Title (en)
  Device for reliable process control.

Title (de)
  Einrichtung zur sicheren Prozesssteuerung.

Title (fr)
  Dispositif pour une commande fiable d'un processus.

Publication
  EP 0120339 A1 19841003 (DE)

Application
  EP 84102198 A 19840301

Priority
  DE 3310975 A 19830325

Abstract (en)
  1. A device for the reliable process control employing two microcomputers which are independent of one another and do not operate so as to be safety-oriented and which commonly act upon the process which is to be controlled, and allow both control operations, whose reliability is tested in a separate safety plane outside the microcomputer, and also auxiliary operations, whose reliability is no longer tested, to be carried out, in particular for the control of a railroad signalling device of at least one operating location, characterized in that the one microcomputer (MC1) converts the process control instructions which are present in order to be carried out, into corresponding command data, and stores them in an output device (AE) and re-reads the stored data, where the reread data are simultaneously fed to the other microcomputer (MC2) by means of a safety-oriented input double (EV), that both microcomputers classify the data, which are fed thereto, independently of another in accordance with the respectively present process control instruction and feeds the classification results to a relay connection (RV) which when the classification results of the two microcomputers are identical causes the release of the data stored in the output device (AE), if the respectively classified process control instruction relates to a control operation, but during common recognition of an auxiliary operation makes the release of the data stored in the output device dependent upon a separate agreement of an operator, which is fed via the relay connection (RV).

Abstract (de)
  Die Prozeßsteueraufträge werden von einem nicht sicheren Mikrocomputer (MC1) in Kommandodaten umgesetzt, in einer Ausgabeeinrichtung (AE) gespeichert und zu Prüfzwecken laufend zurückgelesen. Die rückgelesenen Daten gelangen auch auf einen weiteren Mikrocomputer (MC2). Nur wenn beide Mikrocomputer die rückgelesenen Daten übereinstimmend klassifizieren, ist eine Freigabe der gespeicherten Daten möglich: Klassifizieren beide Mikrocomputer die Daten als eine Regelbedienung betreffend, wird über eine sichere Verknüpfung (RV) die Ausgabe der Daten veranlaßt. Bei eine Hilfshandlung betreffenden Daten ist die Freigabe der Daten von einere zusätzlichen Betätigung von Freigabeschaltmitteln (FS) durch den Veranlasser abhängig.

IPC 1-7
  B61L 27/00

IPC 8 full level
  B61L 21/04 (2006.01); **B61L 27/00** (2006.01); **G05B 9/02** (2006.01)

CPC (source: EP)
  B61L 21/04 (2013.01); **B61L 27/30** (2022.01)

Citation (search report)
  • [A] DE 2303828 A1 19740801 - STANDARD ELEKTRIK LORENZ AG
  • [A] CH 535154 A 19730331 - STIN [CH]

Cited by
  DE19742330C1; EP1038752A1; EP0448796A3; DE4432419C2; DE4107639A1; EP0503336A3; US6308117B1

Designated contracting state (EPC)
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DOCDB simple family (publication)
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DOCDB simple family (application)
  EP 84102198 A 19840301; AT 84102198 T 19840301; DE 3310975 A 19830325; DE 3462231 T 19840301