

## Features

- Mini ISO high power automotive relay 30A/50A.
- High temperature endurance up to 125°C.
- Optional to be equipped with protection diode or resistor.
- Both available PCB terminal and quick connect terminal versions.
- General purpose applications for headlights, cell motors, air conditioners, ABS, EPS, etc.



## Ordering Information

NF104	100	E	7	12	S	1	V	D	XXXX	
1	2	3	4	5	6	7	8	9	10	
1.	NF104	-- 40A version						7.	Blank	-- Standard cover
	NF104H	-- 50A version						1		-- Insulation bracket
								2		-- Metal bracket
2.	100	-- 1A						8.	Blank	-- Plug-in type 1
	001	-- 1C						P		-- PCB (standard cover only)
3.	E	-- Contact Material Ag alloy						9.	Blank	-- Standard
4.	Blank	-- Standard						D		-- Diode
								R		-- Resistor
5.	12, 24	-- Coil Voltage [VDC]						10.	XXXX	-- Letters and/or numbers for special customer design
6.	Blank	-- Dust cover								
	S	-- Sealed washable (NF104 only)								

## Contact Data

Type of contact	Single Contact	
Configuration	1A/1C	
Contact rating	NF104	40A, 14VDC
	1A-Form	20A, 24VDC
	NF104	40A/ 30A, 14VDC
	1C-Form NO / NC	20A/15A, 24VDC
	NF104H	50A, 14VDC
	1A-Form	25A, 24VDC
Contact rating	NF104H	50A / 40A,14VDC
	1C-Form	25A / 20A, 24VDC
Max. switching power	NF104: 630W; NF104H: 700W	
Max. switching voltage	NF104:75VDC (max.40A); NF104H:75VDC(max. 50A)	
Contact Resistance	≤30mΩ	
Contact material	Ag alloy	

### Coil rating (DC @+23°C)

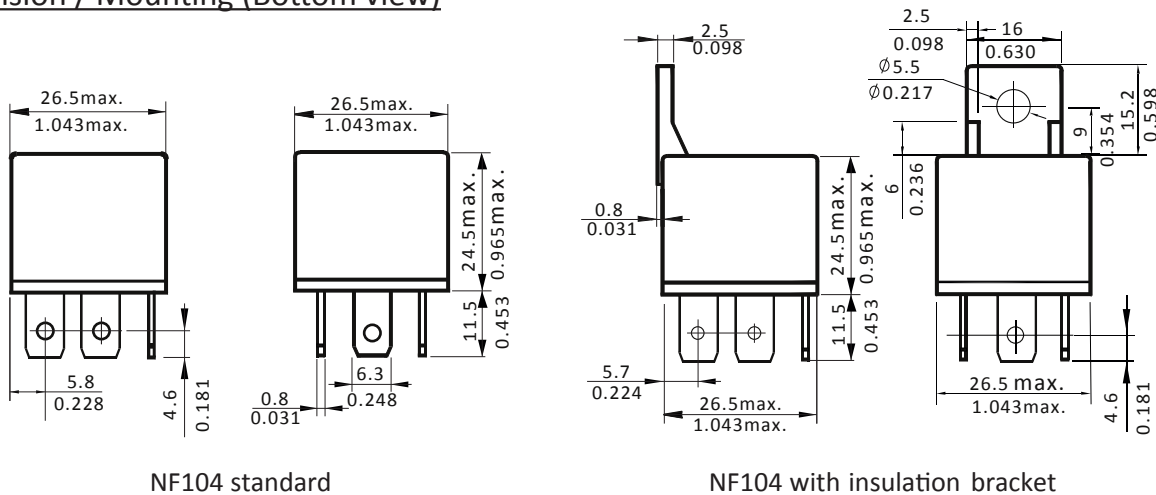
U <sub>N</sub> (VDC)		R (Ω ± 10%)	Pull-in Voltage U <sub>PI</sub> (VDC)	Drop-out voltage U <sub>DO</sub> (VDC)	Coil power P <sub>coil</sub> (W)
Rated	Max.				
12	15.6	90	7.8	1.2	1.6
24	31.2	360	15.6	2.4	

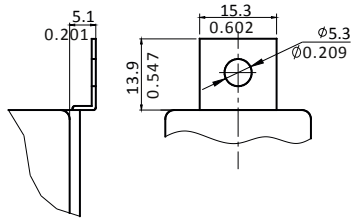
CAUTION: 1. The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.  
 2. Pull-in and drop-out voltage are for test purposes only and not to be used as design criteria.

### Specification

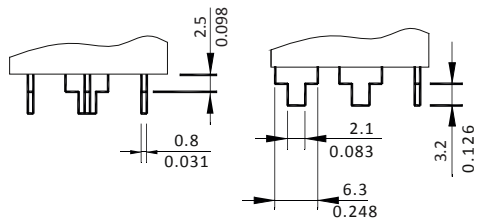
Mechanical life (frequency)	18000 oper. / h	10 <sup>7</sup> Oper.
Electrical life (frequency)	360 oper. / h	10 <sup>5</sup> Oper.
Operating time / Release time		≤7ms / ≤5ms
Insulation Resistance		100MΩMin (at 500VDC)
Dielectric strength contacts/ coil		750 VACrms
Dielectric strength open contacts		500 VACrms
Ambient temperature (nofreezing)		-40°C...+125°C
Vibration resistance		10 ~ 40Hz; double amplitude 1.5mm
Shock resistance		147m/s <sup>2</sup> 11ms
Dimensions	Standard	26.5 X 26.5 X 24.5
	With bracket	26.5 X 26.5 X 40.5
Weight	Standard	approx. 31g
	With bracket	approx. 36g

### Dimension / Mounting (Bottom view)

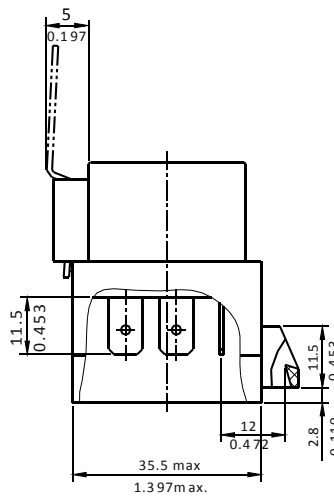




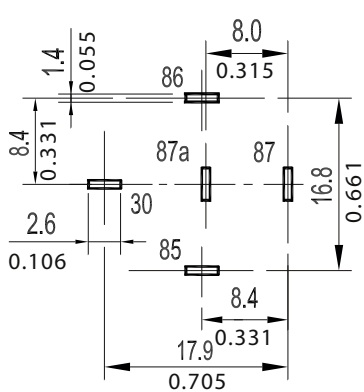
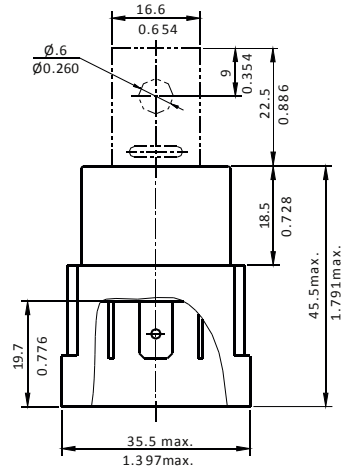
NF104 with metal bracket



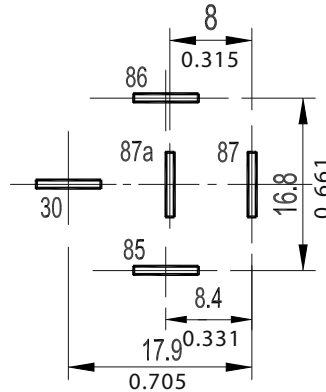
Note: Terminals as shown above are also available



NF104 shrouded with metal bracket



PCB type

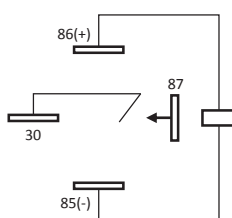


Plug in type 1

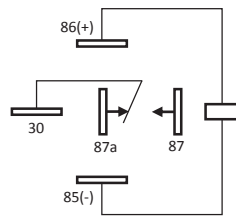
Notes: 1. Dimensions are in millimeters  
2. Inch equivalents are given for general information only

## Wiring Diagram

Bottom View



1A



1C plug in type 1

### Disclaimer

All technical performance data apply to the relay as such, specific conditions of the individual application are not considered. Please always check the suitability of the relay for your intended purpose. We do not assume any responsibility or liability for not complying herewith. We recommend to complete our questionnaire and to request our technical service. Any responsibility for the application of the product remains with the customer only. All specifications are subject to change without notification. All rights of NF Forward GmbH are reserved.