

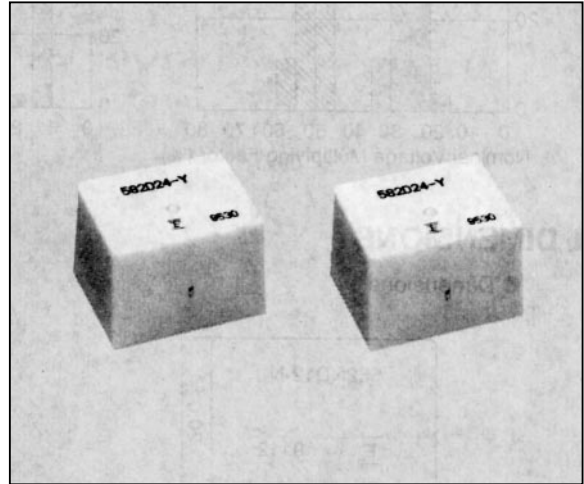
# WIDER CONTACT GAP TWIN RELAY

## 1 POLE × 2-12 A (28 VDC) (FOR AUTOMOTIVE APPLICATIONS)

### FBR580 SERIES

#### ■ FEATURES

- Relay for 24 V load (Truck automotive application) newly added to our high power relay series, FBR560/570 series.
- 1.4 mm wider contact gap  
Wider contact gap allows to break high voltage load 32 VDC-14 A locked rotor.
- Same pin configuration with FBR570 relay.



#### ■ ORDERING INFORMATION

[Example]  $\frac{\text{FBR582}}{\text{(a)}} \frac{\text{N}}{\text{(b)}} \frac{\text{D24}}{\text{(c)}} - \frac{\text{Y}}{\text{(d)}} \frac{\text{**}}{\text{(e)}}$

(a)	Series Name	FBR582: FBR582 Series (Contact Gap 1.4 mm)
(b)	Enclosure	N : Plastic Sealed Type
(c)	Nominal Voltage	D24 : 24 VDC
(d)	Contact Material	W : Silver-Tin oxide indium Y : Silver-Tin oxide
(e)	Custom Designation	To be assigned custom specification

## ■ SPECIFICATIONS

Item		Specifications	
Contact	Arrangement	1 From C (SPDT) × 2	
	Material	Silver-Tin oxide indium (-W Type) Silver-Tin oxide (-Y Type)	
	Voltage Drop (Resistance)	Max. 100 mV (at 2 A 12 VDC)	
	Rating	28 VDC 12 A (Locked Motor Load)	
	Max. Carrying Current	30 A/5 min. 40 A/2 min. (25°C, Nominal Voltage)	
	Max. Inrush Current (Reference)	-W Type: 60 A	
	Max. Switching Current (Reference)	14 A 32 VDC	
	Min. Switching Load <sup>(*)</sup> (Reference)	1 A 6 VDC	
Coil	Operating Temperature	-30°C~ +85°C (No frost) (Refer to the CHARACTERISTIC DATA)	
	Storage Temperature	-40°C~ +100°C (No frost)	
Time Value	Operate (at nominal voltage)	Max. 10 ms	
	Release (at nominal voltage)	Max. 5 ms	
Life	Mechanical	1 × 10 <sup>6</sup> ops. min.	
	Electrical	100 × 10 <sup>3</sup> ops. min. (Locked Motor Load)	
Other	Vibration Resistance	10 to 55 Hz (double amplitude of 1.5 mm)	
	Shock Resistance	Misoperation	100 m/s <sup>2</sup> (11 ±1 ms)
		Endurance	1,000 m/s <sup>2</sup> (11 ±1 ms)
	Unit Mass	Approx. 18 g	

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

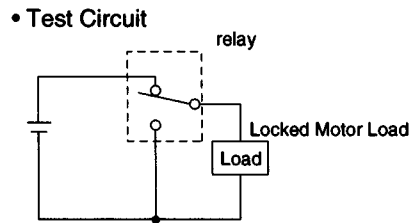
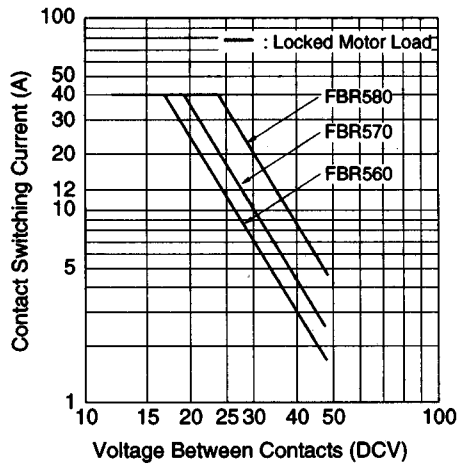
## ■ COIL DATA CHART

MODEL		Nominal Voltage	Coil resistance (±10%) (at 20°C)	Must Operate Voltage	Thermal Resistance
W contact	Y contact				
FBR582ND24-W	FBR582ND24-Y	24 VDC	170 Ω	14.4 VDC (at 20°C) 18.0 VDC (at 85°C)	56°C/W

# FBR580 SERIES

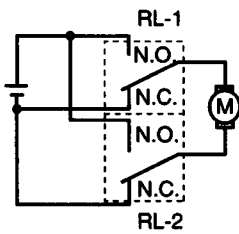
## CHARACTERISTIC DATA

### 1. MAXIMUM BREAK CAPACITY

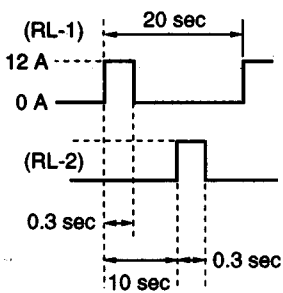


### 2. LIFE TEST (EXAMPLE)

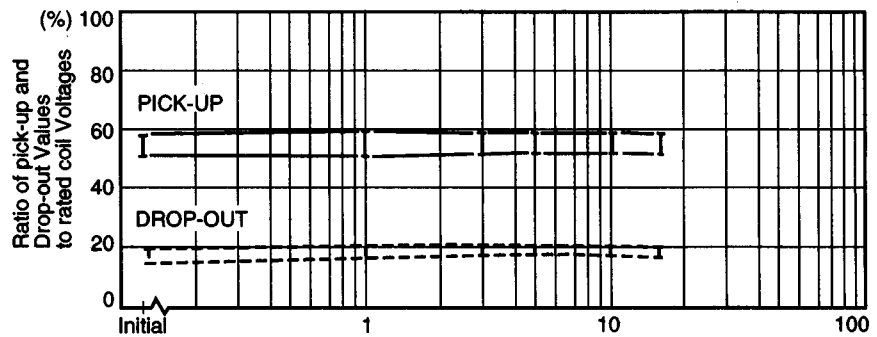
• Test Circuit



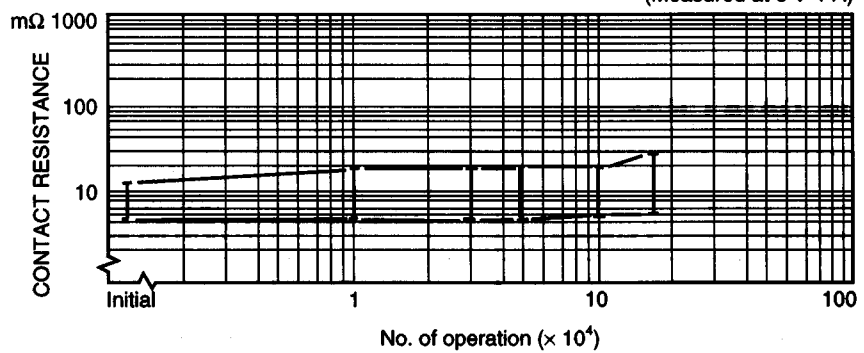
• Current Wave Form



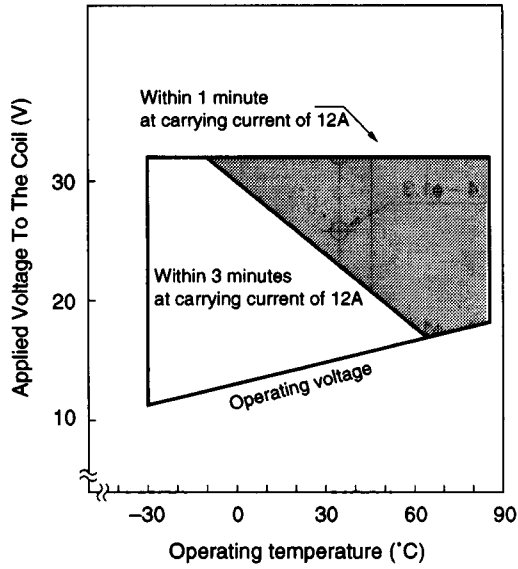
• Shift of Pick-up Drop-out Voltage



• Shift of Contact Resistance

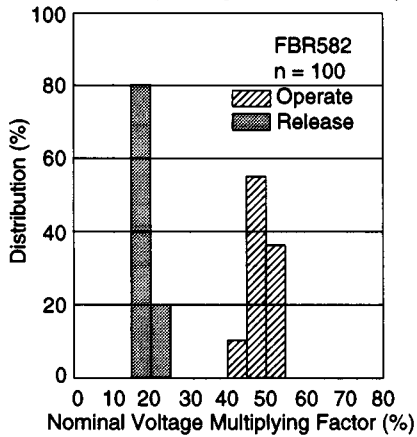


## 3. OPERATING COIL VOLTAGE RANGE

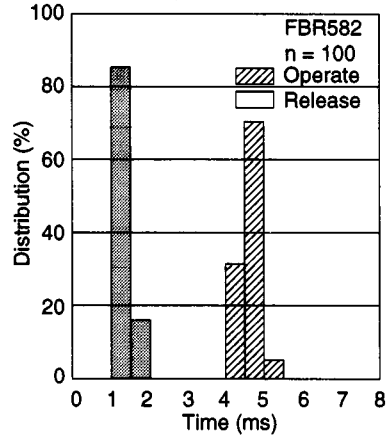


## ■ REFERENCE DATA

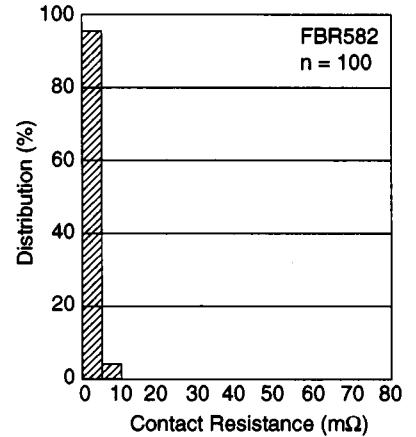
Distribution of Operating & Release Voltage



Distribution of Operate & Release Time



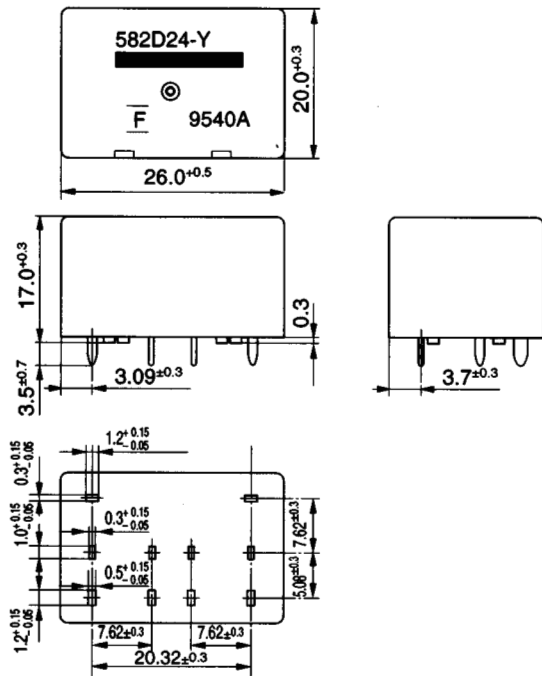
Distribution of Contact Resistance



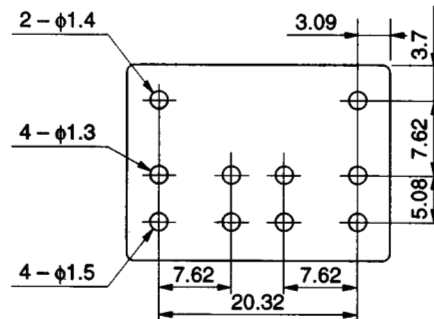
# FBR580 SERIES

## ■ DIMENSIONS

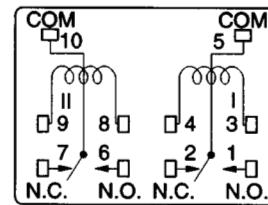
### ● Dimension



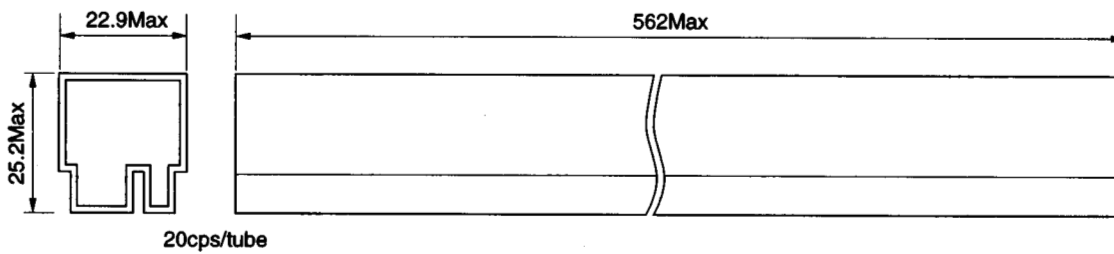
### ● PC board mounting hole layout (BOTTOM VIEW)



### ● Schematics (BOTTOM VIEW)



### ● Tube carrier



Unit: mm