

|                                                                                            | XBP24                                                                                                                                                                                                                                                                                                                                                                                                                                            | XBP24-E | XDP24         | XDP24-E |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|---------|
| Protection against polarity inversions                                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |               |         |
| Power monitoring                                                                           | Yes and value available through the application «FB Status», 1/10V, 5%.                                                                                                                                                                                                                                                                                                                                                                          |         |               |         |
| Inputs                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |               |         |
| Digital and high speed digital inputs 24 VDC - 4 inputs from I1 to I4                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |               |         |
| Input used as digital input                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |               |         |
| Input voltage                                                                              | 24 VDC (-15% / +20%)                                                                                                                                                                                                                                                                                                                                                                                                                             |         |               |         |
| Input current                                                                              | 1.8 mA @ 20.4 V<br>2.1 mA @ 24 V<br>2.5 mA @ 28.8 V                                                                                                                                                                                                                                                                                                                                                                                              |         |               |         |
| Input impedance                                                                            | 11.6 kΩ                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |               |         |
| Logic 1 voltage threshold                                                                  | ≥ 15 VDC                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |               |         |
| Making current at logic state 1                                                            | ≥ 1.3 mA                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |               |         |
| Logic 0 voltage threshold                                                                  | ≤ 10 VDC                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |               |         |
| Release current at logic state 0                                                           | ≤ 0.8 mA                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |               |         |
| Response time                                                                              | 1 to 2 cycle times                                                                                                                                                                                                                                                                                                                                                                                                                               |         |               |         |
| Sensor type                                                                                | Contact or 3-wire PNP                                                                                                                                                                                                                                                                                                                                                                                                                            |         |               |         |
| Conforming to IEC/EN 61131-2                                                               | Type 1                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |               |         |
| Input type                                                                                 | Resistive                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |               |         |
| Isolation between power supply and inputs                                                  | None                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |               |         |
| Isolation between inputs                                                                   | None                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |               |         |
| Protection against polarity inversions                                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |               |         |
| Status indicator                                                                           | No                                                                                                                                                                                                                                                                                                                                                                                                                                               |         | On LCD screen |         |
| Cable length                                                                               | ≤ 100 m                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |               |         |
| Input used as high speed digital input                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |               |         |
| Maximum counting frequency                                                                 | 3 channels encoder (I1, I2, I3): 5 kHz*<br>2 independent counters (I1, I2) (I3, I4) (Cumul, IND, DIR): 2 channels: 10 kHz*,<br>4 channels: 5 kHz*,<br>2 independent counters (I1, I2) (I3, I4) (PH, PH2): 2/4 channels: 5 kHz*<br>4 independent counters (I1, I2, I3, I4) (Up/Down) : 1 channel: 15 kHz*, 2 channels: 10 kHz*, > 2 channels: 5 kHz*<br>* with a time cycle ≤ 10 ms and a ton / toff = 50% ± 5%, level 0 < 2V and level 1 > 20,4V |         |               |         |
| Other functions                                                                            | 4 tachometers (I1, I2, I3, I4 )                                                                                                                                                                                                                                                                                                                                                                                                                  |         |               |         |
| Cable length                                                                               | ≤ 3 m with shielded twisted cable                                                                                                                                                                                                                                                                                                                                                                                                                |         |               |         |
| Digital 24 VDC and analog inputs 12 bits / 28.8 V - potentiometer - 8 inputs from I5 to IC |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |               |         |
| Input used as digital input                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |               |         |
| Input voltage                                                                              | 24 VDC (-15% / +20%)                                                                                                                                                                                                                                                                                                                                                                                                                             |         |               |         |
| Input current                                                                              | 1.8 mA @ 20.4 V<br>2.1 mA @ 24 V<br>2.5 mA @ 28.8 V                                                                                                                                                                                                                                                                                                                                                                                              |         |               |         |
| Input impedance                                                                            | 11.6 kΩ                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |               |         |
| Logic 1 voltage threshold                                                                  | ≥ 11 VDC                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |               |         |
| Making current at logic state 1                                                            | ≥ 1 mA                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |               |         |
| Logic 0 voltage threshold                                                                  | ≤ 9 VDC                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |               |         |
| Release current at logic state 0                                                           | ≤ 0.7 mA                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |               |         |
| Response time                                                                              | 1 to 2 cycle times                                                                                                                                                                                                                                                                                                                                                                                                                               |         |               |         |
| Sensor type                                                                                | Contact or 3-wire PNP                                                                                                                                                                                                                                                                                                                                                                                                                            |         |               |         |
| Conforming to IEC/EN 61131-2                                                               | Type 1                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |               |         |
| Input type                                                                                 | Resistive                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |               |         |
| Isolation between power supply and inputs                                                  | None                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |               |         |
| Isolation between inputs                                                                   | None                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |               |         |
| Protection against polarity inversions                                                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |               |         |

|                                                     | XBP24                                                                       | XBP24-E | XDP24         | XDP24-E |
|-----------------------------------------------------|-----------------------------------------------------------------------------|---------|---------------|---------|
| Status indicator                                    | No                                                                          |         | On LCD screen |         |
| Cable length                                        | ≤ 30 m                                                                      |         |               |         |
| Input used as analog input                          |                                                                             |         |               |         |
| Measuring range                                     | 0 → 10 V, 0 → V power supply or Voltmeter                                   |         |               |         |
| Input impedance                                     | 11.6 kΩ                                                                     |         |               |         |
| Maximum value without destruction                   | 28.8 VDC max                                                                |         |               |         |
| Input type                                          | Common mode                                                                 |         |               |         |
| Resolution                                          | 12 bit at maximum input voltage (10 bit at 10V)                             |         |               |         |
| Value of LSB                                        | 7.03 mV                                                                     |         |               |         |
| Conversion time                                     | Controller cycle time                                                       |         |               |         |
| Maximum error in 0-10V mode                         | ± 3.5 % of full scale at 25°C (77°F)<br>± 5 % of full scale at 55°C (131°F) |         |               |         |
| Maximum error in 0-V power supply mode              | ± 5 % of full scale at 25°C (77°F)<br>± 6.2 % of full scale at 55°C (131°F) |         |               |         |
| Repeat accuracy at 55°C (131°F)                     | ± 2 %                                                                       |         |               |         |
| Voltmeter                                           | From 0 to 30.5 V, 5%                                                        |         |               |         |
| Isolation between analogue channel and power supply | None                                                                        |         |               |         |
| Protection against polarity inversions              | Yes                                                                         |         |               |         |
| Potentiometer control                               | 2.2 kΩ / 0.5 W (recommended), 10 KΩ max.                                    |         |               |         |
| Cable length                                        | ≤ 10 m with shielded twisted cable (sensor not isolated)                    |         |               |         |
| Digital 24 VDC - 4 inputs from ID to IG             |                                                                             |         |               |         |
| Input voltage                                       | 24 VDC (-15% / +20%)                                                        |         |               |         |
| Input current                                       | 1.5 mA @ 20.4 V<br>1.7 mA @ 24 V<br>2.1 mA @ 28.8 V                         |         |               |         |
| Input impedance                                     | 13.9 kΩ                                                                     |         |               |         |
| Logic 1 voltage threshold                           | ≥ 11 VDC                                                                    |         |               |         |
| Making current at logic state 1                     | ≥ 0.8 mA                                                                    |         |               |         |
| Logic 0 voltage threshold                           | ≤ 8 VDC                                                                     |         |               |         |
| Release current at logic state 0                    | ≤ 0.5 mA                                                                    |         |               |         |
| Response time                                       | 1 to 2 cycle times                                                          |         |               |         |
| Sensor type                                         | Contact or 3-wire PNP                                                       |         |               |         |
| Conforming to IEC/EN 61131-2                        | Type 1                                                                      |         |               |         |
| Input type                                          | Resistive                                                                   |         |               |         |
| Isolation between power supply and inputs           | None                                                                        |         |               |         |
| Isolation between inputs                            | None                                                                        |         |               |         |
| Protection against polarity inversions              | No                                                                          |         |               |         |
| Status indicator                                    | No                                                                          |         | On LCD screen |         |
| Cable length                                        | ≤ 30 m                                                                      |         |               |         |
| Outputs                                             |                                                                             |         |               |         |
| 6 A relay output - 2 outputs from O1 to O2          |                                                                             |         |               |         |
| Breaking voltage                                    | 250 VAC max                                                                 |         |               |         |
| Breaking current                                    | 6 A<br>Derating: UL: ≥ 45°C (113°F): 4A max                                 |         |               |         |
| Maximum breaking current in the common              | IEC @ 25°C (77 °F): 12 A<br>IEC @ 60°C (140 °F) or UL: 10 A                 |         |               |         |
| Mechanical life                                     | 5 000 000 operations (cycles)                                               |         |               |         |