


INDUSTRIAL
AUTOMATION


ENDA

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WELCOME TO SISEL

Founded in 1989, Sisel Engineering Inc. is a leader in providing innovative automation products and solutions in Turkey. Sisel offers comprehensive system integration, hardware, software and customer-centric design services; all backed by industry leading front and back machine manufacturers and automation solutions. We cooperate with our partners to help provide complete solutions for applications across a diverse range of industries. Sisel has always been innovator in the development and manufacturing of quality and our aim is maintaining our brand name ENDA preferable in the industrial automation market throughout the world.

Flexible and economic: The right solution for control

The ENDA product range are industrial controllers within a portfolio suitable for a multitude of applications. The range extends from temperature and process controllers, counters, tachometers, converters, time relays, defrost controllers, solid state relays, digital potentiometers and indicators.





Quality & unrivalled support

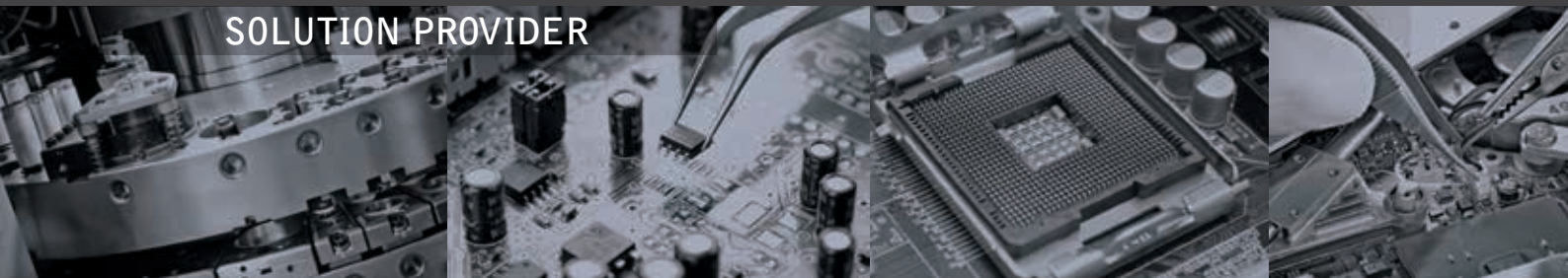
Your reliable partner

ENDA have designed and supplied process automation products for over 30 years. In the 1992s, the Company started production with counter. With research, development and investment, today, we are well-known, trustable and prebable brand name having a corner in the Turkey market as well as all around the world.

ENDA with marketing 4P's

We are doing our best to carry out our Product, Place, Price and Promotion activities, that are the four main parameters of marketing in the best possible ways. We are also offering direct support to our customers in the exhibitions we attend also by visits, catalogues, leaflets, periodicals, newspapers and internet.

SOLUTION PROVIDER



ENDA



Worldwide organization

Export periodically. Besides, operates on machines over 33 countries in which are exported.

With strong distribution chain capability, our network offers on-site supply options including local and global solutions that meet your unique need and budget requirements. The spreaded network channel gives you technical support and face-to-face after-sales service on your application site.

Algeria	Iraq	Singapore
Azerbaijan	Iran	Slovenia
Bulgaria	Israel	South Africa
Denmark	Italy	Spain
Egypt	Lebanon	Syria
England	Norway	Sweden
Finland	Oman	Thailand
France	Pakistan	Tunisia
Germany	Philippines	UAE
Greece	Poland	Ukraine
Holland	Romania	USA

DYNAMIC NETWORK ORGANIZATION



ENDDA



Support & Services

The spreaded network channel gives you technical support and face-to-face after-sales service on your application site.

Quality Assurance System

ENDA has been designing and manufacturing industrial automation products according to following basic principles:

- Always strive for overall customer satisfaction
- Improve the products parallel to requirement of the market
- Feedback to resolve problems

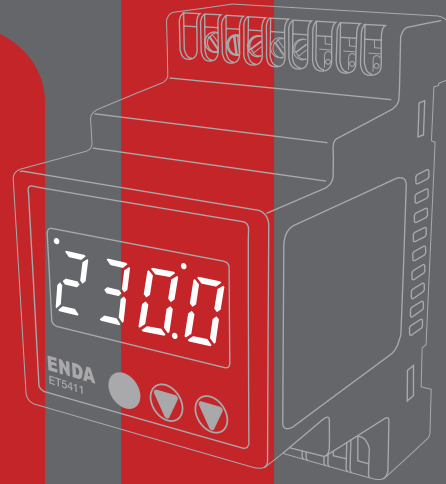
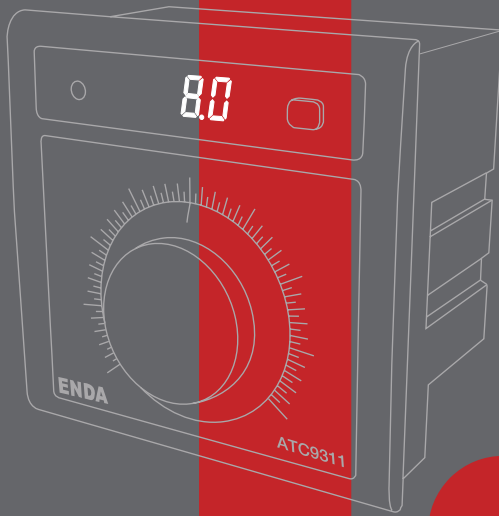
At ENDA, quality is our main priority. Optimal

operational processes are guaranteed by our CE marked control devices complying with EMC performance criteria and safety requirements. An environmental program that focuses on reducing, reusing and recycling of materials throughout the manufacturing process is also applied at ENDA and support with ISO14001 certification. All products are 100% RoHS compliant and carry RoHS mark on the label of products.



EXCELLENT TEAM

ENDA



Temperature Controllers

1



Temperature Controllers



ANALOG

MODEL	AT411	ATC9311
Dimensions (mm)	W48xH48xD82	W96xH96xD50
Display	-	3 digits
Input Type	PT-100 or TC *	TC *
Scale Range	PT 100, 0...400°C J, 0...200°C J, 0...300°C J, 0...400°C K, 0...400°C	J, 0...400°C K, 0...400°C
Power Supply	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *	
Wiring	8 pin socket or screw terminals	2,5mm ² screw terminals
Control Output	Relay, 3A (NO+NC)	Relay, 8A (NO+NC)
SSR	10V DC, 10mA *	12V DC, 20mA *
Control Type	On-Off or time proportional	

* order option

ORDERING CODE

AT411 - FE - K - 400 - 230VAC - SSR

Part Number	
48x48mm, Analog Thermostat	AT411
Input Type	
Fe-Const	FE
NiCr-Ni	NI
Pt-100	RT
Wiring	
8 pin socket	None
Screw terminals	K(only FE)

Control Output	
Relay	None
Logic	SSR
Power Supply	
230VAC	230VAC
110VAC	110VAC
24VAC	24VAC
9-30V DC/7-24V AC	SM
Scale Range	
0-400°C	400
0-300°C	300
0-200°C	200

ATC9311 - FE - 400 - 230VAC - SSR

Part Number	
96x96mm, Analog Thermostat	ATC9311
Input Type	
Fe-Const	FE
NiCr-Ni	K
Scale Range	
0-400°C	400

Control Output	
Relay	None
Logic	SSR
Power Supply	
230VAC	230VAC
110VAC	110VAC
24VAC	24VAC
9-30V DC/7-24V AC	SM

AT411

Input Type	Output Type	Wiring	Scale (°C)	Dimensions (mm)	Power Supply	Part Number
J	Relay	Screw terminals	200	48x48	230VAC	AT411-FE-K-200-230VAC
					110VAC	AT411-FE-K-200-110VAC
					24VAC	AT411-FE-K-200-24VAC
					9-30VDC/7-24VAC	AT411-FE-K-200-SM
J	Relay	Screw terminals	300	48x48	230VAC	AT411-FE-K-300-230VAC
					110VAC	AT411-FE-K-300-110VAC
					24VAC	AT411-FE-K-300-24VAC
					9-30VDC/7-24VAC	AT411-FE-K-300-SM
J	Relay	Screw terminals	400	48x48	230VAC	AT411-FE-K-400-230VAC
					110VAC	AT411-FE-K-400-110VAC
					24VAC	AT411-FE-K-400-24VAC
					9-30VDC/7-24VAC	AT411-FE-K-400-SM
J	Relay	8 Pin Socket	200	48x48	230VAC	AT411-FE-200-230VAC
					110VAC	AT411-FE-200-110VAC
					24VAC	AT411-FE-200-24VAC
					9-30VDC/7-24VAC	AT411-FE-200-SM
J	Relay	8 Pin Socket	300	48x48	230VAC	AT411-FE-300-230VAC
					110VAC	AT411-FE-300-110VAC
					24VAC	AT411-FE-300-24VAC
					9-30VDC/7-24VAC	AT411-FE-300-SM
J	Relay	8 Pin Socket	400	48x48	230VAC	AT411-FE-400-230VAC
					110VAC	AT411-FE-400-110VAC
					24VAC	AT411-FE-400-24VAC
					9-30VDC/7-24VAC	AT411-FE-400-SM
K	Relay	8 Pin Socket	400	48x48	230VAC	AT411-NI-400-230VAC
					110VAC	AT411-NI-400-110VAC
					24VAC	AT411-NI-400-24VAC
					9-30VDC/7-24VAC	AT411-NI-400-SM
PT 100	Relay	8 Pin Socket	400	48x48	230VAC	AT411-RT-400-230VAC
					110VAC	AT411-RT-400-110VAC
					24VAC	AT411-RT-400-24VAC
					9-30VDC/7-24VAC	AT411-RT-400-SM

ATC9311

Input Type	Output Type	Wiring	Scale (°C)	Dimensions (mm)	Power Supply	Part Number
J	Relay	Screw terminals	400	96X96	230VAC	ATC9311-FE-400-230VAC
					110VAC	ATC9311-FE-400-110VAC
					24VAC	ATC9311-FE-400-24VAC
					9-30VDC/7-24VAC	ATC9311-FE-400-SM
K	Relay	Screw terminals	400	96X96	230VAC	ATC9311-K-400-230VAC
					110VAC	ATC9311-K-400-110VAC
					24VAC	ATC9311-K-400-24VAC
					9-30VDC/7-24VAC	ATC9311-K-400-SM

(1) For SSR output models of these products, -SSR extension must be added to the end of the order code

(2) There is no price difference for SSR output models



DIGITAL ON-OFF

MODEL	ET4403	ET2001	ET2411	ET2412	ET5411	ET5412
Dimensions (mm)	W48xH48xD53	W77xH35xD61			W54xH94xD68	
Temperature Display	3 digits	4 digits				
Set Display		-				
Input Type	PT 100	TC or NTC *	NTC			
Scale Range	0...700°C	J, -30...400°C	-60.0...150.0°C			
		NTC, -25.0...110.0°C				
°C/°F	-		✓			
Heating/Cooling	-	✓				
Power Supply	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *	230V AC, 110V AC, 50/60Hz, 24V AC/DC, 12V AC/DC or 9-30V DC / 7-24V AC, 50/60Hz *				
Wiring	2,5mm ² and 1,5mm ² screw terminals	2,5mm ² screw terminals				
Control Output	Relay, 2A (NO)	Relay, 8A (NO+NC) or 5/16A (NO) *		Relay, 8A (NO+NC)	Relay, 8A (NO+NC) or 20A (NO) *	Relay, 8A (NO+NC)
Alarm Output		-		Relay, 8A (NO)	-	Relay, 8A (NO)
Control Type	On-Off					
Modbus Selection	-				RS485 ModBus *	

* order option

ORDERING CODE

ET5411 - 230 - P - RS

Part Number	
Rail Mounted Digital Thermostat	ET5411
Rail Mounted Digital Thermostat	ET5412

Power Supply	
230VAC	230
24V AC/DC	024
12V AC/DC	012
9-30V DC/7-24V AC	SM

Modbus Selection	
Not Fitted	None
RS485 Modbus	RS

Relay Current	
8A	R
20A	P

ET2001 - J - 230 - 05

Part Number	
48x48mm, Digital Thermostat	ET4403
77x35mm, Digital Thermostat	ET2001
77x35mm, Digital Thermostat	ET2411
77x35mm, Digital Thermostat + Alarm	ET2412

Input Type	
J tipi TC (only ET2001)	J
NTC (only ET2001)	N

Relay Current	ET2001/2411	ET2412	ET4403
5A	05	None	None
8A	08	08	None
16A	16	None	None

Power Supply	ET2411/12	ET4403	ET2001
230VAC	230	230	230
110VAC	110	110	110
24VAC	None	024	None
24V AC/DC	024	None	024
12V AC/DC	012	None	012
9-30V DC/7-24V AC	SM	SM	SM

ET4403

Input Type	Output Properties		Scale (°C)	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Control Output	Alarm Output					
PT 100	2A Relay NO	-	0...+700	-	48x48	230VAC	ET4403-230
						110VAC	ET4403-110
						24VAC	ET4403-024
						9-30VDC/7-24VAC	ET4403-SM

ET2001

Input Type	Output Properties		Scale (°C)	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Control Output	Alarm Output					
NTC	5A Relay NO	-	-25.0...+110.0	-	77x35	230VAC	ET2001-N-230-05
						110VAC	ET2001-N-110-05
						24V AC/DC	ET2001-N-024-05
						12V AC/DC	ET2001-N-012-05
						9-30VDC/7-24VAC	ET2001-N-SM-05
NTC	8A Relay NO+NC	-	-25.0...+110.0	-	77x35	230VAC	ET2001-N-230-08
						110VAC	ET2001-N-110-08
						24V AC/DC	ET2001-N-024-08
						12V AC/DC	ET2001-N-012-08
						9-30VDC/7-24VAC	ET2001-N-SM-08
NTC	16A Relay NO	-	-25.0...+110.0	-	77x35	230VAC	ET2001-N-230-16
						110VAC	ET2001-N-110-16
						24V AC/DC	ET2001-N-024-16
						12V AC/DC	ET2001-N-012-16
						9-30VDC/7-24VAC	ET2001-N-SM-16
J	5A Relay NO	-	-30...+400	-	77x35	230VAC	ET2001-J-230-05
						110VAC	ET2001-J-110-05
						24V AC/DC	ET2001-J-024-05
						12V AC/DC	ET2001-J-012-05
						9-30VDC/7-24VAC	ET2001-J-SM-05
J	8A Relay NO+NC	-	-30...+400	-	77x35	230VAC	ET2001-J-230-08
						110VAC	ET2001-J-110-08
						24V AC/DC	ET2001-J-024-08
						12V AC/DC	ET2001-J-012-08
						9-30VDC/7-24VAC	ET2001-J-SM-08
J	16A Relay NO	-	-30...+400	-	77x35	230VAC	ET2001-J-230-16
						110VAC	ET2001-J-110-16
						24V AC/DC	ET2001-J-024-16
						12V AC/DC	ET2001-J-012-16
						9-30VDC/7-24VAC	ET2001-J-SM-16

ET2411

Input Type	Output Properties		Scale (°C)	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Control Output	Alarm Output					
NTC	5A Relay NO	-	-60.0...+150.0	-	77x35	230VAC	ET2411-230-05
						110VAC	ET2411-110-05
						24V AC/DC	ET2411-024-05
						12V AC/DC	ET2411-012-05
						9-30VDC/7-24VAC	ET2411-SM-05
NTC	8A Relay NO+NC	-	-60.0...+150.0	-	77x35	230VAC	ET2411-230-08
						110VAC	ET2411-110-08
						24V AC/DC	ET2411-024-08
						12V AC/DC	ET2411-012-08
						9-30VDC/7-24VAC	ET2411-SM-08
NTC	16A Relay NO	-	-60.0...+150.0	-	77x35	230VAC	ET2411-230-16
						110VAC	ET2411-110-16
						24V AC/DC	ET2411-024-16
						12V AC/DC	ET2411-012-16
						9-30VDC/7-24VAC	ET2411-SM-16

ET2412

Input Type	Output Properties		Scale (°C)	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Control Output	Alarm Output					
NTC	8A Relay NO+NC	8A Relay NO	-60.0...+150.0	-	77x35	230VAC	ET2412-230-08
						110VAC	ET2412-110-08
						24V AC/DC	ET2412-024-08
						12V AC/DC	ET2412-012-08
						9-30VDC/7-24VAC	ET2412-SM-08

ET5411

Input Type	Output Properties		Scale (°C)	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Control Output	Alarm Output					
NTC	8A Relay NO+NC	-	-60.0...+150.0	-	54x94	230VAC	ET5411-230-R
						24VAC/DC	ET5411-024-R
						12VAC/DC	ET5411-012-R
						9-30VDC/7-24VAC	ET5411-SM-R
NTC	20A Relay NO	-	-60.0...+150.0	-	54x94	230VAC	ET5411-230-P
						24VAC/DC	ET5411-024-P
						12VAC/DC	ET5411-012-P
						9-30VDC/7-24VAC	ET5411-SM-P
NTC	8A Relay NO+NC	-	-60.0...+150.0	RS485 Modbus	54x94	230VAC	ET5411-230-R-RS
						24VAC/DC	ET5411-024-R-RS
						12VAC/DC	ET5411-012-R-RS
						9-30VDC/7-24VAC	ET5411-SM-R-RS
NTC	20A Relay NO	-	-60.0...+150.0	RS485 Modbus	54x94	230VAC	ET5411-230-P-RS
						24VAC/DC	ET5411-024-P-RS
						12VAC/DC	ET5411-012-P-RS
						9-30VDC/7-24VAC	ET5411-SM-P-RS

ET5412

Input Type	Output Properties		Scale (°C)	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Control Output	Alarm Output					
NTC	8A Relay NO+NC	8A Relay NO	-60.0...+150.0	-	54x94	230VAC	ET5412-230
						24VAC/DC	ET5412-024
						12VAC/DC	ET5412-012
						9-30VDC/7-24VAC	ET5412-SM
NTC	20A Relay NO	8A Relay NO	-60.0...+150.0	-	54x94	230VAC	ET5412-230-P
						24VAC/DC	ET5412-024-P
						12VAC/DC	ET5412-012-P
						9-30VDC/7-24VAC	ET5412-SM-P
NTC	8A Relay NO+NC	8A Relay NO	-60.0...+150.0	RS485 Modbus	54x94	230VAC	ET5412-230-RS
						24VAC/DC	ET5412-024-RS
						12VAC/DC	ET5412-012-RS
						9-30VDC/7-24VAC	ET5412-SM-RS
NTC	20A Relay NO	8A Relay NO	-60.0...+150.0	RS485 Modbus	54x94	230VAC	ET5412-230-P-RS
						24VAC/DC	ET5412-024-P-RS
						12VAC/DC	ET5412-012-P-RS
						9-30VDC/7-24VAC	ET5412-SM-P-RS



DIGITAL PID

MODEL	ET3011	ET2011	ET4430	ET4402
Dimensions (mm)	W77xH35xD61		W48xH48xD87	W48xH48xD53
PV Display	4 digits		4 digits LCD display	4 digits
Set Display	-			
Input Type	PT 100 or TC *		PT 100 and TC	TC
Scale Range	PT 100, -99.9...199.9°C PT 100, -200...600°C J, 0...600°C K, 0...1300°C T, 0...400°C S, 0...1700°C R, 0...1700°C	PT 100, -99.9...300.0°C PT 100, -200...600°C J, 0...600°C K, 0...1300°C T, 0...400°C S, 0...1700°C R, 0...1700°C	PT 100, -199.9...600.0°C PT 100, -200...600°C J, -30.0...600.0°C J, -30...600°C K, -30.0...999.9°C K, -30...1300°C L, -30.0...600.0°C L, -30...600°C T, -30.0...400.0°C T, -30...400°C S, -40...1700°C R, -40...1700°C	J, -30...600°C K, -30...999°C L, -30...600°C
°C/°F			✓	
Heating/Cooling			✓	
Power Supply	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *		90-250V AC, 24V AC 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *
Wiring	2,5mm ² and 1,5mm ² screw terminals			
Control Output	Relay, 8A (NO+NC) or 16A (NO) * This relay can be used as alarm output		Relay, 8A (NO+NC) When the control output is selected as SSR output, this relay can be used as Alarm output	Relay, 5A (NO) When the control output is selected as SSR output, this relay can be used as Alarm output
Alarm Output			Relay, 8A (select program NO or NC)	Relay, 5A NO
SSR Output	12V, 20mA		24V, 20mA	12V, 20mA
Control Type	On-Off / P, PI, PD, PID			
Digital Input	-		Contact input	-
Modbus Selection	-		RS485 ModBus *	-

* order option

ORDERING CODE

		ET2011 - T - 230VAC - P			
Part Number				Relay Current	
77x35mm, Thermostat	ET3011			8A	None
77x35mm, Thermostat	ET2011			16A	P
Input Type				Power Supply	ET2011
TC	T			230VAC	230VAC
Pt-100	RT			110VAC	110VAC
				24VAC	24VAC
				9-30V DC/7-24V AC	SM
		ET4430 - 230VAC - RS			
Part Number				Modbus Selection	
48x48mm, Digital Thermostat	ET4430			Not Fitted	None
48x48mm, Digital Thermostat	ET4402			RS485 Modbus (only ET4430)	RS
				Power Supply	
				90-250V AC (only ET4430)	230
				230 VAC (only ET4402)	230
				110 VAC (only ET4402)	110
				24 VAC (only ET4430)	24
				24 VAC (only ET4402)	024
				9-30V DC/7-24V AC	SM



DIGITAL PID

MODEL	ET4420	ET7420	ET8420	ET9420
Dimensions (mm)	W48xH48xD87	W72xH72xD97	W48xH96xD87	W96xH96xD50
PV Display	4 digits			
Set Display				
Input Type	PT 100 and TC			
Scale Range	PT 100, -199.9...600.0°C PT 100, -200...600°C J, -30.0...600.0°C J, -30...600°C K, -30.0...999.9°C K, -30...1300°C L, -30.0...600.0°C L, -30...600°C T, -30.0...400.0°C T, -30...400°C S, -40...1700°C R, -40...1700°C			
°C/°F	✓			
Heating/Cooling	✓			
Power Supply	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *			
Wiring	2,5mm ² and 1,5mm ² screw terminals			
Control Output	Relay, 8A (NO+NC) When the control output is selected as SSR output, this relay can be used as Alarm output			
Alarm Output	Relay, 8A (select program NO or NC)			
SSR Output	24V, 20mA			
Control Type	On-Off / P, PI, PD, PID			
Digital Input	Contact input			
Modbus Selection	RS485 ModBus *			

* order option

ORDERING CODE

ET4420 - 230VAC - RS

Part Number		Modbus Selection	
48x48mm, Digital Thermostat	ET4420	Not Fitted	None
72x72mm, Digital Thermostat	ET7420	RS485 Modbus	RS
48x96mm, Digital Thermostat	ET8420		
96x96mm, Digital Thermostat	ET9420		

Power Supply	
230VAC	230
110VAC	110
24VAC	24
9-30V DC/7-24V AC	SM

ET4402

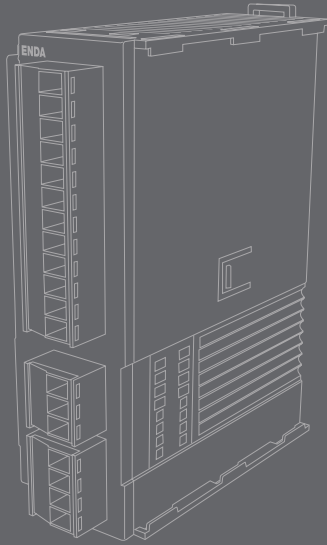
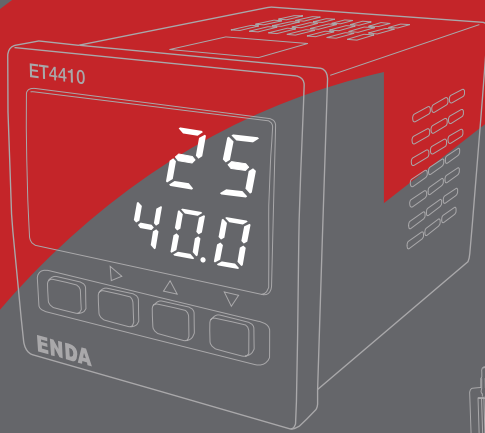
Input Type	Output Properties			Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control/Alarm2 Output	Alarm1 Output	SSR Control Output				
J,K,L	5A Relay NO	5A Relay NO	12V, 20mA	48x48	-	230VAC 110VAC 24VAC 9-30VDC/7-24VAC	ET4402-230 ET4402-110 ET4402-024 ET4402-SM

ET2011

Input Type	Output Properties			Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control/Alarm2 Output	Alarm1 Output	SSR Control Output				
PT 100	8A Relay NO+NC	-	12V, 20mA	77x35	-	230VAC	ET2011-RT-230VAC
						110VAC	ET2011-RT-110VAC
						24VAC	ET2011-RT-24VAC
						9-30VDC/7-24VAC	ET2011-RT-SM
PT 100	16A Relay NO	-	12V, 20mA	77x35	-	230VAC	ET2011-RT-230VAC-P
						110VAC	ET2011-RT-110VAC-P
						24VAC	ET2011-RT-24VAC-P
						9-30VDC/7-24VAC	ET2011-RT-SM-P
JK,T,S,R	8A Relay NO+NC	-	12V, 20mA	77x35	-	230VAC	ET2011-T-230VAC
						110VAC	ET2011-T-110VAC
						24VAC	ET2011-T-24VAC
						9-30VDC/7-24VAC	ET2011-T-SM
JK,T,S,R	16A Relay NO	-	12V, 20mA	77x35	-	230VAC	ET2011-T-230VAC-P
						110VAC	ET2011-T-110VAC-P
						24VAC	ET2011-T-24VAC-P
						9-30VDC/7-24VAC	ET2011-T-SM-P

ET4430 - ET4420 - ET7420 - ET8420 - ET9420

Input Type	Output Properties			Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control/Alarm2 Output	Alarm1 Output	SSR Control Output				
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	48x48	-	90-250V AC	ET4430-230VAC
						24VAC	ET4430-24VAC
						9-30VDC/7-24VAC	ET4430-SM
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	48x48	RS485 Modbus	90-250V AC	ET4430-230VAC-RS
						24VAC	ET4430-24VAC-RS
						9-30VDC/7-24VAC	ET4430-SM-RS
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	48x48	-	230VAC	ET4420-230VAC
						110VAC	ET4420-110VAC
						24VAC	ET4420-24VAC
						9-30VDC/7-24VAC	ET4420-SM
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	48x48	RS485 Modbus	230VAC	ET4420-230VAC-RS
						110VAC	ET4420-110VAC-RS
						24VAC	ET4420-24VAC-RS
						9-30VDC/7-24VAC	ET4420-SM-RS
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	72x72	-	230VAC	ET7420-230VAC
						110VAC	ET7420-110VAC
						24VAC	ET7420-24VAC
						9-30VDC/7-24VAC	ET7420-SM
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	72x72	RS485 Modbus	230VAC	ET7420-230VAC-RS
						110VAC	ET7420-110VAC-RS
						24VAC	ET7420-24VAC-RS
						9-30VDC/7-24VAC	ET7420-SM-RS
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	48x96	-	230VAC	ET8420-230VAC
						110VAC	ET8420-110VAC
						24VAC	ET8420-24VAC
						9-30VDC/7-24VAC	ET8420-SM
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	48x96	RS485 Modbus	230VAC	ET8420-230VAC-RS
						110VAC	ET8420-110VAC-RS
						24VAC	ET8420-24VAC-RS
						9-30VDC/7-24VAC	ET8420-SM-RS
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	96x96	-	230VAC	ET9420-230VAC
						110VAC	ET9420-110VAC
						24VAC	ET9420-24VAC
						9-30VDC/7-24VAC	ET9420-SM
JK,L,T,S,R PT 100	8A Relay NO+NC	8A Relay NO	24V, 20mA	96x96	RS485 Modbus	230VAC	ET9420-230VAC-RS
						110VAC	ET9420-110VAC-RS
						24VAC	ET9420-24VAC-RS
						9-30VDC/7-24VAC	ET9420-SM-RS



Process Controllers



Process Controllers



PROFILE & UNIVERSAL & MOTORIZED VALVE

MODEL	EPC9513			EUP4420		EUP7420		EUP8420		EUP9420	
Dimensions (mm)	W96xH96xD81			W48xH48xD87		W72xH72xD97		W48xH96xD87		W96xH96xD50	
PV Display	5 digits 3,5" TFT graphic display			4 digits							
Timer Display											
Input Type	PT 100, TC, NTC, R, mA, V or mV			PT 100, TC, mA, V or mV							
Scale Range	PT 100, -200.0 ... 850.0 °C B, 200.0 ... 1800.0 °C E, -100.0 ... 900.0 °C J, -100.0 ... 900.0 °C K, -100.0 ... 1300.0 °C L, -100.0 ... 900.0 °C N, -200.0 ... 1300.0 °C R, 0.0 ... 1700.0 °C S, 0.0 ... 1700.0 °C T, -250.0 ... 300.0 °C U, -200.0 ... 400.0 °C NTC, -60.0 ... 150.0 °C			PT 100, -199.9...600.0°C PT 100, -200...600.0°C J, -30.0...600.0°C J, -30...600°C K, -30.0...999.9°C K, -30...1300°C L, -30.0...600.0°C L, -30...600°C T, -30.0...400.0°C T, -30...400°C S, -40...1700°C R, -40...1700°C							
Measuring Range	mA	0 - 20mA		mA	0 - 20mA		-1999 ... 9999 max. scale range 10000				
		4 - 20mA			4 - 20mA						
	mV	0 - 150mV		mV	0 - 25mV						
		0 - 5V			0 - 50mV						
	V	1 - 5V		V	0 - 10V						
0 - 10V		2 - 10V									
Ω	0 - 550Ω		0 - 10kΩ								
°C/°F											
Heating/Cooling											
Power Supply	90-250V AC, 50/60Hz			90-250V AC, 50/60Hz		90-250V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *					
Wiring										2,5mm ² screw terminals	
Control Output	Relay, 10A (NO+NC) When the control output is selected as SSR output, this relay can be used as Alarm 3 output			Relay, 8A (NO+NC) When the control output is selected as SSR output, this relay can be used as Alarm 2 output.							
Alarm Output	Alarm 1: Relay, 10A (NO+NC) Alarm 2: Relay, 10A (NO)			Relay, 8A (NO / NC)							
SSR Output	12V, 40mA			24V, 20mA							
Analog Output	0/4-20mA, 0-10V			0/4-20mA							
Control Type										On-Off / P, PI, PD, PID	
Profile Control	16 program up to 8 steps profile control			Up to 16 steps profile control							
Modbus Selection	RS485 ModBus			RS485 ModBus *							

* order option

ORDERING CODE

EUP4420 - 230VAC - RS

Part Number	
48x48mm, Profile/Universal/Motorized Valve Controller	EUP4420
72x72mm, Profile/Universal/Motorized Valve Controller	EUP7420
48x96mm, Profile/Universal/Motorized Valve Controller	EUP8420
96x96mm, Profile/Universal/Motorized Valve Controller	EUP9420

Modbus Selection	
Not Fitted	None
RS485 Modbus	RS

Power Supply	
90-250V AC	230VAC
9-30V DC/7-24V AC	SM

EPC9513 Advanced Process Controller

Input Type	Output Properties						Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control/ Alarm3 Output	Alarm1 Output	Alarm2 Output	SSR Output	mA	V				
TC,NTC,RTD, mA,V,mV,Ω	10A Relay NO+NC	10A Relay NO+NC	10A Relay NO	12V, 40mA	0/4-20mA	0-10 VDC	96x96	RS485 Modbus	90-250VAC	EPC9513

EUP4420 - EUP7420 - EUP8420 - EUP9420

Input Type	Output Properties				Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control/ Alarm2 Output	Alarm1 Output	SSR Output	mA				
JK,T,S,R, PT 100 mA, V, mV	8A Relay NO+NC	8A Relay NO/NC	24V, 20mA	0/4-20mA	48x48	-	90-250V AC	EUP4420-230VAC
							9-30VDC/7-24VAC	EUP4420-SM
JK,T,S,R, PT 100 mA, V, mV	8A Relay NO+NC	8A Relay NO/NC	24V, 20mA	0/4-20mA	48x48	RS485 Modbus	90-250V AC	EUP4420-230VAC-RS
							9-30VDC/7-24VAC	EUP4420-SM-RS
JK,T,S,R, PT 100 mA, V, mV	8A Relay NO+NC	8A Relay NO/NC	24V, 20mA	0/4-20mA	72x72	-	90-250V AC	EUP7420-230VAC
							9-30VDC/7-24VAC	EUP7420-SM
JK,T,S,R, PT 100 mA, V, mV	8A Relay NO+NC	8A Relay NO/NC	24V, 20mA	0/4-20mA	72x72	RS485 Modbus	90-250V AC	EUP7420-230VAC-RS
							9-30VDC/7-24VAC	EUP7420-SM-RS
JK,T,S,R, PT 100 mA, V, mV	8A Relay NO+NC	8A Relay NO/NC	24V, 20mA	0/4-20mA	48x96	-	90-250V AC	EUP8420-230VAC
							9-30VDC/7-24VAC	EUP8420-SM
JK,T,S,R, PT 100 mA, V, mV	8A Relay NO+NC	8A Relay NO/NC	24V, 20mA	0/4-20mA	48x96	RS485 Modbus	90-250V AC	EUP8420-230VAC-RS
							9-30VDC/7-24VAC	EUP8420-SM-RS
JK,T,S,R, PT 100 mA, V, mV	8A Relay NO+NC	8A Relay NO/NC	24V, 20mA	0/4-20mA	96x96	-	90-250V AC	EUP9420-230VAC
							9-30VDC/7-24VAC	EUP9420-SM
JK,T,S,R, PT 100 mA, V, mV	8A Relay NO+NC	8A Relay NO/NC	24V, 20mA	0/4-20mA	96x96	RS485 Modbus	90-250V AC	EUP9420-230VAC-RS
							9-30VDC/7-24VAC	EUP9420-SM-RS



UNIVERSAL

MODEL	EUC9526			EU4430				
Dimensions (mm)	W96xH96xD81			W48xH48xD87				
PV Display	5 digits 3,5" TFT graphic display			4 digits LCD display				
Input Type	2 x PT 100, TC, NTC, R, mA, V or mV			PT 100, TC, mA, V or mV				
Scale Range	PT 100, -200.0 ... 850.0°C PT 100, -100.00 ... 160.00°C B, 200.0 ... 1800.0°C E, -100.0 ... 900.0°C J, -100.0 ... 900.0°C K, -100.0 ... 1300.0°C L, -100.0 ... 900.0°C N, -200.0 ... 1300.0°C R, 0.0 ... 1700.0°C S, 0.0 ... 1700.0°C T, -250.0 300.0°C U, -200,0 400,0°C NTC, -60.0 ... 150.0°C			PT 100, -199.9 ... 600.0°C PT 100, -200 ... 600°C J, -30.0 ... 600.0°C J, -30 ... 600°C K, -30.0 ... 999.9°C K, -30 ... 1300°C L, -30.0 ... 600.0°C L, -30 ... 600°C T, -30.0 ... 400.0°C T, -30 ... 400°C S, -40 ... 1700°C R, -40 ... 1700°C				
Measuring Range	mA	0 - 20mA	-32768 ... 32767	mA	0 - 20mA	-1999 ... 9999 max. scale range 10000		
		4 - 20mA			4 - 20mA			
	V	0 - 150mV		-3276,8 ... 3276,7	mV		0 - 25mV	
		0 - 5V					-327,68 ... 327,67	0 - 50mV
		1 - 5V					-32,768 ... 32,767	
	Ω	0 - 10V		-32,768 ... 32,767	V		0 - 10V	
0 - 550Ω			2 - 10V					
0 - 10kΩ								
°C/°F				✓				
Heating/Cooling				✓				
Power Supply	90-250V AC, 50/60Hz			90-250V AC, 50/60Hz or 9-30V DC / 7-24 VAC, 50/60Hz *				
Wiring	2,5mm ² screw terminals							
Control Output	Relay, 10A (NO+NC) When the control output is selected as SSR output, this relay can be used as Alarm 3 output			Relay, 8A (NO+NC) When the control output is selected as SSR output, this relay can be used as alarm 2 output.				
Alarm1 Output	Relay, 10A (NO+NC)			Relay, 8A (NO / NC)				
Alarm 2 Output	Relay, 10A (NO /NC)			-				
SSR Output	12V, 40mA			24V, 20mA				
Analog Output	0/4-20mA, 0-10V			0/4-20mA				
Control Type	On-Off / P, PI, PD, PID							
Modbus Selection	RS485 ModBus			RS485 ModBus *				

* order option

ORDERING CODE

EU4430 - 230VAC - RS

Part Number		Modbus Selection	
48x48mm, Universal Controller	EU4430	Not Fitted	None
		RS485 Modbus	RS
Power Supply			
90-250V AC		230VAC	
24VAC		24VAC	
9-30V DC/7-24V AC		SM	

EUC9526 Advanced Double Loop Controller

Input Type	Output Properties						Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control/ Alarm3 Output	Alarm1 Output	Alarm2 Output	SSR Output	mA	V				
TC,NTC,RTD, mA,V,mV,Q	10A Relay NO+NC	10A Relay NO+NC	10A Relay NO	12V, 40mA	0/4-20mA	0-10 VDC	96x96	RS485 Modbus	90-250VAC	EUC9526

EU4430 LCD Display

Input Type	Output Properties						Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control/Alarm2 Output	Alarm 1 Output	Alarm2 Output	SSR Output	mA	V				
TC,RTD, mA,V,mV	8A Relay NO+NC	8A Relay NO/NC	-	24V, 20mA	0/4-20mA	-	48x48	-	90-250VAC	EU4430-230VAC
									24VAC	EU4430-24VAC
									9-30VDC/7-24VAC	EU4430-SM
TC,RTD, mA,V,mV	8A Relay NO+NC	8A Relay NO/NC	-	24V, 20mA	0/4-20mA	-	48x48	RS485 Modbus	90-250VAC	EU4430-230VAC-RS
									24VAC	EU4430-24VAC-RS
									9-30VDC/7-24VAC	EU4430-SM-RS



MODULAR

MODEL	ET1124	ET1112	ET1122
Dimensions (mm)	W29xH90xD64 TH35 rail mounted		
Display	-		
Functions	-	Slave	Master (Connection up to 7 slave modules)
Input Type	4 x TC or 4 x PT 100 *	PT 100, TC, 0/4-20mA, 0/25-50mV and 0/2-10V	
Scale Range	PT 100, -199.9 ... 600.0°C PT 100, -200 ... 600°C J, -30.0 ... 600.0°C J, -30 ... 600°C K, -30.0 ... 999.9°C K, -30 ... 1300°C L, -30.0 ... 600.0°C L, -30 ... 600°C T, -30.0 ... 400.0°C T, -30 ... 400°C S, -40 ... 1700°C R, -40 ... 1700°C	PT 100, -199.9 ... 600.0°C PT 100, -200 ... 600°C J, -30.0...600.0°C J, -30...600°C K, -30.0...999.9°C K, -30...1300°C L, -30.0...600.0°C L, -30...600°C T, -30.0...400.0°C T, -30...400°C S, -40...1700°C R, -40...1700°C	
Measuring Range	-	0-20mA, -10000...+10000 4-20mA, -10000...+10000 0-10V, -10000...+10000 2-10V, -10000...+10000 0-25mV, -10000...+10000 0-50mV, -10000...+10000	
°C/°F	-	✓	
Heating/Cooling	-	✓	
Power Supply	24V DC		
Wiring	1,5mm ² screw terminals		
Control Output	4 channels, 24V, 30mA SSR	Relay, 2A (NO) This relay can be used as Alarm2 output when Control output is selected as SSR output	
Alarm Output	-	Relay, 2A (select program NO / NC)	
SSR Output	-	✓	
Analog Output	-	0/4-20mA, 0/2-10V	
Control Type	-	On-Off / P, PI, PD, PID	
Profile Control	-	Up to 16 steps can be control	
Modbus Selection	RS485 ModBus		

* order option

ET1112 Slave

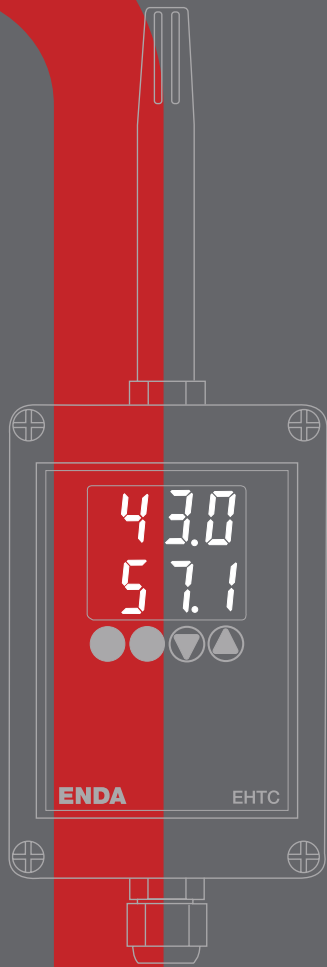
Input Type	Output Properties			Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control Output	SSR Output	Analog Output				
J,K,L,T,S,R, PT 100, mA,V,mV	2A Relay NO	Available	0/4-20mA 0/2 -10V	29x90	RS 485 Modbus	24VDC	ET1112

ET1122 Master

Input Type	Output Properties			Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control Output	SSR Output	Analog Output				
J,K,L,T,S,R, PT 100, mA,V,mV	2A Relay NO	Available	0/4-20mA 0/2 -10V	29x90	RS 485 Modbus	24VDC	ET1122

ET1124

Input Type	Output Properties			Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Control Output	SSR Output	Analog Output				
J,K,L,T,S,R	4 x 24V, 30mA SSR	Available	-	29x90	RS 485 Modbus	24VDC	ET1124
PT 100	4 x 24V, 30mA SSR	Available	-	29x90	RS 485 Modbus	24VDC	ET1124-RT



Humidity and Temperature



Humidity and Temperature



MODEL	EHTC7425A Humidity and Temperature Controller		EHTC Humidity and Temperature Controller Transmitter	ESHT-102 Humidity and Temperature Transmitter	EHTS Humidity and Temperature Transmitter
Temperature Indicator	4 digits				
Humidity Indicator	4 digits				
Input Type	AS	0-20mA 4-20mA	-		
		1-5V 0-10V			
	DS	EHTD-CB-100			
Mounting Type	-		Wall Mounted Type, 1,5 mt. Cabled Type, Duct Type		
Immersion Length	-		For Wall Mounted Type: 100mm, 1,5mt. For Cabled and Duct Type: 150/250/350mm *	For Wall Mounted Type: 50mm, 1,5mt. For Cabled and Duct Type: 150/250/350mm *	For Wall Mounted Type: 100mm, 1,5mt. For Cabled and Duct Type: 150/250/350mm *
Scale Range	-40.0...125.0°C		-40.0...125.0°C	-40...60°C (for ESHT-102) -40...125°C (for ESHT-102-W-50, ESHT-102-CB-x50, ESHT 102-DC-x50) *	-40.0...125.0°C
Humidity Range	0.0...100.0%RH		0 ... 100%RH		
Response Time	-		63% humidity variation for 7s (with 1m/s airflow at 25 °C) 63% temperature variation for 20s (with 1m/s airflow at 25 °C)		
°C/°F	-		✓	-	
Power Supply	230V AC, 50/60Hz or 9-30V DC / 7-24V AC		90-250V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *	15-35V DC or 10-25V AC	90-250V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *
Auxiliary Power Supply	15V DC, 50mA		-		
Wiring	2,5mm ² and 1,5mm ² screw terminals		2,5mm ² and 1,75mm ² screw terminals	1,5mm ² screw terminals	2,5mm ² and 1,75mm ² screw terminals
Control Output	For Temperature: Relay, 10A (NO) For Humidity: Relay, 10A (NO) For Fan: Relay, 10A (NO) For Rotator: 2 Relay, 10A (NO)		For Temperature: Relay, 5A (NO) For Humidity: Relay, 5A (NO)	-	
Alarm Output	Audible Warning Tone			-	
SSR Output	-				
Analog Output	-		0/4-20mA, 0-10V veya 1-5V (for temperature and humidity select program)	0-20mA or 0-10V (for temperature and humidity select program)	
Control Type	For Temperature: PID or On-Off For Humidity: On-Off			-	
Modbus Selection	RS485 ModBus *			-	RS485 ModBus *

* order option

ORDERING CODE

EHTC7425A - AS - 230 - RS

Part Number		Modbus Selection	
Humidity and Temperature Controller	EHTC7425A	Not Fitted	None
RS485 Modbus			RS

Input Type	
Analog Input	AS
Digital Input	DS

Supply Voltage	
230V AC	230
9-30V DC/7-24V AC	SM

ESHT-102 - CB - 150

Part Number		Immersion Length	
Humidity and Temperature Transmitter	ESHT-102	50mm (Wall Mounted Type)	50
150mm	150	250mm	250
350mm	350		

Mounting Type	
Wall Mounted Type	-
Wall Mounted Type	W
Wired Type	CB
Duct Mounted Type	DC

EHTC - W - UV - 100 - 2R - RS

Part Number		Modbus Selection	
Humidity and Temperature Controller Transmitter	EHTC	Not Fitted	None
RS485 Modbus			RS

Mounting Type	
Wall Mounted Type	W
Wired Type	CB
Duct Mounted Type	DC

Power Voltage	
90-250V AC	UV
9-30V DC/7-24V AC	LV

Relay Output	
Not Fitted	None
2 Relay Output	2R

Immersion Length	
100mm (Wall Mounted Type)	100
150mm	150
250mm	250
350mm	350

EHTS - W - UV - 100 - RS

Part Number		Modbus Selection	
Humidity and Temperature Transmitter	EHTS	None	
RS485 Modbus			RS

Mounting Type	
Wall Mounted Type	W
Wired Type	CB
Duct Mounted Type	DC

Power Supply Voltage	
90-250V AC	UV
9-30V DC/7-24V AC	LV

Immersion Length	
100mm (Wall Mounted Type)	100
150mm	150
250mm	250
350mm	350

EHTC7425A Humidity and Temperature Controller

Input Type	Output Properties				Auxiliary Power Supply	Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Temperature Control Output	Humidity Control Output	Fan Control Output	Rotating Control Output					
0/4-20mA 0-10V 1-5V	10A Relay NO	10A Relay NO	10A Relay NO	10A, 2 Relay NO	15VDC, 50mA	72x72	-	230VAC	EHTC7425A-AS-230
								9-30VDC/7-24VAC	EHTC7425A-AS-SM
	10A Relay NO	10A Relay NO	10A Relay NO	10A, 2 Relay NO	15VDC, 50mA	72x72	RS485 Modbus	230VAC	EHTC7425A-AS-230-RS
								9-30VDC/7-24VAC	EHTC7425A-AS-SM-RS
EHTD-CB-100 Dijital Çıkışlı Sensör	10A Relay NO	10A Relay NO	10A Relay NO	10A, 2 Relay NO	15VDC, 50mA	72x72	-	230VAC	EHTC7425A-DS-230
								9-30VDC/7-24VAC	EHTC7425A-DS-SM
	10A Relay NO	10A Relay NO	10A Relay NO	10A, 2 Relay NO	15VDC, 50mA	72x72	RS485 Modbus	230VAC	EHTC7425A-DS-230-RS
								9-30VDC/7-24VAC	EHTC7425A-DS-SM-RS
* EHTS7425A-DS modeli ile birlikte satılan sensör									EHTD-CB-100

EHTC Sensor Control Devices

EHTC-W Wall Mounting Type

Scale Range	Output Properties		Modbus Selection	Immersion Length	Power Supply	Part Number
	Analog Output	Relay Output				
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	-	100mm	90-250VAC	EHTC-W-UV-100
					9-30VDC/7-24VAC	EHTC-W-LV-100
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	RS485 Modbus	100mm	90-250VAC	EHTC-W-UV-100-RS
					9-30VDC/7-24VAC	EHTC-W-LV-100-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	-	100mm	90-250VAC	EHTC-W-UV-100-2R
					9-30VDC/7-24VAC	EHTC-W-LV-100-2R
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	RS485 Modbus	100mm	90-250VAC	EHTC-W-UV-100-2R-RS
					9-30VDC/7-24VAC	EHTC-W-LV-100-2R-RS

EHTC-CB Cabled Type

Scale Range	Output Properties		Modbus Selection	Immersion Length	Power Supply	Part Number
	Analog Output	Relay Output				
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	-	150mm	90-250VAC	EHTC-CB-UV-150
					9-30VDC/7-24VAC	EHTC-CB-LV-150
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	RS485 Modbus	150mm	90-250VAC	EHTC-CB-UV-150-RS
					9-30VDC/7-24VAC	EHTC-CB-LV-150-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	-	150mm	90-250VAC	EHTC-CB-UV-150-2R
					9-30VDC/7-24VAC	EHTC-CB-LV-150-2R
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	RS485 Modbus	150mm	90-250VAC	EHTC-CB-UV-150-2R-RS
					9-30VDC/7-24VAC	EHTC-CB-LV-150-2R-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	-	250mm	90-250VAC	EHTC-CB-UV-250
					9-30VDC/7-24VAC	EHTC-CB-LV-250
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	RS485 Modbus	250mm	90-250VAC	EHTC-CB-UV-250-RS
					9-30VDC/7-24VAC	EHTC-CB-LV-250-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	-	250mm	90-250VAC	EHTC-CB-UV-250-2R
					9-30VDC/7-24VAC	EHTC-CB-LV-250-2R
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	RS485 Modbus	250mm	90-250VAC	EHTC-CB-UV-250-2R-RS
					9-30VDC/7-24VAC	EHTC-CB-LV-250-2R-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	-	350mm	90-250VAC	EHTC-CB-UV-350
					9-30VDC/7-24VAC	EHTC-CB-LV-350
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	RS485 Modbus	350mm	90-250VAC	EHTC-CB-UV-350-RS
					9-30VDC/7-24VAC	EHTC-CB-LV-350-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	-	350mm	90-250VAC	EHTC-CB-UV-350-2R
					9-30VDC/7-24VAC	EHTC-CB-LV-350-2R
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	RS485 Modbus	350mm	90-250VAC	EHTC-CB-UV-350-2R-RS
					9-30VDC/7-24VAC	EHTC-CB-LV-350-2R-RS

EHTC-DC Duct Mounting Type

Scale Range	Output Properties		Modbus Selection	Immersion Length	Power Supply	Part Number
	Analog Output	Relay Output				
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	-	150mm	90-250VAC	EHTC-DC-UV-150
					9-30VDC/7-24VAC	EHTC-DC-LV-150
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	RS485 Modbus	150mm	90-250VAC	EHTC-DC-UV-150-RS
					9-30VDC/7-24VAC	EHTC-DC-LV-150-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	-	150mm	90-250VAC	EHTC-DC-UV-150-2R
					9-30VDC/7-24VAC	EHTC-DC-LV-150-2R
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	RS485 Modbus	150mm	90-250VAC	EHTC-DC-UV-150-2R-RS
					9-30VDC/7-24VAC	EHTC-DC-LV-150-2R-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	-	250mm	90-250VAC	EHTC-DC-UV-250
					9-30VDC/7-24VAC	EHTC-DC-LV-250
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	RS485 Modbus	250mm	90-250VAC	EHTC-DC-UV-250-RS
					9-30VDC/7-24VAC	EHTC-DC-LV-250-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	-	250mm	90-250VAC	EHTC-DC-UV-250-2R
					9-30VDC/7-24VAC	EHTC-DC-LV-250-2R
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	RS485 Modbus	250mm	90-250VAC	EHTC-DC-UV-250-2R-RS
					9-30VDC/7-24VAC	EHTC-DC-LV-250-2R-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	-	350mm	90-250VAC	EHTC-DC-UV-350
					9-30VDC/7-24VAC	EHTC-DC-LV-350
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	-	RS485 Modbus	350mm	90-250VAC	EHTC-DC-UV-350-RS
					9-30VDC/7-24VAC	EHTC-DC-LV-350-RS
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	-	350mm	90-250VAC	EHTC-DC-UV-350-2R
					9-30VDC/7-24VAC	EHTC-DC-LV-350-2R
-40...+125 °C 0...100 %RH	0/4-20mA, 0-10V,1-5V	2 Relay, 5A NO	RS485 Modbus	350mm	90-250VAC	EHTC-DC-UV-350-2R-RS
					9-30VDC/7-24VAC	EHTC-DC-LV-350-2R-RS

ESHT102 Relative Humidity and Temperature Transmitter
ESHT102-W Wall Mounting Type

Scale Range	Output Type	Modbus Selection	Immersion Length	Power Supply	Part Number
-40...+60 °C 0...100 %RH	0-20mA or 0-10V	-	50mm	15-35V DC veya 10-25V AC	ESHT-102
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	50mm	15-35V DC veya 10-25V AC	ESHT-102-W-50

ESHT102-DC Duct Type

Scale Range	Output Type	Modbus Selection	Immersion Length	Power Supply	Part Number
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	150mm	15-35V DC veya 10-25V AC	ESHT-102-DC-150
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	250mm	15-35V DC veya 10-25V AC	ESHT-102-DC-250
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	350mm	15-35V DC veya 10-25V AC	ESHT-102-DC-350

ESHT102-CB Cabled Type

Scale Range	Output Type	Modbus Selection	Immersion Length	Power Supply	Part Number
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	150mm	15-35V DC veya 10-25V AC	ESHT-102-CB-150
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	250mm	15-35V DC veya 10-25V AC	ESHT-102-CB-250
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	350mm	15-35V DC veya 10-25V AC	ESHT-102-CB-350

EHTS Relative Humidity and Temperature Transmitter

EHTS-W Wall Mounting Type

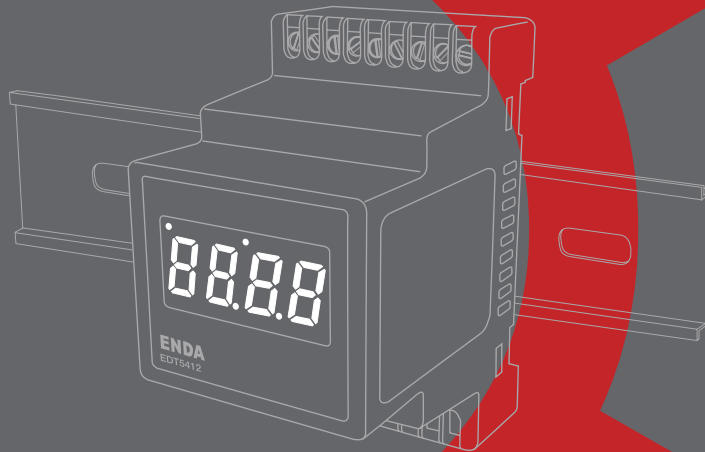
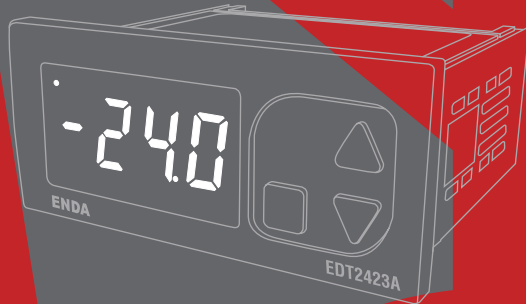
Scale Range	Output Type	Modbus Selection	Immersion Length	Power Supply	Part Number
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	100mm	90-250VAC/DC	EHTS-W-UV-100
				9-30VDC/7-24VAC	EHTS-W-LV-100
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	RS485 Modbus	100mm	90-250VAC/DC	EHTS-W-UV-100-RS
				9-30VDC/7-24VAC	EHTS-W-LV-100-RS

EHTS-DC Duct Type

Scale Range	Output Type	Modbus Selection	Immersion Length	Power Supply	Part Number
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	150mm	90-250VAC/DC	EHTS-DC-UV-150
				9-30VDC/7-24VAC	EHTS-DC-LV-150
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	RS485 Modbus	150mm	90-250VAC/DC	EHTS-DC-UV-150-RS
				9-30VDC/7-24VAC	EHTS-DC-LV-150-RS
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	250mm	90-250VAC/DC	EHTS-DC-UV-250
				9-30VDC/7-24VAC	EHTS-DC-LV-250
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	RS485 Modbus	250mm	90-250VAC/DC	EHTS-DC-UV-250-RS
				9-30VDC/7-24VAC	EHTS-DC-LV-250-RS
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	350mm	90-250VAC/DC	EHTS-DC-UV-350
				9-30VDC/7-24VAC	EHTS-DC-LV-350
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	RS485 Modbus	350mm	90-250VAC/DC	EHTS-DC-UV-350-RS
				9-30VDC/7-24VAC	EHTS-DC-LV-350-RS

EHTS-CB Cabled Type

Scale Range	Output Type	Modbus Selection	Immersion Length	Power Supply	Part Number
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	150mm	90-250VAC/DC	EHTS-CB-UV-150
				9-30VDC/7-24VAC	EHTS-CB-LV-150
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	RS485 Modbus	150mm	90-250VAC/DC	EHTS-CB-UV-150-RS
				9-30VDC/7-24VAC	EHTS-CB-LV-150-RS
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	250mm	90-250VAC/DC	EHTS-CB-UV-250
				9-30VDC/7-24VAC	EHTS-CB-LV-250
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	RS485 Modbus	250mm	90-250VAC/DC	EHTS-CB-UV-250-RS
				9-30VDC/7-24VAC	EHTS-CB-LV-250-RS
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	-	350mm	90-250VAC/DC	EHTS-CB-UV-350
				9-30VDC/7-24VAC	EHTS-CB-LV-350
-40...+125 °C 0...100 %RH	0-20mA or 0-10V	RS485 Modbus	350mm	90-250VAC/DC	EHTS-CB-UV-350-RS
				9-30VDC/7-24VAC	EHTS-CB-LV-350-RS



Defrost Controllers

4



Defrost Controllers



PANEL MOUNTING

MODEL	EDT3011	EDT3411	EDT2411A	EDT2412A	EDT2423A	EDT2422A
Dimensions (mm)	W77xH35xD61					
Display	3,5 digits 19mm			4 digits 12,5mm		
Setting Method	Touch Panel Keys		Front Panel Keys			
Input Type	NTC				2xNTC	
Scale Range	-60 ... 150°C or -60,0 ... 150,0°C					
°C/°F	✓					
Heating/Cooling	-	✓	-			
Power Supply	230V AC, 50/60Hz, 24V/12V AC/DC, 50/60Hz or 9-30V DC / 7-24V AC *					230V AC, 50/60Hz
Wiring	2,5mm ² and 1,5mm ² screw terminals		2,5mm ² screw terminals			
Compressor Relay Output	8A/250V AC, ½ hp (NO+NC) 20A/277V AC, 2 hp (NO) *				8A/250V AC, ½ hp (NO)	20A/277V AC, ½ hp (NO)
Lighting/Defrost Relay Output	-			8A/250V AC, ½ hp (NO+NC) Can be used as Lighting or Defrost output	8A/250V AC, ½ hp (NO+NC) Can be used as Defrost output	-
Fan Relay Output	-				8A/250V AC, ½ hp (NO)	8A/250V AC, ½ hp (NO+NC)
Alarm	Audible warning tone				-	
Control Type	On-Off					
Digital Input	Contact input					
ENDAKEY	Parameter can be transferred by using ENDAKEY-RF			Parameter can be transferred by using ENDAKEY without connecting the device to main supply		
Modbus Selection	RS485 ModBus *				-	

* order option

ORDERING CODE

EDT3011 - 230 - 08 - RS

Part Number	
77x35mm, Defrost Thermostat	EDT3011
77x35mm, Defrost Thermostat	EDT3411

Power Supply	
230VAC	230
24V AC/DC	024
12V AC/DC	012
9-30V DC/7-24V AC	SM

Modbus Selection	
Not Fitted	None
RS485 Modbus	RS

Compressor Relay Output	
8A	08
20A	20

EDT2411A - 230 - R - RS

Part Number	
77x35mm, Defrost Thermostat	EDT2411A
77x35mm, Defrost Thermostat	EDT2412A
77x35mm, Defrost Thermostat	EDT2423A

Power Supply	
230VAC	230
24V AC/DC	24
12V AC/DC	12
9-30V DC/7-24V AC	SM

Modbus Selection	
Not Fitted	None
RS485 Modbus	RS

Compressor Relay Output	
8A	R
20A (EDT2423A excluded)	P

EDT2422A - 230 - P

Part Number	
77x35mm, Defrost Thermostat	EDT2422A

Power Supply	
230VAC	230

Compressor Relay Output	
20A	P

EDT3011

Input Type	Output Properties			Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Compressor Relay Output	Lighting/Defrost Control Output	AUX Control Output				
NTC	8A Relay NO+NC	-	-	-	77x35	230VAC	EDT3011-230-08
						24VAC/DC	EDT3011-024-08
						12VAC/DC	EDT3011-012-08
						9-30VDC/7-24VAC	EDT3011-SM-08
NTC	8A Relay NO+NC	-	-	RS485 Modbus	77x35	230VAC	EDT3011-230-08-RS
						24VAC/DC	EDT3011-024-08-RS
						12VAC/DC	EDT3011-012-08-RS
						9-30VDC/7-24VAC	EDT3011-SM-08-RS
NTC	20A Relay NO	-	-	-	77x35	230VAC	EDT3011-230-20
						24VAC/DC	EDT3011-024-20
						12VAC/DC	EDT3011-012-20
						9-30VDC/7-24VAC	EDT3011-SM-20
NTC	20A Relay NO	-	-	RS485 Modbus	77x35	230VAC	EDT3011-230-20-RS
						24VAC/DC	EDT3011-024-20-RS
						12VAC/DC	EDT3011-012-20-RS
						9-30VDC/7-24VAC	EDT3011-SM-20-RS
							ENDAKEY-RF

EDT3411

Input Type	Output Properties			Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Compressor Relay Output	Lighting/Defrost Control Output	AUX Control Output				
NTC	8A Relay NO+NC	-	-	-	77x35	230VAC	EDT3411-230-08
						24VAC/DC	EDT3411-024-08
						12VAC/DC	EDT3411-012-08
						9-30VDC/7-24VAC	EDT3411-SM-08
NTC	8A Relay NO+NC	-	-	RS485 Modbus	77x35	230VAC	EDT3411-230-08-RS
						24VAC/DC	EDT3411-024-08-RS
						12VAC/DC	EDT3411-012-08-RS
						9-30VDC/7-24VAC	EDT3411-SM-08-RS
NTC	20A Relay NO	-	-	-	77x35	230VAC	EDT3411-230-20
						24VAC/DC	EDT3411-024-20
						12VAC/DC	EDT3411-012-20
						9-30VDC/7-24VAC	EDT3411-SM-20
NTC	20A Relay NO	-	-	RS485 Modbus	77x35	230VAC	EDT3411-230-20-RS
						24VAC/DC	EDT3411-024-20-RS
						12VAC/DC	EDT3411-012-20-RS
						9-30VDC/7-24VAC	EDT3411-SM-20-RS

EDT2411A

Input Type	Output Properties			Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Compressor Relay Output	Lighting/Defrost Control Output	AUX Control Output				
NTC	8A Relay NO+NC	-	-	-	77x35	230VAC	EDT2411A-230-R
						24VAC/DC	EDT2411A-24-R
						12VAC/DC	EDT2411A-12-R
						9-30VDC/7-24VAC	EDT2411A-SM-R
NTC	8A Relay NO+NC	-	-	RS485 Modbus	77x35	230VAC	EDT2411A-230-R-RS
						24VAC/DC	EDT2411A-24-R-RS
						12VAC/DC	EDT2411A-12-R-RS
						9-30VDC/7-24VAC	EDT2411A-SM-R-RS
NTC	20A Relay NO	-	-	-	77x35	230VAC	EDT2411A-230-P
						24VAC/DC	EDT2411A-24-P
						12VAC/DC	EDT2411A-12-P
						9-30VDC/7-24VAC	EDT2411A-SM-P
NTC	20A Relay NO	-	-	RS485 Modbus	77x35	230VAC	EDT2411A-230-P-RS
						24VAC/DC	EDT2411A-24-P-RS
						12VAC/DC	EDT2411A-12-P-RS
						9-30VDC/7-24VAC	EDT2411A-SM-P-RS

EDT2412A

Input Type	Output Properties			Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Compressor Control Output	Lighting/Defrost Control Output	AUX Control Output				
NTC	8A Relay NO	8A Relay NO+NC	-	-	77x35	230VAC	EDT2412A-230-R
						24VAC/DC	EDT2412A-24-R
						12VAC/DC	EDT2412A-12-R
						9-30VDC/7-24VAC	EDT2412A-SM-R
NTC	8A Relay NO	8A Relay NO+NC	-	RS485 Modbus	77x35	230VAC	EDT2412A-230-R-RS
						24VAC/DC	EDT2412A-24-R-RS
						12VAC/DC	EDT2412A-12-R-RS
						9-30VDC/7-24VAC	EDT2412A-SM-R-RS
NTC	20A Relay NO	8A Relay NO+NC	-	-	77x35	230VAC	EDT2412A-230-P
						24VAC/DC	EDT2412A-24-P
						12VAC/DC	EDT2412A-12-P
						9-30VDC/7-24VAC	EDT2412A-SM-P
NTC	20A Relay NO	8A Relay NO+NC	-	RS485 Modbus	77x35	230VAC	EDT2412A-230-P-RS
						24VAC/DC	EDT2412A-24-P-RS
						12VAC/DC	EDT2412A-12-P-RS
						9-30VDC/7-24VAC	EDT2412A-SM-P-RS

EDT2422A

Input Type	Output Properties			Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Compressor Control Output	Lighting/Defrost Control Output	AUX / Fan Control Output				
2 NTC	20A Relay NO	-	8A Relay NO+NC (Used as AUX output)	-	77x35	230VAC	EDT2422A-230-P

EDT2423A

Input Type	Output Properties			Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Compressor Control Output	Lighting/Defrost Control Output	AUX / Fan Control Output				
2 NTC	8A Relay NO	8A Relay NO+NC (Used as defrost output)	8A Relay NO (Used as fan output)	-	77x35	230VAC	EDT2423A-230-R
						24VAC/DC	EDT2423A-24-R
						12VAC/DC	EDT2423A-12-R
						9-30VDC/7-24VAC	EDT2423A-SM-R
2 NTC	8A Relay NO	8A Relay NO+NC (Used as defrost output)	8A Relay NO (Used as fan output)	RS485 Modbus	77x35	230VAC	EDT2423A-230-R-RS
						24VAC/DC	EDT2423A-24-R-RS
						12VAC/DC	EDT2423A-12-R-RS
						9-30VDC/7-24VAC	EDT2423A-SM-R-RS



RAIL MOUNTING

MODEL	EDT5411A	EDT5412A
Dimensions (mm)	W54xH94xD68 TH35 type rail mounted	
Display	4 digits	
Input Type	NTC	
Scale Range	-60 ... 150°C or -60,0 ... 150,0°C	
°C/°F	✓	
Heating/Cooling	✓	
Power Supply	230V AC, 50/60Hz, 24V/12V AC/DC, 50/60Hz or 9-30V DC / 7-24V AC *	
Wiring	2,5mm ² terminals	
Compressor Relay Output	8A/250V AC, ½ hp (NO+NC) 20A/277V AC, 2 hp (NO) *	8A/250V AC, ½ (NO) hp 20A/277V AC, 2 hp (NO) *
Lighting/Defrost Relay Output	-	8A/250V AC, ½ (NO+NC) hp can be used as Lighting or Defrost output
Alarm	Audible warning tone	
Control Type	On-Off	
Digital Input	Contact input	
ENDAKEY	Parameter can be transferred by using ENDAKEY without connecting the device to mains supply	
Modbus Selection	RS485 ModBus *	

* order option



WALL MOUNTING

MODEL	EDTW136
Dimensions (mm)	W150xH200xD75
Display	4 digits
Input Type	3 X NTC
Scale Range	-60 ... 150°C or -60,0 ... 150,0°C
°C/°F	✓
Heating/Cooling	-
Power Supply	230V AC, 50/60Hz
Wiring	2,5mm ² and 1,75mm ² terminals
Compressor Relay Output	20A/277V AC, 2 hp (NO)
Defrost Relay Output	16A/250V AC, ½ hp (NO+NC)
Fan Relay Output	16A/250V AC, ½ hp (NO)
Lighting Relay Output	16A/250V AC, ½ hp (NO)
Alarm Relay Output	8A/250V AC, ½ hp (NO+NC)
Auxiliary (AUX) Relay Output	8A/250V AC, ½ hp (NO)
Control Type	On-Off
Digital Input	Two contact inputs with door control and parameter adjustable
ENDAKEY	Parameter can be transferred by using ENDAKEY without connecting the device to mains supply
Modbus Selection	RS485 ModBus

ORDERING CODE

EDT5411A - 230 - R - RS

Part Number							
Rail Mount Defrost Thermostat	EDT5411A						
Rail Mount Defrost Thermostat	EDT5412A						

Power Supply			
230VAC	230		
24V AC/DC	24		
12V AC/DC	12		
9-30V DC/7-24V AC	SM		

Modbus Selection			
Not Fitted	None		
RS485 Modbus	RS		

Compressor Relay Output			
8A	R		
20A	P		

EDT5411A

Input Type	Output Properties		Scale Range (°C)	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Compressor Control Output	Defrost Control Output					
NTC	8A Relay NO+NC	-	-60.0...+150.0	-	54x94	230VAC	EDT5411A-230-R
						24VAC/DC	EDT5411A-24-R
						12VAC/DC	EDT5411A-12-R
						9-30VDC/7-24VAC	EDT5411A-SM-R
NTC	8A Relay NO+NC	-	-60.0...+150.0	RS485 Modbus	54x94	230VAC	EDT5411A-230-R-RS
						24VAC/DC	EDT5411A-24-R-RS
						12VAC/DC	EDT5411A-12-R-RS
						9-30VDC/7-24VAC	EDT5411A-SM-R-RS
NTC	20A NO	-	-60.0...+150.0	-	54x94	230VAC	EDT5411A-230-P
						24VAC/DC	EDT5411A-24-P
						12VAC/DC	EDT5411A-12-P
						9-30VDC/7-24VAC	EDT5411A-SM-P
NTC	20A NO	-	-60.0...+150.0	RS485 Modbus	54x94	230VAC	EDT5411A-230-P-RS
						24VAC/DC	EDT5411A-24-P-RS
						12VAC/DC	EDT5411A-12-P-RS
						9-30VDC/7-24VAC	EDT5411A-SM-P-RS

EDT5412A

Input Type	Output Properties		Scale Range (°C)	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
	Compressor Control Output	Defrost Control Output					
NTC	8A NO	8A NO+NC	-60.0...+150.0	-	54x94	230VAC	EDT5412A-230-R
						24VAC/DC	EDT5412A-24-R
						12VAC/DC	EDT5412A-12-R
						9-30VDC/7-24VAC	EDT5412A-SM-R
NTC	8A NO	8A NO+NC	-60.0...+150.0	RS485 Modbus	54x94	230VAC	EDT5412A-230-R-RS
						24VAC/DC	EDT5412A-24-R-RS
						12VAC/DC	EDT5412A-12-R-RS
						9-30VDC/7-24VAC	EDT5412A-SM-R-RS
NTC	20A NO	8A NO+NC	-60.0...+150.0	-	54x94	230VAC	EDT5412A-230-P
						24VAC/DC	EDT5412A-24-P
						12VAC/DC	EDT5412A-12-P
						9-30VDC/7-24VAC	EDT5412A-SM-P
NTC	20A NO	8A NO+NC	-60.0...+150.0	RS485 Modbus	54x94	230VAC	EDT5412A-230-P-RS
						24VAC/DC	EDT5412A-24-P-RS
						12VAC/DC	EDT5412A-12-P-RS
						9-30VDC/7-24VAC	EDT5412A-SM-P-RS

* ENDAKEY

EDTW136

Input Type	Output Properties	Scale Range (°C)	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
3xNTC	6 Relay (Compressor, Fan, Lighting, Defrost, Alarm, AUX)	-60.0...+150.0	RS485 Modbus	150x200	230VAC	EDTW136

2 pcs NTC-APT-1,5 T included.

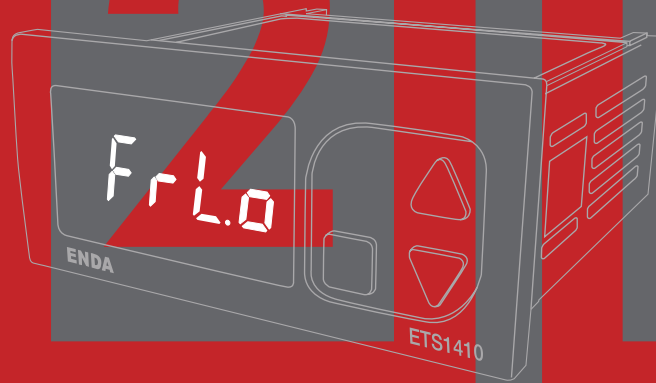
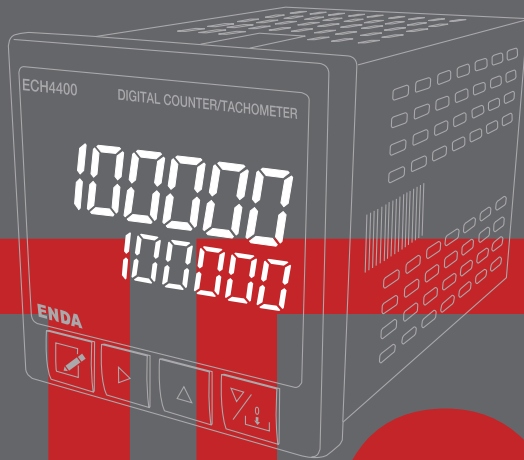


MODEL	END003	END004	END005	END214
Display	4 digits, 26 mm			
Input Type	3xNTC			
Scale Range	-60 ... 150°C or -60,0 ... 150,0°C			
°C/°F	√			
Heating/Cooling	-			
Power Supply	230V AC +%10 -%20, 50/60Hz			
Wiring	2,5mm ² and 1,5mm ² screw terminals			
Compressor Relay Output	20A/277V AC, ½ hp (NO)			
Fan Relay Output	8A/250V AC, ½ hp (NO)			
Defrost Relay Output	8A/250V AC, ½ hp (NO+NC) Can be used as Defrost output or Aux			
Aux Relay Output	-	8A/250V AC, ½ hp (NO+NC)		
Aux Relay Output	-	8A/250V AC, ½ hp (NO+NC)		-
Alarm	Audible warning tone			
Control Type	On-Off			
Digital Input	2 x Contact input			
ENDAKEY	Parameter can be transferred by using ENDAKEY without connecting the device to mains supply			
WIFI Selection	-			
RTC	-			
Modbus Selection	RS485 ModBus *			

* order option

ORDERING CODE

END003		-	230		-	RS	
Part Number			Modbus Selection			Power Supply	
Defrost Thermostat, 3 Relays	END003		Not Fitted			230	
Defrost Thermostat, 4 Relays	END004		RS485 Modbus			24	
Defrost Thermostat, 5 Relays	END005					12	
Defrost Thermostat, 4 Relays, Wifi	END214					9-30V DC/7-24V AC	SM



Counter and Tachometer



5



Counter and Tachometer



COUNTER AND TACHOMETER

MODEL	ECH4400	ECH7700
Dimensions (mm)	W48xH48xD87	W72xH72xD97
Display	2x6 digits LCD	
Counting Input	PNP, NPN, Encoder (CPA and CPB channels)	
Counting Frequency	40kHz	
Reset Input	5V to 30V pulses	
Counting Mode	Up or Down	
Sampling Time	0.2 to 20.0 s	
Offset	0 - 500000	
Prescaler Factor	0,0001 to 99.9999	
Decimal Point	Rightmost 5 digits	
Batch Counter	6 digits	
Total Counter	9 digits	
Power Supply	90-250V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *	
Wiring	2,5mm ² screw terminals	
Control Output 1	Relay, 2A (NO+NC) and open collector (S.S out)	
Control Output Time	Continuously or 0,1 to 999,9 s	
Control Output 2	Relay, 2A (NO+NC) and open collector (S.S out)	
Auxiliary Power Supply	12V DC, 50mA	
Modbus Selection	RS485 Modbus *	

* order option



TACHOMETER

MODEL	ETS1410
Dimensions (mm)	W77xH35xD71
Display	4 digits
Input Type	5V to 30V pulses
Measuring Frequency	0,07Hz - 3kHz
Sampling Time	1 - 16 s
Prescaling Function	1 - 999 divider value
Decimal Point	Rightmost 3 digits
Power Supply	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50-60Hz *
Wiring	2.5mm ² terminals
Control Output 1	-
Control Output 2	-
Auxiliary Power Supply	12V DC, 30mA

* order option

ORDERING CODE

ECH4400 - 230VAC - RS

Part Number	
48x48mm, Digital Counters & Tachometer	ECH4400
72x72mm, Digital Counters & Tachometer	ECH7700

Modbus Selection	
Not Fitted	None
RS485 Modbus	RS

Power Supply	
230VAC	230VAC
110VAC	110VAC
24VAC	24VAC
9-30V DC/7-24V AC	SM

ETS1410 - 230VAC

Part Number	
77x35mm, Tachometer	ETS1410

Power Supply	
230VAC	230VAC
110VAC	110VAC
24VAC	24VAC
9-30V DC/7-24V AC	SM

ECH4400

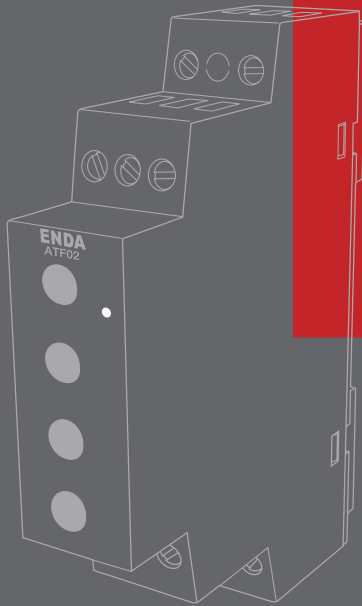
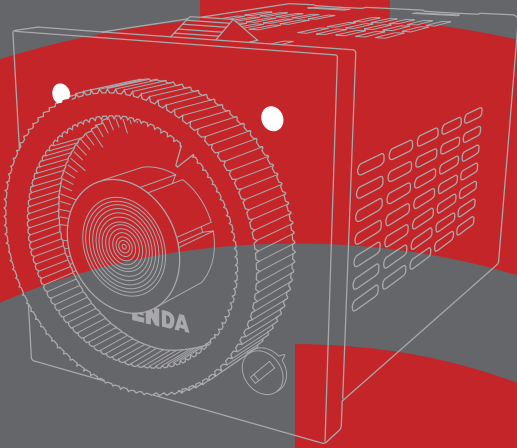
Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
PNP/NPN Encoder	2x2A Relay 2xSSR	-	48x48	90-250VAC	ECH4400-230VAC
				24VAC	ECH4400-24VAC
				9-30VDC/7-24VAC	ECH4400-SM
PNP/NPN Encoder	2x2A Relay 2xSSR	RS485 Modbus	48x48	90-250VAC	ECH4400-230VAC-RS
				24VAC	ECH4400-24VAC-RS
				9-30VDC/7-24VAC	ECH4400-SM-RS

ECH7700

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
PNP/NPN Encoder	2x2A Relay 2xSSR	-	72x72	90-250VAC	ECH7700-230VAC
				24VAC	ECH7700-24VAC
				9-30VDC/7-24VAC	ECH7700-SM
PNP/NPN Encoder	2x2A Relay 2xSSR	RS485 Modbus	72x72	90-250VAC	ECH7700-230VAC-RS
				24VAC	ECH7700-24VAC-RS
				9-30VDC/7-24VAC	ECH7700-SM-RS

ETS1410

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
PNP	-	-	77x35	230VAC	ETS1410-230VAC
				110VAC	ETS1410-110VAC
				24VAC	ETS1410-24VAC
				9-30VDC/7-24VAC	ETS1410-SM



Timers



Timers



ANALOG

MODEL	ATP4	ATSP4	ATM9321
Dimensions (mm)	W48xH48xD82		W96xH96xD50
Display	-		3 digits
Scale	0-1/3/12/30/60 *		0-9.99/99.9/999dk
Input Type	Start, reset, gate	-	Start, reset
Start Input	Contact input (for 10-pin screw terminals or 11-pin socket only) *	-	Contact input
Reset Input			
Gate Input			
Power Supply	90-250V AC, 50/60Hz or 24V AC/DC 50/60Hz *		230V AC, 110V AC, 24V AC 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *
Wiring	8/11 pin socket or 7/10 pin screw terminals *	8-pin socket or 5-pin screw terminals *	2,5mm ² screw terminals
Control Output	Relay, 8A (NO+NC)		Relay, 2A (NO+NC) or 12V DC 20mA logic output *
Instantaneous Contact Output	Relay, 8A (NO)	-	-
Timing Function	A, B, C, D, E, F modes (set by operating mode selector)		A and B modes (select program)
Timing Unit	s, 10s, min, 10min, hr, 10hr (set by time unit selector)		min

* order option

ORDERING CODE

ATP4* - **K07** - **UV** - **01**

Part Number	
48x48mm, Analog Timer	ATP4
48x48mm, Analog Timer	ATSP4

Wiring	
5-pin screw terminals (only ATSP4)	K05
7-pin screw terminals (only ATP4)	K07
10-pin screw terminals (only ATP4)	K10
8-pin socket	S08
11-pin socket (only ATP4)	S11

* Description for Time Ranges:
 01: 1,2s, 12s, 1,2min, 12min, 1,2hr, 12hr
 03: 3s, 30s, 3min, 30min, 3hr, 30hr
 12: 12s, 120s, 12min, 120min, 12hr, 120hr
 30: 30s, 300s, 30min, 300min, 30hr, 300hr
 60: 60s, 600s, 60min, 600min, 60hr, 600hr

Scale	
0 ... 1	01
0 ... 3	03
0 ... 12	12
0 ... 30	30
0 ... 60	60

Power Supply	
90-250V AC	UV
24V AC/DC	LV

ATM9321 - **230VAC** - **SSR**

Part Number	
96x96mm, Analog timer with digital display	ATM9321

Control Output	
Relay	
Logic	SSR

Power Supply	
230VAC	230VAC
110VAC	110VAC
24VAC	24VAC
9-30V DC/7-24V AC	SM

ATP4

Timing Unit	Output Properties		Wiring	Dimensions (mm)	Power Supply	Part Number
	Control Output	Instantaneous Output				
Second, minute, hour	Available	Available	7-pin screw terminals	48x48	90-250VAC	ATP4-K07-UV-01
						ATP4-K07-UV-03
						ATP4-K07-UV-12
						ATP4-K07-UV-30
Second, minute, hour	Available	Available	7-pin screw terminals	48x48	24VAC/DC	ATP4-K07-LV-01
						ATP4-K07-LV-03
						ATP4-K07-LV-12
						ATP4-K07-LV-30
Second, minute, hour	Available	Available	8-pin socket	48x48	90-250VAC	ATP4-S08-UV-01
						ATP4-S08-UV-03
						ATP4-S08-UV-12
						ATP4-S08-UV-30
Second, minute, hour	Available	Available	8-pin socket	48x48	24VAC/DC	ATP4-S08-LV-01
						ATP4-S08-LV-03
						ATP4-S08-LV-12
						ATP4-S08-LV-30
Second, minute, hour	Available	Available	10-pin screw terminals	48x48	90-250VAC	ATP4-K10-UV-01
						ATP4-K10-UV-03
						ATP4-K10-UV-12
						ATP4-K10-UV-30
Second, minute, hour	Available	Available	10-pin screw terminals	48x48	24VAC/DC	ATP4-K10-LV-01
						ATP4-K10-LV-03
						ATP4-K10-LV-12
						ATP4-K10-LV-30
Second, minute, hour	Available	Available	11-pin socket	48x48	90-250VAC	ATP4-S11-UV-01
						ATP4-S11-UV-03
						ATP4-S11-UV-12
						ATP4-S11-UV-30
Second, minute, hour	Available	Available	11-pin socket	48x48	24VAC/DC	ATP4-S11-LV-01
						ATP4-S11-LV-03
						ATP4-S11-LV-12
						ATP4-S11-LV-30

ATSP4

Timing Unit	Output Properties		Wiring	Dimensions (mm)	Power Supply	Part Number
	Control Output	Instantaneous Output				
Second, minute, hour	Available	-	5-pin screw terminals	48x48	90-250VAC	ATSP4-K05-UV-01
						ATSP4-K05-UV-03
						ATSP4-K05-UV-12
						ATSP4-K05-UV-30
Second, minute, hour	Available	-	5-pin screw terminals	48x48	24VAC/DC	ATSP4-K05-LV-01
						ATSP4-K05-LV-03
						ATSP4-K05-LV-12
						ATSP4-K05-LV-30
Second, minute, hour	Available	-	8-pin screw terminals	48x48	90-250VAC	ATSP4-S08-UV-01
						ATSP4-S08-UV-03
						ATSP4-S08-UV-12
						ATSP4-S08-UV-30
Second, minute, hour	Available	-	8-pin screw terminals	48x48	24VAC/DC	ATSP4-S08-LV-01
						ATSP4-S08-LV-03
						ATSP4-S08-LV-12
						ATSP4-S08-LV-30

ATM9321

Timing Unit	Wiring	Dimensions (mm)	Power Supply	Part Number
Second and minute	Socket Terminals	96x96	230VAC	ATM9321-230VAC
			110VAC	ATM9321-110VAC
			24VAC	ATM9321-24VAC
			9-30VDC/7-24VAC	ATM9321-SM

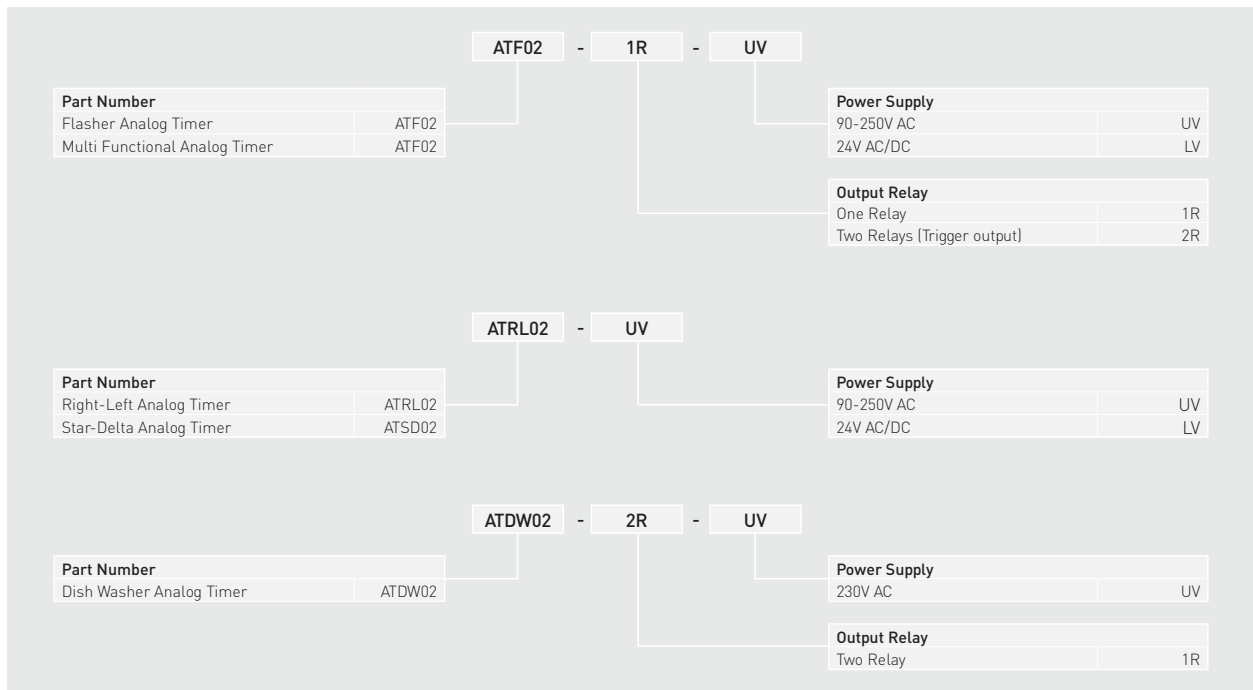
1. For SSR output models of these products, -SSR extension must be added to the end of the order code. Example: ATM9321-230VAC-SSR
2. There is no price difference for SSR output models



ANALOG RAIL MOUNTING

MODEL	ATF02 Flasher Analog Timer	ATRL02 Right-Left Analog Timer	ATP02 Multi Functional Analog Timer	ATDW02 Dish Washer Analog Timer	ATSD02 Star-Delta Analog Timer
Dimensions (mm)	G18xY90xD66				
Scale	Adjustable between 0-1			Washing: 30, 60, 90, 120, 180 s Waiting: 3s Rinsing: 1-30 s	For Y connection 0-1 Off transition time; 0, 20, 100, 200, 400, 500 ms
Control Output	Relay: 250V AC, 10A (for resistive load), NO+NC				
Reset Input	Max. 0.04 s				
Power Supply	90-250V AC +10% -20%, 50/60Hz or 24V AC ±10%, 50/60Hz or 24V DC ±10%			230V AC +10% -20%, 50/60Hz	90-250V AC +10% -20%, 50/60Hz or 24V AC ±10%, 50/60Hz or 24V DC ±10%
Wiring	Screw terminals				
Timing Function	ton: On time for OUT2 toff: Off time for OUT2	ton: On time for OUT1-OUT2 toff: Off time for OUT1-OUT2	A, B, C, D, E, F modes (set by operating mode selector)	Ty: Washing time Tb: Waiting time Td: Rinsing time	Y Time: OUT1 OFF Time: OUT1-OUT2
Timing Unit	s, 10s, min, 10min, hr, 10hr (set by time unit selector)				

ORDERING CODE



ATP02 Multi functional

Timing Unit	Output Properties		Dimensions (mm)	Power Supply	Part Number
	Control Output	Instantaneous Output			
Second, minute, hour	Available	-	18x90	90-250VAC	ATP02-1R-UV
				24VAC/DC	ATP02-1R-LV
Second, minute, hour	Available	Available	18x90	90-250VAC	ATP02-2R-UV
				24VAC/DC	ATP02-2R-LV

ATF02 Flasher

Timing Unit	Output Properties		Dimensions (mm)	Power Supply	Part Number
	Control Output	Instantaneous Output			
Second, minute, hour	Available	-	18x90	90-250VAC	ATF02-1R-UV
				24VAC/DC	ATF02-1R-LV
Second, minute, hour	Available	Available	18x90	90-250VAC	ATF02-2R-UV
				24VAC/DC	ATF02-2R-LV

ATRL02 Right-Left

Timing Unit	Output Properties		Dimensions (mm)	Power Supply	Part Number
	Control Output	Instantaneous Output			
Second, minute, hour	Available	-	18x90	90-250VAC	ATRL02-UV
Second, minute, hour	Available	-	18x90	24VAC/DC	ATRL02-LV

ATDW02 Dish Washer

Timing Unit	Output Properties		Dimensions (mm)	Power Supply	Part Number
	Control Output	Instantaneous Output			
Second	Available	-	18x90	230VAC	ATDW02-2R-UV

ATSD02 Star-Delta

Timing Unit	Output Properties		Dimensions (mm)	Power Supply	Part Number
	Control Output	Instantaneous Output			
Second, minute, hour	Available	-	18x90	90-250VAC	ATSD02-UV
Second, minute, hour	Available	-	18x90	24VAC/DC	ATSD02-LV

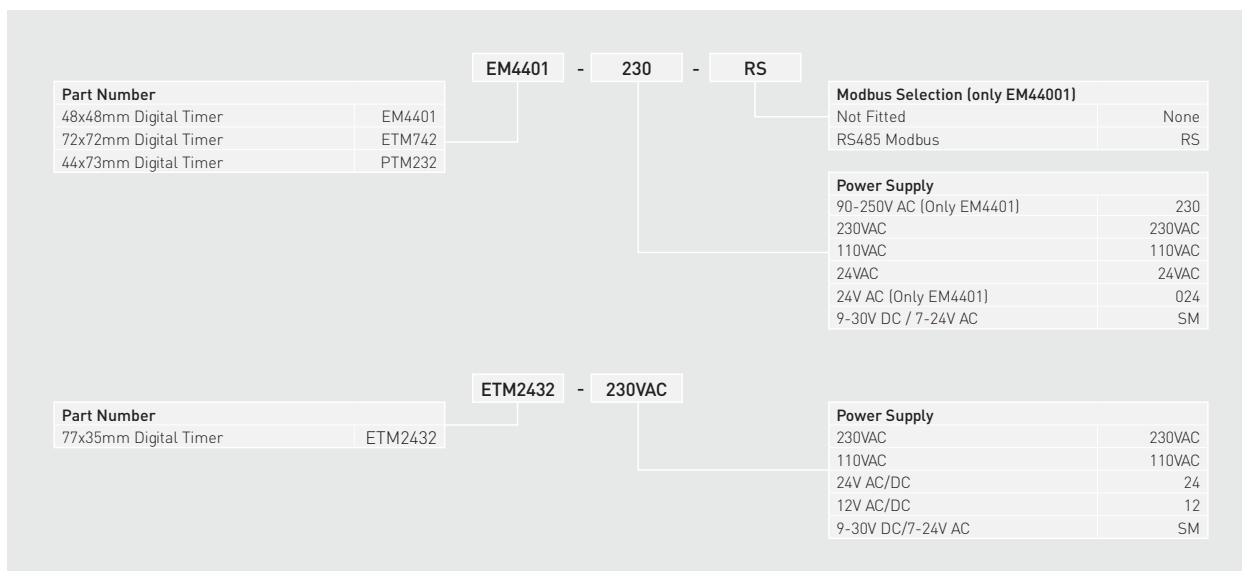


DIGITAL

MODEL	ETM2432	EM4401	ETM742	PTM232
Dimensions (mm)	W77xH35xD61	W48xH48xD87	W72xH72xD97	W44xH73xD90
Display	4 digits	LCD	2x4 digits	2 digits
Scale	0:01 ... 99:59 min 0:01... 99:59 hr	0-99.99 s and 0-9999 hr		0-9.9 s and 0-99 hr
Inputs	Start, reset, gate			
Start Input	Contact input	Input types can be adjusted as PNP or NPN in programming mode		Contact input
Reset Input				
Gate Input				
Power Supply	230V AC, 110V AC, 24V AC/DC, 12V AC/DC, 50/60Hz or 9-30V DC / 7-24V AC, 50-60Hz *	90-250V AC, 50/60Hz, 24V AC, 50/60Hz, or 9-30V DC / 7-24V AC, SMPS *	230V AC, 110V AC, 50/60Hz, 24V AC/DC, 12V AC/DC or 9-30V DC / 7-24V AC, 50-60Hz *	
Wiring	2,5mm ² screw terminals	Power screw terminals: 2,5mm ² socket, Signal screw terminals: 1,5mm ² screw terminals	2,5mm ² socket screw terminals	11 pin socket
Control Output	2 Relay, 8A (NO+NC)	2 x Relay, 2A (NO+NC and NO) 2 x SSR	Relay, 2A (NO+NC)	2 Relay, 2A (NO+NC)
Timing Function	9 different timing modes	12 different timing modes	9 different timing modes	6 different timing modes
Timing Unit	Second, minute, hour			
Alarm	✓	-		-
Auxiliary Power Supply	-	12V DC, 50 mA		-
Modbus Selection	-	RS485 ModBus *	-	-

* order option

ORDERING CODE



ETM2432

Timing Function	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
Second, minute, hour	-	77x35	230VAC	ETM2432-230VAC
			24VAC/DC	ETM2432-24
			12VAC/DC	ETM2432-12
			9-30VDC/7-24VAC	ETM2432-SM

EM4401

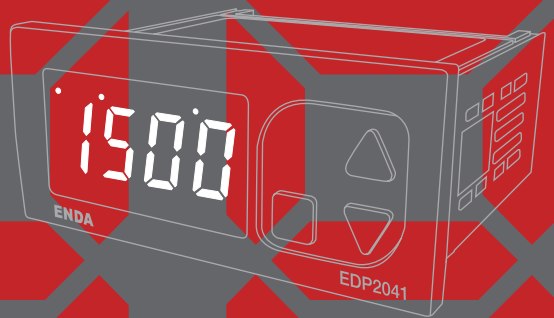
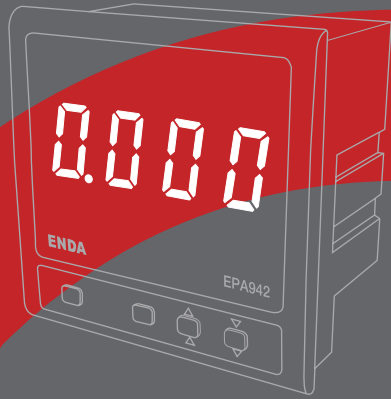
Timing Function	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
Second, minute, hour	-	48x48	90-250VAC	EM4401-230
			24VAC	EM4401-024
			9-30VDC/7-24VAC	EM4401-SM
Second, minute, hour	RS485 Modbus	48x48	90-250VAC	EM4401-230-RS
			24VAC	EM4401-024-RS
			9-30VDC/7-24VAC	EM4401-SM-RS

ETM742

Timing Function	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
Second, minute, hour	-	72x72	230VAC	ETM742-230VAC
			110VAC	ETM742-110VAC
			24VAC	ETM742-24VAC
			9-30VDC/7-24VAC	ETM742-SM

PTM232

Timing Function	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
Second, minute, hour	-	44x73	230VAC	PTM232-230VAC
			110VAC	PTM232-110VAC
			24VAC	PTM232-24VAC
			9-30VDC/7-24VAC	PTM232-SM



Digital Potentiometers



Digital Potentiometers



DIGITAL POTENTIOMETERS

MODEL	EDP2041	EDP7041
Dimensions (mm)	W77xH35xD61	W72xH72xD97
Display	4 digits	
Scale Range	-1999 ... 9999	
Decimal Point	Rightmost 3 digits	
Power Supply	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50/60Hz *	
Wiring	2,5mm ² screw terminals	
Output	0/4-20mA and 0-10V	
External Button Inputs	Sets Preset Value	
"soft on" and "soft off" Functions	✓	
Synchronous Operation	Via ModBus	
Modbus Selection	RS485 ModBus *	

* order option

ORDERING CODE

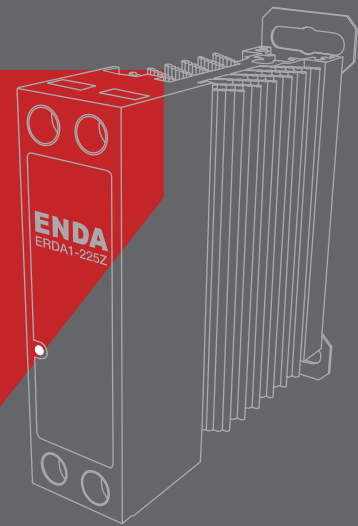
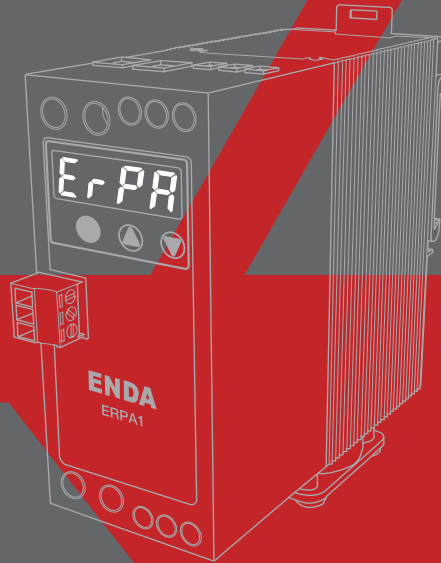
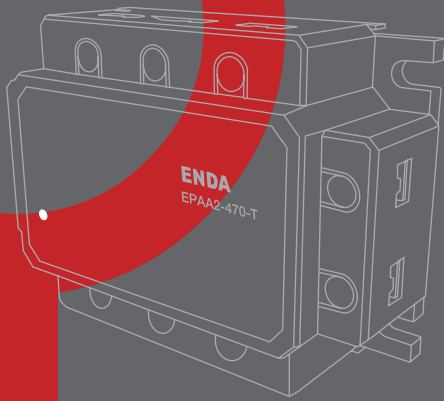
Part Number 77x35mm, Digital Potentiometer EDP2041 72x72mm, Digital Potentiometer EDP7041		Modbus Selection Not Fitted None RS485 Modbus RS
Power Supply 230VAC 230VAC 110VAC 110VAC 24VAC 24VAC 9-30V DC/7-24V AC SM		

EDP2041

Modbus Selection	Dimensions (mm)	Power Supply	Product Code
-	77x35	230VAC	EDP2041-230VAC
		110VAC	EDP2041-110VAC
		24VAC	EDP2041-24VAC
		9-30VDC/7-24VAC	EDP2041-SM
RS485 Modbus	77x35	230VAC	EDP2041-230VAC-RS
		110VAC	EDP2041-110VAC-RS
		24VAC	EDP2041-24VAC-RS
		9-30VDC/7-24VAC	EDP2041-SM-RS

EDP7041

Modbus Selection	Dimensions (mm)	Power Supply	Product Code
-	72x72	230VAC	EDP7041-230VAC
		110VAC	EDP7041-110VAC
		24VAC	EDP7041-24VAC
		9-30VDC/7-24VAC	EDP7041-SM
RS485 Modbus	72x72	230VAC	EDP7041-230VAC-RS
		110VAC	EDP7041-110VAC-RS
		24VAC	EDP7041-24VAC-RS
		9-30VDC/7-24VAC	EDP7041-SM-RS



Solid State Relays

8



Solid State Relays

ZERO CROSS PANEL MOUNTING



EPDA1 Single Phase

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection 	8-30V AC/DC	24-320V AC	12A	EPDA1-212Z
			25A	EPDA1-225Z
			40A	EPDA1-240Z
	8-30V AC/DC	50-480V AC	25A	EPDA1-425Z
			40A	EPDA1-440Z
			50A	EPDA1-450Z
			70A	EPDA1-470Z
			100A	EPDA1-4100Z
			120A	EPDA1-4120Z



EPDA2 Single Phase, 2 x Solid State Relays

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection • Fan control thermostat • Covers fan control thermostat operating temperatures over 50 °C Example: EPDA2-440Z-T 	8-30V AC/DC	50-480V AC	2 x 25A	EPDA2-425Z
				EPDA2-425Z-T
			2 x 40A	EPDA2-440Z
				EPDA2-440Z-T
			2 x 70A	EPDA2-470Z
				EPDA2-470Z-T



EPDA3 Three Phase

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection • Fan control thermostat • Covers fan control thermostat operating temperatures over 50 °C Example: EPDA3-440Z-T 	8-30V AC/DC	50-480V AC	3 x 25A	EPDA3-425Z
				EPDA3-425Z-T
			3 x 40A	EPDA3-440Z
				EPDA3-440Z-T
			3 x 50A	EPDA3-450Z
				EPDA3-450Z-T



EPAA1 Single Phase

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection 	90-240V AC	24-320V AC	12A	EPAA1-212Z
			25A	EPAA1-225Z
			40A	EPAA1-240Z
	90-240V AC	50-480V AC	25A	EPAA1-425Z
			40A	EPAA1-440Z
			50A	EPAA1-450Z
			70A	EPAA1-470Z
			100A	EPAA1-4100Z
			120A	EPAA1-4120Z



EPAA2 Single Phase, 2 x Solid State Relays

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection • Fan control thermostat • Covers fan control thermostat operating temperatures over 50 °C Example: EPAA2-440Z-T 	90-240V AC	50-480V AC	2 x 25A	EPAA2-425Z
				EPAA2-425Z-T
			2 x 40A	EPAA2-440Z
				EPAA2-440Z-T
			2 x 70A	EPAA2-470Z
				EPAA2-470Z-T



EPAA3 Three Phase

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection • Fan control thermostat • Covers fan control thermostat operating temperatures over 50 °C Example: EPAA3-440Z-T 	90-240V AC	50-480V AC	3 x 25A	EPAA3-425Z
				EPAA3-425Z-T
			3 x 40A	EPAA3-440Z
				EPAA3-440Z-T
			3 x 50A	EPAA3-450Z
				EPAA3-450Z-T

ZERO CROSS RAIL MOUNTING



ERDA1 Single Phase

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection 	8-30V AC/DC	24-320V AC	25A	ERDA1-225Z
			40A	ERDA1-240Z
	8-30V AC/DC	50-480V AC	25A	ERDA1-425Z
			40A	ERDA1-440Z



ERDA2 Single Phase, 2 x Solid State Relays

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection • -F: Integrated fan 	8-30V AC/DC	24-280V AC	2 x 25A	ERDA2-225Z
			2 x 40A	ERDA2-240Z-F
	8-30V AC/DC	50-480V AC	2 x 25A	ERDA2-425Z
			2 x 40A	ERDA2-440Z-F



ERAA1 Single Phase

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection 	90-240V AC	24-320V AC	25A	ERAA1-225Z
			40A	ERAA1-240Z
	90-240V AC	24-320V AC	25A	ERAA1-425Z
			50-480V AC	40A



ERAA2 Single Phase, 2 x Solid State Relays

Features	Input Voltage	Load Voltage	Load Current	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage zero-cross switching • Applicable for three phase loads • Built-in varistor protection • -F: Integrated fan 	90-240V AC	24-280V AC	2 x 25A	ERAA2-225Z
			2 x 40A	ERAA2-240Z-F
	90-240V AC	50-480V AC	2 x 25A	ERAA2-425Z
			2 x 40A	ERAA2-440Z-F

PHASE ANGLE RAIL MOUNTING



ERCA1 Proportional Solid State Relays

Features	Input Voltage	Load Voltage	Load Current	Modbus Selection	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage phase angel controlled • Built-in varistor protection • -F: Integrated fan 	4-20mA	180-320V AC	25A	-	ERCA1-225PA
			40A	-	ERCA1-240PA
		180-480V AC	25A	-	ERCA1-425PA
			40A	-	ERCA1-440PA
		180-500V AC	50A	-	ERCA1-550PA-F
			70A	-	ERCA1-570PA-F



ERVA1 Proportional Solid State Relays

Features	Input Voltage	Load Voltage	Load Current	Modbus Selection	Part Number
<ul style="list-style-type: none"> • LED status indicator for input voltage • AC voltage phase angel controlled • Built-in varistor protection • -F: Integrated fan 	0-10V DC	180-280V AC	40A	-	ERVA1-240PA
			40A	-	ERVA1-440PA
		180-500V AC	50A	-	ERVA1-550PA-F
			70A	-	ERVA1-570PA-F



ERPA1 Power Regulator

Features	Input Voltage	Load Voltage	Load Current	Modbus Selection	Part Number
<ul style="list-style-type: none"> • 4 digits LED display • Phase angel or zero-cross controlled • Soft Start or Kick Start functions • Overheat alarm output • Built-in varistor protection • -F: Integrated fan 	0-20mA	180-280V AC	40A	-	ERPA1-240-F
	4-20mA			RS485 Modbus	ERPA1-240-F-RS
	0/1-5V	180-480V AC	40A	-	ERPA1-440-F
	0-10V			RS485 Modbus	ERPA1-440-F-RS
	2-10V	180-500V AC	50A	-	ERPA1-550-F
	1/10kΩ			RS485 Modbus	ERPA1-550-F-RS
	180-500V AC	70A	-	ERPA1-570-F	
			RS485 Modbus	ERPA1-570-F-RS	



ERFA1 Fan Speed Controller

Features	Input Voltage	Load Voltage	Load Current	Modbus Selection	Part Number
<ul style="list-style-type: none"> • 4 digits LED display • 24V DC auxiliary power supply • Phase angel or zero-cross controlled • Soft Start or Kick Start functions • Built-in varistor protection • -F: Integrated fan 	0-20mA	180-280V AC	40A	-	ERFA1-240F
	4-20mA				
	0/1-5V				
	0-10V				
	2-10V				
	1/10kΩ				

PHASE ANGLE RAIL MOUNTING



EPAC3-W-F Selectable Vibration Frequency and Load Current

Input Signal	Load Voltage	Load Current	Digital Input	External Power Supply	Part Number
Adjustment knob or 0-10V DC analog signal	110V AC or 220V AC	4A AC 15A AC	Available	12V DC, 50mA	EPAC3-W-F EPAC3-W-F-15
<ul style="list-style-type: none"> 4 digits LED display Selectable, 50Hz or 100Hz vibration frequency Phase angle can be controlled by adjustment knob or 0-10V DC analog signal 		<ul style="list-style-type: none"> Load output can be stopped with digital input Selectable digital input (for NO/NC contact or NO/NC sensor) Power cable with plug and motor connection cable included 		<ul style="list-style-type: none"> Adjustable maximum and minimum value for output Internal fuse Soft Start feature Built-in varistor protection On/Off Power switch 	

EPAC-W Vibration Controller

Input Signal	Load Voltage	Load Current	Digital Input	External Power Supply	Part Number
Adjustment knob or 0-10V DC analog signal	125V AC	4A AC	Available	12V DC, 50mA	EPAC-W-230
<ul style="list-style-type: none"> 4 digits LED display Load output can be stopped with digital input Selectable digital input (for NO/NC contact or NO/NC sensor) 		<ul style="list-style-type: none"> Power cable with plug and motor connection cable included Connection cable for digital input Maximum and minimum value can be assigned to output 		<ul style="list-style-type: none"> Internal fuse Soft Start feature Built-in varistor protection On/Off Power switch 	

EPAC-W-F Selectable Vibration Frequency

Input Signal	Load Voltage	Load Current	Digital Input	External Power Supply	Part Number
Adjustment knob or 0-10V DC analog signal	220V AC	4A AC	Available	12V DC, 50mA	EPAC-W-F
<ul style="list-style-type: none"> 4 digits LED display Selectable, 50Hz or 100Hz vibration frequency Phase angle can be controlled by adjustment knob or 0-10V DC analog signal 		<ul style="list-style-type: none"> Load output can be stopped with digital input Selectable digital input (for NO/NC contact or NO/NC sensor) Power cable with plug and motor connection cable included 		<ul style="list-style-type: none"> Adjustable maximum and minimum value for output Internal fuse Soft Start feature Built-in varistor protection On/Off Power switch 	



HEATSINKS

Thermal Resistance °C/ W	Load Current	Dimensions (mm)	Part Number
2	12-25A	46x61x62	ETS-46-62
1,7	20-25A	46x61x80	ETS-46-80
1,5	25-40A	46x61x100	ETS-46-100
0,7	50-70A	46x61x110	ETS-46-100F
1	40-50A	62x77x100	ETS-62-100
0,4	70-120A	62x77x120	ETS-62-100F
0,75	3 x 25A	99x87x100	ETS-99-100
0,34	3 x 40-50A	99x87x125	ETS-99-100F

(1) -F: Integrated fan
Fan Power Supply: for ETS-62-100F, 24VDC, 140mA

Fan Power Supply: for ETS-46-100F, 24VDC, 100mA
Fan Power Supply: for ETS-99-100F, 24VDC, 220mA

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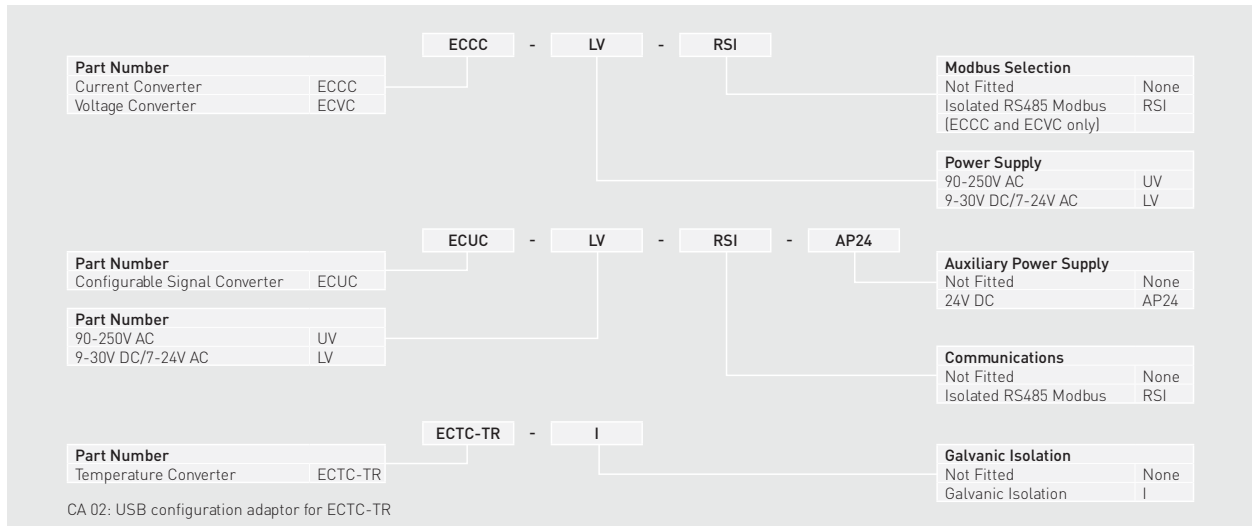
Converters



MODEL	ECCE Current Converter	ECVC Voltage Converter	ECUC Configurable Universal Converter	ECTC-TR Temperature Converter		
Dimensions (mm)	W25xH97xD115 TH35 rail mounted			Diameter 44xY20		
Input Type	±5A and ±60mV	±100V and ±500V	TC, PT 100, NTC, mA, mV, V, W, kHz	PT 100 and TC		
Scale Range	±5A DC 0-5A AC and RMS ±60mV DC 0-60mV AC and RMS	±100/500V DC and 0-100/500V AC and RMS	PT 100, -200...840°C / -100...1600°C B, 200...1800°C E, -100...900°C J, -100...900°C K, -100...1300°C L, -100...900°C N, -200...1300°C R, 0...1700°C S, 0...1700°C T, -250...300°C U, -200...600°C NTC, -60...150°C	PT 100, -200...840°C B, 60...1820°C E, -200...840°C J, -200...1120°C K, -200...1360°C L, -200...900°C N, -200...1300°C S, -40...1760°C R, -40...1760°C T, -200...400°C U, -200...600°C		
			mA		0 - 20mA 4 - 20mA	-999 ... 9999 -99,9 ... 999,9 -9,99 ... 99,99 -9,99 ... 9,999
			mV		0 - 150mV	
			V		0 - 5V 1 - 5V 0 - 10V	
			Ω		0 - 550Ω 0 - 10kΩ	
kHz	0 - 10kHz					
Frequency Range	AC, 10Hz - 200Hz (for square wave form 10Hz-70Hz)		-			
Sampling Time	250ms		250, 500, 750, 1000ms (select program)	100ms		
Output	0/4-20mA DC, 0-10V DC or 1-5V DC		0/4-20mA DC, 0-10V DC or 1-5V DC, 0-50kHz	4-20mA, 20-4mA		
Power Supply	90-250V AC, 50/60Hz or 9-30V DC/7-24V AC,50/60Hz *			8-36V DC 10-36V DC		
Auxiliary Power Supply	-		24V DC, 50 mA *	-		
Wiring	2,5mm ² screw terminals			M3 screw terminals		
A/D Converter	12bit		16bit	16bit		
D/A Converter	12bit		13bit	16bit		
Input/Output Isolation	✓			For ECTC-TR-I only		
Modbus Selection	Isolated RS485 ModBus *			-		

* order option

ORDERING CODE



ECXC Current Converter

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
5A, 60mV	0/4-20mA DC, 0-10V DC, 1-5V DC	-	25x97	90-250VAC	ECXC-UV
				9-30VDC/7-24VAC	ECXC-LV
5A, 60mV	0/4-20mA DC, 0-10V DC, 1-5V DC	RS485 Modbus	25x97	90-250VAC	ECXC-UV-RSI
				9-30VDC/7-24VAC	ECXC-LV-RSI

ECVC Voltage Converter

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
±100/500V DC and 0-100/500V AC and RMS	0/4-20mA DC, 0-10V DC, 1-5V DC	-	25x97	90-250VAC	ECVC-UV
				9-30VDC/7-24VAC	ECVC-LV
±100/500V DC and 0-100/500V AC and RMS	0/4-20mA DC, 0-10V DC, 1-5V DC	RS485 Modbus	25x97	90-250VAC	ECVC-UV-RSI
				9-30VDC/7-24VAC	ECVC-LV-RSI

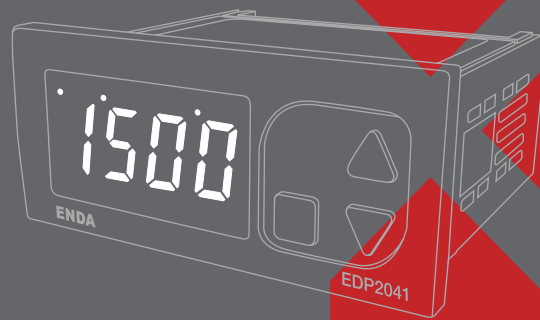
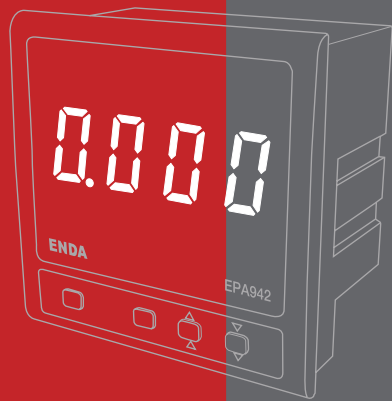
ECUC Configurable Universal Converter

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
TC, PT 100, NTC, mA, mV, V, Ω, kΩ, kHz	0/4-20mA DC, 0-10V DC or 0-5V DC, 0-50kHz	-	25x97	90-250VAC	ECUC-UV
				9-30VDC/7-24VAC	ECUC-LV
Auxiliary Power Supply: 24V DC, 50mA					ECUC-UV-AP24
Auxiliary Power Supply: 24V DC, 50mA					ECUC-LV-AP24
TC, PT 100, NTC, mA, mV, V, Ω, kΩ, kHz	0/4-20mA DC, 0-10V DC or 0-5V DC, 0-50kHz	-	25x97	90-250VAC	ECUC-UV-RSI
				9-30VDC/7-24VAC	ECUC-LV-RSI
Auxiliary Power Supply: 24V DC, 50mA					ECUC-UV-RSI-AP24
Auxiliary Power Supply: 24V DC, 50mA					ECUC-LV-RSI-AP24

ECTC-TR Temperature Converter

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
TC, PT 100	4-20mA, 20-4mA	-	Diameter 44xY20	8-36VDC	ECTC-TR
				10-36VDC	ECTC-TR-I

Part Number	
CA 02: USB configuration adaptor for ECTC-TR	CA02



Indicators

10 Indicators



AMMETERS

MODEL	EPA242	EPA742	EPA542	EPA942
Dimensions (mm)	W77xH35xD61	W72xH72xD97	W54xH94xD68 TH35 type rail mounted	W96xH96xD50
Display	4 digits			
Input Type	±5A (current transformer) CT 20/30 (For part number - CT extension)	±5A (current transformer)		
	±60mV (shunt resistance)			
Scale Range	for CT30: 0 ... 120A AC for CT20: 0 ... 300A AC	-9.99 ... 99.99A DC -99.9 ... 999.9A DC -999 ... 9999A DC	0 ... 99.99A AC and RMS 0 ... 999.9A AC and RMS 0 ... 9999A AC and RMS	
Frequency Range	DC, 10Hz - 200Hz (10Hz-70Hz for square wave form)			
Power Supply	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50-60Hz *			
Wiring	Screw-terminals	Plug-in terminals	Screw-terminals	Plug-in terminals
Alarm Output	Relay, 8A (NO+NC) *	Relay, 8A (NO) *	Relay, 8A (NO+NC) *	2 Relay, 10A (NO+NC) *
Analog Output	0/4-20mA DC, 1-5V DC or 0-10V DC *	-		
Modbus Selection	Isolated RS485 ModBus *			

* order option

ORDERING CODE

EPA242 - CT - A - 230VAC - RSI

Part Number	
77x35mm, Ammeter	EPA242
Input Type	
5A or 60mV	None
CT20/30 Current Transformer or 60 mV	CT
Output Type	
Not Fitted	None
Relay	R
Analog Output	A

Modbus Selection	
Not Fitted	None
Isolated RS485 Modbus	RSI
Power Supply	
230VAC	230VAC
110VAC	110VAC
24VAC	24VAC
9-30V DC/7-24V AC	SM

EPA742 - R - 230VAC - RSI

Part Number	
72x72mm, Ammeter	EPA742
54x94mm, Ammeter	EPA542
96x96mm, Ammeter	EPA942
Alarm Output	
Not Fitted	None
Alarm Output	R
2 Alarm Outputs (only EPA942)	2R

Modbus Selection	
Not Fitted	None
Isolated RS485 Modbus	RSI
Power Supply	
230VAC	230VAC
110VAC	110VAC
24VAC	24VAC
9-30V DC/7-24V AC	SM

EPA242

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
5A (current transformer) 60mV (shunt resistance)	-	-	77x35	230VAC	EPA242-230VAC
				110VAC	EPA242-110VAC
				24VAC	EPA242-24VAC
				9-30VDC/7-24VAC	EPA242-SM
5A (current transformer) 60mV (shunt resistance)	-	RS485 Modbus	77x35	230VAC	EPA242-230VAC-RSI
				110VAC	EPA242-110VAC-RSI
				24VAC	EPA242-24VAC-RSI
				9-30VDC/7-24VAC	EPA242-SM-RSI
5A (current transformer) 60mV (shunt resistance)	8A Relay NO+NC	-	77x35	230VAC	EPA242-R-230VAC
				110VAC	EPA242-R-110VAC
				24VAC	EPA242-R-24VAC
				9-30VDC/7-24VAC	EPA242-R-SM
5A (current transformer) 60mV (shunt resistance)	8A Relay NO+NC	RS485 Modbus	77x35	230VAC	EPA242-R-230VAC-RSI
				110VAC	EPA242-R-110VAC-RSI
				24VAC	EPA242-R-24VAC-RSI
				9-30VDC/7-24VAC	EPA242-R-SM-RSI
5A (current transformer) 60mV (shunt resistance)	Analog 0/4-20mA, 0-10V, 1-5V	-	77x35	230VAC	EPA242-A-230VAC
				110VAC	EPA242-A-110VAC
				24VAC	EPA242-A-24VAC
				9-30VDC/7-24VAC	EPA242-A-SM
5A (current transformer) 60mV (shunt resistance)	Analog 0/4-20mA, 0-10V, 1-5V	RS485 Modbus	77x35	230VAC	EPA242-A-230VAC-RSI
				110VAC	EPA242-A-110VAC-RSI
				24VAC	EPA242-A-24VAC-RSI
				9-30VDC/7-24VAC	EPA242-A-SM-RSI

EPA242-CT

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
CT20/CT30 (current transformer) 60mV (shunt resistance)	-	-	77x35	230VAC	EPA242-CT-230VAC
				110VAC	EPA242-CT-110VAC
				24VAC	EPA242-CT-24VAC
				9-30VDC/7-24VAC	EPA242-CT-SM
CT20/CT30 (current transformer) 60mV (shunt resistance)	-	RS485 Modbus	77x35	230VAC	EPA242-CT-230VAC-RSI
				110VAC	EPA242-CT-110VAC-RSI
				24VAC	EPA242-CT-24VAC-RSI
				9-30VDC/7-24VAC	EPA242-CT-SM-RSI
CT20/CT30 (current transformer) 60mV (shunt resistance)	8A Relay NO+NC	-	77x35	230VAC	EPA242-CT-R-230VAC
				110VAC	EPA242-CT-R-110VAC
				24VAC	EPA242-CT-R-24VAC
				9-30VDC/7-24VAC	EPA242-CT-R-SM
CT20/CT30 (current transformer) 60mV (shunt resistance)	8A Relay NO+NC	RS485 Modbus	77x35	230VAC	EPA242-CT-R-230VAC-RSI
				110VAC	EPA242-CT-R-110VAC-RSI
				24VAC	EPA242-CT-R-24VAC-RSI
				9-30VDC/7-24VAC	EPA242-CT-R-SM-RSI
CT20/CT30 (current transformer) 60mV (shunt resistance)	Analog 0/4-20mA, 0-10V, 1-5V	-	77x35	230VAC	EPA242-CT-A-230VAC
				110VAC	EPA242-CT-A-110VAC
				24VAC	EPA242-CT-A-24VAC
				9-30VDC/7-24VAC	EPA242-CT-A-SM
CT20/CT30 (current transformer) 60mV (shunt resistance)	Analog 0/4-20mA, 0-10V, 1-5V	RS485 Modbus	77x35	230VAC	EPA242-CT-A-230VAC-RSI
				110VAC	EPA242-CT-A-110VAC-RSI
				24VAC	EPA242-CT-A-24VAC-RSI
				9-30VDC/7-24VAC	EPA242-CT-A-SM-RSI

EPA242-CT Current Transformers

Part Number
CT30 (120 A) ¹
CT20 (300 A) ¹

¹ CT20/CT30 Current Transformers must be ordered separately.

EPA742

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
5A (current transformer) 60mV (shunt resistance)	-	-	72x72	230VAC	EPA742-230VAC
				110VAC	EPA742-110VAC
				24VAC	EPA742-24VAC
				9-30VDC/7-24VAC	EPA742-SM
5A (current transformer) 60mV (shunt resistance)	-	RS485 Modbus	72x72	230VAC	EPA742-230VAC-RSI
				110VAC	EPA742-110VAC-RSI
				24VAC	EPA742-24VAC-RSI
				9-30VDC/7-24VAC	EPA742-SM-RSI
5A (current transformer) 60mV (shunt resistance)	8A Relay NO+NC	-	72x72	230VAC	EPA742-R-230VAC
				110VAC	EPA742-R-110VAC
				24VAC	EPA742-R-24VAC
				9-30VDC/7-24VAC	EPA742-R-SM
5A (current transformer) 60mV (shunt resistance)	8A Relay NO+NC	RS485 Modbus	72x72	230VAC	EPA742-R-230VAC-RSI
				110VAC	EPA742-R-110VAC-RSI
				24VAC	EPA742-R-24VAC-RSI
				9-30VDC/7-24VAC	EPA742-R-SM-RSI

EPA542 Rail Mounting

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
5A (current transformer) 60mV (shunt resistance)	-	-	54x94	230VAC	EPA542-230VAC
				110VAC	EPA542-110VAC
				24VAC	EPA542-24VAC
				9-30VDC/7-24VAC	EPA542-SM
5A (current transformer) 60mV (shunt resistance)	-	RS485 Modbus	54x94	230VAC	EPA542-230VAC-RSI
				110VAC	EPA542-110VAC-RSI
				24VAC	EPA542-24VAC-RSI
				9-30VDC/7-24VAC	EPA542-SM-RSI
5A (current transformer) 60mV (shunt resistance)	8A Relay NO+NC	-	54x94	230VAC	EPA542-R-230VAC
				110VAC	EPA542-R-110VAC
				24VAC	EPA542-R-24VAC
				9-30VDC/7-24VAC	EPA542-R-SM
5A (current transformer) 60mV (shunt resistance)	8A Relay NO+NC	RS485 Modbus	54x94	230VAC	EPA542-R-230VAC-RSI
				110VAC	EPA542-R-110VAC-RSI
				24VAC	EPA542-R-24VAC-RSI
				9-30VDC/7-24VAC	EPA542-R-SM-RSI

EPA942

Input Type	Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
5A (current transformer) 60mV (shunt resistance)	-	-	96x96	230VAC	EPA942-230VAC
				110VAC	EPA942-110VAC
				24VAC	EPA942-24VAC
				9-30VDC/7-24VAC	EPA942-SM
5A (current transformer) 60mV (shunt resistance)	-	RS485 Modbus	96x96	230VAC	EPA942-230VAC-RSI
				110VAC	EPA942-110VAC-RSI
				24VAC	EPA942-24VAC-RSI
				9-30VDC/7-24VAC	EPA942-SM-RSI
5A (current transformer) 60mV (shunt resistance)	10A Relay NO+NC	-	96x96	230VAC	EPA942-R-230VAC
				110VAC	EPA942-R-110VAC
				24VAC	EPA942-R-24VAC
				9-30VDC/7-24VAC	EPA942-R-SM
5A (current transformer) 60mV (shunt resistance)	10A Relay NO+NC	RS485 Modbus	96x96	230VAC	EPA942-R-230VAC-RSI
				110VAC	EPA942-R-110VAC-RSI
				24VAC	EPA942-R-24VAC-RSI
				9-30VDC/7-24VAC	EPA942-R-SM-RSI
5A (current transformer) 60mV (shunt resistance)	10A 2 Relay NO+NC	-	96x96	230VAC	EPA942-2R-230VAC
				110VAC	EPA942-2R-110VAC
				24VAC	EPA942-2R-24VAC
				9-30VDC/7-24VAC	EPA942-2R-SM
5A (current transformer) 60mV (shunt resistance)	10A 2 Relay NO+NC	RS485 Modbus	96x96	230VAC	EPA942-2R-230VAC-RSI
				110VAC	EPA942-2R-110VAC-RSI
				24VAC	EPA942-2R-24VAC-RSI
				9-30VDC/7-24VAC	EPA942-2R-SM-RSI



VOLTMETERS

MODEL	EPV242	EPV742	EPV542	EPV942
Dimensions (mm)	W77xH35xD61	W72xH72xD97	W54xH94xD68 TH35 rail mounting	W96xH96xD50
Display	4 digits			
Input Range	±500V ±100V			
Scale Range	-100.0 ... 100.0V DC		0 ... 100.0V AC and RMS	
	-500 ... 500V DC		0 ... 500V AC and RMS	
Frequency Range	DC, 10Hz - 200Hz (10Hz-70Hz for square wave form)			
Power Supply	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50-60Hz *			
Wiring	Screw-terminals	Plug-in terminals	Screw-terminals	Plug-in terminals
Alarm Output	Relay, 10A (NO+NC) *	Relay, 8A (NO+NC) *		2 Relay, 10A (NO+NC) *
Modbus Selection	Isolated RS485 ModBus *			

* order option

ORDERING CODE

		EPV242	-	R	-	230VAC	-	RSI			
Part Number		77x35mm, Voltmeter	EPV242						Modbus Selection		
		72x72mm, Voltmeter	EPV742						Not Fitted		None
		54x94mm, Voltmeter	EPV542						Isolated RS485 Modbus		RSI
		96x96mm, Voltmeter	EPV942						Power Supply		
Alarm Output		Not Fitted	None						230VAC		230VAC
		Alarm Output	R						110VAC		110VAC
		2 Alarm Output (only EPV942)	2R						24VAC		24VAC
									9-30V DC/7-24V AC		SM

EPV242

Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
-	-	77x35	230VAC	EPV242-230VAC
			110VAC	EPV242-110VAC
			24VAC	EPV242-24VAC
			9-30VDC/7-24VAC	EPV242-SM
-	RS485 Modbus	77x35	230VAC	EPV242-230VAC-RSI
			110VAC	EPV242-110VAC-RSI
			24VAC	EPV242-24VAC-RSI
			9-30VDC/7-24VAC	EPV242-SM-RSI
8A Relay NO+NC	-	77x35	230VAC	EPV242-R-230VAC
			110VAC	EPV242-R-110VAC
			24VAC	EPV242-R-24VAC
			9-30VDC/7-24VAC	EPV242-R-SM
8A Relay NO+NC	RS485 Modbus	77x35	230VAC	EPV242-R-230VAC-RSI
			110VAC	EPV242-R-110VAC-RSI
			24VAC	EPV242-R-24VAC-RSI
			9-30VDC/7-24VAC	EPV242-R-SM-RSI

EPV742

Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
-	-	72x72	230VAC	EPV742-230VAC
			110VAC	EPV742-110VAC
			24VAC	EPV742-24VAC
			9-30VDC/7-24VAC	EPV742-SM
-	RS485 Modbus	72x72	230VAC	EPV742-230VAC-RSI
			110VAC	EPV742-110VAC-RSI
			24VAC	EPV742-24VAC-RSI
			9-30VDC/7-24VAC	EPV742-SM-RSI
8A Relay NO	-	72x72	230VAC	EPV742-R-230VAC
			110VAC	EPV742-R-110VAC
			24VAC	EPV742-R-24VAC
			9-30VDC/7-24VAC	EPV742-R-SM
8A Relay NO	RS485 Modbus	72x72	230VAC	EPV742-R-230VAC-RSI
			110VAC	EPV742-R-110VAC-RSI
			24VAC	EPV742-R-24VAC-RSI
			9-30VDC/7-24VAC	EPV742-R-SM-RSI

EPV542

Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
-	-	54x94	230VAC	EPV542-230VAC
			110VAC	EPV542-110VAC
			24VAC	EPV542-24VAC
			9-30VDC/7-24VAC	EPV542-SM
-	RS485 Modbus	54x94	230VAC	EPV542-230VAC-RSI
			110VAC	EPV542-110VAC-RSI
			24VAC	EPV542-24VAC-RSI
			9-30VDC/7-24VAC	EPV542-SM-RSI
8A Relay NO+NC	-	54x94	230VAC	EPV542-R-230VAC
			110VAC	EPV542-R-110VAC
			24VAC	EPV542-R-24VAC
			9-30VDC/7-24VAC	EPV542-R-SM
8A Relay NO+NC	RS485 Modbus	54x94	230VAC	EPV542-R-230VAC-RSI
			110VAC	EPV542-R-110VAC-RSI
			24VAC	EPV542-R-24VAC-RSI
			9-30VDC/7-24VAC	EPV542-R-SM-RSI

EPV942

Output Type	Modbus Selection	Dimensions (mm)	Power Supply	Part Number
-	-	96x96	230VAC	EPV942-230VAC
			110VAC	EPV942-110VAC
			24VAC	EPV942-24VAC
			9-30VDC/7-24VAC	EPV942-SM
-	RS485 Modbus	96x96	230VAC	EPV942-230VAC-RSI
			110VAC	EPV942-110VAC-RSI
			24VAC	EPV942-24VAC-RSI
			9-30VDC/7-24VAC	EPV942-SM-RSI
10A Relay NO+NC	-	96x96	230VAC	EPV942-R-230VAC
			110VAC	EPV942-R-110VAC
			24VAC	EPV942-R-24VAC
			9-30VDC/7-24VAC	EPV942-R-SM
10A Relay NO+NC	RS485 Modbus	96x96	230VAC	EPV942-R-230VAC-RSI
			110VAC	EPV942-R-110VAC-RSI
			24VAC	EPV942-R-24VAC-RSI
			9-30VDC/7-24VAC	EPV942-R-SM-RSI
10A 2 Relay NO+NC	-	96x96	230VAC	EPV942-2R-230VAC
			110VAC	EPV942-2R-110VAC
			24VAC	EPV942-2R-24VAC
			9-30VDC/7-24VAC	EPV942-2R-SM
10A 2 Relay NO+NC	RS485 Modbus	96x96	230VAC	EPV942-2R-230VAC-RSI
			110VAC	EPV942-2R-110VAC-RSI
			24VAC	EPV942-2R-24VAC-RSI
			9-30VDC/7-24VAC	EPV942-2R-SM-RSI

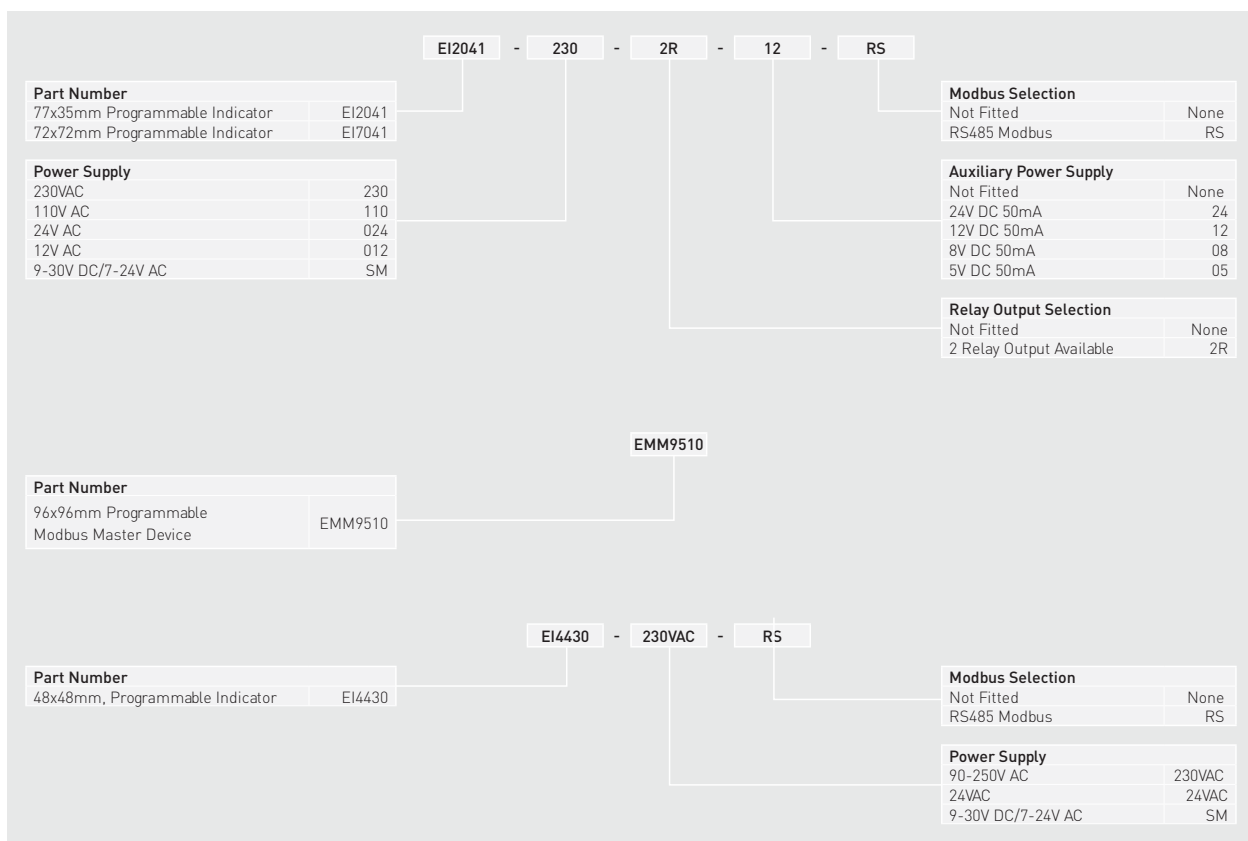


PROCESS INDICATORS

MODEL	EMM9510	EI4430	EI2041	EI7041
Dimensions (mm)	W96xH96xD81	W48xH48xD87	W77xH35xD61	W72xH72xD97
Display	5 digits	4 digits LCD display	4 digits	
Input Type	-	0/2-10V DC, 0/4-20mA DC	0-1V DC, 0-10V DC, 0-20mA DC and 4-20mA DC	
Scale Range	-	Adjustable between -1999 ... 9999	Adjustable between -1999 ... 4000	
Memory Function	-	-	Store and indicate maximum and minimum values	
Control Output	-	-	Relay, 8A (NO) *	
Alarm Output	-	-	Relay, 8A (NO) *	
Control Type	-	-	On-Off	
Power Supply	90-250V AC, 50/60Hz	90-250V AC, 24V AC 50/60Hz or 9-30V DC / 7-24V AC *	230V AC, 110V AC, 24V AC, 50/60Hz, 12V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50-60Hz *	
Wiring	Plug-in terminals		Screw-terminals	Plug-in terminals
Auxiliary Power Supply	-	-	5V DC, 8V DC, 12V DC, 24V DC, 50mA *	
Modbus Selection	RS485 ModBus		RS485 ModBus *	

* order option

ORDERING CODE



EMM9510

Programmable Modbus Master Device	Part Number
<ul style="list-style-type: none"> • 96x96mm sized • 3,5-inch, 5 Digits graphical TFT display • Up to 10 address read • Slave registers can be updated via master device • Multiple and/or single read value display • Baudrate selection 	EMM9510

EI4430

Output Properties			Modbus Selection	Dimensions (mm)	Power Supply	Part Number
Control	Alarm	Auxiliary Power Supply				
-	-	-	-	48x48	90-250VAC 24VAC 9-30VDC/7-24VAC	EI4430-230VAC EI4430-24VAC EI4430-SM
-	-	-	-	48x48	230VAC 24VAC 9-30VDC/7-24VAC	EI4430-230VAC-RS EI4430-24VAC-RS EI4430-SM-RS

EI2041

Output Properties			Modbus Selection	Dimensions (mm)	Power Supply	Part Number
Control	Alarm	Auxiliary Power Supply				
-	-	-	-	77x35	230VAC 110VAC 24VAC 12VAC 9-30VDC/7-24VAC	EI2041-230 EI2041-110 EI2041-024 EI2041-012 EI2041-SM
8A Relay NO	8A Relay NO	-	-	77x35	230VAC 110VAC 24VAC 12VAC 9-30VDC/7-24VAC	EI2041-230-2R EI2041-110-2R EI2041-024-2R EI2041-012-2R EI2041-SM-2R

EI7041

Output Properties			Modbus Selection	Dimensions (mm)	Power Supply	Part Number
Control	Alarm	Auxiliary Power Supply				
-	-	-	-	72X72	230VAC 110VAC 24VAC 12VAC 9-30VDC/7-24VAC	EI7041-230 EI7041-110 EI7041-024 EI7041-012 EI7041-SM
8A Relay NO	8A Relay NO	-	-	72X72	230VAC 110VAC 24VAC 12VAC 9-30VDC/7-24VAC	EI7041-230-2R EI7041-110-2R EI7041-024-2R EI7041-012-2R EI7041-SM-2R

1. Auxiliary Power Supply is order option. In case of Auxiliary Power Supply enquiry please add the following extensions:

-24:	24VDC, 50mA
-12:	12VDC, 50mA
-08:	8VDC, 50mA
-05:	5VDC, 50mA

2. Auxiliary Power Supply carry an additional option charge

Example:	EI2041-230-12
Example:	EI7041-SM-05
Example:	EI2041-230-2R-12
Example:	EI7041-SM-2R-05

3. ModBus Communication is order option. In case of communication enquiry please add -RS at the end of Part Number.

4. ModBus Communication carry an additional option charge

Example:	EI2041-230-RS
Example:	EI7041-SM-RS
Example:	EI2041-230-2R-RS
Example:	EI7041-SM-2R-RS

5. ModBus Communication and Auxiliary Power Supply carry an additional charge

Example:	EI2041-230-12-RS
Example:	EI7041-SM-08-RS
Example:	EI2041-230-2R-12-RS
Example:	EI7041-SM-2R-05-RS



TEMPERATURE INDICATORS

MODEL	EI2410	ETI741
Dimensions (mm)	W77xH35xD61	W72xH72xD97
Display	4 digits	
Input Type	NTC	PT 100 and TC
Scale Range	-60.0...150.0°C -60...150°C	PT 100, -99.9...300.0°C PT 100, -200...600°C J, 0...600°C K, 0...1200°C S, 0...1600°C R, 0...1600°C T, 0...400°C
°C/°F	✓	
Power Supply	230V AC, 110V AC, 50/60Hz, 24V AC/DC, 12V AC/DC or 9-30V DC / 7-24V AC, 50/60Hz *	230V AC, 110V AC, 24V AC, 50/60Hz or 9-30V DC / 7-24V AC, 50-60Hz *
Wiring	2.5mm ² terminals	2.5mm ² screw terminals

* order option

ORDERING CODE

EI2410 - 230VAC		Power Supply	
Part Number 77x35mm, Temperature Indicator	EI2410	230VAC	230
		110VAC	110
		24V AC/DC	024
		12V AC/DC	012
ETI741 - 230VAC		Power Supply	
Part Number 72x72mm, Temperature Indicator	ETI741	230VAC	230VAC
		110VAC	110VAC
		24VAC	24V AC
		9-30V DC/7-24V AC	SM

EI2410

Input Type	Scale (°C)	Dimensions (mm)	Power Supply	Part Number
NTC	-60.0...150.0	77x35	230VAC	EI2410-230
			110VAC	EI2410-110
			24VAC/DC	EI2410-024
			12 VAC/DC	EI2410-012

ETI741

Input Type	Scale (°C)	Dimensions (mm)	Power Supply	Part Number
PT100, TC	PT 100, -99.9...300.0 PT 100, -200...600 J, 0...600 K, 0...1200 T, 0...400 S, 0...1600 R, 0...1600	72x72	230VAC	ETI741-230VAC
PT100, TC		72x72	110VAC	ETI741-110VAC
	24VAC		ETI741-24VAC	
	9-30VDC/7-24VAC		ETI741-SM	

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Protection Relays



MODEL	EPCR02 Current Protection Relay	EPVR02 Voltage Protection Relay	EPMR02 Motor Protection Relay
Dimensions (mm)	W18xH84xD62 mm TH35 rail mounted		
Input Type	0-5A AC	3 x 125-310V AC	3 x 125-310 / 500V AC and PTC
Functions	One phase current protection	One and 3 phase voltage protection	Phase failure protection
	Over or under current protection	Over and/or under current protection	Phase sequence protection
	Adjustable current set value	Adjustable voltage set value	Adjustable voltage/ asymmetry protection
	Adjustable initial error state delay	Phase failure protection	Over and/or under voltage protection
	Adjustable alarm state delay	Phase sequence protection	PTC protection
Frequency Range	45Hz-65Hz		
Reset Input	Maximum 0.01s		
Control Output	Relay, 10A (NO+NC)		Relay, 10A (NO) (for EPMR02-N-P and EPMR02-N-F) Relay, 10A (NO+NC) (for EPMR02-N-V and EPMR02-N-A)
Power Supply	125-310V AC	-	
Wiring	Screw-terminals		

SELECTION GUIDE

Part Number	Neutral Connection	Phase Failure Control	Phase Sequence Control	PTC (over heat control)	Over-Under Voltage Control	Adjustable Voltage	Fixed (20%) Asymmetry	Adjustable Asymmetry
EPMR02-N-A	✓	✓	✓	✓	✓			✓
EPMR02-N-V	✓	✓	✓	✓	✓	✓	✓	
EPMR02-N-F	✓	✓	✓					
EPMR02-N-P	✓	✓						

ORDERING CODE

EPMR02 - N - A

Part Number
Rail mount motor protection relay

Protection Type

Only for Phase Failure and Sequence	F
Adjustable asymmetry protection	A
Adjustable voltage protection	V
Phase Failure protection	P

Connection Type

Neutral connection	N
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EPVR02 Voltage Protection Relay

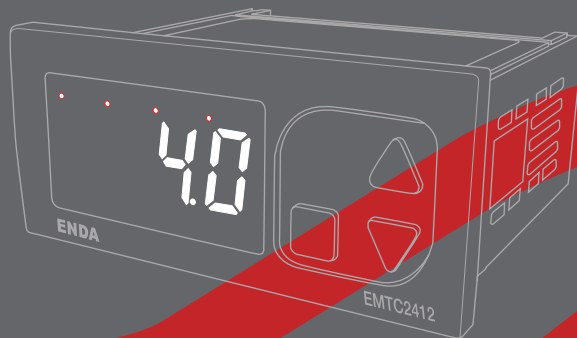
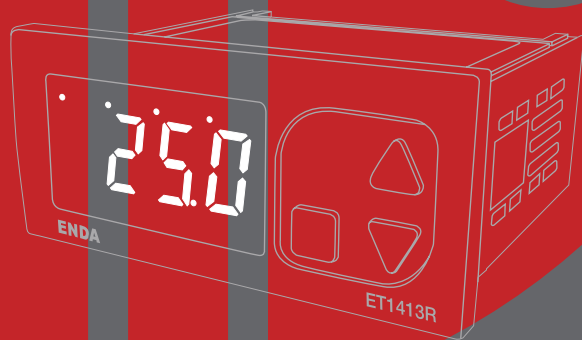
Input Type	Output Type	Dimensions (mm)	Power Supply	Part Number
3 x 125-310V AC	Relay 10A (NO+NC)	18x84	-	EPVR02

EPMR02 Motor Protection Relay

Input Type	Output Type	Dimensions (mm)	Power Supply	Part Number
3 x 125-310V (Phase-Neutral), 3 x 125-500V AC, (Phase-Phase)	Relay 10A (NO)	18x84	-	EPMR02-N-P
	Relay 10A (NO)			EPMR02-N-F
	Relay 10A (NO+NC)			EPMR02-N-V
	Relay 10A (NO+NC)			EPMR02-N-A

EPCR02 Current Protection Relay

Input Type	Output Type	Dimensions (mm)	Power Supply	Part Number
0-5A AC	Relay 10A (NO+NC)	18x84	125-310VAC	EPCR02



Special Purpose Controllers

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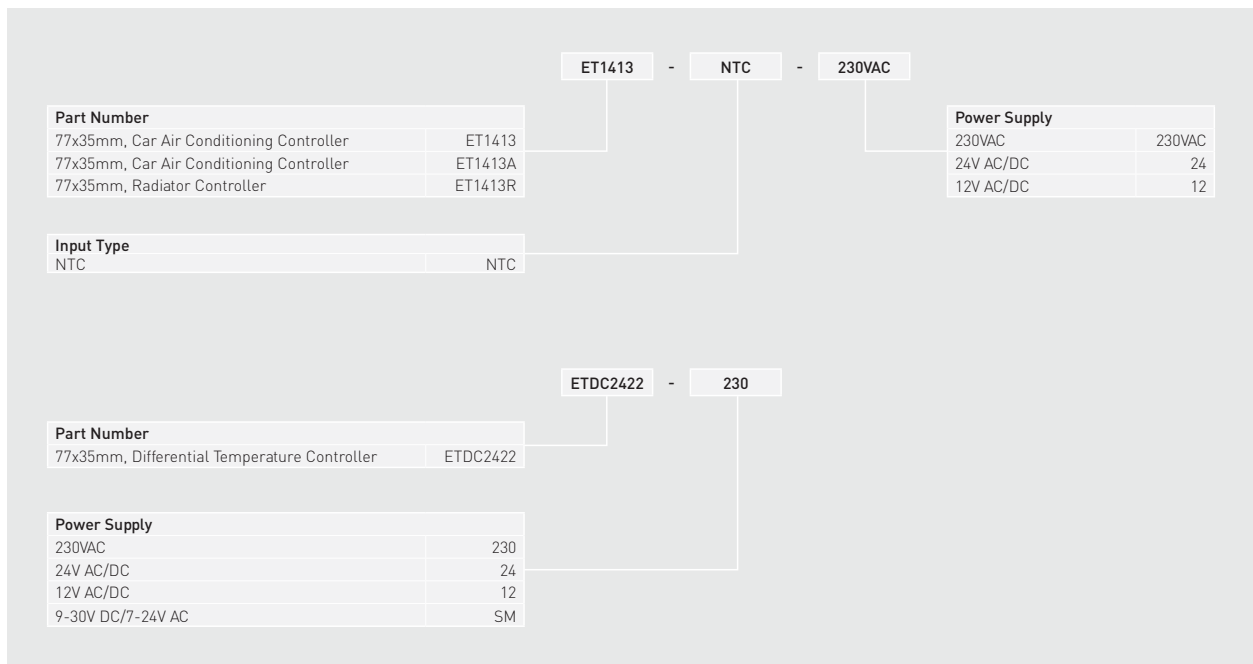
Special Purpose Controllers



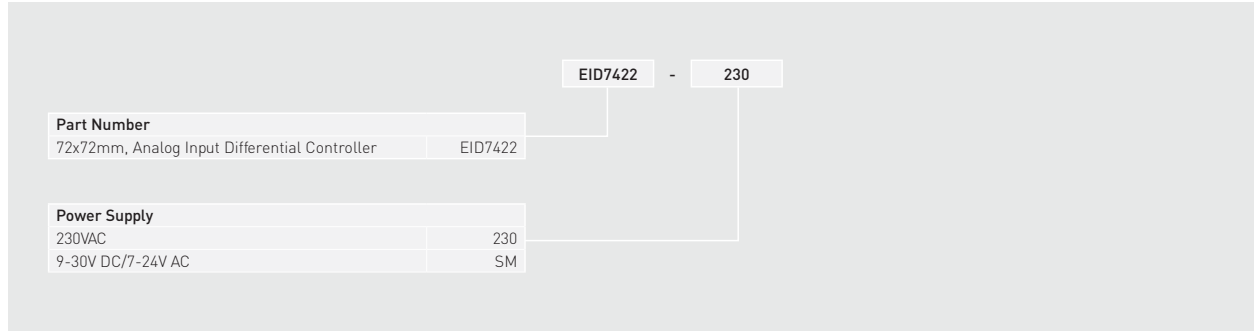
MODEL	ET1413 Car Air Conditioning Controller	ET1413A Car Air Conditioning Controller	ET1413R Radiator Controller	ETDC2422 Differential Temperature Controller	EID7422 Analog Input Differential Controller
Dimensions (mm)	W77xH35xD71			W77xH35xD61	W72xH72xD97
Display	4 digits				2x4 digits
Input Type	NTC			2xNTC	2x0/4-20mA, 0-1/10V
Scale Range	-50.0 ... + 110.0 °C		0.0 ... + 150.0 °C	-60.0 ... +150.0 °C	-999 ... 9999
°C/°F	-			✓	-
Heating/Cooling	-		✓	-	
Functions	Two manuel fan controls and Manuel air-condition control	Two manuel fan controls and Manuel air-condition control	Circulation control, Coal control and Fan control	Pump and Heater Control Collector Control and Boiler Control	Differential Controller (Output above or below the difference value)
Power Supply	230V AC, 50/60Hz, 24V AC/DC, 12V AC/DC, or 9-30V DC / 7-24V AC, 50-60Hz *				230V AC or 9-30V DC / 7-24V AC, 50-60Hz *
Wiring	2.5mm ² screw terminals				2.5mm ² screw terminals
Control Output	For fan1: Relay, 8A (NO+NC) For fan2: Relay, 8A (NO) For air-condition: Relay, 8A (NO)		For circulation: Relay, 8A (NO+NC) For coal: Relay, 8A (NO) For fan: Relay, 8A (NO)	For pump: Relay, 8A (NO) For heater: Relay, 8A (NO+NC)	Out1: Relay, 10A (NO) Out2: Relay, 10A (NO)
Control Type	Manuel		On-Off		-

* order option

ORDERING CODE



ORDERING CODE



ET1413 Manual Fan and Manual Air Conditioning Control

Input Type	Output Properties			Scale (°C)	Dimensions (mm)	Communications	Power Supply	Part Number
	Fan 1	Fan 2	Air Conditioning					
NTC	Relay, 8A (NO+NC)	Relay, 8A (NO)	Relay, 8A (NO)	-50.0...+110.0	77x35	-	230VAC	ET1413-NTC-230VAC
							24V AC/DC	ET1413-NTC-24
							12V AC/DC	ET1413-NTC-12

ET1413A Manual Fan and On-Off Air Conditioning Control

Input Type	Output Properties			Scale (°C)	Dimensions (mm)	Communications	Power Supply	Part Number
	Fan 1	Fan 2	Air Conditioning					
NTC	Relay, 8A (NO+NC)	Relay, 8A (NO)	Relay, 8A (NO)	-50.0...+110.0	77x35	-	230VAC	ET1413A-NTC-230VAC
							24V AC/DC	ET1413A-NTC-24
							12V AC/DC	ET1413A-NTC-12

ET1413R Circulation, Coal and Fan Control

Input Type	Output Properties			Scale (°C)	Dimensions (mm)	Communications	Power Supply	Part Number
	Circulation	Coal	Fan					
NTC	Relay, 8A (NO+NC)	Relay, 8A (NO)	Relay, 8A (NO)	0.0...+150.0	77x35	-	230VAC	ET1413R-NTC-230VAC
							24V AC/DC	ET1413R-NTC-24
							12V AC/DC	ET1413R-NTC-12

ETDC2422 Differential Temperature Controller

Input Type	Output Properties		Scale (°C)	Dimensions (mm)	Communications	Power Supply	Part Number
	Pump	Heater					
2xNTC	Relay, 8A (NO+NC)	Relay, 8A (NO)	-60.0+150.0	77x35	-	230VAC	ETDC2422-230
						24V AC/DC	ETDC2422-24
						12V AC/DC	ETDC2422-12
						9-30V DC/7-24V AC	ETDC2422-SM

EID7422 Analog Input Differential Controller

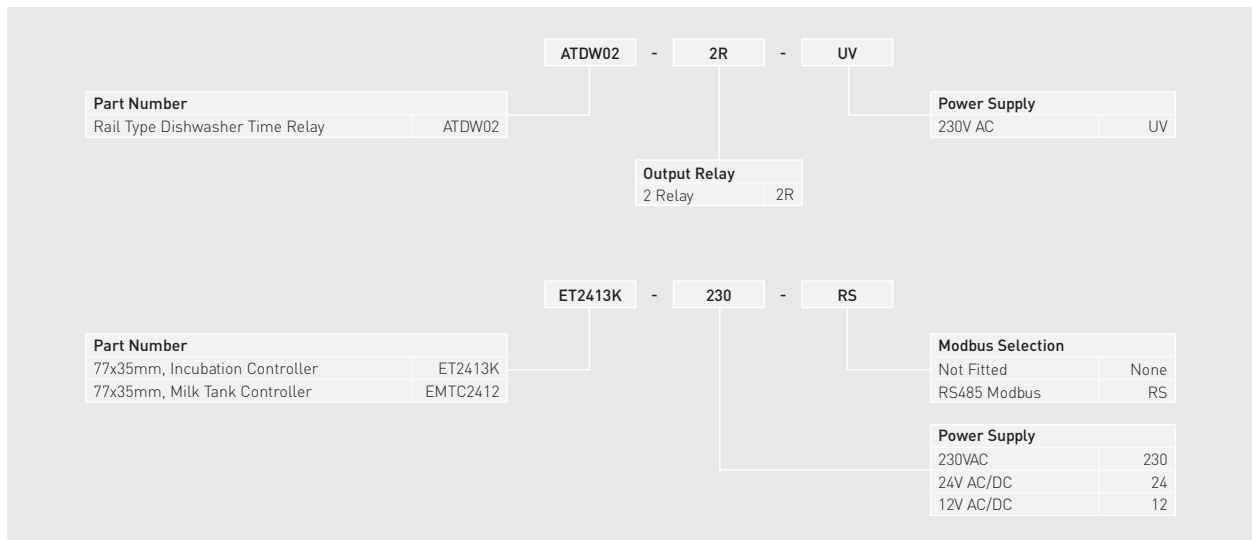
Input Type	Output Properties			Scale (°C)	Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Output 1	Output 2	Power Supply Output					
0/4-20mA 0-1/10V	Relay, 10A (NO)	Relay, 10A (NO)	50mA 15VDC	-999...9999	72x72	-	230VAC	EID7422-230
							9-30V DC/7-24V AC	EID7422-SM



MODEL	ATDW02 Washing Machine Time Relay	ET2413K Incubator Temperature Controller	EMTC2412 Milk Tank Controller
Dimensions (mm)	W18xH90xD66	W77xH35xD61	
Display		4 digits	
Input Type	-	NTC	
Scale Range	-	-60.0 ... + 150.0 °C	
°C/°F	-	✓	
Heating/Cooling	-	-	
Cooling/Mixer			✓
Functions	5 different washing time, Adjustable rinsing time	Egg incubator/hatcher controller Temperature control, Fan timer control Rotator timer control	Milk Tank Controller, Cooling Control, Timer Mixer and Compressor protection parameters
Power Supply	230V AC	230V AC, 50/60Hz, 24V AC/DC, 50/60Hz or 12V AC/DC, 50/60Hz *	
Wiring	2.5mm ² klemens		
Control Output	For Washing / Rinsing: Relay, 10A (NO)	For heating: Relay, 8A (NO+NC) For humidification: Relay, 8A (NO) For rotator: Relay, 8A (NO)	For Compressor: Relay, 20A (NO) For dialing: Relay, 8A (NO+NC)
Control Type	-	On-Off	
Modbus Selection	-	RS485 ModBus *	

* order option

ORDERING CODE



ATDW02 Washing Machine Time Relay

Input Type	Output Properties		Scale (°C)	Dimensions (mm)	Modbus Selection	Power Supply	Part Number
	Washing	Rinse					
-	Relay, 10A (NO)	Relay, 10A (NO)	-	18x90	-	230VAC	ATDW02-2R-UV

ET2413K Incubator Temperature Controller

Input Type	Output Properties			Scale (°C)	Dimensions (mm)	Communications	Power Supply	Part Number
	Heater	Humidity	Turning					
NTC	Relay, 8A (NO+NC)	Relay, 8A (NO)	Relay, 8A (NO)	-60.0...+150.0	77x35	-	230VAC	ET2413K-230
							24V AC/DC	ET2413K-24
							12V AC/DC	ET2413K-12
NTC	Relay, 8A (NO+NC)	Relay, 8A (NO)	Relay, 8A (NO)	-60.0...+150.0	77x35	RS485 ModBus	230VAC	ET2413K-230-RS
							24V AC/DC	ET2413K-24-RS
							12V AC/DC	ET2413K-12-RS

EMTC2412 Milk Tank Controller

Input Type	Output Properties		Scale (°C)	Dimensions (mm)	Communications	Power Supply	Part Number
	Compressor	Mixer					
NTC	Relay, 20A (NO)	Relay, 8A (NO+NC)	-60.0...+150.0	77x35	-	230VAC	EMTC2412-230
						24V AC/DC	EMTC2412-24
						12V AC/DC	EMTC2412-12
NTC	Relay, 20A (NO)	Relay, 8A (NO+NC)	-60.0...+150.0	77x35	RS485 ModBus	230VAC	EMTC2412-230-RS
						24V AC/DC	EMTC2412-24-RS
						12V AC/DC	EMTC2412-12-RS

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Temperature Sensors



NTC PROBE

MODEL	NTC-APT-1,5T	NTC-APP-xxP	NTC-APS-xxS	NTC-LPS-xxS
Sensor Type	NTC			
Scale Range	-50...+105°C	-30...+80°C	-60...+150°C	
Cable Material	Thermoplastic shell	Plastic shell	Stainless steel shell	
Cable Type	Thermoplastic	PVC	Silicone	
Cable Length	1,5 mt.	Cable length is order option *		

* order option

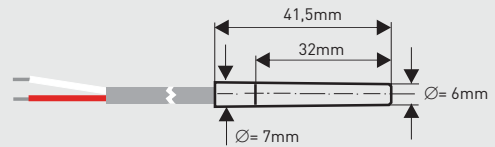
ORDERING CODE

NTC-APT--1,5T Thermoplastic Cap Air Probe



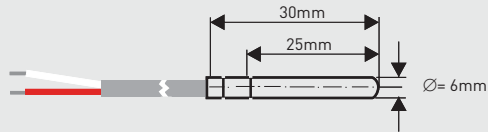
Cable length is standard and 1,5mt.

NTC-APP--1,5P Plastic Cab Air Probe



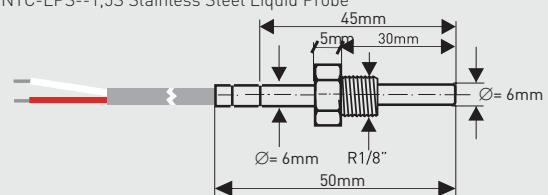
Cable length is order option.

NTC-APS--1,5S Stainless Steel Air Probe



Cable length is order option.

NTC-LPS--1,5S Stainless Steel Liquid Probe



Cable length is order option.

- 1m silicone cable
- 1m PVC cable
- The cable length of the NTC-APT-1.5T probe is 1.5 meters as standard
- The cable length of other probes must be specified in the order

Part Number

NTC-APT-1,5T
 NTC-APP-1,5P
 NTC-APS-1,5S
 NTC-LPS-1,5S



BAYONET TYPE THERMOCOUPLES & RTD'S

Element Type	Process Connection	Protecting Tube Diameter	Immersion Length	Cable Length	Part Number
J	M12 x 1.75	6mm	30mm	1 meter	ETB30F06-1Ç
				1.5 meter	ETB30F06-1.5Ç
				2 meter	ETB30F06-2Ç
				3 meter	ETB30F06-3Ç
				4 meter	ETB30F06-4Ç
				5 meter	ETB30F06-5Ç
J	M12 x 1.75	8mm	12mm	1 meter	ETB12F08-1Ç
				1.5 meter	ETB12F08-1.5Ç
				2 meter	ETB12F08-2Ç
				3 meter	ETB12F08-3Ç
				4 meter	ETB12F08-4Ç
				5 meter	ETB12F08-5Ç
Pt-100	M12 x 1.75	6mm	30mm	1 meter	EP0630-1Ç
				2 meter	EP0630-2Ç
				3 meter	EP0630-3Ç
				4 meter	EP0630-4Ç
				5 meter	EP0630-5Ç
Pt-100	M12 x 1.75	8mm	12mm	1 meter	EP0812-1Ç
				2 meter	EP0812-2Ç
				3 meter	EP0812-3Ç
				4 meter	EP0812-4Ç
				5 meter	EP0812-5Ç



HEADED TYPE THERMOCOUPLES & RTD'S

Element Type	Protecting Tube Diameter	Number Of Element	Process Connction	Immersion Lenght	Part Number
J	8mm	Single element	Screw Connection (thread) 1/2"	100 mm	ETD01-1J1K08-10R1/2
				150 mm	ETD01-1J1K08-15R1/2
				250 mm	ETD01-1J1K08-25R1/2
				350 mm	ETD01-1J1K08-35R1/2
				500 mm	ETD01-1J1K08-50R1/2
J	8mm	Single element	-	100 mm	ETD01-1J1K08-10
				150 mm	ETD01-1J1K08-15
				250 mm	ETD01-1J1K08-25
				350 mm	ETD01-1J1K08-35
				500 mm	ETD01-1J1K08-50
Pt-100	8mm	Single element	Screw Connection (thread) 1/2"	100 mm	EP02-1K08-10Ü
				150 mm	EP02-1K08-15Ü
				250 mm	EP02-1K08-25Ü
				350 mm	EP02-1K08-35Ü
				500 mm	EP02-1K08-50Ü
				700 mm	EP02-1K08-70Ü
Pt-100	8mm	Double element	Screw Connection (thread) 1/2"	100 mm	EP02-2K08-10
				150 mm	EP02-2K08-15
				250 mm	EP02-2K08-25
				350 mm	EP02-2K08-35
				500 mm	EP02-2K08-50
				700 mm	EP02-2K08-70

ENDA Compensation Cables

Element Type	Conductor Cross-Section (mm ²)	Part Number
J (Fe-Const)	2 x 0,35	KÇ 2x0,35-J-SCM
	2 x 0,75	KÇ 2x0,75-J-SCM
	2 x 1,5	KÇ 2x1,5-J-SCM
K (NiCr-Ni)	2 x 0,75	KÇ 2x0,75-K-SCM
	2 x 1,5	KÇ 2x1,5-K-SCM

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Human Machine Interface



MODEL	MT6050iP	MT6070iP	MT8070iP
Dimensions (mm)	W128xH102xD32	W200.4xH146.5xD34	
Display	4,3" TFT	7" TFT	
Resolution	480x272	800x480	
Colors	65536		
Back Light	LED		
Brightness	500 cd/m ²	350 cd/m ²	
Backlight Life Time	>30.000 hour		
Touch Panel	4 wire resistive type		
Processor	32bit 400MHz RISC CPU		
Memory	64MB RAM, 128MB		
Real Time Clock	✓		
USB Host	-	USB 1.1x1	
USB client (Mini USB)	USB 2.0x1		
Ethernet	-		✓
COM Port	COM1: RS232/RS485	COM1: RS232	COM1: RS232
	-	COM2: RS485	COM2: RS485
	COM3: RS485	-	
Supply	24V DC		
Ambient Temperature	0 ~ 50°C		
Storage Temperature	-20 ~ 60°C		
Software	EasyBuilder8000 V4.65.10 or later versions		

MT6050IP, MT6070IP, MT8070IP

Part Number
MT6050IP
MT6070IP
MT8070IP



ENDA

Accessories

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Accessories



MODEL	ECON-485 USB/RS 485 - RS 422 CONVERTER
Compatibility	USB 1.1 ve USB 2.0 standards
Standards	For RS-485/422, it is available TIA/EIA standards
USB Signal Inputs	VCC, DATA+, DATA-, GND, FG
RS - 485 Signal Outputs	T/R+, T/R-, GND
RS - 422 Signal Outputs	TXD+, TXD-, RXD+, RXD-, GND
Operation Mode	Asynchronous working, point-to-point or point-to-multipoint 2 wires (half duplex) 4 wires (full duplex)
Direction Control	Data-flow direction is controlled automatically
Baud Rate	300-921,600bps (Automatically detect the serial port signal rate)
Load Capability	Support point-to-multipoint transmission. (Each converter can connect 32 RS-422 or RS-485 interface equipment)
Maximum Cable Length	For RS 485/422 port: 1.2km (921,600bps-300bps) For USB port: Max. 5mt
ESD (Electro-Static Discharge)	±15KV
Interface Protection	600W/ms
Connection	USB port: A Type male interface RS 485/422 port: 5-pin connection pole
Signal Indication	Power LED display (PWR), receive LED display (RXD), send LED display (TXD)
Cabling	Twisted-pair cable or shielded cable
Dimensions	W62xH33xD19mm
Ambient/Storage Temperature	-40 °C ~ 85 °C
Relative Humidity	%5 ~ %95 RH
Operation System	Supports Windows98, Win7, Win8, Win10, Linux and Mac OS



MODEL	Transformer
Input	230V AC +%10 -%20, 50/60Hz
Output	12V AC
Power	3W

ECON-485, TRAFÖ

Part Number
ECON-485
Transformer

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