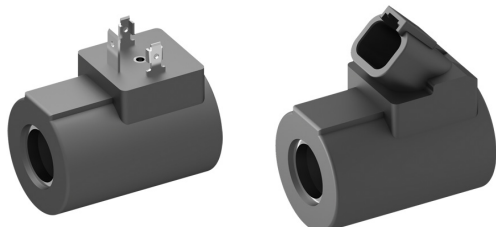


# Coils for Solenoid Valves

Wide variety of connector types, power ratings and voltages  
Series D36...



- Facilitates compact assemblies
- All common AC and DC voltages
- Power consumption 8 W, 17 W, 27/25 W
- Wide variety of connector types
- With optional protection diode
- Protection class IP 65 / IP 67 / IP 69K
- For core tube  $\varnothing$  16 mm

## 1 Description

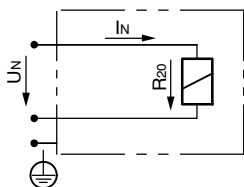
The slip-on coils can be replaced without opening the hydraulic envelope and can be positioned at any angle through 360°. When combined with the appropriate core tube, the coils produce an on/off solenoid function or a proportional solenoid function. Thanks to the wide variety of connector types and voltages, these coils are suitable for

widespread use in mobile and industrial applications. These coils are very adaptable in use, a benefit that is enhanced by various power ratings and an optional protection diode. The coil encapsulation and the plug base are glass-fibre reinforced thermoplastic.

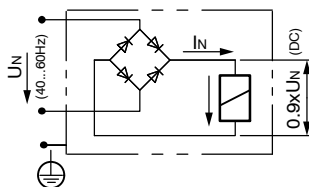
## 2 Symbol

Connector type to DIN EN

Direct current DC

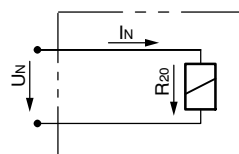


Alternating current AC

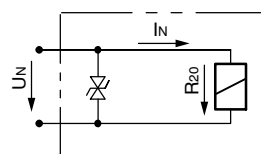


All connector types except DIN EN (DC)

Without protection diode



With bipolar protection diode



### ATTENTION!

Protection of AC solenoid coils.  
The rectifier built into the coil can be damaged by high voltage spikes.  
To prevent AC coils from being destroyed, a mating connector with integral power varistor is recommended.



### IMPORTANT!

The two supply connections (UN) can be interchanged. Please note: Special versions with unipolar protection diode are excluded. The earth connection is marked with ...



## 3 Technical data

General characteristics	Description, value, unit
Designation	Coil, D36
Design	slip-on, rotatable 360°
Mounting method	core tube, knurled nut
Ambient temperature range	-30 °C ... +50 °C
Coil weight	190 ... 230 g (dependent on type of connection)

Electrical characteristics	Description, value, unit
Electrical connection	<ul style="list-style-type: none"> <li>- DIN EN 175301-803, 3-pole 2 P+E</li> <li>- Deutsch plug connection 45° DT04-2P</li> <li>- Junior Timer radial plug connection, 2-pole</li> <li>- Junior Timer axial plug connection, 2-pole</li> <li>- AMP Super Seal 1,5 / Metri-Pack 150, 2-pole</li> <li>- Kostal plug connection M27x1, 2-pole</li> <li>- flying leads, 2-pole</li> </ul>
Insulation class to VDE 0580	H (180 °C)
Protection class to ISO 20 653 / EN 60 529	IP 65 / IP 67 / IP 69K, see "Ordering code" (with appropriate mating connector and proper fitting and sealing)
Relative duty cycle	100 %
Control current	See valve data sheet (proportional function)
Supply voltage tolerance	± 10 %
supply voltages / power ratings:	
standard	<b>12 V DC</b> / 8 W, 17 W, <b>27 W</b>
standard	24 V DC / 8 W, 17 W, 27 W
	26 V DC / 27 W
	28 V DC / 17 W, 27 W
standard	200 V DC / 25 W
standard	115 V AC <sup>1)</sup> / 17 VA, 25 VA
standard	230 V AC <sup>1)</sup> / 17 VA, 25 VA
more on request	see Coil resistance R



**IMPORTANT!:**

<sup>1)</sup> supply voltages > 75 VDC or 50 VAC only possible with DIN EN 175301-803 connect.

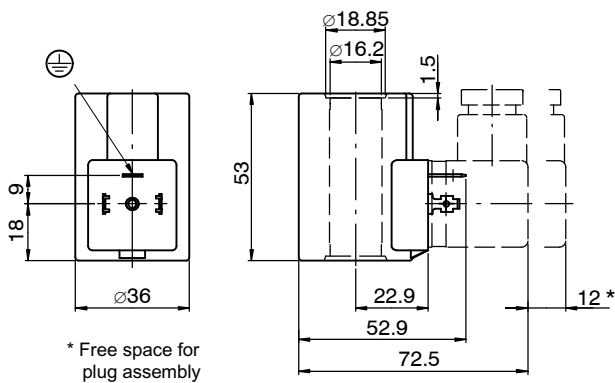
Supply voltage: 12 V DC		8 W	17 W	27 W
Coil resistance R	- cold value at + 20 °C	18.0 Ω	8.6 Ω	5.8 Ω
	- cold value at - 30 °C	14.5 Ω	6.9 Ω	4.7 Ω
	- max. warm value	28.2 Ω	13.5 Ω	9.1 Ω
Inductance		37 mH	17 mH	10 mH
Measured at the core tube, non-operated, at 0.1 mA (rms) / 1 kHz				
Breakdown voltage for the bipolar protection diode		33 V	33 V	33 V
Supply voltage: 24 V DC		8 W	17 W	27 W
Coil resistance R	- cold value at + 20 °C	72.0 Ω	34.9 Ω	20.9 Ω
	- cold value at - 30 °C	58.0 Ω	28.1 Ω	16.8 Ω
	- max. warm value	112.7 Ω	54.6 Ω	32.7 Ω
Inductance		130 mH	68 mH	37 mH
Measured at the core tube, non-operated, at 0.1 mA (rms) / 1 kHz				
Breakdown voltage for the bipolar protection diode		56 V	56 V	56 V
Supply voltage: 26 V DC		8 W	17 W	27 W
Coil resistance R	- cold value at + 20 °C	-	-	25.0 Ω
	- cold value at - 30 °C	-	-	20.1 Ω
	- max. warm value	-	-	39.1 Ω
Inductance		-	-	49 mH
Measured at the core tube, non-operated, at 0.1 mA (rms) / 1 kHz				
Breakdown voltage for the bipolar protection diode		-	-	56 V

Supply voltage: 28 V DC		8 W	17 W	27 W
Coil resistance R	- cold value at + 20 °C	–	45.0 Ω	28.0 Ω
	- cold value at - 30 °C	–	36.2 Ω	22.5 Ω
	- max. warm value	–	70.4 Ω	43.8 Ω
Inductance		–	95 mH	60 mH
Measured at the core tube, non-operated, at 0.1 mA (rms) / 1 kHz				
Breakdown voltage for the bipolar protection diode		–	56 V	56 V
Supply voltage: 200 V DC		8 W	17 W	25 W
Coil resistance R	- cold value at + 20 °C	–	–	1710 Ω
	- cold value at - 30 °C	–	–	1377 Ω
	- max. warm value	–	–	2677 Ω
Inductance		–	–	17'000 mH
Measured at the core tube, non-operated, at 120 Hz / 0.5 Vrms				
Supply voltage: 115 V AC		8 VA	17 VA	25 VA
Coil resistance R	- cold value at + 20 °C	–	630 Ω	430 Ω
	- cold value at - 30 °C	–	507 Ω	346 Ω
	- max. warm value	–	986 Ω	673 Ω
Supply voltage: 230 V AC		8 VA	17 VA	25 VA
Coil resistance R	- cold value at + 20 °C	–	2520 Ω	1710 Ω
	- cold value at - 30 °C	–	2029 Ω	1377 Ω
	- max. warm value	–	3945 Ω	2677 Ω

## 4 Dimensions

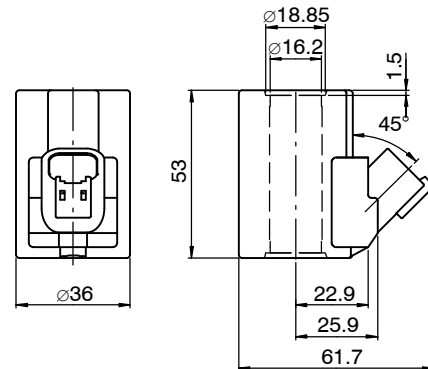
### Coil with DIN plug connection

- Standard-Type (see Ordering code)



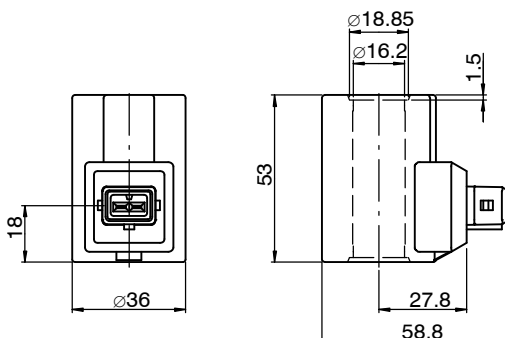
### Coil with Deutsch DT04-2P plug connection

- Type D without quenching diode
- Type DT with quenching diode (see Ordering code)



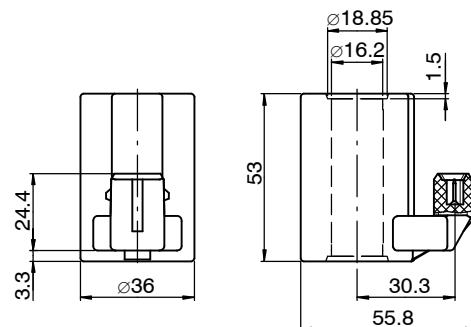
### Coil with Junior Timer radial plug connection

- Type JT (see ordering code)



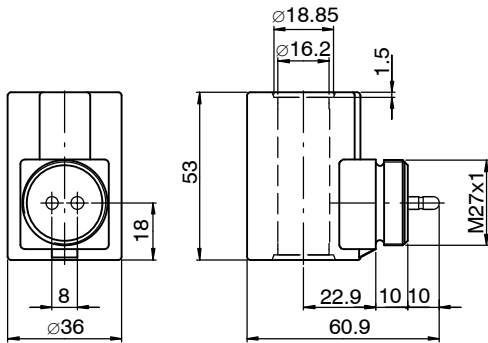
### Coil with Junior Timer axial plug connection

- Type IT (see ordering code)



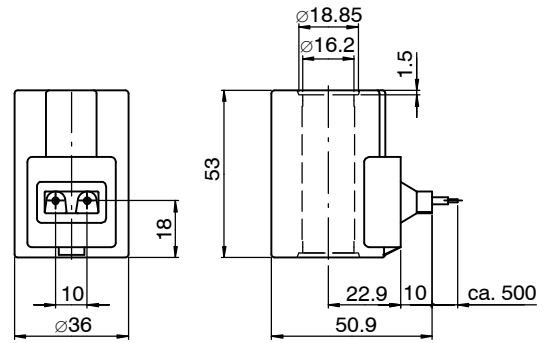
### Coil with Kostal plug connection

- Type C (see ordering code)



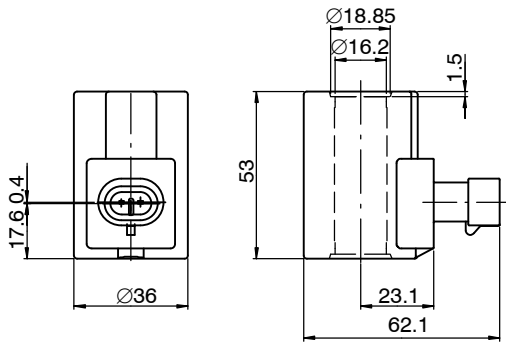
### Coil with flying leads

- Type F (see ordering code)



### Coil with connection AMP Superseal / Metri Pack 150, 2-pole

- Type S (see ordering code)



## 5 Installation information



#### Attention.

Because of the danger of overheating, the coil must only be operated when it is properly fitted on a valve. To prevent the ingress of water, both ends of the coil on the core tube must be properly sealed with O-rings.



#### Attention.

To obtain the maximum performance, be sure to fit the coil the right way round i.e. with plug base up (furthest from valve), or down (closest to valve). The data sheet for each solenoid cartridge valve shows the correct position for that valve.

## 6 Ordering code

Ex. **MAG-SP** **D36** **24** **D** **IT** **27W**

**MAG-SP** = coil

**D36** =  $\varnothing$  36 mm (outside  $\varnothing$ )

... = voltage e.g. 24 (24 V),  
see "Electrical characteristics" - supply voltage

**D** = current **DC**

**A** = current AC (only possible with DIN EN 175301-803 connect)

(blank) = standard plug connection to DIN EN (3-pole, 2 P+E)

**C** = Kostal plug connection (IP 65)

**JT** = Junior Timer radial plug connection (with protection diode, IP65)

**IT** = Junior Timer axial plug connection (with protection diode, IP65)

**D** = Deutsch plug connection 45° DT04-2P (IP67/69K)

**DT** = Deutsch plug connection 45° DT04-2P (with protection diode, IP67/69K)

**S** = AMP Superseal 1.5 (IP67) / Metri-Pack 150 (IP65) plug connection

**F** = flying leads (500 mm)

... = Nominal power consumption, see "Electrical characteristics"

} mating plug not supplied