



Автомобильные реле серии FBR562

Технические характеристики

Архангельск (8182)63-90-72	Ижевск (3412)26-03-58	Магнитогорск (3519)55-03-13	Пермь (342)205-81-47	Сургут (3462)77-98-35
Астана (7172)727-132	Иркутск (395)279-98-46	Москва (495)268-04-70	Ростов-на-Дону (863)308-18-15	Тверь (4822)63-31-35
Астрахань (8512)99-46-04	Казань (843)206-01-48	Мурманск (8152)59-64-93	Рязань (4912)46-61-64	Томск (3822)98-41-53
Барнаул (3852)73-04-60	Калининград (4012)72-03-81	Набережные Челны (8552)20-53-41	Самара (846)206-03-16	Тула (4872)74-02-29
Белгород (4722)40-23-64	Калуга (4842)92-23-67	Нижний Новгород (831)429-08-12	Санкт-Петербург (812)309-46-40	Тюмень (3452)66-21-18
Брянск (4832)59-03-52	Кемерово (3842)65-04-62	Новокузнецк (3843)20-46-81	Саратов (845)249-38-78	Ульяновск (8422)24-23-59
Владивосток (423)249-28-31	Киров (8332)68-02-04	Новосибирск (383)227-86-73	Севастополь (8692)22-31-93	Уфа (347)229-48-12
Волгоград (844)278-03-48	Краснодар (861)203-40-90	Омск (3812)21-46-40	Симферополь (3652)67-13-56	Хабаровск (4212)92-98-04
Вологда (8172)26-41-59	Красноярск (391)204-63-61	Орел (4862)44-53-42	Смоленск (4812)29-41-54	Челябинск (351)202-03-61
Воронеж (473)204-51-73	Курск (4712)77-13-04	Оренбург (3532)37-68-04	Сочи (862)225-72-31	Череповец (8202)49-02-64
Екатеринбург (343)384-55-89	Липецк (4742)52-20-81	Пенза (8412)22-31-16	Ставрополь (8652)20-65-13	Ярославль (4852)69-52-93
Иваново (4932)77-34-06	Киргизия (996)312-96-26-47	Казахстан (772)734-952-31	Таджикистан (992)427-82-92-69	

Единый адрес для всех регионов: fst@nt-rt.ru || www.fujitsu.nt-rt.ru

HIGH POWER TWIN RELAY

1 POLE x 2—30A

(FOR AUTOMOTIVE APPLICATIONS)

FBR562 SERIES

■ FEATURES

- Two independent relays mounted in a single package (43% of the volume of the two FRL-270 relays)
- High current contact capacity (carrying current: 40 A/2 minutes, 30 A/1 hour)
- High heat resistance and extended operating voltage



■ ORDERING INFORMATION

[Example] $\frac{\text{FBR562}}{\text{(a)}} \frac{\text{N}}{\text{(b)}} \frac{\text{D12}}{\text{(c)}} - \frac{\text{W}}{\text{(d)}} \frac{\text{**}}{\text{(e)}}$

(a)	Series Name	FBR562: FBR562 Series relay for 12 V battery (contact gap 0.4 mm)
(b)	Enclosure	N : Plastic sealed type
(c)	Nominal Voltage	D06 : 6 VDC D09 : 9 VDC D12 : 12 VDC
(d)	Contact Material	W : Silver-tin oxide indium N : Silver copper nickel
(e)	Custom Designation	To be assigned custom specification

FBR562 SERIES

■ SPECIFICATIONS

Item		Specifications	
Contact	Arrangement	1 form C × 2 (SPDT × 2)	
	Material	Silver-tin oxide indium (-W type) Silver copper nickel (-N type)	
	Voltage Drop (resistance)	Maximum 100 mV (at 2 A 12 VDC)	
	Ratings	14 VDC 20 A (locked motor load) 14 VDC inrush 20 A, break 4 A (motor free load)	
	Maximum Carrying Current	40 A/2 minutes, 30 A/ 1 hour (25°C, 100% rated coil voltage)	
	Maximum Inrush Current (reference)	-W type: 60 A -N type: 40 A	
	Max. Switching Current (reference)	40 A 16 VDC	
	Minimum Switching Load*1 (reference)	-W type: 6 VDC 1 A -N type: 6 VDC 2 A	
Coil	Operating Temperature	-40°C to +85°C (no frost) (refer to the CHARACTERISTIC DATA)	
	Storage Temperature	-40°C to +100°C (no frost)	
Time Value	Operate (at nominal voltage)	Maximum 10 ms	
	Release (at nominal voltage)	Maximum 5 ms	
Life	Mechanical	1 × 10 ⁷ operations minimum	
	Electrical	1 × 10 ⁵ operations minimum (locked motor load) 1 × 10 ⁶ operations minimum (motor free Load)	
Other	Vibration Resistance		10 to 55 Hz (double amplitude of 1.5 mm)
	Shock Resistance	Misoperation	100 m/s ²
		Endurance	1,000 m/s ²
Weight		Approximately 18 g	

*1 Values when switching a resistive load at normal room temperature and humidity and in a clean environment. The minimum switching load varies with the switching frequency and operating environment.

■ COIL DATA CHART

MODEL		Nominal voltage	Coil resistance (±10%) (at 20°C)	Must operate voltage	Thermal resistance
W contact	N contact				
FBR562ND06-W	FBR562ND06-N	6 VDC	42 Ω	3.6 VDC (at 20°C) 4.5 VDC (at 85°C)	77°C/W
FBR562ND09-W	FBR562ND09-N	9 VDC	95 Ω	5.4 VDC (at 20°C) 6.8 VDC (at 85°C)	
FBR562ND12-W	FBR562ND12-N	12 VDC	170 Ω	7.3 VDC (at 20°C) 9.2 VDC (at 85°C)	

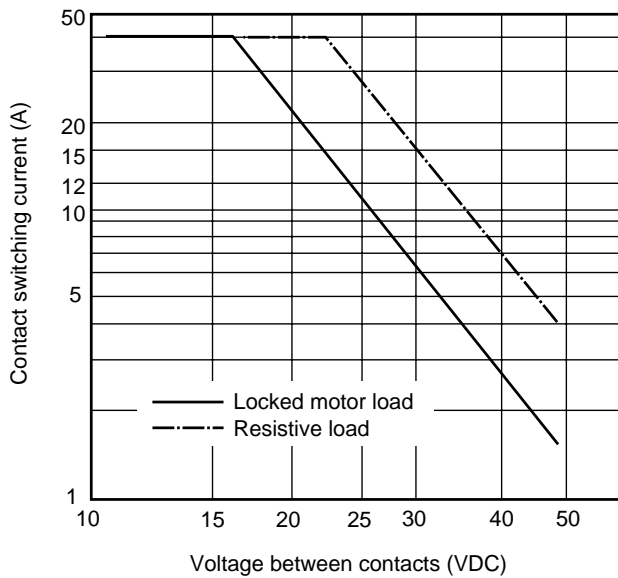
FBR562 SERIES

■ SUITABLE APPLICATIONS

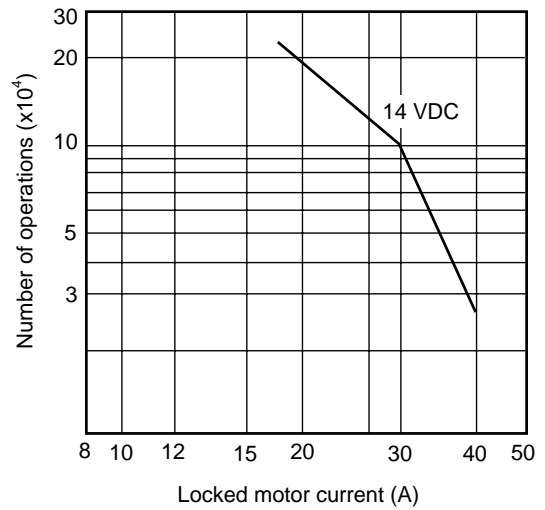
Application		Normal load current	Life x 10 ³	Recommended model (example)
For 12 V battery	Power Windows	20 to 30 A (switching at motor locking)	100	FBR562N□ -W
	Automatic Door Lock	18 to 30 A/4 to 5 door (switching at motor locking)	100	FBR562N□ -W
	Intermittent Wipers	INRUSH 15 to 30 A BREAK 2 to 8 A (motor free)	300	FBR562N□ -N
	Tilt-Lock Wheel	INRUSH 15 A BREAK 2.5 A (motor free)	100	FBR562N□ -W
	Sunroof	20 to 30 A (switching at motor locking)	100	FBR562N□ -W
	Others	Car audio system, etc	—	FBR562N□ -W

■ CHARACTERISTIC DATA

1. MAXIMUM BREAK CAPACITY



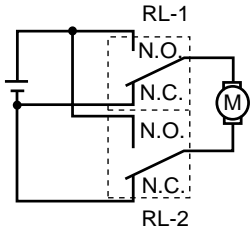
2. LIFE



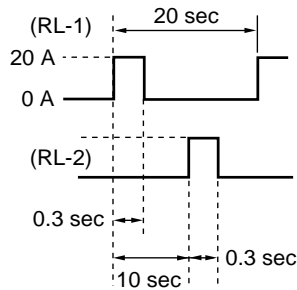
3. LIFE TEST (EXAMPLE)

- Test item
14 VDC-20 A
Motor lock
200,000 operations minimum
(FBR562 □-W type)

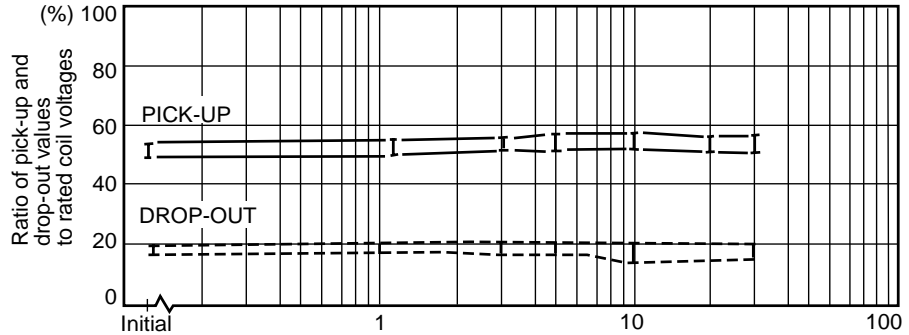
- Test circuit



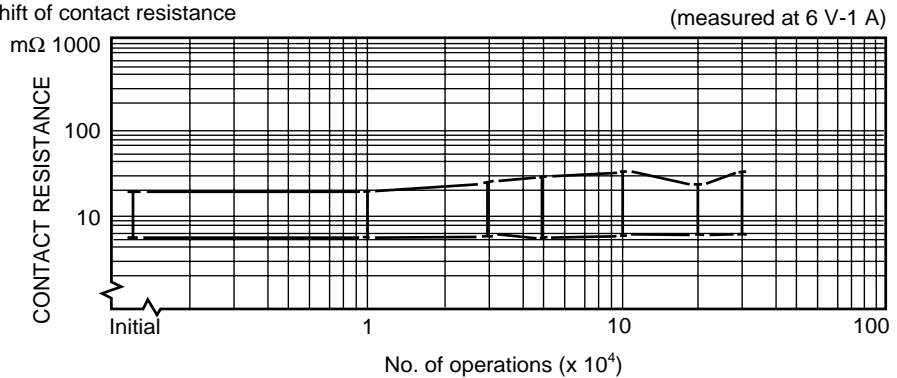
- Current Wave Form



- Shift of pick-up drop-out voltage

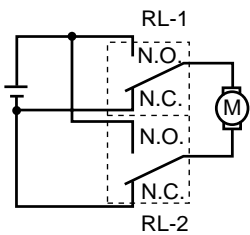


- Shift of contact resistance

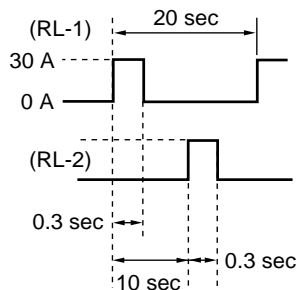


- Test item
14 VDC-30 A
Motor lock
100,000 operations minimum
(FBR562 □-W type)

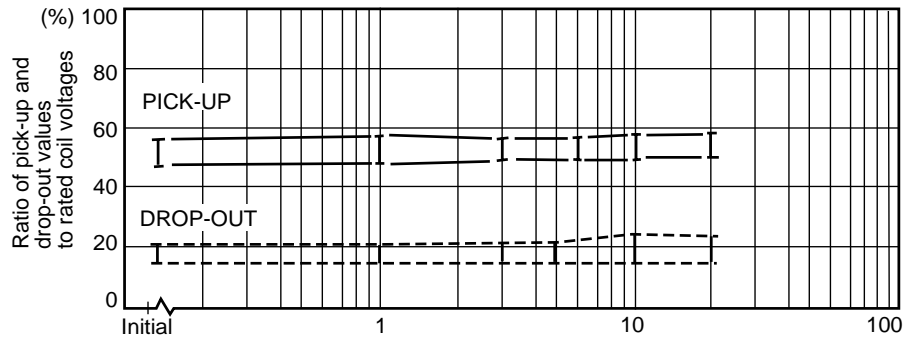
- Test circuit



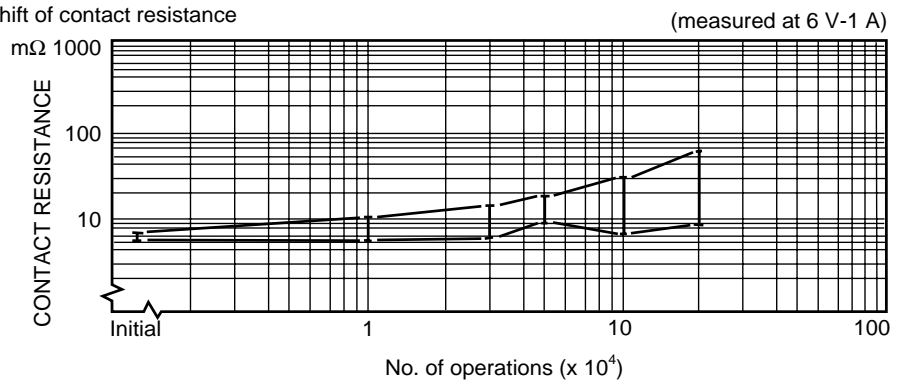
- Current wave form



- Shift of pick-up drop-out voltage



- Shift of contact resistance



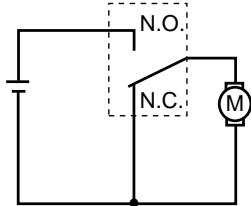
(Continued)

FBR562 SERIES

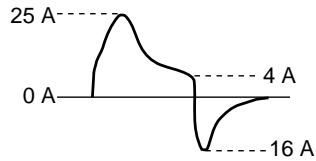
(Continued)

- Test item
16 VDC-25 A INRUSH
Motor Free
400,000 operations minimum
(FBR562 □-N type)

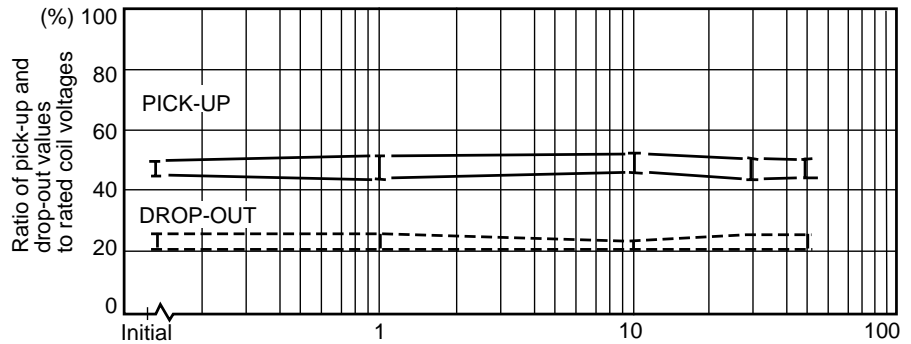
- Test circuit



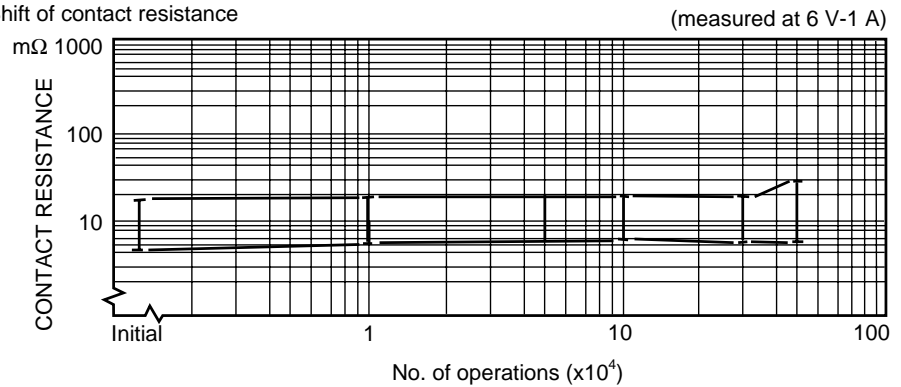
- Current wave form



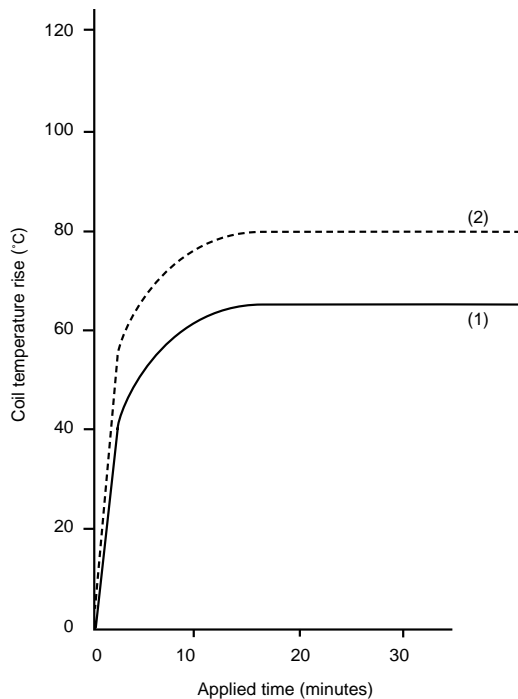
- Shift of pick-up drop-out voltage



- Shift of contact resistance



4. COIL TEMPERATURE RISE

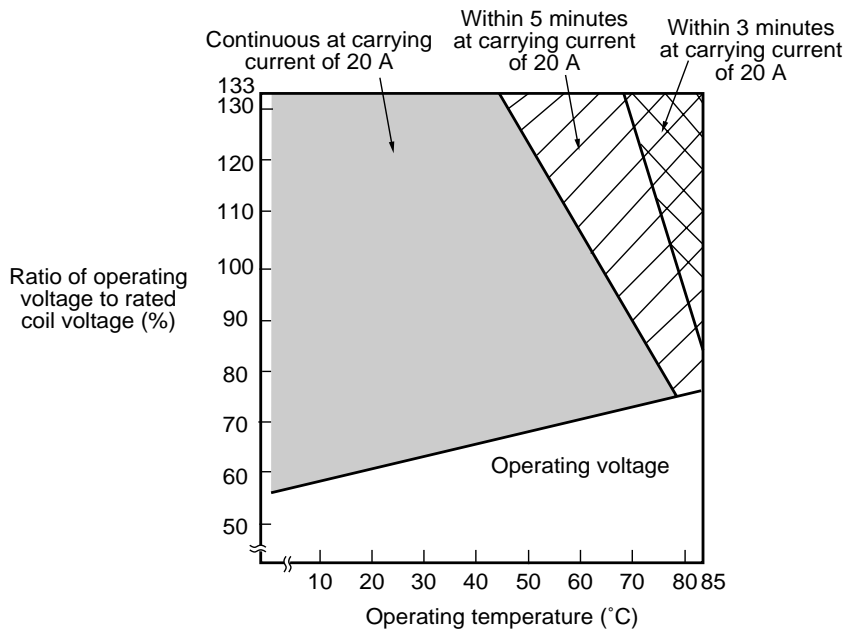


*: One coil energized at 20°C

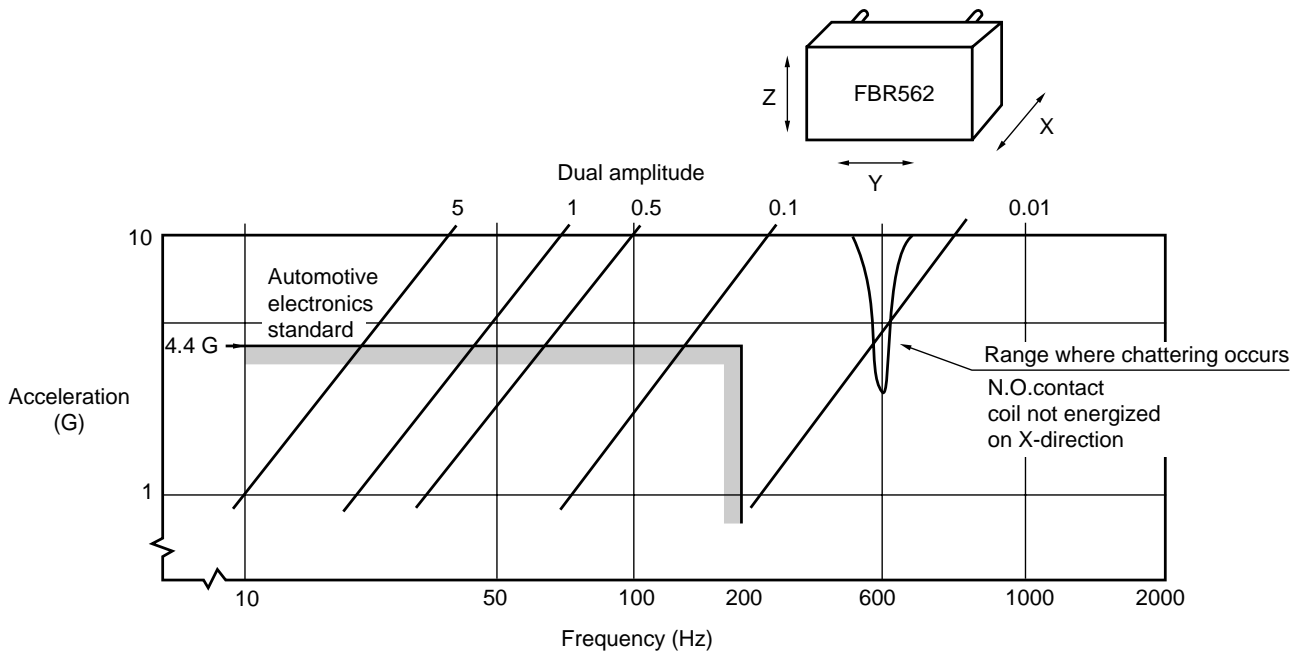
If both coils are energized, temperature rise will increase by
(1) 5°C (0 A carrying current)
(2) 20°C (10 A carrying current)

FBR562 SERIES

5. OPERATING COIL VOLTAGE RANGE (EXAMPLE)

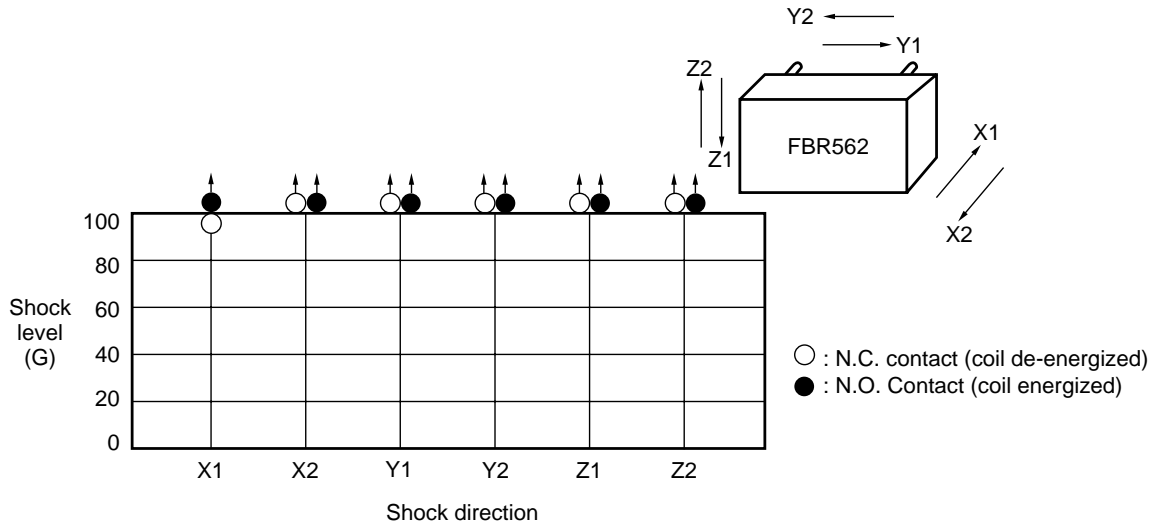


6. VIBRATION RESISTANCE CHARACTERISTICS



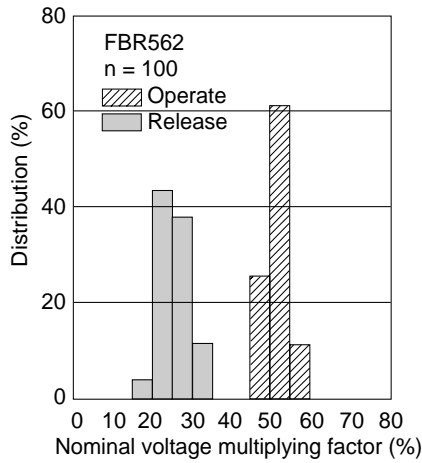
FBR562 SERIES

7. SHOCK RESISTANCE CHARACTERISTICS

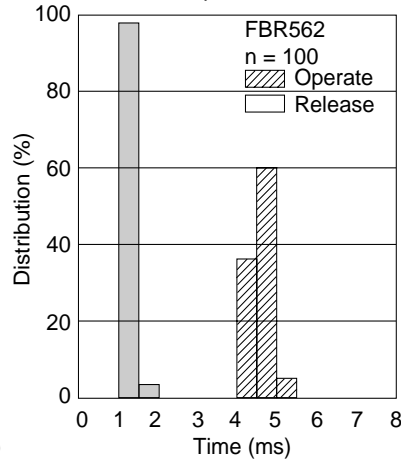


REFERENCE DATA

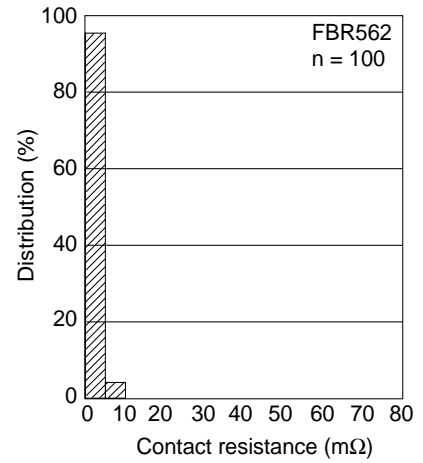
Distribution of operate and release voltage



Distribution of operate and release time



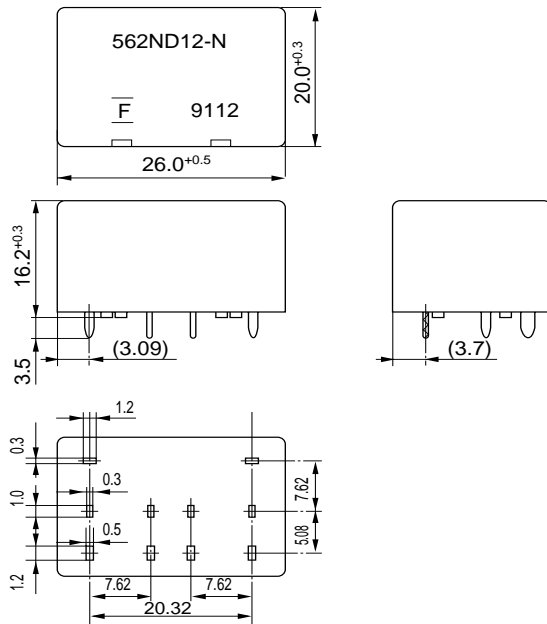
Distribution of contact resistance



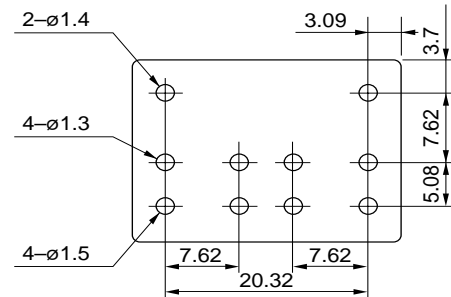
FBR562 SERIES

■ DIMENSIONS

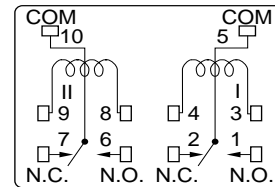
● Dimensions



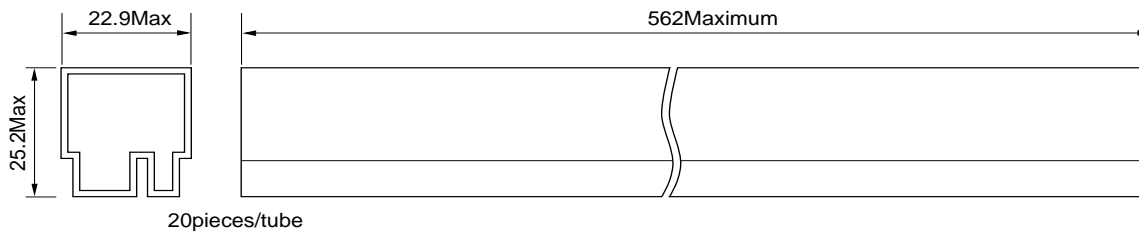
● PC board mounting hole layout (BOTTOM VIEW)



● Schematic (BOTTOM VIEW)



● Tube carrier



Unit: mm

Архангельск (8182)63-90-72	Ижевск (3412)26-03-58	Магнитогорск (3519)55-03-13	Пермь (342)205-81-47	Сургут (3462)77-98-35
Астана (7172)727-132	Иркутск (395)279-98-46	Москва (495)268-04-70	Ростов-на-Дону (863)308-18-15	Тверь (4822)63-31-35
Астрахань (8512)99-46-04	Казань (843)206-01-48	Мурманск (8152)59-64-93	Рязань (4912)46-61-64	Томск (3822)98-41-53
Барнаул (3852)73-04-60	Калининград (4012)72-03-81	Набережные Челны (8552)20-53-41	Самара (846)206-03-16	Тула (4872)74-02-29
Белгород (4722)40-23-64	Калуга (4842)92-23-67	Нижний Новгород (831)429-08-12	Санкт-Петербург (812)309-46-40	Тюмень (3452)66-21-18
Брянск (4832)59-03-52	Кемерово (3842)65-04-62	Новокузнецк (3843)20-46-81	Саратов (845)249-38-78	Ульяновск (8422)24-23-59
Владивосток (423)249-28-31	Киров (8332)68-02-04	Новосибирск (383)227-86-73	Севастополь (8692)22-31-93	Уфа (347)229-48-12
Волгоград (844)278-03-48	Краснодар (861)203-40-90	Омск (3812)21-46-40	Симферополь (3652)67-13-56	Хабаровск (4212)92-98-04
Вологда (8172)26-41-59	Красноярск (391)204-63-61	Орел (4862)44-53-42	Смоленск (4812)29-41-54	Челябинск (351)202-03-61
Воронеж (473)204-51-73	Курск (4712)77-13-04	Оренбург (3532)37-68-04	Сочи (862)225-72-31	Череповец (8202)49-02-64
Екатеринбург (343)384-55-89	Липецк (4742)52-20-81	Пенза (8412)22-31-16	Ставрополь (8652)20-65-13	Ярославль (4852)69-52-93
Иваново (4932)77-34-06	Киргизия (996)312-96-26-47	Казахстан (772)734-952-31	Таджикистан (992)427-82-92-69	