

Single relay - REL-MR- 12DC/21HC - 2961309

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Plug-in miniature power relay, with power contact for high continuous currents, 1 PDT, input voltage 12 V DC

Your advantages

- Switching current of up to 16 A



Key Commercial Data

Packing unit	1 pc
Minimum order quantity	10 pc
GTIN	 4 017918 187552
GTIN	4017918187552
Weight per Piece (excluding packing)	15.700 g
Custom tariff number	85364190
Country of origin	Austria

Technical data

Dimensions

Width	12.7 mm
Height	29 mm
Depth	15.7 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	RT II

Single relay - REL-MR- 12DC/21HC - 2961309

Technical data

Coil side

Nominal input voltage U_N	12 V DC
Input voltage range in reference to U_N	see diagram
Typical input current at U_N	33 mA
Typical response time	7 ms
Typical release time	3 ms
Coil resistance	360 Ω \pm 10 % (at 20 °C)
Power dissipation for nominal condition	0.4 W

Contact side

Contact type	1 PDT
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (at 10 mA)
Min. switching current	10 mA (at 12 V)
Maximum inrush current	50 A (20 ms)
Limiting continuous current	16 A
Interrupting rating (ohmic load) max.	384 W (at 24 V DC)
	58 W (at 48 V DC)
	48 W (at 60 V DC)
	50 W (at 110 V DC)
	80 W (at 220 V DC)
	4000 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13)
	0.2 A (at 110 V, DC13)
	0.2 A (at 250 V, DC13)
	6 A (at 24 V, AC15)
	6 A (at 120 V, AC15)
	6 A (at 250 V, AC15)
Motor load according to UL 508	1/2 HP, 120 V AC (N/O contact)
	1 HP, 240 V AC (N/O contact)
	1/3 HP, 120 V AC (N/C contact)
	3/4 HP, 240 V AC (N/C contact)
	1/4 HP, 200 ... 250 V AC

General

Test voltage relay winding/relay contact	5 kV AC (50 Hz, 1 min.)
Operating mode	100% operating factor

Single relay - REL-MR- 12DC/21HC - 2961309

Technical data

General

Mechanical service life	3x 10 ⁷ cycles
Service life, electrical	see diagram
Mounting position	any
Assembly instructions	Can be aligned without spacing (> 70 °C ≥ 2.5 mm)

Connection data

Connection method	Solder connection
-------------------	-------------------

Standards and Regulations

Connection in acc. with standard	CUL
Standards/regulations	IEC 60664
	EN 50178
	EN 61810-1
Pollution degree	3
Overvoltage category	III

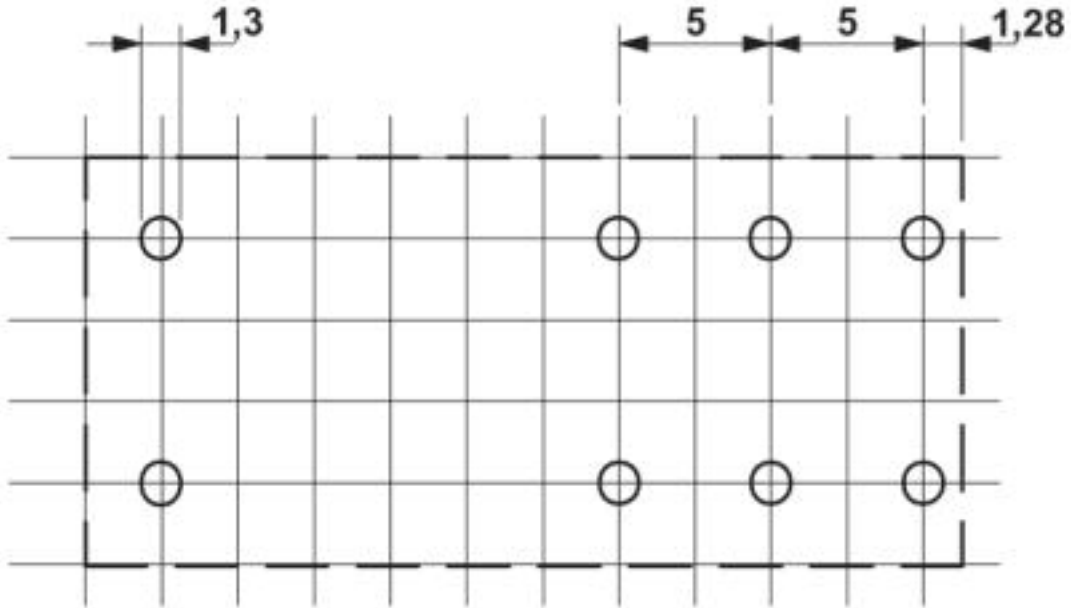
Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Single relay - REL-MR- 12DC/21HC - 2961309

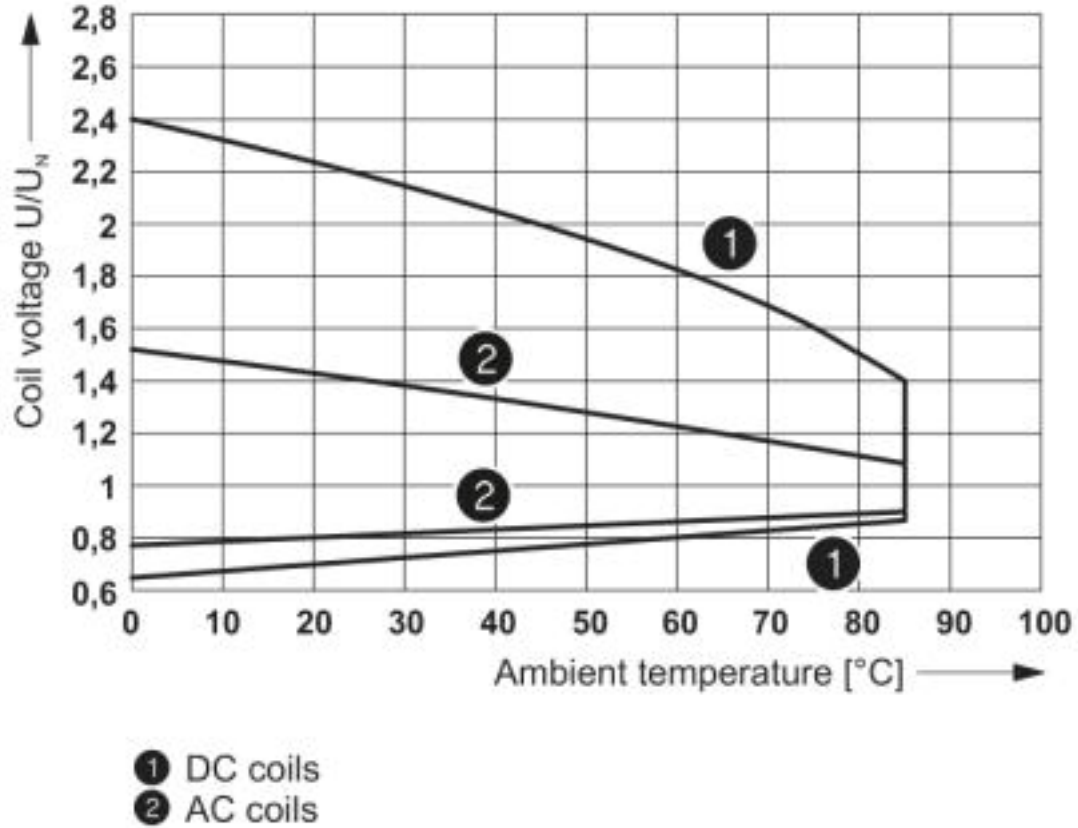
Drilling diagram



a = pitch division 2.5 mm

Single relay - REL-MR- 12DC/21HC - 2961309

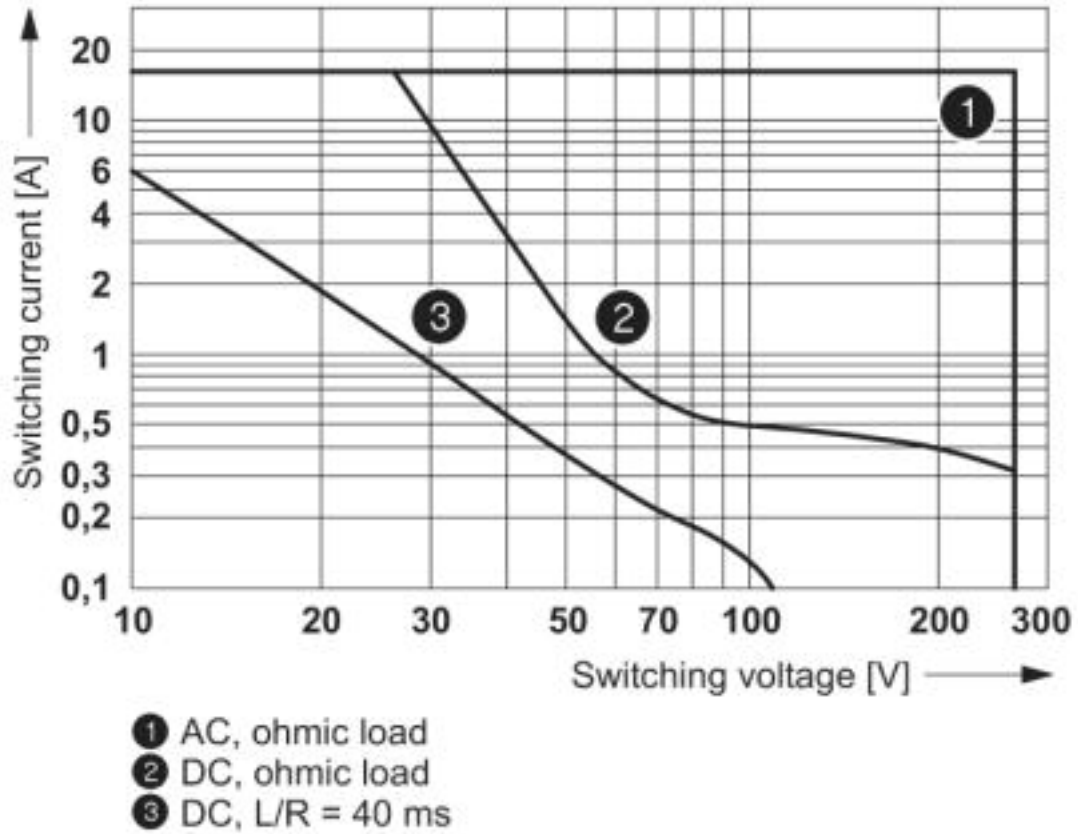
Diagram



Operating voltage range

Single relay - REL-MR- 12DC/21HC - 2961309

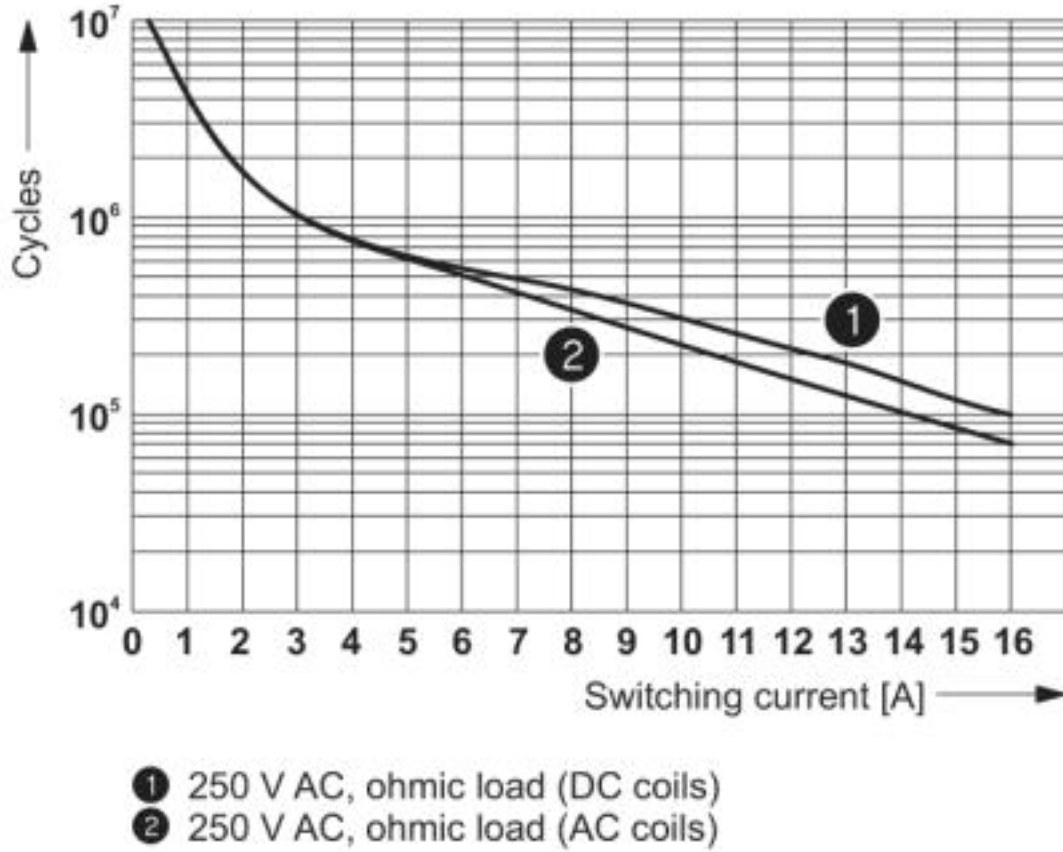
Diagram



Interrupting rating

Single relay - REL-MR- 12DC/21HC - 2961309

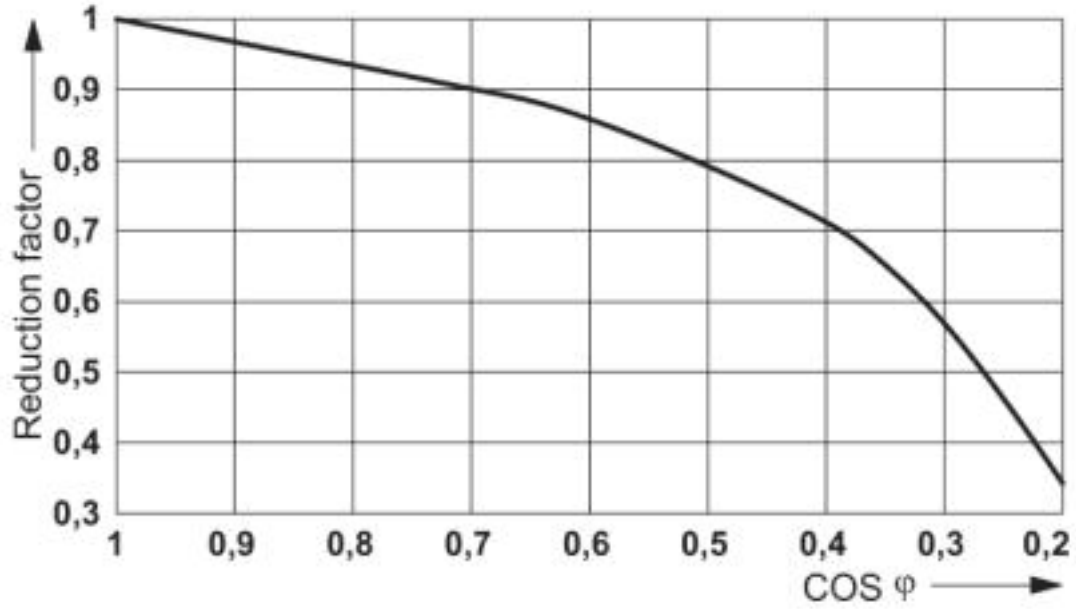
Diagram



Electrical service life

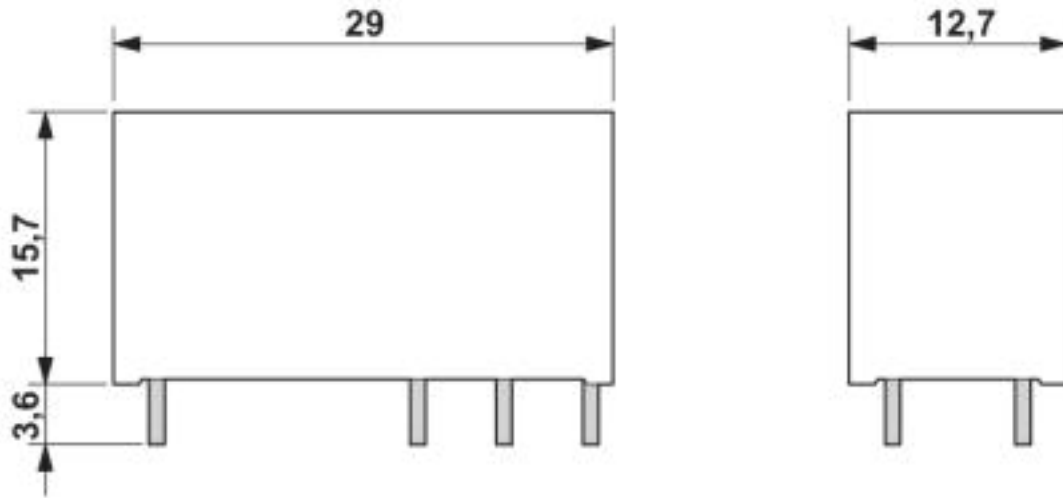
Single relay - REL-MR- 12DC/21HC - 2961309

Diagram



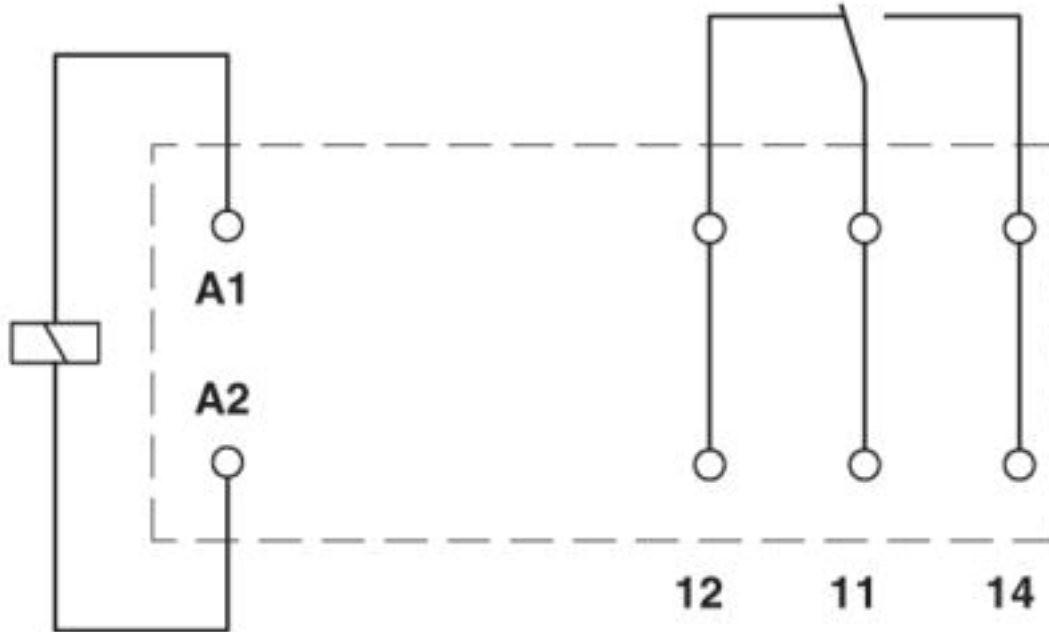
Service life reduction factor with various cos phi

Dimensional drawing



Single relay - REL-MR- 12DC/21HC - 2961309

Circuit diagram



Classifications

eCl@ss

eCl@ss 4.0	27371100
eCl@ss 4.1	27371100
eCl@ss 5.0	27371600
eCl@ss 5.1	27371600
eCl@ss 6.0	27371600
eCl@ss 7.0	27371601
eCl@ss 8.0	27371601
eCl@ss 9.0	27371601

ETIM

ETIM 2.0	EC001437
ETIM 3.0	EC001437
ETIM 4.0	EC001437
ETIM 5.0	EC001437
ETIM 6.0	EC001437
ETIM 7.0	EC001437

Single relay - REL-MR- 12DC/21HC - 2961309

Classifications

UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121515
UNSPSC 11	39121515
UNSPSC 12.01	39121515
UNSPSC 13.2	39122334

Approvals






Approvals

Approvals

UL Recognized / VDE Zeichengenehmigung / cUL Recognized / UL Recognized / cUL Recognized / PRS / GL / UL Recognized / cUL Recognized / VDE Zeichengenehmigung / EAC / EAC

Ex Approvals

Approval details

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 228652
VDE Zeichengenehmigung		http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40048281
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 228652
UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 172140
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 172140

Single relay - REL-MR- 12DC/21HC - 2961309

Approvals

PRS		http://www.prs.pl/	TE/2109/880590/16
-----	--	---	-------------------

GL		https://approvalfinder.dnvgl.com/	46016-03 HH
----	--	---	-------------

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 228652
---------------	--	---	---------------

cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 228652
----------------	--	---	---------------

VDE Zeichengenehmigung		http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40007758
------------------------	--	---	----------

EAC			TR_TS_D_00573_c
-----	--	--	-----------------

EAC			TR_TS_S_00010_c
-----	--	--	-----------------

Accessories

Additional products

Relay base - PLC-BPT- 12DC/21HC - 2900253



14 mm PLC basic terminal block for high continuous currents with push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 12 V DC

Single relay - REL-MR- 12DC/21HC - 2961309

Accessories

Relay base - PLC-BSP- 12DC/21HC - 2912332



14 mm PLC basic terminal block for high continuous currents with spring-cage connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 12 V DC

Relay base - PLC-BSC- 12DC/21HC - 2967769



14 mm PLC basic terminal block for high continuous currents with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 PDT, input voltage 12 V DC

Relay base - PR1-BSC2/2X21 - 2833518



Relay base PR1..., for miniature power relay or miniature switching relay with 1 or 2 PDT or solid-state relay of same construction, 2/2 level design, screw connections, connection facility for input/interference suppression modules

Relay base - PR1-BSC3/2X21 - 2833521



Relay base PR1..., for miniature power relay or miniature switching relay with 1 or 2 PDT or solid-state relay of same construction, 1/3 level design, screw connections, connection facility for input/interference suppression modules

Relay base - PR1-BSP3/2X21 - 2833534



Relay base PR1..., for miniature power relay or miniature switching relay with 1 or 2 PDT or solid-state relay of same construction, 1/3 level design, spring-cage connections, connection facility for input/interference suppression modules

Single relay - REL-MR- 12DC/21HC - 2961309

Accessories

Relay base - RIF-1-BPT/2X21 - 2900931



RIF-1... relay base, for miniature power relay with 1 or 2 PDTs or solid-state relays of the same design, push-in connection, plug-in option for input/suppressor modules, for mounting on NS 35/7,5

Relay base - RIF-1-BSC/2X21 - 2900930



RIF-1... relay base, for miniature power relay with 1 or 2 changeover contacts or identical solid-state relays, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5