Constructional Data Form -All-or-Nothing Electromechanical Relays

Licenseholder :	Ningbo Yinzhou Huike Electronics Co., Ltd.
(full address)	Xintang Yan Development Zone, Jiangshan, Yinzhou, Ningbo, Zhejiang 315191, P.R. China
Factory :	Ningbo Yinzhou Huike Electronics Co., Ltd.
(full address)	Xintang Yan Development Zone, Jiangshan, Yinzhou, Ningbo, Zhejiang 315191, P.R. China
Relay type	Relay
Type or Model Number :	HK4100F-DCxV-SH-y x = 3, 6, 9, 12 or 24 y = A, B or C

General:

Protection degree	IP00	Accessible external parts*	~~Yes~~ No
Metal parts requiring earthing/method	None/ ---	Restricted installation position?*	~~Yes~~ No
Ambient temperature	-30°C to 70°C	In case of position restriction see page 3/3	
Pollution degree	2	Min. distance between relays	See page 3/3

Insulation coordination according to IEC 60664-1: 1992					Insulation specifications		
Overvoltage category*	Coil circuit: ~~I~~ II ~~III~~ Contact circuit: ~~I~~ ~~II~~ ~~III~~	2.5KV			Dielectric strength (V)	Insulation resist. (MΩ)	Impulse Voltage (kV)
	Creepage (mm)/ Material Group		Clearance (mm)	U_i[*1] (V)	1 min, 45 - 65Hz leakage : 1 mA	5 seconds (min.) DC 500V	(IEC Publ. 60)
Terminals of each contact circuit (open contacts)	0.7 /	IIIa	0.3	230	800	100	---
Terminals and exposed conductive parts/foil	--- /	---	---	---	---	---	---
Terminals of separate windings	--- /	---	---	---	---	---	---
Coil terminals and contact terminals	2.5 /	IIIa	1.5	230	1500	100	---
Terminals of separate contact circuits	--- /	---	---	---	---	---	---

*1 U_i for the contact gap is based only on the minimum creepage distance.

Terminals /connection:

Terminal designation	Movable Spring Terminal (1, 2)	Stationary Spring Terminal (5, 6)	Coil Terminal (3, 4)
Type of Terminal	PCB solder pin	PCB solder pin	PCB solder pin
Material %copper / plating material	93.5%/SnCeSb	93.5%/SnCeSb	93.5%/SnCeSb
Solder bath max. temp. / time (°C/s)	290-310/1-3	290-310/1-3	290-310/1-3
Soldering iron max . temp./ time (°C/s)	---	---	---
Male tab terminal size / % copper / plating m.	---	---	---
Conductor for max. temperature assessment	---	---	---

*Delete all but the appropriate value/expression

Köln, den Guoping Zheng
24.06.2004
TÜV Rheinland
Product Safety GmbH

(Place) (Date)

(Stamp and Signature of Applicant)

Constructional Data Form -All-or-Nothing Electromechanical Relays

ISO(mm²) or AWG number metric equivalent (mm²)			

NS = Non standard

Contact circuit(s)

Short time current capacity	~~______A/___sec~~								
Contact type*	Make Break Changeover	Contact material	Stationary Movable	$AgSnO_2$ $AgSnO_2$	Maximum contact resistance (mΩ)	100(Bef.) 500(Aft.)			
Terminal Designation	--- (Positive terminal)			--- (Negative terminal)			1, 2, 5, 6 (Pos. or Neg. terminals)		
Capacity	~~Make~~	~~Break~~	Cyclic	~~Make~~	~~Break~~	~~Cyclic~~	~~Make~~	~~Break~~	~~Cyclic~~
Rated voltage (V)	230V		30V	---	---		---	---	
Nature of supply (AC or DC)	AC		DC	---	---		---	---	
Frequency (Hz)	50/60		---	---	---		---	---	
Rated current (A)	3A		3A	---	---		---	---	
Cos φ = or L/R =	1.0		0ms	---	---		---	---	
Duty level	III		III	---	---		---	---	
Number of operations	30000		30000	---	---		---	---	
Operations per hour	1800		1800	---	---		---	---	
Duty factor	50%		50%	---	---		---	---	

Coil (standard values determined at 23°C)

Terminal Designation	--- ~~(Positive terminal)~~		--- ~~(Negative terminal)~~	3, 4 (Pos. or Neg. terminals)	
Nature of Supply	DC	DC	DC	DC	DC
Rated coil voltage	3V	6V	9V	12V	24V
Winding resist. (Ω) tolerance (± %)	25 10	100 10	225 10	400 10	1600 10
Min. rated current (mA)	120	60	40	30	15
Rated burden (W) tolerance(±%)	0.36 10	0.36 10	0.36 10	0.36 10	0.36 10
Pick-up class	1	1	1	1	1
Operative range	1	1	1	1	1
Operations (Mech. life)	1×10^6	1×10^6	1×10^6	1×10^6	1×10^6
Operations per hour	18000	18000	18000	18000	18000
Insulation class	B	B	B	B	B

*Delete all but the appropriate value/expression

Köln, den Guoping Zheng
24.06.2004
TÜV Rheinland
Product Safety GmbH

__________ (Place) __________ (Date)

__________ (Stamp and Signature of Applicant)

TÜV Rheinland
Product Safety GmbH
Am Grauen Stein
D - 51105 Köln

Certificate No.: R 50042370
Our reference : ZC10- ZGP- 14700278 002
Appendix No. : 1.3
(To be filled in by TÜV Rheinland)

TÜV Rheinland COMPONENTS

Constructional Data Form -All-or-Nothing Electromechanical Relays

Plastic insulating parts:

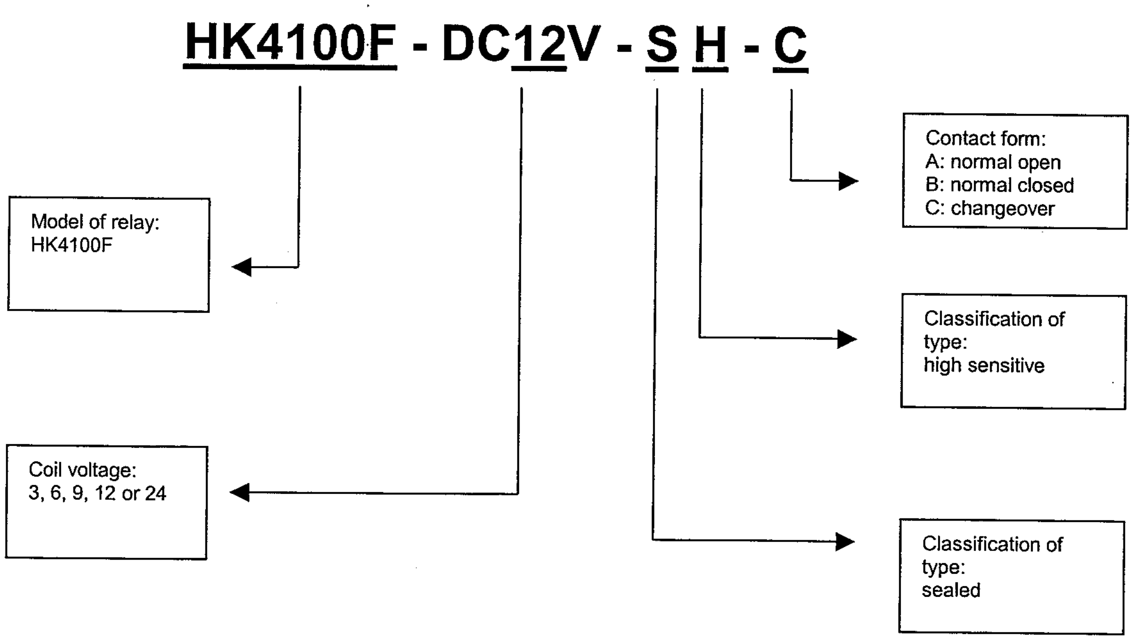
Part name	Material name	RTI	Flame class	Material Group
Base	PBT 420SE0	130	94V-0	IIIa
Case	PBT 420SE0	130	94V-0	IIIa
Bobbin	PBT 420SE0	130	94V-0	IIIa
---	---	---	---	---

Accessories essential to the relay performance: NONE

Other:

Mounting distance between relays: Not declared

Type Designation:



*Delete all but the appropriate value/expression

Köln, den 24.06.2004 Gueping Zheng
TÜV Rheinland
Product Safety GmbH

(Place) (Date)

(Stamp and Signature of Applicant)