

# 6. YAV BOARDS AND MODULES

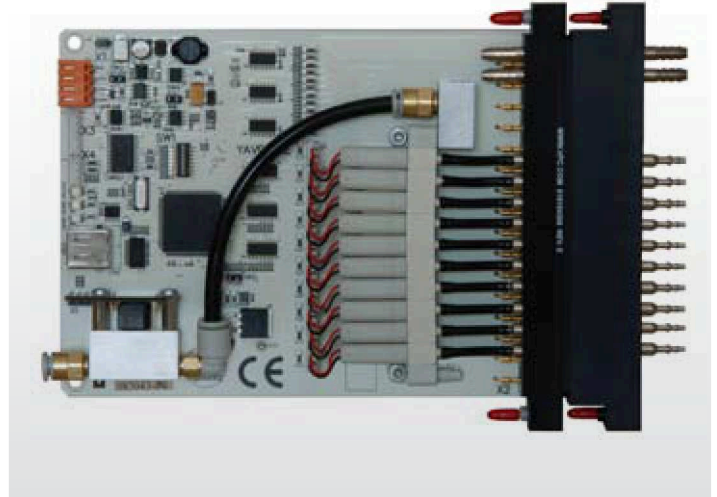
## 6.1.12 YAV90PNE CAN Bus pneumatic sub-system

### Features

- ✦ 10x 3-way pneumatic valves to directly control 10 simple or 5 double effect cylinders;
- ✦ 12 inputs for position sensors.
- ✦ Linear pressure sensor included
- ✦ 2 inlets for direct air inputs
- ✦ 4 digital outputs (24Vdc) to drive external coils
- ✦ 1 analog output to optionally control a proportional valve
- ✦ 2 digital inputs for output monitoring
- ✦ Controlled through CAN bus
- ✦ Power requirements: 24Vdc
- ✦ Automatic device identification
- ✦ National Instruments LabView drivers
- ✦ Pneumatic VPC 90 series connector

### Applications

- ✦ Pneumatic control in test systems



This module is a complete pneumatic plug&play sub-system, controlled by USB or CAN bus. Thanks to 10x 3-way microvalves, 10 simple effect or 5 double effect actuators can be controlled. The board has also 12 inputs to monitor the position of the actuators (PNP).

Coils are powered in a way that once activated, the power consumption is reduced to avoid self-heating of the device. Control through the PC is more easy thanks to the included pressure sensor. Some programmable static relays are available to set the operational limits.

Two logic inputs placed opposite to the VPC connector are to cut the air inlet when the system detects fixture extraction, the signal can be given by a simple switch inside the VPC receiver.

The board has also outputs to control 4 auxiliary coils (two in the connector side, two in the opposite side) and an analog output to control a proportional valve. The board can be controlled through CAN bus or USB and is delivered with all the necessary software to use it in a Test stand or LabView based platform.

| ESPECIFICACIONES NEUMÁTICAS         |                     | ELECTRICAL SPECS          |                    |
|-------------------------------------|---------------------|---------------------------|--------------------|
| Operation max. pressure             | 500 kP              | Voltage requirements      | 20 ... 29 VDC + 0% |
| Test pressure                       | 1000 kP             | Max. consumption @ 24VDC  | 115 mA             |
| Number of microvalves               | 10                  |                           |                    |
| Pressure inlet connection           | Dex/in= 8/6 mm      |                           |                    |
| Bypass connection tube              | Dex/in= 8/6 mm      |                           |                    |
| Valves output inlet connection tube | Din= 4 o 6 mm       |                           |                    |
| AMBIENT CONDITIONS                  |                     |                           |                    |
| Operation temperature               | -10...+50 °C no ice | Number of digital inputs  | 14                 |
| Humidity                            | 5 ... 85%           | Input threshold voltage   | 6 VDC              |
| Max. Vibration                      | >12 Gs              | Input internal resistance | > 5 kΩ             |
| Max. shock                          | >15 Gs              | Number of digital outputs | 4                  |
|                                     |                     | Outputs voltage           | 24V                |
|                                     |                     | Outputs maximum current   | 500 mA             |
|                                     |                     | Number of analog outputs  | 1                  |
|                                     |                     | Analog Output voltage     | 0 ... 5 VDC        |

| ORDERING INFORMATION                    | P/N      |
|---|----------|
| Pneumatic sub-system YAV board, CAN bus | YAV90PNE |
| ITA module with 16 pneumatic inlets     | YAV90PNF |

# Schematic

