

Description

Bistable power relay for single pole disconnection with a variety of versions available. Due to the possible combinations of the different configurations as well as due to different modes of mounting the power relay is suitable for many applications. In release condition its power consumption is zero and it is therefore particularly suited to battery-powered systems.

Typical applications

Passenger cars and commercial vehicles, agricultural vehicles, watercraft, construction vehicles, motor homes and industrial trucks



PR80

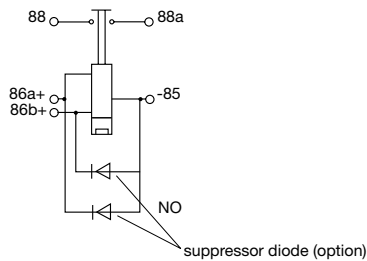
Technical data

Continuous current	100 A, 200 A, 300 A		
Coil data			
Rated voltage	DC 12 V	DC 24 V	DC 48 V
Operating voltage	9...16 V	18...32 V	36...54 V
Pulse duration for excitation and release	min. 50 ms / max. 500 ms		
Power of excitation coil	approx. 155 W		
Power of release coil	approx. 115 W		
Ambient temperature	-40 °C...+85 °C		
Protection class			
interior	IP67 (0.2 bar: 1 min) to IEC 529		
terminals	IP00 to IEC 529		
Vibration	6 g (50-2000 Hz)		
Shock	40 g (11 msec)		
Resistance to	oil, fuel, hydraulic fluids		
Housing	galvanized steel, tin-plated or lacquered optional		
Mounting method	side mount, small foot mount		
Spark / reverse polarity protection	special version reverse polarity protected and/or blow magnet		
Terminal thread	100 A: M8 200 A: M8 or M10 300 A: M10		
Mounting position	any		
Switching element	silver contacts (AgSnO)		
Min. insulation resistance	100 MΩ		
High voltage resistance	1,050 V for 1 min		
Max. initial contact voltage drop	150 mV		
ON duty	100 %		
Overload (ampacity in closed condition)	100 A: 800 A for 1 s, 200 A for 20 s 200 A: 1 600 A for 1 s, 400 A for 20 s 300 A: 2 400 A for 1 s, 600 A for 20 s		
Typical life at ambient			
rated load Ω	20,000 cycles (at DC 12 / 24 V)		
mechanically	40,000 cycles		
Starting time incl. bounce duration	max. 40 ms		
Bounce duration	max. 5 ms		
Release time	max. 20 ms		
Cable cross section at rated load	100 A: min. 50 mm ² 200 A: min. 70 mm ² 300 A: min. 95 mm ²		
Mass	approx. 420 g		

Ordering information

Type no.	PR80
Contact type	1 make contact
Rated voltage	1 12 V 2 24 V 3 48 V
Continuous current	1 100 A 2 200 A 3 300 A
Design of main terminals	1 M8 (for current ratings 100 A and 200 A) 2 M10 (for current ratings 200 A and 300 A)
Contact design	2 silver (standard)
Options	0 without 2 suppressor diode 3 blow magnet, recommended for voltages ≥ 40 V 4 suppressor diode and blow magnet
Housing	1 galvanised steel (standard)
Mounting method	1 side mount 2 small foot mount
Ordering example	PR80 - 1 2 3 -2 2 0 -1 1

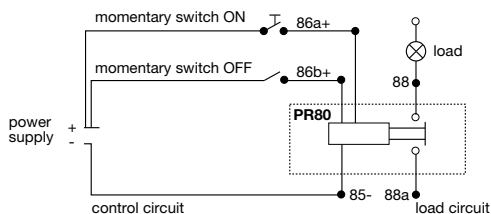
Schematic diagram



Schematic diagram

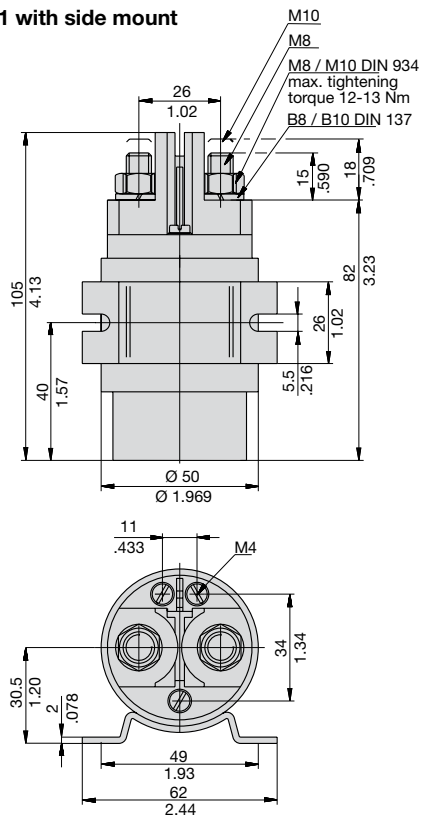
PR80

PR80-1
make contact / NO

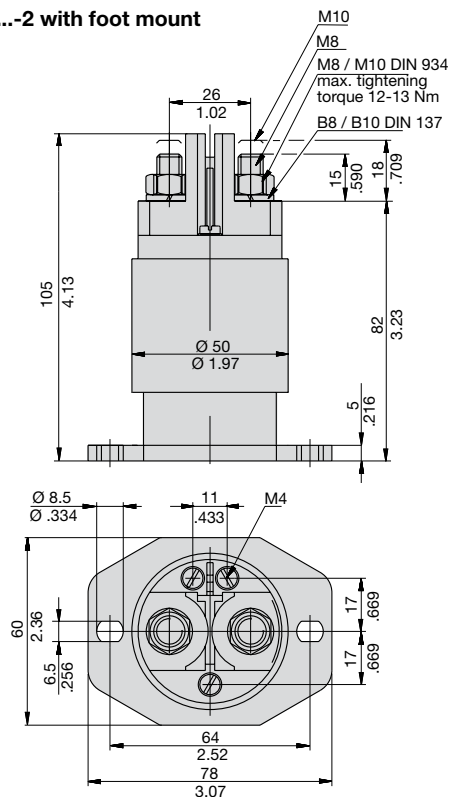


Dimensions

PR80-...-1 with side mount



PR80-...-2 with foot mount

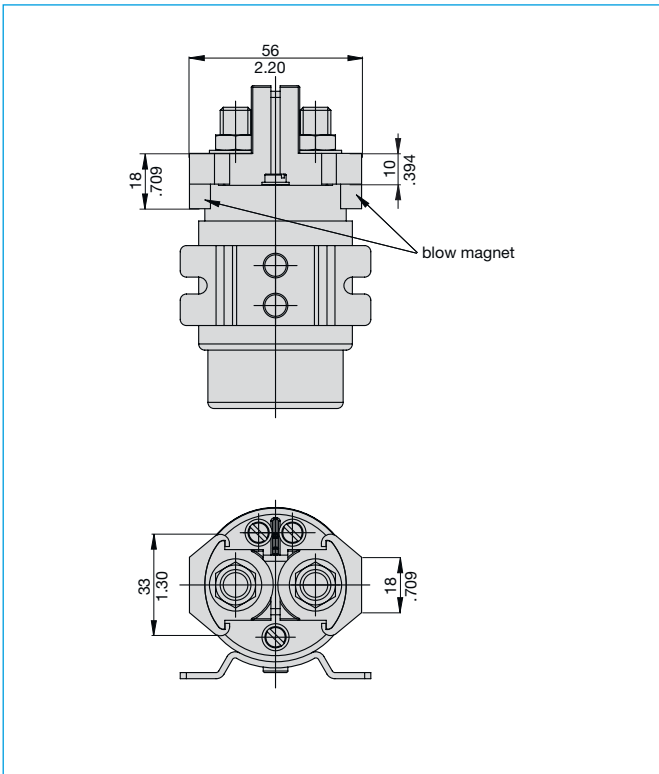


Current rating 100 A: terminal thread M8
 Current rating 200 A: terminal thread M8 or M10
 Current rating 300 A: terminal thread M10

Nominal dimensions without direct tolerance indication:
 IT 14 DIN ISO 2

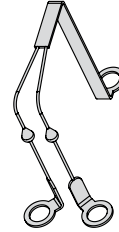
This is a metric design and millimeter dimensions take precedence ($\frac{\text{mm}}{\text{inch}}$)

Dimensions PR80-...-3-... with blow magnet



Accessories

**Suppressor diode
X 223 03 001**



This is a metric design and millimeter dimensions take precedence ($\frac{\text{mm}}{\text{inch}}$)

All dimensions without tolerances are for reference only. In the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved. Product markings may not be exactly as the ordering codes. Errors and omissions excepted.