

ISO 7176-21:2009-04 (E)

Wheelchairs - Part 21: Requirements and test methods for electromagnetic compatibility of electrically powered wheelchairs and scooters, and battery chargers

Contents		Page
Foreword		iv
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Classification of electrically powered wheelchairs	4
5	Requirements	4
5.1	General	4
5.2	Wheelchair drives	4
5.3	Wheelchairs with an on-board battery charger	6
5.4	Off-board and carry-on battery chargers	8
6	Test apparatus	9
7	Preparation	10
7.1	Wheelchairs - driving	10
7.2	Wheelchairs - non-driving	11
7.3	Wheelchairs with on-board battery chargers	11
7.4	Off-board and carry-on battery chargers	11
8	Sequence of tests	11
9	Test methods for emissions	11
9.1	Mains terminal disturbances	11
9.2	Radiated emissions	12
9.3	Harmonic current emissions	12
9.4	Voltage fluctuations and flicker	12
10	Test methods for immunity	13
10.1	Electrostatic discharge immunity	13
10.2	Radiated r.f. field immunity	14
10.3	Fast transient/burst immunity	17
10.4	Surge immunity	17
10.5	Conducted disturbance immunity	18
10.6	Power frequency magnetic field immunity	18
10.7	Voltage dips and short interruptions immunity	18
11	Wheel speed change calculations	19
12	Test report	20
13	Disclosure	20
14	User manual	20