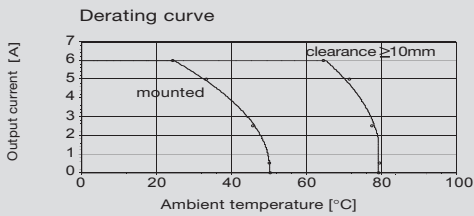
Information

WAVESERIES

3 NO contacts



Relay coupler



| Output | |
|---|---|
| Max. switching voltage AC/Continuous current | 250V/4A |
| Min. switching power | 12V/10mA |
| Response time / Release time | 5ms/21ms |
| Contact base material | AgSnO2 |
| Mechanical endurance | 20x10^6 switching cycles |
| Max. switching frequency at rated load | 0.1Hz |
| Rated data | |
| Status indicator/Free wheel diode/Reverse volt. prot. | LED green/No/hot available |
| Ambient temp., fitted w. distance | -25 °C...+50 °C |
| Storage temperature | -40 °C...+60 °C |
| Climate | 40°C/93% rel. humidity without condensation |
| Approvals | UL / CSA |
| Insulation coordinates (EN 50 178) | |
| Standards | EN 50178 |
| Rated voltage | 300 V |
| Impulse withstand voltage | 6 kV (1.2/50 μ) |
| Creepage and clearance path input - output | =>5.5mm |
| Overvoltage category | III |
| Pollution severity | 2 |
| Secure separation acc. to VDE 0106 Part 101 | Yes |

| Dimensions | Screw connection | Tension clamp connection |
|--|------------------|--------------------------|
| Clamping range (rating- / min. / max.) | mm² | 1.5 / 0.5 / 2.5 |
| Length x width x height | mm | 92.4 / 22.5 / 112.4 |

Information

Ordering data

| Input | 24VUC 3A | 230VAC 3A | | |
|-------------------------------------|-----------------|------------------|--|--|
| Rated voltage | 24 Vuc +/- 10 % | 230 Vac +/- 10 % | | |
| Rated current AC | 10.4mA | 10.3mA | | |
| Rated current DC | 10.5mA | | | |
| Power rating | 0.3VA // 0.25W | 2.4VA | | |
| Oper.-/drop-out volt. AC-coil | 12.8 V / 5 V | 207V/207V/207V | | |
| Oper.-/drop-out volt. DC-coil | 12.8 V / 5 V | | | |
| Pull-in curr./release curr. AC-coil | 6.6 mA / 2.1 mA | 9mA | | |
| Pull-in curr./release curr. DC-coil | 6.5 mA / 1.4 mA | | | |

Ordering data Complete module

| Screw connection | Type | WRS2 24VUC 3A | WRS2 230VAC 3A | | |
|--------------------------|------|-------------------|-------------------|--|--|
| Order No. | | 8418330000 | 8418340000 | | |
| Tension clamp connection | Type | | | | |
| Order No. | | | | | |

Ordering data Spare relay, pluggable

| Type | | | | |
|-----------|--|--|--|--|
| Order No. | | | | |

Information

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

K