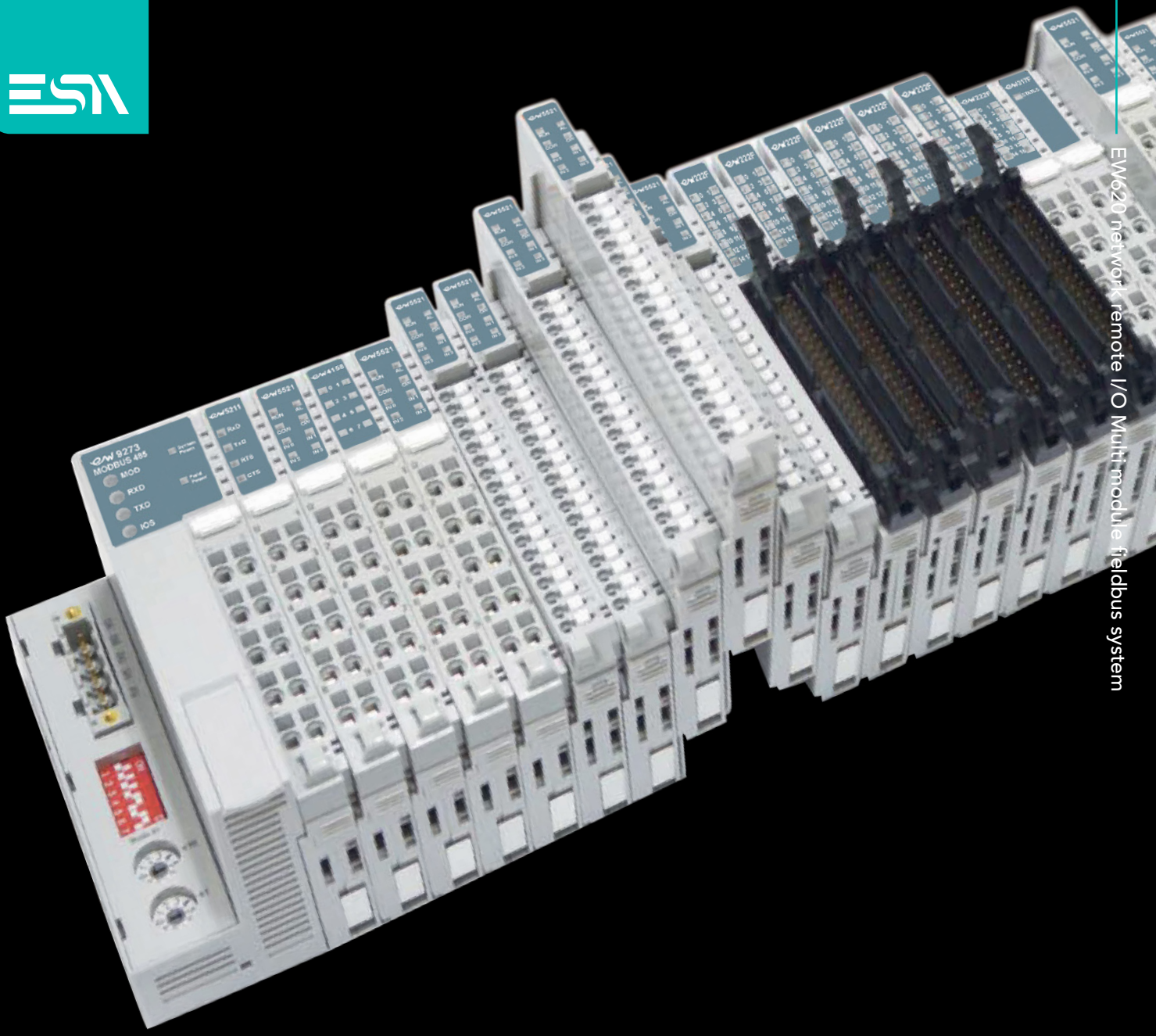


EW620 network remote I/O Multi module fieldbus system

EW620

Network Remote I/O
Multi module fieldbus system

I/O Automation

Connect ideas. Shape solutions.

ESA S.p.a. | www.esa-automation.com |

EW620 is the new distributed Input Output system for up to 63 modules manufactured by ESA Automation. With 10 different fieldbuses including EtherCAT, CANOpen, modBUS and a multiple configuration of both digital and analog inputs and outputs, it is the ideal solution for distributed control of field device signals. The easy integration with the ESA Automation platform consisting in HMI, control and servodrive and the guarantee of an excellent price/performance ratio mean that the product can be used in different applications and markets not only industrial. The EW620 product cabling solution called Remove Terminal Block (RTB) together with the toolless system allow easy maintenance and management of the multiple connection cables

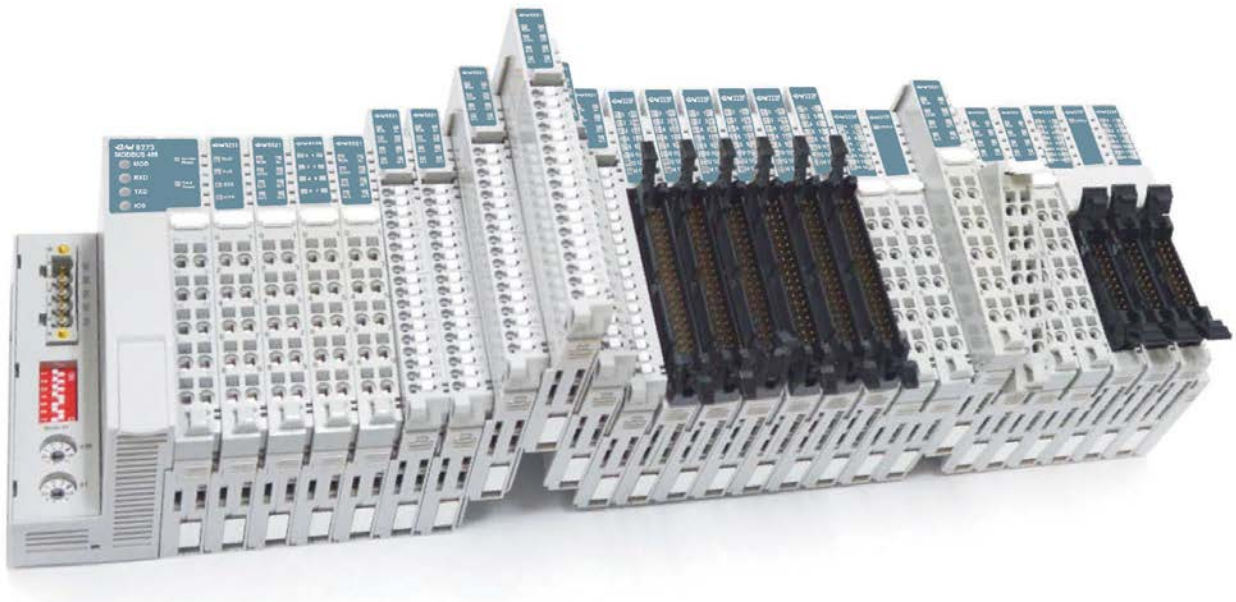
- Different fieldbuses accepted thanks to the modularity of the couplers
- Digital input or output modules up to 32 points
- Analog input or output modules with up to 16 channels and 16 bit resolution
- Special modules such as encoder input, thermocouples, synchronous serial input
- RTB for contact removal without rewiring
- Module clamping system on DIN rail easily accessible
- Sealing ring for cable fixing

FEATURES

- Fieldbus standard: EtherCAT o CANOpen
- Optional Fieldbus: modBUS, ProfiNET, CC-Link
- Working temperature -20 .. +60°C
- Internal BUS: <1ms (128Bytes), 2ms (256Bytes), 4ms (512Bytes)
- Nuomber of module for each coupler: 63
- Protection degree: IP20
- Compliance / certification: CE | UL

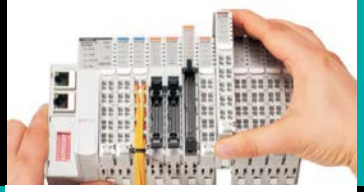
APPLICATION

- Industrial automation
- Robotics
- In-Plant production
- Handling & Packaging



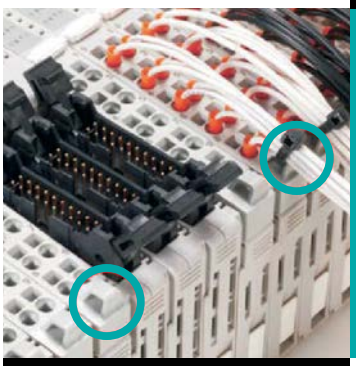
Several communication buses

There are different fieldbuses on the market depending on the protocols used. The EW620 allows configuration according to the requirements of the specific application.



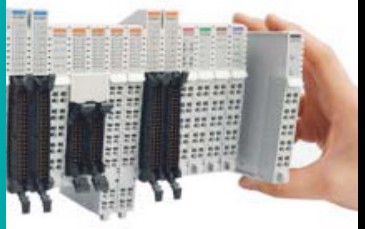
Efficient Maintenance

EW620 can extend I/O modules up to 63 slots by user's system demand. And efficient maintenance is available by supporting easy I/O configuration, and exchange



Benefits in wiring

The removable terminal block will support the easy maintenance helping users to repair and/or change modules without new wiring. Additionally a cable ring on each I/O module tied with wiring, to have a clean and fixed position.



Easy to assemble

Due to the user convenience you can combine digital module or analogue without no procedure. Special additional module supply for high current request

Designed for a safety system

Line-up based on international standard protocol specifications that can be linked independently from the suppliers of customizable PLCFirmware

Expandable up to 63 I/O modules

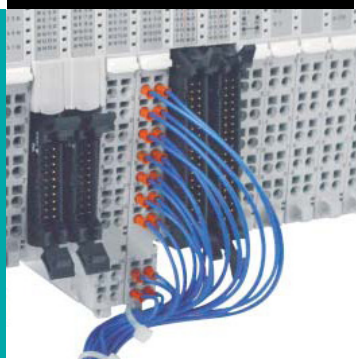
Fast scan time and stable internal speed

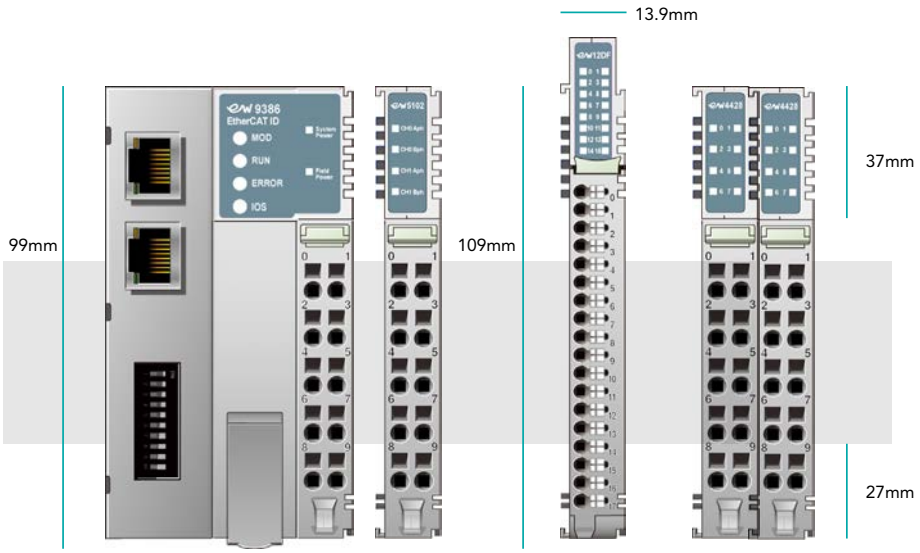
Universal input module can choose between NPN or PNP types

Compactness

with the highest connection density on a EW620 reduces the need for space inside the control cabinet.

Extremely flexible configuration allows multiple combinations in small spaces





Technical Characteristics

Coupler Module

Order Code	EW62N9261	EW62N9386	EW62N9273
System Data			
Adapter Type	Slave Node CANopen	Slave Node EtherCAT	Slave node (MODBUS Serial RTU/ASCII Server
Max. Network Node	99 Nodes	65535	99 nodes
Max. Expansion module	63 slots	63 slots	63 slots
I/O Data Size	Input: 252 Bytes Output: 252 Bytes	1452 Bytes, Max128 bytes each slot	Max 128 bytes each slot
Baud Rate	10..1000 kbps	100 Mbps	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
Bus Connection	5 Pin Open-Style Connector	2 x RJ-45	5 Pin open connector
General Specification			
Supply Voltage	24 Vdc	24 Vdc	24 Vdc
Supply Voltage Range	15 .. 32 Vdc	15 .. 32 Vdc	15 .. 32 Vdc
Power Dissipation	70 ma @ 24 Vdc	70 ma @ 24 Vdc	70 ma @ 24 Vdc
Current for I/O module	1.5 A @ 5Vdc	1.5 A @ 5Vdc	1.5 A @ 5Vdc
Max Current Field Power Contact	DC 10A max	DC 10A max	DC 10A max
Mechanical			
Weight	162 g	167 g	162 g
Dimensions	54mm x 99mm x 70mm	54mm x 99mm x 70mm	54mm x 99mm x 70mm

Digital Input Module

Order Code	EW62T1238	EW62T12DF	EW62T12FA	EW62T123F	EW62T1904
System data					
Inputs per Module	8 Points Universal type	16 Points Universal type	32 Points Universal type	16 Points Universal type	4 Points Sink type
Indicators	8 Green input state	16 Green input state	32 Green input state	16 Green input state	4 Green input state
ON–state Voltage	24V dc nominal Min. 15Vdc to Max. 32Vdc	24V dc nominal @70°C - Min. 15Vdc to Max. 28.8Vdc @60°C - Min. 15Vdc to Max. 32Vdc	24Vdc (Min. 15Vdc ~ Max. 32Vdc)	24Vdc (Min. 15Vdc ~ Max. 32Vdc)	240Vac nominal Min. 170Vac ~ Max. 264Vac
OFF-state voltage	8.3Vdc @ 25°C	n.a.	9.1V@25°C	9.3Vdc @ 25°C	n.a.
ON-state current	3.03mA maximum/point @32Vdc	3.05mA maximum/point @32Vdc	Max. 3mA / point @ 32Vdc	3.05mA maximum/point @32Vdc	10mA maximum/point @ 240Vac
Input Signal Delay	OFF to ON : 0.3ms Max ON to OFF : 0.3ms Max	OFF to ON : 0.3ms Max ON to OFF : 0.3ms Max	OFF to ON : 0.2ms Max ON to OFF : 0.2ms Max	OFF to ON : 0.3ms Max ON to OFF : 0.3ms Max	OFF to ON : 30mS Max @ 240Vac ON to OFF : 140mS Max @ 240Vac
Input filter	Adjustable, up to 10ms	n.a.	Adjustable, up to 10ms	Adjustable, up to 10ms	n.a.
Nominal Input Impedance	10.2K ohm typical	14.9K ohm typical	10.2K ohm typical	10.2K ohm typical	26.5 Kohm Typical
COMMON Type	8 points / External 2COM (Universal)	16 points / 2 COM (Single Common)	32 Point / External 8COM(Universal)	16 points / 2 COM (Single Common)	4 Points / 4 Common (L2/N)
General Specification					
Power dissipation	35mA maximum @ 5.0Vdc	50mA maximum @ 5.0Vdc	55mA maximum @ 5.0Vdc	55mA maximum @ 5.0Vdc	Max. 30mA @ 5Vdc
Isolation	I/O to Logic : Photocou-pler Isolation	I/O to Logic : Photocou-pler Isolation	I/O to Logic : Photocou-pler Isolation	I/O to Logic : Photocou-pler Isolation	I/O to Logic : Photocou-pler Isolation
Field Power	Supply voltage : 24Vdc nominal Voltage range : 15 to 32Vdc Power dissipation : 0mA @ 24Vdc	Supply voltage : 24Vdc nominal Voltage range : 15 to 32Vdc Power dissipation : 0mA @ 32Vdc	Supply voltage : 24Vdc nominal Voltage range : 15 to 32Vdc Power dissipation : 0mA @ 24Vdc	Supply voltage : 24Vdc nominal Voltage range : 15 to 32Vdc Power dissipation : 0mA @ 24Vdc	Field Power passes throu-gh to the next module. Supply Voltage : 24Vdc Voltage Range : 15 ~ 32Vdc (AC Power Not Used)
Wiring	I/O Cable Max. 2.0mm2(AWG 14)	I/O Cable Max. 0.32 mm2 (AWG 22)	Module connector : HIF3BA-40D-2.54R	220Pin Connector Type	I/O Cable Max. 2.0mm2(AWG 14)
Mechanical					
Weight	39 g	52 g	59 g	52 g	57 g
Dimensions	12 mm x 99 mm x 70 mm	12 mm x 110 mm x 70 mm	12 mm x 109 mm x 70 mm	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm

Digital Output Module

Order Code	EW62T226F	EW62T22CA	EW62T2328	EW62T2628
System data				
Outputs per module	16 Points Source type	32 Points Source type	8 Points Source type	8 Points Source type
Indicators	16 Green input state	32 Green input state	8 Green input state	8 Green input state
Output Voltage Range	24V dc nominal Min. 15Vdc to Max. 32Vdc	24V dc nominal Min. 15Vdc to Max. 32Vdc	24V dc nominal Min. 15Vdc to Max. 32Vdc	24V dc nominal Min. 11Vdc to Max. 28.8Vdc
ON-state voltage drop	Max. 0.3Vdc @ 25°C / 0.5Vdc @ 70°C	Max. 0.3Vdc @ 25°C / 0.5Vdc @ 70°C	Max. 0.5Vdc @ 25°C, 70°C, -40°C	Max. 1Vdc @ 25°C
Field Power OFF-state voltage	n.a.	n.a.	4.6Vdc @ 25°C	
ON-State Min. Current	1mA per channel	1mA per channel	1mA per channel	1mA per channel
OFF-State Leakage current	Max. 5μA	Max. 5μA	Max. 5μA	Max. 150μA
Output Signal Delay	OFF to ON : 0.3ms maximum ON to OFF : 0.3ms maximum	OFF to ON : 0.3ms max. ON to OFF : 0.3ms max.	OFF to ON : 0.3ms maximum ON to OFF : 0.3ms maximum	OFF to ON : 0.3ms maximum ON to OFF : 0.3ms maximum
Output Current Rating	Max. 0.3A per channel / Max. 4.8A per unit	Max. 0.3A per channel / Max. 6.0A per unit	Max. 0.3A per channel / Max. 4A per unit	Max. 2A per channel Max. 10A per unit (-40°C .. +50°C) Max. 7A per unit (+50°C .. +60°C) Max. 4.8A per unit (+60°C .. +70°C)
Protection (ITS716G)	Over Current limit : Min 6.5A@ 25°C per each channels Thermal Shutdown : Min 4A@ 25°C per each channels Short circuit protection	Over Current limit : Min 6.5A@ 25°C per each channels Thermal Shutdown : Min 4A@ 25°C per each channels Short circuit protection	Over Current limit : Min 6.5A@ 25°C per each channels Thermal Shutdown : Min 4A@ 25°C per each channels Short circuit protection	8 points / Internal 2 COM
COMMON Type	16 points / 2 COM (Single Common)	32 points / 4 COM (Single Common)	8 points / Internal 2 COM	8 points / Internal 2 COM
General Specification				
Power dissipation	50mA maximum @ 5.0Vdc	65mA maximum @ 5.0Vdc	40mA maximum @ 5.0Vdc	45mA maximum @ 5.0Vdc
Isolation	I/O to Logic : Photocoupler Isolation	I/O to Logic : Photocoupler Isolation Field Power : Non-Isolation	I/O to Logic : Isolation Field Power: Non-isolation	I/O to Logic : Isolation Field Power: Non-isolation
Field Power	Supply voltage : 24Vdc nominal Voltage range : 15 to 32Vdc Power dissipation : 40mA @ 32Vdc	Supply voltage : 24Vdc nominal Voltage range : 15 to 32Vdc Power dissipation : 30mA @ 32Vdc	Supply voltage : 24Vdc nominal Voltage range : 15 to 32Vdc Power dissipation : 10mA @ 32Vdc	Supply voltage : 24Vdc nominal Voltage range : 15 to 32Vdc Power dissipation : 30mA @ 32Vdc
Wiring	I/O Cable Max. 0.32 mm2 (AWG 22)	I/O Cable Max. 0.32 mm2 (AWG 22)	I/O Cable Max. 2.0 mm2 (AWG 14)	I/O Cable Max. 2.0 mm2 (AWG 14)
Mechanical				
Weight	52 g	63 g	40 g	70 g
Dimensions	12 mm x 110 mm x 70 mm	12 mm x 109 mm x 70 mm	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm

Order Code	EW62T2734	EW62T2744	EW62T2764
System data			
Outputs per module	4 Points, Bi-directional	4 Points, Bi-directional	4 Points, Bi-directional
Indicators	4 Green output state	4 Green output state	4 Green output state
Relay Type	MOS Relay (Solid State Relay)	Form A, Single Pole Single Throw (SPST)	MOS Relay (Solid State Relay)
Output Voltage Range	Max. 240Vac @ 0.5A resistive Max. 240Vdc @ 0.5A resistive	0~32Vdc @ 2.0A resistive 48Vdc @ 0.8A resistive 110Vdc @ 0.5A resistive Max. 240Vac @ 2.0A resistive	Max. 24Vac @ 2A resistive
Output Delay Time	Max. AC/DC : 240V OFF to ON : Max. 0.6ms ON to OFF : Max. 3ms	OFF to ON : Max. 5ms @ 24Vdc ON to OFF : Max. 8ms @ 24Vdc OFF to ON : Max. 5ms @ 220Vac ON to OFF : Max. 15ms @ 220Vac	Max. AC/DC : 24V OFF to ON : Max. 1 ms @ 24Vdc ON to OFF : Max. 3 ms @ 24Vdc OFF to ON : Max. 1 ms @ 24Vac ON to OFF : Max. 3.5 ms @ 24Vac
Output Current Rating	Max. 0.5A per channel	2.0A @ 0~32Vdc 0.8A @ 48Vdc 0.5A @ 110Vdc 2.0A @ 240Vac -40°C~70°C (2A Load 2ch) -40°C~60°C (2A Load 4ch)	Max. 2A per channel Operating Temperature -40°C~70°C : Max. 7A per unit -40°C~50°C : Max. 8A per unit
Frequency Range (Vac)	47 ~ 63Hz	47 ~ 63Hz	47 ~ 63Hz
COMMON Type	4Points / 2COM (Single Common)	4Points / 2COM (Single Common)	4Points / 2COM (Single Common)
General Specification			
Power dissipation	80mA maximum @ 5.0Vdc	35mA maximum @ 5.0Vdc	80mA maximum @ 5.0Vdc
Isolation	I/O to Logic : Isolation Field Power : Non-Isolation	I/O to Logic : Isolation Field Power : Non-Isolation	I/O to Logic : Isolation Field Power : Non-Isolation
Field Power	Field Power passes through to the next module. Supply Voltage : 24Vdc Voltage Range : 15 ~ 32Vdc (AC Power Not Used)	Supply voltage : 24Vdc nominal Voltage range : 22 to 26Vdc Power dissipation: 30mA @ 24Vdc (AC Power Not used)	Field Power passes through to the next module. Supply Voltage : 24Vdc Voltage Range : 15 ~ 32Vdc (AC Power Not Used)
Wiring	I/O Cable Max. 2.0mm2(AWG 14)	I/O Cable Max. 2.0mm2(AWG 14)	I/O Cable Max. 2.0mm2(AWG 14)
Mechanical			
Weight	58 g	58 g	58 g
Dimensions	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm

Input Analogue Module

Order Code	EW62T3114 EW62T3154	EW62T3118 EW62T3158	EW62T3424 EW62T3464	EW62T3428 EW62T3468
System data				
Inputs per module	4 Channels single ended, non-isolated between channels	8 Channels single ended, non-isolated between channels	4 Channels single ended, non-isolated between channels	8 Channels single ended, non-isolated between channels
Indicators (Logic Side)	4 Green input status	8 Green input status	4 Green input status	8 Green input status
Resolution in Ranges	12 bits for T3114 16 bits for T3154	12 bits for T3118 16 bits for T3158	12 bits for T3424 16 bits for T3464	12 bits for T3428 16 bits for T3468
Input Range	0-20mA, 4-20mA	0-20mA, 4-20mA	0-10Vdc, 0-5Vdc, 1-5Vdc	0-10Vdc, 0-5Vdc, 1-5Vdc
Data Format	16Bits Integer (2'compliment)	16Bits Integer (2'compliment)	16Bits Integer (2's compliment)	16Bits Integer (2's compliment)
Module Error	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 70°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 70°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 70°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 70°C
Input Impedance	121.5 OHM	121.5 OHM	500 KOHM	500 KOHM
Diagnostic	Diagnostic Field Power Off : LED Blinking Field Power On : LED Off < 0.5% (Maximum Input Value) Field Power On : LED On > 0.5% (Maximum Input Value) Maximum Range Over : LED Off > 21mA Minimum Range Over : LED Off < 3mA (4-20mA)	Diagnostic Field Power Off : LED Blinking Field Power On : LED Off < 0.5% (Maximum Input Value) Field Power On : LED On > 0.5% (Maximum Input Value) Maximum Range Over : LED Off > 21mA Minimum Range Over : LED Off < 3mA (4-20mA)	Diagnostic Field Power Off : LED Blinking Field Power On : LED Off < 0.5% (Maximum Input Value) Field Power On : LED On > 0.5% (Maximum Input Value)	Diagnostic Field Power Off : LED Blinking Field Power On : LED Off < 0.5% (Maximum Input Value) Field Power On : LED On > 0.5% (Maximum Input Value)
Conversion Time	800µsec / All Channels	1msec / All Channels (<= 0.125ms per channel)	350usec / All Channels	≤1msec / All channel (≤ 0.125ms per channel)
Field Calibration	Not Required	Not Required	Not Required	Not Required
COMMON Type	4 Common, Field Power 0V is Common(AGND)	2 Common, Field Power 0V is Common(AGND)	4 Common, Field Power 0V is Common(AGND)	2 Common, Field Power 0V is Common(AGND)
General Specification				
Power dissipation	Max. 25mA @ 5.0Vdc	Max. 30mA @ 5.0Vdc	Max. 25mA @ 5.0Vdc	Max. 30mA @ 5.0Vdc
Isolation	I/O to Logic: Isolation Field Power: Non-Isolation	I/O to Logic: Isolation Field Power: Non-Isolation	I/O to Logic: Isolation Field Power: Non-Isolation	I/O to Logic: Isolation Field Power: Non-Isolation
Field Power	Supply voltage : 24Vdc nominal Voltage range : 18 to 32Vdc Power dissipation : Max. 25mA @ 24Vdc	SSupply voltage : 24Vdc nominal Voltage range : 18 to 32Vdc Power dissipation : Max. 30mA @ 24Vdc	SSupply voltage : 24Vdc nominal Voltage range : 18 to 32Vdc Power dissipation : Max. 25mA @ 24Vdc	Supply voltage : 24Vdc nominal Voltage range : 18 to 32Vdc Power dissipation : Max. 30mA @ 24Vdc
Wiring	I/O Cable Max. 2.0mm2(AWG 14)	I/O Cable Max. 2.0mm2(AWG 14)	I/O Cable Max. 2.0mm2(AWG 14)	I/O Cable Max. 2.0mm2(AWG 14)
Mechanical				
Weight	58 g	58 g	58 g	58 g
Dimensions	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm

<table>
<tr><th></th><th>EW62T3704</th><th>EW62T3804</th></tr>
<tr><td>System data</td><td></td><td></td></tr>
<tr><td>Inputs per module</td><td>4 Channels</td><td>4 Channels</td></tr>
<tr><td>Indicators (Logic Side)</td><td>4 Green Input status ,</td><td>4 Green Input status , 1 Green Input CJ status</td></tr>
<tr><td>Sensor Types</td><td>RTD Input Range
<table><tr><th>Type</th><th>Max Input Range</th></tr><tr><td>PT100, PT200, PT500, PT50</td><td>-200°C … 850°C</td></tr><tr><td>PT1000</td><td>-200°C … 350°C</td></tr><tr><td>JPT100, JPT200, JPT500, JPT50</td><td>-200°C … 640°C</td></tr><tr><td>JPT1000</td><td>-200°C … 350°C</td></tr><tr><td>NI100, NI200, NI500</td><td>-60°C … 250°C</td></tr><tr><td>NI1000</td><td>-60°C … 180°C</td></tr><tr><td>NI120</td><td>-80°C … 260°C</td></tr><tr><td>NI1000LG</td><td>-50°C … 120°C</td></tr></table>Resistance Input Range
<table><tr><th>Type</th><th>Max Input Range</th></tr><tr><td>100mOHM/bit</td><td>0 .. 2000 OHM</td></tr><tr><td>10mOHM/bit</td><td>0 .. 327 OHM</td></tr><tr><td>20mOHM/bit</td><td>0 .. 620 OHM</td></tr><tr><td>50mOHM/bit</td><td>0 .. 1200 OHM</td></tr></table></td><td>Thermal Couple Input Range
<table><tr><th>Type</th><th>Max Input Range</th><th>Recommended Input Range</th></tr><tr><td>K</td><td>-270 .. +1372 °C</td><td>-200 .. +1200°C</td></tr><tr><td>J</td><td>-210 .. +1200 °C</td><td>-40 .. +1100°C</td></tr><tr><td>T</td><td>-270 .. +400°C</td><td>-200 .. +350°C</td></tr><tr><td>B</td><td>+30 .. +1820°C</td><td>+600 .. +1700°C</td></tr><tr><td>R</td><td>-50 .. +1768°C</td><td>0 .. 1600°C</td></tr><tr><td>S</td><td>-50 .. +1768°C</td><td>0 .. +1600°C</td></tr><tr><td>E</td><td>-270 .. +1000°C</td><td>-200 .. +800°C</td></tr><tr><td>N</td><td>-270 .. +1300°C</td><td>-200 .. +1250°C</td></tr><tr><td>L</td><td>-200 .. +900°C</td><td>-100 .. +850°C</td></tr><tr><td>U</td><td>-200 .. +600°C</td><td>-100 .. +550°C</td></tr><tr><td>C</td><td>0 .. +2310°C</td><td>+100 .. +2100°C</td></tr><tr><td>D</td><td>0 .. +2490°C</td><td>+100 .. +2200°C</td></tr><tr><td>10uV Input</td><td colspan="2">-81.0 .. +81.0mV, 10uV/1 Count</td></tr><tr><td>1uV Input</td><td colspan="2">-32.7 .. +32.7mV, 1uV/1Count</td></tr><tr><td>2uV Input</td><td colspan="2">-65.5 .. +65.5mV, 2uV/1Count</td></tr></table></td></tr>
<tr><td>Module Accuracy
(need 20 minute preheating to get enhanced accuracy)</td><td>PT100, PT1000 : ±0.5°C Full Scale @ 25°C ambient
±0.1% Full Scale @ 25°C ambient
±0.3% Full Scale @ -40,70°C ambient</td><td>Recommend Input Range
• ±0.1% Recommended Scale @ 25°C ambient
• ±0.3% Recommended Scale @ -40°C..70°C
C/D type Recommend Input Range
• ±0.3% Recommended Scale @ -40°C..70°C
External Cold Jucntion(PT100)
±2°C Recommended Scale @ -40°C..70°C</td></tr>
<tr><td>Connection Method</td><td>3-Wire</td><td>2-Wire</td></tr>
<tr><td>Conversion Time</td><td><150ms, All Channels</td><td>Average Conversion time <200ms</td></tr>
<tr><td>Data Format</td><td>16Bits Integer (2's compliment)</td><td>16Bits Integer (2's compliment)</td></tr>
<tr><td>Calibration</td><td>Not Required</td><td>Not Required</td></tr>
<tr><td>Diagnostic</td><td>Sensor open or range over, then conversion data = 0x8000(-32768)</td><td>Sensor open or range over, then conversion data = 0x8000(-32768)
* Connected External CJ : CJ LED On.
Not Connected External CJ : CJ LED Off.</td></tr>
<tr><td>Cold junction temperature</td><td>N.A.</td><td>Internal
• TMP275AIDGKR: -40.. +125°C
External
PT100: -45..+95°C</td></tr>
<tr><td>General Specification</td><td></td><td></td></tr>
<tr><td>Power dissipation</td><td>Max. 130mA @ 5.0Vdc</td><td>Max. 130mA @ 5.0Vdc</td></tr>
<tr><td>Isolation</td><td>I/O to Logic: Isolation
Field Power: Not Connected</td><td>I/O to Logic: Isolation
Field Power: Not Connected</td></tr>
<tr><td>Field Power</td><td>Not used, Field power bypass to next expansion module</td><td>Not used, Field power bypass to next expansion module</td></tr>
<tr><td>Wiring</td><td>I/O Cable Max. 2.0mm2(AWG 14)</td><td>I/O Cable Max. 2.0mm2(AWG 14)</td></tr>
<tr><td>Mechanical</td><td></td><td></td></tr>
<tr><td>Weight</td><td>60 g</td><td>60 g</td></tr>
<tr><td>Dimensions</td><td>12 mm x 99 mm x 70 mm</td><td>12 mm x 99 mm x 70 mm</td></tr>
</table>

Order Code	EW62T3808
System data	
Inputs per module	8 Channels
Indicators (Logic Side)	8 Green Input status , 1 Green Input CJ status
Sensor Types	Thermal Couple Input Range

Type	Max Input Range	Recommended Input Range
K	-270 .. +1372 °C	-200 .. +1200°C
J	-210 .. +1200 °C	-40 .. +1100°C
T	-270 .. +400°C	-200 .. +350°C
B	+30 .. +1820°C	+600 .. +1700°C
R	-50 .. +1768°C	0 .. 1600°C
S	-50 .. +1768°C	0 .. +1600°C
E	-270 .. +1000°C	-200 .. +800°C
N	-270 .. +1300°C	-200 .. +1250°C
L	-200 .. +900°C	-100 .. +850°C
U	-200 .. +600°C	-100 .. +550°C
C	0 .. +2310°C	+100 .. +2100°C
D	0 .. +2490°C	+100 .. +2200°C
10uV Input	-81.0 .. +81.0mV, 10uV/1 Count	
1uV Input	-32.7 .. +32.7mV, 1uV/1Count	
2uV Input	-65.5 .. +65.5mV, 2uV/1Count	

Module Accuracy (need 20 minute preheating to get enhanced accuracy)	Recommend Input Range • ±0.1% Recommended Scale @ 25°C ambient • ±0.3% Recommended Scale @ -40°C..70°C T,B,R,S,C,D type Recommend Input Range • ±0.3% Recommended Scale @ -40°C..70°C External Cold Jucntion(PT100) ±2°C Recommended Scale @ -40°C..70°C
Connection Method	2-Wire
Conversion Time	Average Conversion time <330ms
Data Format	16Bits Integer (2's compliment)
Cold junction temperature	Internal • TMP275AIDGKR: -40.. +125°C External • PT100: -45..+95°C
Calibration	Not Required
Diagnostic	Sensor open or range over, then conversion data = 0x8000(-32768) * Connected External CJ : CJ LED On. Not Connected External CJ : CJ LED Off.
General Specification	
Power dissipation	Max. 150mA @ 5.0Vdc
Isolation	I/O to Logic: Isolation Field Power: Not Connected
Field Power	Not used, Field power bypass to next expansion module
Wiring	I/O Cable Max. 2.0mm2(AWG 14)
Mechanical	
Weight	60 g
Dimensions	12 mm x 99 mm x 70 mm

	EW62T3914 EW62T3934	EW62T3924 EW62T3944
System data		
Inputs per module	4 Channels Differential, Non-isolated Between Channels	4 Channels Differential, Non-isolated Between Channels
Indicators (Logic Side)	4 Green Input Status LEDs	4 Green Input Status LEDs
Resolution in Ranges	For EW62T3914 12 bits : 4.88uA/bit(0~20mA) 12 bits : 3.91uA/bit(4~20mA) 12 bits : 9.77uA/bit(-20~20mA) For EW62T3934 16 bits	For EW62T3924 12 bits : 2.44mV/Bit(0~10V) 12 bits : 1.22mV/Bit(0~5V) 12 bits : 4.88mV/Bit(-10~10V) 12 bits : 2.44mV/Bit(-5~5V) For EW62T3944 16 bits
Input Range	0~20mA, 4~20mA, -20~20mA	0~10Vdc, 0~5Vdc, -10~10Vdc, -5~5Vdc
Data Format	16Bits Integer (2's compliment)	16Bits Integer (2's compliment)
Module Error	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 60°C
Diagnostic	Diagnostic Field Power Off : LED Blinking Field Power On : LED Off < 0.5% (Maximum Input Value) Field Power On : LED On > 0.5% (Maximum Input Value)	Diagnostic Field Power Off : LED Blinking Field Power On : LED Off < 0.5% (Maximum Input Value) Field Power On : LED On > 0.5% (Maximum Input Value)
Conversion Time	≤1msec / All channel (≤ 0.125ms per channel)	≤1msec / All channel (≤ 0.25ms per channel)
Field Calibration	Not Required	Not Required
COMMON Type	1 Common, Field Power 0V is Common(AGND)	1 Common, Field Power 0V is Common(AGND)
General Specification		
Power dissipation	Max. 30mA @ 5.0Vdc	Max. 30mA @ 5.0Vdc
Isolation	I/O to Logic : Photocoupler Isolation Field power : DC/DC Converter Isolation	I/O to Logic : Photocoupler Isolation Field power : DC/DC Converter Isolation
Field Power	Supply Voltage : 24Vdc nominal Voltage Range : 60°C : 18 ~ 26.4Vdc 50°C : 18 ~ 32Vdc Power Dissipation : Max. 40mA@24Vdc	Supply Voltage : 24Vdc nominal Voltage Range : 18 ~ 32Vdc Power Dissipation : Max. 45mA@24Vdc
Mechanical		
Wiring	I/O Cable Max. 2.0mm2(AWG 14)	I/O Cable Max. 2.0mm2(AWG 14)
Weight	58 g	58 g
Dimensions	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm

Output Analogue Module

Order Code	EW62T4114 EW62T4154	EW62T4118 EW62T4158	EW62T4424 EW62T4464	EW62T4428 EW62T4468
System data				
Outputs per module	4 Channels single ended	8 Channels single ended	4 Channels single ended	8 Channels single ended
Indicators (Logic Side)	4 Green Output Status LEDs	8 Green Output Status LEDs	4 Green input status	8 Green input status
Resolution in Ranges	12 bits for T4114 16 bits for T4154	12 bits for T4118 16 bits for T4158	12 bits for T4424 16 bits for T4464	12 bits for T4428 16 bits for T4468
Input Range	0~20mA	0~20mA	0-10Vdc	0-10Vdc
Data Format	16Bits Integer (2'compliment)	16Bits Integer (2'compliment)	16Bits Integer (2'compliment)	16Bits Integer (2'compliment)
Module Error	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 70°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 70°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 70°C
Load Resistance	Max. 250 OHM	Min 100 OHM, Max. 250 OHM	Min. 2kOHM	Min. 2kOHM
Conversion Time	150µsec / All Channels	250µsec / All Channels	150µsec / All Channels	250µsec / All Channels
Diagnostic	Field Power Off : LED Blinking Field Power On : No Output LED Off Field Power On : Output LED On	Field Power Off : LED Blinking Field Power On : No Output LED Off Field Power On : Output LED On	Field Power Off : LED Blinking Field Power On : No Output LED Off Field Power On : Output LED On	Field Power Off : LED Blinking Field Power On : No Output LED Off Field Power On : Output LED On
Calibration	Not Required	Not Required	Not Required	Not Required
COMMON Type	4 Channels / 4 Common	2 Common, Field Power 0V is Common (AGND)	4 Common, Field Power 0V is Common(AGND)	2 Common, Field Power 0V is Common(AGND)
General Specification				
Power dissipation	Max. 30mA @ 5.0Vdc	Max. 30mA @ 5.0Vdc	Max. 30mA @ 5.0Vdc	Max. 30mA @ 5.0Vdc
Isolation	I/O to Logic: Isolation Field Power: Non-Isolation	I/O to Logic: Photocoupler isolation Field Power: Non-Isolation	I/O to Logic: Isolation Field Power: Non-Isolation	I/O to Logic: Isolation Field Power: Non-Isolation
Field Power	Supply voltage : 24Vdc nominal Voltage range : 18 to 32Vdc Power dissipation : Max. 80mA @ 24Vdc	Supply voltage : 24Vdc nominal Voltage range : 18 to 32Vdc Power dissipation : Max. 130mA @ 24Vdc	Supply voltage : 24Vdc nominal Voltage range : 18 to 32Vdc Power dissipation : Max. 35mA @ 24Vdc	Supply voltage : 24Vdc nominal Voltage range : 18 to 32Vdc Power dissipation : Max. 70mA @ 24Vdc
Wiring	I/O Cable Max. 2.0mm²(AWG 14)	I/O Cable Max. 2.0mm²(AWG 14)	I/O Cable Max. 2.0mm²(AWG 14)	I/O Cable Max. 2.0mm²(AWG 14)
Mechanical				
Weight	58 g	58 g	58 g	58 g
Dimensions	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm

Special Module

Order Code	EW62T5102
System data	
Number of Channel	2 Channel Encoder, High speed Counter, Frequency measurement Pulse width & Period measurement
Indicators	4 Green Terminal Input Leds
Input Voltage	5Vdc (max)
Input Current	13mA @ 5.2Vdc
Min On-State Volt	≥ 2.1Vdc
Input Frequency	0 .. 600KHz Encoder Mode 0 .. 1MHz Counting Mode
Counting Mode	1 – Input Mode: Up, Down 2 – Input Mode: Encoder 4x, Up/Inhibit, Up/Reset, Down/Inhibit, down/Reset, UP/Down, Clock/Direction, Frequency Measurement, Pulse Width & Period measurement
Counter Size	32bit-wide/Channel
General Specification	
Power dissipation	70mA maximum @ 5.0Vdc
Isolation	I/O to Logic : Photocoupler Isolation I/O to Field Power: Non-Isolation
Field Power	Supply voltage : 24Vdc nominal Voltage range : 18 to 32Vdc
Wiring	I/O Cable Max. 2.0mm²(AWG 14)
Mechanical	
Weight	60 g
Dimensions	12 mm x 90.5 mm x 65 mm

Order Code	EW62T5212	EW62T5232
System data		
Transfer Channels	TxD, RxD, Full Duplex	TxD, RxD, Half Duplex
Transfer Rate	1200bps .. 115200bps	1200bps .. 115200bps
Data Bit	8 bit	8 bit
Parity Bit	None, Odd, Even (*Default: None)	None, Odd, Even (*Default: None)
Stop Bit	1bit, 2bit (*Default: 1bit)	1bit, 2bit (*Default: 1bit)
Flow Control	-	-
Bit Distortion	< 16%	-
Connection	10 RTB	10 RTB
Cable type	Shield Cable	Shield Cable
Cable Length	Max 15 m	1 km twisted pair
Low Signal Voltage	-18V .. -3V	-
High Signal Voltage	3V .. 18V	-
Data Buffer	IO User data IO size changed Max. 62 bytes Control/Status 2 bytes Rx/Tx Length 2 bytes	IO User data 12 Bytes IO size changed Max. 62 bytes Control/Status 2 bytes Rx/Tx Length 2 bytes
RxD Buffer	1024 Bytes	1024 Bytes
TxD Buffer	1024 Bytes	1024 Bytes
Line Impedance	-	120 OHM
Input Image Size	16 Bytes (*Default) @ Max. 62 Bytes	16 Bytes (*Default) @ Max. 62 Bytes
Output Image Size	16 Bytes (*Default) @ Max. 62 Bytes	16 Bytes (*Default) @ Max. 62 Bytes
General Specification		
Power dissipation	85mA maximum @ 5.0Vdc	85mA maximum @ 5.0Vdc
Isolation	I/O to Logic : Isolation Logic to Field Power: Isolation (Not Used) Logic to System Power: Mom-isolation	I/O to Logic : Isolation Logic to Field Power: Isolation (Not Used) Logic to System Power: Mom-isolation
Field Power	Not used (Field Power is bypass)	Not used (Field Power is bypass)
Wiring	I/O Cable Max. 2 mm2 (AWG 14)	I/O Cable Max. 2 mm2 (AWG 14)
Mechanical		
Weight	57 g	57 g
Dimensions	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm

Order Code	EW62T5352
System data	
Number of Channels	2 Channel - Synchronous Serial Interface Module
Indicators	8 Green LEDs RUN0, RUN1, UP0, UP1, DOWN0, DOWN1, WARN0, WARN1
SSI Data Rate	Channel 0,1 – 125K, 250K, 500K, 1M, 2M (default 250K)
SSI Data Width	Max 30 Bit
SSI Data Delay Time	100µs .. 10ms (Default 200us)
SSI Output	C+, C-: Ch0,1 RS422 Differential Output
SSI Input	D+, D-: Ch0,1 RS422 Differential Input
SSI Data Code Type	Gray Code or Natural Binary
Receiver Common Mode Input Voltage (Data Input Voltage)	-7Vdc .. +7Vdc
Output Voltage (Clock Output Voltage)	-0.5Vdc .. +4.3Vdc
Special features	Adjustable baud rate, delay and data length
General Specification	
Power dissipation	60mA maximum @ 5.0Vdc
Isolation	I/O to Logic : Photocoupler Isolation I/O to Field Power: Non-Isolation
Field Power	Supply voltage: 24Vdc nominal Voltage range: 70°C -> 18 .. 26.4Vdc 60°C -> 18 .. 32Vdc Power Dissipation: Max. 30mA @ 24Vdc
Wiring	I/O Cable Max. 2.0mm²(AWG 14)
Mechanical	
Weight	60 g
Dimensions	12 mm x 90.5 mm x 65 mm

System Module

Order Code	EW62T7408	EW62T7518	EW62T7588	EW62T7641
System data				
Filed Power Voltage	24 Vdc Nominal	24 Vdc Nominal	24 Vdc Nominal	24 Vdc Nominal
Field Power Contacts Current	Max. 10A Referred to Operating Tem-perature -40°C .. 50°C: Max. 10A 50°C .. 70°C: Max. 7A	Max. 10A Referred to Operating Tem-perature -40°C .. 50°C: Max. 10A 50°C .. 70°C: Max. 7A	Max. 10A Referred to Operating Tem-perature -40°C .. 50°C: Max. 10A 50°C .. 70°C: Max. 7A	Max. 10A Referred to Operating Tem-perature -40°C .. 50°C: Max. 10A 50°C .. 70°C: Max. 7A
Indicator	1 green LEDs Internal Bus State	1 green LEDs Internal Bus State	1 green LEDs Internal Bus State	1 green LEDs Internal Bus State
General Specification				
Power dissipation	30mA maximum @ 5.0Vdc	30mA maximum @ 5.0Vdc	30mA maximum @ 5.0Vdc	30mA maximum @ 5.0Vdc
Wiring	I/O Cable Max. 2 mm2 (AWG 14)	I/O Cable Max. 2 mm2 (AWG 14)	I/O Cable Max. 2 mm2 (AWG 14)	I/O Cable Max. 2 mm2 (AWG 14)
Mechanical				
Weight	70 g	70 g	70 g	70 g
Dimensions	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm	12 mm x 99 mm x 70 mm

Accessories

EW62AVV10	Accessory Package(14pcs): G type, 10PTs RTB

Environmental Specification

Operation Temperature	-40 .. +70°C
Storage Temperature	-40 .. +85°C
Relative Humidity	5% .. 90% Not-condensing
Mounting	DIN Rail
Shock Operating	IEC 60068-2-27
Vibration Resistance	Based on IEC 60068-2-6 Sine Vibration • 5 ~ 25Hz : ±1.6mm • 25 ~ 300Hz : 4g • Sweep Rate : 1 Oct/min, 20 cycles Random Vibration • 10 ~ 40 Hz : 0.0125 g2/Hz • 40 ~ 100 Hz : 0.0125 °C 0.002 g2/Hz • 100 ~ 500 Hz : 0.002 g2/Hz • 500 ~ 2000 Hz : 0.002 °C 1.3 x 10-4g2/Hz Test time : 1hrs for each test
Industrial Emissions	EN 61000-6-4/All:2011
Industrial Immunity	EN 61000-6-2:2005
Installation Position	Variable
IP Protection	IP20
Certifications	CE, UL

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