

Switching programs

Description	Wiring diagram	Switching angle	Number of cells ↓ Size ↓ AC21	Type	Design see page 6-8 E. Z. V. SMA. P. G.	Switch pro- gram	Escutcheon plate
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Multi speed switches P

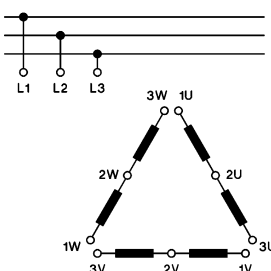
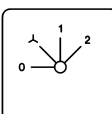
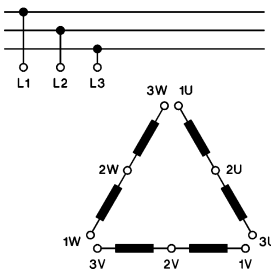
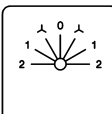
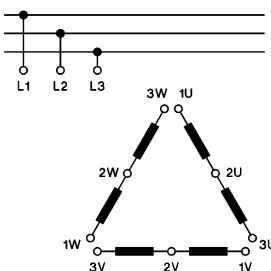
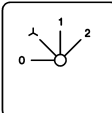
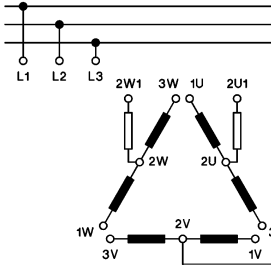
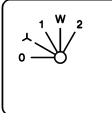
<p>1 Dahlander winding 1 rotary direction</p>	<p>60°</p>	<p>4</p> <p>48 □ 20A 32A</p> <p>64 □ 32A 50A</p> <p>88 □ 63A 80A 115A</p> <p>132 □ 150A 250A</p>	<p>M10H . x x x x x¹⁾ - . P61</p> <p>M20 . x x x x - - . P61</p> <p>N20 . x - x - x x . P61</p> <p>N33F . x - x - x - . P61</p> <p>N40 . x - x - x - . P61</p> <p>N60 . x - x - x - . P61</p> <p>N80 . x - x - - - . P61</p> <p>N100 . x - x - - - . P61</p> <p>N200 . x - x - - - . P61</p>	
<p>1 Dahlander winding 1 rotary direction</p>	<p>60°</p>	<p>4</p> <p>48 □ 20A 32A</p> <p>64 □ 32A 50A</p> <p>88 □ 63A 80A 115A</p> <p>132 □ 150A 250A</p>	<p>M10H . x x x x x¹⁾ - . P62</p> <p>M20 . x x x x - - . P62</p> <p>N20 . x - x - x x . P62</p> <p>N33F . x - x - x - . P62</p> <p>N40 . x - x - x - . P62</p> <p>N60 . x - x - x - . P62</p> <p>N80 . x - x - - - . P62</p> <p>N100 . x - x - - - . P62</p> <p>N200 . x - x - - - . P62</p>	<p>+007</p>
<p>1 Dahlander winding both rotary directions</p>	<p>60°</p>	<p>7</p> <p>48 □ 20A 32A</p> <p>64 □ 32A 50A</p> <p>88 □ 63A 80A 115A</p> <p>132 □ 150A 250A</p>	<p>M10H . x x x - - - . P61R</p> <p>M20 . x x x - - - . P61R</p> <p>N20 . x - x - x - . P61R</p> <p>N33F . x - x - - - . P61R</p> <p>N40 . x - x - x - . P61R</p> <p>N60 . x - x - - - . P61R</p> <p>N80 . x - x - - - . P61R</p> <p>N100 . x - x - - - . P61R</p> <p>N200 . x - x - - - . P61R</p>	
<p>1 Dahlander winding 1 rotary direction, clockwise operation</p>	<p>60°</p>	<p>5</p> <p>48 □ 20A 32A</p> <p>64 □ 32A 50A</p> <p>88 □ 63A 80A 115A</p> <p>132 □ 150A 250A</p>	<p>M10H . x x x x x¹⁾ - . P61RU</p> <p>M20 . x x x x - - . P61RU</p> <p>N20 . x - x - x x . P61RU</p> <p>N33F . x - x - x - . P61RU</p> <p>N40 . x - x - x - . P61RU</p> <p>N60 . x - x - x - . P61RU</p> <p>N80 . x - x - - - . P61RU</p> <p>N100 . x - x - - - . P61RU</p> <p>N200 . x - x - - - . P61RU</p>	
<p>1 Dahlander winding 1 rotary direction, with auxiliary contacts for contactor control</p>	<p>60°</p>	<p>5</p> <p>48 □ 20A 32A</p> <p>64 □ 32A 50A</p> <p>88 □ 63A 80A 115A</p> <p>132 □ 150A 250A</p>	<p>M10H . x x x x x¹⁾ - . P61J</p> <p>M20 . x x x x - - . P61J</p> <p>N20 . x - x - x x . P61J</p> <p>N33F . x - x - x - . P61J</p> <p>N40 . x - x - x - . P61J</p> <p>N60 . x - x - x - . P61J</p> <p>N80 . x - x - - - . P61J</p> <p>N100 . x - x - - - . P61J</p> <p>N200 . x - x - - - . P61J</p>	

Ordering example: AC21 32A cast enclosed, multi speed switch, 1 Dahlander winding, 1 rotary direction

N20 G P61

1) Plastic enclosed switches are delivered with switch type M10.

Switching programs

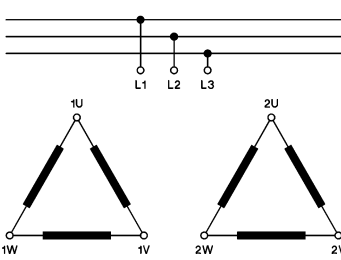
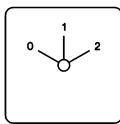
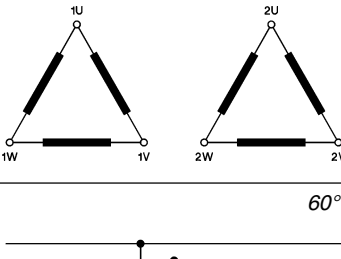
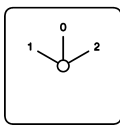
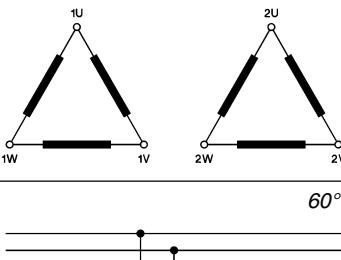
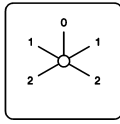
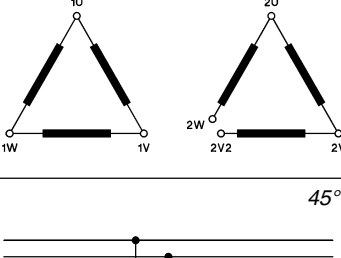
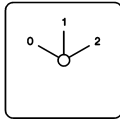
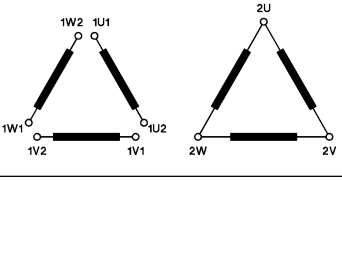
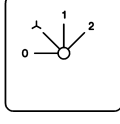
Description	Wiring diagram	Switching angle	Number of cells ↓ Size ↓ AC21	Type	Design see page 6-8 E. Z. V. SMA. P. G.	Switch pro- gram	Escutcheon plate
Multi speed switches P open Dahlander winding 1 rotary direction low speed with star-delta-start 	45°	6	48 □ 20A 32A 64 □ 32A 50A 88 □ 63A 80A 115A 132 □ 150A 250A	M10H . x x x - x ¹⁾ - . P91 M20 . x x x - - - . P91 N20 . x - x - x x . P91 N33F . x - x - x - . P91 N40 . x - x - x - . P91 N60 . x - x - x - . P91 N80 . x - x - - - . P91 N100 . x - x - - - . P91 N200 . x - x - - - . P91			
open Dahlander winding both rotary directions low speed with star-delta-start 	30°	8	48 □ 20A 32A 64 □ 32A 50A 88 □ 63A 80A 115A 132 □ 150A 250A	M10H . x x x - - - . P91R M20 . x x x - - - . P91R N20 . x - x - x - . P91R N33F . x - x - - - . P91R N40 . x - x - x - . P91R N60 . x - x - - - . P91R N80 . x - x - - - . P91R N100 . x - x - - - . P91R N200 . x - x - - - . P91R			
same as type P91 no load return from 2 to Off 	45°	10	48 □ 20A 32A 64 □ 32A 50A 88 □ 63A 80A 115A 132 □ 150A 250A	M10H . - - - - - . P91S M20 . - - - - - . P91S N20 . x - x - - - . P91S N33F . x - x - - - . P91S N40 . x - x - - - . P91S N60 . x - x - - - . P91S N80 . x - x - - - . P91S N100 . - - - - - . P91S N200 . - - - - - . P91S			
open Dahlander winding 1 rotary direction, low speed with star-delta-start, with additional start position (starting resistor) 	30°	7	48 □ 20A 32A 64 □ 32A 50A 88 □ 63A 80A 115A 132 □ 150A 250A	M10H . x x x - - - . P91W M20 . x x x - - - . P91W N20 . x - x - x - . P91W N33F . x - x - - - . P91W N40 . x - x - x - . P91W N60 . x - x - - - . P91W N80 . x - x - - - . P91W N100 . x - x - - - . P91W N200 . x - x - - - . P91W			

Ordering example: AC21 250A panel mounting, multi speed switch, 1 rotary direction, low speed with star-delta-start

N200 E P91

1) Plastic enclosed switches are delivered with switch type M10.

Switching programs

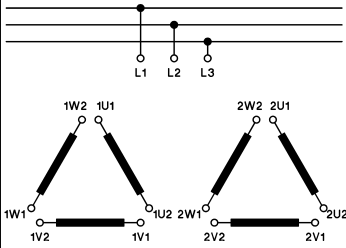

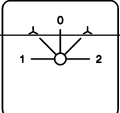
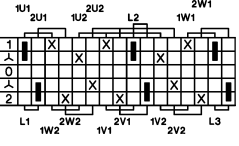
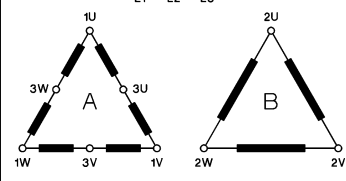
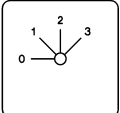
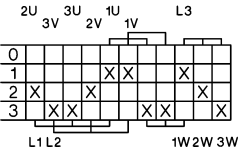
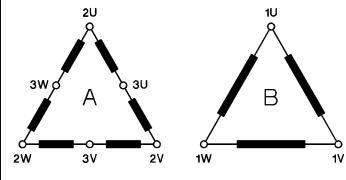
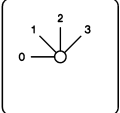
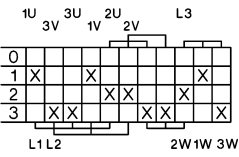
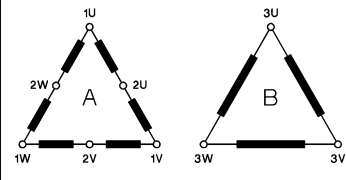
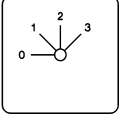
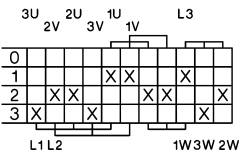
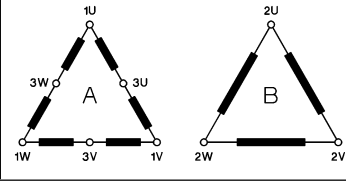
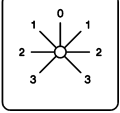
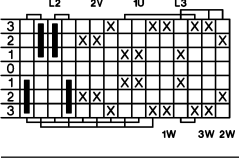
Description	Wiring diagram	Switching angle	Number of cells ↓ Size ↓ AC21	Type	Design see page 6-8 E. Z. V. SMA. P. G.	Switch pro- gram	Escutcheon plate
2 separate windings 1 rotary direction 	60°	3	48 □ 20A 32A 64 □ 32A 50A 88 □ 63A 80A 115A 132 □ 150A 250A	M10H . x x x x x ¹⁾ - M20 . x x x x - -	. P63 . P63 . P63 . P63 . P63 . P63		
2 separate windings 1 rotary direction 	60°	3	48 □ 20A 32A 64 □ 32A 50A 88 □ 63A 80A 115A 132 □ 150A 250A	M10H . x x x x x ¹⁾ - M20 . x x x x - -	. P64 . P64 . P64 . P64 . P64 . P64		
2 separate windings both rotary directions 	60°	5	48 □ 20A 32A 64 □ 32A 50A 88 □ 63A 80A 115A 132 □ 150A 250A	M10H . x x x x x ¹⁾ - M20 . x x x x - -	. P66 . P66 . P66 . P66 . P66 . P66		
2 separate windings 1 opened 1 rotary direction 	60°	4	48 □ 20A 32A 64 □ 32A 50A 88 □ 63A 80A 115A 132 □ 150A 250A	M10H . x x x x x ¹⁾ - M20 . x x x x - -	. P71 . P71 . P71 . P71 . P71 . P71		
2 separate windings 1 rotary direction low speed with star-delta-start 	45°	6	48 □ 20A 32A 64 □ 32A 50A 88 □ 63A 80A 115A 132 □ 150A 250A	M10H . x x x - x ¹⁾ - M20 . x x x - - -	. P96 . P96 . P96 . P96 . P96 . P96		

Ordering example: AC21 250A panel mounting, multi speed switch, 2 separate windings, low speed with star-delta-start

N200 E P96

1) Plastic enclosed switches are delivered with switch type M10.

Switching programs

Description	Wiring diagram	Switching angle	Number of cells ↓ Size ↓ AC21	Type	Design see page 6-8 E. Z. V. SMA. P. G.	Switch pro- gram	Escutcheon plate
Multi speed switches P							
2 separate windings 1 rotary direction both speeds with star-delta-start 		8	48 □ 20A 32A	M10H . x x x - - - . P122 M20 . x x x - - - . P122		. P122 . P122 . P122 . P122 . P122	
			64 □ 32A 50A	N20 . x - x - x - . P122 N33F . x - x - - - . P122			
			88 □ 63A 80A 115A	N40 . x - x - x - . P122 N60 . x - x - - - . P122 N80 . x - x - - - . P122			
			132 □ 150A 250A	N100 . x - x - - - . P122 N200 . x - x - - - . P122			
							
1 Dahlander winding A 1 normal winding B 3 speeds 1 rotary direction 0-A Δ-B Δ or Δ-A Δ		6	48 □ 20A 32A	M10H . x x x - x ¹⁾ - . P93 M20 . x x x - - - . P93		. P93 . P93 . P93 . P93 . P93	
			64 □ 32A 50A	N20 . x - x - x x . P93 N33F . x - x - x - . P93			
			88 □ 63A 80A 115A	N40 . x - x - x - . P93 N60 . x - x - x - . P93 N80 . x - x - - - . P93			
			132 □ 150A 250A	N100 . x - x - - - . P93 N200 . x - x - - - . P93			
							
1 Dahlander winding A 1 normal winding B 3 speeds 1 rotary direction 0-B Δ or Δ-A Δ		6	48 □ 20A 32A	M10H . x x x - x ¹⁾ - . P94 M20 . x x x - - - . P94		. P94 . P94 . P94 . P94 . P94	
			64 □ 32A 50A	N20 . x - x - x - . P94 N33F . x - x - x - . P94			
			88 □ 63A 80A 115A	N40 . x - x - x - . P94 N60 . x - x - x - . P94 N80 . x - x - - - . P94			
			132 □ 150A 250A	N100 . x - x - - - . P94 N200 . x - x - - - . P94			
							
1 Dahlander winding A 1 normal winding B 3 speeds 1 rotary direction 0-A Δ-A Δ-B Δ or Δ		6	48 □ 20A 32A	M10H . x x x - x ¹⁾ - . P95 M20 . x x x - - - . P95		. P95 . P95 . P95 . P95 . P95	
			64 □ 32A 50A	N20 . x - x - x x . P95 N33F . x - x - x - . P95			
			88 □ 63A 80A 115A	N40 . x - x - x - . P95 N60 . x - x - x - . P95 N80 . x - x - - - . P95			
			132 □ 150A 250A	N100 . x - x - - - . P95 N200 . x - x - - - . P95			
							
1 Dahlander winding A 1 normal winding B 3 speeds both rotary directions		9	48 □ 20A 32A	M10H . x x x - - - . P93R M20 . x x x - - - . P93R		. P93R . P93R . P93R . P93R . P93R	
			64 □ 32A 50A	N20 . x - x - - - . P93R N33F . x - x - - - . P93R			
			88 □ 63A 80A 115A	N40 . x - x - - - . P93R N60 . x - x - - - . P93R N80 . x - x - - - . P93R			
			132 □ 150A 250A	N100 . x - x - - - . P93R N200 . x - x - - - . P93R			
							

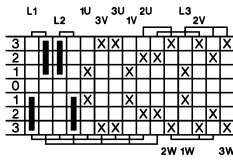
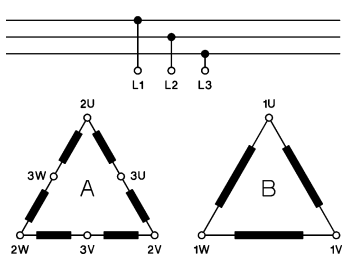
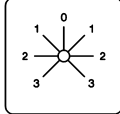
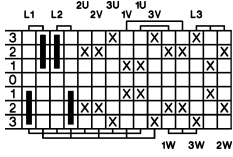
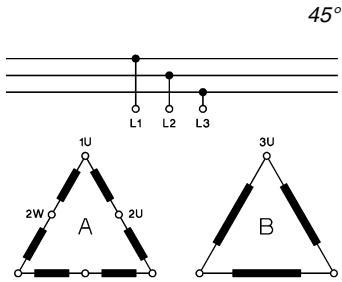
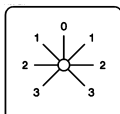
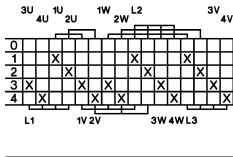
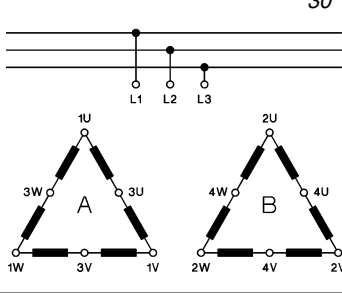
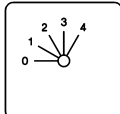
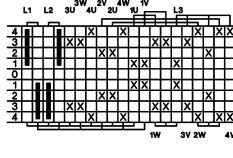
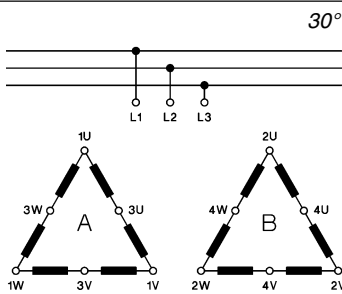
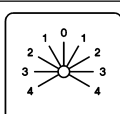
Ordering example: AC21 250A panel mounting, multi speed switch, 1 Dahlander winding A,
 1 normal winding B, 3 speeds, both rotary directions **N200 E P93R**

1) Plastic enclosed switches are delivered with switch type M10.

Switching programs

Description	Wiring diagram	Switching angle	Number of cells ↓ Size ↓ AC21	Type	Design see page 6-8 E. Z. V. SMA. P. G.	Switch pro- gram	Escutcheon plate
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Multi speed switches P

1 Dahlander winding A 1 normal winding B 3 speeds both rotary directions 		45°	9 48 □ 20A 32A	M10H . x x x - - - . P94R M20 . x x x - - - . P94R	
			64 □ 32A 50A	N20 . x - x - - - . P94R N33F . x - x - - - . P94R	
			88 □ 63A 80A 115A	N40 . x - x - - - . P94R N60 . x - x - - - . P94R N80 . x - x - - - . P94R	
			132 □ 150A 250A	N100 . x - x - - - . P94R N200 . x - x - - - . P94R	
1 Dahlander winding A 1 normal winding B 3 speeds both rotary directions 		45°	8 48 □ 20A 32A	M10H . x x x - - - . P95R M20 . x x x - - - . P95R	
			64 □ 32A 50A	N20 . x - x - x - . P95R N33F . x - x - - - . P95R	
			88 □ 63A 80A 115A	N40 . x - x - x - . P95R N60 . x - x - - - . P95R N80 . x - x - - - . P95R	
			132 □ 150A 250A	N100 . x - x - - - . P95R N200 . x - x - - - . P95R	
2 Dahlander windings 4 speeds 1 rotary direction 0 - A Δ - B Δ - A Δ - B Δ 		30°	8 48 □ 20A 32A	M10H . x x x - - - . P124 M20 . x x x - - - . P124	
			64 □ 32A 50A	N20 . x - x - x - . P124 N33F . x - x - - - . P124	
			88 □ 63A 80A 115A	N40 . x - x - x - . P124 N60 . x - x - - - . P124 N80 . x - x - - - . P124	
			132 □ 150A 250A	N100 . x - x - - - . P124 N200 . x - x - - - . P124	
2 Dahlander windings 4 speeds both rotary directions 		30°	12 48 □ 20A 32A	M10H . x x x - - - . P124R M20 . x x x - - - . P124R	
			64 □ 32A 50A	N20 . x - x - - - . P124R N33F . x - x - - - . P124R	
			88 □ 63A 80A 115A	N40 . x - x - - - . P124R N60 . x - x - - - . P124R N80 . x - x - - - . P124R	
			132 □ 150A 250A	N100 . x - x - - - . P124R N200 . x - x - - - . P124R	

Ordering example: AC21 250A Base mounting, multi speed switch, 2 Dahlander windings, 4 speeds, 1 rotary direction

N200 V P124