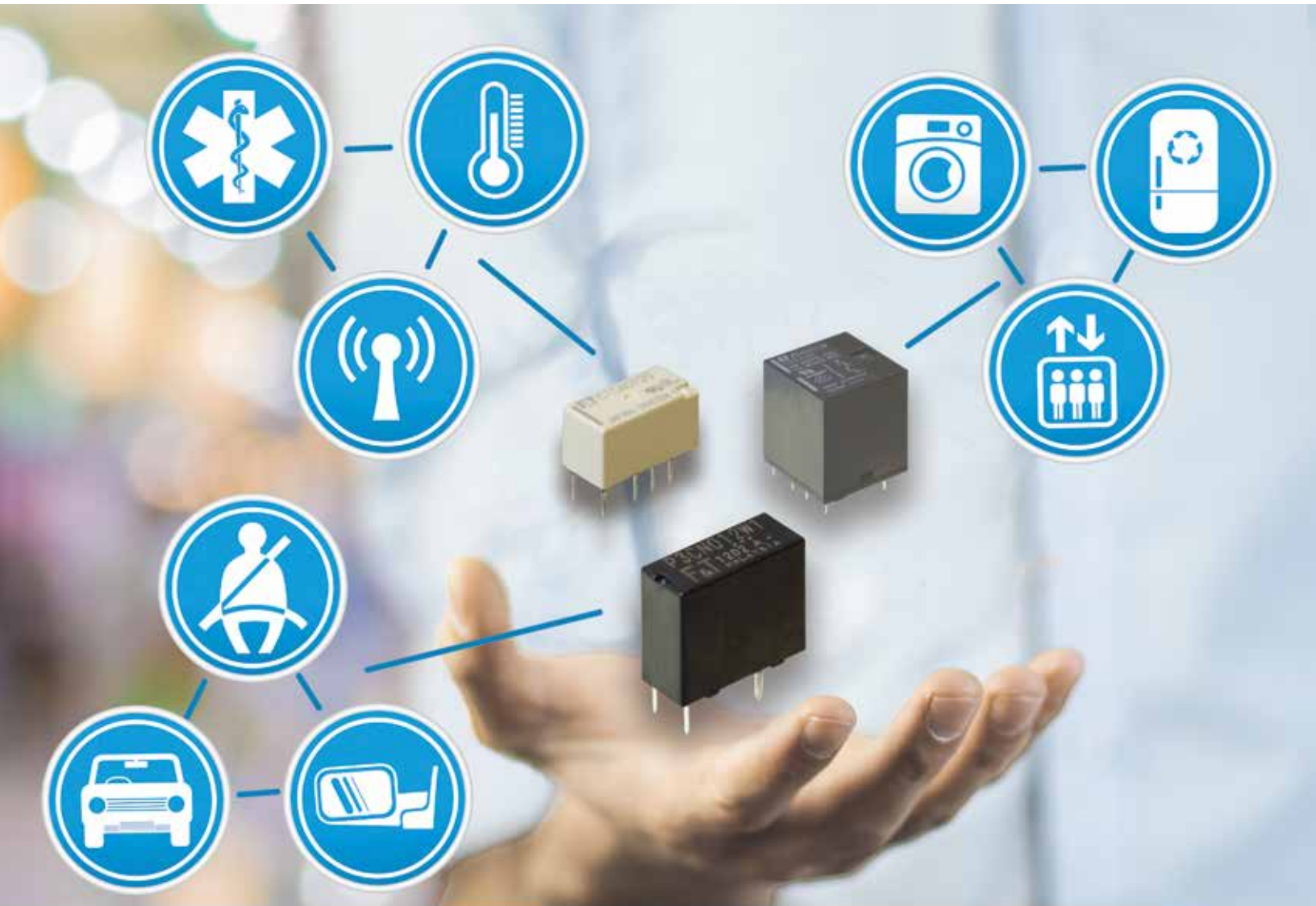


Fujitsu Relays

Automotive, Power, Signal, Solid State






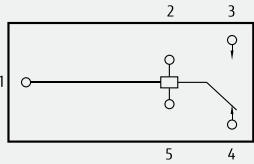
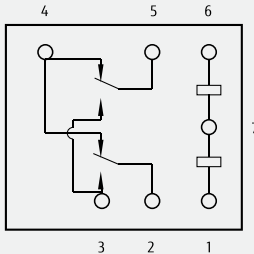
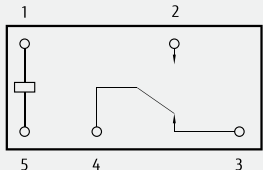
shaping tomorrow with you

Content




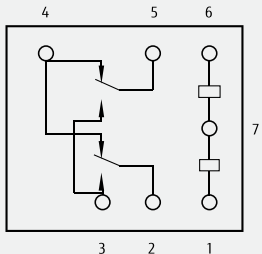
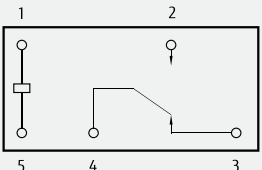
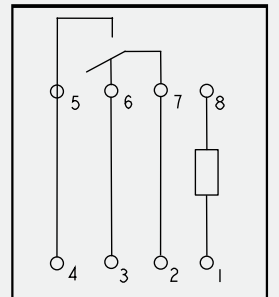
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|------------------------|---------|
| Product Line-Up | |
| Automotive Relays | Page 4 |
| Power Relays | Page 11 |
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Please refer to your supplier for more information or contact your local Fujitsu Office.
For contact information, see the last page of this document, or <http://us.fujitsu.com/relays/>



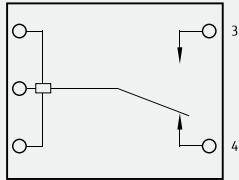
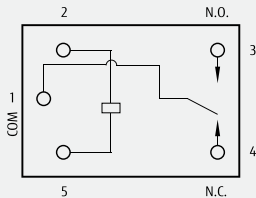
Automotive relays (25A)

| Series Name | FTR-G1 | FTR-P2 | FTR-P3 |
|-------------------------------|---|---|--|
| |  |  |  |
| Description | 25A Compact Relay | 25A Low Noise H-bridge Relay | 25A Compact Relay |
| Features | <ul style="list-style-type: none"> 0.25mm contact gap Average acoustic noise level 60db @ 5cm | <ul style="list-style-type: none"> Pin compatible with FTR-P4 Average acoustic noise level 50db @ 5cm | <ul style="list-style-type: none"> 0.25 and 0.6mm contact gap types THR type available High temp. types available (+125 °C) Pin compatible with FTR-P5 |
| Dimensions (W x L x H mm) | 6.6 x 13.7 x 13.5 | 16.5 x 21.0 x 18.0 | 7.2x17.4x13.5, (THR: 7.2x17.4x14.1) |
| Weight (approx.) | 3.5 g | 13.0 g | 5.0 g |
| Contact form | 1 c | 1c x 2 (H-bridge) | 1 c, (THR: 1a, 1c) |
| Contact rating | 25A, 14VDC locked motor load | 25A, 14VDC, locked motor load | 25A, 14VDC, locked motor load |
| Expected life on load example | <p>14VDC, 25A window motor load 100x10³ ops.</p> <p>14VDC, 20A, door lock motor load 100x10³ ops.</p> | 14VDC, 25A, locked motor load 100x10 ³ ops. | 14VDC, 25A, locked motor load 100x10 ³ ops. |
| Operating temperature | -40 to +85 °C | -40 to +85 °C | -40 to +85 °C / +125 °C |
| Coil voltage (DC) | 9 to 12 V | 9 to 12 V | 9 to 12 V |
| Nominal coil power | 0.64 W | 0.45 W | 0.6 W / 0.8 W |
| Dielectric strength (1 min.) | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC |
| Mounting | Through hole | Through hole | Through hole / THR |
| Terminal layout (bottom view) |  |  |  1a does not carry #3 contact |




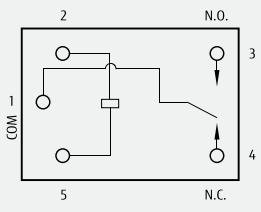
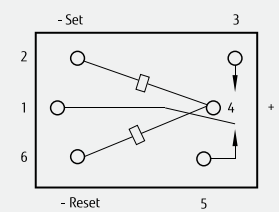
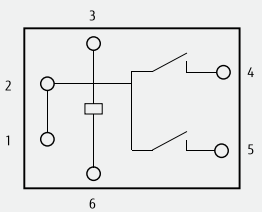
Automotive relays (25A)

| Series Name | FTR-P4 | FTR-P5 | FTR-P6 |
|-------------------------------|--|---|--|
| |  |  |  |
| Description | 25A H-bridge Relay | 25A Low Noise Compact Relay | 25A Surface Mount Relay |
| Features | <ul style="list-style-type: none"> ■ 0.25 contact gap types ■ Pin compatible with FTR-P2 | <ul style="list-style-type: none"> ■ Pin compatible with FTR-P3 ■ Average acoustic noise level 50db @ 5cm | <ul style="list-style-type: none"> ■ 0.25mm contact gap ■ Average acoustic noise level 60db @ 5cm ■ SMD |
| Dimensions (W x L x H mm) | 14.2 x 17.4 x 13.5 | 9.7 x 20.4 x 16.7 | 9.0 x 12.0 x 10.3 |
| Weight (approx.) | 10.0 g | 7.0 g | 3.0 g |
| Contact form | 1 cx2 (H-bridge) | 1 c | 1 c |
| Contact rating | 25A, 14VDC, locked motor load | 25A, 14VDC, locked motor load | 25A, 14VDC |
| Expected life on load example | 14VDC, 25A, locked motor load 100x10 ³ ops. | 14VDC, 25A, locked motor load 100x10 ³ ops. | 14VDC, 25A, locked motor load 100x10 ³ ops. |
| Operating temperature | -40 to +85 °C | -40 to +85 °C | -40 to +85 °C |
| Coil voltage (DC) | 9 to 12 V | 9 to 12 V | 10 to 12 V |
| Nominal coil power | 0.6 W | 0.45 W | 0.8 W |
| Dielectric strength (1 min.) | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC |
| Mounting | Through hole | Through hole | Surface Mount |
| Terminal layout (bottom view) |  |  |  |




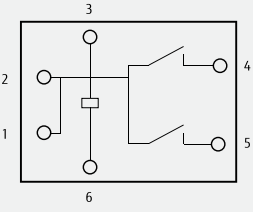
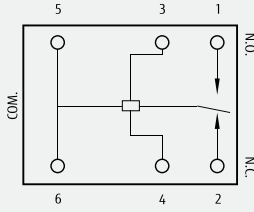
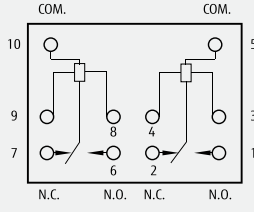
Automotive relays (25A)

| Series Name | FTR-P7 | FBR51 / 52 |
|-------------------------------|---|---|
| |  |  |
| Description | 25A Low Noise Compact Automotive Relay | 25A Compact Automotive Relay |
| Features | <ul style="list-style-type: none"> ■ 0.3 mm contact gap ■ Average acoustic noise level 45db @ 5cm | <ul style="list-style-type: none"> ■ 0.3 or 0.6 mm (FBR52) ■ 60A inrush |
| Dimensions (W x L x H mm) | 17.0 x 20.8 x 14.0 | 12.1 x 15.5 x 13.7 |
| Weight (approx.) | 7.0 g | 6.0 g |
| Contact form | 1 c | 1 c |
| Contact rating | 25A, 14VDC locked motor load | 25A, 14VDC, locked motor load |
| Expected life on load example | 14VDC, 25A, locked motor load 100x10 ³ ops. | 14VDC, 25A, locked motor load 200x10 ³ ops. |
| Operating temperature | -40 to +85 °C | -40 to +85 °C |
| Coil voltage (DC) | 12 V | 6 to 12 V |
| Nominal coil power | 0.55 W | 0.6 W / 0.8 W |
| Dielectric strength (1 min.) | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC |
| Mounting | Through hole | Through hole |
| Terminal layout (bottom view) |  |  |



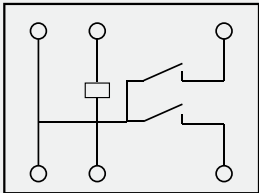
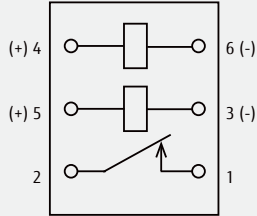
Automotive relays (25A ~ 40A)

| Series Name | FBR51 / 52 (-WL / -WF) | FBR51L | FBR53 |
|-------------------------------|--|---|---|
| |  |  |  |
| Description | 30A Compact Automotive Relay for Special Lamp Loads | 25A Dualcoil Latching Compact Automotive Relay | 30A Compact Automotive Relay |
| Features | <ul style="list-style-type: none"> 0.3 mm contact gap | <ul style="list-style-type: none"> Dual coil latching THR type available | <ul style="list-style-type: none"> 0.25mm contact gap THR type (-RW) available 60A inrush 30A carry current |
| Dimensions (W x L x H mm) | 12.1 x 15.5 x 13.7 | 12.1 x 15.5 x 13.7 | 12.3 x 15.7 x 14.0 |
| Weight (approx.) | 6.0 g | 6.0 g | 6.0 g |
| Contact form | 1 a | 1 c | 1 form u |
| Contact rating | 80 / 120W, 14VDC lamp load | 25A, 14VDC, locked motor load | 25A, 14VDC |
| Expected life on load example | <p>14VDC, 120W, lamp load 100x10³ ops. (-WL)</p> <p>Special type for flasher lamp applications (-WF)</p> <p>14 VDC, 80W, lamp load 2500x10³ ops. (-WF) Inrush 11A, 14VDC 0.35 sec. ON/ 0.35 sec. OFF</p> | <p>14VDC, 25A, locked motor load 200x10³ ops. (-W1 type) 50x10³ ops. (E type)</p> | <p>14VDC, 25A, resistive load 100x10³ ops.</p> |
| Operating temperature | -40 to +85 °C | -40 to +125 °C | -40 to +125 °C |
| Coil voltage (DC) | 6 to 12 V | 10 V | 9 to 12 V |
| Nominal coil power | 0.6 W | 1.1 W | 0.6 W |
| Dielectric strength (1 min.) | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC |
| Mounting | Through hole / THR | Through hole / THR | Through hole / THR |
| Terminal layout (bottom view) |  |  |  |

Automotive relays (25A ~ 40A)

| Series Name | FBR53-HW | FBR57 | FBR572 / 582 |
|--------------------------------------|---|--|--|
| |  |  |  |
| Description | 40A Compact Relay | 12A High Power Relay | 12/14A High Power Twin Relay |
| Features | <ul style="list-style-type: none"> ■ THR type (-RW) available ■ High power type ■ 80A inrush | <ul style="list-style-type: none"> ■ For 24V battery applications ■ 70A inrush | <ul style="list-style-type: none"> ■ 0.8/1.4mm contact gap ■ For 24V battery applications ■ 60A inrush |
| Dimensions (W x L x H mm) | 12.3 x 15.7 x 14.0 | 14.4 x 20.0 x 16.2 | 20.0 x 26.0 x 16.2 (FBR572) 20.0 x 26.0 x 17.0 (FBR582) |
| Weight (approx.) | 6.0 g | 9.4 g | 18.0 g |
| Contact form | 1 form U | 1 c | 1 c x2 |
| Contact rating | 40A, 14VDC, resistive load | 12A, 28VDC, locked motor load, inrush 15A/break 2.5A 28VDC, free motor load | 12A, 28VDC, locked motor load, inrush 15A/break 2.5A, 28VDC, free motor load |
| Expected life on load example | 14VDC, 40A, resistive load 100x10 ³ ops. | 28VDC, 12A, locked motor load 100x10 ³ ops. 28VDC, inrush 12A/break 2.5A, free motor load 500x10 ³ ops. | 28VDC, 12A, locked motor load 100x10 ³ ops. (FBR572, 582) 28VDC, 2.5A, free motor load 500x10 ³ ops. (FBR572) |
| Operating temperature | -40 to +125 °C | -40 to +85°C | -40 to +85 °C |
| Coil voltage (DC) | 9 to 12 V | 24 V | 24 V |
| Nominal coil power | 0.9 W | 1.5 W | 1.5W / 3.4W |
| Dielectric strength (1 min.) | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC |
| Mounting | Through hole / THR | Through hole | Through hole |
| Terminal layout (bottom view) |  |  |  |

Automotive relays (45A)

| Series Name | FBR59-HW | FTR-V1 |
|-------------------------------|--|--|
| |  |  |
| Description | 45A/60A High Power Relay | 210A High Capacity Latching Relay |
| Remarks | <ul style="list-style-type: none"> ■ THR type (-RW) ■ High power type ■ 220A max. inrush ■ 60A carry current | <ul style="list-style-type: none"> ■ 210A (@85°C)/120A(@125°C) continuous current ■ Initial contact resistance max. 0.6mΩ |
| Dimensions (W x L x H mm) | 15.0 x 20.0 x 16.8 | 52.8 x 84.5 x 24.7 |
| Weight (approx.) | 13.0 g | 120 g |
| Contact form | 1 form u | 1b |
| Contact rating | 45A, 14VDC motor lock, 60A 14VDC resistive | Inrush 230A, 14VDC Break 1A, 14VDC |
| Expected life on load example | 14 VDC, 45A, motor load 100x10 ³ ops. 14VDC, 60A resistive load 100x10 ³ ops. | Inrush 230A, 14VDC Break 1A, 14VDC 120x10 ³ ops. |
| Operating temperature | -40 to +125 °C | -40 to +125 °C |
| Coil voltage (DC) | 9 to 12 V | 12V |
| Nominal coil power | 0.45 W | 2.88W |
| Dielectric strength (1 min.) | Open contacts: 500VAC Coil and contacts: 500VAC | Open contacts: 500VAC Coil and contacts: 500VAC |
| Mounting | Through hole / THR | |
| Terminal layout (bottom view) |  |  |

Automotive relays (450VDC)

| | |
|--------------------|---------------|
| Series Name | FTR-E1 |
|--------------------|---------------|




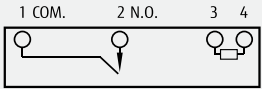
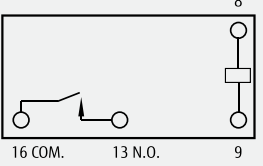
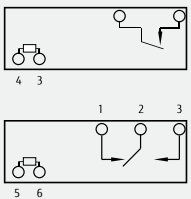


| | |
|--------------------|---|
| Description | 20A/30A, 450VDC High Voltage DC Relay |
| Remarks | <ul style="list-style-type: none"> ■ No specific polarity for connection of load terminals ■ UL/cUL recognized type available |




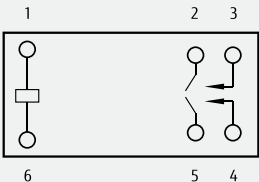
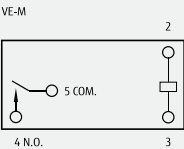
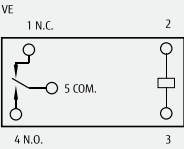
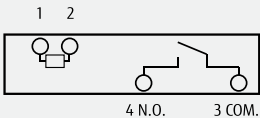
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|--------------------------------------|--|
| Dimensions (W x L x H mm) | 28.3 x 43.6 x 36.8 |
| Weight (approx.) | 75.5 g |
| Contact form | 1 a |
| Contact rating | 20A, 450VDC / 30A, 450VDC |
| Expected life on load example | <p>10A, 450VDC, resistive 75 x 10³ ops. with varistor</p> <p>20A, 450VDC, resistive 10 x 10³ ops. with varistor</p> <p>30A, 450VDC, resistive with varistor, 5x10³ ops. (-HA)</p> <p>20A, 450VDC inrush only (without break), 100x10³ ops.</p> |
| Operating temperature | -40 to +85 °C |
| Coil voltage (DC) | 12, 24 VDC |
| Nominal coil power | 0.9 W |
| Dielectric strength (1 min.) | Open contacts: 2,500VAC Coil and contacts: 5,000VAC |
| Mounting | Through hole |

| | |
|--------------------------------------|--|
| Terminal layout (bottom view) | |
|--------------------------------------|--|



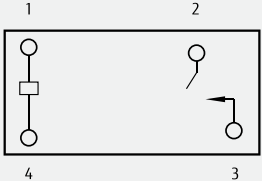
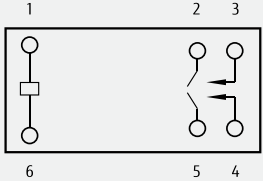
Power relays (3A ~ 5A)

| Series Name | NY | JY | FTR-F3 |
|---------------------------------|--|---|---|
| |  |  |  |
| Description | 5A Slim Type Relay | 3/5A Compact Relay | 3/5/10A Slim Type Relay |
| Remarks | <ul style="list-style-type: none"> Socket available (-NYP) Compliant to IEC61010-2-201 and 61131 reinforced insulation Compatible with SN solid state relay | <ul style="list-style-type: none"> Socket available (-P) Compatible with SJ solid state relay AgCd types not for new designs | <ul style="list-style-type: none"> Right angle versions available (1 a) TV-3, TV-5 rating types available 1 form c type available Sealed/Flux proof IEC60335-1 types (-GW) 10A types available AgNi contacts |
| Dimensions (W x L x H mm) | 5.0 x 20.1 x 17.5 | 9.8 x 20.0 x 12.8 | 7.0 x 20.3 x 15.0 (1c: 7.0 x 23.4 x 15.0) |
| Weight (approx.) | 3.5 g | 5.0 g | 4.0 g |
| Contact form | 1 a | 1 a | 1 a, 1 c (5A type) |
| Contact rating (Resistive load) | 5A, 250VAC/30VDC | 3A, 250VAC/30VDC (3A type) 5A, 250VAC/30VDC (5A type) | 3A, 125VAC/30VDC (3A type) 5A, 250VAC/30VDC (5A type) 10A, 250VAC/30VDC (10A type) |
| Minimum switching load (ref.) | 5VDC, 1mA | 100m VDC 0.1WmA (W) 5VDC 10mA (G, HG) 5VDC 100mA (R, HR) | 5VDC 10mA (3/5A type) 5VDC 100mA (10A type) |
| Mechanical life | 20 x 10 ⁶ ops. | 20 x 10 ⁶ ops. | 5 x 10 ⁶ ops. / 2x10 ⁶ ops (1c) |
| Electrical life (Rated load) | 100 x 10 ³ ops. (at 3A, 250VAC, 30VDC) 50x10 ³ ops. (at 5A, 250VAC,30VDC) | 100 x 10 ³ ops. | 10x10 ³ ops (10A plastic sealed type) 50 x 10 ³ ops. (10A flux free type, 1c type, TV-rated type) 100 x 10 ³ ops. (5A type) 200 x 10 ³ ops. (3A type) |
| Operating temperature | -40 to +90 °C | -40 to +90 °C | -40 to +70 °C , -40 to 85°C (TV-3/TV-5), -40 to +40°C (10A type) |
| Coil voltage (DC) | 4.5 to 24 V | 4.5 to 48 V | 5 to 24 V |
| Nominal coil power | 0.12 W | 0.2 to 0.36 W | 0.2W / 0.28 W / 0.36 W |
| Surge strength | 5,080 V | 4,000 V | 10,000 V |
| Dielectric strength (1 min.) | Open contacts: 750VAC Coil and contacts: 3,000VAC | Open contacts: 750VAC Coil and contacts: 2,000VAC | Open contacts: 750VAC Coil and contacts: 4,000VAC |
| Safety standards | UL, CSA | UL, CSA | UL, CSA, VDE, CQC |
| Mounting / Enclosure | Through hole / RTIII | Through hole / RTIII | Through hole / RTIII / RTIII |
| Terminal layout (bottom view) |  |  |  |




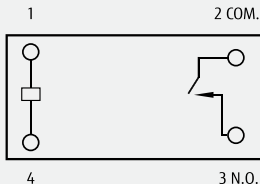
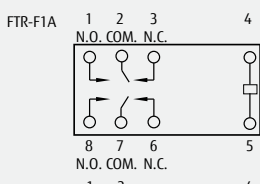
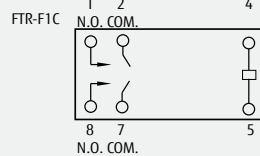
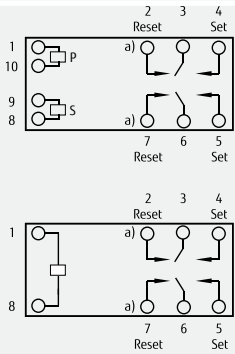
Power relays (3A ~ 5A)

| Series Name | FTR-F4 | VE | FTR-MY |
|---------------------------------|--|--|---|
| |  |  |  |
| Description | 5A TV-3 Compact Relay | 5A Medium Load Relay | 5A Slim Type Relay |
| Remarks | <ul style="list-style-type: none"> ■ Flux proof types ■ TV-3 rated | <ul style="list-style-type: none"> ■ High sensitive types ■ Cd types (not for new designs) ■ Creepage >3.2mm | <ul style="list-style-type: none"> ■ Compliant to IEC61010-2-201, 61131-2 reinforced insulation ■ Conforms to ANSI/ISA12.12.01 ■ Creepage, clearance >5.6mm |
| Dimensions (W x L x H mm) | 12.0 x 24.0 x 25.0 | 10.5 x 20.5 x 20.5 | 5.0 x 20.0 x 12.0 |
| Weight (approx.) | 12.0 g | 8.0 g | 2.5 g |
| Contact form | 2 a | 1 a, 1 c | 1 a |
| Contact rating (Resistive load) | 5A, 250VAC/30VDC | 5A, 250VAC (HME, HM) 3A (NC)/5A (NO), 250VAC (H, HE) | 5A, 250VAC/30VDC |
| Minimum switching load (ref.) | 5VDC, 100mA | 5VDC, 10mA (gold plated contacts) 5VDC, 100mA | 5VDC 1mA |
| Mechanical life | 2 x 10 ⁶ ops. | 10 x 10 ⁶ ops. | 20 x 10 ⁶ ops. |
| Electrical life (Rated load) | 100 x 10 ³ ops. 25 x 10 ³ (lamp load TV-3) | 100 x 10 ³ ops. (VE) 50 x 10 ³ ops. (VE-S) | 100 x 10 ³ ops. (at 3A 250VAC/30VDC), 5 x 10 ³ ops (at 5A, 250VAC/30VDC) |
| Operating temperature | -40 to +70 °C | -40 to +85 °C | -40 to +90 °C |
| Coil voltage (DC) | 5 to 48 V | 5 to 48 V | 4.5 to 24 V |
| Nominal coil power | 0.53 W | 0.25 to 0.36 W | 0.11 W |
| Surge strength | 10,000 V | 4,000 V / 6,000 V | 5,080 V |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 4,000VAC | Open contacts: 750VAC (1 c), 1,000 VAC (1 a) Coil and contacts: 2,000VAC | Open contacts: 750VAC Coil and contacts: 3,000VAC |
| Safety standards | UL, CSA, VDE, CQC | UL, CSA, VDE, CQC | UL, CSA, VDE, CQC |
| Mounting / Enclosure | Through hole / RTII | Through hole / RTIII | Through hole / RTIII |
| Terminal layout (bottom view) |  |   |  |


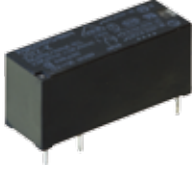

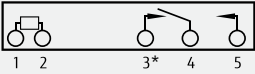
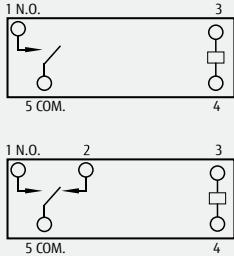
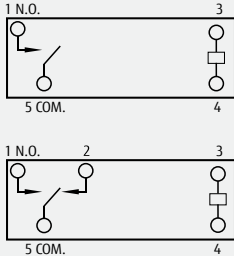
Power relays (3A ~ 5A)

| Series Name | FTR-F2 | FTR-F4G |
|---------------------------------|---|--|
| |  |  |
| Description | 5A High profile Relay | 5A High Profile Wide Contact Gap Relay |
| Remarks | <ul style="list-style-type: none"> ■ TV-5 rated ■ TV-8 Version (F2P) ■ High sensitive coil types | <ul style="list-style-type: none"> ■ 1.5mm contact gap ■ TV-3 rated ■ Flux proof and sealed types |
| Dimensions (W x L x H mm) | 11.0 x 24.0 x 25.0 | 12.7 x 28.7 x 25.2 |
| Weight (approx.) | 13.0 g | 18.0 g |
| Contact form | 1 a | 2 a |
| Contact rating (Resistive load) | 5A, 250VAC/30VDC | 5A, 250VAC |
| Minimum switching load (ref.) | 5VDC 100mA | 5VDC, 100mA |
| Mechanical life | 2 x 10 ⁶ ops. | 500 x 10 ³ ops. |
| Electrical life (Rated load) | 100 x 10 ³ ops. | 100 x 10 ³ ops. flux proof version 20 x 10 ³ Sealed version |
| Operating temperature | -40 to +70 °C | -40 to +70 °C |
| Coil voltage (DC) | 5 to 48 V, (F2P: 5 to 24V) | 3 to 60 V |
| Nominal coil power | 0.25 to 0.53 W | 0.8 W |
| Surge strength | 10,000 V, (F2P: 12,000V) | 10,000 V |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 4,000VAC | Open contacts: 1,500VAC Coil and contacts: 5,000VAC |
| Safety standards | UL, CSA, VDE, CQC, (F2P: UL, CSA) | cULus, TUV |
| Mounting / Enclosure | Through hole / RTII | Through hole / RTII / RTIII |
| Terminal layout (bottom view) |  |  |




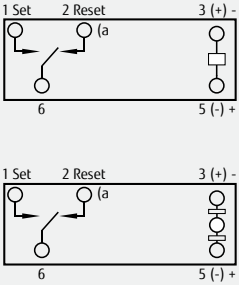
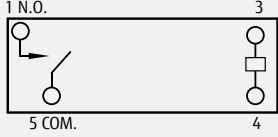
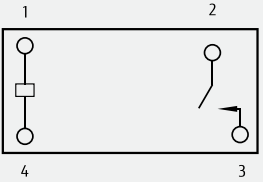
Power relays (5A ~ 10A)

| Series Name | JV | FTR-F1 | FTR-F1L |
|--|--|---|--|
| |  |  |  |
| Description | 5A/10A Medium Load Relay | 5A / 8A Low Profile Relay | 8A Low Profile Latching Relay |
| Remarks | <ul style="list-style-type: none"> High sensitive type available 10A type JV-KS (TV 4) IEC60335-1 types (-GW) available | <ul style="list-style-type: none"> Pin compatible with VB series TV-3 rating available (2 a) Clear cover available (-RG) Sensitive coil types 8A types FTR-F1R | <ul style="list-style-type: none"> Latching relay 1 and 2 coil types |
| Dimensions (W x L x H mm) | 10.0 x 17.5 x 12.5 | 12.8 x 29.0 x 16.5 | 12.8 x 29.0 x 16.5 |
| Weight (approx.) | 4.3 g | 12.0 g | 13.0 g |
| Contact form | 1 a | 2 a, 2 c | 2 a, 2 c |
| Contact rating (Resistive load) | 5A, 250VAC/30VDC (5A type) 10A, 250VAC/24VDC (10A type) | 5A, 250VAC/24VDC (5A type) 8A, 250VAC/24VDC (8A type) | 8A, 250VAC/24VDC |
| Minimum switching load (ref.) | 5VDC, 10mA (5A type) 5VDC, 100mA (10A type) | 5VDC 10mA | 5VDC 10mA |
| Mechanical life | 5 x 10 ⁶ ops. | 20 x 10 ⁶ ops. | 3 x 10 ⁶ ops. |
| Electrical life (Rated load) | 100 x 10 ³ ops. (5A type), 50 x 10 ³ ops (10A type) | 100 x 10 ³ ops. 25 x 10 ³ (TV3) 50 x 10 ³ (F1R) | 50 x 10 ³ ops. |
| Operating temperature | -40 to 70 °C (5A type) / 85 °C (10A type) | -40 to +75 °C (Transparent type: -40 to 70 °C) | -40 to +85 °C |
| Coil voltage (DC) | 3 to 24 V (48V for 5A standard type) | 1.5 to 110 V (High sensitive: 1.5 to 48V) | 5 to 24 V |
| Nominal coil power | 0.2 to 0.3 W | 0.4 to 0.55 W | 0.4 to 0.6 W |
| Surge strength | 10.000 V | 10.000 V | 10.000 V |
| Dielectric strength (1 min.) | Open contacts: 750VA Coil and contacts: 5,000VAC | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | Open contacts: 1,000VAC Coil and contacts: 5,000VAC |
| Safety standards | UL, CSA, VDE, CQC | UL, CSA, VDE, CQC | UL, CSA, VDE, CQC |
| Mounting / Enclosure | Through hole / RTIII | Through hole / RTIII | Through hole / RTIII |
| Terminal layout (bottom view) |  | <p>FTR-F1A</p>  <p>FTR-F1C</p>  |  <p>a) omitted on 2 a types</p> |

Power relays (5A ~ 10A)

| Series Name | FTR-LY | JS | JS-RW |
|---------------------------------|---|---|---|
| |  |  |  New Design |
| Description | 6A Slim Type Relay | 8A Low Profile Relay | 8A Low Profile Relay Reflow Capable |
| Remarks | <ul style="list-style-type: none"> ■ Ultra slim ■ Socket type available ■ Right angle type available ■ Creepage/clearance >8mm | <ul style="list-style-type: none"> ■ 3.2 and 5 mm pitch types ■ IEC60335-1 types (-GW) ■ 3μAu versions ■ Creepage/clearance >8mm | <ul style="list-style-type: none"> ■ Reflow solderable relay ■ 3.2 and 5 mm pitch types ■ Flux proof ■ Contact Fujitsu for details ■ 1μAu versions ■ Creepage/clearance >8mm |
| Dimensions (W x L x H mm) | 5.0 x 28.0 x 15.0 | 10.0 x 29.0 x 12.5 | 10.0 x 29.0 x 12.5 |
| Weight (approx.) | 5.0 g | 8.0 g | 8.0 g |
| Contact form | 1 a, 1 c | 1 a, 1 c | 1 a, 1 c |
| Contact rating (Resistive load) | 6A, 250VAC/24VDC | 8A, 250VAC/24VDC | 8A, 250VAC/24VDC |
| Minimum switching load (ref.) | 5VDC, 10mA (-V type) 5VDC 100mA (-Y, -E type) | 5VDC 100mA, 5VDC 10mA (3μAu) | 5VDC 100mA, 5VDC 10mA (1μAu) |
| Mechanical life | 10 x 10 ⁶ ops. | 20 x 10 ⁶ ops. | 20 x 10 ⁶ ops. |
| Electrical life (Rated load) | 30 x 10 ³ ops. NC 50 x 10 ³ ops. NO | 20 x 10 ³ ops. to 50 x 10 ³ ops. (Depends on contact material) | 20 x 10 ³ ops. to 50 x 10 ³ ops. (Depends on contact material) |
| Operating temperature | -40 to +85 °C | -40 to +85 °C | -40 to +85 °C |
| Coil voltage (DC) | 5 to 60 V | 5 to 60 V | 5 to 60 V |
| Nominal coil power | 0.17 W / 0.217 mW | 0.22 to 0.29 W | 0.22 to 0.29 W |
| Surge strength | 6,000 V | 10,000 V | 10,000 V |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 4,000VAC | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | Open contacts: 1,000VAC Coil and contacts: 5,000VAC |
| Safety standards | UL, CSA, VDE | UL, CSA, VDE, CQC | Pending |
| Mounting / Enclosure | Through hole / RTIII | Through hole / RTIII | Through hole / Reflow (THR) / RTII |
| Terminal layout (bottom view) |  <p>*omitted on 1 form A type</p> |  |  |

Power relays (5A ~ 10A)

| Series Name | JSL | JS-KS | FTR-H2 |
|---------------------------------|--|--|--|
| |  |  |  |
| Description | 8A Low Profile Latching Relay | 8A Low Profile High Inrush Relay | 10A High Profile Relay |
| Remarks | <ul style="list-style-type: none"> ■ Latching type ■ 1 and 2 coil types available ■ 3.2mm pitch ■ Creepage/clearance >8mm | <ul style="list-style-type: none"> ■ 1000W lamp load ■ 65A inrush (TV4) ■ 5mm pitch ■ Creepage/clearance >8mm | <ul style="list-style-type: none"> ■ TV-5 rated ■ High sensitive types ■ Creepage/clearance >6mm |
| Dimensions (W x L x H mm) | 10.0 x 29.0 x 12.5 | 10.0 x 29.0 x 12.5 | 11.0 x 24.0 x 25.0 |
| Weight (approx.) | 8.0 g | 8.0 g | 13.0 g |
| Contact form | 1 a, 1 c | 1 a | 1 a |
| Contact rating (Resistive load) | 8A, 250VAC/24VDC | 8A, 250VAC/24VDC | 10A, 250VAC/30VDC |
| Minimum switching load (ref.) | 5VDC 100mA | 5VDC 100mA | 5VDC 100mA |
| Mechanical life | 5 x 10 ⁶ ops. | 20 x 10 ⁶ ops. | 2 x 10 ⁶ ops. |
| Electrical life (Rated load) | 50 x 10 ³ ops. | 100k @ rated load 25k @ lamp load (TV4) | 100 x 10 ³ ops. @ rated load 25 x 10 ³ ops. (@ lamp load TV-5) |
| Operating temperature | -40 to +85 °C | -40 to +85 °C | -40 to +70 °C |
| Coil voltage (DC) | 3 to 24 V | 5 to 60 VDC | 5 to 48 V (High sensitive: 5 to 24V) |
| Nominal coil power | 0.22 to 0.25 (1coil), 0.48 (2 coils) | 0.22 to 290mw | 0.25 to 0.53 W |
| Surge strength | 10.000 V | 10.000 V | 10.000 V |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | Open contacts: 1,000VAC Coil and contacts: 4,000VAC |
| Safety standards | UL, CSA, VDE | UL, CSA | UL, CSA, VDE, CQC |
| Mounting / Enclosure | Through hole / RT III | Through hole / RT III | Through hole / RT II / RT III |
| Terminal layout (bottom view) |  <p>(a omitted on 1 a types)</p> |  |  |

Power relays (5A ~ 10A)

| | |
|-------------|--------|
| Series Name | FTR-J2 |
|-------------|--------|




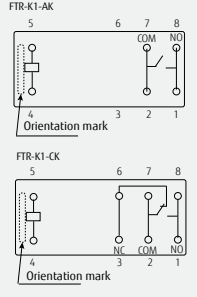
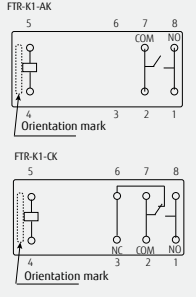
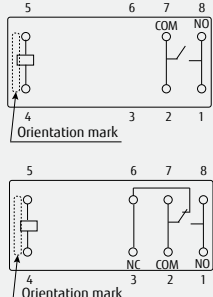


| | |
|-------------|--|
| Description | 10A, 450VDC Small High Voltage DC Relay |
| Remarks | <ul style="list-style-type: none"> ■ Special arc extinguishing provision ■ 150A inrush per contact |



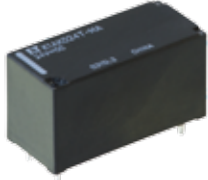
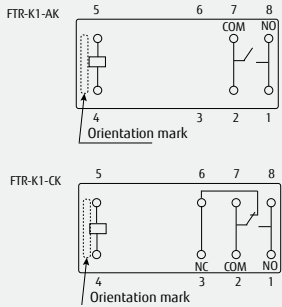
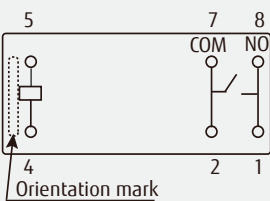
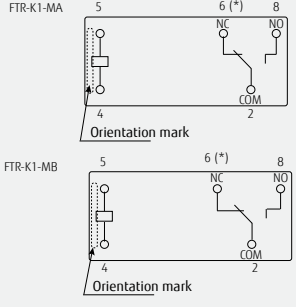
| | |
|---------------------------------|--|
| Dimensions (W x L x H mm) | 23.5 x 24.0 x 27.0 |
| Weight (approx.) | 26.0 g |
| Contact form | 1a x 2 |
| Contact rating (Resistive load) | 10A, 200VDC x 2 or 10A, 450VDC x 1 600VDC max. switching voltage |
| Minimum switching load (ref.) | 5VDC, 100mA per contact |
| Mechanical life | 2 x 10 ⁶ ops. |
| Electrical life (Rated load) | 10 x 10 ³ ops. |
| Operating temperature | -40 to +85 °C |
| Coil voltage (DC) | 5 to 110 V |
| Nominal coil power | 1 coil: 0.53W, 2 coils: 1.06W |
| Surge strength | 10.000 V (1.2 x 50µs) |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 4,000VAC |
| Safety standards | UL, VDE |
| Mounting / Enclosure | Through hole / RT II |

| | |
|-------------------------------|--|
| Terminal layout (bottom view) | |
|-------------------------------|--|




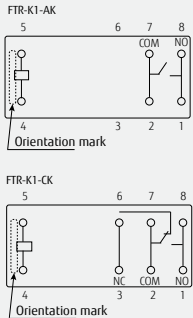
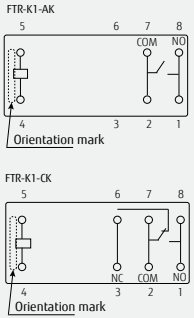
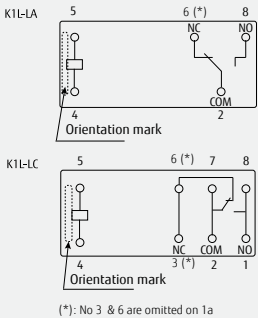
Power relays (>10A ~ 20A)

| Series Name | FTR-K1 | | FTR-K1-(RG) | | FTR-K1-E | |
|---------------------------------|---|---|---|---|--|--|
| |  | |  | |  | |
| Description | 16A Inrush 80A Type | | 10A Transparent Cover, Inrush 80A Type | | 16A AgNi Contact | |
| Type | FTR-K1AK()T | FTR-K1CK()W | FTR-K1AK()T-RG | FTR-K1CK()W-RG | FTR-K1AK()E | FTR-K1CK()E |
| Remarks | <ul style="list-style-type: none"> ■ Au plated types (-BG) ■ 5mm pitch ■ Creepage/clearance >10mm ■ UI-TV-5 (N.O.) | | <ul style="list-style-type: none"> ■ Cover material PC ■ Max operating temp. +70°C ■ 10A/12A/16A standard types available ■ 5.0mm pitch | | <ul style="list-style-type: none"> ■ Contact material AgNi ■ Clear cover types (-RG) available ■ 5mm pitch ■ Creepage/clearance >10mm | |
| Dimensions (W x L x H mm) | 12.7 x 29.0 x 15.7 | | 12.7 x 29.0 x 15.7 | | 12.7 x 29.0 x 15.7 | |
| Weight (approx.) | 13.0 g | | 13.0 g | | 13.0 g | |
| Contact form | 1 a | 1 c | 1 a | 1 c | 1 a | 1 c |
| Contact rating (Resistive load) | 16A, 250VAC/24VDC | | 16A, 250VAC/24VDC | | 16A, 250VAC/24VDC | |
| Minimum switching load (ref.) | 5VDC 100mA | | 5VDC 100mA | | 5VDC 100mA | |
| Mechanical life | 20 x 10 ⁶ ops. | | 20 x 10 ⁶ ops. | | 20 x 10 ⁶ ops. | |
| Electrical life (Rated load) | 100 x 10 ³ ops. (AC) 100 x 10 ³ ops. (DC) 25 x 10 ³ ops. (TV-5) | 50 x 10 ³ ops. (AC) 30 x 10 ³ ops. (DC) 25 x 10 ³ ops. (TV-5) (N.O.) | 100 x 10 ³ ops. (AC) 100 x 10 ³ ops. (DC) 25 x 10 ³ ops. (TV-5) | 50 x 10 ³ ops. (AC) 30 x 10 ³ ops. (DC) 25 x 10 ³ ops. (TV-5) (N.O.) | 100 x 10 ³ ops. (AC) 100 x 10 ³ ops. (DC) | 50 x 10 ³ ops. (AC) 30 x 10 ³ ops. (DC) |
| Operating temperature | -40 to +85 °C | | -40 to +70 °C | | -40 to +85 °C | |
| Coil voltage (DC) | 5 to 110 VDC | | 5 to 110 V | | 5 to 110 V | |
| Nominal coil power | 0.4 to 0.43W | | 0.4 to 0.43 W | | 0.4 to 0.43 W | |
| Surge strength | 10.000 V | | 10.000 V | | 10.000 V | |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | |
| Safety standards | UL, CSA, VDE, CQC | | VDE | | UL, CSA, VDE | |
| Mounting / Enclosure | Through hole, RTII | | Through hole, RTII | | Through hole, RTII | |
| Terminal layout (bottom view) |  | |  | |  | |




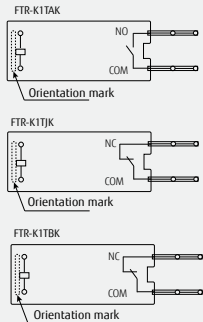
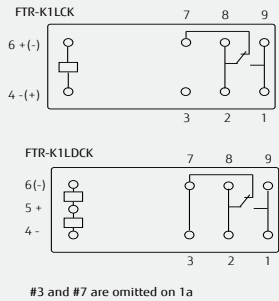
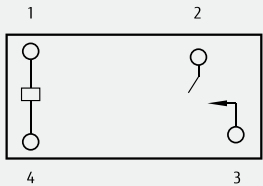
Power relays (>10A ~ 20A)

| Series Name | FTR-K1-KS | | FTR-K1-HC | FTR-K1-MA / MB | |
|--|--|---|--|--|--------------------------|
| |  | |  |  | |
| Description | 16A Inrush 120A Type | | High Capacity 20A Type | 12A Type | |
| Type | FTR-K1AK() T-KS | FTR-K1CK()T-KS | FTR-K1AK()T-HC | FTR-K1AK() W-(MA;MB) | FTR-K1CK() W-(MA;MB) |
| Remarks | <ul style="list-style-type: none"> ■ 5mm pitch ■ Creepage/clearance >10mm ■ UL TV-8 (N.O.) | | <ul style="list-style-type: none"> ■ 5mm pitch ■ Creepage/clearance >10mm | <ul style="list-style-type: none"> ■ Au plated types (-BG) ■ Clear cover types (-RG) ■ 3.5mm pitch. MA type ■ 5mm pitch MB type ■ Creepage/clearance >10mm | |
| Dimensions (W x L x H mm) | 12.7 x 29.0 x 15.7 | | 12.7 x 29.0 x 15.7 | 12.7 x 29.0 x 15.7 | |
| Weight (approx.) | 13.0 g | | 13.0 g | 13.0 g | |
| Contact form | 1 a | 1 c | 1 a | 1 a | 1 c |
| Contact rating (Resistive load) | 16A, 250VAC | | 20A, 250VAC | 12A, 250VAC/24VDC | |
| Minimum switching load (ref.) | 5VDC 100mA | | 5VDC 100mA | 5VDC 100mA | |
| Mechanical life | 20 x 10 ⁶ ops. | | 20 x 10 ⁶ ops. | 20 x 10 ⁶ ops. | |
| Electrical life (Rated load) | 100 x 10 ³ ops. (AC) 25 x 10 ³ ops. (TV-8) | 30 x 10 ³ ops. (AC) 25 x 10 ³ ops. (TV-8) (N.O.) | 100 x 10 ³ ops. (AC) | 100 x 10 ³ ops. (AC) 100 x 10 ³ ops. (DC) | |
| Operating temperature | -40 to +85 °C | | -40 to +85 °C | -40 to +85 °C | |
| Coil voltage (DC) | 18 V | | 18 V | 18 V | |
| Nominal coil power | 0.4 to 0.43 W | | 0.4 W | 0.4 W / 0.43 W | |
| Surge strength | 10.000 V | | 10.000 V | 10.000 V | |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | |
| Safety standards | UL, CSA, VDE | | UL | UL, CSA, VDE | |
| Mounting / Enclosure | Through hole, RTII | | Through hole, RTII | Through hole, RTII | |
| Terminal layout (bottom view) |  | |  |  | |
| | | | | (*) : No 6 is omitted on 1a | |

Power relays (>10A ~ 20A)

| Series Name | FTR-K1-HT | | FTR-K1-KW | | FTR-K1-LA / LB | |
|--|--|--|--|--------------------------------|---|-------------------------------------|
| |  | |  | |  | |
| Description | 16A High Temperature 105°C Type | | 16A Plastic Sealed 105°C Type | | 10A High Sensitive Type | |
| Type | FTR-K1AK()T-HT | FTR-K1CK()W-HT | FTR-K1AK() W-KW | FTR-K1CK()W-KW | FTR-K1AL() W-(LA, LB) | FTR-K1CL() W-(LA, LB) |
| Remarks | <ul style="list-style-type: none"> ■ 5mm pitch ■ Creepage/clearance >10mm\ ■ Flux free ■ UL TV-5 (1a) | | <ul style="list-style-type: none"> ■ 5mm pitch ■ Creepage/clearance >10mm ■ Plastic seal | | <ul style="list-style-type: none"> ■ Clear cover types (-RG) ■ Gold plated contact types (-BG) ■ 3.5mm pitch LA type ■ 5mm pitch LB type ■ Creepage/clearance >10mm | |
| Dimensions (W x L x H mm) | 12.7 x 29.0 x 15.7 | | 12.7 x 29.0 x 15.7 | | 12.7 x 29.0 x 15.7 | |
| Weight (approx.) | 13.0 g | | 13.0 g | | 13.0 g | |
| Contact form | 1 a | 1 c | 1 a | 1 c | 1 a | 1 c |
| Contact rating (Resistive load) | 16A, 250VAC/24VDC | | 16A, 250VAC | | 10A, 250VAC | |
| Minimum switching load (ref.) | 5VDC 100mA | | 5VDC 100mA | | 5VDC 100mA | |
| Mechanical life | 20 x 10 ⁶ ops. | | 20 x 10 ⁶ ops. | | 20 x 10 ⁶ ops. | |
| Electrical life (Rated load) | 100x10 ³ ops. (AC) 100x10 ³ ops.(DC) 25 x 10 ³ ops. (1a / TV-5) | 50 x 10 ³ ops. (AC) 30 x 10 ³ ops. (DC) | 20 x 10 ³ ops. (AC) | 10 x 10 ³ ops. (AC) | 100 x 10 ³ ops. (LA), 150 x 10 ³ ops. (LB) | 100 x 10 ³ ops. (LA, LB) |
| Operating temperature | -40 to +105 °C | | -40 to +105 °C | | -40 to +85 °C (LA) / -40 to +105 °C (LB) | |
| Coil voltage (DC) | 5 to 110 VDC | | 5 to 110 V | | 5 to 48 V | |
| Nominal coil power | 0.4 to 0.43W | | 0.4 to 0.43W | | 0.25 W | |
| Surge strength | 10.000 V | | 10.000 V | | 10.000 V | |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | |
| Safety standards | UL, VDE | | UL, VDE | | UL, CSA, VDE | |
| Mounting / Enclosure | Through hole / RTII | | Through hole / RTIII | | Through hole / RTII | |
| Terminal layout (bottom view) |  | |  | |  | |

Power relays (>10A ~ 20A)

| Series Name | FTR-K1T | | FTR-K1L | | FTR-K2 |
|--|--|--------------------------------|--|---|--|
| |  | |  | |  |
| Description | 17A Tab Terminal Type | | 16A Latching Type Inrush 80A | | 16A High Profile Relay |
| Type | FTR-K1TAK, FTR-K1TJK | FTR-K1TBK | FTR-K1L(D) AK()T | FTR-K1L(D)CK()W AK()T | FTR-K2AK-T |
| Remarks | <ul style="list-style-type: none"> ■ Au plated contacts (-BG) ■ Horizontal / vertical tabs ■ TV-5 rated (1a) ■ Creepage/clearance >10mm | | <ul style="list-style-type: none"> ■ 1 and 2 coil types ■ TV-5 rated (N.O.) ■ Creepage/clearance >10mm | | <ul style="list-style-type: none"> ■ TV-5 rated ■ 1mm contact gap types available ■ 3.5mm pitch |
| Dimensions (W x L x H mm) Note: * except tab terminals | 12.7 x 29.0 x 15.7* | 12.7 x 29.0 x 15.7* | 12.7 x 29.0 x 15.7 | | 11.0 x 24.0 x 25.0 |
| Weight (approx.) | 14.8 g | | 13.0 g | | 13.0 g |
| Contact form | 1 a | 1 b | 1 a | 1 c | 1 a |
| Contact rating (Resistive load) | 17A, 250VAC | | 16A, 250VAC | | 16A, 250VAC / 30VDC |
| Minimum switching load (ref.) | 5VDC 100mA | | 5VDC 100mA | | 5VDC 100mA |
| Mechanical life | 20 x 10 ⁶ ops. | | 3 x 10 ⁶ ops. | | 2 x 10 ⁶ ops. |
| Electrical life (Rated load) | 100 x 10 ³ ops. (AC) 25 x 10 ³ ops. (TV-5) | 50 x 10 ³ ops. (AC) | 100 x 10 ³ ops. (AC) 25 x 10 ³ ops. (TV-5) | 50 x 10 ³ ops. (AC) 25 x 10 ³ ops. (TV-5) (N.O.) | 100 x 10 ³ ops. 25 x 10 ³ ops. (lamp load TV-5) |
| Operating temperature | -40 to +105 °C | | -40 to +85 °C | | -40 to +70 °C |
| Coil voltage (DC) | 5 to 110 VDC | | 5, 12, 24 V | | 3 to 48 V |
| Nominal coil power | 0.4 to 0.43W | | 1 Coil 0.4 W, 2 Coil 0.6 W | | 0.53 W |
| Surge strength | 10.000 V | | 10.000 V | | 10.000 V |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | | Open contacts: 1,000VAC Coil and contacts: 4,000VAC |
| Safety standards | UL, CSA, VDE | | VDE, cULus | | UL, CSA, VDE, CQC |
| Mounting / Enclosure | Through hole / RTII | | Through hole / RTII | | Through hole / RTII |
| Terminal layout (bottom view) |  | |  <p>#3 and #7 are omitted on 1a</p> | |  |

Power relays (>10A ~ 20A)

| | |
|--------------------|----------------|
| Series Name | FTR-K2G |
|--------------------|----------------|




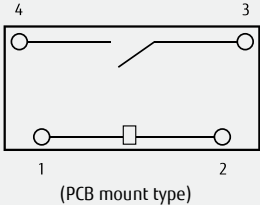
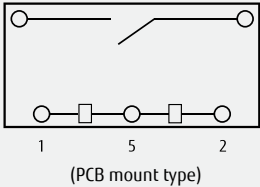
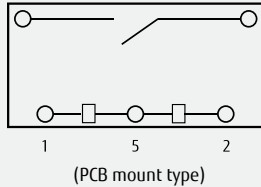


| | |
|--------------------|--|
| Description | 20A 3mm Wide Contact Gap Relay |
| Type | FTR-K2G |
| Remarks | <ul style="list-style-type: none"> ■ TV-8 rated ■ 3mm contact gap ■ Reinforced insulation ■ Peak inrush 120A |

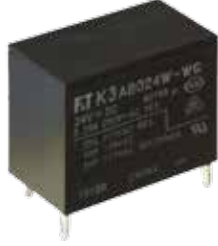

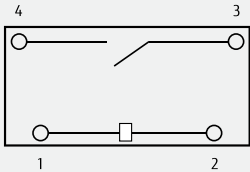
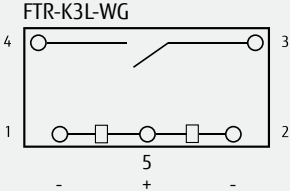
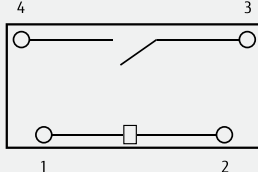
| | |
|--|--|
| Dimensions (W x L x H mm) | 16.0 x 35.0 x 28.0 |
| Weight (approx.) | 34.0 g |
| Contact form | 1 a |
| Contact rating (Resistive load) | 20A, 250VAC (120A, 250VAC inrush) |
| Minimum switching load (ref.) | 5VDC 100mA |
| Mechanical life | 1 x 10 ⁶ ops. |
| Electrical life (Rated load) | 100 x 10 ³ ops. 25 x 10 ³ ops. (lamp load TV-8) |
| Operating temperature | -40 to +70 °C |
| Coil voltage (DC) | 5 to 110 V |
| Nominal coil power | 0.93 to 1.05 W |
| Surge strength | 10.000 V |
| Dielectric strength (1 min.) | Open contacts: 2,000VAC Coil and contacts: 5,000VAC |
| Safety standards | UL, VDE |
| Mounting / Enclosure | Through hole |

| | |
|--------------------------------------|-------------------------|
| Terminal layout (bottom view) | <p>Orientation mark</p> |
|--------------------------------------|-------------------------|




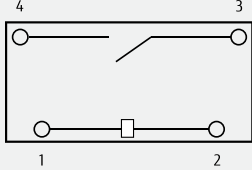
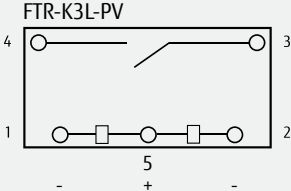
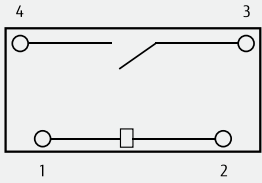
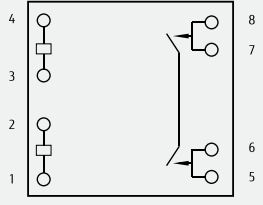
Power relays (20A ~ 25A)

| Series Name | FTR-K3 | FTR-K3L | FTR-K3LV |
|--|---|--|---|
| |  |  |  |
| Description | 20 - 25A Heavy Load Relay | 25A Heavy Load Latching Relay | 32A Heavy Load Latching Relay |
| Type | FTR-K3 | FTR-K3L | FTR-K3LV |
| Remarks | <ul style="list-style-type: none"> ■ Tab terminal types (J) ■ Flat types (-F) ■ High insulation type (-LS) ■ High current type (-HC) ■ PCB mount types (A) | <ul style="list-style-type: none"> ■ 2 coil latching type ■ Tab terminal types (J) and PCB mount types (A) | <ul style="list-style-type: none"> ■ 2 coil latching type ■ 32A screw terminal type |
| Dimensions (W x L x H mm) | 15.7 x 30.1 x 23.3 (Flat: 23.3 x 30.9 x 18.2) | 15.7 x 30.1 x 23.3 | 15.7 x 30.1 x 23.3 |
| Weight (approx.) | 25.0 g | 25.0 g | 27.0g |
| Contact form | 1 a | 1 a | 1 a |
| Contact rating (Resistive load) | 20A, 250VAC 25A, 250VAC(-HC, Flat) | 25A, 250VAC | 32A 250VAC |
| Minimum switching load (ref.) | 5VDC 100mA | 5VDC 100mA | 5VDC 100mA |
| Mechanical life | 2 x 10 ⁶ ops. | 1 x 10 ⁶ ops. | 1 x 10 ⁶ ops. |
| Electrical life (Rated load) | 100 x 10 ³ ops. | 100 x 10 ³ ops. | 30x10 ³ ops. |
| Operating temperature | -40 to +60 °C | -40 to +85 °C | -40 to +85 °C |
| Coil voltage (DC) | 5 to 48 V | 5 to 24 V | 5 to 48V |
| Nominal coil power | 0.78 W | 0.9mW | 1.2W |
| Surge strength | 8,500 V | 8,500 V | 6,000V |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | Open contacts: 1,000VAC Coil and contacts: 5,000VAC | Open contacts: 2,500VAC Coil and contacts: 5,000VAC |
| Safety standards | UL, CSA, VDE, CQC, TÜV, (Flat: UL, CSA, VDE, CQC) | cULus, VDE | No safety standard |
| Mounting / Enclosure | Through hole / RTII | Through hole / RTII | Through hole / RTII |
| Terminal layout (bottom view) |  <p>(PCB mount type)</p> |  <p>(PCB mount type)</p> |  <p>(PCB mount type)</p> |

Power relays (20A ~ 25A)

| Series Name | FTR-K3-WG | FTR-K3-WS |
|--|--|--|
| |  |  |
| Description | 25A 1.5mm Contact Gap Relay | 25A 1.8mm Contact Gap Relay |
| Type | FTR-K3-WG | FTR-K3-WS |
| Remarks | <ul style="list-style-type: none"> ■ 1.5mm contact gap ■ 2 coil latching type available (FTR-K3L-WG) | <ul style="list-style-type: none"> ■ 1.8mm contact gap |
| Dimensions (W x L x H mm) | 15.7 x 30.1 x 23.3 | 15.7 x 30.1 x 23.3 |
| Weight (approx.) | 25.0 g | 25.0 g |
| Contact form | 1 a | 1 a |
| Contact rating (Resistive load) | 25A, 250VAC | 25A, 250VAC |
| Minimum switching load (ref.) | 5VDC 100mA | 5VDC 100mA |
| Mechanical life | 2 x 10 ⁶ ops. | 100 x 10 ³ ops. |
| Electrical life (Rated load) | 100 x 10 ³ ops. | 30 x 10 ³ ops. |
| Operating temperature | -40 to +60 °C, (latch: -40 to 85 °C) | -40 to +60 °C |
| Coil voltage (DC) | 5 to 48 V | 5 to 48 V |
| Nominal coil power | 0.78 W | 1.2 W |
| Surge strength | 8.500 V | 8.500 V |
| Dielectric strength (1 min.) | Open contacts: 2,500VAC Coil and contacts: 5,000VAC | Open contacts: 2,500VAC Coil and contacts: 5,000VAC |
| Safety standards | UL, VDE, CQC | UL, VDE |
| Mounting / Enclosure | Through hole / RTII | Through hole / RTII |
| Terminal layout (bottom view) | <p>FTR-K3-WG</p>  <p>FTR-K3L-WG</p>  |  |

Power relays (30A ~ 120A)

| Series Name | FTR-K3-PV | FTR-K3-PS | FTR-K2W |
|--|--|--|---|
| |  |  |  |
| Description | 32A 1.5mm Contact Gap Relay | 32A 1.8mm Contact Gap Relay | 30A 60VDC /25A 72VDC 6mm Contact Gap Relay |
| Type | FTR-K3-PV | FTR-K3-PS | FTR-K2W |
| Remarks | <ul style="list-style-type: none"> ■ High capacity 32A ■ 1.5mm contact gap ■ 2 coil latching type available (FTR-K3L-PV) | <ul style="list-style-type: none"> ■ High capacity 32A ■ 1.8mm contact gap | <ul style="list-style-type: none"> ■ DC high capacity |
| Dimensions (W x L x H mm) | 15.7 x 30.1 x 23.3 | 15.7 x 30.1 x 23.3 | 34.9 x 36.5 x 30.2 |
| Weight (approx.) | 25.0 g | 25.0 g | 74.0 g |
| Contact form | 1 a | 1 a | 1 a |
| Contact rating (Resistive load) | 32A, 250VAC | 32A, 250VAC | 30A 60VDC/25A 72VDC |
| Minimum switching load (ref.) | 5VDC 100mA | 5VDC 100mA | 5VDC 100mA |
| Mechanical life | 1 x 10 ⁶ ops. | 100 x 10 ³ ops. | 1 x 10 ⁶ ops. |
| Electrical life (Rated load) | 30 x 10 ³ ops. | 30 x 10 ³ ops. | 10 x 10 ³ ops. |
| Operating temperature | -40 to +60 °C, (latch: -40 to 85°C) | -40 to +60 °C | -40 to +70 °C |
| Coil voltage (DC) | 5 to 48 V | 5 to 48 V | 5 to 48 V |
| Nominal coil power | 1.2 W | 1.4 W | 2 W |
| Surge strength | 6,000 V | 6,000 V | 10,000 V (1.2X50μs) |
| Dielectric strength (1 min.) | Open contacts: 2,500VAC Coil and contacts: 4,000VAC | Open contacts: 2,500VAC Coil and contacts: 4,000VAC | Open contacts: 2,000VAC Coil and contacts: 5,000VAC |
| Safety standards | UL, VDE | UL, VDE | cULus, TÜV |
| Mounting / Enclosure | Through hole / RTII | Through hole / RTII | Through hole / RTII |
| Terminal layout (bottom view) | <p>FTR-K3-PV</p>  <p>FTR-K3L-PV</p>  |  |  |

Power relays (30A ~ 120A)

| | |
|--------------------|---------------|
| Series Name | FTR-K4 |
|--------------------|---------------|

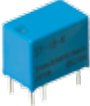
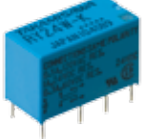

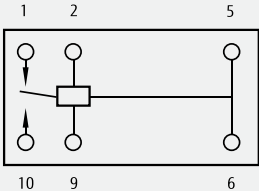
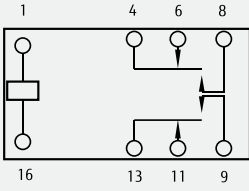
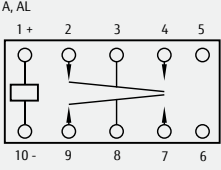
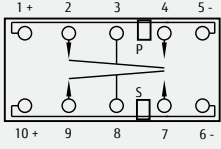


| | |
|--------------------|---|
| Description | 120A High Power Latching Relay |
| Remarks | <ul style="list-style-type: none"> ■ 2 coil latching type available ■ Meets IEC62055-31 UC 3 category ■ Contact resistance max. 0.5Ω (initial) |




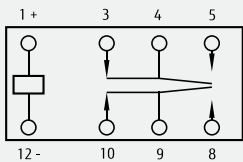
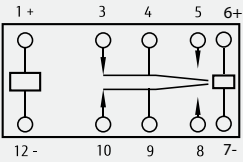
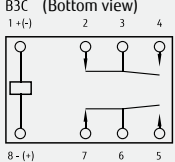
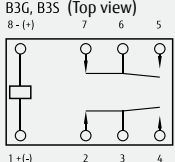
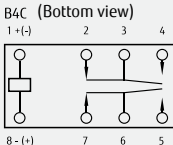
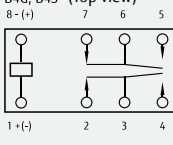
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| Dimensions (W x L x H mm) | 37.0 x 43.0 x 22.0 |
| Weight (approx.) | 70 g |
| Contact form | 1 a |
| Contact rating (Resistive load) | 120A, 277VAC |
| Minimum switching load (ref.) | 50mA, 100VAC |
| Mechanical life | 1 x 10 ⁶ ops. |
| Electrical life (Rated load) | 10 x 10 ³ ops. |
| Operating temperature | -40 to 85 °C |
| Coil voltage | 100VAC (1 coil latching) |
| Nominal coil power | 18VA |
| Surge strength | 12,000 V (1.2 x50μs) |
| Dielectric strength (1 min.) | Open contacts: 2,000VAC Coil and contacts: 4,000VAC |
| Safety standards | - |
| Mounting / Enclosure | Coil: thru hole / Load: screws |

| | |
|--------------------------------------|--|
| Terminal layout (bottom view) | |
|--------------------------------------|--|

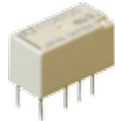

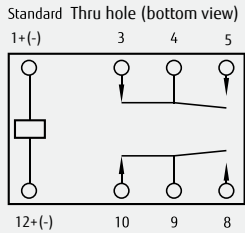
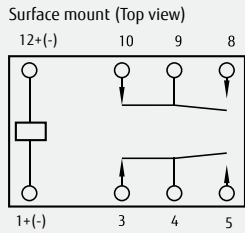
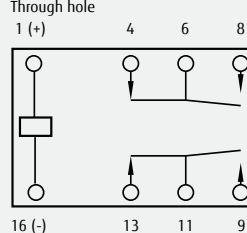
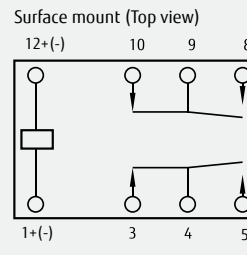
Signal relays (1A ~ 2A)

| Series Name | SY | RY | A |
|---------------------------------|---|--|--|
| |  |  |  |
| Description | 1 to 2A Slim Type Relay | 1 to 2A Signal Relay | 1 to 2A Low Profile Relay |
| Remarks | <ul style="list-style-type: none"> ■ DIL pitch terminals ■ Single or bifurcated contact types | <ul style="list-style-type: none"> ■ High dielectric strength types ■ MBB contact available | <ul style="list-style-type: none"> ■ 1 and 2 coil latching versions available ■ DIL pitch terminals |
| Dimensions (W x L x H mm) | 7.4 x 12.5 x 9.5 | 9.8 x 20.2 x 12.5 | 9.4 x 14.0 x 5.0 |
| Weight (approx.) | 1.7 g | 5.0 g | 1.2 g |
| Contact form | 1 c | 2 c / 2 d | 2 c |
| Contact rating (Resistive load) | 0.5A 120VAC, 1A 24VDC | 0.5 120VAC, 1A 24VDC (RY-W, WZ) 0.25A 120VAC, 1A 24VDC (RY-WF) 0.4A 100VAC, 2A 30VDC (RY-WFZ) | 0.5A 125VAC 1A, 30VDC |
| Minimum switching load (ref.) | 0.1VDC, 0.1mA (SY-W) 1VDC 1mA (SY) | 10mVDC 0.01A | 10mVDC 0.01mA |
| Mechanical life | 5 x 10 ⁶ ops. | 20 x 10 ⁶ ops. (W) 10 x 10 ⁶ ops. (WF, WZ, WFZ) | 100 x 10 ⁶ ops. 10 x 10 ⁶ ops. (latching) |
| Electrical life (Rated load) | 100 x 10 ³ ops. | 100 x 10 ³ ops. (WFZ) 200 x 10 ³ ops. (W, WZ) (AC) 500 x 10 ³ ops. (W, WZ, WF) (DC) | 500 x 10 ³ ops. (DC) 200 x 10 ³ ops. (AC) |
| Coil voltage (DC) | 1.5 to 24 V | 3 to 48 V | 1.5 to 24 V (48 V Only standard type) |
| Nominal coil power | 0.15 to 0.175 W | 0.15 to 0.58 W | 0.1 to 0.3 W |
| Surge strength | 1,500 V | 1,500 V | 1,500 V |
| Dielectric strength (1 min.) | Open contacts: 300/400VAC Coil and contacts: 1,000VAC | Open contacts: 500VAC (W, WZ, WFZ) 1,000VAC (WF) Coil and contacts: 1,000VAC | Open contacts: 1,000VAC Coil and contacts: 1,000VAC |
| Safety standards | UL, CSA, FCC68 | UL, CSA, FCC68 | UL, CSA, FCC68 |
| Mounting / Enclosure | Through hole / RTIII | Through hole / RTIII | Through hole / RTIII |
| Terminal layout (bottom view) |  |  | <p>A, AL</p>  <p>AL-D</p>  |

Signal relays (1A ~ 2A)

| Series Name | NA | FTR-B3 | FTR-B4 |
|--|--|--|--|
| |  |  |  |
| Description | 1 to 2A Slim Type Relay | 2A Low Profile Relay | 2A Slim Type Relay |
| Remarks | <ul style="list-style-type: none"> ■ Latching type available | <ul style="list-style-type: none"> ■ Latching type available ■ Space saver versions available ■ THT and SMT versions | <ul style="list-style-type: none"> ■ Latching type available ■ Space saver versions available ■ THT and SMT versions |
| Dimensions (W x L x H mm) | 7.4 x 14.9 x 9.7 | 7.2 x 10.6 x 5.45 | 5.7 x 10.6 x 9.0 |
| Weight (approx.) | 1.6 g | 0.85 g | 1.0 g |
| Contact form | 2 c | 2 c | 2 c |
| Contact rating (Resistive load) | 0.5A 125VAC 1A 30VDC | 0.3A 125VAC 1A 30VDC | 0.3A 125VAC 1A 30VDC |
| Minimum switching load (ref.) | 10mVDC 0.01mA | 10mVDC 0.01mA | 10mVDC 0.01mA |
| Mechanical life | 100 x 10 ⁶ ops. 10 x 10 ⁶ ops. (latching) | 50 x 10 ⁶ ops. 20 x 10 ⁶ ops. (latching) | 50 x 10 ⁶ ops. 20 x 10 ⁶ ops. (latching) |
| Electrical life (Rated load) | 500 x 10 ³ ops. (DC) 200 x 10 ³ ops. (AC) | 100 x 10 ³ ops. | 100 x 10 ³ ops. |
| Coil voltage (DC) | 1.5 to 24 V (48V Only standard type) | 1.5 to 24 V | 1.5 to 24 V |
| Nominal coil power | 0.1 to 0.3 W | 0.1 to 0.23 W | 0.1 to 0.23 W |
| Surge strength | 2,500 V (NA, NAL) 1,500 V (NAL-D) | 2,500 V | 2,500 V |
| Dielectric strength (1 min.) | Open contacts: 1,000VAC Coil and contacts: 1,500VAC (NA, NAL) 1,000VAC (NAL-D) | Open contacts: 1,000VAC Coil and contacts: 1,500VAC | Open contacts: 1,000VAC Coil and contacts: 1,500VAC |
| Safety standards | UL, CSA, FCC68, Telcordia, IEC60950-1 | UL, CSA, BSI, FCC68, Telcordia, IEC60950-1 | UL, CSA, FCC68, Telcordia, IEC60950-1 |
| Mounting / Enclosure | Through hole / RTIII | Through hole / Surface mount / RTIII | Through hole / Surface mount / RTIII |
| Terminal layout (bottom view) |   |   |   |

Signal relays (1A ~ 2A)

| Series Name | FTR-C1 | FTR-C2 |
|--|---|---|
| |  |  |
| Description | 2A Miniature Relay | 2A Miniature Relay |
| Remarks | <ul style="list-style-type: none"> ■ Latching type available ■ Contact gap 0.6mm ■ Creepage>2.5mm, clearance >2.0mm ■ High surge strength | <ul style="list-style-type: none"> ■ Contact gap 2mm ■ Creepage 2.5mm, clearance 2mm ■ THT and SMT versions |
| Dimensions (W x L x H mm) | 7.5 x 15.0 x 9.3 | 9.85 x 20.05 x 11.4 |
| Weight (approx.) | 2.0 g | 3.7 g |
| Contact form | 2 c | 2 c |
| Contact rating (Resistive load) | 0.3A 125VAC 1A 30VDC | 0.3A 125VAC 1A 30VDC |
| Minimum switching load (ref.) | 10mVDC 0.01mA | 10mVDC 0.01mA |
| Mechanical life | 10 x 10 ⁶ ops. | 10 x 10 ⁶ ops. |
| Electrical life (Rated load) | 100 x 10 ³ ops. | 100 x 10 ³ ops. |
| Coil voltage (DC) | 3 to 24 V | 3 to 24 V |
| Nominal coil power | 0.14 to 0.3 W | 0.15 to 0.3 W |
| Surge strength | 5,000 V | 2,500 V |
| Dielectric strength (1 min.) | Open contacts: 1,500VAC Coil and contacts: 3,000VAC | Open contacts: 1,500VAC Coil and contacts: 2,000VAC |
| Safety standards | UL, CSA, BSI, Telcordia | UL, CSA, BSI, Telcordia, IEC60950-1 |
| Mounting / Enclosure | Through hole / Surface mount / RTIII | Through hole / Surface mount / RTIII |
| Terminal layout (bottom view) | <p>Standard Thru hole (bottom view)</p>  <p>Surface mount (Top view)</p>  | <p>Through hole</p>  <p>Surface mount (Top view)</p>  |

High Frequency relays

| | |
|--------------------|------------------|
| Series Name | FTR-B3-RF |
|--------------------|------------------|



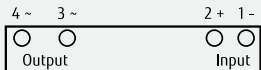
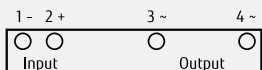


| | |
|--------------------|--|
| Description | 2A GHz RF Relay |
| Remarks | <ul style="list-style-type: none"> ■ Latching type available ■ S.M. space saver versions |

| | |
|--|---|
| Dimensions (W x L x H mm) | 7.7 x 13.6 x 5.45 |
| Weight (approx.) | 1.3 g |
| Contact form | 2 c |
| Contact rating (Resistive load) | 0.3A 125VAC 1A 30VDC, 1W (@1GHz) |
| Minimum switching load (ref.) | 10mVDC 0.01mA |
| RF characteristics (@ 75 Ω) | 3W @ 1GHz-switching 1W @ 1GHz-carry Isolation > 30dB @ 1GHz Insertion loss < 0.2dB @ 1Hz V.S.W.R. < 1.2 @ 1Hz |
| Mechanical life | 50 x 10 ⁶ ops., 20 x 10 ⁶ ops |
| Electrical life (Rated load) | 100 x 10 ³ ops. |
| Coil voltage (DC) | 1.5 to 24 V |
| Nominal coil power | 0.1 to 0.23 W |
| Dielectric strength (1 min.) | Open contacts: 750VAC Coil and contacts: 750VAC |
| Safety standards | - |
| Mounting / Enclosure | Surface mount / RTIII |

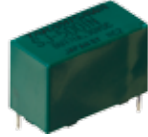
| | |
|--------------------------------------|---|
| Terminal layout (bottom view) | <p>(Top view)</p> <p>8 (-) 7 6 5</p> <p>1 (+) 2 3 4</p> |
|--------------------------------------|---|

Solid State relays (1A ~ 3A)

| Series Name | | FTR-SL | | SE | | | |
|-------------------------------|--------------------------------|--|-----------|---|-------------------|------------------|--------|
| | |  | |  | | | |
| Description | | 1A AC SSR | | 1.5A / 2A AC SSR | | | |
| Type | | | | 1.5 A type | 2 A type | | |
| Remarks | | <ul style="list-style-type: none"> ■ Pin compatible with FTR-LY ■ Internal zero cross circuit available ■ Internal varistor and snubber circuit | | <ul style="list-style-type: none"> ■ Internal zero cross circuit available | | | |
| Dimensions (W x L x H mm) | | 5.0 x 28.0 x 15.0 | | 5.0 x 20.0 x 17.0 | 5.0 x 20.0 x 20.0 | | |
| Weight (approx.) | | 4.0 g | | 4.0 g | 5.1 g | | |
| Current | | 1.0 A | | 1.5 A | 2 A | | |
| Voltage type | | AC | | AC | | | |
| Nominal Voltage | | 5, 12, 24, 60 VDC | | 3, 5, 12, 24 VDC | | | |
| Input side | Impedance | 5 V | 560 Ω | 3 V | 130 Ω | 3 V | 130 Ω |
| | | 12 V | 1.3k Ω | 5 V | 330 Ω | 5 V | 330 Ω |
| | | 24 V | 2.4k Ω | 12 V | 1.0k Ω | 12 V | 1.0k Ω |
| | | 60 V | 10k Ω | 24 V | 2.2k Ω | 24 V | 2.2k Ω |
| Output side | Load voltage range | AC 24 to 250 VAC rms | | 24 to 265 V rms | | | |
| | Max. load current | 1.0 A rms | | 1.5 A rms | 2 A rms | | |
| | Min. load current | 0.01 mA rms | | 10 mA rms | | | |
| | 1 cycle surge current | 50 A | | 50 A | | | |
| | Max. off-state leakage current | 1 mA rms | | 0.5 / 1.0 mA rms | | 1.0 / 2.0 mA rms | |
| Max. on-state voltage drop | 1.3 V rms | | 1.2 V rms | | 1.3 V rms | | |
| Max. operating time | | 1/2 cycle + 1 ms | | 1 ms (without zero cross), 1/2 cycle + 1ms (with zero cross) | | | |
| Max. release time | | 1/2 cycle + 1 ms | | 1/2 cycle + 1 ms | | | |
| Operating temperature | | -30°C to +85°C | | -30°C to +85°C | | | |
| Storage temperature | | -40°C to +100°C | | -40°C to +100°C | | | |
| Dielectric strength (I/O) | | 2.500 V rms | | 2.500 V rms | | | |
| Safety standards | | - | | - | | | |
| Mounting | | Through hole | | Through hole | | | |
| Terminal layout (bottom view) | |  | |  | | | |

Solid State relays (1A ~ 3A)

| Series Name | SJ | SN |
|-------------|----|----|
|-------------|----|----|



| Description | 1A AC/DC SSR | 1A AC/DC SSR |
|-------------|---|---|
| Remarks | <ul style="list-style-type: none"> ■ Pin compatible with JY ■ Internal surge absorber ■ Socket available | <ul style="list-style-type: none"> ■ Compatible with NY ■ Internal surge absorber ■ Socket available |

| Dimensions (W x L x H mm) | | 10.0x20.0x12.8 | | | | 5.0x20.0x17.0 | | | | | | | |
|-------------------------------|--------------------------------|-------------------|--------|---------------|--------|-----------------|-------------------|------------------|-------------|---------------|--------|--|--|
| Module | | - | | | | Input (AC) | Input (DC) | Output (AC) | | Output (DC) | | | |
| Weight (approx.) | | 5.5 g | | | | 20g | 3.3 g | 3.5 g | | 2.9 g | | | |
| Current | | 1.0A | | | | 1A | | | | | | | |
| Voltage type | | AC | | DC | | AC | DC | AC | | DC | | | |
| Nominal Voltage | | 3, 5, 12, 24 VDC | | 5, 12, 24 VDC | | 100 VAC | 12, 24 VDC | 3, 5, 12, 24 VDC | | 5, 12, 24 VDC | | | |
| Input side | Impedance | 3 V | 120 Ω | - | - | - | - | 3 V | 130/180 Ω | - | - | | |
| | | 5 V | 360 Ω | 5 V | 430 Ω | - | - | 5 V | 330/470 Ω | 5 V | 390 Ω | | |
| | | 12 V | 1.0k Ω | 12 V | 1.2k Ω | - | - | 12 V | 1.0/1.5k Ω | 12 V | 1.2k Ω | | |
| | | 24 V | 2.0k Ω | 24 V | 2.4k Ω | - | - | 24 V | 2.2k/3.0k Ω | 24 V | 2.4k Ω | | |
| Output side | Load voltage range | 24 to 265 V rms | | 3 to 30 VDC | | 4 to 6 VDC | | 24 to 265 V rms | | 3 to 30 VDC | | | |
| | Max. load current | 1.0A rms | | 1.0A | | ±4 mA (VDD=5 V) | ±0.4 mA (VDD=5 V) | 1.0A rms | | 1.0A | | | |
| | Min. load current | 10 mA rms | | 1 mA | | - | - | 10 mA rms | | 1 mA | | | |
| | 1 cycle surge current | 50 A | | 3.0A (10ms) | | - | - | 50 A | | 3 A (10ms) | | | |
| | Max. off-state leakage current | 0.75 / 1.5 mA rms | | 0.1 mA | | - | - | 1.5/3.0 mA rms | | 0.1 mA | | | |
| | Max. on-state voltage drop | 1.2V rms | | 1.2V | | - | - | 1.2V rms | | 1.2V | | | |
| Max. operating time | | 1 ms | | | | 25 ms | 10 ms | 1 ms | | | | | |
| Max. release time | | 1/2 cycle + 1 ms | | 1 ms | | 30 ms | 10 ms | 1/2 cycle + 1 ms | | 1 ms | | | |
| Operating temperature | | -30°C to +85°C | | | | -30°C to +85°C | | | | | | | |
| Storage temperature | | -40°C to +100°C | | | | -40°C to +100°C | | | | | | | |
| Dielectric strength (I/O) | | 2,500 V rms | | | | 2,500 V rms | | | | | | | |
| Safety standards | | UL, CSA | | | | - | | | | | | | |
| Mounting | | Through hole | | | | Through hole | | | | | | | |
| Terminal layout (bottom view) | | | | | | | | | | | | | |

Reference

Contact forms

Pole and throw

Since relays are switches, the terminology applied to switches is also applied to relays; a relay switches one or more poles, each of whose contacts can be thrown by energizing the coil in one of three ways:

Normally-open (NO)

Normally-open (NO) contacts connect the circuit when the relay is activated; the circuit is disconnected when the relay is inactive. It is also called a Form A contact or "make" contact. NO contacts may also be distinguished as "early-make" or NOEM, which means that the contacts close before the button or switch is fully engaged.

Normally-closed (NC)

Normally-closed (NC) contacts disconnect the circuit when the relay is activated; the circuit is connected when the relay is inactive. It is also called a Form B contact or "break" contact. NC contacts may also be distinguished as "late-break" or NCLB, which means that the contacts stay closed until the button or switch is fully disengaged.

Change-over (CO), or double-throw (DT)

Change-over (CO), or double-throw (DT), contacts control two circuits: one normally-open contact and one normally-closed contact with a common terminal. It is also called a Form C contact or "transfer" contact ("break before make"). If this type of contact utilizes a "make before break" functionality, then it is called a Form D contact.

Designations

SPST – Single Pole Single Throw

These have two terminals which can be connected or disconnected. Including two for the coil, such a relay has four terminals in total. It is ambiguous whether the pole is normally open or normally closed. The terminology "SPNO" and "SPNC" is sometimes used to resolve the ambiguity.

SPDT – Single Pole Double Throw

A common terminal connects to either of two others. Including two for the coil, such a relay has five terminals in total.

DPST – Double Pole Single Throw

These have two pairs of terminals. Equivalent to two SPST switches or relays actuated by a single coil. Including two for the coil, such a relay has six terminals in total. The poles may be Form A or Form B (or one of each).

DPDT – Double Pole Double Throw

These have two rows of change-over terminals. Equivalent to two SPDT switches or relays actuated by a single coil. Such a relay has eight terminals, including the coil.

Contacts

Contact Resistance

Statistical value. Specifies the total resistance of the closed contacts, terminals and contact springs, in milli-Ohms (or max Voltage drop) Not reproducible value. Sometimes the measuring condition is specified e.g. 6V/1A.

Contact Rating

The resistive Voltage and Ampere rating of a contact.

Max Switching Voltage

The max open circuit voltage that can be safely switched by the contacts to reach the limiting switching cycles. AC and DC voltages may differ.

Max Switching current

The max inrush current that can be safely switched by the contacts. <0.5sec. Meeting the specified number of making cycles. AC and DC currents may differ.

Max carry current

The current that can safely be carried by the contacts without causing damage due to overheating.

Max Switching Power

The max power in Watts or VA that can be safely switched by the contacts.

Coil Values

Coil Voltage

Nominal voltage to be applied to the coil terminals, to assure reliable operation, maintaining all specifications

Coil Resistance

Nominal resistance measured in Ohms @ 20C or 23C. In most cases tolerance is +/- 10%.

Coil Power

The Voltage-current product of the coil indicating the dissipation (Heat) of the coil in Watts @ nominal coil voltage at 20C. (Short time value)

Coil Inductance

Inductance of the relay coil in [H or mH]. Normally not mentioned in the specifications, but can be important for designers.

Coil operating temperature

Indicating temp. Operating range of the coil. Is depending on the used coil wire temperature class and used relay materials. Coil temperature is an important parameter to calculate the actual operating voltage of the relay. (See operating range graphs in the relay specifications)

About Fujitsu Components

Fujitsu Components America, Inc. is responsible for managing the sales, marketing and distribution of electronic and system components and sub-systems throughout North and South America. Products include relays, connectors, input and pointing devices, touch panels, thermal printers, and wireless modules.

Primary customers include large original equipment manufacturers and resellers of a broad range of electronic equipment for various industries.

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