

# TABLE 3-3.9.1 HAZARD RISK CATEGORY CLASSIFICATIONS

Task (Assumes Equipment is Energized, and Work is Done Within the Flash Protection Boundary)

TASK	V-RATED TOOLS V-RATED GLOVES		
	HAZARD/RISK CATEGORY		
<b>Panelboards rated 240 V and below - Notes 1 and 3</b>			
Circuit breaker (CB) or fused switch operation with covers on	0	N	N
CB or fused switch operation with covers off	0	N	N
Work on energized parts, including voltage testing	1	Y	Y
Remove/install CBs or fused switches	1	Y	Y
Removal of bolted covers (to expose bare, energized parts)	1	N	N
Opening hinged covers (to expose bare, energized parts)	0	N	N
<b>Panelboards or Switchboards rated &gt;240 V and up to 600 V (with molded case or insulated case circuit breakers) - Notes 1 and 3</b>			
CB or fused switch operation with covers on	0	N	N
CB or fused switch operation with covers off	1	N	N
Work on energized parts, including voltage testing	*2	Y	Y
<b>600 V Class Motor Control Centers (MCCs) - Notes 2 (except as indicated) and 3</b>			
CB or fused switch or starter operation with enclosure doors closed	0	N	N
Reading a panel meter while operating a meter switch	0	N	N
CB or fused switch or starter operation with enclosure doors open	1	N	N
Work on energized parts, including voltage testing	2	Y	Y
Work on control circuits with energized parts 120 V or below, exposed	0	Y	Y
Work on control circuits with energized parts > 120 V, exposed	*2	Y	Y
Insertion or removal of individual starter "buckets" from MCC - Note 4	3	Y	N
Application of safety grounds, after voltage test	*2	Y	N
Removal of bolted covers (to expose bare, energized parts)	*2	N	N
Opening hinged covers (to expose bare, energized parts)	1	N	N
<b>600 V Class Switchgear (with power circuit breakers or fused switches) - Notes 5 and 6</b>			
CB or fused switch operation with enclosure doors closed	0	N	N
Reading a panel meter while operating a meter switch	0	N	N
CB or fused switch operation with enclosure doors open	1	N	N
Work on energized parts, including voltage testing	*2	Y	Y
Work on control circuits with energized parts 120 V or below, exposed	0	Y	Y
Work on control circuits with energized parts > 120 V, exposed	*2	Y	Y
Insertion or removal (racking) of CBs from cubicles, doors open	3	N	N
Insertion or removal (racking) of CBs from cubicles, doors closed	2	N	N
Application of safety grounds, after voltage test	*2	Y	N
Removal of bolted covers (to expose bare, energized parts)	3	N	N
Opening hinged covers (to expose bare, energized parts)	2	N	N
<b>Other 600 V Class (277 V through 600 V, nominal) Equipment - Note 3</b>			
Lighting or small power transformers (600 V, maximum)	-	-	-
Removal of bolted covers (to expose bare, energized parts)	*2	N	N
Opening hinged covers (to expose bare, energized parts)	1	N	N
Work on energized parts, including voltage testing	*2	Y	Y

TASK	V-RATED TOOLS V-RATED GLOVES		
	HAZARD/RISK CATEGORY		
<b>Other 600 V Class (277 V through 600 V, nominal) Equipment - Note 3 (Continued)</b>			
Application of safety grounds, after voltage test	*2	Y	N
Revenue meters (kW-hour, at primary voltage and current)	-	-	-
Insertion or removal	*2	Y	N
Cable trough or tray cover removal or installation	1	N	N
Miscellaneous equipment cover removal or installation	1	N	N
Work on energized parts, including voltage testing	*2	Y	Y
Application of safety grounds, after voltage test	*2	Y	N
<b>NEMA E2 (fused contactor) Motor Starters, 2.3 kV through 7.2 kV</b>			
Contactors operation with enclosure doors closed	0	N	N
Reading a panel meter while operating a meter switch	0	N	N
Contactors operation with enclosure doors open	*2	N	N
Work on energized parts, including voltage testing	3	Y	Y
Work on control circuits with energized parts 120 V or below, exposed	0	Y	Y
Work on control circuits with energized parts > 120 V, exposed	3	Y	Y
Insertion or removal (racking) of starters from cubicles, doors open	3	N	N
Insertion or removal (racking) of starters from cubicles, doors closed	2	N	N
Application of safety grounds, after voltage test	3	Y	N
Removal of bolted covers (to expose bare, energized parts)	4	N	N
Opening hinged covers (to expose bare, energized parts)	3	N	N
<b>Metal Clad Switchgear, 1 kV and above</b>			
CB or fused switch operation with enclosure doors closed	2	N	N
Reading a panel meter while operating a meter switch	0	N	N
CB or fused switch operation with enclosure doors open	4	N	N
Work on energized parts, including voltage testing	4	Y	Y
Work on control circuits with energized parts 120 V or below, exposed	2	Y	Y
Work on control circuits with energized parts > 120 V, exposed	4	Y	Y
Insertion or removal (racking) of CBs from cubicles, doors open	4	N	N
Insertion or removal (racking) of CBs from cubicles, doors closed	2	N	N
Application of safety grounds, after voltage test	4	Y	N
Removal of bolted covers (to expose bare, energized parts)	4	N	N
Opening hinged covers (to expose bare, energized parts)	3	N	N
Opening voltage transformer of control power transformer compartments	4	N	N
<b>Other Equipment 1 kV and above Metal Clad load interrupter switches, fused or unfused</b>			
Switch operation, doors closed	2	N	N
Work on energized parts, including voltage testing	4	Y	Y
Removal of bolted covers (to expose bare, energized parts)	4	N	N
Opening hinged covers (to expose bare, energized parts)	3	N	N
Outdoor disconnect switch operation (hookstick operated)	3	Y	Y
Outdoor disconnect switch operation (gang-operated, from grade)	2	N	N
Insulated cable examination, in manhole or other confined space	4	Y	N
Insulated cable examination, in open area	2	Y	N

## LEGENDS:

**V-rated Gloves** are gloves rated and tested for the maximum line-to-line voltage upon which work will be done.

**V-rated Tools** are tools rated and tested for the maximum line-to-line voltage upon which work will be done.

**\*2** means that a double-layer switching hood and hearing protection are required for this task in addition to the other Hazard/Risk Category 2 requirements of Table 3-3.9.2 of Part II.

**Y** = yes (required)      **N** = no (not required)

## NOTES:

- 1) 25 kA short circuit current available, 0.03 second (2 cycle) fault clearing time
- 2) 65 kA short circuit current available, 0.03 second (2 cycle) fault clearing time
- 3) For <10 kA short circuit current available, the Hazard/Risk Category required may be reduced by one Number.
- 4) 65 kA short circuit current available, 0.33 second (20 cycle) fault clearing time
- 5) 65 kA short circuit current available, up to 1.0 second (60 cycle) fault clearing time
- 6) For <25 kA short circuit current available, the Hazard/Risk Category required may be reduced by one Number.