

MOVECAT I-Motion NMB-14, Network Master Box – Stop Category 1



The I-Motion Network Master Box satisfies the current requirements for SIL 3 applications with Stop Category 1 in conjunction with DGUV V17 (BGV C1) vario drives.

According to DIN 56950-1, Stop Category 1 is required in particular for fast-running, regulated drives as well as complex load networks where controlled stopping by means of a ramp movement is also essential in the E-Stop. This contrasts with Stop Category 0, which involves the immediate removal of power, triggering the abrupt stopping of all drives (immediate incursion of the brakes). The sudden shutdown of the power characteristic of Stop Category 0 solutions generates additional hazards due to the enormous impact coefficients and the massive stresses to which connected loads, slings and supporting structures, as well as the drives themselves (gearboxes, brakes, load-bearing parts etc.), are subjected as a result.

Kinetic applications with Stop Category 1 increase both the

functional and the operational safety, as in case of a malfunction, dynamic loads and irreversible damage to all components can be considerably reduced.

The use as network master is affected after I-Motion control consoles (e.g. Expert-T or Basic). The NMB-14 I-Motion Network Master Box generates for subsequent NDB-6 Network Distributor Boxes and V-Motion Power Controllers the requisite dual-channel diverse data communication as well as the Stop Category 1/E-Stop function level and assures the real-time synchronicity of all connected system units.

The device is equipped with 14 independent, opto-isolated I-Motion network outputs for V-Motion or NDB-6 and makes possible the flexible combination of star and series topologies for complex kinetic systems meeting the highest standards in terms of failure-free, functional system security.

Furthermore, the NMB-14 manages the E-Stop function

ality in the I-Motion network in addition to an internal and also an optional externally connectable E-Stop. These are complemented by two optionally connectable external safety („dead-man“) enabler buttons for selective, decentralized enabling in case, for example, of restricted visibility or manned airframes.

For the operation of the NMB-14 I-Motion network master box, four function keys as well as a backlit 4x20 digital display with LED status indicators are provided. The integrated UPS sets the seal on the operational safety of the network master box and with it of the I-Motion integrated system.

With the NMB-14, existing Movecat I-Motion systems can be upgraded to Stop Category 1 and the latest safety and functional requirements of DGUV V17, DIN 56950-1, EN 61508/SIL3 and BetrSichV, thereby assuring continuing guideline conformity and with it future-safe operation.

Technical data

- evaluation of the E-Stop button, the connected control consoles, V-Motion and external E-Stop buttons for ramps, controlled E-Stop (Stop Category 1)
- generates as master module the real-time synchronization of the subsequent NDBs and V-Motions
- backlit 4x20 LC-display with automatic backlight switch-off
- four function keys
- E-STOP button, function-illuminated
- UPS module (3 minutes)
- matt black metal housing with four handles (optional 19" rack-mount kit)
- I-Net input C14FC
- E-Stop button input C14FC with dummy plug
- 14 opto-isolated I-Net outputs C14FC with active detection and LED display
- two independent DMB inputs C7FC
- three M12 female sockets for truss couplers
- eyelet for attaching safety chain
- power supply: 100 to 230 V/AC with 1.5 m cable Neutrik powerCON True on schuko plug
- weight: 14 kg
- dimensions: 435x133x455 mm (WxHxD) (w. plug)

Subject to technical modifications and typographical errors.