


RH5 Technical Data

General Data

Reference code		RH5	
Standards		IEC/EN 60947, DIN VDE 0660, UL, CSA	
Rated insulation voltage U_i (pollution degree 3)	IEC, VDE 0660	(V)	690
	UL, CSA	(V)	600
Rated impulse withstand voltage U_{imp} (IEC/EN 60947-1)		(kV)	6
Rated operational frequency		(Hz)	25...400
Rated operational voltage U_e	IEC, VDE 0660	(V)	690
	UL, CSA	(V)	600
Rated thermal current I_{th} ($\theta \leq 55^\circ\text{C}$)		(A)	20
AC-15 (IEC 60947-5-1)	$U_e \leq 240\text{ V}$	(A)	10
	380-400 V	(A)	6
	415-440 V	(A)	5
	500 V	(A)	4
	660-690 V	(A)	2
UL, CSA			A600
DC-13 (IEC 60947-5-1)	24 V	(A)	6
	48 V	(A)	4
	110 V	(A)	2
	220 V	(A)	0.7
UL, CSA			Q600
Mechanical lifespan		Ops x 10 ⁶	10
Electrical lifespan (AC - 3)		Ops x 10 ⁶	1.5
Mounting		Screw or 35 mm DIN Rail	
Degree of protection		IP20	
Ambient temperature		-25 °C to +55 °C	
Operating temperature		-55 °C to +80 °C	
Storage temperature			
Altitude			
Normal values		Up to 3,000 m	
90% I_e / 80% U_e		3,000 to 4,000 m	
80% I_e / 75% U_e		4,000 to 5,000 m	
Overvoltage category / Pollution degree		III / 3	
Climatic proofing		Acc. IEC 60680-2	

Terminal Capacity and Tightening Torque - Power Terminals

Reference code		RH5		
Screw type		M3.5x 9 Flat / Phillips		
Power terminal capacity ¹⁾		Finely stranded with end sleeve	Stranded and finely stranded without end sleeve	Solid
mm ²		1x 0.5...4 2x 0.5...2.5	1x 1...6 2x 1...2.5 2x 2.5...6	1x 0.5...6 2x 0.5...2.5 2x 2.5...6
AWG (UL/CSA)		14...10		
Tightening torque (N.m)		1...1.5		
Tightening torque (lb.in) (UL/CSA)		15		

Terminal Capacity and Tightening Torque - Coil Terminals

Reference code		RH5		
Screw type		M3.5x 10 Flat / Phillips		
Coil terminal		Finely stranded with end sleeve	Stranded and finely stranded without end sleeve	Solid
mm ²		1x 0.5...4 2x 0.5...1.5 2x 1...2.5	1x 1...4 2x 1...2.5	1x 0.5...4 2x 0.5...1.5 2x 1...2.5
AWG (UL/CSA)		1x 20...10 2x 20...14 2x 16...12	1x 16...10 2x 16...12	1x 20...10 2x 20...14 2x 16...12
Tightening torque (N.m)		0.8...1.1		
Tightening torque (lb.in) (UL/CSA)		10		

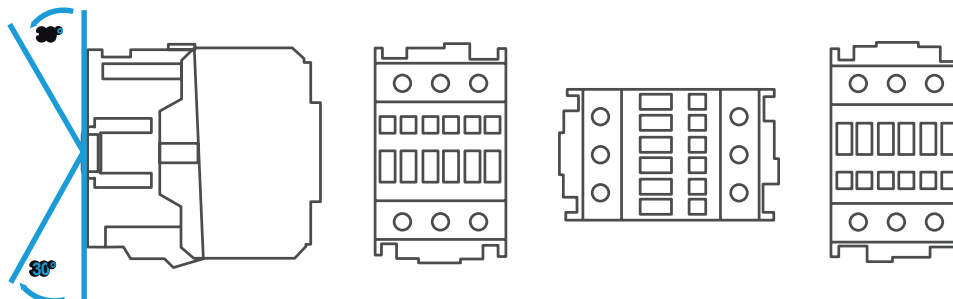
Control Circuit - Alternating Current (AC)

Reference code			RH5
Rated insulation voltage U_i (pollution degree 3)	IEC/VDE 0660	(V)	1,000
	UL, CSA	(V)	600
Coils rated voltage 50 Hz		(V)	10...550
Coils rated voltage 60 Hz		(V)	12...660
Coils rated voltage 50/60 Hz		(V)	12...660
Coils rated voltage			
Coil operating limits		(xUs)	0.85...1.1
Coil 60 Hz	Pick up	(xUs)	0.4...0.76
	Drop out	(xUs)	0.25...0.65
Coil 50/60 Hz	Pick up	(xUs)	0.5...0.8
	Drop out	(xUs)	0.2...0.6
Average consumption			1.0 x Us coil cold state
Coil 60 Hz	Magnetic circuit closed	(VA)	5.5...9.3
	Magnetic circuit closing	(VA)	70
Coil 50/60 Hz	Magnetic circuit closed	(VA)	4...7.2
	Magnetic circuit closing	(VA)	69.5
Average time	Closing NO contacts	(ms)	8...20
	Opening NO contacts	(ms)	6...13

Control Circuit - Direct Current (DC)

Reference code			RH5
Coil type			Conventional
Rated insulation voltage U_i (pollution degree 3)	IEC/VDE 0660	(V)	1,000
	UL, CSA	(V)	600
Standard voltages		(V)	12...440
Coil operating limits		(xUs)	0.85...1.1
	Pick up	(xUs)	0.4...0.7
	Drop out	(xUs)	0.15...0.4
Power consumption			1.0 x Us coil cold state
	Magnetic circuit closed	(W)	3.8...9.0
	Magnetic circuit closing	(W)	3.8...9.0
Operation time	Closing NO contacts	(ms)	35...45
	Opening NO contacts	(ms)	7...12

Mounting Position



Auxiliary Contact Blocks

Reference code	HBXT.. / HBXS..	
Rated insulation voltage U_i IEC/EN 60 947 UL/CSA	(V) (V)	1,000 600
Rated operational voltage U_o	(V)	690
Conv. thermal current I_{th}	(A)	10
Rated operational current I_o		
AC-15	220 - 240 V (A) 380 - 400 V (A) 415 V (A) 500 V (A)	10 4 3.5 2.5
UL/CSA		A600
DC-13	24 V (A) 48 V (A) 110 V (A) 220 V (A)	4 2 0.7 0.3
UL/CSA		Q600
Making capacity I_m		
AC-15	$U_o \leq 400$ V 50/60 Hz (A)	90
DC-13	$U_o \leq 220$ V dc (A)	90
Breaking capacity I_c		
AC-15	$U_o \leq 400$ V 50/60 Hz (A)	60
DC-13	$U_o \leq 220$ V dc (A)	0.95
Short-circuit protection max. fuse gL/gG	(A)	10
Control circuit reliability		$I_{o \min} = 5$ mA $U_{o \min} = 17$ V
Electrical lifespan	Ops	10^6
Mechanical lifespan	Ops	10×10^6

Terminal Capacity and Tightening Torque Auxiliary Contact Blocks

Reference code	HBXT.. / HBXS..		
Screw type	M3.5x9 Flat / Phillips		
Auxiliary contact block	Finely stranded with end sleeve	Stranded and finely stranded without end sleeve	Solid
mm ²	1x 0.5...4 2x 0.5...2.5	1x 0.75...2.5 2x 0.75...2.5	1x 0.5...4 2x 0.5...2.5
AWG (UL/CSA)	22...12		
Tightening torque (N.m)	0.8...1.1		
Tightening torque (lb.in) (UL/CSA)	10		