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 <i>H04L 41/022</i> (2022.01)</p> <p>(21) International Application Number:
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 63/152,438 23 February 2021 (23.02.2021) US</p> <p>(71) Applicant: PHOENIX CONTACT DEVELOPMENT AND MANUFACTURING, INC. [US/US]; 586 Fulling Mill Rd, Middletown, PA 17057 (US).</p> | <p>(72) Inventors: SWARR, Lonnel J.; 617 Auction Rd, Manheim, PA 17545 (US). KATZ, David N.; 1039 Fairdell Drive, Hummelstown, PA 17036 (US). MATHEWS, Davis; 74 Foxfire Lane, Lewisberry, PA 17339 (US). GILLESPIE, Brian John; 5317 Oak Leaf Drive, Mount Joy, PA 17552 (US). HELFRICK, Brenton E.; P.O. Box 4100, Harrisburg, PA 17111-0100 (US). FRYE, Scott Michael; 7 Wheatstone Ct, Palmyra, 17078 (US).</p> <p>(74) Agent: HOOKER, Charles et al.; Hooker & Habib, P.C., 205 Grandview Ave Suite 403, Camp Hill, PA 17011 (US).</p> <p>(81) Designated States (<i>unless otherwise indicated, for every kind of national protection available</i>): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,</p> |
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(54) Title: APL FIELD SWITCH WITH AUTOMATIC PROTOCOL DETECTION

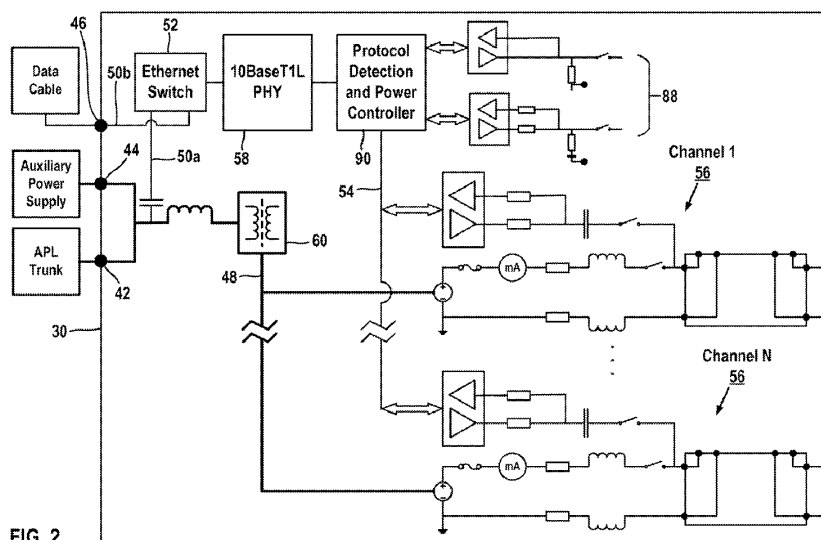


FIG. 2

(57) **Abstract:** Protocol detection circuits for detecting the field device protocol of a field device attached to a channel having a data line are sequentially connected to the data line by a controller that communicates to the field device through the protocol detection circuits. The protocol detection circuits are disconnected from the field device after protocol detection is completed. The channel may be one of a number of channels; the controller may also connect and disconnect the protocol detection circuits from the one channel whereby the protocol detection circuits can be used with any channel. After the protocol of the field device is identified a protocol adapter can be inserted into the channel to enable data conversion between the field device protocol and an another protocol used by the channel for data transmission.

NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU,
RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM,
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