

Annex B (informative)

Inquiry checklist for the electrical equipment of machines

The use of this inquiry checklist can facilitate an exchange of information between the user and supplier on basic conditions and additional user requirements to enable suitable design, application and utilization of the electrical equipment of the machine (see 4.1) particularly when the conditions on site can deviate from those generally expected.

Name of manufacturer/supplier			
Name of end user			
Tender/order number		Date	
Type of machine	Type designation	Serial number	
1. Special conditions (see Clause 1)			
a) Is the machine to be used in the open air?	Yes/No	If yes, specification	
b) Will the machine use, process or produce explosive or flammable material?	Yes/No	If yes, specification	
c) Is the machine for use in potentially explosive or flammable atmospheres?	Yes/No	If yes, specification	
d) Can the machine present special hazards when producing or consuming certain materials?	Yes/No	If yes, specification	
e) Is the machine for use in mines?	Yes/No	If yes, specification	
2. Electrical supplies and related conditions (see 4.3)			
a) Anticipated voltage fluctuations (if more than $\pm 10\%$)			
b) Anticipated frequency fluctuations (if more than $\pm 2\%$)	Continuous	Short time	
c) Indicate possible future changes in electrical equipment that will require an increase in the electrical supply requirements			
d) Specify voltage interruptions in supply if longer than specified in Clause 4 where electrical equipment has to maintain operation under such conditions			
3. Physical environment and operating conditions (see 4.4)			
a) Electromagnetic environment (see 4.4.2)	Residential, commercial or light industrial environment	Industrial environment	
Special EMC conditions or requirements			
b) Ambient temperature range			
c) Humidity range			
d) Altitude			
e) Special environmental conditions (for example corrosive atmospheres, dust, wet environments)			
f) Radiation			
g) Vibration, shock			

h) Special installation and operation requirements (for example flame-retardant cables and conductors)				
i) Transportation and storage (for example, temperatures outside the range specified in 4.5)				
k) restrictions related to size, weight or point load				
4. Incoming electrical supplies				
Specify for each source of supply:				
a) Nominal voltage (V)	AC		DC	
	If AC, number of phases		Frequency (Hz)	
Value of the supply source impedance (Ω) at the point of connection to the electrical equipment				
Prospective short-circuit current (kA r.m.s.) at the point of connection to the electrical equipment (see also item 2)				
b) Type of distribution system (see IEC 60364-1)	TN (system with one point directly earthed, with a protective conductor (PE) directly connected to that point); specify if the earthed point is the neutral point (centre of the star) or another point		TT (system with one point directly earthed but the protective conductor (PE) of the machine not connected to that earth point of the system)	
	IT (system that is not directly earthed)			
In the case of IT systems, is insulation monitoring/fault location to be provided by the supplier of the electrical equipment?	Yes		No	
c) Is the electrical equipment to be connected to a neutral (N) supply conductor? (See 5.1)	Yes		No	
Maximum current (A) allowed				
d) Supply disconnecting device				
Is disconnection of the neutral (N) conductor required?	Yes		No	
Is a removable link for disconnecting the neutral (N) required?	Yes		No	
Type of supply disconnecting device to be provided				
e) Cross sectional area and material of external protective (PE) conductor				
f) Is an RCD provided in the installation?	Yes/No		If yes, type and rated residual operating current	
5. Protection against electric shock (see Clause 6)				
a) For which of the following classes of persons is access to the interior of enclosures required during normal operation of the equipment?	Electrically skilled persons		Electrically instructed persons	
b) Are locks with removable keys to be provided for securing the doors? (see 6.2.2)	Yes		No	
Type of locking device				
Basic lock unit (except key cylinder) to be supplied and installed by				
Key cylinder to be supplied and installed by				

6. Protection of equipment (see Clause 7)				
a) Will the user or the supplier of the electrical equipment provide supply conductors and the overcurrent protection for the supply conductors? (see 7.2.2)				
Type and rating of overcurrent protective devices				
b) Largest (kW) three-phase AC motor that may be started direct-on-line				
c) May the number of motor overload detection devices be reduced? (see 7.3.2)	Yes		No	
d) Is overvoltage protection to be provided?	Yes/No		If yes, specification	
7. Operation				
For cableless control systems, specify the time delay before automatic machine shutdown is initiated in the absence of a valid signal.				
8. Operator interface and machine-mounted control devices (see Clause 10)				
Special colour preferences (for example to align with existing machinery):	Start		Stop	
	Other			
9. Controlgear				
Degree of protection of enclosures (see 11.3) or special conditions:				
10. Wiring practices (see Clause 13)				
Is there a specific method of identification to be used for the conductors? (see 13.2.1)	Yes		No	
Type				
11. Accessories and lighting (see Clause 15)				
a) Is a particular type of socket-outlet required?	Yes		No	
If yes, which type?				
b) Where the machine is equipped with local lighting:	Highest permissible voltage (V)		If lighting circuit voltage is not obtained directly from the power supply, state preferred voltage	
12. Marking, warnings and reference designations (see Clause 16)				
a) Functional identification (see 16.3)				
Specifications:				
b) Inscriptions/special markings	On electrical equipment?		In which language?	
c) Specific local regulations that must be complied with	Yes		No	
If yes, which one?				
13. Technical documentation (see Clause 17)				
a) Technical documentation (see 17.1)	On what media/		In which language?	
	File format?			
b) Instructions for use (see 17.1)	On what media?		In which language?	
	File format?			

c) Size, location and purpose of ducts, open cable trays or cable supports to be provided by the user				
d) Indicate if special limitations on the size or weight affect the transport of a particular machine or controlgear assemblies to the installation site:	Maximum dimensions		Maximum weight	
e) In the case of specially built machines, is a certificate of operating tests with the loaded machine to be supplied?	Yes		No	
f) In the case of other machines, is a certificate of operating type tests on a loaded prototype machine to be supplied?	Yes		No	