Potential monitoring device
Type 8521 as per DIN EN 50122 part 1 / VDE 0115 part 3

8521

Description

As protection from dangerous body currents generated from contact voltages/tapping voltages, maximum voltages have been stipulated depending on the effect time. On exceeding the maximum voltages and effect time, safety measures such as short circuit or switching off have to be initiated.

The potential monitoring device type 8521 has been developed to register these maximum voltages taking account of their effect time, and to trigger switching measures.

Function

The potential of the points of contact being monitored is brought to terminals 31 and 32. Polarity, DC or AC voltage is irrelevant for the connection.

A 10-stage comparator brings the measured information to a microprocessor which assumes the time control for activating the two output relays (contact K1 and K2) depending on the level of measuring voltage and the voltage type.

K1 takes account of the voltage time values for the workshop area, to be considered separately according to EN 50122. Relay K1 works in closed circuit mode. K2 follows the voltage time values for the „normal“ area. Relay K2 works in operating circuit mode.

The potential monitoring device already takes account of a time workload of > 30 ms for the subsequent switching measure for a DC of 420 V and an AC of 200 V.

Caution: for possible higher touchable voltages! The time required for switching off or short-circuiting must always be included in the planning (should not be longer than 35 ms). If registration and reaction times are allowed longer than DIN EN 50122, additional measures (e.g. voltage-limiting devices) are to be provided for this voltage range, insofar as this is expected.

Seeing that relay K1 follows the voltage/time curve for the workshop area, this contact can also be used for pre-warning purposes outside the workshop area.

The potential monitoring device type 8521 requires no adjustment. For other monitoring devices, please see the full leaflet folder.

Technical Data

Dimensions	W / H / D 150 / 73 / 113 mm
Housing material	Terminal board: polycarbonate lower section: ABS
Fastening	2 drilled holes as per drilling template Standard support rails as per DIN EN 50022
Protection	Housing: IP 40; terminals: IP 10
Connections	2 x 2.5 mm^2 solid to DIN 46288 or 2 x 1.5 mm^2
Ambient temp.	- 20°C to + 60°C
Power supply	AC 19.2 ... 253 V, 50 – 60 Hz, ≤ 5.5 VA DC 19.2 ... 253 V, ≤ 2.5 W
Measuring input	≤ 1500 V, continuous; resistance: approx. 2 MΩ
Relay outputs	2 change-over contacts (u), potential-free

voltage	current	cos φ
AC 250	V4.0 A	> 0.7
DC 120 V	1.0 A	ohmic load

Displays	Network LED green K1: LED yellow K2: LED yellow voltage level: bar graph array
Test voltage	Supply voltage - measuring voltage outputs: 6 kV_{eff}
Input voltage	DC 50 V < U_M < DC 90 V K1 switches after 295 ... 299 s (workshop) DC 100 V < U_M < DC 140 V K1 and K2 switch after 295 ... 299 s U_M > DC 140 V K1 and K2 switch jointly as per diagram U_M > DC 660 V K1 and K2 switch after max. 30 ms AC 25 V < U_M < AC 40 V K1 switches after 295 ... 299 s (workshop) AC 50 V < U_M < AC 70 V K1 and K2 switch after 295 ... 299 s U_M > AC 70 V K1 and K2 switch jointly as per diagram U_M > AC 842 V K1 and K2 switch after max. 30 ms
Diagram	see overleaf

Ordering Information

Type	Order No.
8521	**210100**

Special designs, safety housings etc. on request

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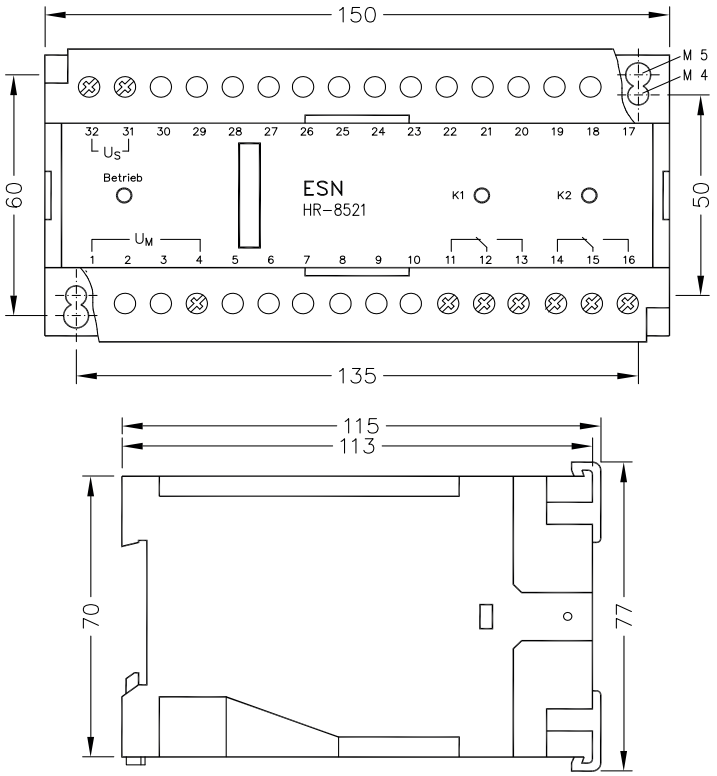
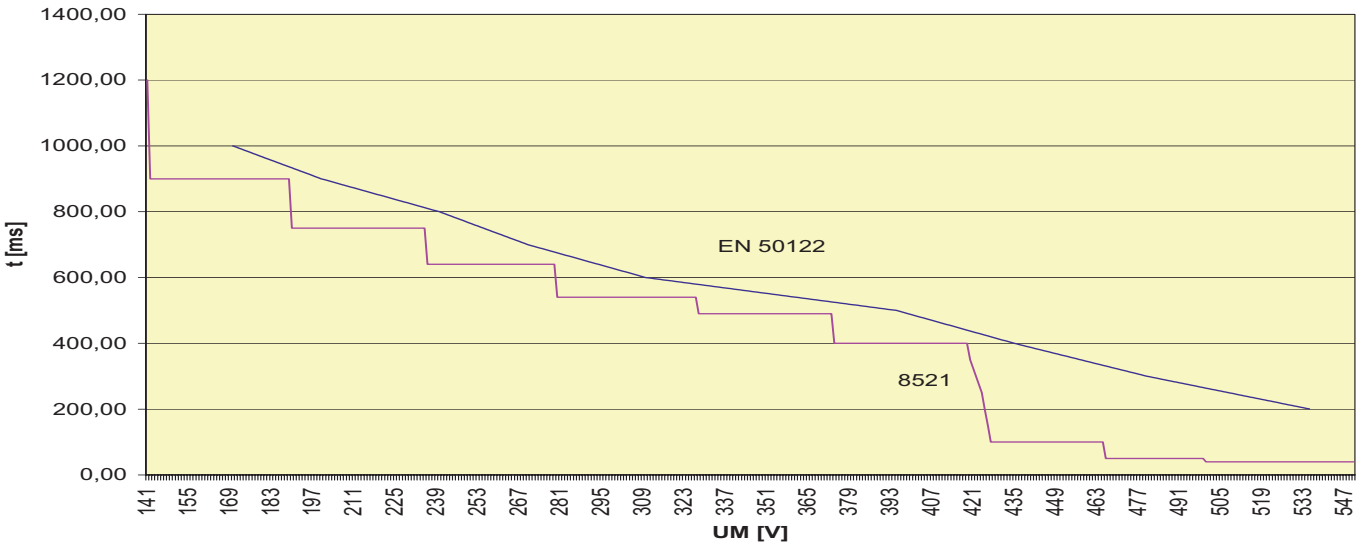


DC-Diagramm Potential Monitoring Device Type 8521



AC-Diagramm Potential Monitoring Device Type 8521