Title (en)

Control and protection of servoswitching of points with a telecontrol device or a local control device.

Title (de)

Steuerung und Sicherung einer durch eine Fernstelleinrichtung (Stellwerk) oder eine Ortsstelleinrichtung bedienbaren Weiche.

Title (fr)

Commande et protection d'un servo-aiguillage avec un dispositif de télécommande ou de commande local.

Publication

EP 0153900 A2 19850904 (DE)

Application

EP 85730006 A 19850118

Priority

DE 3404825 A 19840209

Abstract (en)

1. Circuit arrangement for the control and protection of points operable by a remote setting equipment (FE) (signal box) or local setting equipment (DE), in which arrangement the commands are conducted in signal-technically safe manner an electronic points control circuit (WST) and an electronic points protection circuit (WSI), which are associated locally with a polyphase current points drive (WA) and by which the points drive (WA) is applied by way of a contactless polyphase current power switch (LS), current monitors (ÜW) as well as a four-core setting cable (SK) to a polyphase current mains with neutral conductor (Mp), wherein a switching-off of the drive (WA) as well as a limit position report with monitoring take place by way of motor contacts (MK) and limit position or monitoring contacts (ÜK), characterised by the following features : a) the monitor (ÜW) detects the currents in two phase lines (R, S) and the neutral conductor (Mp), couples out a high signal each time in the case of current flow and transmits bit patterns of the currents to the points control circuit (WST) and to the points protection circuit (WSI) for evaluation, b) on agreement of the bit pattern dependent on the setting of the points, i. e. on the corresponding position of the motor contacts (MK) and the limit position or monitoring contacts (ÜK) in the points drive (WA) with the predetermined target pattern in the points control circuit (WST), the points drive (WA) is stopped by this through switching-off of the polyphase current power switch (LS), c) a protective switch (SS) connected in front subsequently separates the conductors of the points drive (WA) additionally from the polyphase current mains (R, S, T, Mp) and switches the conductors over to a single-phase alternating test voltage, while the switching state of the protective switch (SS) is monitored by the points protection circuit (WS1), and d) monitoring test currents about the test voltage and the individual alternating current switches (WS) of the polyphase current power switch (LS), which are driven in an automatic test mode, are constantly sent through the points drive, while the exact position of the points is detectable in signal-technically safe manner by means of the bit pattern in that case issued from the monitor (ÜW).

Abstract (de)

Es wird eine rechnergeführte Weichensteuerung (WST) und Weichensicherung (WSI) beschrieben, die über eine Fernstelleinrichtung (FE) oder Ortsstelleinrichtung (OE) beeinflußbar ist und über ein Stellglied (LS) und ein vieradriges Stellkabel (SK) einen Weichenantrieb (WA) mit Endlagenabschaltung und -meldung steuert. Dabei wird die Betriebsspannung (3~) über einen Sicherungsschalter (SS), das Stellglied (LS) und einen Überwacher (ÜW) geführt, welcher die endlagenabhängigen Ströme in Bitmuster umsetzt. Diese werden mit Sollmustern in der Weichensteuerung (WST) verglichen. Bei Übereinstimmung wird der Antrieb stillgesetzt. Anschließend wird die Betriebsspannung ab- und auf eine Prüfspannung umgeschaltet, über die mittels eines automatischen Prüfmodus und der sich ergebenden Bitmuster vom Überwacher (ÜW) die Lage der Weiche laufend überwacht wird.

IPC 1-7

B61L 7/06; B61L 5/06

IPC 8 full level

B61L 5/06 (2006.01); **B61L 5/10** (2006.01); **B61L 7/06** (2006.01)

CPC (source: EP)

B61L 5/062 (2013.01); **B61L 5/107** (2013.01); **B61L 7/062** (2013.01); **B61L 7/067** (2013.01)

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EP2181907A1; EP1607301A1; EP1593574A1; EP1524166A1; AT509241B1; EP0734932A3; NL1040284A; US4986498A; MD311C2; CN110231792A; LT3361B; WO2006047971A1

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