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Datasheet for the decision of 30 September 2015

Case Number: T 2364/11 - 3.5.03

Application Number: 05810421.7

Publication Number: 1776621

IPC: G05B19/418

Language of the proceedings: EN

Title of invention:
Process Field Device with Radio Frequency Communication

Applicant:
Rosemount Inc.

Headword:
Process Field Device/ROSEMOUNT

Relevant legal provisions:
EPC Art. 84

Keyword:
Claims - clarity (no)

Decisions cited:

Catchword:

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Case Number: T 2364/11 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 30 September 2015

Appellant: (Applicant)	Rosemount Inc. 8200 Market Boulevard Chanhassen, MN 55317 (US)
Representative:	Boult Wade Tennant Verulam Gardens 70 Gray's Inn Road London WC1X 8BT (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 22 June 2011 refusing European patent application No. 05810421.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	F. van der Voort
Members:	T. Snell
	O. Loizou

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division refusing European patent application No. 05810421.7 (publication No. WO 2006/025918 A2).

The refusal was based on the ground of lack of inventive step pursuant to Article 52(1) EPC in combination with Article 56 EPC.

II. The applicant filed a notice of appeal against the above decision. New claims 1 to 81 were subsequently filed with the statement of grounds of appeal.

Oral proceedings were conditionally requested.

III. In a communication accompanying a summons to oral proceedings, the board raised matters concerned with Articles 123(2) and 84 EPC. In particular, the board gave a preliminary opinion, inter alia, that independent claims 1 and 62 were neither clear under Article 84 EPC nor based on the application documents as filed (Article 123(2) EPC) with respect to two occurrences of the feature "power supply circuitry", and further that claims 1 and 62 also concerned unallowable intermediate generalisations, contrary to Article 123(2) EPC.

IV. In response to the board's communication, the appellant informed the board that it would not be attending the oral proceedings and requested a decision on the file as it stands.

V. Oral proceedings took place on 30 September 2015 in the absence of the appellant.

On the basis of the written submissions, the board understood the appellant to be requesting that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 81 filed with the statement of grounds of appeal.

After due deliberation, the chairman announced the board's decision.

VI. Claim 1 of the request reads as follows:

"Radio frequency communication module configured to couple to a field device in a two-wire process control loop (16, 156), comprising:
wireless communication circuitry (22, 170) arranged to couple to the two-wire process control loop (16, 156) and configured to transmit an RF signal,
characterized in that the radio frequency communication module further comprises:
power supply circuitry (196) arranged to couple to the two-wire process control loop (16, 156) and including a voltage regulator (202) the power supply circuitry arranged to connect in series with the process control loop (16, 156) wherein the voltage regulator (202) is configured to receive a voltage drop and responsively provide a regulated voltage output to power the wireless communication circuitry (22, 170),
an energy storage capacitor (114) configured to store electrical charge using power received from the two-wire process control loop (16, 156); and
power supply circuitry configured to use power from the electrical charge stored on the energy storage capacitor (114) to power the wireless communication circuitry. *[sic]*
wherein the radio frequency communication module is adapted to removably couple to the field device."

Reasons for the Decision

1. Clarity

1.1 The present application relates to industrial control systems, and in particular to a field device which is able to communicate over a two-wire process control loop (i.e. a bus) as well as via radio for communicating with, for example, a portable display. Claim 1 is directed to a radio frequency communication module configured to couple to a field device in a two-wire process control loop, comprising wireless communication circuitry arranged to [be] couple[d] to the two-wire process control loop and configured to transmit an RF signal.

1.2 The characterising part of claim 1 includes features directed to generating power. In addition to an "energy storage capacitor", there are two features both designated as "power supply circuitry". The first "power supply circuitry" is given the reference numeral 196 (referring to Fig. 7) and includes a voltage regulator 202. The capacitor has the reference numeral 114 (referring to Fig. 4), whereas the second "power supply circuitry" is not given a reference numeral. The second power supply circuitry is defined as being "configured to use power from the electrical charge stored on the energy storage capacitor".

1.3 From the wording of claim 1, it is not clear whether the second reference to "power supply circuitry" concerns the same circuitry as the antecedent "power supply circuitry", or whether there are two different power supply circuitry features. This ambiguity remains even when examining claim 1 in the context of the

description and drawings, since, whilst these give no explicit support for second power supply circuitry, suggesting rather that the claim should be interpreted as comprising only one power supply circuitry, the presence of second circuitry would be technically plausible.

1.4 Referring to Fig. 4, loop 16 is connected to a power regulator 110 the output of which charges a "super capacitor 114" (cf. page 14, lines 1-6). The capacitor is connected in parallel with a [communication] circuit 122. Although there is no second "power supply circuitry configured to use power from the electrical charge stored on the energy storage capacitor" shown in Fig. 4, it is plausible from a technical point of view that there could be another power supply circuit, e.g. within the communication circuit, not shown in Fig. 4.

1.5 Referring to Fig. 7, which shows a much more detailed circuit than Fig. 4, the power supply circuitry 196 of claim 1 might plausibly be equated with the features 182, 192, 200 and 202, which charge the capacitor 204. In the context of Fig. 7, the second "power supply circuitry configured to use power from the electrical charge stored on the energy storage capacitor" might refer to components 208 and 210, which are referred to in the description as a "secondary filter" (cf. page 18, lines 23-24). Alternatively, it may refer to additional circuitry inside the RF circuit transmit/ receive 232.

1.6 Although a claim embracing more than one embodiment may in certain circumstances be seen as merely broad and not per se unclear, in the present case the board judges that the ambiguity discussed above is the result of a technically unclear formulation rather than the

express, and justified, wish to define the matter for which protection is sought in broad terms. In any case, the appellant has declined to make its intentions clear, either by replying to the board's objection, or by clarifying the claim.

1.7 The board concludes that claim 1 does not clearly define the matter for which protection is sought, contrary to Article 84 EPC.

1.8 The same objection applies, mutatis mutandis, to independent claim 62.

2. Conclusion

As the request is not allowable, it follows that the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Rauh F. van der Voort

Decision electronically authenticated