

# 3. FA Network

## Industrial Ethernet cable

In industrial Ethernet, there are many scenes where oil resistance and noise resistance are required. It is recommended to use industrial Ethernet cable with oil resistant sheath and double shield. We have been involved in the FA field for many years, and in order to meet diversifying needs, we propose a variety of industrial Ethernet cables.

### CC-Link connection specifications

#### ■ Connection cable

CC-Link connection is to be made using specially designed cable (Three-core). For connection to your CC-Link system to be newly installed, we basically recommend use of Ver.1.10 type cables.

#### ■ Use length of movable CC-Link cable

For movable cable, the maximum total cable length is shorter than that for the standard cable. The movable cable is available in three types in terms of its transmittable length relative to that of the standard cable, specified as 30%, 50% and 70%, which are represented as -3, -5 and -7 added to the end of their respective corresponding codes. For example, KURAMO's FANC-110SBZ-5 has its maximum transmittable distance specified as 50m at 10Mbps. When 10m of the movable cable (50% type) is used at 10Mbps with the rest connected using the standard cable of permissible length up to 80m, both cables allow the connection to be made with a total length of up to 90m. For details, refer to the CC-Link Installation Manual.

CC-Link Partner Association's homepage (<https://www.cc-link.org/>)



### DeviceNet connection specifications

#### ■ Connection cable

DeviceNet connection is to be made using specially designed cables integrating communication line/communication power supply line as specified in DeviceNet connection specifications. KURAMO offers DeviceNet cables in two types – THIN and THICK.

#### ■ Connection specifications

DeviceNet is designed to allow star connection, multi-drop, T-branching and other connection with a high degree of freedom. The DeviceNet's maximum trunk line length varies according to the communication speed and the type of the connection cable used. For details, refer to the ODVA homepage.

ODVA TAG Japan homepage (<https://odvatagjapan.iinaa.net/>)



### PROFIBUS-DP connection specifications

#### ■ Connection cable

PROFIBUS-DP connection is to be made using specially designed cables with characteristic impedance of 150 Ω.

#### ■ Connection specifications

It is recommended that PROFIBUS-DP, when operated at high communication speed of 3Mbps or above, should be connected with equipment-to-equipment cable length of 1m or above.

For details, refer to the "Instructions on PROFIBUS DP Cable and Equipment Installation" and other appropriate publications issued by Japanese PROFIBUS Organization.

Japanese PROFIBUS Organization homepage (<http://www.profibus.jp/>)



### CompoNet connection specifications

#### ■ Connection cable

CompoNet is possible to use, Exclusive Flat cable I (without sheath), Exclusive Flat cable II (with sheath), Round cable I (VCTF cable of two conductors) and Round cable II (VCTF cable of four conductors).

We have a lineup of KOMP series cables that adapted CompoNet specifications.

#### ■ Connection specifications

CompoNet is possible to do wiring with the high degree of freedom, like T-branch. Maximum length of trunk line differ with communication speed, cable type and within/without branch lines.

For details, refer to the ODVA homepage.

ODVA TAG Japan homepage (<https://odvatagjapan.iinaa.net/>)

