

## SWITCHES

## STANDARD FAMILY CODE N0002000P1A01

Туре	N 2000
Number of Poles	1 NO
Connection between poles	None
Mounting Position	Vertical
Control Voltage Rating Uc [Vdc]	110Vdc/Vac - 220Vdc/Vac <sup>1</sup>
Auxiliary Contact Blocks	5 NO + 5 NC
Block Type	В
Arc chute Material	Ceramic in plastic shells
Main Contacts tips Material	S6
Arcing Contacts tips Material	S8
Electric Diagram	TU0165/B (DC) - TU0165/C (AC)
Layout Drawing	D53362

<sup>1</sup> To be specified in order phase.



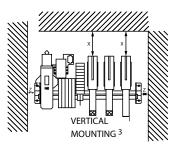
## Description

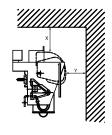
Contactor with single interruption in air, electromagnetic control by power save system (economy resistor). Typical application control of all type of motor for standard or severe duty application. Control of resistive, inductive and capacitive circuits: heating, lighting, cosfi rectification, normal stand-by. Reference Standard IEC 60947-4-1.

Rated Insulation Voltage Ui [Vdc]     100       Conventional Free air thermal current Ith [ at 40°C] <sup>2</sup> 2000       Conventional Free air thermal current Ith [ at 60°C] <sup>2</sup> 750       Maximum Making Capacity for 100 ms Ich [kA]     25       Short Circuit Withstand Current for 100 ms Icw [kA]     30       Average impedence per pole at 50 Hz [MicroOhm]     150       Blow out circuit type     Indirect with arcing contact       Electrical Characteristics 1NO pole (56) for DC application     X440     600       Maximum Breaking Capacity tau=15ms Idcmax [A]     1500     110000     750       Rated Operational Power Pe [kW]     2020     380     440     600       Maximum Breaking Capacity tau=15ms Idcmax [A]     1500     110000     790     790       Rated Operational Power Pe [kW]     2000     2000     18000       Utilization Category according to IEC60947-4-1: DC18     2     2       Rated Operational Power Pe [kW]     350     - <th c<="" th=""><th>Electrical Characteristics</th><th></th><th></th><th></th><th></th></th>	<th>Electrical Characteristics</th> <th></th> <th></th> <th></th> <th></th>	Electrical Characteristics				
Name of the data of the data of the second	Rated Operational Voltage Ue [Vac/Vdc]	220	380	440	600	
Conventional rice and identified traff ( 4.0 c)     1750       Conventional Free air thermal current Ith [ at 60°C] <sup>2</sup> 1750       Maximum Making Capacity for 100 ms Ich [kA]     25       Short Circuit Withstand Current for 100 ms Icw [kA]     30       Average impedence per pole at 50 Hz [MicroOhm]     Indirect with arcing contact       Blow out circuit type     Indirect with arcing contact       Electrical Characteristics 1NO pole (S6) for DC application     11600     10000     7350       Maximum Breaking Capacity tau=15ms Idcmax [A]     15000     11600     10000     7350       Utilization Category according to IEC60947-4-1: DC18DC3     2000     2000     1800     1320       Utilization Category according to IEC60947-4-1: DC5     50     -     -     -       Rated Operational Power Pe [kW]     350     -     -     -       Rated Operational Current Ie [A]     1600     -     -     -       Rated Operational Voltage [Vac]     220     380     440     600       Maximum Breaking Capacity cosΦ=0,5 Iacmax [A]     2000     2000     1000     8100       Utilization Category according to IEC60947-4-1: MC	Rated Insulation Voltage Ui [Vdc]	1000				
Naximum Making Capacity for 100 ms lch [kA]     25       Maximum Making Capacity for 100 ms lch [kA]     30       Average impedence per pole at 50 Hz [MicroOhm]     Indirect with arcing contact       Blow out circuit type     Indirect with arcing contact       Electrical Characteristics 1NO pole (S6) for DC application     110000     7350       Maximum Breaking Capacity tau=15ms ldcmax [A]     15000     11600     10000     7350       Utilization Category according to IEC60947-4-1: DC1&DC3     7440     760     790     790       Rated Operational Power Pe [kW]     440     760     790     790       Rated Operational Current Ie [A]     2000     2000     1800     1320       Utilization Category according to IEC60947-4-1: DC5     -     -     -       Rated Operational Power Pe [kW]     350     -     -     -       Rated Operational Current Ie [A]     1600     -     -     -       Rated Operational Current Ie [A]     2000     380     440     600       Maximum Breaking Capacity cosΦ=0,5 lacmax [A]     2000     11000     8100       Utilization Category according to IEC60947-4-1:	Conventional Free air thermal current lth [ at 40°C] $^{2}$	2000				
Maximum maturing tarbacting of 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand Current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit With stand current for 100 ms (km)     Soft Circuit	Conventional Free air thermal current $th [at 60^{\circ}C]^2$	1750				
Average impedence per pole at 50 Hz [MicroOhm]     150       Average impedence per pole at 50 Hz [MicroOhm]     150       Blow out circuit type     Indirect with Juria contact       Blow out circuit type     150       Electrical Characteristics 1NO pole (S6) for DC application     Utilization Category according to IEC60947-4-1: DC1&DC3       Rated Operational Power Pe [kW]     440     700     700       Rated Operational Current Ie [A]     2000     2000     18000       Utilization Category according to IEC60947-4-1: DC1&DC3     Utilization Category according to IEC60947-4-1: DC5       Rated Operational Current Ie [A]     2000     2000     1800     1300       Bated Operational Current Ie [A]     2000     2000     1800       Clettrical Characteristics 1NO pole (S6) for AC application     Utilization Category according to IEC60947-4-1: DC5       Rated Operational Current Ie [A]     2000     380     440       Bated Operational Current Ie [A]     2000     10000     10000       <	Maximum Making Capacity for 100 ms lch [kA]	25				
Number of the procedue of the function in the control of the function in the	Short Circuit Withstand Current for 100 ms lcw [kA]	30				
Electrical Characteristics 1NO pole (S6) for DC application       Rated Operational Voltage [Vdc]     220     380     440     600       Maximum Breaking Capacity tau=15ms Idcmax [A]     15000     11600     10000     7350       Utilization Category according to IEC60947-4-1: DC1&DC3       790     790       Rated Operational Power Pe [kW]     440     760     790     790       Rated Operational Current Ie [A]     2000     2000     1800     1320       Utilization Category according to IEC60947-4-1: DC5       -     -       Rated Operational Power Pe [kW]     350     -     -     -     -       Rated Operational Current Ie [A]     1600     -     -     -     -       Rated Operational Current Ie [A]     1600     -     -     -     -       Rated Operational Voltage [Vac]     220     380     440     600       Maximum Breaking Capacity cosΦ=0,5 Iacmax [A]     20000     12750     11000     8100       Utilization Category according to IEC60947-4-1: AC1     AC1     AC1     AC1     AC1<	Average impedence per pole at 50 Hz [MicroOhm]	150				
Rated Operational Voltage [Vdc]     220     380     440     600       Maximum Breaking Capacity tau=15ms Idcmax [A]     15000     11600     10000     7350       Utilization Category according to IEC60947-4-1: DC1&DC3       790     790       Rated Operational Power Pe [kW]     440     760     790     790       Rated Operational Current Ie [A]     2000     2000     1800     1320       Jtilization Category according to IEC60947-4-1: DC5      -     -       Rated Operational Power Pe [kW]     350     -     -     -       Rated Operational Current Ie [A]     1600     -     -     -       Rated Operational Current Ie [A]     1600     -     -     -       Rated Operational Current Ie [A]     1600     -     -     -       Rated Operational Voltage [Vac]     220     380     440     600       Maximum Breaking Capacity cosΦ=0,5 Iacmax [A]     20000     12750     11000     8100       Jtilization Category according to IEC60947-4-1: AC     2000     2000     1920     1410 <t< td=""><td>Blow out circuit type</td><td colspan="3">Indirect with arcing contact</td></t<>	Blow out circuit type	Indirect with arcing contact				
Maximum Breaking Capacity tau=15ms Idcmax [A]     15000     11600     10000     7350       Utilization Category according to IEC60947-4-1: DC1&DC3     -	Electrical Characteristics 1NO pole (S6) for DC application	on				
Utilization Category according to IEC60947-4-1: DC1&DC3     440     760     790     790       Rated Operational Power Pe [kW]     2000     2000     1800     1320       Utilization Category according to IEC60947-4-1: DC5           760     790     790       Rated Operational Power Pe [kW]     350     -	Rated Operational Voltage [Vdc]	220	380	440	600	
Rated Operational Power Pe [kW]     440     760     790     790       Rated Operational Current le [A]     2000     2000     1800     1320       Utilization Category according to IEC60947-4-1: DC5     -     -     -       Rated Operational Power Pe [kW]     350     -     -     -       Rated Operational Current le [A]     1600     -     -     -       Rated Operational Current le [A]     1600     -     -     -       Electrical Characteristics 1NO pole (S6) for AC application     -     -     -     -       Rated Operational Voltage [Vac]     220     380     440     600       Maximum Breaking Capacity cosΦ=0,5 lacmax [A]     20000     12750     11000     8100       Utilization Category according to IEC60947-4-1: AC1&AC2&AC3     350     610     680     680       Rated Operational Current le [A]     2000     2000     1920     1410       Utilization Category according to IEC60947-4-1: AC4     2000     550     550     550	Maximum Breaking Capacity tau=15ms Idcmax [A]	15000	11600	10000	7350	
Rated Operational Current le [A]     2000     2000     1800     1320       Utilization Category according to IEC60947-4-1: DC5     -     -     -       Rated Operational Power Pe [kW]     350     -     -     -       Rated Operational Current le [A]     1600     -     -     -       Rated Operational Current le [A]     1600     -     -     -       Electrical Characteristics 1NO pole (S6) for AC application     220     380     440     600       Maximum Breaking Capacity cosΦ=0,5 lacmax [A]     20000     12750     11000     8100       Utilization Category according to IEC60947-4-1: AC1&AC2&AC3     2000     350     610     680     680       Rated Operational Current le [A]     2000     2000     1920     1410       Utilization Category according to IEC60947-4-1: AC1&AC2&AC3     350     610     680     680       Rated Operational Current le [A]     2000     2000     1920     1410       Utilization Category according to IEC60947-4-1: AC4     E     E     E       Rated Operational Power Pe [kW] (cosΦ=0,8)     350     550<	Utilization Category according to IEC60947-4-1: DC1&DC3					
Utilization Category according to IEC60947-4-1: DC5Solution <t< td=""><td>Rated Operational Power Pe [kW]</td><td>440</td><td>760</td><td>790</td><td>790</td></t<>	Rated Operational Power Pe [kW]	440	760	790	790	
Rated Operational Power Pe [kW]350Rated Operational Current le [A]1600Electrical Characteristics 1NO pole (S6) for AC application220380440600Rated Operational Voltage [Vac]220380110008100Maximum Breaking Capacity cosΦ=0,5 lacmax [A]2000012750110008100Utilization Category according to IEC60947-4-1: AC1&AC2&AC3350610680680Rated Operational Power Pe [kW] (cosΦ=0,8)350610680680Utilization Category according to IEC60947-4-1: AC42000200019201410Utilization Category according to IEC60947-4-1: AC4550550550550	Rated Operational Current le [A]	2000	2000	1800	1320	
Rated Operational Current le [A]1600Electrical Characteristics 1NO pole (S6) for AC application220380440600Rated Operational Voltage [Vac]22038014008100Maximum Breaking Capacity cosΦ=0,5 lacmax [A]2000012750110008100Utilization Category according to IEC60947-4-1: AC1&AC2&AC3350610680680Rated Operational Power Pe [kW] (cosΦ=0,8)35061019201410Utilization Category according to IEC60947-4-1: AC420002000550550	Utilization Category according to IEC60947-4-1: DC5					
Electrical Characteristics 1NO pole (S6) for AC applicationRated Operational Voltage [Vac]220380440600Maximum Breaking Capacity cosΦ=0,5 lacmax [A]2000012750110008100Utilization Category according to IEC60947-4-1: AC1&AC2&AC3S50610680680Rated Operational Power Pe [kW] (cosΦ=0,8)350610680680Utilization Category according to IEC60947-4-1: AC42000200019201410Utilization Category according to IEC60947-4-1: AC4S50550550550	Rated Operational Power Pe [kW]	350	-	-	-	
Rated Operational Voltage [Vac]   220   380   440   600     Maximum Breaking Capacity cosΦ=0,5 lacmax [A]   20000   12750   11000   8100     Utilization Category according to IEC60947-4-1: AC1&AC2&AC3           Rated Operational Power Pe [kW] (cosΦ=0,8)   350   610   680   680     Rated Operational Current Ie [A]   2000   2000   1920   1410     Utilization Category according to IEC60947-4-1: AC4      550   550   550	Rated Operational Current le [A]	1600	-	-	-	
Maximum Breaking Capacity cosΦ=0,5 lacmax [A]2000012750110008100Utilization Category according to IEC60947-4-1: AC1&AC2&AC3S50610680680Rated Operational Power Pe [kW] (cosΦ=0,8)350610680680Rated Operational Current Ie [A]2000200019201410Utilization Category according to IEC60947-4-1: AC4E550550550	Electrical Characteristics 1NO pole (S6) for AC application	on				
Utilization Category according to IEC60947-4-1: AC1&AC2&AC3     State Operational Power Pe [kW] (cosΦ=0,8)     350     610     680     680       Rated Operational Current Ie [A]     2000     2000     1920     1410       Utilization Category according to IEC60947-4-1: AC4     E     550     550     550	Rated Operational Voltage [Vac]	220	380	440	600	
AC1&AC2&AC3   Rated Operational Power Pe [kW] (cosΦ=0,8)   350   610   680   680     Rated Operational Current le [A]   2000   2000   1920   1410     Utilization Category according to IEC60947-4-1: AC4   E   550   550   550	Maximum Breaking Capacity cosΦ=0,5 lacmax [A]	20000	12750	11000	8100	
Rated Operational Current le [A]2000200019201410Utilization Category according to IEC60947-4-1: AC4Rated Operational Power Pe [kW] (cosΦ=0,8)350550550550	Utilization Category according to IEC60947-4-1: AC1&AC2&AC3					
Utilization Category according to IEC60947-4-1: AC4Rated Operational Power Pe [kW] (cosΦ=0,8)350550550	Rated Operational Power Pe [kW] ( $cos\Phi=0,8$ )	350	610	680	680	
Rated Operational Power Pe [kW] (cosΦ=0,8)     350     550     550     550	Rated Operational Current le [A]	2000	2000	1920	1410	
	Utilization Category according to IEC60947-4-1: AC4					
Rated Operational Current le [A]     2000     1800     1550     1150	Rated Operational Power Pe [kW] ( $cos\Phi=0,8$ )	350	550	550	550	
	Rated Operational Current le [A]	2000	1800	1550	1150	

<sup>2</sup> Device cabled according IEC 60947 <sup>3</sup> Other mounting positions not allowed

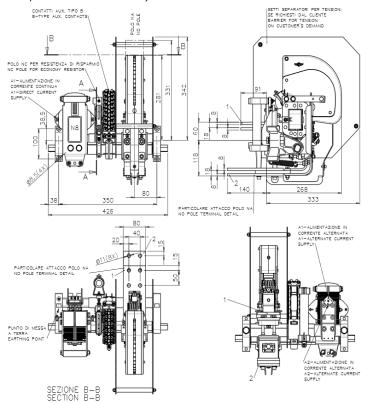
Minimum clearances [mm] from:					
Rated Ins Voltage	sulation	х	Y	Z	
1000	Metal Parts	100	50	30	
	Plastic Parts	50	30	20	





Mechanical Characteristics	
Mechanical Endurance (cycles) <sup>4</sup>	3x10 <sup>6</sup>
Weight [kg]	31
Control Circuit	
Control Voltage Range	$0.85U_c\ \div\ 1.1U_c$
Power Consumption (Uc and T = $20^{\circ}$ C) at Closing - at Opening [W]	1000-50
Mechanical Operation Time (Uc and T = $20^{\circ}$ C) when Closing - Opening [ms]	120-15
Mechanical Operation Time (in the worst condition) when Closing - Opening [ms]	450-20
Time Constant (L/R) at Pick Up - when Holding [ms]	
Electrical Connections	Fast-On 6.35x0.8mm
Auxiliary Contacts	
Tips material	Solid Silver
Rated Operational Voltage [Vac / Vdc]	250
Rated Current [A]	10
Minimum Switching Current at 16Vdc [mA] <sup>5</sup>	100
Electrical Connections	Fast-On 6.35x0.8mm
Environmental Conditions	
Stock Temperature Range	-25°C ÷ +60°C
Operational Temperature Range	-5℃ ÷ +55℃
Max Altitude without Performance Derating [m]	2000

 $^{\rm 4}$  With respect of the maintenance operations  $^{\rm 5}$  In clean and dry conditions



The technical specifications reported are not binding and they should be agreed in the contract.



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