

NF90
NF90H
NF90P

Heavy Duty Power Relay

1 pole 30A / 40A / 50A



Technical data			
Contact data			
Type of contact	Single contact		
Configuration	1NO / 1CO		
Contact resistance	mΩ	≤30	
Rated voltage	VAC	250	
Rated current	NF90 NO/NC	A	30 / 20
	NF90H NO/NC	A	40 / 30
	NF90P NO/NC	A	50 / 35
Contact material	Ag alloy		

General data		
Mechanical life	Oper.	10 X 10 ⁶
Electrical life 25A, 277VAC @ +40°C	Oper.	100 X 10 ³
Operating time / Release time	in ms max	15 / 10
Dielectric strength contacts / coil	VAC _{rms}	2500 / 4000 (without pin 6)
Dielectric strength open contacts	VAC _{rms}	1500
Resist heat class		Class F
Ambient temperature	°C	-55...+100
Vibration resistance 10 ~ 55Hz double amplitude	mm	1.5
Shock resistance 11 ms	m/s ²	200
Dimensions	mm	32.5 X 27.6 X 20.5
Mass	g	30

Coil data at +23°C – 900mW Coil Consumption (NF90 only)				
U _N (VDC)	R (Ohm) ± 10%	U _{PI} (VDC)	U _{DO} (VDC)	I _N (mA)
5	28	75%V or less of Nominal voltage (Initial)	10%V or more of nominal voltage (Initial)	180
6	40			150
9	90			100
12	160			75
24	640			38
48	2560			19

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Coil data at +23°C – 1500mW Coil Consumption (NF90H and NF90P only)				
U_N (VDC)	R (Ohm) $\pm 10\%$	U_{PI} (VDC)	U_{DO} (VDC)	I_N (mA)
5	17	75%V or less of Nominal voltage (Initial)	10%V or more of nominal voltage (Initial)	300
6	24			250
9	54			167
12	96			125
24	384			63
48	1536			31

Ordering Key

1.	2.	3.	4.	5.	6.	7.	8.	9.
NF90	100	E	-	24	S	CG	B	XXXX

Character 1	Type	NF90 = 30A Version NF90H = 40A Version NF90P = 50A Version
Character 2	Configuration	100 = 1 NO 001 = 1 CO
Character 3	Contact material	E = Ag alloy
Character 4	Pinning	Nil = Without pin 6 7 = With pin 6 (NF90 and NF90H only)
Character 5	Coil code	5 = 5VDC 6 = 6VDC 9 = 9VDC 12 = 12VDC 24 = 24VDC 48 = 48VDC
Character 6	Protection	Nil = Flux tight S = Sealed washable
Character 7	Contact gap	Nil = Standard CG = 1.8mm contact gap (NF90 1NO only)
Character 8	Dielectric strength contacts / coil	Nil = 2500 VAC _{rms} B = 4000 VAC _{rms} (NF90 and NF90H without pin 6 only)
Character 9	Special	XXXX = Letters and/or numbers for special customer design

Ordering key, example: NF90H 001E 24 S

Heavy duty power relay NF90H:

1CO-Form, NO 40A, NC 30A, 250VAC, Ag alloy, sealed washable, 24VDC coil

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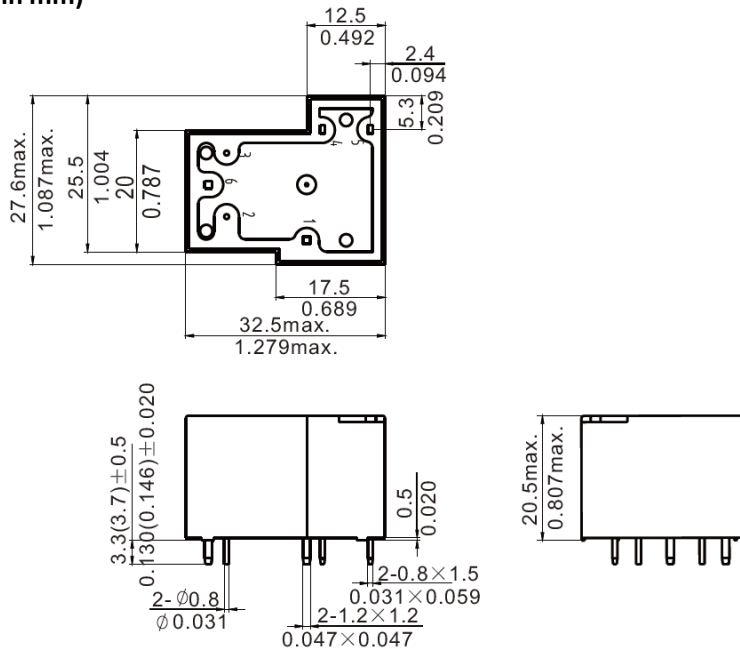
Heavy Duty Power Relay

1 pole 30A / 40A / 50A

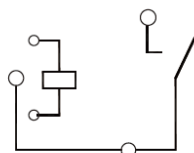


Safety approval ratings	
VDE (Pending)	UL / CUL
25A, 250VAC (NF90H version only)	NO: 40A, 240VAC; 30A, 277VAC; 2HP 250VAC (NF90H Version only); NC: 30A, 240VAC; 20A, 277VAC; 1 1/2 HP 250VAC (NF90H Version only);
	NO : 50A, 240VAC; NC: 35A, 240VAC; (Pending)

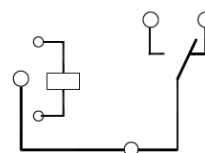
Outline dimensions (in mm)



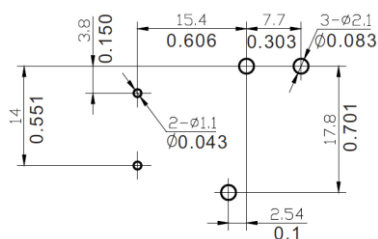
Wiring / PCB-layout (Bottom view)



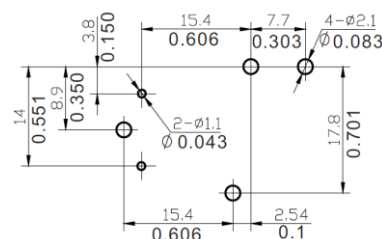
1A



1C



Without pin 6



With pin 6

View on solder pins.
Dimensions in mm.

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.