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Technical Data - 3VU13 / 3VU16

• Specification**		IEC 947-1,	IEC 947-2,	IEC 947-4-1
• Type		**3VU13**		**3VU16**
• No of poles			3	3
• Max Rated Current				
– Distribution		Amps	25	63
–.Motor		Amps	25	50
• Permissible Ambient Temperature at Full Rated Current		°C		-20 to +55
• Rated Voltage Ue		AC V	690	
• Rated Frequency		Hz	50/60	
• Rated Insulation Voltage		V	750	
• Rated Impulse Withstand Voltage		kV	6	
• Utilization Category				
IEC947-1 (Circuit Breaker)			A	
IEC947-4 (Motor starters)			AC 3	
• Rated Breaking Capacity			Refer Table I	
• S/C Protection			Refer Table I	
• Rated Breaking Capacity DC t = 15ms				
1 Contact	2Contacts in series	3Contacts in series		
110V	220V	330V	kA	10	Upon Enq
to 150V	to 300V	to 450	kA	10	Upon Enq

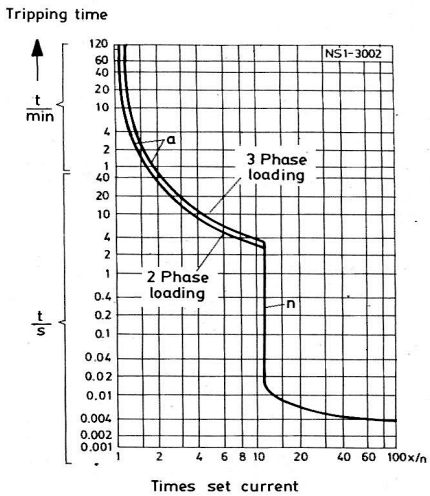
• KW Rating With Max Current Rating		Distr	Motor
220/230V	kW	7	18	11
240V	kW	7.5	20	15
380/400V	kW	12.5	31	22
415V	kW	13	34	22
500V	kW	16	41	30
660V	kW	22	55	37
690V	kW	23	57	45

• Wattloss Per Breaker	A	W	A	W
	0.6	5	2.4	8
	4	6	6	7
	6	7	25	14
	25	9	63	23

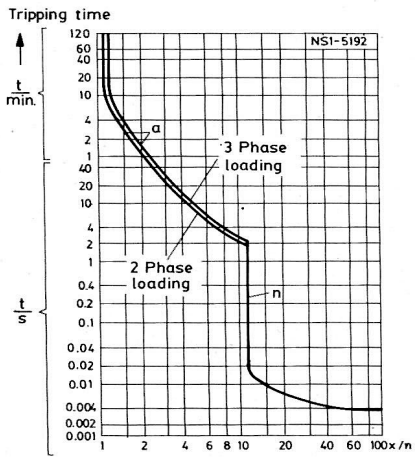
• Protection Class With Open Terminals & With Cable Connection		IP00/IP2LO	
• Protection Against Touch as per DIN VDE		Available	
• Mechanical Life at 25A/above 25A		100000	100000/30000
• Switching Frequency with Current Loading	OP/hr	25	25
• Single Phase Protection Sensivity		Available	
• Temperature Compensation		Available	
• **Auxiliary Switch**			
- Rated Voltage	AC, V	230 400	500
- Rated Current	Amps	3 1.5	1.2
- Utilization Category		AC - 15	
- Rated Voltage	DC, V	24 60	220
- Rated Current	Amps	2.3 0.7	0.3
- Utilization		DC - 13	

** NEMA Rating upon enquiry

Characteristics

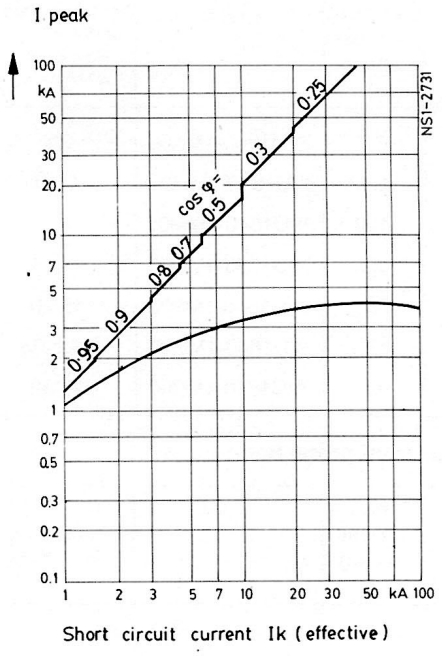


Time current characteristics of 3VU13

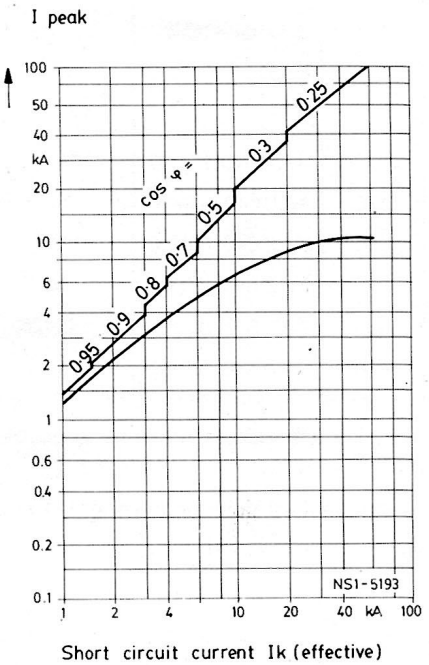


Time current characteristics of 3VU16

Technical Data-3VU13/3VU16



Cut off characteristics of 3VU1300-0MK00



Cut off characteristics of 3VU1600-0MN00

		3VU13	3VU16
• Under Voltage Release			
- Consumption During Pick-up,	VA/W	10/6	
- Consumption During Running,	VA/W	4.7/2	
- Dropout		0.7 to 0.35 times Ue	
- Pickup		85 to 110% of Ue	
- Max Operating Time	ms	20	
• Shunt Release			
- Consumption	VA/W	10/6	
- Max Continuous Rating	Sec	5	
- Pickup		0.7 to 1.1 times Ue	
• Power Connections (Incoming from top or bottom possible)			
- Method		SIGUT ®	
- Single / Multiple Core Cable	mm²	2 x (1 to 6)	1 x 1.5 to 2 x 16 or 1 x 25+1 x 10
- Finely Stranded with Pin type Lugs	mm²	2 x (1 to 4)	1 x 1.5 to 2 x 10 or 1 x 16+1 x 10
- Tightening Torque	Nm	1 to 1.5	2.5 to 3
- Control Terminals method		SIGUT	
- Single / Multiple Core Cable	mm²	1 x 0.5 to 2 x 2.5	
- Finely Stranded with Pin type Lugs	mm²	1 x 0.5 to 2 x 2.5	
- Tightening Torque	Nm	1 to 1.3	
- S/C Protection for Auxiliary Circuit			
gL/gG Fuses	Amps	10	
Breaker	Amps	6	
• Current Limiter for 3VU13			
- Rated current In		56 Amps	
- Rated Voltage Ue		500 V 50 / 60 Hz.	
- Power Connection	mm²	2 x (1 to 6)	
- Power Connection with special feed In terminals Type 3VU9135-IBB01	mm²	25	
• Remote Controlled Operating Mechanism for 3VU13			
- Rated Operational control voltage, VAC	Us	220/240	
During Pick Up	W	230	
In Continuous Operation	W	5	
• Mounting		on DIN Rail in any position.	

Table 1 3VU13 / 3VU16 breaking capacity at 415V

3VU13

Current Rating In		0.16 to 1	1.6	2.4	3.2 & 4	5 & 6	8 & 10	13 & 16	20 & 25
Rated S/C Breaking Capacity at 415 V:									
Icu	KA	100	100	100	100	100	10(50)	6(50)	6(50)
Ics	KA	100	100	100	100	100	10(50)	6(50)	6(50)
Max Back up fuse (gL/gG)									
Diazed	A	*	*	*	*	*	80	80	80
NH	A	*	*	*	*	*	80	80	80

* Fuse not required

( ) Values in bracket are with Current Limiter.
For 3VU13 breakers of ratings 8A & above, in place of fuses, the Current Limiter can be used to increase the S/C breaking capacity.

3VU16

Current Rating In	A	1.6 & 2.4	4	6	10	16	25	32 to 63
Rated S/C Breaking Capacity at 415 V:								
Icu	KA	100	100	100	100	100	100	35
Ics	KA	100	100	100	100	100	50	17
Max Back up fuse (gL/gG)								
Diazed	A	*	*	*	*	*	*	–
NH	A	*	*	*	*	*	*	200

* Fuse not required

Selection Table for 3VU13 and 3VU16 MPCBs.

3VU 13 Circuit - breakers with 1no+1nc auxiliary contacts for motor and plant protection

Rated Current In A	Overload release range A	Shortcircuit release setting A	Type	Recommended 415V Motor Ratings in Kw/HP (DOL)
0.16	0.1 - 0.16	1.9	3VU1340-1MB00	-
0.24	0.16 - 0.24	2.9	3VU1340-IMC00	-
0.4	0.24 - 0.4	4.8	3VU1340-1MD00	-
0.6	0.4-0.6	7.2	3VU1340-1ME00	-
1	0.6-1	12	3VU1340-1MF00	0.25/0.33
1.6	1-1.6	19	3VU1340-1MG00	0.37/0.5
2.4	1.6-2.4	29	3VU1340-1MH00	0.75/1
3.2	2-3.2	38	3VU1340-1NH00	1.1/1.5
4	2.4-4	48	3VU1340-1MJ00	1.5/2
5	3.2-5	60	3VU1340-1NJ00	2.2/3
6	4-6	72	3VU1340-1MK00	3/4
8	5-8	96	3VU1340-1NK00	3.7/5
10	6-10	120	3VU1340-1ML00	4/5.4
13	8-13	156	3VU1340-1NL00	5.5/7.5
16	10-16	190	3VU1340-1MM00	7.5/10
20	14-20	240	3VU1340-1MN00	9.3/12.5
25	18-25	300	3VU1340-1MP00	11/15

Circuit - breakers with 1no + 1nc auxiliary contacts for line-side protection of transformers with high inrush current

Rated Current In A	Overload release range A	Shortcircuit release setting A	Type
0.16	0.1-0.16	2.9	3VU1340-1TBOO
0.24	0.16-0.24	4.8	3VU1340-1TC00
0.4	0.24-0.4	7.2	3VU1340-1TD00
0.6	0.4-0.6	12	3VU1340-1TE00
1	0.6-1	15	3VU1340-1TF00
1.6	1-1.6	29	3VU1340-1TG00
2.4	1.6-2.4	48	3VU1340-1TH00
4	2.4-4	72	3VU1340-1TJ00
6	4-6	120	3VU1340-1TK00
10	6-10	190	3VU1340-1TL00
16	10-16	300	3VU1340-1TM00
20	14-20	300	3VU1340-1TN00

Circuit - breakers with 1no + 1nc auxiliary contacts

Rated Current In A	Overload release range A	Shortcircuit release setting A	Type
0.2	0.2	1.2	3VU1340-1MS00

3VU16 Circuit - breakers with 1no + 1nc auxiliary contacts for motor and plant protection

Rated Current In A	Overload release range A	Shortcircuit release setting A	Type	Recommended 415V Motor Ratings in Kw/HP (DOL)
6	4-6	72	3VU1640-1MK00	3/4
10	6-10	120	3VU1640-1MLOO	4/5.4
16	10-16	190	3VU1640-1MM00	7.5/10
25	16-25	300	3VU1640-1MN00	11/15
32	22-32	380	3VU1640-1MP00	15/20
40	28-40	480	3VU1640-1MQ00	18.5/25
52	36-52	600	3VU1640-1MR00	22/30

Circuit - breakers for plant protection

Rated Current In A	Overload release range A	Shortcircuit release setting A	Type	Unit Price Rs.	Std. Pkg. (Nos)
63	-	600	3VU1640-1LS00	6326.-	1

Circuit - breakers for starter protection, with 1NO + 1NC auxiliary contacts

Rated Current In A	Overload release range A	Shortcircuit release setting A	Type	Recommended 415V Motor Ratings in Kw/HP (DOL)
1.6	without thermal overload releases	19	3VU1640-1CG00	0.37/0.5
2.4		29	3VU1640-1CH00	0.75/1
4		48	3VU1640-1CJ00	1.5/2
6		72	3VU1640-1CK00	3/4
10		120	3VU1640-1CL00	4/5.4
16		190	3VU1640-1CM00	7.5/10
25		300	3VU1640-1CN00	11/15
32		380	3VU1640-1CP00	15/20
40		480	3VU1640-1CQ00	18.5/25
52		600	3VU1640-1CR00	22/30

The 3VU13 and 3VU16 circuit breakers are also available without auxiliary contacts.

To order the same, the 8th place of the type number is to be replaced with the digit 0.

Connection diagram

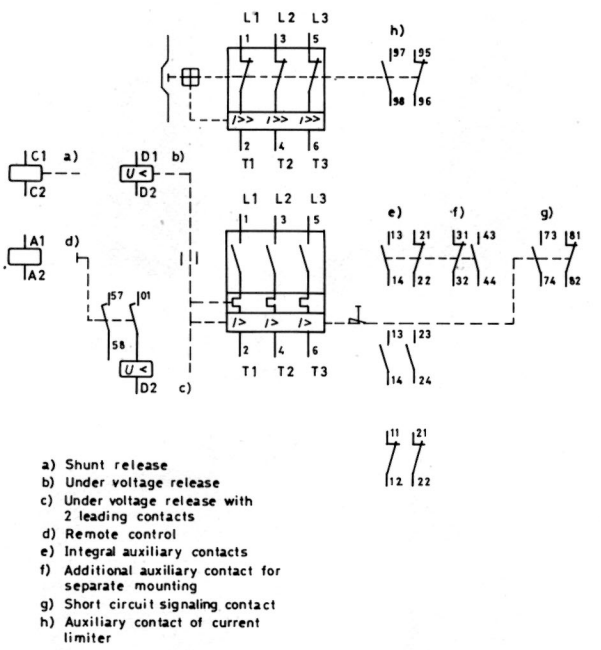
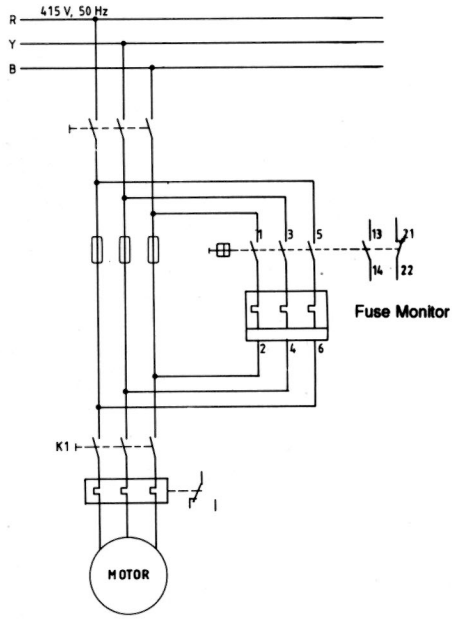
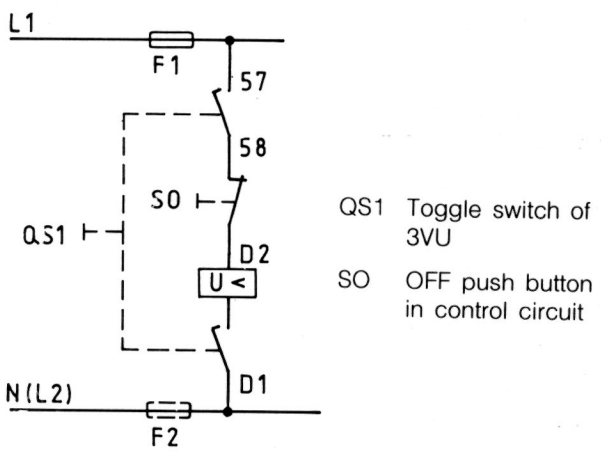


Diagram for 3VU13 / 16 and current limiter (Applies for 3VU13 only)

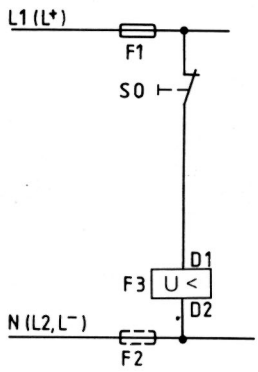


Fuse Monitor 3VU1300-IMS00

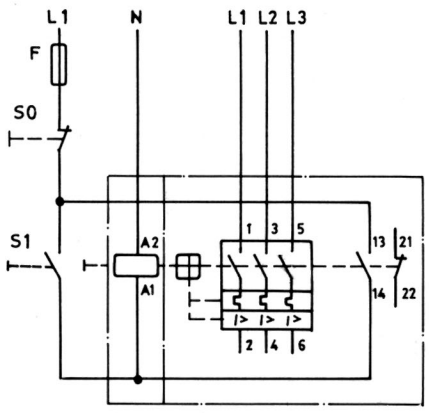
Connection diagrams



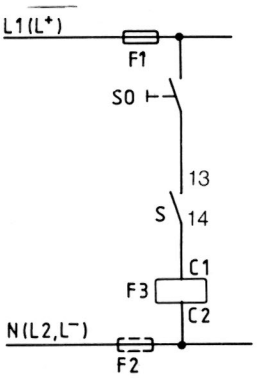
Wiring diagram for under voltage release with 2 leading auxiliary contacts



Wiring diagram for under voltage release of 3VU13 / 16



Wiring diagram for Remote control with 3VU13 AC 50/60 Hz 220/240V.
Switching command <5s. Connection command not recomanded.



Shunt realease

Wiring diagram for Shunt release for 3VU13 / 16