Technical Instruction MA7_5662550_02_en MA7, MA7/8
Checks to be performed in case of tripping of the motor protective switch type MA7, MA7/8



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Regensburg, 2023-04-27

NOTICE

Safety, hazard and other information included in the MR operating instructions for on-load tap-changers type MA7, MA7/8 must be observed!

The instruction describes the checks to be performed when the motor protection trips.

Content

MA7_5662550_02_en page 2 of 3

Checklist tripping of th	e motor protectiv	ve switch
Motor-drive unit type	, serial no	, operation counter reading on the un
When was the transformer pu	ut into service? Date	:
When did the tripping of the tripping occur since that time'		ritch occur, at what time, and how often did th
Did the tripping of the motor sporadically?	protective switch oc	cur always at the same time or did it occur on
In which service position	did the tripping	g of the motor protective switch occur
Did the tripping of the motor both directions?	protective switch al	ways occur always in the same position and i
Did the tripping of the motor p change operation?	protective switch occ	ur at the beginning, during or at the end of a ta
Does the motor-drive unit sto indication wheel after comple		e red mark in the green zone on the tap-chang operation?
Please indicate the ambient to	•	
Compare the tripping range sonameplate. Value set on the motor protection	et on the motor prote	ective switch with the data on the motor-drive ur
How is the arc intensity on th contact opening and closing?		A 3 and on the motor contactors K1 and K2 durin
Check the phase sequence a	t the motor terminals	s L1, L2, L3 - clockwise ☐ yes / ☐ no
Do fluctuations of the motor-o	drive unit supply volta	age occur? □ yes / □ no
If so, how large are these fluc	tuations?	
U _{Nenn} : V, U _{max} :	V, U _{min} :	V
Measure the motor voltage (3	phases)	
L1= V, L2=	V, L3=	V
Measure the motor current (3	phases)	
L1= A, L2=	A, L3=	A
Check the step-by-step unit:		
a) for breakage or easy move	ement of the return s	spring
b) for correct return of the sw	vitching lever after co	ompletion of a tap-change operation.

17. Check the opening and closing points of the restart contacts S12 and S14, of the step-by-step contact S13 and of the other devices according to the flow chart diagram (Fig. 1, Page 2).

Enter the opening and closing points that have been determined into the flow chart diagram.

Step-by-step unit Device	0	1	2	: 3	4	· 5	6	7	8	9	1	0		2	4 25	5 26	3 2	7 2	8 2	9 3	0 3	1 3	2 3	3 1	
Push-buttons S1 and S2																									
Motor contactors K1 and K2																									
Brake contactor K3																									
Restarting contact S12/S14																									
Step-by-step contact S13																									
Stepping relay K20																									
		,	'	•	•	•		'	•		•	,	'	'	,	•									

18.	Which control modes are existing for the motor-drive unit? (Local / remote, auto / manual, s	step-by-
	step or continuous operation).	

19. During which control did the tripping of the motor switch occur?	
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20.	Please indicate the time between one control pulse and the next control pulse as well as the pulse
	duration.

- 21. Please send us your diagram for the external connection of the motor-drive unit.
- 22. To determine whether the motor protective switch was tripped by the tripping solenoid, connect the tripping coil of another motor protective switch (which must be set to ON) in parallel with the coil of the motor protective switch in question. With this method it is possible to determine whether the motor protective switch was tripped by its tripping solenoid.

i.V. Andreas Hartmann

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