AF 50..RT ... AF 75..RT 3-pole Contactors

a.c. / d.c. Operated - Electronic Coil Interface

Application

AF 50..RT ... AF 75..RT contactors are mainly used for controlling 3-phase motors and generally for controlling power circuits up to 690 V a.c. and 220 V d.c. The contactors can also be used for many other applications such as bypass, capacitor switching, lighting, d.c. power circuits...

The **AF..RT** contactors are fitted with an electronic coil interface which accepts a wide control voltage range, on a.c. 50/60 Hz or d.c. supplies. The same contactor can accept various supply voltages according to the different countries where the final machine will be used or if there is fluctuations in the control voltage due to the local supply or network.

The **AF..RT** contactors have ring tongue terminals and are also fully suitable for operation in a.c. or d.c. control circuit liable to voltage interruptions or voltage dip risks.

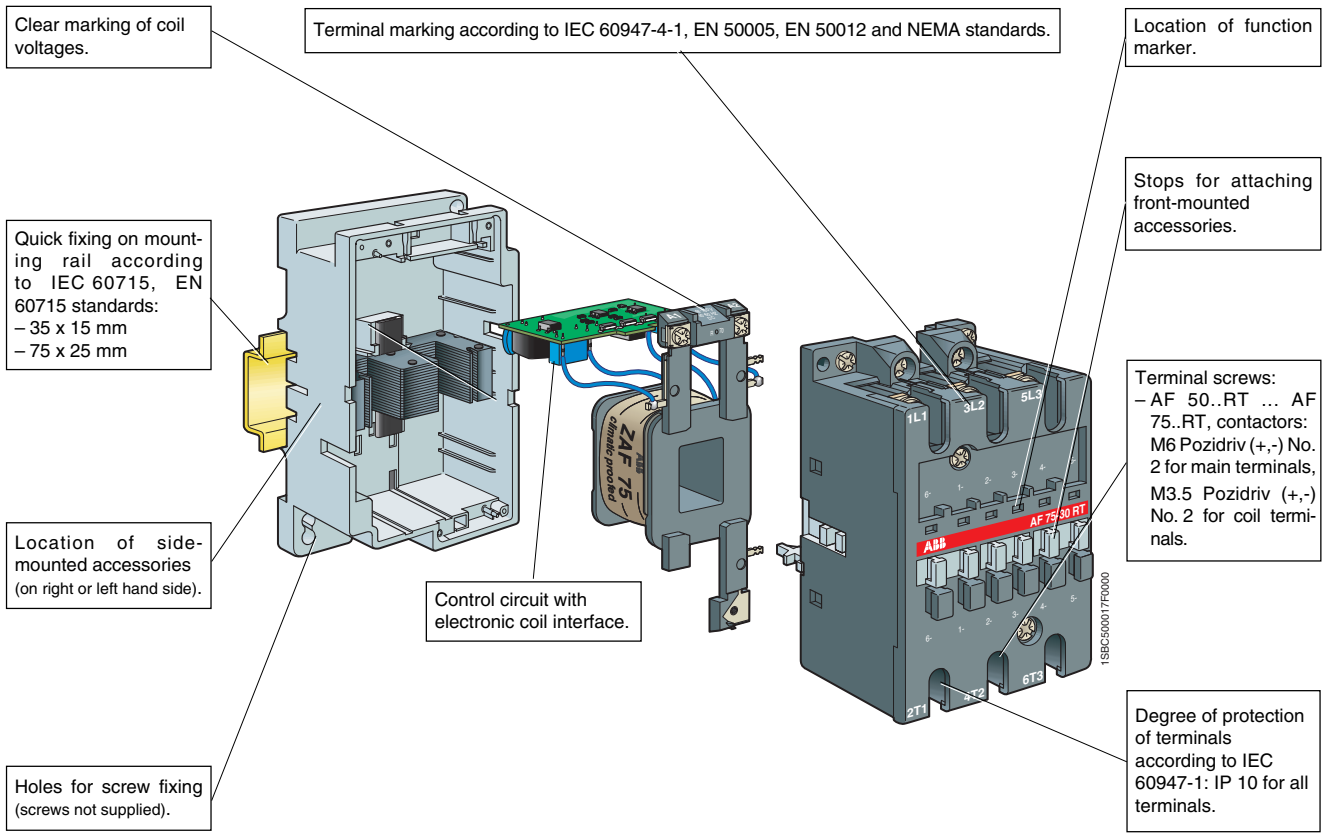
Description

The **AF 50..RT ... AF 75..RT** 3-pole contactors are of the block type design.

- Main poles and auxiliary contact blocks
  - 3 main poles,
  - front-mounted add-on auxiliary contact blocks.
- Electronic control:
  The contactors are fitted with an electronic interface that very precisely controls the voltage to the coil. The electronic control circuit always works using d.c. current through the coil and in a.c. operation the current is rectified before being applied to the coil. To achieve the current levels required for making and holding respectively, the voltage is pulsed across the coil with the aid of a transistor. The pulsing also implies that the current in the coil can be optimally regulated all the time relatively independently of the voltage level. The function is controlled by a specific integrated circuit developed by **ABB**.

  Advantages
  - Wide voltage range, e.g. 100 ... 250 V a.c. and d.c.,
  - Can manage large voltage variations,
  - Reduced power consumption,
  - Very distinct closing and opening,
  - Noise free,
  - Can withstand voltage interruptions or voltage dips in the control supply (≤ 20 ms).
- Accessories: a wide range of accessories are available (☞ page 37).

AF..RT contactors



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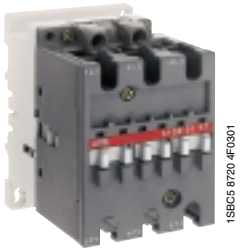


AF 50-30-00RT

AF 75-30-00RT

Ordering Details

IEC		UL/CSA		Auxiliary contacts fitted	Type	Order code	Weight kg
AC-3 Rated power	AC-1 Rated current	3-Phase motor rating	General use rating				
400 V	θ ≤ 40°C	480 V	600 V		state coil voltage ⌊..⌋ (see table below)	state coil voltage code □□ (see table below)	Packing 1 piece
kW	A	hp	A				
22	100	40	80	– –	AF 50-30-00RT ⌊..⌋	1SBL 357 010 R□□00	1.180
30	115	60	90	– –	AF 63-30-00RT ⌊..⌋	1SBL 377 010 R□□00	1.180
37	125	60	105	– –	AF 75-30-00RT ⌊..⌋	1SBL 417 010 R□□00	1.180

Coil voltages and codes

Voltage ⌊..⌋ V - 50/60Hz	Voltage ⌊..⌋ V d.c.	Code □□
–	20 ... 60	7 2 (1)
48 ... 130	48 ... 130	6 9
100 ... 250	100 ... 250	7 0

(1) The connection polarities indicated close to the coil terminals must be respected: **A1** for the **positive** pole and **A2** for the **negative** pole.

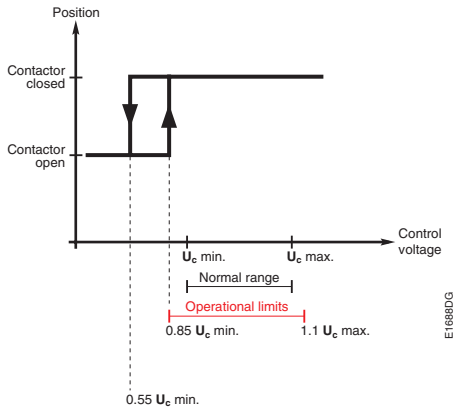
Electromagnetic compatibility

AF..RT contactors comply with international standards IEC 60947-1 (2004-03-Ed.4.0), 60947-4-1 (2002-12-Ed.2.1) and European standards EN 60947-1, 60947-4-1.

Notice: This product has been designed for **environment A**. Use of this product in **environment B** may cause unwanted electromagnetic disturbances in which case the user may be required to take adequate mitigation measures.

Definitions:

Environment A: "Mainly relates to low-voltage non public or industrial networks/locations/installations (☞ EN 50082-2 article 4) including highly disturbing sources".

Environment B: "Mainly relates to low-voltage public networks (☞ EN 50082-1 article 5) such as residential, commercial and light industrial locations/installations. Highly disturbing sources such as arc welders are not covered by this environment".

Operating diagram