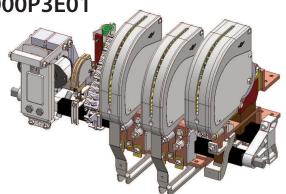
## Switches

Standard Family Code N0002000P3E01



## Description

Contactor with single interruption in air, electromagnetic control by power save system (economy resistor). Typical application DC Motor control with braking circuit. Reference Standard IEC 60947-4-1.

Type	N 2000
Number of Poles	2 NO + 1 NC
Connection between poles	Series for NO pole <sup>1</sup>
Mounting Position	Vertical
Control Voltage Rating Uc [Vdc]	110Vdc/Vac - 220Vdc/Vac <sup>2</sup>
Auxiliary Contact Blocks	5 NO + 5 NC
Block Type	В
Arc chute Material	Ceramic in plastic shells
Main Contacts tips Material	S6 (NO Pole) - S4 (NC Pole)
Arcing Contacts tips Material	S8 (No Pole)
Electric Diagram	TU0165/B (DC) - TU0165/C (AC)
Layout Drawing	D53552

<sup>&</sup>lt;sup>1</sup> Series bar connections available under request

<sup>&</sup>lt;sup>2</sup> To be specified in order phase.

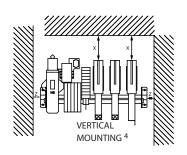
Electrical Characteristics					
Rated Operational Voltage Ue [Vdc]	220	440	660	750	1000
Rated Insulation Voltage Ui [Vdc]	1000				
Conventional Free air thermal current lth [ at 40°C] <sup>3</sup>	2000				
Conventional Free air thermal current Ith [at 60°C] <sup>3</sup>	1750				
Blow out circuit type	Indirect with arcing contact				

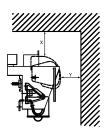
Electrical Characteristics 2NO poles series connected (S6) for DC application						
Rated Operational Voltage [Vdc]	220	440	660	750	1000	
Maximum Breaking Capacity tau=15ms ldcmax [A]	30000	20000	15000	13200	9900	
Utilization Category according to IEC60947-4-1: DC3						
Max Operational Power Pe [kW]	1800	1800	1800	1800	1800	
Max Operational Making and breaking Current le [A]	8182	4091	2727	2400	1800	
Utilization Category according to IEC60947-4-1: DC5						
Max Operational Power Pe [kW]	1200	1200	1200	1200	0	
Max Operational Making and breaking Current le [A]	5455	2727	1818	1600	0	
Maximum Making Capacity for 100 ms Ich [kA]		25				
Short Circuit Withstand Current for 100 ms lcw [kA]	Circuit Withstand Current for 100 ms lcw [kA]					
Average impedence per pole at 50 Hz [MicroOhm]	re per pole at 50 Hz [MicroOhm] 150					

Electrical Characteristics 1NC (S4) for DC application application (1250A Rating)						
Rated Operational Voltage [Vdc]	220	440	660	750	1000	
Maximum Breaking Capacity tau=15ms Idcmax [A]	5000	3000	2000	0	0	
Max Operational Making Current [A]	2500	1250	830	730	550	
Max Operational Breaking Current [A]	1550	625	330	0	0	
Maximum Making Capacity for 100 ms Ich [kA]	10					
Short Circuit Withstand Current for 100 ms lcw [kA]	13					
Average impedence per pole at 50 Hz [MicroOhm]	450					

 $<sup>^{3}</sup>$  Device cabled according IEC 60947

Minimum clearances [mm] from:				
Rated 0	Operational Voltage	Х	Υ	Z
1000	Metal Parts	100	50	30
1000	Plastic Parts	50	30	20









## Switches

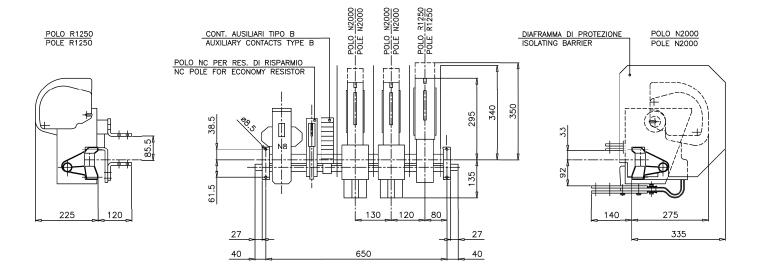
Mechanical Characteristics	
Mechanical Endurance (cycles) <sup>5</sup>	3x10 <sup>6</sup>
Weight [kg]	74

Control Circuit	
Control Voltage Range	0.85Uc ÷ 1.1Uc
Power Consumption (Uc and T = 20°C) at Closing - at Opening [W]	1000 - 50
Mechanical Operation Time ( $U_c$ 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 16 V <sub>dc</sub> [mA] <sup>6</sup>	100
Electrical Connections	Fast-On 6.35x0.8mm

Environmental Conditions	
Stock Temperature Range	-25°C ÷ +60°C
Operational Temperature Range	-5°C ÷ +55°C
Max Altitude without Performance Derating [m]	2000

<sup>&</sup>lt;sup>5</sup>With respect of the maintenance operations





<sup>&</sup>lt;sup>6</sup> In clean and dry conditions