ASCON TECNOLOGIC

EVERYTHING UNDER CONTROL

REFRIGERATION CATALOGUE 2020

INDEX

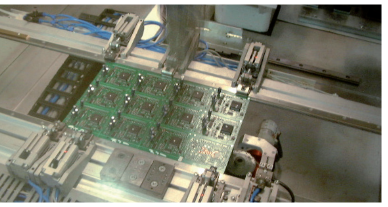
COMPANY PROFILE

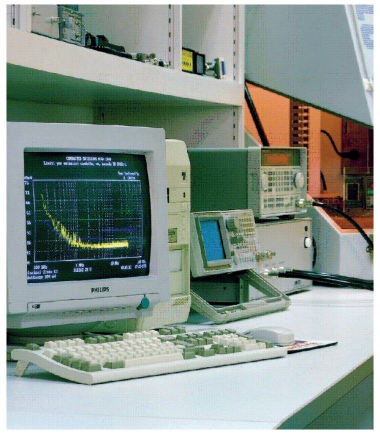
Ascon Tecnologic is an Italian company that develops, manufactures and commercializes a complete range of products for the regulation and automation of machinery and systems in the manufacturing and processing sectors as well as that of industrial and commercial refrigeration.
The group Ascon Tecnologic has more than 200 employees and, in its productive plants, realizes every year over a million of instruments.
Ascon Tecnologic operates in over 50 countries with 6 branches, its own agents and a distribution network, offering clients sales and after-sales assistance.

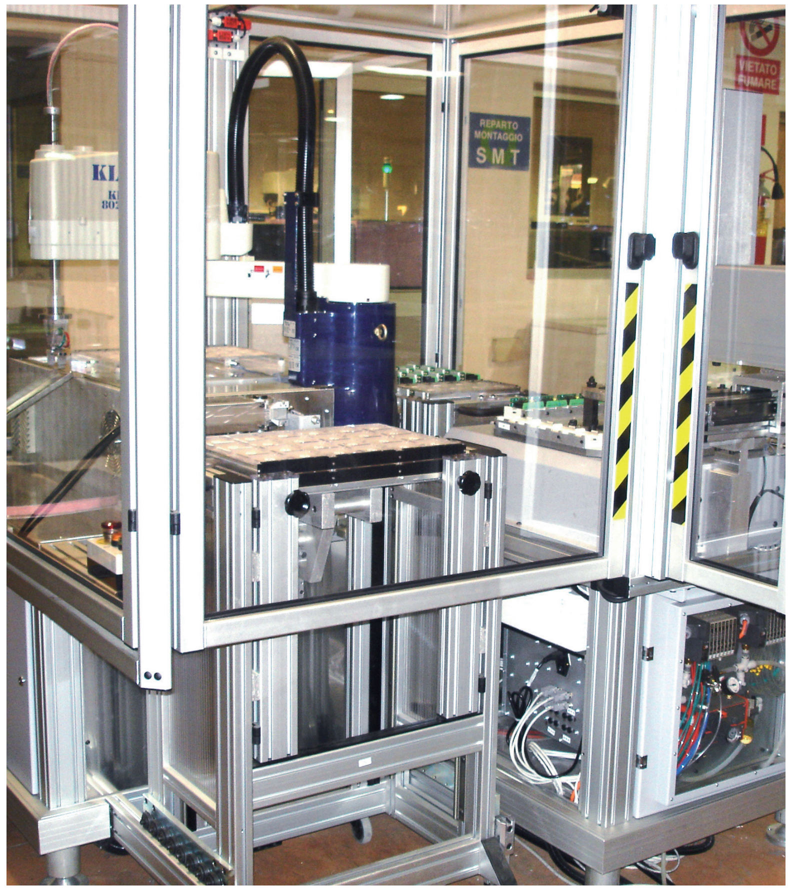
Manufacturing unit, Manaus (Brazil).

Headquarters, offices, R&D, Manufacturing unit, Vigevano (Italy).

QUALITY CERTIFICATION / SAFETY AND APPROVALS







Ascon Tecnologic S.r.l. has obtained:

- the certification of "Quality System" in conformity to UNI EN ISO 9001:2008 released by the corporate certifier Det Norske Veritas Italy S.r.l.

- the "Management System Certificate" in conformity to OHSAS 18001:2007 released by the corporate certifier DNV GL Business Assurance Italia S.r.l.

The instruments are developped for the use in conformity to the actual compliance, as concern the CE mark according to Directives 2006/95/CE (Low Voltage) and 2004/108/CE (EMC).
The applicable rules, according to the model, are:

Safety
- EN61010-1
- EN60730-1
- UL873 for use conforming as foreseen by Underwriters Laboratory Inc. (only for approved instruments).

EMC
EN61326-1

Remarks: please make reference to the documentation and the individual certifications for details of the applicable norms.

MANAGEMENT SYSTEM CERTIFICATION
DNV·GL
ISO 9001 = ISO 45001

REFRIGERATION

THERMOSTATS AND CONTROLLERS

Cooling is cool

A complete range of products dedicated to the refrigeration both commercial and industrial: from the simple thermostat to the refrigerating unit controller.

THERMOSTATS AND CONTROLLERS

FEATURES		Z30	Z31A	Z31	Z31E	Z31Y	Y39	Y39C	Y39E	Y33	W09	W09Y	W09C	X33H	X34	E51A	E51	TLZ12P	TLY25	TLY26	TLY29	TLY35	TLZ35	TLW24	TLB29	TLB30	TLB55	B05
Dimensions (mm)	78 x 35	●	●	●	●	●	●	●	●	●				●	●			●	●	●	●							
	68 x 35															●	●											
	75 x 122										●	●	●															
	70 x 84 4 DIN rail module																					●	●					
	185 x 38																							●				
	92 x 92																											●
	96 x 50																								●	●		
	135 x 97																										●	
Single display		●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	(*)
Dual display														●														
Digit		3	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3	4	3	3	3	4	4	4	2	2	2	(*)
"Sensitive Touch" keyboard		●	●	●	●	●	●	●	●	●					●										●	●	●	
Input	NTC	●																										
	PTC-NTC		●	●	●	●					●	●	●			●	●		●	●	●	●	●		●	●	●	
	PTC-NTC-4... 20 mA													●														
	PTC-NTC-PT1000						●	●	●	●					●									●				●
	NTC-PT1000																	●										
	Digital	1			1	1	1	1	1	1		1	1		2+2			1	1	1	1	1	1	1	2	2	2	3
Relay outputs		1	1	1	2	2	3	3	3	3	1	3	3	4	4	1	1	2	4	4	3	4	2	4	3	4	4	4
Power supply	12 Vac/Vdc		●	●	●	●	●	●	●							●	●	●	●	●	●	●	●					
	12... 24 Vac/Vdc		●	●	●	●	●	●	●	●																		
	24 Vac/Vdc		●	●	●	●	●	●	●									●				●	●					
	100... 240 Vac		●	●	●	●	●	●	●		●	●	●	●	●			●	●		●	●	●	●	●	●	●	●
	115Vac or 230 Vac	●								●						●	●											
Control	ON/OFF	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ENERGY SAVING functions					●				●	●					●													
Defrosting control at intervals time by stopping compressor		●		●							●						●	●						●				
Defrosting control at intervals time, at reaching temperature by stopping compressor, by means of electrical heating or hot gas/reverse cycle					●	●	●	●	●	●		●	●	●	●				●	●	●	●			●	●	●	●
REAL TIME CLOCK function								●					●		●				●	●	●	●						
HACCP function															●													
RS485 on board															●					●		●						
CE certification		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
UL approval			●	●	●	●	●	●	●									●	●	●	●	●	●	●	●	●	●	●
ENEC approval (with "Sensitive Touch" keyboard only)			●	●	●	●	●	●							●										●	●	●	

(*) B05 has no visualization unless connected to external displays P03 or P05.

Z30

- THERMOSTATS AND CONTROLLERS FOR REFRIGERATING UNITS
- SENSITIVE-TOUCH KEYBOARD
- ENERGY SAVING FUNCTIONS
- REDUCED DEPTH

FEATURES

DISPLAY	Z30
Single	3 red or blue digit, h 15.5 mm
INPUTS	
Two	NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)
Digital input	1 digital input for free voltage contacts as alternative to input 2
Accuracy	± 0.5 % fs + 1 digit
OUTPUTS	
One	OUT1: Relay SPST-NO (16A - 1HP 250V, 1/2HP 125 Vac); EN 61810: 16 (9) A - EN 60730: 10 (4) A UL 60730: 12 A Res., 30 LRA, 5 FLA
Relay operations	100000 operations
FUNCTIONAL	
Control	ON/OFF
Defrosting control	At interval time by stopping compressor
Energy Saving functions	Available
GENERAL	
Power supply	115 Vac, 230 Vac ±10% (50/60 Hz)
Power consumption	2 VA approx.
Dimensions / Weight	78 x 35 mm - depth 34 mm or 42.2 mm with plug-in terminals / 105 g approx.
Keyboard	Mechanical or "Sensitive Touch"
Connections	Screw terminal block 1.5 and 2.5 mm² or plug-in connector with screw terminals 1.5 and 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9). Regulation 37/2005/CE (EN13485 air, S, A, 2,- 50°C +90°C wheter used with NTC 103AT11 probe).

CE

HOW TO ORDER

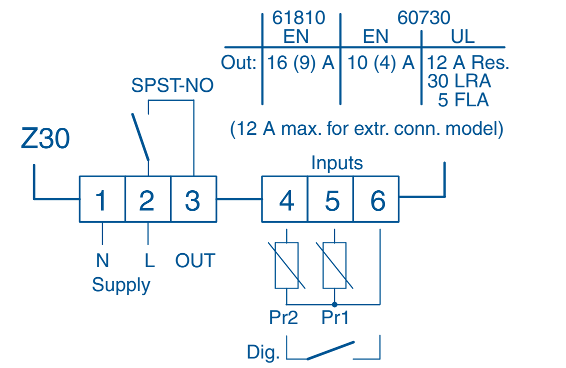
To compose the part number, pls. choose one of the option for each variable

Z30	CODE
KEYBOARD	
Mechanical	-
Sensitive-Touch (*)	S
POWER SUPPLY	
115 Vac	C
230 Vac	D
OUT 1	
Relay SPST NO-16A-AC1	R
CONNECTION	
Plug-in screw type	E
Plug-in screw type, fix part only	N
Fix screw type (standard)	-
DISPLAY	
Blue	B
Red (standard)	-

(*) Capacitive Touch screen keyboard

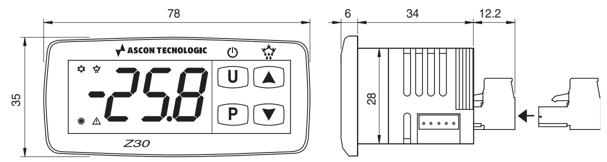
CONNECTIONS

Z30



DIMENSIONS

Z30



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

Z31

- THERMOSTATS AND CONTROLLERS FOR REFRIGERATING UNITS
- SENSITIVE-TOUCH KEYBOARD
- ENERGY SAVING FUNCTIONS

FEATURES

DISPLAY	Z31A	Z31	Z31E	Z31Y
Single	3 red or blue digit, h 15.5 mm			
INPUTS				
One (Z31, Z31A) or Two (Z31E, Z31Y)	PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)		2x PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or 2x NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)	
Digital input	--		1 digital input for free voltage contacts as alternative to input 2	
Accuracy	± 0.5 % fs + 1 digit			
OUTPUTS				
One (Z31, Z31A) or Two (Z31E, Z31Y)	OUT1: Relay SPDT or SPST-NO (16A - 1HP 250V, 1/2HP 125 Vac); EN 61810: 16 (9) A - EN 60730: 10 (4) A UL 60730: 12 A Res., 30 LRA, 5 FLA 12 A max. for plug-in version		Up to 2 relays. OUT1: SPDT or SPST-NO (16A - 1HP 250V, 1/2HP 125 Vac); EN 61810: 16 (9) A - EN 60730: 10 (4) A - UL 60730: 12 A Res., 30 LRA, 5 FLA OUT2: SPDT (8A - 1/2 HP 250 Vac, 1/3 HP 125 Vac); EN 61810: 8 (3) A - EN 60730: 6 (4) A - UL 60730: 6 A Res. 12 A max. for plug-in version	
Relay operations	100000 operations			
FUNCTIONAL				
Control	ON/OFF			
Acoustic alarm	Internal Buzzer (optional)			
Defrosting control	--	At interval time by stopping compressor	At intervals time, at reaching temperature by stopping compressor, by electrical heating or hot gas/reverse cycle	
Energy Saving functions	--		Available	--
Serial communication	TTL Modubus, or RS485 by means of the external module A30 (see "Accessories" section)			
Remote display	By means of module TVRY (see "Indicators" section)			
GENERAL				
Power supply	12 Vac/Vdc, 12...24 Vac/Vdc, 100...240 Vac ±10% (50/60 Hz)			
Power consumption	4 VA approx.			
Dimensions / Weight	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals / 120 g approx.			
Keyboard	Mechanical or "Sensitive Touch"			
Connections	Screw terminal block 2.5 mm² or plug-in connector with screw terminals 2.5 mm²			
Mounting	Flush in panel in 71 x 29 mm hole			
Front protection degree	IP65, mounted in panel with gasket			
Operating / storage temperature	0... +50°C (32... +122°F) /-25... +60°C (-13... +140°F)			
Operating humidity	30... 95 RH% without condensation			
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV\ diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9). Regulation 37/2005/CE (EN13485 air, S, A, 2,- 50°C +90°C wheter used with NTC 103AT11 probe).			

EVERYTHING UNDER CONTROL

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

Z31A / Z31	CODE
KEYBOARD	
Mechanical	-
Sensitive-Touch (*)	S
POWER SUPPLY	
12 Vac/Vdc	F
12... 24 Vac/Vdc	G
100... 240 Vac	H
OUT 1	
Relay SPDT 16A-AC1	S
Relay SPST NO-16A-AC1	R
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTION	
Plug-in screw type	E
Plug-in screw type, fix part only	N
Fix screw type (standard)	-
DISPLAY	
Blue	B
Red (standard)	-

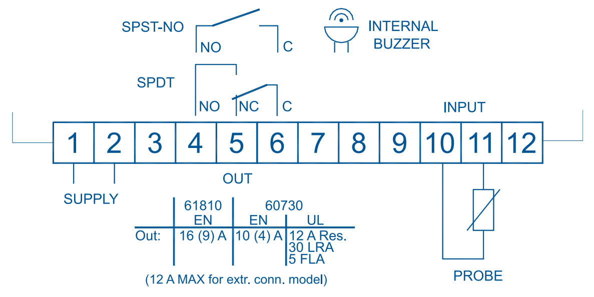
(*) Capacitive Touch screen keyboard

Z31E / Z31Y	CODE
KEYBOARD	
Mechanical	-
Sensitive-Touch (*)	S
POWER SUPPLY	
12 Vac/Vdc	F
12... 24 Vac/Vdc	G
100... 240 Vac	H
OUT 1	
Relay SPDT 16A-AC1	S
Relay SPST NO-16A-AC1	R
OUT 2	
Relay SPDT 5A-AC1	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTION	
Plug-in screw type	E
Plug-in screw type, fix part only	N
Fix screw type (standard)	-
DISPLAY	
Blue	B
Red (standard)	-

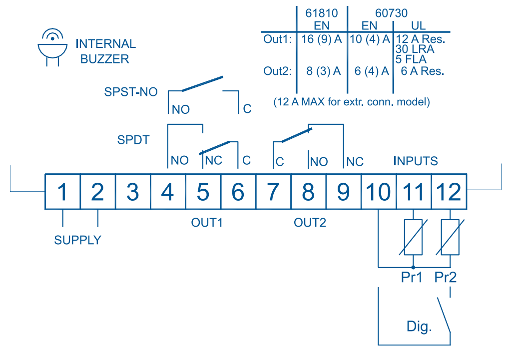
(*) Capacitive Touch screen keyboard

CONNECTIONS

Z31A / Z31

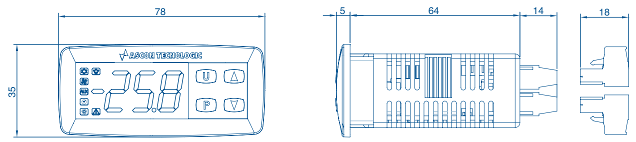


Z31E / Z31Y



DIMENSIONS

Z31A / Z31 / Z31E / Z31Y



The dimensions are expressed in mm

Y39

- CONTROLLERS FOR REFRIGERATING UNITS
- SENSITIVE-TOUCH KEYBOARD
- ENERGY SAVING FUNCTIONS
- UP TO 3 INPUTS AND 3 OUTPUTS

FEATURES

DISPLAY	Y39	Y39C	Y39E
Single	3 red or blue digit, h 15.5 mm		
INPUTS			
Two (Y39E) or Three (Y39, Y39C)	3x PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or 3x NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)	3x PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or 3x NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F) or 3x Pt1000 (1000Ω at 0°C) -99.9... +500°C (-148... +932°F)	2x PTC KTY 81-121 (990Ω a 25°C) -50... +150°C (-58... +302°F) or 2x NTC 103AT-2 (10kΩ a 25°C) -50... +109°C (-58... +228°F)
Digital input	1 digital input for free voltage contacts (as alternative to input 3 for Y39 ed Y39C)		
Accuracy	± 0.5 % fs + 1 digit		
OUTPUTS			
Up to three	OUT1: Relay SPST-NO (16A - 1HP 250V, 1/2HP 125 Vac); EN 61810: 16 (9) A - EN 60730: 10 (4) A - UL 60730: 12 A Res., 30 LRA, 5 FLA OUT2: Relay SPDT (8A, 1/2HP 250Vac, 1/3HP 125Vac): EN 61810: 8 (3) A - EN 60730: 4 (4) A - UL 60730: 4 A Res. OUT3: Relay SPST-NO (5A - 1/8HP 250V, 1/10HP 125 Vac); EN 61810: 5 (2) A - EN 60730: 2 (2) A - UL 60730: 2 A Res. 16A max.(for plug-in version) for common relay (term. 1)		
Relay operations	100000 operations		
FUNCTIONAL			
Control	ON/OFF		
Acoustic alarm	Internal Buzzer (optional)		
Defrosting control	At intervals time, at reaching temperature by stopping compressor, by electrical heating or hot gas/reverse cycle		
Energy Saving functions	--		Available
Real time clock	--	Internal clock to manage defrosting at programmed times	--
Serial communication	TTL Modubus, or RS485 by means of the external module A30 (see "Accessories" section)		
Remote display	By means of module TVRY (see "Indicators" section)		
GENERAL			
Power supply	12 Vac/Vdc, 12...24 Vac/Vdc, 100...240 Vac ±10% (50/60 Hz)		
Power consumption	4 VA approx.		
Dimensions / Weight	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals / 120 g approx.		
Keyboard	Mechanical or "Sensitive Touch"		
Connections	Screw terminal block 2.5 mm² or plu-in connector with screw terminals 2.5 mm²		
Mounting	Flush in panel in 71 x 29 mm hole		
Front protection degree	IP65, mounted in panel with gasket		
Operating / storage temperature	0... +50°C (32... +122°F) /-25... +60°C (-13... +140°F)		
Operating humidity	30... 95 RH% without condensation		
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV\ diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9). Regulation 37/2005/CE (EN13485 air, S, A, 2,- 50°C +90°C wheter used with NTC 103AT11 probe)		

HOW TO ORDER

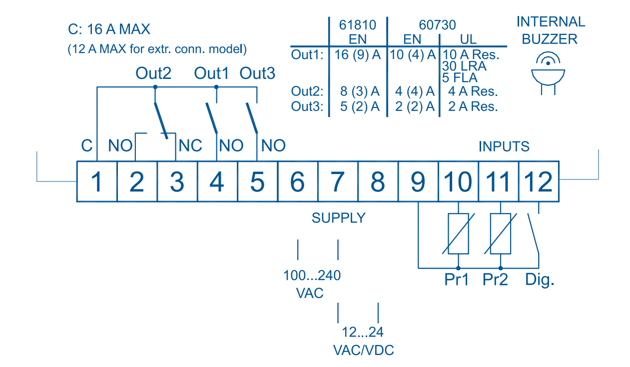
To compose the part number, pls. choose one of the option for each variable

Y39 / Y39C / Y39E	CODE
KEYBOARD	
Mechanical	-
Sensitive-Touch (*)	S
POWER SUPPLY	
12 Vac/Vdc	F
12... 24 Vac/Vdc	G
100... 240 Vac	H
OUT 1	
Relay SPDT 16A-AC1	S
Relay SPST NO-16A-AC1	R
OUT 2	
Relay SPDT 5A-AC1	R
Not available	-
OUT 3	
Relay SPDT 5A-AC1	R
Non prevista	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTION	
Plug-in screw type	E
Plug-in screw type, fix part only	N
Fix screw type (standard)	-
DISPLAY	
Blue	B
Red (standard)	-

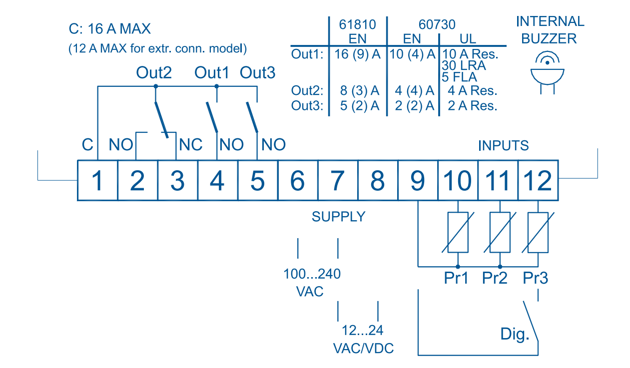
(*) Capacitive Touch screen keyboard

CONNECTIONS

Y39 / Y39E

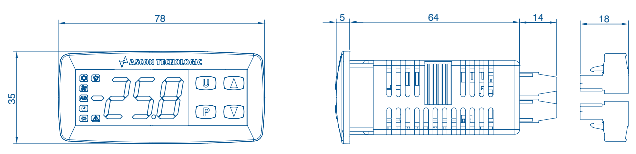


Y39C



DIMENSIONS

Y39 / Y39C / Y39E



The dimensions are expressed in mm

Y33

- CONTROLLERS FOR REFRIGERATING UNITS
- SENSITIVE-TOUCH KEYBOARD
- ENERGY SAVING FUNCTIONS
- RELAY 30A 2HP

FEATURES

DISPLAY	Y33
Single	3 red or blue digit, h 15.5 mm
INPUTS	
Three	3x PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or 3x NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F) or 3x Pt1000 (1000Ω at 0°C) -99.9... +500°C (-148... +932°F)
Digital input	1 digital input for free voltage contacts as alternative to input 3
Accuracy	± 0.5 % fs + 1 digit
OUTPUTS	
Up to three	OUT1: Relay SPST-NO (30A 2HP 250V, 1HP 125 Vac); EN 61810: 30 (15) A - EN 60730: 14 (14) A - - UL 60730: 14 A Res., 96 LRA, 16 FLA OUT2: Relay SPDT (8A, 1/2HP 250Vac, 1/3HP 125Vac): EN 61810: 8 (3) A - EN 60730: 8 (4) A - UL 60730: 10 A Res. OUT3: Relay SPST-NO (5A - 1/10HP 125/250 Vac); EN 61810: 5 (1) A - EN 60730: 2 (1) A - UL 60730: 2 A Gen. use 16A max.(12A for plug-in version) for common relay 1 and 3 (term. 3)
Relay operations	100000 operations
FUNCTIONAL	
Control	ON/OFF
Acoustic alarm	Internal Buzzer (optional)
Defrosting control	At intervals time, at reaching temperature by stopping compressor, by electrical heating or hot gas/reverse cycle
Energy Saving functions	Available
GENERAL	
Power supply	12... 24 Vac/Vdc, 115 Vac, 230 Vac ±10% (50/60 Hz)
Power consumption	3.5 VA approx.
Dimensions / Weight	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals / 190 g approx.
Keyboard	Mechanical or "Sensitive Touch"
Connections	Screw terminal block 2.5 mm² or plug-in connector with screw terminals 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) /-25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV\ diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9). Regulation 37/2005/CE (EN13485 air, S, A, 2,- 50°C +90°C wheter used with NTC 103AT11 probe)

CE

EVERYTHING UNDER CONTROL

HOW TO ORDER

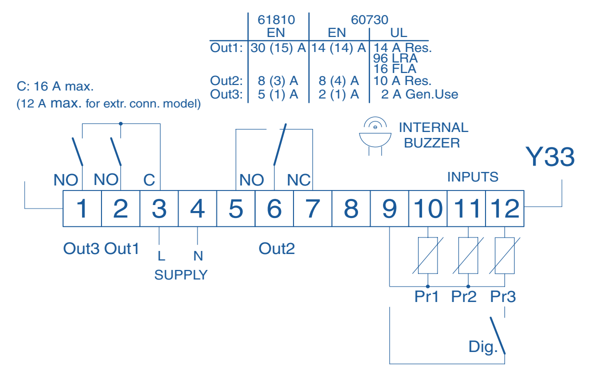
To compose the part number, pls. choose one of the option for each variable

Y33	CODE
KEYBOARD	
Mechanical	-
Sensitive-Touch (*)	S
POWER SUPPLY	
12... 24 Vac/Vdc	G
115 Vac	C
230 Vac	D
OUT 1	
Relay SPST-NO 30A	R
OUT 2	
Relay SPDT 8A-AC1	R
Not available	-
OUT 3	
Relay SPST 5A-AC1	R
Non prevista	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTION	
Plug-in screw type	E
Plug-in screw type, fix part only	N
Fix screw type (standard)	-
DISPLAY	
Blue	B
Red (standard)	-

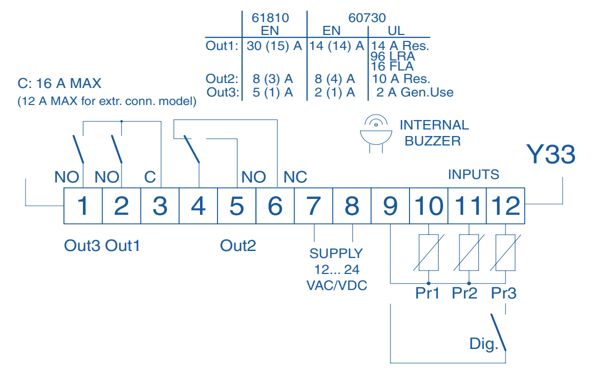
(*) Capacitive Touch screen keyboard

CONNECTIONS

Y33 - SUPPLY 115 AND 230 V

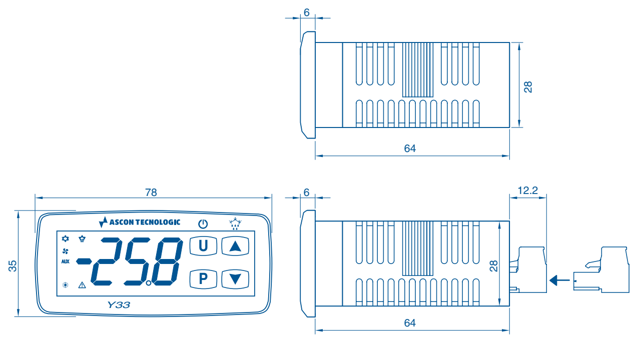


Y33 - SUPPLY 12...24 VAC/VDC



DIMENSIONS

Y33



The dimensions are expressed in mm

Y39H

- HUMIDITY AND TEMPERATURE CONTROLLER
- INTEGRATED TWIN-TIMER
- UP TO 3 RELAY OUTPUTS
- ON/OFF AND PID CONTROL

FEATURES

DISPLAY	Y39H
Single	3 red or blue digit, h 15.5 mm
INPUTS	
Two	1 input for digital temperature and humidity probe TRH03 -40 … 80 °C (-40 … 176 °F) / 0 … 100% RH 1 input for NTC 103AT-2 probe (10kΩ at 25 °C) -50 … + 109 °C (-58 … + 228 °F)
Digital input	1 digital input for free voltage contacts as alternative to input 3
Accuracy	± 0.5 % fs + 1 digit
OUTPUTS	
Up to three	OUT1: Relay SPST-NO (16A 1HP 250V, 1/2HP 125 Vac); EN 61810: 16 (9) A - EN 60730: 10 (4) A - - UL 60730: 12 A Res., 30 LRA, 5 FLA or SSR Relay SPST-NO 0.1A… 2A 250 VAC OUT2: Relay SPDT (8A, 1/2HP 250Vac, 1/3HP 125Vac): EN 61810: 8 (3) A - EN 60730: 4 (4) A - UL 60730: 4 A Res. OUT3: Relay SPST-NO (5A - 1/10HP 125/250 Vac); EN 61810: 5 (2) A - EN 60730: 2 (2) A - UL 60730: 2 A Res. 16A max.(12A for plug-in version) for common relay (term. 1)
Relay operations	100000 operations
FUNCTIONAL	
Temperature control	ON/OFF and PID
Humidity control	ON/OFF
Acoustic alarm	Internal Buzzer (optional)
Twin-Timer	Pause/work functioning (on board)
GENERAL	
Power supply	12 Vac/Vdc, 12… 24 Vac/Vdc, 100… 240 Vac ±10% (50/60 Hz)
Power consumption	12 Vac/Vdc: 3.5 VA approx. 12… 24 Vac/Vdc, 100… 240 Vac: 4VA approx.
Dimensions / Weight	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals / 190 g approx.
Connections	Screw terminal block 2.5 mm² or plug-in connector with screw terminals 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0… +50°C (32… +122°F) / -25… +60°C (-13… +140°F)
Operating humidity	< 95 RH% without condensation
Conformity	Directive LV 2014/35/EU (EN 60730-1, EN 60730-2-9); Directive EMC 2014/30/EU (EN55011: class B; EN61000-4-2: 8 kV air, 4kV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2kV supply and relay outputs, 1kV inputs; EN61000-4-5: supply 2kV com. mode, 1 kV\ diff. mode; EN61000-4-6: 3V).

CE cULus

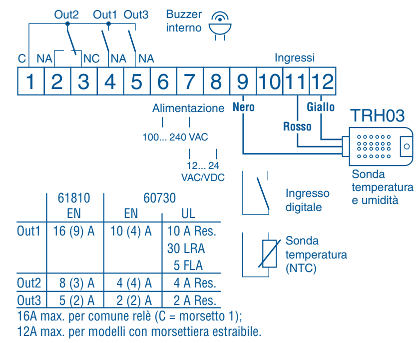
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

Y39H	CODE
POWER SUPPLY	
12 Vac/Vdc	F
12… 24 Vac/Vdc	G
100… 240 Vac	H
OUT 1	
Relay SPST-NO 30A	R
Vdc for SSR drive	Q
OUT 2	
Relay SPDT 8A-AC1	R
Not available	-
OUT 3	
Relay SPST 5A-AC1	R
Non prevista	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTION	
Plug-in screw type	E
Fix screw type (standard)	-
DISPLAY	
Blue	U
Red (standard)	R

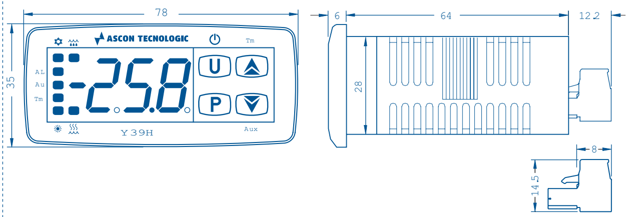
CONNECTIONS

Y39H



DIMENSIONS

Y39H



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

W09

- THERMOSTAT 1 INPUT AND 1 OUTPUT
- CONTROLLERS FOR REFRIGERATING UNITS, 3 INPUTS AND 3 OUTPUTS
- REAL TIME CLOCK FUNCTION

FEATURES

DISPLAY	W09	W09Y	W09C
Single	3 red or blue digit, h 15.5 mm		
INPUT			
One (W09) or Three (W09Y, W09C)	PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)	3x PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or 3x NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)	
Digital input	--	1 digital input for free voltage contacts as alternative to input 3	
Accuracy	± 0.5 % fs + 1 digit		
OUTPUTS			
One (W09) or Three (W09Y, W09C)	OUT1: Relay SPDT 8A, 1/2HP 250V, 1/3 HP 125 Vac - EN 61810: 8 (3) A - EN 60730: 8 (4) A - UL 60730: 10A Res., 12 LRA, 2 FLA	OUT1: Relay SPST-NO (14A-AC1, 6AAC3 250 Vac, 1 HP 250 Vac, 1/2 HP 125 Vac) OUT2: Relay SPDT (8A-AC1, 3A-AC3 250 Vac, 1/2 HP 250 Vac, 1/3 HP 125 Vac) OUT3: Relay SPST-NO (4A-AC1, 2A-AC3 250 Vac, 1/8 HP 250-125 Vac) 16 A max. for common relay (term. 12)	
Relay operations	100000 operations according to EN 60730		
FUNCTIONAL			
Control	ON/OFF		
Defrosting control	At intervals time by stopping compressor	At intervals time, at reaching temperature by stopping compressor, by electrical heating or hot gas/reverse cycle	
Acoustic alarm	Internal Buzzer (optional)		
Real Time Clock	--		Internal clock to manage defrosting at programmed times
Serial communication	TTL Modubus, or RS485 by means of the external module A30 (see "Accessories" section)		
Remote display	By means of module TVRY (see "Indicators" section)		
GENERAL			
Power supply	100...240 Vac ±10% (50/60 Hz)		
Power consumption	3 VA approx.		
Dimensions / Weight	75 x 122 mm - depth 34 mm / 120 g approx.		
Connections	Screw terminal block for cables 0.2...1.5 mm² / AWG 24...16		
Mounting	On wall. Cables outlet: on the back side or lateral side by PG9 cable gland		
Front protection degree	IP40		
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)		
Operating humidity	30... 95 RH% without condensation		
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply and relay outputs, 1KV inputs; EN61000-4-5: supply 2KV com. mode, 1 KV\ diff. mode; EN61000-4-6: 3V); Directive 2006/95/CE (EN 60730-1, EN 60730-2-9). Regulation 37/2005/CE (EN13485 air, S, A, 2,- 50°C +90°C whter used with NTC 103AT11 probe). Regulation 37/2005/CE (EN13485 air, S, A, 2,- 50°C +90°C whter used with NTC 103AT11 probe).		

CE

HOW TO ORDER

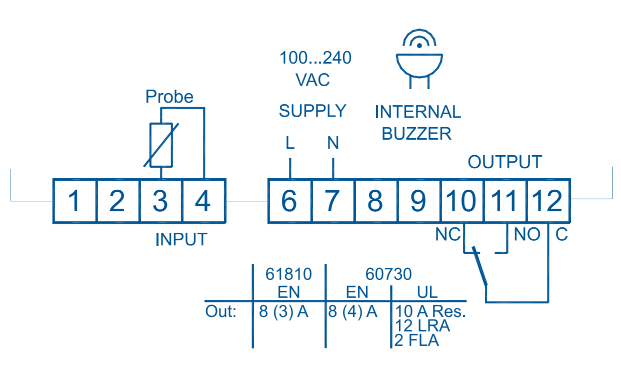
To compose the part number, pls. choose one of the option for each variable

W09	CODE
POWER SUPPLY	
100... 240Vac	H
OUT 1	
Relay SPDT-8A-AC1	R
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTION	
Screw type	-
DISPLAY	
Blue	B
Red (standard)	-

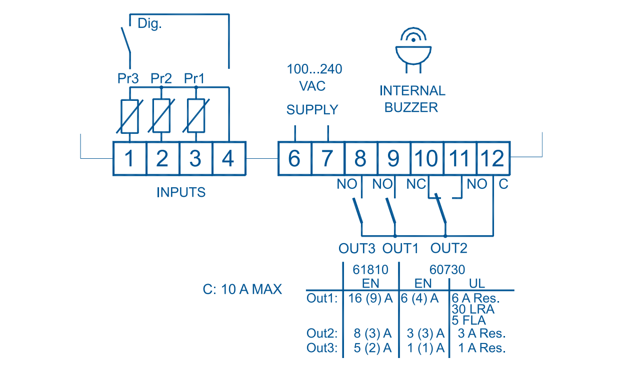
W09Y / W09C	CODE
ALIMENTAZIONE	
100...240Vac	H
OUT 1	
Relay SPDT-8A-AC1	R
OUT 2	
Relay SPDT-8A-AC1	R
Not available	-
OUT 3	
Relay SPST-NO 5A-AC1	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTION	
Screw type	-
DISPLAY	
Blue	B
Red (standard)	-
REAL TIME CLOCK (W09C ONLY)	
Available	C
Not available	-

CONNECTIONS

W09

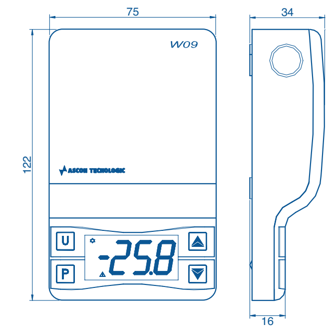


W09Y / W09C



DIMENSIONS

W09 / W09Y / W09C



The dimensions are expressed in mm

X33H

- HUMIDITY AND TEMPERATURE CONTROLLER
- 4 INPUTS AND 4 OUTPUTS

FEATURES

DISPLAY	X33H
Dual	4 digit, red and amber colours, h 7 mm
INPUTS	
Four	3x PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or 3x NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F) 2 of them can be used as digital inputs + 1 input for humidity probe (0/4... 20 mA)
Digital inputs	1 digital input for free voltage contacts + 2 optional digital inputs for free voltage contacts as alternative to temperature inputs
Accuracy	± 0.5 % fs + 1 digit
OUTPUTS	
Up to four	OUT1: Relay SPST (16A-AC1, 6A-AC3 250 Vac, 1 HP 250 Vac, 1/2HP 125 Vac) OUT2: Relay SPDT (8A-AC1, 3A-AC3 250 Vac,1/2 HP 250 Vac, 1/3HP 125 Vac) OUT3 e OUT4: Relay SPST-NO (5A-AC1, 2A-AC3 250 Vac, 1/8 HP 250 Vac, 1/10HP 125 Vac). 12 A max. for plug-in version
Auxiliary power supply	12 Vdc/20 mA max.
FUNCTIONAL	
Control	ON/OFF
Acoustic alarm	Internal Buzzer (optional)
Defrosting control	At intervals time by stopping compressor, by electrical heating or hot gas/reverse cycle
GENERAL	
Power supply	100... 240 Vac ±10% (50/60 Hz)
Power consumption	4 VA approx.
Dimensions / Weight	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals / 180 g approx.
Keyboard	Mechanical or "Sensitive Touch"
Connections	Screw terminal block 2.5 mm² or plu-in connector with screw terminals 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9)

CE

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

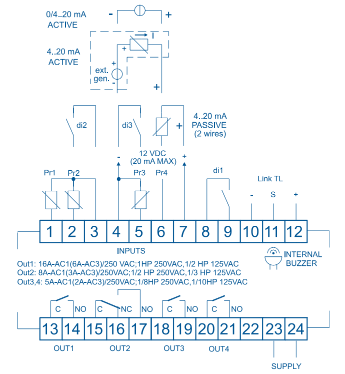
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

X33H	CODE
POWER SUPPLY	
100...240Vac/Vdc	H
OUT 1	
Relay SPST-16A-AC1	R
OUT 2	
Relay SPDT-8A-AC1	R
Not available	-
OUT 3	
Relay SPST-NO 5A-AC1	R
Not available	-
OUT 4	
Relay SPST-NO 5A-AC1	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-

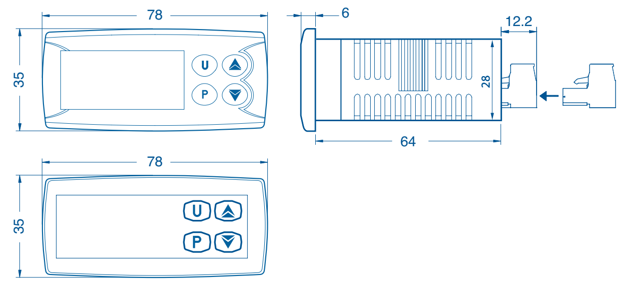
CONNECTIONS

X33H



DIMENSIONS

X33H



The dimensions are expressed in mm

X34

- CONTROLLERS FOR REFRIGERATING UNITS
- HACCP FUNCTIONS
- ENERGY SAVING FUNCTIONS
- 4 INPUTS AND 4 OUTPUTS

FEATURES

DISPLAY	**X34**
Single	3 red or blue digit, h 15.5 mm
INPUTS	
Up to four	PTC KTY 81-121 (990Ω at 25°C) -50... +109°C (-58... +228 °F) or NTC 103AT-2 (10kΩ at 25°C) -50...150°C (-58... +302 °F) or Pt1000 (1000Ω at 0 °C) -99.9... +300°C (-99.9 ... 572°F)
Digital inputs	2 digital inputs for free voltage contacts + 2 digital inputs as alternative to inputs Pr3 and Pr4
Accuracy	± 0.5 % fs + 1 digit
OUTPUTS	
Up to four (OUT1 and OUT2 are always on board)	OUT1: Relay SPST-NO-16A - 1HP 250V - EN 61810: 16 (9) A - EN 60730: 10 (4) A - UL 60730: 12A Res., 30 LRA, 5 FLA OUT2: Relay SPDT 8A - 1/2HP 250 V - EN 61810: 8 (3) A - EN 60730: 4 (4) A - UL 60730: 10A Res. OUT3 e OUT4: Relay SPST-NO 5A - 1/10HP 125/250 V - EN 61810: 5 (1) A - EN 60730: 2 (1) A - UL 60730: 2 A Gen.Use 12 A max. for plug-in version
Relay operations	100000 operations according to EN 60730
FUNCTIONAL	
Control	ON/OFF
Acoustic alarm	Internal buzzer (optional)
Defrosting control	At intervals time, at reaching temperature, at programmed times by stopping compressor, by electrical heating or hot gas/reverse cycle
HACCP functions	With alarm recording
Real time clock	Internal clock to manage defrosting at programmed times
Events	Events programming by means of the internal clock
Serial communication	Isolated RS485 with Modbus RTU protocol
Baud rate	9600 baud
GENERAL	
Power supply	12 Vac/Vdc, 12... 24 Vac/Vdc, 100...240 Vac ±10% (50/60 Hz)
Power consumption	4 VA approx.
Dimensions / Weight	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals / 180 g approx.
Keyboard	Mechanical or "Sensitive Touch"
Connections	Screw terminal block 2.5 mm² or plu-in connector with screw terminals 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) /-25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000-4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV\ diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9) Regulation 37/2005/CE (EN13485 aria/air, S, A, 1,- 50°C +90°C wheter used with NTC 103AT11 probe or Pt1000 class B or better

CE

HOW TO ORDER

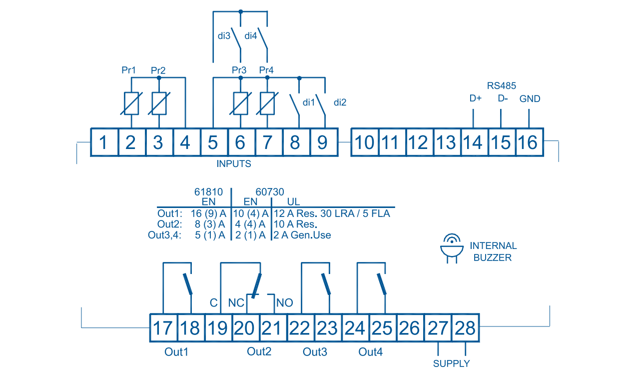
To compose the part number, pls. choose one of the option for each variable

X34	CODE
KEYBOARD	
Mechanical	-
Sensitive-Touch (*)	S
POWER SUPPLY	
12 Vac/Vdc	F
12... 24 Vac/Vdc	G
100... 240 Vac/Vdc	H
OUT 3	
Relay SPST-5A-AC1	R
Not available	-
OUT 4	
Relay SPST-5A-AC1	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTIONS	
Plug-in screw type	E
Plug-in screw type, fix part only	N
Fix screw type (standard)	-
DISPLAY	
Blue	B
Red (standard)	-
REAL TIME CLOCK	
Available	C
Not available	-
SERIAL COMMUNICATION	
RS485	S
TTL Modbus	-

(*) Capacitive Touch screen keyboard

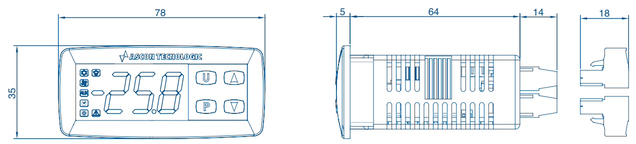
CONNECTIONS

X34



DIMENSIONS

X34



The dimensions are expressed in mm

X35P

- CONTROLLERS FOR REFRIGERATING UNITS
- FREQUENCY / VOLTAGE OUTPUT FOR INVERTER CONTROL FOR COMPRESSORS

FEATURES

DISPLAY	X35P
Single	3 red or blue or white digit, h 15.5 mm
INPUTS	
Up to four	PTC KTY 81-121 (990Ω at 25°C) -50... +109°C (-58... +228 °F) or NTC 103AT-2 (10kΩ at 25°C) -50...150°C (-58... +302 °F) or Pt1000 (1000Ω at 0 °C) -99.9... +300°C (-99.9 ... 572°F)
Digital inputs	2 digital inputs for free voltage contacts + 2 digital inputs as alternative to inputs Pr3 and Pr4
Accuracy	± 0.5 % fs + 1 digit
OUTPUTS	
Up to four (OUT1 and OUT2 are always on board)	OUT1: Relay SPST-NO-16A - 1HP 250V - EN 61810: 16 (9) A - EN 60730: 10 (4) A - UL 60730: 12A Res., 30 LRA, 5 FLA OUT2: Relay SPDT 8A - 1/2HP 250 V - EN 61810: 8 (3) A - EN 60730: 4 (4) A - UL 60730: 10A Res. OUT3 e OUT4: Relay SPST-NO 5A - 1/10HP 125/250 V - EN 61810: 5 (1) A - EN 60730: 2 (1) A - UL 60730: 2 A Gen.Use OUT5: in frequency (9... 12 VDC 250 Hz max) or analogue 0... 5 / 10V 12 A max. for plug-in version
Relay operations	OUT1, OUT2: 30000 operations according to EN 60730 OUT3, OUT4: 60000 operations according to EN 60730
FUNCTIONAL	
Control	ON/OFF or PID
Defrosting control	At intervals time, at reaching temperature, at programmed times by stopping compressor, by electrical heating or hot gas/reverse cycle
HACCP functions	With alarm recording
Programming	With NFC interface (optional)
Real time clock	Internal clock to manage defrosting at programmed times
Acoustic alarm	Internal buzzer (optional)
Events	Events programming by means of the internal clock-calendary (14 daily events and 98 weekly events)
Serial communication	Not Isolated RS485 with Modbus RTU protocol
Baud rate	Selectable 9600, 19200, 38400 baud
GENERAL	
Power supply	12 Vac/Vdc, 12... 24 Vac/Vdc, 100...240 Vac ±10% (50/60 Hz)
Power consumption	6 VA approx.
Dimensions / Weight	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals / 180 g approx.
Keyboard	Mechanical
Connections	Screw terminal block 2.5 mm² or plu-in connector with screw terminals 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)
Operating humidity	< 95 RH% without condensation
Conformity	Directive LV 2014/35/EU (EN 60730-1, EN 60730-2-9); UL60730-1, UL 60730-2-9. Directive EMC 2014/30/EU (EN55011: class B; EN61000-4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply and relay outputs, 1KV inputs; EN61000-4-5: supply 2KV com. mode, 1 KV diff. mode; EN61000-4-6: 3V)

CE

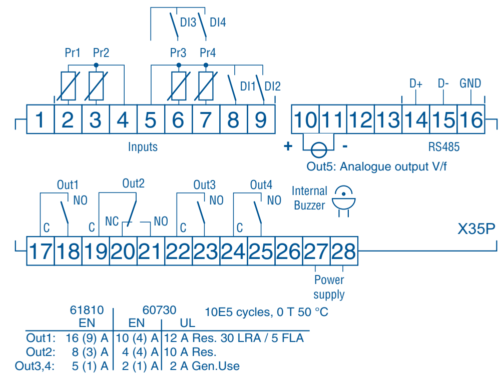
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

X35P	CODE
POWER SUPPLY	
12... 24 Vac/Vdc	G
100... 240 Vac/Vdc	H
12 Vdc	X
OUT 3 + OUT 4	
Relay SPST-NO 5A	R
OUT3 ONLY - Relay SPST-NO 5A	A
Not available	-
OUT 5	
Frequency (9... 12 VDC 250 Hz max)	F
Analogue 0... 5 / 10V (supply H only)	V
Not available	-
CONNECTIONS	
Plug-in screw type	E
Faston	F
Plug-in screw type, fix part only	N
Fix screw type (standard)	V
DISPLAY	
Blue	B
Red (standard)	I
White	T
SERIAL COMMUNICATION	
NOT isolated RS485 + TTL Modbus	X
REAL TIME CLOCK + BUZZER	
Real Time Clock + Buzzer	A
Buzzer	B
Real Time Clock	C
Not available	-
NFC PROGRAMMING	
Available	N
Not available	-

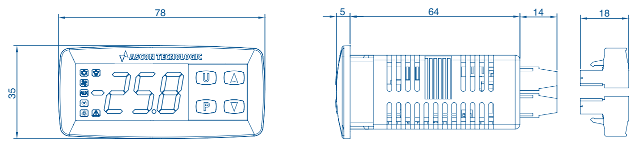
CONNECTIONS

X35P



DIMENSIONS

X35P



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

E51

- THERMOSTAT AND CONTROLLER
- 1 INPUT AND 1 OUTPUT
- SMALL DIMENSIONS

FEATURES

DISPLAY	E51A	E51
Single	3 red or blue digit, h 14 mm	
INPUT		
One	PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)	
Accuracy	± 0.5 % fs + 1 digit	
OUTPUT		
One	OUT1: Relay SPDT or SPST-NO (16A-AC1, 6A-AC3 250 Vac, 1 HP 250 Vac, 1/2HP 125 Vac); 12 A max. for plug-in version	
Relay operations	100000 operations for relay SPST-NO 16A and SPDT 8A, 50000 operations for relay SPDT 16A	
FUNCTIONAL		
Control	ON/OFF	
Defrosting control	--	At intervals time by stopping compressor
GENERAL		
Power supply	12 Vac/Vdc, 115, 230 Vac ±10% (50/60 Hz)	
Power consumption	3 VA approx.	
Dimensions / Weight	68 x 35 mm - depth 50 mm / 105 g approx.	
Connections	Screw terminal block 2.5 mm²	
Mounting	Flush in panel in 58 x 25 mm hole	
Front protection degree	IP65, mounted in panel with gasket	
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)	
Operating humidity	30... 95 RH% without condensation	
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV\ diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9)	

CE

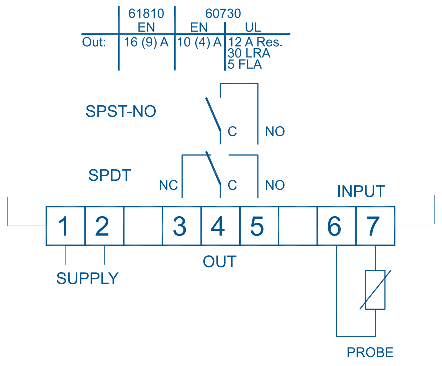
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

E51A/E51	CODE
POWER SUPPLY	
12 Vac/Vdc	F
115 Vac	C
230 Vac	D
INPUT	
PTC	P
NTC	N
OUT 1	
Relay SPDT 16A-AC1	S
Relay SPST-NO-16A-AC1	R

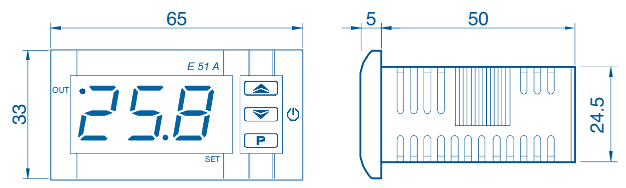
CONNECTIONS

E51A / E51



DIMENSIONS

E51A / E51



The dimensions are expressed in mm

TLZ12P

- THERMOSTAT
- 1 INPUT
- UP TO 2 OUTPUTS

FEATURES

DISPLAY	**TLZ12P**
Single	4 red or blue digit, h 12 mm
INPUT	
One	Pt1000: -100... 500°C (-99.9... +500.0°C), -148... +932°F (-99.9... +932.0°C) or NTC PT24 C2 (100KΩ at 25°C): 0... +300°C (32... +572°F)
Digital inputs	1 digital input for free voltage contacts
Accuracy	± 0.5 % fs
OUTPUTS	
Up to 2	OUT 1: Relay SPST-NO 16A -AC1(6A-AC3)/250 Vac or Relay SPDT 16A- AC1(6A-AC3)/250 Vac OUT 2: Relay SPDT 5A-AC1(2A-AC3)/250 Vac
Relay operations	100000 operations for relay SPST-NO 16A and SPDT 8A, 50000 operations for relay SPDT 16A
FUNCTIONAL	
Control	ON/OFF
Acoustic alarm	Internal Buzzer (optional)
Defrosting control	At intervals time by stopping compressor
GENERAL	
Power supply	12, 24 Vac/Vdc, 100... 240 Vac ± 10% (50/60 Hz)
Power consumption	3 VA approx.
Dimensions / Weight	78 x 35 mm - depth 64 mm / 115 g approx.
Connections	Screw terminal block 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive CEE EMC 2004/108/CE (EN 61326), Directive CEE BT 2006/95/CE (EN 61010-1)

CE cULus

EVERYTHING UNDER CONTROL

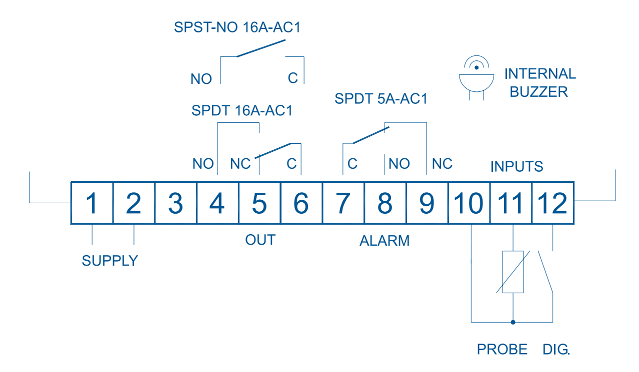
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TLZ12P	CODE
POWER SUPPLY	
12 Vac/Vdc	F
24 Vac/Vdc	L
100... 240 Vac	H
OUT 1	
Relay SPDT 16A-AC1	S
Relay SPST NO-16A-AC1	R
OUT 2	
Relay	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-
INPUT	
PT1000 or NTC	P

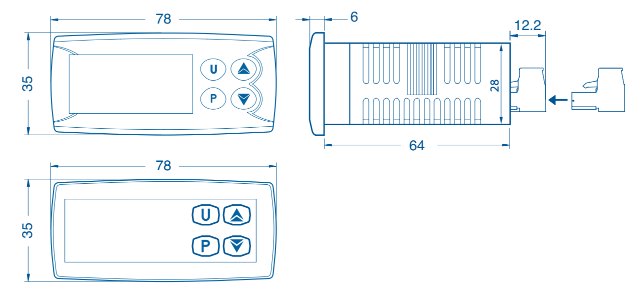
CONNECTIONS

TLZ12P



DIMENSIONS

TLZ12P



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

TLY 25/26/29

- CONTROLLERS FOR REFRIGERATING UNITS
- UP TO 2 INPUTS AND 4 OUTPUTS
- RS485

FEATURES

DISPLAY	TLY25	TLY26	TLY29
Single	3 red or blue digit, h 12 mm		
INPUTS			
Up to two	2x PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or 2x NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)		
Digital inputs	1 digital input for free voltage contacts		
Accuracy	± 0.5 % fs + 1 digit		
OUTPUTS			
Up to three (TLY29) Up to four (TLY25, TLY26)	With supply H type: OUT1: Relay SPST-NO 16 A max. for common (term.1), OUT 2, OUT3, OUT4: Relay 5A-AC1 With supply F type: OUT1: Relay SPST-NO 16 A max. for common (term.1), OUT 2, OUT3, OUT4: Relay 8A-AC1 (3A-AC3 250 Vac)	OUT1: Relay SPST-NO 16 A max. for common (term. 1) OUT 2, OUT3, OUT4: Relay 8A-AC1 (3A-AC3 250 Vac)	OUT1: Relay SPST-NO (16A-AC1, 6A-AC3 250 Vac) OUT2: Relay SPDT (8A-AC1, 3A-AC3 250 Vac) OUT3: Relay SPSTNO (5A-AC1, 2A-AC3 250 Vac). 16 A max. for common (term. 1)
Relay operations	100000 operations for relay SPST-NO 16A e SPDT 8A - 50000 operations for relay SPDT 16A		
FUNCTIONAL			
Control	ON/OFF		
Acoustic alarm	--	Internal buzzer (optional)	
Defrosting control	At intervals time by stopping compressor, by electrical heating or hot gas/reverse cycle		
Real time clock	Internal clock to manage defrosting at programmed times		
Serial communication	RS485 by means of the extrernal mod. A30 (see "Accessories" section)	RS485 on board with Modbus RTU protocol	RS485 by means of the extrernal mod. A30 (see "Accessories" section)
Baud rate	--	9600 baud	
Remote display	PBy means of module TVRY (see "Indicators" section)		
GENERAL			
Power supply	12 Vac/Vdc, 100...240 Vac ±10% (50/60 Hz)	12 Vac/Vdc ±10% (50/60 Hz)	12 Vac/Vdc, 24 Vac/Vdc, 100... 240 Vac ± 10% (50/60 Hz)
Power consumption	4 VA approx.		
Dimensions	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals		
Weight	115 g approx.	155 g approx.	
Connections	Screw terminal block 2.5 mm² or plu-in connector with screw terminals 2.5 mm²		
Mounting	Flush in panel in 71 x 29 mm hole		
Front protection degree	IP65, mounted in panel with gasket		
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)		
Operating humidity	30... 95 RH% without condensation		
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-9)		

CE cULus

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

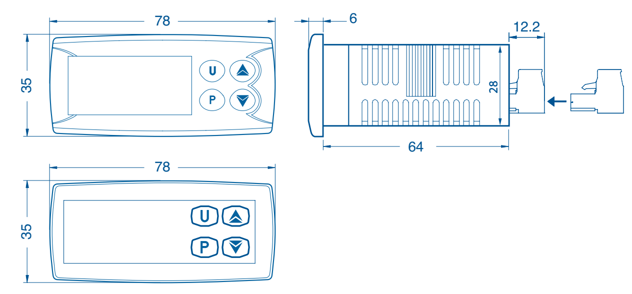
TLY25	CODE
POWER SUPPLY	
12 Vac/Vdc	F
100... 240 Vac	H
REAL TIME CLOCK	
Available	C
Not available	-

TLY26	CODE
REAL TIME CLOCK	
Available	C
Not available	-
REMOTE DISPLAY	
Available	D
Not available	-
SERIAL COMMUNICATION	
RS485	S
TTL Modubus	-
OUT 4	
Relay SPDT 8A AC1	R
Not available	-

TLY29	CODE
POWER SUPPLY	
12 Vac/Vdc	F
12...24 Vac/Vdc	G
24 Vac/Vdc	L
100...240 Vac	H
BUZZER (INTERNAL)	
Available	B
Not available	-
REAL TIME CLOCK	
Available	C
Not available	-

DIMENSIONS

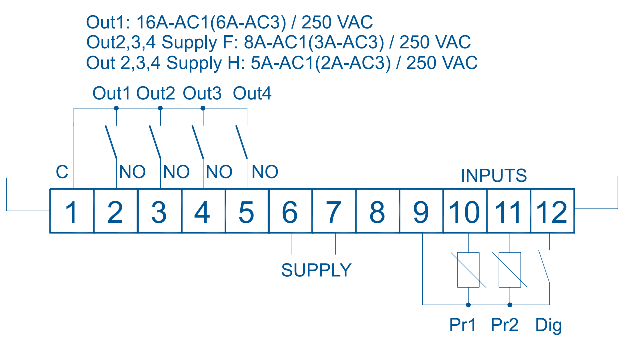
TLY25 / TLY26 / TLY29



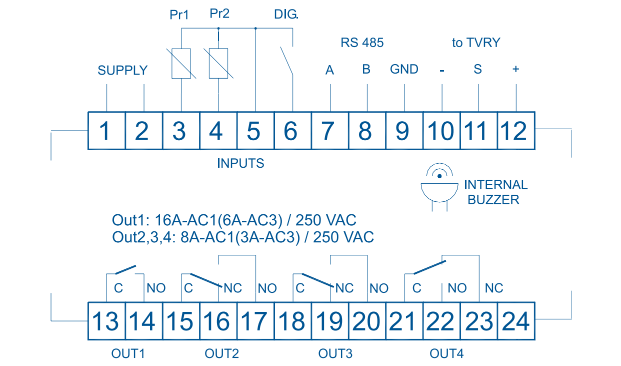
The dimensions are expressed in mm

CONNECTIONS

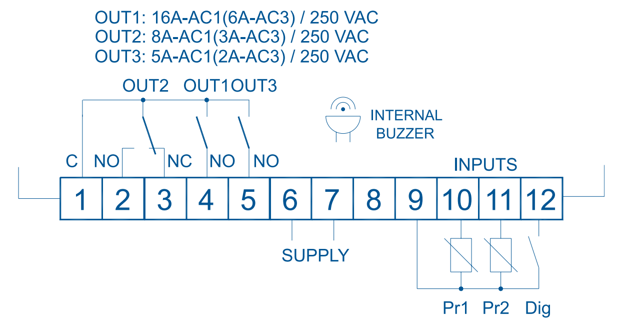
TLY25



TLY26



TLY29



TLY35

- CONTROLLER FOR REFRIGERATING UNITS
- UP TO 2 INPUTS AND 4 OUTPUTS
- RS485

FEATURES

DISPLAY	TLY35
Single	4 red or blue digit, h 12 mm
INPUTS	
Up to two	2x PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or 2x NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)
Digital input	1 digital input for free voltage contacts
Accuracy	± 0.5 % fs + 1 digit
OUTPUTS	
Up to four	OUT1: Relay SPST-NO (16A-AC1, 6AAC3 250 Vac,1HP 250Vac, 1/2HP 125 Vac) or SPDT (16A-AC1-NO, 8A-AC1-NC, 6A-AC3 250 Vac,1HP 250Vac, 1/2HP 125 Vac) OUT2 e OUT3: Relay SPDT (8A-AC1, 3A-AC3 250 Vac,1/2HP 250Vac, 1/3HP 125 Vac) OUT4: Relay SPST-NO (8A-AC1, 3A-AC3 250 Vac,1/2HP 250Vac, 1/3HP 125 Vac)
Relay operations	100000 operations for relay SPST-NO 16A and SPDT 8A - 50000 operations for relay SPDT 16A
FUNCTIONAL	
Control	ON/OFF
Defrosting control	At intervals time by stopping compressor, by electrical heating or hot gas/reverse cycle
Real Time Clock	Internal clock to manage defrosting at programmed times
Serial communication	Isolated RS485 with Modbus RTU protocol
Baud rate	9600 baud
Remote display	By means of module TVRY (see "Indicators" section)
GENERAL	
Power supply	12 Vac/Vdc, 24 Vac/Vdc, 100...240 Vac ±10% (50/60 Hz)
Power consumption	5 VA approx.
Dimensions / Weight	4 DIN rail module, 70 x 84 mm, depth 60 mm/ 180 g
Connections	Screw terminal block 2.5 mm²
Mounting	On OMEGA DIN A rail
Front protection degree	IP40, for internal use
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive CEE EMC 2004/108/CE (EN 61326), Directive CEE BT 2006/95/CE (EN 61010-1)

CE cULus

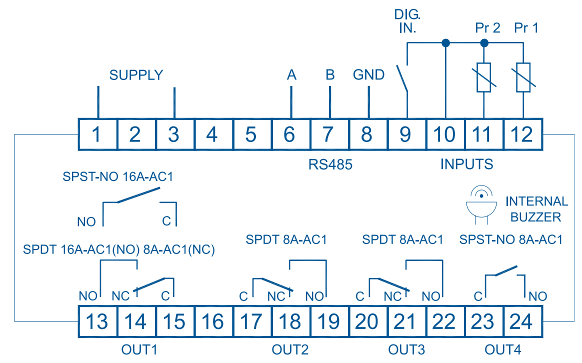
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TLY35	CODE
POWER SUPPLY	
12 Vac/Vdc	F
24 Vac/Vdc	L
100... 240 Vac	H
OUT 1	
Relay SPDT 16A AC1	S
Relay SPST-NO 16A AC1	R
OUT 4 / BUZZER (INTERNAL)	
Relay SPDT 8A AC1	R
Buzzer	B
Not available	-
REAL TIME CLOCK	
Available	C
Not available	-
SERIAL COMMUNICATION	
RS485	S
TTL Modubus	-

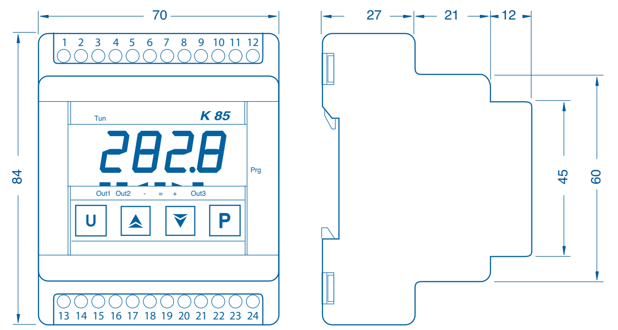
CONNECTIONS

TLY35



DIMENSIONS

TLY35



The dimensions are expressed in mm

TLZ35

- THERMOSTAT
- 1 INPUT AND UP TO 2 OUTPUTS

FEATURES

DISPLAY	**TLZ35**
Single	4 digit rossi o blu, h 12 mm
INPUT	
One	Termistori PTC KTY 81-121 (990Ω a 25°C) -50... +150°C (-58... +302°F) oppure Termistori NTC 103AT-2 (10kΩ a 25°C) -50... +109°C (-58... +228°F)
Digital input	1 digital input for free voltage contacts
Accuracy	± 0.5 % fs
OUTPUTS	
Up to two	OUT 1: Relay SPST-NO 16A -AC1(6A-AC3)/250 Vac or SPDT 16A- AC1(6A-AC3)/250 Vac OUT2: Relay SPDT 8A-AC1 (3A-AC3)/ 250 Vac
Relay operations	100000 operations for relay SPST-NO 16A and SPDT 8A - 50000 operations for relay SPDT 16A
FUNCTIONAL	
Control	ON/OFF
Acoustic alarm	Internal buzzer (optional)
Defrosting control	At intervals time by stopping compressor
GENERAL	
Power supply	12, 24 Vac/Vdc, 100... 240 Vac ± 10% (50/60 Hz)
Power consumption	3 VA approx.
Dimensions / Weight	4 DIN rail modules - 70 x 84 x 60 mm / 150 g approx.
Connections	Screw terminal block 2.5 mm²
Mounting	On OMEGA DIN A rail
Front protection degree	IP40, for internal use
Operating / storage temperature	0... +50°C (32... +122°F) /-25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive CEE EMC 2004/108/CE (EN 61326), Directive CEE BT 2006/95/CE (EN 61010-1)

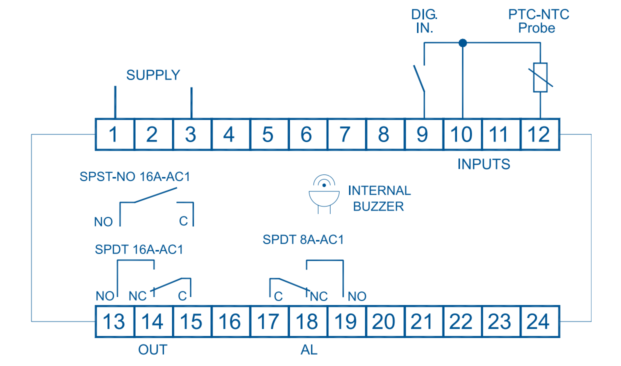
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TLZ35	CODE
POWER SUPPLY	
12 Vac/Vdc	F
24 Vac/Vdc	L
100... 240 Vac	H
OUT 1	
Relay SPDT 16A-AC1	S
Relay SPST NO-16A-AC1	R
OUT 2	
Relay	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-

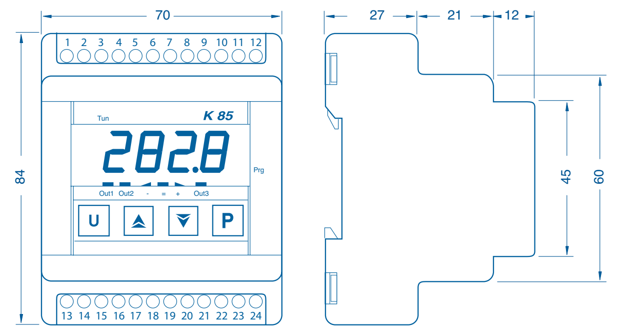
CONNECTIONS

TLZ35



DIMENSIONS

TLZ35



The dimensions are expressed in mm

TLW24

- CONTROLLER FOR REFRIGERATING UNITS
- UP TO 2 INPUTS AND 4 OUTPUTS
- PICK RECORDING
- INOX FRONT FRAME

FEATURES

DISPLAY	TLW24
Single	4 red or blue digit, h 12 mm
INPUTS	
Up to two	2x PTC KTY 81-121 (990Ω at 25°C): -50... +150°C (-58... +302°F) or 2x NTC 103AT-2 (10kΩ at 25°C): -50... +109°C (-58... +228°F) or 2x PT1000: -100...+100°C (-148... +212°F)
Digital input	1 digital input for free voltage contacts
Accuracy	± 0.5 % fs + 1 digit
OUTPUTS	
Up to four	OUT1: Relay SPST-NO (16A-AC1, 12A-AC3 /250Vac, 2HP 250Vac, 1HP 125Vac) OUT2: Relay SPDT (8A-AC1, 3A-AC3 250 Vac, 1/2HP 250 Vac, 1/3 HP 125 Vac) OUT3: Relay SPST-NO (8A-AC1, 3A-AC3 250 Vac, 1/2HP 250 Vac, 1/3 HP 125 Vac) OUT4: Relay SPST-NO (R) o SPDT (S) (16A-AC1, 6A-AC3 250 Vac,1HP 250Vac, 1/2HP 125 Vac) Power supply common (term. 13, 14): 16 A max. (11.5 A max. for UL873 with Faston terminals)
Relay operations	OUT1, OUT2, OUT3: 30000 operations OUT4: 50000 operations (VDE approval)
FUNCTIONAL	
Control	ON/OFF
Acoustic alarm	Internal buzzer (optional)
Defrosting control	At intervals time by stopping compressor, by electrical heating or hot gas/reverse cycle
Special functions	Stand-by, light control, min./max. picks recording, keyaboard lock, duty cycle function
Serial communication	RS485 by means of the external module A30 (see "Accessories" section)
GENERAL	
Power supply	12... 24 Vac/Vdc, 100... 240 Vac ±10% (50/60 Hz)
Power consumption	6 VA approx.
Frontal frame	Grey or white autoextinguishing plastic UL 94 Vo or Inox steel, with transparent protective cover (optional)
Dimensions / Weight	185 x 38 mm, depth 79 mm / 240 g approx.
Connections	Faston male 6.3 mm or Screw terminal block 2.5 mm²
Mounting	Flush in panel in 31 x 150 mm hole, with screw protective covers
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) /-25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive CEE EMC 2004/108/CE (EN 61326), Directive CEE BT 2006/95/CE (EN 61010-1)

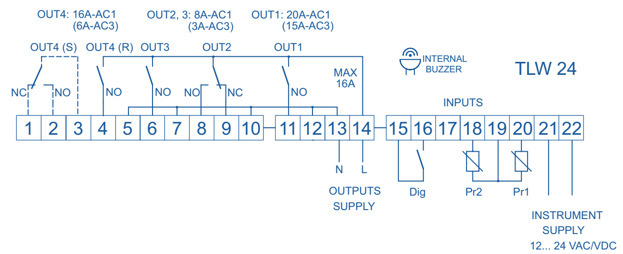
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

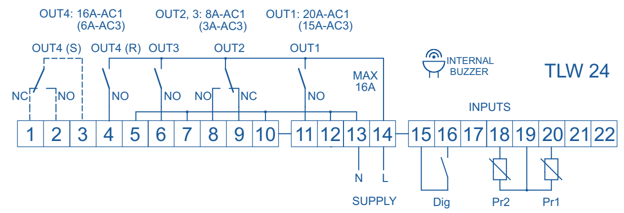
TLW24	CODE
OUT 2	
Relay 8A SPDT	R
Not available	-
OUT 3	
Relay 8A SPDT	R
Not available	-
OUT 4	
Relay 16A SPST	R
Relay 16A SPDT	S
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTIONS	
Screw type	MV
Faston type	- -
DISPLAY AND FRONT FRAME COLOUR	
Red Display, Grey front frame	- -
Red Display, White front frame	RB
Red Display, Inox front frame	- X
Blue Display, Grey front frame	B-
Blue Display, White front frame	BB
Blue Display, Inox front frame	BX
SPECIAL VERSIONS	
Input for PT1000 -100+100°C	P
DUTY CYCLE function	F
Standard	-
FRONT PROTECTION - POWER SUPPLY	
With transparent cover - Supply 100... 240 Vac	C
Without transparent cover - Supply 100... 240 Vac	-
With transparent cover - Supply 12... 24 Vac/Vdc	I
Without transparent cover - Supply 12... 24 Vac/Vdc	G

CONNECTIONS

TLW24 - POWER SUPPLY 12... 24 VAC

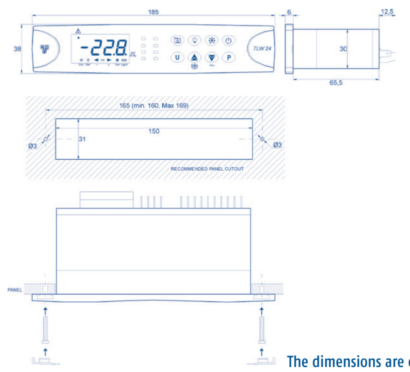


TLW24 - OTHER POWER SUPPLIES



DIMENSIONS

TLW24



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

TLB29

- CONTROLLER FOR REFRIGERATING UNITS
- UP TO 2 INPUTS AND 3 OUTPUTS
- SENSITIVE-TOUCH KEYBOARD

FEATURES

DISPLAY	TLB29
Single	2 red or blue digit, h 31 mm
INPUTS	
Up to two	2x PTC KTY 81-121 (990Ω at 25°C): -50... 99 °C (-58... 99 °F) or 2x NTC 103AT-2 (10kΩ at 25°C): -50... 99 °C (-58... 99 °F)
Digital input	2 digital inputs for free voltage contacts
Accuracy	± 0.5 % fs + 1 digit
OUTPUTS	
Up to three	OUT1: Relay SPST-NO (16A-AC1, 6A-AC3 250 Vac) OUT2: Relay SPDT (8A-AC1, 3A-AC3 250 Vac) OUT3: Relay SPSTNO (8A-AC1, 3A-AC3 250 Vac)
Relay operations	100000 operations (VDE)
FUNCTIONAL	
Control	ON/OFF
Acoustic alarm	Internal buzzer (optional)
Defrosting control	At intervals time by electrical heating or hot gas/reverse cycle
GENERAL	
Power supply	100...240 Vac ±10% (50/60 Hz)
Power consumption	4 VA approx.
Dimensions / Weight	96 x 50 mm, depth 60 mm / 155 g approx.
Keyboard	"Sensitive-Touch" keyboard or TLBTA external keyboard (optional - see page 44)
Connections	Screw terminal block 2.5 mm² + plug-in connectors (optional for inputs only)
Mounting	Flush in panel in 90 x 44 mm hole
Front protection degree	IP40, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive CEE EMC 2004/108/CE (EN 61326), Directive CEE BT 2006/95/CE (EN 61010-1)

EVERYTHING UNDER CONTROL

HOW TO ORDER

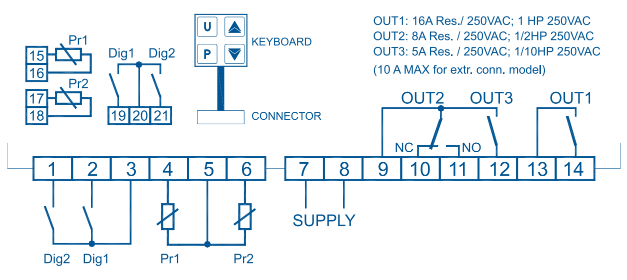
To compose the part number, pls. choose one of the option for each variable

TLB29	CODE
KEYBOARD	
TLBTA external keyboard	-
Sensitive-Touch (*)	S
POWER SUPPLY	
100... 240 Vac	H
OUT 1	
Relay SPST-NO 16A	R
OUT 2	
Relay SPDT 8A	R
Not available	-
OUT 3	
Relay SPST NO 5A	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTIONS	
Screw type (Standard)	-
Screw type + input connectors	B
With input connectors only	C
Plug-in type	E
Plug-in type, fix part only	N
DISPLAY	
Red	-
Blue	B

(*) Capacitive Touch screen keyboard

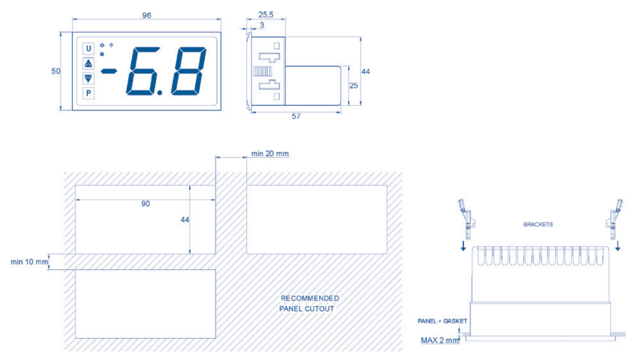
CONNECTIONS

TLB29



DIMENSIONS

TLB29



The dimensions are expressed in mm

TLB 30/55

- CONTROLLERS FOR REFRIGERATING UNITS
- UP TO 2 INPUTS AND 4 OUTPUTS
- SENSITIVE-TOUCH KEYBOARD

FEATURES

DISPLAY	TLB30	TLB55
Single	2 red or blue digit, h 31 mm	2 red or blue digit, h 54 mm
INPUTS		
Up to two	2x PTC KTY 81-121 (990Ω at 25°C): -50... 99 °C (-58... 99 °F) or 2x NTC 103AT-2 (10kΩ at 25°C): -50... 99 °C (-58... 99 °F)	
Digital input	2 digital inputs for free voltage contacts	
Accuracy	± 0.5 % fs + 1 digit	
OUTPUTS		
Up to four	OUT1: Relay SPST-NO (12A-AC1, 6A-AC3 250 Vac) OUT2: Relay SPST-NO (8A-AC1, 3A-AC3 250 Vac) OUT3 e OUT4: Relay SPST-NO (5A-AC1, 2A-AC3 250 Vac)	
Relay operations	100000 operations (EN60730)	
FUNCTIONAL		
Control	ON/OFF	
Acoustic alarm	Internal buzzer (optional)	
Defrosting control	At intervals time by electrical heating or hot gas/reverse cycle	
GENERAL		
Power supply	100...240 Vac ±10% (50/60 Hz)	
Power consumption	4 VA approx.	
Dimensions	96 x 50 mm, depth 22.5 mm	135 x 97 mm, depth 22.5 mm
Power module BSLB4	90 x 65 mm, depth 41 mm	
Weight	70 g approx. (TLB30) + 115 g approx. (BSLB4)	135 g approx. (TLB55) + 115 g approx. (BSLB4)
Keyboard	"Sensitive-Touch" keyboard or TLBTA external keyboard (optional - see page 44)	
Connections	TLB connections (inputs): mini plug-in connectors BSLB4 connections (power supply and outputs): 6 pole plug-in connector AMP MATE-N-LOK .250 " type TLB-BSLB4 connections: 3 m max. by means of cable with RJ connectors telephone type	
Mounting	Flush in panel in 90 x 44 mm hole	Flush in panel in 124 x 85 mm hole
Front protection degree	IP40, mounted in panel with gasket	
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)	
Operating humidity	30... 95 RH% without condensation	
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000-4-2: 8KV air, 4KV cont.; EN 61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV diff. mode; EN 61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9) Approvals: ENEC (Lic.n. 00161); C-UL (file n. E212227)	

HOW TO ORDER

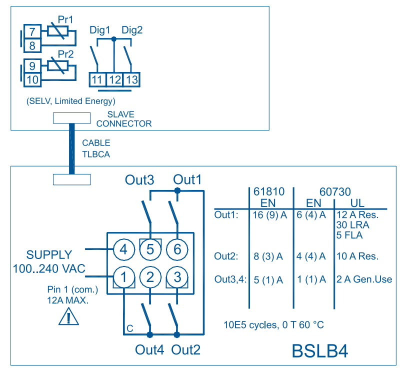
To compose the part number, pls. choose one of the option for each variable

TLB30 /TLB55	CODE
KEYBOARD	
TLBTA external keyboard	-
Sensitive-Touch (*)	S
OUT 1	
Available	Y
Not available	-
OUT 2	
Available	Y
Not available	-
OUT 3	
Available	Y
Not available	-
OUT 4	
Available	Y
Not available	-
VOLTAGE ALARM	
Available	V
Not available	-

(*) Capacitive Touch screen keyboard
To be used with slave module BSLB4 and cable TLBCA (see following page)

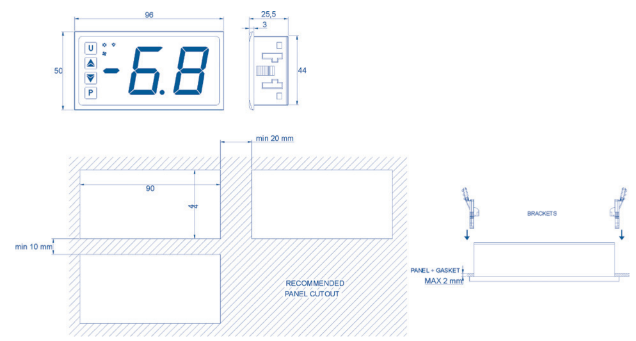
CONNECTIONS

TLB30 / TLB55



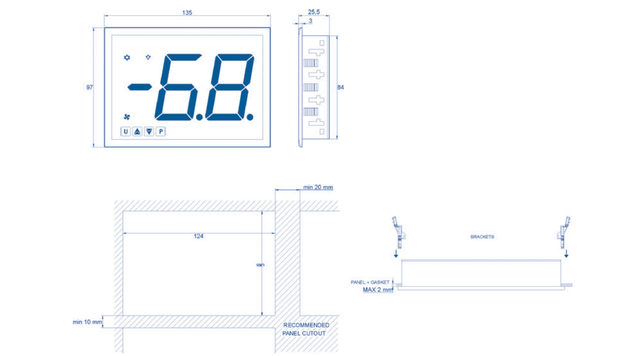
DIMENSIONS

TLB30



The dimensions are expressed in mm

TLB55



The dimensions are expressed in mm

BSLB4

- ACCESSORY FOR TLB SERIES
- POWER MODULE (SLAVE)

FEATURES

OUTPUTS	BSLB4
Up to four	OUT1: Relay SPST-NO (12A-AC1, 6A-AC3 250 Vac) OUT2: Relay SPST-NO (8A-AC1, 3A-AC3 250 Vac) OUT3 e OUT4: Relay SPST-NO (5A-AC1, 2A-AC3 250 Vac)
Relay operations	100000 operations, according to EN60730
GENERAL	
Power supply	100...240 Vac ±10% (50/60 Hz)
Power consumption	4 VA approx.
Dimensions / Weight	90 x 65 mm, depth 41 mm / 115 g approx.
Connections	Power supply and outputs: 6 pole plug-in connector AMP MATE-N-LOK .250 " type TLB-TLBSL connection: 3 m max. by means of cable with RJ connectors telephonic type
Mounting	Within enclosure
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive CEE EMC 2004/108/CE (EN 61326), Directive CEE BT 2006/95/CE (EN 61010-1)

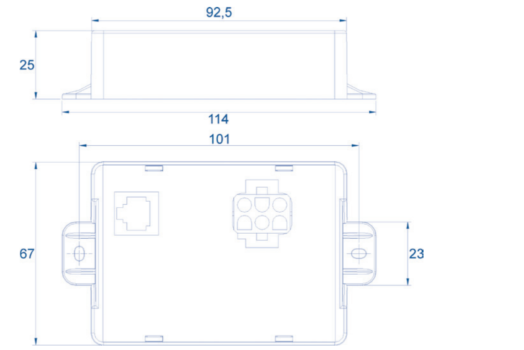
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

BSLB4	CODE
POWER SUPPLY	
100... 240 Vac/Vdc	H
OUT 1	
Relay 16A SPST-AC1	R
OUT 2	
Relay 8A SPST	R
OUT 3	
Relay 5A SPST	R
OUT 4	
Relay 5A SPST	R
VOLTAGE ALARM	
Available	V
Not available	-

DIMENSIONS

BSLB4



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

TLB TA/CA

- ACCESSORIES FOR TLB SERIES
- PROGRAMMING KEYBOARD
- CABLE OF CONNECTION

FEATURES

PROGRAMMING KEYBOARD	TLBTA
Functions	The programming of the operating parameters of TLB series, in the version without keys, can be done by using this remote keyboard, connectable to TLB unit by means of a cable TLBCA (1 m) In the version with Sensitive Touch keyboard, obviously TLBTA is not necessary.

CONNECTION CABLE BETWEEN DISPLAY TLB AND SLAVE BSLB4	TLBCA
Lenght	1 meter

CE cULus

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TLBCA	CODE
LENGHT	
1 m	100
3 m	300

TLBTA	CODE
CABLE LENGHT	
1 m	--

B05 P03/P05

- CONTROLLERS FOR REFRIGERATING UNITS
- 3 INPUTS AND 4 OUTPUTS
- WITH OPERATOR PANELS


FEATURES

DISPLAY	B05	P03	P05
Single	--	2 red or blue digit, h 31 mm	2 red or blue digit, h 54 mm
INPUTS			
Up to three	3x PTC KTY 81-121 (990Ω at 25°C): -50... 99 °C (-58... 99 °F) or 3x NTC 103AT-2 (10kΩ at 25°C): -50... 99 °C (-58... 99 °F) or PT1000 (1000Ω at 25°C): 199... 99°C/-99... 99°F	--	
Digital input	2 digital inputs for free voltage contacts as alternative to 2 probe inputs	1 digital input for free voltage contacts	
Accuracy	± 0.5 % fs + 1 digit		
OUTPUTS			
Up to four	OUT1: SPST-NO-16A-250V 1HP EN 61810: 16 (9) - EN 60730: 6 (4) - UL 60730: 6 A Res., 30 LRA, FLA 5 OUT2: SPST-8A-1 / 2HP 250V EN 61810: 8 (3) - EN 60730: 4 (4) - UL 60730: 4 A Res., 24 LRA, FLA 4 OUT3: SPST-5A-250V EN 61810: 5 (1) - EN 60730: 1 (1) A - UL 60730: 1 A Res. OUT4: SPST-5A-250V EN 61810: 5 (1) - EN 60730: 1 (1) A - UL 60730: 1 A Res Common power supply (pin1): 12A max.	--	
Relay operations	30.000 operations (EN60730)	--	
FUNCTIONAL			
Function	Power supply and control unit	Display	
Acoustic alarm	Internal buzzer (optional)	--	
Control	ON/OFF	--	
Defrosting control	At intervals time by electrical heating or hot gas/reverse cycle	--	
GENERAL			
Power supply	100...240 Vac ±10% (50/60 Hz)		
Power consumption	4 VA approx.		
Dimensions	92 x 92 mm, depth 27.8 mm	96 x 50 mm, depth 22.5 mm	135 x 97 mm, depth 22.5 mm
Weight	130 g approx.	70 g approx.	135 g approx.
Keyboard	--	"Sensitive-Touch" keyboard	
Connections	B05 connections (power supply and outputs): 6 pole plug-in connector AMP MATE-N-LOK .250 " type	P03/P05-B05 connections: 3 m max. by means of cable with mini plug-in connectors	
Mounting	On panel	Flush in panel in 90 x 44 mm hole	Flush in panel in 124 x 85 mm hole
Front protection degree	--	IP40, mounted in panel with gasket	
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)		
Operating humidity	30... 95 RH% without condensation		
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000-4-2: 8KV air, 4KV cont.; EN 61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV\ diff. mode; EN 61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9) Approvals: ENEC (Lic.n. 00161); C-UL (file n. E212227)		

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

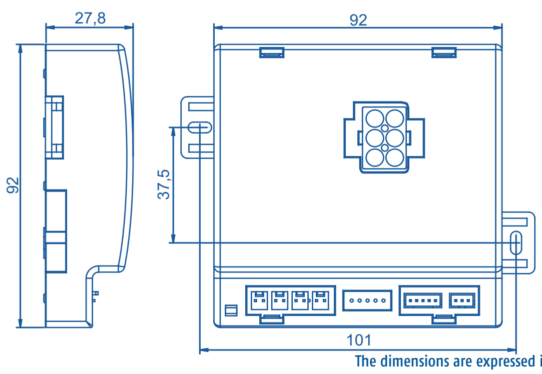
B05 - SUPPLY AND CONTROL UNIT	CODE
POWER SUPPLY	
100... 240 Vac	H
OUT 1	
Relay SPST-NO 16A	R
Not available	-
OUT 2	
Relay SPST-NO 8A	R
Not available	-
OUT 3	
Relay SPST-NO 5A	R
Not available	-
OUT 4	
Relay SPST-NO 5A	R
Not available	-

P03/P05 - DISPLAY	CODE
BUZZER (UINTERNAL)	
Available	B
Not available	-
DISPLAY	
Blue	B
Red (standard)	-

CALIND - CONNECTION CABLE BETWEEN B05 AND P03/P05	CODE
LENGHT	
0.8 m	080
1.2 m	120
3.3 m	330

DIMENSIONS

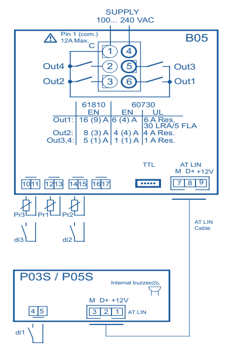
B05



The dimensions are expressed in mm

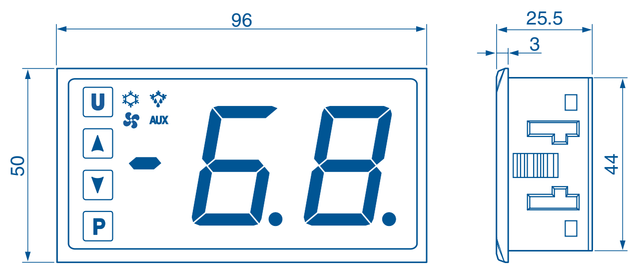
CONNECTIONS

B05 + P03/P05



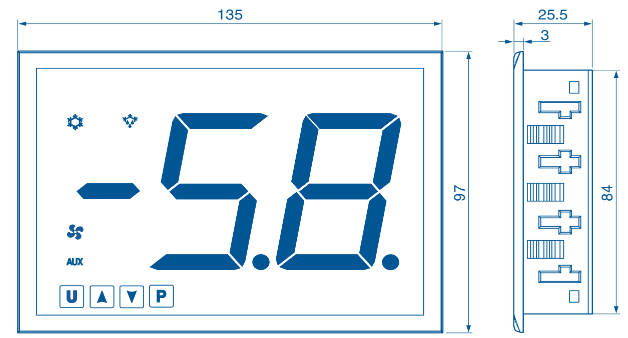
DIMENSIONS

P03



The dimensions are expressed in mm

P05



The dimensions are expressed in mm

INDICATORS

Easy to use, reliable and cost effective

Indicators with input for temperature probes and analogue signals in current or voltage.
Available also LCD versions with external probe already wired.

INDICATORS

FEATURES		Z31V	K31V	K38V	K48V	K85V	E51V	TLCD	TVRY	X31L
Dimensions (mm)	78x35	•	•	•						•
	24x48						•			
	48x48	•			•					
	70x84 4 DIN rail module					•				
	Various (see detailed table)							•		
	64x31								•	
Single display		•	•	•	•	•	•	•	•	•
Digit		3	4	4	4	4	3	2	2 ½	3
Input	PTC-NTC	•					•			
	J-K-S-R-T + IR + PTC-NTC		•	•	•	•				
	J-K-S-R-T + IR + Pt100		•	•	•	•				
	0/4... 20 mA or 0/1... 5 V or 0... 10V		•	•	•	•				
	Digital		2		2	2				10
Outputs		1	4	2	3	3				1
Power supply	12 Vac/Vdc	•	•				•			
	12... 24 Vac/Vdc	•								
	24 Vac/Vdc		•	•	•	•				•
	115, 230 Vac						•			
	100... 240 Vac	•	•	•	•	•				•
	12 Vdc (by the instrument)								•	
	1.5 Vdc battery							•		
	Solar cell							•		
RS485 Modubus			•			•				
CE certification		•	•	•	•	•	•	•	•	•
UL approval		•	•	•	•	•				
ENEC approval		•								

Z31V

- INDICATOR
- 1 INPUT AND 1 OUTPUT FOR ALARM INDICATION
- SENSITIVE-TOUCH KEYBOARD

FEATURES

DISPLAY	Z31V
Single	3 red or blue digit, h 15.5 mm
INPUT	
One	PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)
Accuracy	± 0.5 % fs + 1 digit
OUTPUT	
One, for alarm indication	OUT1: Relay SPDT or SPST-NO (16A - 1HP 250V, 1/2HP 125 Vac); EN 61810: 16 (9) A - EN 60730: 10 (4) A - UL 60730: 12 A Res., 30 LRA, 5 FLA 12 A max. for plug-in version
Relay operations	100000 operations
FUNCTIONAL	
Acoustic alarm	Internal buzzer (optional)
GENERAL	
Power supply	12 Vac/Vdc, 12...24 Vac/Vdc, 100...240 Vac ±10% (50/60 Hz)
Power consumption	4 VA approx.
Dimensions / Weight	78 x 35 mm - depth 64 mm o 75.5 mm with plug-in terminals / 120 g approx.
Keyboard	Mechanical or "Sensitive Touch"
Connections	Screw terminal block 2.5 mm² or plu-in connector with screw terminals 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) /-25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV\ diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9). Regulation 37/2005/CE (EN13485 air, S, A, 2,- 50°C +90°C wheter used with NTC 103AT11 probe).

CE cULus

HOW TO ORDER

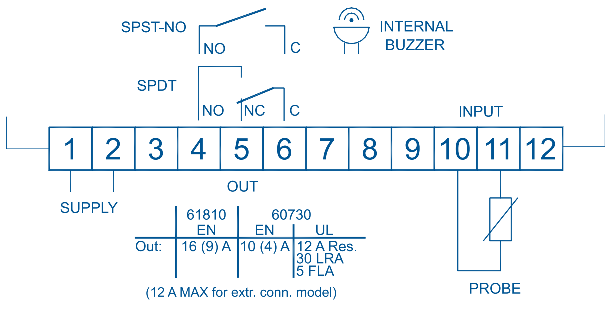
To compose the part number, pls. choose one of the option for each variable

Z31V	CODE
KEYBOARD	
Mechanical	-
Sensitive-Touch (*)	S
POWER SUPPLY	
12 Vac/Vdc	F
12... 24 Vac/Vdc	G
100... 240 Vac	H
OUT 1	
Relay SPDT 16A-AC1	S
Relay SPST-NO-16A-AC1	R
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTIONS	
Plug-in screw type	E
Plug-in screw type, fix part only	N
Fix screw type (standard)	-
DISPLAY	
Blue	B
Red (standard)	-

(*) Capacitive Touch screen keyboard

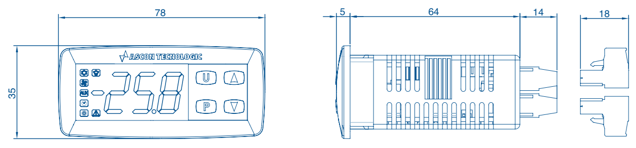
CONNECTIONS

Z31V



DIMENSIONS

Z31V



The dimensions are expressed in mm

K 31V/38V

- INDICATORS
- UP TO 4 OUTPUTS FOR ALARM INDICATION
- RS485 OR TTL SERIAL COMMUNICATION

FEATURES

DISPLAY	K31V	K38V
Single	4 red digit, h 12 mm + 3 LEDs bargraph	
INPUTS		
4 different configurations	Thermocouples (0… 1000°C/32… 1832°F), K (0… 1370°C/32… 2498°F), S,R (0… 1760°C/32… 3200°F), T (0… 400°C/32… 752°F) and Infrared sensors J or K type + Thermoresistances Pt 100 3 wires (-200.. 850°C/-328… 1562°F)	
	Thermocouples J (0… 1000°C/32… 1832°F), K (0… 1370°C/32… 2498°F), S,R (0… 1760°C/32… 3200°F), T (0… 400°C/32… 752°F) and Infrared sensors J or K type + Thermistors PTC KTY 81-121 (990Ω at 25°C) (-55… 150°C/-67… 302°F) and Thermistors NTC 103AT-2 (10kΩ at 25°C) (-50… 110°C/-58… 230°F)	
	Linear signals 0/4… 20mA	
	Linear signals 0/10… 50mV, 0/12… 60mV, 0/1… 5V, 0/2… 10V	
Digital inputs	2 digital inputs for free voltage contacts	--
OUTPUTS		
Up to four (K31V) Up to two (K38V)	OUT1 and OUT2: Relay SPDT (8A-AC1, 3A-AC3/250 Vac) or 12V ± 20% 20 mA max. for SSR driving OUT3 and OUT4: Relay SPST-NO (5A-AC1, 3A-AC3/250 Vac) or 12V ± 20% 20 mA max. for SSR driving	OUT1 and OUT2: Relay SPDT (8A-AC1, 3A-AC3/250 Vac) or 12V ± 20% 20 mA max. for SSR driving
Auxiliary supply	12 Vdc/20 mA max.	
FUNCTIONAL		
Signal retransmission	Set point	--
Serial communication	RS485 with Modbus RTU protocol	TTL ModBus
Baud rate	1200… 38400 baud, programmable	--
GENERAL		
Power supply	12 Vac/Vdc, 24 Vac/Vdc, 100… 240 Vac/Vdc ± 10% (50/60 Hz)	
Power consumption	6 VA approx.	
Dimensions	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals	78 x 35 mm - depth 64 mm
Weight	180 g approx.	
Connections	Screw terminal block 2.5 mm² or plu-in connector with screw terminals 2.5 mm²	Screw terminal block 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole	
Front protection degree	IP65, mounted in panel with gasket	
Operating / storage temperature	0… 50°C (32… 122°F)/-30… 70°C (-22… 158°F)	
Operating humidity	30… 95 RH% without condensation	
Conformity	Directive EMC 2004/108/CE (EN 61326-1), Directive BT 2006/95/CE (EN 61010-1)	

EVERYTHING UNDER CONTROL

HOW TO ORDER

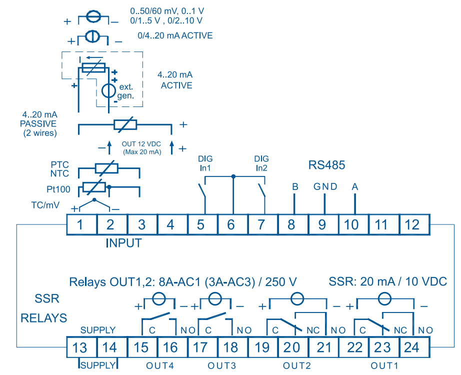
To compose the part number, pls. choose one of the option for each variable

K31V	CODE
POWER SUPPLY	
12 Vac/Vdc	F
24 Vac/Vdc	L
100… 240 Vac/Vdc	H
INPUT	
TC,PT100,mV	C
TC,PTC,NTC,mV	E
0/4… 20mA	I
0… 1V, 0/1… 5V, 0/2… 10V	V
OUT 1	
Relay SPDT 8A-AC1	R
Vdc for SSR driving	O
OUT 2	
Relay SPDT 8A-AC1	R
Vdc for SSR driving	O
Not available	-
OUT 3	
Relay SPST-NO 5A-AC1	R
Vdc for SSR driving	O
Not available	-
OUT 4	
Relay SPST-NO 5A-AC1	R
Vdc for SSR driving	O
Not available	-
SERIAL COMMUNICATION	
RS485	S
TTL ModBus	-

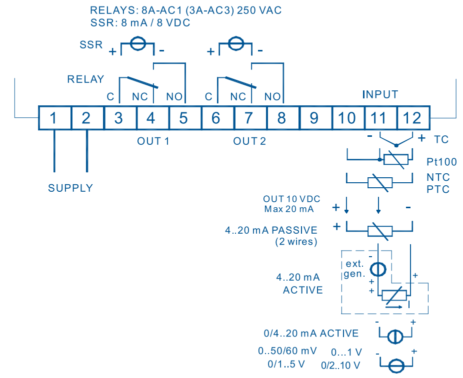
K38V	CODE
POWER SUPPLY	
12 Vac/Vdc	F
24 Vac/Vdc	L
100… 240 Vac/Vdc	H
INPUT	
TC,PT100,mV	C
TC,PTC,NTC,mV	E
0/4… 20mA	I
0… 1V, 0/1… 5V, 0/2… 10V	V
OUT 1	
Relay SPDT 8A-AC1	R
Vdc for SSR driving	O
OUT 2	
Relay SPDT 8A-AC1	R
Vdc for SSR driving	O
Not available	-

CONNECTIONS

K31V

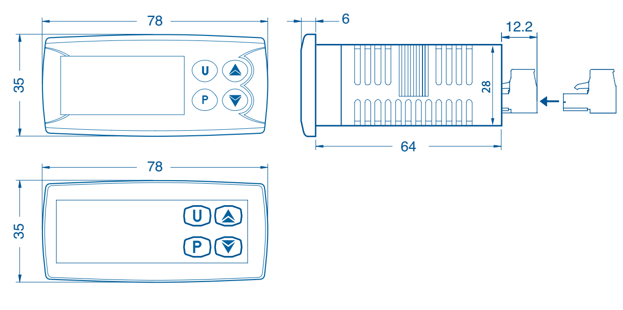


K38V



DIMENSIONS

K31V / K38V



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

K 48V/85V

- INDICATORS
- UP TO 3 OUTPUTS FOR ALARM INDICATION
- RS485 OR TTL SERIAL COMMUNICATION

FEATURES

	K48V	K85V
DISPLAY		
Single	4 red digit, h 7mm	4 red digit, h 12 mm + 3 LEDs bargraph
INPUTS		
4 different configurations	Thermocouples (0… 1000°C/32… 1832°F), K (0… 1370°C/32… 2498°F), S,R (0… 1760°C/32… 3200°F), T (0… 400°C/32… 752°F) and Infrared sensors J or K type + Thermoresistances Pt 100 3 wires (-200.. 850°C/-328… 1562°F)	
	Thermocouples J (0… 1000°C/32… 1832°F), K (0… 1370°C/32… 2498°F), S,R (0… 1760°C/32… 3200°F), T (0… 400°C/32… 752°F) and Infrared sensors J or K type + Thermistors PTC KTY 81-121 (990Ω at 25°C) (-55… 150°C/-67… 302°F) and Thermistors NTC 103AT-2 (10kΩ at 25°C) (-50… 110°C/-58… 230°F)	
	Linear signals 0/4… 20mA	
	Linear signals 0/10… 50mV, 0/12… 60mV, 0/1… 5V, 0/2… 10V	
Digital inputs	2 digital inputs for free voltage contacts, as alternative to Out 3	2 digital inputs for free voltage contacts
OUTPUTS		
Up to three	OUT1 and OUT2: Relay SPST-NO (8A-AC1, 3A-AC3/250 Vac) or 12V ± 20% 20 mA max. for SSR driving OUT3: Relay SPST-NO (5A-AC1, 3A-AC3/250 Vac) or 12V ± 20% 20 mA max. for SSR driving	OUT1 and OUT2: Relay SPDT (8A-AC1, 3A-AC3/250 Vac) or 12V ± 20% 20 mA max. for SSR driving OUT3: Relay SPST-NO (5A-AC1, 3A-AC3/250 Vac) or 12V ± 20% 20 mA max. for SSR driving
Auxiliary supply	12 Vdc/20 mA max.	
FUNCTIONAL		
Signal retransmission	--	Set point
Serial communication	TTL ModBus	RS485 with Modbus RTU protocol
Baud rate	--	1200… 38400 baud, programmable
GENERAL		
Power supply	24 Vac/Vdc, 100… 240 Vac/Vdc ± 10% (50/60 Hz)	
Power consumption	6 VA approx.	
Dimensions	48 x 48 mm (1/16 DIN) - depth 98 mm	4 DIN rail modules, 70 x 84 mm - depth 60 mm
Weight	180 g approx.	230 g approx.
Connections	Screw terminal block 2.5 mm²	
Mounting	Flush in panel in 45 x 45 mm hole	On OMEGA DIN A rail
Front protection degree	IP65, mounted in panel with gasket	IP 40, for internal use
Operating / storage temperature	0… 50°C (32… 122°F)/-30… 70°C (-22… 158°F)	
Operating humidity	30… 95 RH% without condensation	
Conformity	Directive EMC 2004/108/CE (EN 61326-1), Directive BT 2006/95/CE (EN 61010-1)	

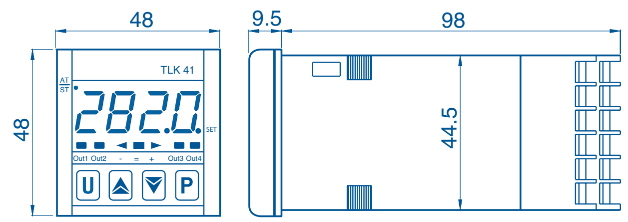
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

K48V / K85V	CODE
POWER SUPPLY	
12 Vac/Vdc	F
24 Vac/Vdc	L
100… 240 Vac/Vdc	H
INPUT	
TC,PT100,mV	C
TC,PTC,NTC,mV	E
0/4… 20mA	I
0… 1V, 0/1… 5V, 0/2… 10V	V
OUT 1	
Relay SPDT 8A-AC1	R
Vdc for SSR driving	O
OUT 2	
Relay SPDT 8A-AC1	R
Vdc for SSR driving	O
Not available	-
OUT 3	
2 digital inputs (K48V only)	D
Relay	R
Vdc for SSR driving	O
Not available	-

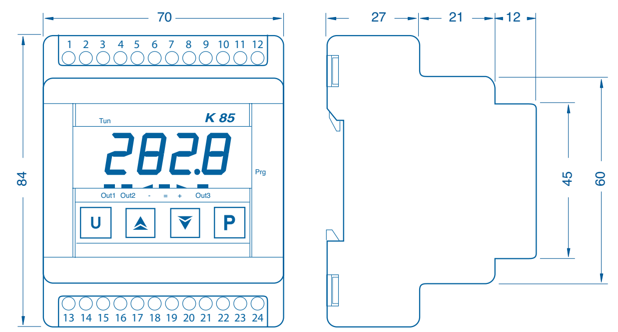
DIMENSIONS

K48V



The dimensions are expressed in mm

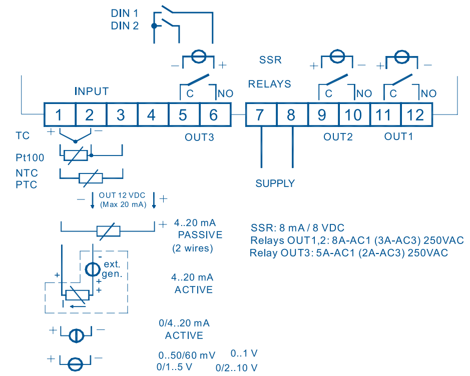
K85V



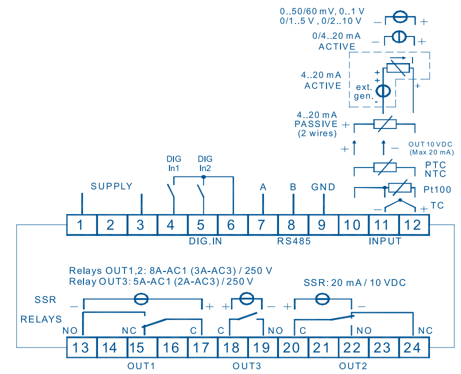
The dimensions are expressed in mm

CONNECTIONS

K48V



K85V



E51V

- INDICATOR
- 1 PTC OR NTC INPUT
- SMALL DIMENSIONS

FEATURES

DISPLAY	E51V
Single	3 red digit, h 14 mm
INPUT	
One	Thermistors PTC KTY 81-121 (990Ω at 25°C) -50... +150°C (-58... +302°F) or Thermistors NTC 103AT-2 (10kΩ at 25°C) -50... +109°C (-58... +228°F)
Accuracy	± 0.5 % fs + 1 digit
GENERAL	
Power supply	12 Vac/Vdc, 115, 230 Vac ±10% (50/60 Hz)
Power consumption	3 VA approx.
Dimensions / Weight	68 x 35 mm - depth 50 mm / 105 g approx.
Connections	Screw terminal block 2.5 mm²
Mounting	Flush in panel in 58 x 25 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000- 4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9)

CE

EVERYTHING UNDER CONTROL

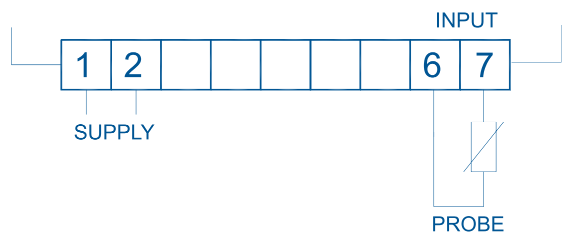
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

E51V	CODE
POWER SUPPLY	
12 Vac/Vdc	F
115 Vac	C
230 Vac	D
INPUT	
PTC	P
NTC	N

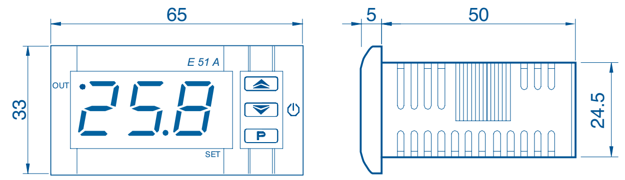
CONNECTIONS

E51V



DIMENSIONS

E51V



The dimensions are expressed in mm

TLCD

- LCD INDICATORS
- INTERNAL BATTERY SUPPLY
- WITH OR WITHOUT SOLAR CELL

FEATURES

DISPLAY	TLCD 02	TLCD 12	TLCD 03	TLCD 05	TLCD 60	TLCD 68
Single LCD	2 digit	2 digit + decimal point	2 digit	2 digit + decimal point		
INPUT						
One	External temperature sensor, wired to the instrument through a cable					
Sensor's cable lenght	50cm, 2m, 3m	50cm, 3m	10cm, 1.5m, 3m, 6m	3m	75cm, 2m	40cm, 3m
Accuracy	± 1°C	± 1°C/ ±2°F	± 1°C		± 0.5°C	± 1°C
GENERAL						
Power supply	1.5 Vdc battery (LR44 or equivalent)			Solar cell and lithium battery (CR2032)	Solar cell	1.5 Vdc battery (LR44 or equivalent)
Power consumption	5 µA approx.					
Dimensions	48.2 X 28.7 mm, depth 16.8 mm		62.2 x 29.5 mm, depth 18.7 mm	105 x 38 mm, depth 12 mm	62.2 x 29.5 mm, depth 18.7 mm	60 x 26 mm, depth 15 mm
Mounting	Flush in panel					
Front protection degree	IP65					IP68
Battery location	Back side		Front side	Back side	--	Back side
Case colour	White or black			Grey	White or gray	Black
FUNCTIONAL						
Measuring range	-50... +70°C	-50.0... +70.0°C / -58.0°F...+158.0°F	-50... +70°C oppure -50... +100°C	-50... +70°C	-50.0... +99.9°C	-50... +70°C
Unit of measurement	°C	°C o °F, on request	°C			
Operating / storage temperature	0... +55°C (32... +311°F) / -30... 70°C (-22... 158°F)					
Operating humidity	30... 95 RH% without condensation					
Conformity	CE					

CE

EVERYTHING UNDER CONTROL

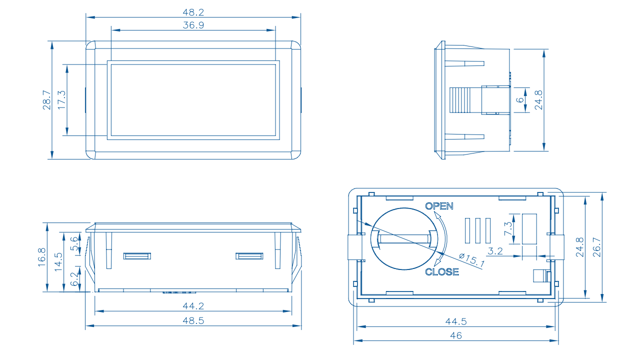
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TLCD	CODE
DIMENSION AND MODEL	
48 x 28.6 mm - Battery on the back side	02
48 x 28.6 mm - Battery on the back side + Decimal point	12
62 x 29 mm - Battery on the front side	03
105 x 38 mm - Solar cell	05
62.2 x 29.5 mm - Solar cell	60
60 x 26 mm - IP68 Battery on the back side	68
SENSOR'S CABLE LENGHT	
10 cm (TLCD 03)	01
40 cm (TLCD 68)	04
50 cm (TLCD 02, TLCD 12)	05
1.5 m (TLCD 03)	A5
75 cm (TLCD 60)	A7
2 m (TLCD 02, TLCD 60)	20
3 m (excluded TLCD 60)	30
6 m (TLCD 03)	60
CASE COLOUR	
White (TLCD 02, TLCD 12, TLCD 03, TLCD 60)	W
Black (TLCD 02, TLCD 12, TLCD 03, TLCD 68)	B
Grey (TLCD 05, TLCD 60)	G
UNIT OF MEASUREMENT - RANGE	
°C - Range -50... +70°C	-
°F - Range -50... +70°F (TLCD 12)	FA
°C - Range -50... +100°C (TLCD 03)	H

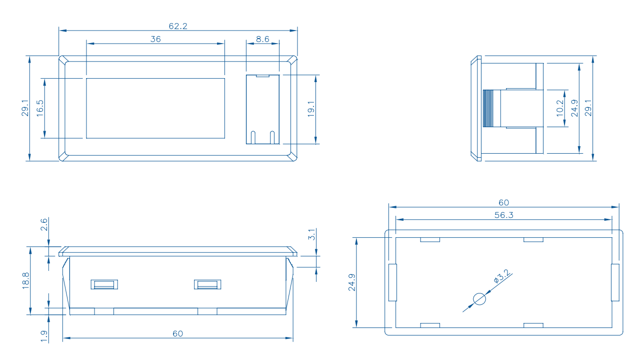
DIMENSIONS

TLCD02 / TLCD12



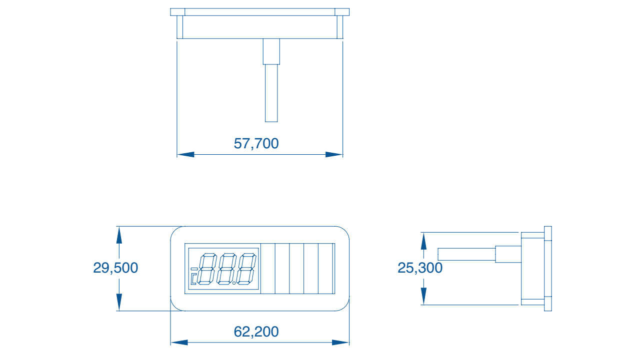
The dimensions are expressed in mm

TLCD03



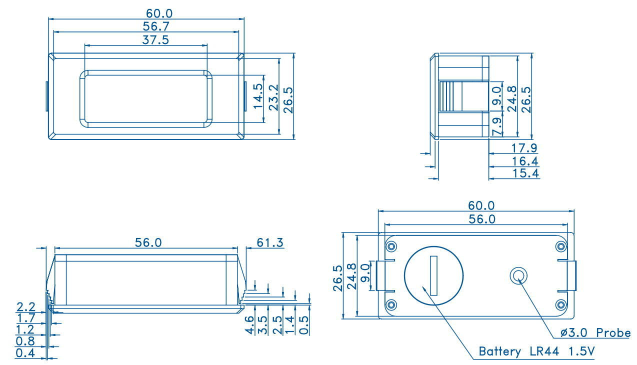
The dimensions are expressed in mm

TLCD60



The dimensions are expressed in mm

TLCD68



The dimensions are expressed in mm

TVRY

• REMOTE DISPLAY FOR CONTROLLERS
TLY SERIES

FEATURES

DISPLAY	TVRY
Single	2 ½ red digit, h 14 mm
GENERAL	
Power supply	12 Vdc (directly supplied by the connected instrument)
Power consumption	1 VA approx. (to be added to the power consumption of the connected instrument)
Dimensions / Weight	64 x 31 mm, depth 30 mm / 35 g approx.
Connections	by means of suitable 5 pole connector or screw terminal block 1.5 mm²
Mounting	Flush in panel in 59 x 25 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) / -10... +60°C (14... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive CEE EMC 2004/108/CE (EN 61326), Directive CEE BT 2006/95/CE (Instrument working at a nominal voltage lower than 50 Vac and 75 Vdc)

CE

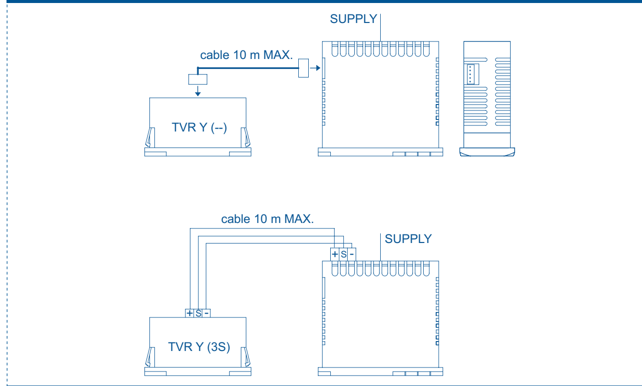
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TVRY	CODE
COMPATIBLE INSTRUMENT	
TLY series	Y
CONNECTION CABLE	
2 m	220
Without cable	-
CONNECTOR / FUNCTIONING MODE	
3 pole / slave	3S
5 pole / master	-

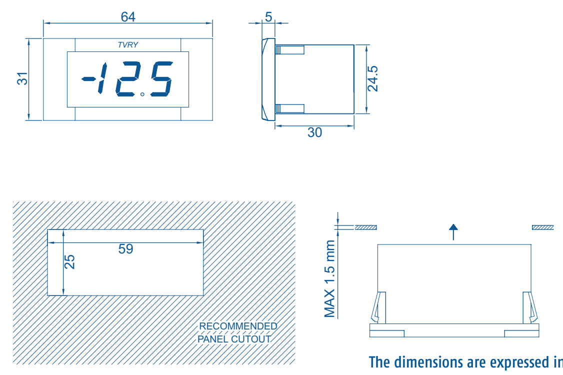
CONNECTIONS

TVRY



DIMENSIONS

TVRY



The dimensions are expressed in mm

X31L

- ALARMS/EVENTS INDICATORS
- SENSITIVE-TOUCH KEYBOARD
- UP TO 10 DIGITAL INPUTS

FEATURES

DISPLAY	X31L
Single	3 red or blue digit, h 15.5 mm
INPUTS	
Ten	10 digital inputs for free voltage contacts or voltage contacts (24 Vac/Vdc)
OUTPUT	
One, for alarm indication	OUT1: Relay SPDT (8A-AC1, 3A-AC3 250 Vac, 1/2 HP 250 Vac, 1/3 HP 125 Vac)
Relay operations	100000 operations
FUNCTIONAL	
Acoustic alarm	Internal buzzer (optional)
GENERAL	
Power supply	24 Vac/Vdc, 100...240 Vac ±10% (50/60 Hz)
Power consumption	4 VA approx.
Dimensions / Weight	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals / 130 g approx.
Keyboard	Mechanical or "Sensitive Touch"
Connections	Screw terminal block 2.5 mm² or plu-in connector with screw terminals 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... +50°C (32... +122°F) / -25... +60°C (-13... +140°F)
Operating humidity	30... 95 RH% without condensation
Conformity	Directive 2004/108/CE (EN55022: class B; EN61000-4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 60730-1, EN 60730-2-7, EN 60730-2-9)

CE

EVERYTHING UNDER CONTROL

HOW TO ORDER

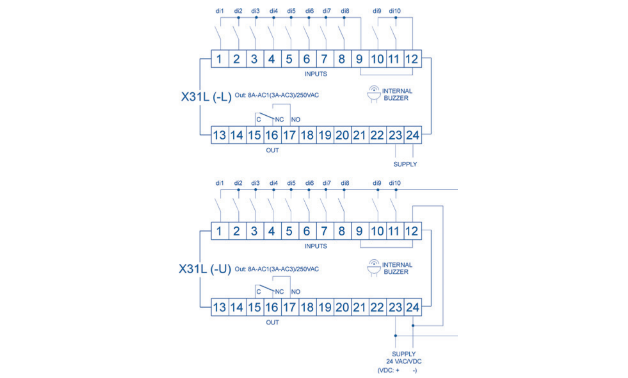
To compose the part number, pls. choose one of the option for each variable

X31L	CODE
KEYBOARD	
Mechanical	-
Sensitive-Touch (*)	S
POWER SUPPLY	
24 Vac/Vdc	L
100... 240 Vac	H
INPUT	
For free voltage contacts	L
24 Vac/Vdc voltage contacts (24 V supply only)	U
OUT 1	
Relay SPDT 8A-AC1	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTIONS	
Plug-in screw type	E
Fix screw type (standard)	-
DISPLAY	
Blue	U
Red (standard)	-

(*) Capacitive Touch screen keyboard

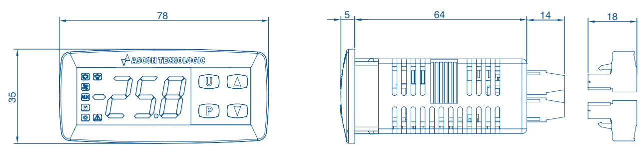
CONNECTIONS

X31L



DIMENSIONS

X31L



The dimensions are expressed in mm

SPECIAL CONTROLLERS AND "CUSTOM"

The only limit is your imagination...

Our production program includes many models that can be used in specific applications such as controllers for Peltier cells, differential controllers, multi-step controllers, milk tank controllers and also "custom" products to meet specific customer requirements.

SPECIAL CONTROLLERS

FEATURES		K31D	Y39D	TLK31C	TLS35	W09D	TLK33	TLJ29M	TLJ35M
Dimensions (mm)	78 x 35	•	•	•			•	•	
	70 x 84 4 DIN rail module				•				•
	75x122					•			
Single display		•	•	•	•	•	•	•	•
Digit		4	3	4	4	3	4	4	4
Inputs	Number of input	2	2	1	2	3	1	1	1
	PTC-NTC	•	•		•	•		|	|
	Pt1000		•						
	TC J,K,S, IR + PT100			•			•		
	TC J,K,S, IR + PTC, NTC			•			•		
	0/4... 20mA			•			•		
	0/10... 50mV, 0/12... 60mV, 0/1... 5V, 0/2... 10V			•			•		
	Digital	2	1	2	1	1	2	1	1
Relay outputs		4	3	4	3	3		3	3
Voltage output 12... 24 Vdc and Vdc for SSR driving output (10mA/Vdc)				4			2		
Power supply	12 Vac/Vdc	•	•	•	•			•	•
	12... 24 Vdc						•		
	24 Vac/Vdc	•	•		•			•	•
	100... 240 Vac	•	•		•	•		•	•
Control	ON/OFF		•	•	•	•		•	•
	ON/OFF, Neutral Zone, PID single and dual action	•							
	ON/OFF, Neutral Zone, proportional			•					
	Peltier cells: PID dual action, Autotuning FAST, Selftuning algorithm, Fuzzy overshoot control						•		
RS485		•		•			•		
Control function		Differential		Multi-step	Differential		For Peltier cells	For milk tanks	
CE certification		•	•	•	•	•	•	•	•
UL approval		•	•	•			•		

DIFFERENTIAL CONTROLLERS

- UP TO 3 INPUTS AND 4 OUTPUTS
- RS485 OR TTL SERIAL COMMUNICATION

FEATURES

DISPLAY	K31D	Y39D
Single	4 red digit, h 12 mm + 3 LEDs bargraph	3 red or blue digit, h 15.5 mm
INPUTS		
Two	2x Thermistors PTC KTY 81-121 (990Ω at 25°C): -55... +150°C/-67... +302 °F or 2x Thermistors NTC 103AT-2 (10kΩ at 25°C): -50... +110°C/-58... +230°F	2x Thermistors PTC KTY 81-121 (990Ω at 25°C): -50... +150°C /-58... +302 °F or 2x Thermistors NTC 103AT-2 (10kΩ at 25°C): -50... +109°C/-58... +228 °F or 2x Thermoresistances Pt1000 (1000Ω at 0°C): -99.9... +500°C/-148... +932°F
Digital inputs	2 digital inputs for free voltage contacts	1 digital input for free voltage contacts as alternative to inputs Pr3
Accuracy	± 0.5 % fs + 1 digit; tc S ± 1% fs + 1 digit	± 0.5 % fs + 1 digit
OUTPUTS		
Up to 4 (K31D) or Up to 3 (Y39D)	OUT1 and OUT2: Relay SPDT (8A-AC1, 3A-AC3/250 Vac) or 12V ± 20% 20 mA max. for SSR driving OUT3 and OUT4: Relay SPST-NO (5A-AC1, 3A-AC3/250 Vac) or 12V ± 20% 20 mA max. for SSR driving	OUT1: Relay SPST-NO (16A-AC1, 6AAC3 250 Vac, 1 HP 250 Vac, 1/2 HP 125 Vac) OUT2: Relay SPDT (8A-AC1, 3A-AC3 250 Vac, 1/2 HP 250 Vac, 1/3 HP 125 Vac) OUT3: Relay SPST-NO (5A-AC1, 2A-AC3 250 Vac, 1/8 HP 250-125 Vac). 16 A max. for common relay (term. 1), 12 A max for plug-in version
FUNCTIONAL		
Control	ON/OFF, Neutral zone, PID single and dual action, programmable	ON/OFF
Real Time Clock	--	Internal clock to manage defrosting at programmed times
Serial communication	RS485 with Modbus RTU protocol	TTL ModBus
Baud rate	1200... 38400 baud, programmable	--
GENERAL		
Power supply	12 Vac/Vdc, 24 Vac/Vdc, 100... 240 Vac/Vdc ± 10% (50/60 Hz)	
Power consumption	4 VA approx.	
Dimensions	78 x 35 mm - depth 64 mm or 75.5 mm with plug-in terminals	
Weight	150 g approx.	130 g approx.
Keyboard	Mechanical	Mechanical or "Sensitive Touch"
Connections	Screw terminal block 2.5 mm² or plu-in connector with screw terminals 2.5 mm²	
Mounting	Flush in panel in 71 x 29 mm hole	
Front protection degree	IP65, mounted in panel with gasket	
Operating / storage temperature	0... 50°C (32... 122°F) / -30... 70°C (-22... 158°F)	
Operating humidity	20... 85 RH% without condensation	
Conformity	Directive EMC 2004/108/CE (EN 61326-1), Directive BT 2006/95/CE (EN 61010-1)	

EVERYTHING UNDER CONTROL

HOW TO ORDER

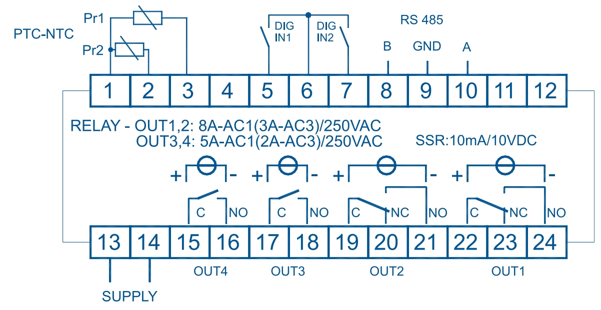
To compose the part number, pls. choose one of the option for each variable

K31D	CODE
POWER SUPPLY	
12 Vac/Vdc	F
24 Vac/Vdc	L
100... 240 Vac/Vdc	H
INPUT	
2 inputs for PTC/NTC sensors	2
OUT 1	
Relay SPDT 8A-AC1	R
Vdc for SSR driving	0
OUT 2	
Relay SPDT 8A-AC1	R
Vdc for SSR driving	0
Not available	-
OUT 3	
Relay SPST-NO 5A-AC1	R
Vdc for SSR driving	0
Not available	-
OUT 4	
Relay SPST-NO 5A-AC1	R
Vdc for SSR driving	0
Not available	-
SERIAL COMMUNICATION	
RS485	S
TTL Modbus	-

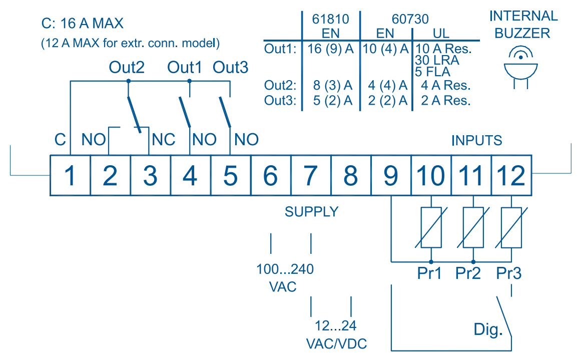
Y39	CODE
KEYBOARD	
Sensitive Touch (*)	SD
Mechanical	D
POWER SUPPLY	
12 V AC/DC	F
12... 24 V AC/DC	G
100... 240 V AC	H
OUT 1	
Relay SPST-NO-16A-AC1	R
OUT 2	
Relay SPDT 5A-AC1	R
Not available	-
OUT 3	
Relay SPDT 5A-AC1	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTIONS	
Plug-in screw type	E
Fix screw type (standard)	-
DISPLAY	
Blue	B
Red (standard)	-
REAL TIME CLOCK	
Available	C
Not available	-

CONNECTIONS

K31D

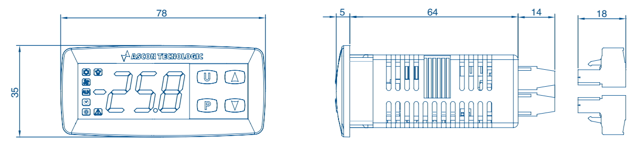


Y39D



DIMENSIONS

K31D / Y39D



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

DIFFERENTIAL CONTROLLERS

- UP TO 3 INPUTS AND 3 OUTPUTS
- TTL SERIAL COMMUNICATION

FEATURES

DISPLAY	TLS35	W09D
Single	4 red digit, h 12 mm	3 red or blue digit, h 15.5 mm
INPUTS		
Two (TLS35) Three (W09D)	2x Thermistors PTC KTY 81-121 (990Ω at 25 °C): -50... +150°C /-58... +302 °F oppure 2x Thermistors NTC 103AT-2 (10KΩ at 25 °C): -50... +109°C/-58... +228 °F	3x Thermistors PTC KTY 81-121 (990Ω at 25 °C): -50... +150°C /-58... +302 °F ore 3x Thermistors NTC 103AT-2 (10KΩ at 25 °C): -50... +109°C/-58... +228 °F
Digital inputs	1 digital input for free voltage contacts	1 digital input for free voltage contacts as alternative to inputs Pr3
Accuracy	± 0.5 % fs + 1 digit	
OUTPUTS		
Up to 3	OUT1: Relay SPST-NO (16A-AC1, 6A- AC3 250 Vac, 1HP 250Vac, 1/2HP 125 Vac) o SPDT (16A-AC1- NO, 8A-AC1-NC, 6A-AC3 250 Vac,1HP 250Vac, 1/2HP 125 Vac) OUT2 and OUT3: Relay SPDT (8A-AC1, 3A-AC3 250 Vac, 1/2HP 250Vac, 1/3HP 125 Vac)	OUT1: Relay SPST-NO (14A-AC1, 6AAC3 250 Vac, 1 HP 250 Vac, 1/2 HP 125 Vac) OUT2: Relay SPDT (8A-AC1, 3A-AC3 250 Vac, 1/2 HP 250 Vac, 1/3 HP 125 Vac) OUT3: Relay SPST-NO (4A-AC1, 2A-AC3 250 Vac, 1/8 HP 250-125 Vac). 16 A max. for common (term. 12)
FUNCTIONAL		
Control	ON/OFF	
Real Time Clock	--	Internal clock to manage defrosting at programmed times
Serial communication	TTL ModBus	
GENERAL		
Power supply	12 Vac/Vdc, 24 Vac/Vdc, 100... 240 Vac/Vdc ± 10% (50/60 Hz)	100... 240 Vac ±10% (50/60 Hz)
Power consumption	5 VA approx.	4 VA approx.
Dimensions	4 DIN rail module 70 x 84 mm, depth 60 mm	75 x 122 mm, depth 34 mm
Weight	180 g	135 g
Keyboard	Mechanical	
Connections	On OMEGA DIN A rail	
Mounting	Screw terminal block 2.5 mm²	
Front protection degree	IP 40 (IP20 on terminal block)	
Operating / storage temperature	0... 50°C (32... 122°F) / -30... 70°C (-22... 158°F)	
Operating humidity	20... 85 RH% without condensation	
Conformity	Directive EMC 2004/108/CE (EN 61326-1), Directive BT 2006/95/CE (EN 61010-1)	

HOW TO ORDER

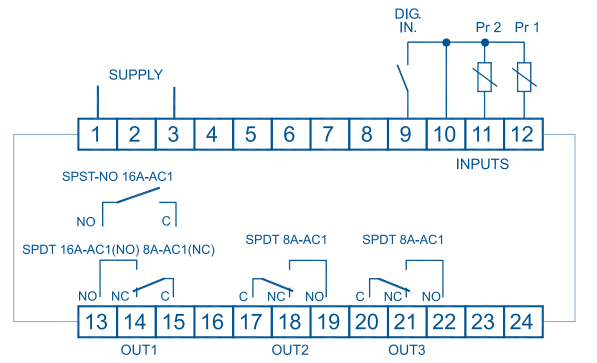
To compose the part number, pls. choose one of the option for each variable

TLS35	CODE
POWER SUPPLY	
24 Vac/Vdc	L
90...240 Vac	H
12 Vac/Vdc	F
OUT 1	
Relay SPDT 16A AC1	S
Relay SPST-NO-16A AC1	R
OUT AL1	
Relay SPST-NO-8A AC1	R
Not available	-
OUT AL2	
Relay SPST-NO-8A AC1	R
Not available	-

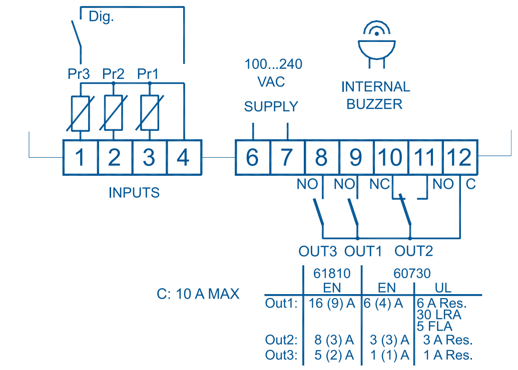
W09D	CODE
POWER SUPPLY	
100...240Vac	H
OUT 1	
Relay SPDT-8A-AC1	R
OUT 2	
Relay SPDT-8A-AC1	R
Not available	-
OUT 3	
Relay SPST-NO 5A-AC1	R
Not available	-
BUZZER (INTERNAL)	
Available	B
Not available	-
CONNECTIONS	
Fix screw type	-
DISPLAY	
Blue	B
Red (standard)	-
REAL TIME CLOCK	
Available	C
Not available	-

CONNECTIONS

TLS35

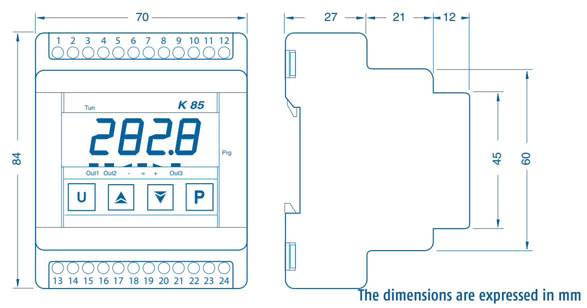


W09D



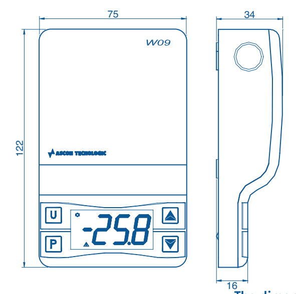
DIMENSIONS

TLS35



The dimensions are expressed in mm

W09D



The dimensions are expressed in mm

MULTI-STEP CONTROLLER

- 4 OUTPUTS
- RS485

FEATURES

DISPLAY	TLK31C
Single	4 red digit, h 12 mm + 3 LEDs Bargraph
INPUTS	
4 different configurations	Thermocouples (0... 1000°C/32... 1832°F), K (0... 1370°C/32... 2498°F), S,R (0... 1760°C/32... 3200°F), T (0... 400°C/32... 752°F) and Infrared sensors J or K type + Thermoresistances Pt 100 3 wires (-200.. 850°C/-328... 1562°F)
	Thermocouples J (0... 1000°C/32... 1832°F), K (0... 1370°C/32... 2498°F), S,R (0... 1760°C/32... 3200°F), T (0... 400°C/32... 752°F) and Infrared sensors J or K type + Thermistors PTC KTY 81-121 (990Ω at 25°C) (-55... 150°C/-67... 302°F) and Thermistors NTC 103AT-2 (10kΩ at 25°C) (-50... 110°C/-58... 230°F)
	Linear signals 0/4... 20mA
	Linear signals 0/10... 50mV, 0/12... 60mV, 0/1... 5V, 0/2... 10V
Digital inputs	2 digital inputs for free voltage contacts
Accuracy	± 0.5% span ±1 digit, Tc S :±1% span ±1 digit
OUTPUTS	
Up to 4	OUT 1 and OUT 2: Relay SPDT 8A-AC1, 3A-AC3/250 VAC or 8mA/8VDC for SSR driving OUT 2 and OUT 3: Relay SPST-NO 8A-AC1, 3A-AC3/250 VAC or 8mA/8VDC for SSR driving
Auxiliary supply	12 Vdc/20 mA max.
FUNCTIONAL	
Control	ON/OFF, Neutral zone, Proportional
Set Point	4 Set Points programmable
Serial communication	RS485 with Modbus RTU protocol
Baud rate	1200... 38400 baud, programmable
GENERAL	
Power supply	12 Vac/Vdc ±10%
Power consumption	4 VA approx.
Dimensions / Weight	78 x 35 mm - depth 64 mm / 150 g approx.
Connections	Screw terminal block 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... 50°C (32... 122°F) / -30... 70°C (-22... 158°F)
Operating humidity	20... 85 RH% without condensation
Conformity	Directive EMC 2004/108/CE (EN 61326-1), Directive BT 2006/95/CE (EN 61010-1)

CE

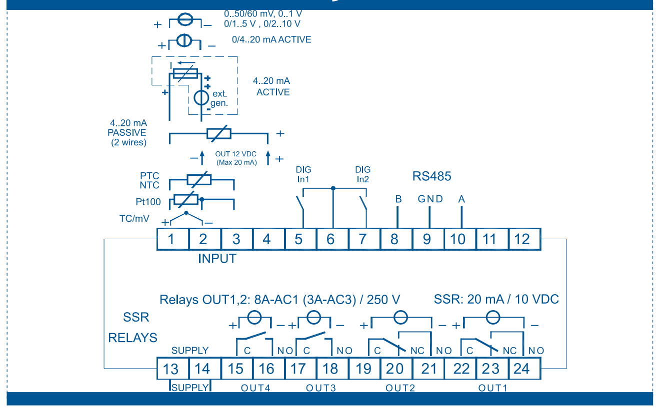
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TLK31C	CODE
INPUT	
PT100 + TC (J,K,S,IRS), mV	D
PTC,NTC,mV + TC (J,K,S,IRS)	E
0/4... 20mA	I
0/1... 5V, 0/2... 10V	V
OUT 1	
Relay 8A SPDT	R
Vdc for SSR driving	O
OUT 2	
Relay 8A SPDT	R
Vdc for SSR driving	O
Not available	-
OUT 3	
Relay 8A SPST-NO	R
Vdc for SSR driving	O
Not available	-
OUT 4	
Relay 8A SPST-NO	R
Vdc for SSR driving	O
Not available	-
SERIAL COMMUNICATION	
RS485	S
Not available	-
DIGITAL INPUTS	
2 digital inputs	I
Not available	-

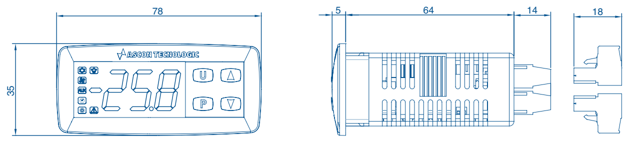
CONNECTIONS

TLK31C



DIMENSIONS

TLK31C



The dimensions are expressed in mm

PELTIER CELLS CONTROLLER

- PID CONTROL
- UP TO 2 OUTPUTS
- RS485

FEATURES

DISPLAY	TLK33
Single	4 red digit, h 12 mm
INPUTS	
4 different configurations	Thermocouples (0... 1000°C/32... 1832°F), K (0... 1370°C/32... 2498°F), S,R (0... 1760°C/32... 3200°F), T (0... 400°C/32... 752°F) and Infrared sensors J or K type + Thermoresistances Pt 100 3 wires (-200.. 850°C/-328... 1562°F)
	Thermocouples J (0... 1000°C/32... 1832°F), K (0... 1370°C/32... 2498°F), S,R (0... 1760°C/32... 3200°F), T (0... 400°C/32... 752°F) and Infrared sensors J or K type + Thermistors PTC KTY 81-121 (990Ω at 25°C) (-55... 150°C/-67... 302°F) and Thermistors NTC 103AT-2 (10kΩ at 25°C) (-50... 110°C/-58... 230°F)
	Linear signals 0/4... 20mA
	Linear signals 0/10... 50mV, 0/12... 60mV, 0/1... 5V, 0/2... 10V
Digital inputs	2 digital inputs for free voltage contacts
Accuracy	± 0,5% span ±1 digit, Tc S :±1% span ±1 digit
OUTPUTS	
Up to 2, in voltage to direct drive Peltier cells	12... 24 Vdc (equal to power supply) to direct drive Peltier cells max. 7A; up to 2 alarm outputs in voltage for SSR driving (10mA/ 10Vdc)
Auxiliary supply	12 Vdc / 20 mA max.
FUNCTIONAL	
Control	PID dual action, Autotuning FAST, Selftuning algorithms, Fuzzy overshoot control
Set Point	4 Set Points programmable
Serial communication	RS485 with Modbus RTU protocol
Baud rate	1200... 38400 baud, programmable
GENERAL	
Power supply	12... 24 Vdc ±10%
Power consumption	4 VA approx.
Dimensions / Weight	78 x 35 mm - depth 75.5 mm / 130 g approx.
Connections	Screw terminal block 2.5 mm²
Mounting	Flush in panel in 71 x 29 mm hole
Front protection degree	IP65, mounted in panel with gasket
Operating / storage temperature	0... 50°C (32... 122°F) / -30... 70°C (-22... 158°F)
Operating humidity	20... 85 RH% without condensation
Conformity	Directive EMC 2004/108/CE (EN 61326-1), Directive BT 2006/95/CE (EN 61010-1)

CE

HOW TO ORDER

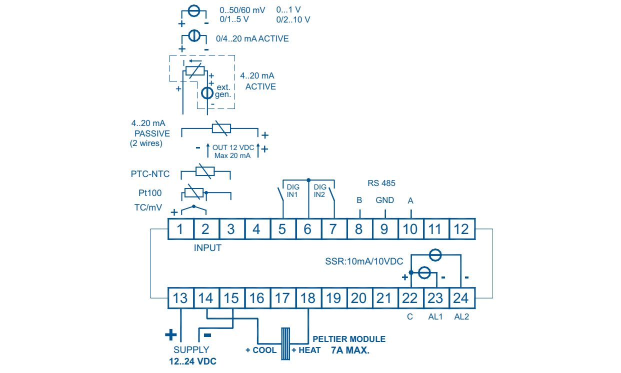
To compose the part number, pls. choose one of the option for each variable

TLK33	CODE
POWER SUPPLY	
12... 24 Vdc	G
INPUT	
PT100 + TC (J,K,S,IRS), mV	D
PTC,NTC,mV + TC (J,K,S,IRS)	E
0/4... 20mA	I
0/1... 5V, 0/2... 10V	V
CONTROL OOUTPUTS (2 FOR SSR)	
12... 24 Vdc for Peltier cells (7A max)	0
OUT AL1	
Vdc for SSR driving	0
Not available	-
OUT AL2	
Vdc for SSR driving	0
Not available	-
SERIAL COMMUNICATION	
RS485 + 2 digital inputs	S
Not available	-
DIGITAL INPUT	
Available	I
Not available	-

TLK33 : When the RS485 is required, 2 digital inputs are always on board too.

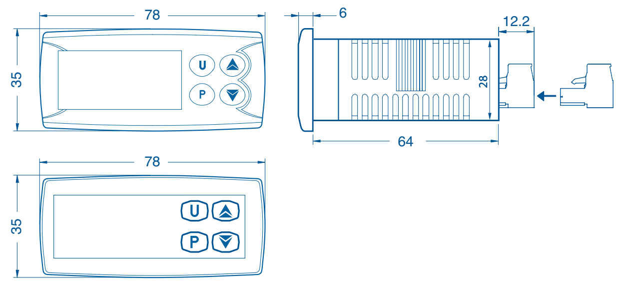
CONNECTIONS

TLK33



DIMENSIONS

TLK33



The dimensions are expressed in mm

MILK TANK CONTROLLERS

- TEMPERATURE AND AGITATOR CONTROL
- 1 INPUT AND UP TO 3 OUTPUTS

FEATURES

DISPLAY	TLJ29M	TLJ35M
Single	4 red digit, h 12 mm	
INPUTS		
One	Thermistors PTC KTY 81-121 (990Ω at 25°C): -50… +150°C (-58… +302°F) or Thermistors NTC 103AT-2 (10kΩ at 25°C): -50… +109°C (-58… 228°F)	
Digital inputs	1 digital input for free voltage contacts	
Accuracy	± 0.5% span + 1 digit	
OUTPUTS		
Up to 3	OUT1: Relay SPST-NO (16A-AC1, 6A-AC3 250 Vac) OUT2 agitator: Relay SPDT (8A-AC1, 3A-AC3 250 Vac) OUT3: Relay SPSTNO (5A-AC1, 2A-AC3 250 Vac) 16 A max. for Common (term. 1)	OUT1: Relay SPST-NO (16A-AC1, 6AAC3 250 Vac, 1HP 250Vac, 1/2HP 125 Vac) or SPDT (16A-AC1-NO, 8A-AC1-NC, 6A-AC3 250 Vac,1HP 250Vac, 1/2HP 125 Vac) OUT2 agitator: Relay SPDT (8A-AC1, 3A-AC3 250 Vac, 1/2HP 250Vac,1/3HP 125 Vac) OUT3: Relay SPST-NO (8A-AC1, 3A-AC3 250 Vac, 1/2HP 250Vac, 1/3HP 125 Vac)
Relay operations	OUT SPST-NO: 100000 operations, OUT SPDT: 50000 operations	OUT SPST-NO: 100000 operations, OUT SPDT: 50000 operations (VDE), AGIT and OUT4: 100000 operations
FUNCTIONAL		
Control	ON/OFF	
Agitator control	With automatic or manual cycle	
Acoustic alarm	Internal buzzer (optional)	
GENERAL		
Power supply	12 Vac/Vdc, 24 Vac/Vdc, 100… 240 Vac ±10% (50/60 Hz)	
Power consumption	4 VA approx.	
Dimensions / Weight	78 x35 mm, depth 64 mm / 115 g approx.	70 x 84 x 60 mm, 4 DIN rail module / 180 g approx.
Mounting	Flush in panel in 71 x 29 mm hole	On OMEGA DIN A rail
Connections	Screw terminal block 2.5 mm²	
Front protection degree	IP65, mounted in panel with gasket	IP20
Operating / storage temperature	0… 50°C (32… 122°F) / -30… 70°C (-22… 158°F)	
Operating humidity	30… 95 RH% without condensation	
Conformity	Directive EMC 2004/108/CE (EN 61326-1), Directive BT 2006/95/CE (EN 61010-1)	Directive 2004/108/CE (EN 61326; EN55022: class B; EN61000-4-2: 8KV air, 4KV cont.; EN61000-4-3: 10V/m; EN61000-4-4: 2KV supply, inputs, outputs; EN61000-4-5: supply 2KV com. mode, 1 KV\ diff. mode; EN61000-4-6: 3V), 2006/95/CE (EN 61010-1, EN 60730-1, EN 60730-2-7, EN 60730-2-9)

EVERYTHING UNDER CONTROL

HOW TO ORDER

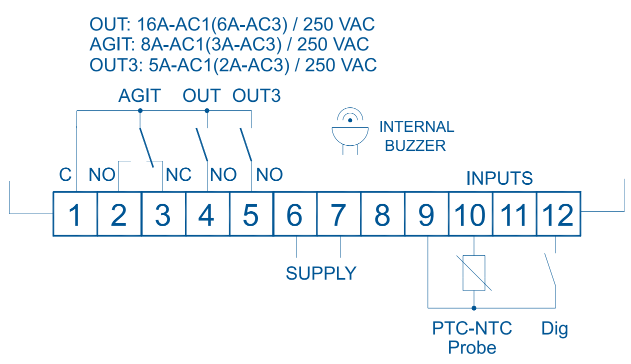
To compose the part number, pls. choose one of the option for each variable

TLJ29 M	CODE
POWER SUPPLY	
24 Vac/Vdc	L
90…240 Vac	H
12 Vac/Vdc	F
OUT 2	
Relay	R
OUT 3	
Relay	R
Not available	-
BUZZER	
Available	B
Not available	-

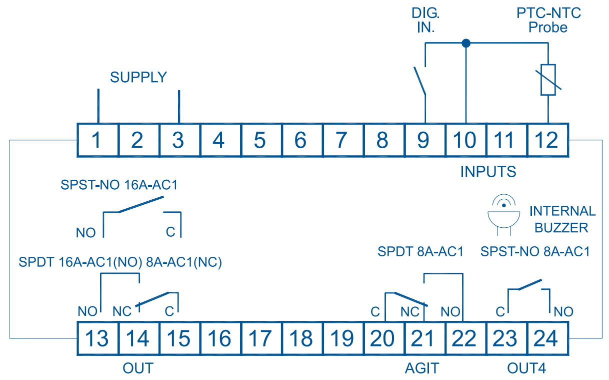
TLJ35 M	CODE
POWER SUPPLY	
24 Vac/Vdc	L
90…240 Vac	H
12 Vac/Vdc	F
OUT 1	
Relay SPDT 16A AC1	S
Relay SPST-NO-16A AC1	R
BUZZER	
Available	B
OUT 3	
Relay	R
OUT 4	
Relay	R
Not available	-

CONNECTIONS

TLJ29M

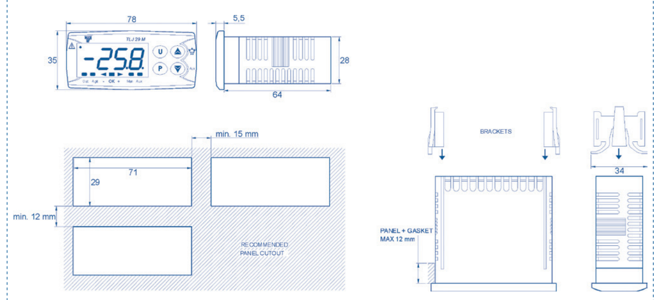


TLJ35M



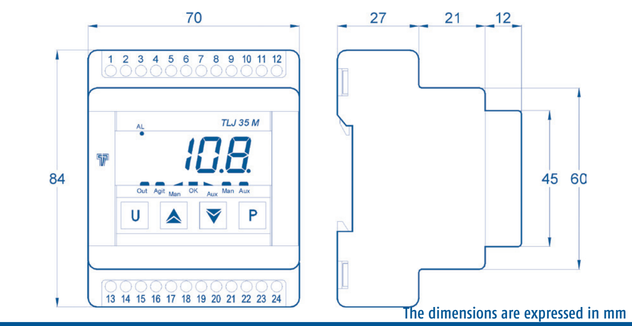
DIMENSIONS

TLJ29M



The dimensions are expressed in mm

TLJ35M



The dimensions are expressed in mm

DEFROST TIMER

- CONTROL OF INTERVALS AND DURATION OF DEFROST CYCLES
- AUTOMATIC AND MANUAL DEFROSTS
- CONTROL AND DELAYED START OF EVAPORATOR FANS

FEATURES

INPUTS	TCS4
One	1 input to end defrost for free voltage contacts
OUTPUTS	
Two	2 relays SPDT outputs: OUT Def: SPDT-16A-1HP 250V, 1/2HP 125VAC - EN61810: 16 (9) A - EN60730: 10 (4) A - UL60730: 12A Res., 30 LRA, 5 FLA OUT Fan: SPDT-8A- 1/2HP 250V - 1/3HP 125VAC - EN61810: 8 (3) A - EN60730: 8 (4) A - UL60730: 10A Res., 12 LRA, 2 FLA
Relay operations	100.000 operations
FUNCTIONAL	
Functions	Defrost interval, duration of the defrost cycle, evaporator fan activation delay, manual defrost cycle, 3 LEDs for ON, DEF, FAN indication
GENERAL	
Power supply	100... 240 VAC ±10% (50/60 Hz)
Power consumption	3 VA approx.
Dimensions / Weight	35 x 90 mm - depth 73 mm / 120g approx.
Mounting	On omega DIN A rail
Connections	Screw terminal block for cables 0.2...2.5 mm²/ AW G 24...14
Operating / storage temperature	0... 50°C (32... 122°F) / -30... 70°C (-22... 158°F)
Operating humidity	20... 85 RH% without condensation
Conformity	Directive EN 60730-1

CE

EVERYTHING UNDER CONTROL

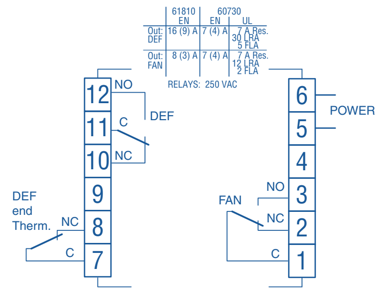
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TCS4	CODE
POWER SUPPLY	
24 VAC/VDC	L
100... 240 VAC/VDC	H
INPUT / END DEFROST TEMPERATURE	
Klixon contact / Temperature detected by thermostat	--
NTC input / Fixed defrost end temperature 12 ° C	12
DEFROST INTERVAL	
2... 24 hrs	-
30 min... 4 hrs	B
DEFROST DURATION	
1... 60 min.	-
1... 7 min.	B
FAN DELAY	
1... 10 min.	-
15 sec. fix	B

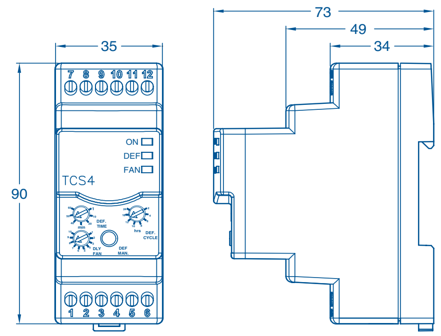
CONNECTIONS

TCS4



DIMENSIONS

TCS4



The dimensions are expressed in mm

PAC SYSTEMS

The right solution for every application!

New generation of programmable controllers (PAC – Programmable Automation Controller).
They manage the control, the monitoring and permit the remote control of machines and small industrial plants.
Within Sigma2 line, two hardware solutions are available: one modular and distributed (SigmaPAC: CU02) and one compact (MicroPAC: M81, MP02).

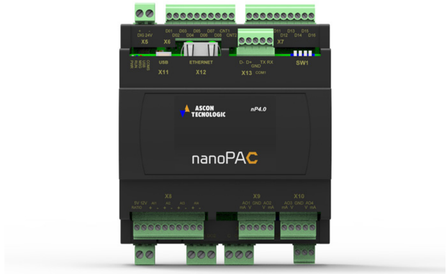
PAC SYSTEMS

FEATURES		NP4		AC3NP
Dimensions (mm)	6 DIN module (105 x 110 mm)	•		
	8 DIN module(152 x 110 mm)			
	83 x 159			•
Inputs (16 bit)	Universal (mA, V, TC, RTD, NTC, Potentiometer)	4		2 (optional)
	Hi level (mA, V)			6+2 (optional)
	Digital	18+36 (*)		8 + 32 (**)
Outputs	Relay outputs / for SSR driving	4+8 (*)		8+32 (**)
	Analog outputs current or voltage	4+8 (*)		4
	Digital outputs	18+36 (*)		
Power supply	24 Vdc	•		•
Control	ON / OFF, PID with advanced Autotuning	•		•
	Servomotor control	•		•
Processor 32 bit		•		•
16 MB RAM, 2MB program and 64 KB flash				•
16 MB Flash, 32 MB SDRAM, 128 kB MRAM		•		
Micro USB		• (AB type)		•
Real Time Clock		•		•
Ethernet port (communication, programming, configuration)		•		•
RS485 port		•		•
RS232 port		1		1
Modbus RTU (Master/Slave) protocol, Modbus TCP Server, ASCII		•		•
Profibus DP				
Programming languages : IL, ST, FBD, LD, SFC, CFC		•		•
Advanced libraries dedicated to process control		•		•
CE certification		•		•
UL approval (listed)				

(*) expandable with modules of the exPAC family
(**) expandable with modules of the MP-D family

NP4 NANOPAC

- COMPACT PROGRAMMABLE CONTROLLER (NANOPAC)
- ON BOARD I/O
- EXPANSION CAPABILITIES



FEATURES

INPUTS	NP4
4 Universal Analogue	Configurable between: 0/1... 5 V, 0/2... 10 V, 0/4... 20 mA, TC (J, K, L, N, R, S, T), PT100 (2 wires), PT1000, NTC (103AT-2), Potentiometer, 5 V Ratiometric
	16 bit resolution
	Accuracy 0,1% of span (linear), 0,2% (temperature)
	Input Impedance >100 kΩ, <200 Ω (mA)
	Insulation 800 V between analogue channels and power supply, digital I/Os and serial comms ports (insulated version)
8/16 + 2 Digital	8 (16 I/O mix) sink type IEC61131-2 type 3
	2 input sink type IEC61131-2 type 3 for counters and frequency (5 kHz max)
	Protection: reverse polarity and overvoltage
	Insulation 800 V between digital channels, power supply, analogue I/Os and serial comms ports (isolated version)
OUTPUTS	
0/2/4 Analogue	Configurable 0/1... 5 V, 0/2... 10 V, 0/4... 20 mA
	12 bit resolution
	Accuracy 0.1 % full scale
	Insulation 800 V between analogue outputs and power supply, analogue inputs, digital I/Os and serial comms ports (isolated version)
8/16 Digital	8 (16 I/O mix) high-side output 0.7 A each
	Insulation 800 V between digitals and power supply, analogue I/Os and serial comms ports (isolated version)
4 Relay/SSR Drive	Relay 2 A, 240 Vac, or SSR Drive max 20 mA, 12V
	Protection: Overvoltage
	Insulation 2500V (Relay), 800V SSR Drive with respect power supply, analogue & digital I/Os and serial comms ports (isolated version)
SERIAL PORTS AND COMMUNICATION	
Ethernet	Ethernet port 10/100 MB
0/1/2 Serial	1 RS232/485 + 1 RS485 (optional/ insulated)
USB	Micro USB AB type (HOST)
Protocol	Modbus TCP Server, Modbus RTU (Master e Slave), ASCII
FUNCTIONAL	
Processor	ARM Cortex M7 32 bit, 216 MHz
Memory	16 MB Flash, 32 MB SDRAM, 128 kB MRAM
Programming	Standard languages IEC 61131-3 compliant: IL, ST, FBD, LD, SFC, CFC
Real Time Clock	Back-up battery on board (rechargeable)
GENERALS	
Power Supply	24 Vdc (-15... +25%)
Power consumption	12 W
Dimensions / Weight	105 x 110 x 60 mm (WxHxD) 6 DIN module / 512 g
Mounting	On Omega DIN A rail
Protection	IP 20
Operating/storage temperature	-20... 50 °C (-4... 122 °F) / -40... 70 °C (-40... 158 °F)
Operating Humidity	5... 95 RH% without condensation

CE

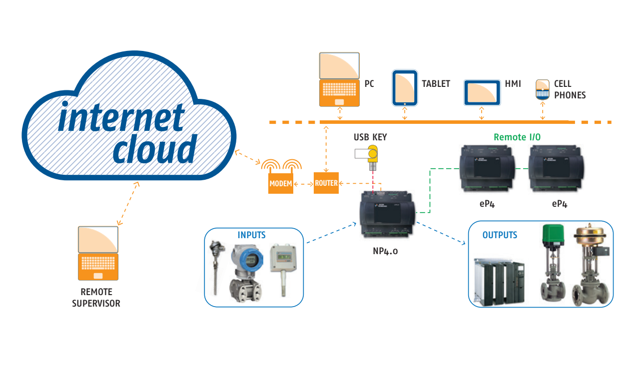
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

NP4	CODE
DISPLAY	
Without display	-
Display LCD 128 x 64 dot (not available yet)	D
DIGITAL OUTPUTS	
Not provided	-
2 Relay DO + 2 SSR drive DO	M
4 Relay DO	R
4 SSR drive DO	S
ANALOGUE INPUTS	
Not provided	-
4 universal inputs	4
4 universal & ratiometric inputs	5
ANALOGUE OUTPUTS	
Not provided	-
2 ch. not isolated	2
2 isolated modules with 2 analogue ch. each	4
DIGITAL INPUTS	
8DI + 8DO + 2 DI for counter and Frequency	88
16 Digitals (config. as IN or OUT) + 2 DI counter/Frequency	16
FIELDBUS	
Ethernet	E
COMMUNICATION PORTS	
Not available	--
RS232/485	1S
RS232/485 isolated	1I
RS232/485 + RS485 isolated	2S
RS232/485 isolated + RS485 isolated	2I
RS485 isolated	4I
CASE COLOUR	
Grey	G
White	W

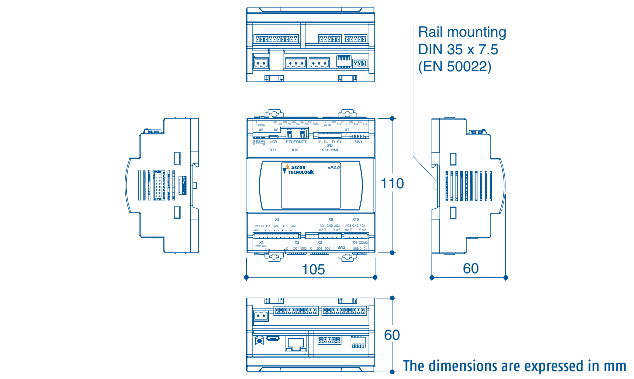
CONNECTIONS

NP4



DIMENSIONS

NP4



THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

EPX EXPAC

• EXPANSION UNITS FOR SIGMAPAC CONTROLLERS

FEATURES

INPUTS	EPX
0/4 Universal Analogue	Configurable between: 0/1... 5 V, 0/2... 10 V, 0/4... 20 mA, TC (J, K, L, N, R, S, T), PT100 (2 wires), PT1000, NTC (103AT-2), Potentiometer, 5 V Ratiometric
	16 bit resolution
	Accuracy 0,1% of span (linear), 0,2% (temperature)
	Input Impedance >100 kΩ, <200 Ω (mA)
	Insulation 800 V between analogue channels and power supply, digital I/Os and serial comms ports (insulated version)
8/16 + 2 Digital	8 (16 I/O mix) sink type IEC61131-2 type 3
	2 input sink type IEC61131-2 type 3 for counters and frequency (5 kHz max)
	Protection: reverse polarity and overvoltage
	Insulation 800 V between digital channels, power supply, analogue I/Os and serial comms ports (isolated version)
OUTPUTS	
0/2/4 Analogue	Configurable 0/1... 5 V, 0/2... 10 V, 0/4... 20 mA
	12 bit resolution
	Accuracy 0.1 % full scale
	Insulation 800 V between analogue outputs and power supply, analogue inputs, digital I/0s and serial comms ports (isolated version)
8/16 Digital	8 (16 I/0 mix) high-side output 0.7 A each
	Insulation 800 V between digitals and power supply, analogue I/0s and serial comms ports (isolated version)
4 Relay/SSR Drive	Relay 2 A, 240 Vac, or SSR Drive max 20 mA, 12V
	Protection: Overvoltage
	Insulation 2500V (Relay), 800V SSR Drive with respect power supply, analogue & digital I/0s and serial comms ports (isolated version)
SERIAL PORTS AND COMMUNICATION	
Communication port	RS485 (optional/isolated)
Protocol	Proprietary protocol for local expansion, Modbus RTU (Slave)
FUNCTIONAL	
Processor	ARM Cortex 32 bit
GENERALS	
Power Supply	24 Vdc (-15... +25%)
Power consumption	12 W
Dimensions / Weight	WxHxD. 108 x 110 x 60 mm (6 DIN module) / 512 g
Mounting	On Omega DIN A rail
Protection	IP 20
Operating/storage temperature	-20... 50 °C (-4... 122 °F) / -40... 70 °C (-40... 158 °F)
Operating Humidity	5... 95 RH% without condensation

CE

EVERYTHING UNDER CONTROL

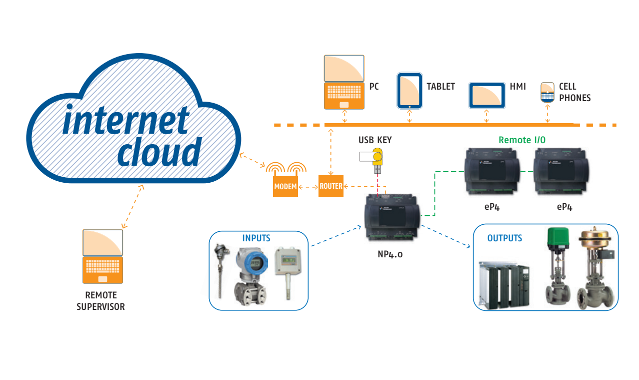
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

SIGMA2 - EPX	CODE
DISPLAY	
Without display	-
DIGITAL OUTPUTS	
Not provided	-
2 Relay DO + 2 SSR drive DO	M
4 Relay DO	R
4 SSR drive DO	S
ANALOGUE INPUTS	
Not provided	-
4 universal inputs & raziometric	5
ANALOGUE OUTPUTS	
Not provided	-
2 ch. not isolated	2
4 ch (2 off 2 ch. modules isolated from each other)	4
DIGITAL INPUTS	
Not provided	--
8DI + 8DO + 2 DI for counter and Frequency	88
16 Digitals (config. as IN or OUT) + 2 DI counter/Frequency	16
FIELDBUS	
Ethernet	E
COMMUNICATION PORTS	
RS485 isolated with Modubus RTU Slave	4I
CASE COLOUR	
Grey	G
White	W

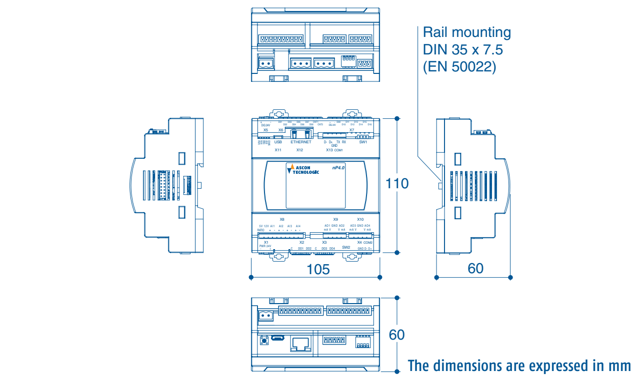
CONNECTIONS

EPX



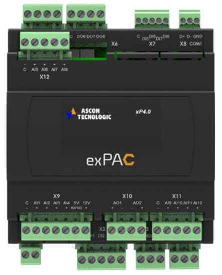
DIMENSIONS

EPX



XP4 EXPAC

• REMOTE EXPANSION UNITS FOR SIGMAPAC CONTROLLERS



FEATURES

INPUTS	XP4
0/4 High level Analogue	Configurable between: 0... 5 V, 0... 10 V, 0/4... 20 mA
	12 bit resolution
	Accuracy: 0.1%
	Input Impedance >100 kΩ; < 50 Ω (mA)
0/8 Temperature Analogue	Configurable PT1000, NTC 103AT-2
	0.1°C resolution
	Accuracy: 0.3 % PT1000 0.5% NTC
4/8 Digital	Free voltage contacts or 12... 48 Vac/ Vdc or 90... 240 Vac
	Protection: reverse polarity and overvoltage
	Insulation for voltage signals only
OUTPUTS	
0/2 Analogue	0... 10 V
	11 bit resolution
	Accuracy 0.3 % full scale (V)
0/2 Relay/ SSR Drive/ SSR Vac	Relay 8 A SPDT, SSR Drive 12 Vdc or SSR 1A Vac
0/6 Relay	Relay 2 A SPST-NO
SERIAL PORTS AND COMMUNICATION	
Communication port	RS485 (isolated)
Protocol	Modbus RTU (Slave)
FUNCTIONAL	
Processor	ARM Cortex M3 32 bit
GENERAL	
Power Supply	24 Vac/ Vdc (± 10%) 50 Hz
Power consumption	400 mA (Vdc)
Dimensions / Weight	WxHxD. 108 x 110 x 60 mm (6 DIN module) / 512 g
Mounting	On Omega DIN A rail
Protection	IP 20
Operating/storage temperature	0... 55 °C (32... 131 °F) / -20... 60 °C (-4... 140 °F)
Operating Humidity	5... 85 RH% without condensation

CE

EVERYTHING UNDER CONTROL

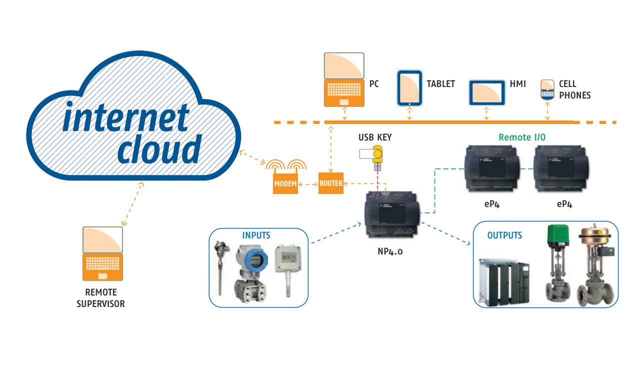
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

SIGMA2 - XP4	CODE
DISPLAY	
Without display	-
DIGITAL OUTPUTS	
Not provided	-
6 relè SPST-NO 2A + 2 relè SPDT-NO 8A	R
ANALOGUE INPUTS	
Not provided	-
4 HL analogue inputs	4
8 temperature analogue inputs: PT1000, NTC	8
4 HL analogue inputs + 8 temperature analogue inputs: PT1000, NTC	F
ANALOGUE OUTPUTS	
Not provided	-
2 analogue channels 0... 10 V (not isolated)	2
DIGITAL INPUTS	
Not provided	--
8 free voltage DI	8-
4 free voltage DI + 4 DI 12... 48 Vac/Vdc	8L
FIELDBUS	
RS485 - Modbus RTU Slave	M
COMMUNICATION PORTS	
RS485 isolated with Modubus RTU Slave	41
CASE COLOUR	
Grey	G
White	W

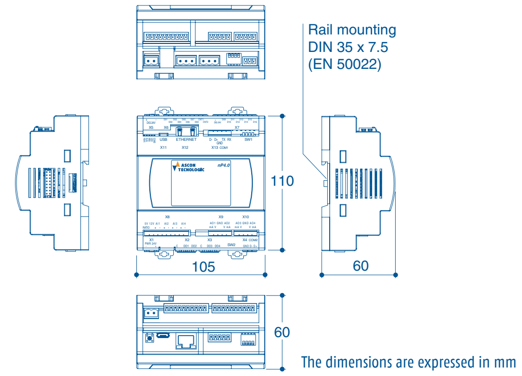
CONNECTIONS

XP4



DIMENSIONS

XP4



The dimensions are expressed in mm

AC3NP

- MULTIFUNCTION PROGRAMMABLE CONTROL SYSTEM
- MULTI LOOP
- PRE-PROGRAMMED HMI

FEATURES

INPUTS	AC3NP
6 Analogue	6 programmable, 0...10V, 0/1...5V, 0...1V , 0/4...20mA 2 programmable, ±10V, ±5V, ±1V , 0/4...20mA
	Resolution: 16 bit - Accuracy: 0.1% of span - Input impedance >100k (V); 300 (mA)
	Isolamento: 800 V rispetto alimentazione e logica
2 Analogue, universal	2 configurabili: ±15mV, ± 35mV, ±50mV, ±100mV, ±300mV, ±1.25 V ad alta impedenza, TC (L, J, T, K, S, R, N), Pt100, Pt1000 e potenziometro (0.1... 10kΩ)
	Risoluzione: 16 bit - Accuratezza: 0.1% dello span - Impedenza di ingresso >10MΩ (V)
	Insulation 800 V between power supply and logic 40 Vpp between two channels (differential inputs)
8+32 Digital	8 + 32 (with expansion units) 24 VDC (ON: 5...30V, OFF: 0..3V) or 8 + 8/16 max.at 120 VAC
	Max. input frequency 80 Hz for counter input
	Sink type
	Reverse polarity protection, overvoltage
	Insulation 800 V between power supply and logic
OUTPUTS	
0/2/4 Analogue	0/2/4 programmable (option) ±10 V (±25 mA max.), 0/4... 20 mA
	Resolution 13 bit
	Accuracy: 0.1% of span
	Insulation 800 V between power supply and logic
8+32 Digital	8 + 32 (with expansion units) 24VDC, 0.5 A or 8 + 8/16 relays (2A, 240 VAC, NA)
	Source type (PNP)
	Overvoltage and short circuit protection
	Insulation 800V channels - power supply
HMI: P04	
Processor	ARM 9 at 32 bit
LCD	TFT resistive type, 4.3", 16/9, back lighted LED
Resolution	480 x 272
Colours	262.000
Interfaces	Ethernet 10/100-T, USB 2.0
FUNCTIONAL	
Processore	ARM 32 bit
Memory	16 MB of RAM system, application memory max. 2 MB internal 64 kB redundant FLASH memory
Programming languages	IL, ST, FBD, LD, SFC, CFC
Standard	IEC61131-3
Real time clock	on board
Minimum time of cycle execution	≥5ms (10ms tipical)
Serial ports	Ethernet + RS485 + RS232/485
Protocols	Modbus RTU (Master/Slave), Modbus TCP Server, ASCII
GENERAL	
Power supply	24 VDC (-15... +25%) / 50/60 Hz
Power consumption	13 VA (+3.5 VA with both expansion units) + 10 VA (for P04)
Dimensions / Weight	MP02: 152 x 110 mm, depth 66 mm / 460 g approx. P04: 83 x 159 mm, depth 28 mm / 200 g approx.
Mounting	MP02: OMEGA DIN rail - P04: flush in panel 68 x 127 (panel only) or 68 x 138 (with adapter)
Front protection degree	MP02: IP20 - P04: IP65
Operating / storage temperature	0... 50°C (32... 122°F) / -40...+70°C (-40... 158°F)
Operating humidity	5... 95 RH% without condensation

Notes: The basic module can be extended by 1 or 2 expansion modules connected directly to the CPU.
To obtain more expansions it's possible to connect I/O modules both analog and digital to an RS485 port.

Digital Signal expansion units:
MPD10808 (8 inputs 24 VDC + 8 outputs 24 VDC, 0.5A)
MPD11616 (16 inputs 24 VDC + 16 outputs 24 VDC, 0.5A)
MPD20808 (8 inputs 24 VDC + 8 outputs 2A relay)
MPD40808 (8 inputs 120 VAC+ 8 outputs 2A relay)

CE

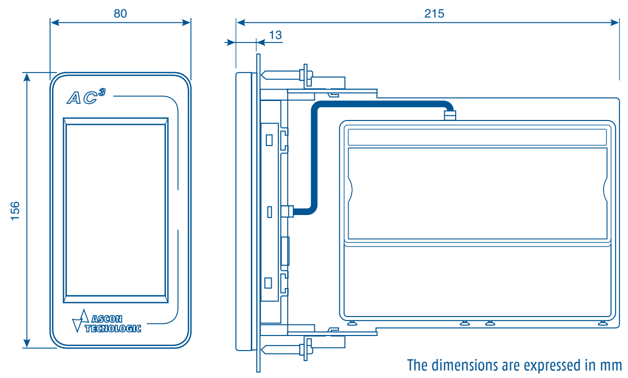
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

HARDWARE MODULE	CODE
With hardware module MP02	AC3NP
ANALOG INPUTS	
6 ch - 0/4... 20mA, Volt	0
8 ch - 0/4... 20mA, Volt	1
6 ch - 0/4... 20mA, Volt + 2 Universal channels	2
ANALOG OUTPUTS	
Not available	-
2 outputs 0/4... 20mA, Volt	1
4 outputs 0/4... 20mA, Volt	2
EXPANSION UNIT 1	
Not available	-
8 DI (24 VDC) + 8 DO (24 VDC)	1
8 DI (24 VDC) + 8 relay outputs	2
16 DI (24 VDC) + 16 DO (24 VDC)	3
8 inputs (120 VAC) + 8 relay outputs	4
EXPANSION UNIT 2	
Not available	-
8 DI (24 VDC) + 8 DO (24 VDC)	1
8 DI (24 VDC) + 8 relay outputs	2
16 DI (24 VDC) + 16 DO (24 VDC)	3
8 inputs (120 VAC) + 8 relay outputs	4
OPERATOR PANEL MODULE	
Not available	--
Operator panel **P04** with adapter	P4
Adapter	PA
USB PORT	
Not available	-
USB port	U
CABLES AND ACCESSORIES	
Not available	--
Short plate + cable 0.15 m	P1
Long plate + cable 0.15 m	P2
Cable 0.15 m	C0
Cable 1 m	C1
Cable 2 m	C2
Cable 5 m	C5
HW/SW CUSTOMIZATION	
Not available	----
Ascon Tecnologic customization	ATA3
SW VERSION	
Not available	-
Release 0	0

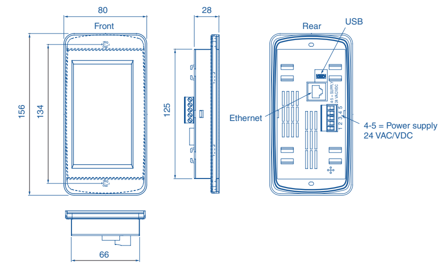
DIMENSIONS

AC3NP



The dimensions are expressed in mm

AC3NP



The dimensions are expressed in mm

MP-D 1/2/4

- EXPANSION UNITS FOR MICROPAC MP02




FEATURES

INPUTS	MP-D1/08-08/M0	MP-D2/08-08/M0	MP-D4/08-08/M0	MP-D1/16-16/M0
Digital	8 inputs (24 Vdc)		8 inputs (120 Vac)	16 inputs (24 Vdc)
OUTPUTS				
Digital	8 outputs (24 Vdc, 0.5A)	8 relay outputs 2A, NO		16 outputs (24 Vdc, 0.5A)
GENERAL				
Power supply	24 Vdc (-15... +25%) (50/60 Hz)			
Power consumption	4 VA			
Dimensions / Weight	76 x 110 mm, depth 66 mm / 220 g			152 x 110 mm, depth 66 mm / 350 g
Mounting	On OMEGA DIN A rail			
Front protection degree	IP 20			
Connections	Terminal block with CLAMP connectors			
Operating / storage temperature	0... +50°C (32... +122°F) / -20...+85°C (-4... +185°F)			
Operating humidity	5... 95 RH% without condensation			

CE

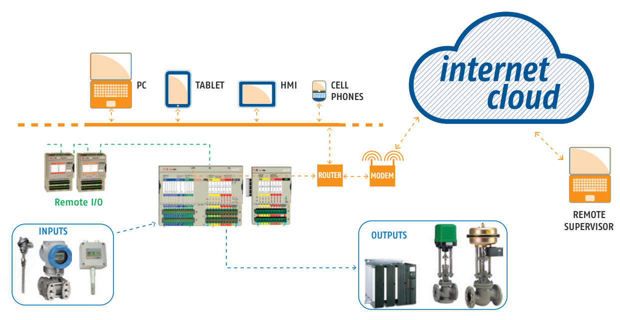
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

EXPANSION UNITS - SIGMA2 MICROPAC	
MP-D1/08-08/M0	8 digital inputs 24Vdc optoisolated + 8 digital outputs 24V 0.5V optoisolated
MP-D1/16-16/M0	16 digital inputs 24Vdc optoisolated + 16 digital outputs 24V 0.5V optoisolated
MP-D2/08-08/M0	8 digital inputs 24Vdc + 8 digital outputs 230Vac/2A relay SPST-NO
MP-D4/08-08/M0	8 digital inputs 120Vac + 8 digital outputs 230Vac/2A relay SPST-NO

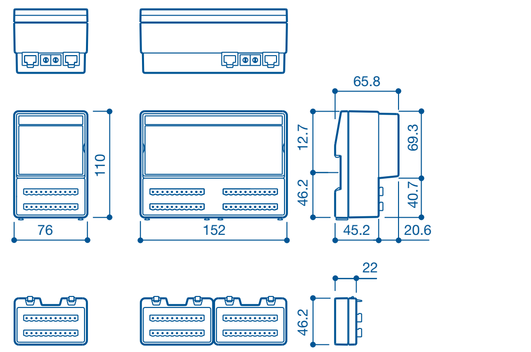
CONNECTIONS

MP-D1 / MP-D2 / MP-D4



DIMENSIONS

MP-D1 / MP-D2 / MP-D4



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

OPENPCS

- PROGRAMMING SOFTWARE COMPLIANT TO STANDARD IEC 61131-3
- 6 PROGRAMMING LANGUAGES
- WIDE RANGE OF LIBRARIES TO SIMPLIFY THE PROGRAMMING

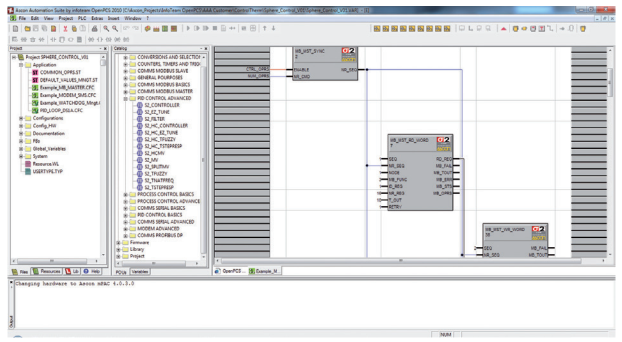
FEATURES

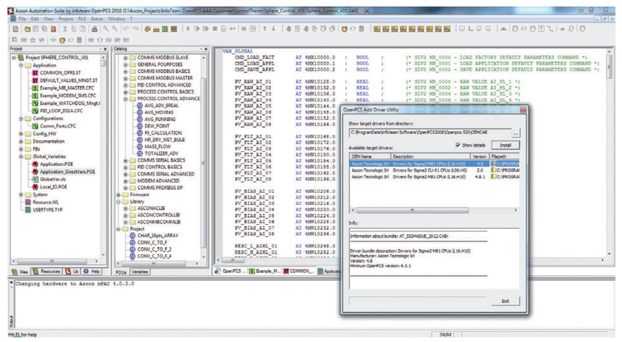
FUNCTIONAL	SOFTWARE OPENPCS
Standard	IEC 61131-3
Programming languages	Instruction List Structured Text Function Block Diagram Ladder Diagram Sequential Function Chart Continous Function Chart
Programming	Application project developing structured and simplified by the variable declaration method and keywords auto-recognition. Integrated online debug and simulation tools. Projects management "easy to use" trough the dedicated browser.
Libraries	AT_Generic_Advanced_Lib: includes advanced calculation and process functions such as Averages, Characterizations/Linearizations, A/D conversions, A/D Selectors, Totalizators, Limiters
	AT_Process_Generic_Lib: includes advanced calculation and process functions such as Alarms, Singnal's conditioning, Dew point, Relative Humidity, Bacteria load reduction (Fo), Compensated flow, Carbon potential calculation
	AT_IO_Modules_Basic_Lib: specifically designed to configure and manage the I/O modules
	AT_Process_Control_Lib: includes all the advanced PID functions dedicated to the process control such as single or double action controllers, within different Autotuning and Feed Forward modes
	AT_CU02_Cpu_Lib: specifically designed to manage the whole communication and diagnostic operations of the onboard I/Os and remote modules
	AT_Communications_Lib: includes a complete set of function blocks dedicated to the Modbus Master, Slave and Profibus agents communication activities plus Modems management.

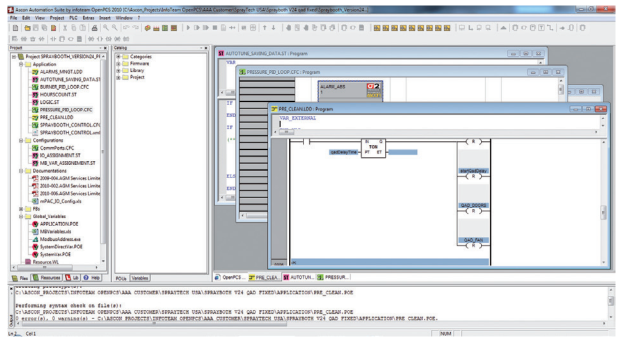
HOW TO ORDER

SOFTWARE OPENPCS	
APS2 SWOPCS00	IEC 61131-3 programming software

SCREENSHOTS







PRE-PROGRAMMED SYSTEMS

Solutions ready to be used!

Flexible systems able to suit to all plants, through a simple configuration and programming by means of touch screens.

BREWERY PAC

• PRE-PROGRAMMED SYSTEM TO MANAGE BREWERY PLANTS

FEATURES

	BREWERYPAC
Functions	Solution that allows to control the temperature in the fermenter for beer production. Enabling is done through the touch screen and allows both control and supervision of individual fermenters. The modularity of the system is 8.
	Temperature control of the fermentors
	Temperature real time trend with time base of 1, 3, 6, 12 hours
	Daily historical trend
	Alarm management
	Alarm history recording
	Remote Management via Ethernet (also via the Web, via tablet or PC)
PRE-PROGRAMMED SOLUTION	
System components	Operator panel OPMT3105/N
	Modular solution: 1 to 32 controllers mod. K31 or 1 to 4 M81 controllers (each controlling 8 zones)

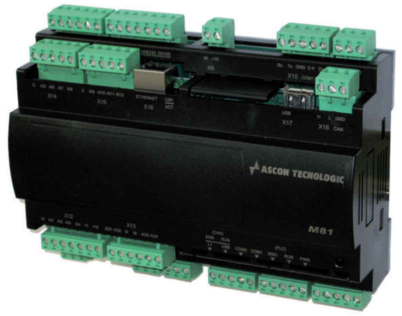
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

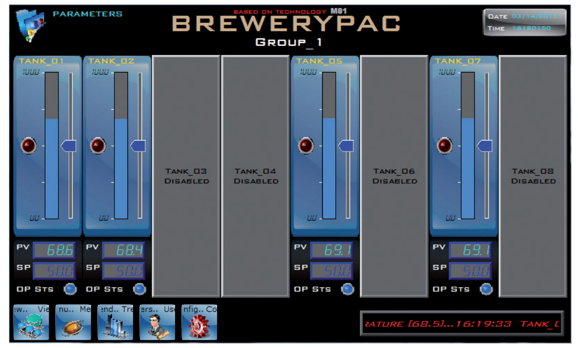
BP01 XXX-YY
OPMT3105/N pre-programmed with BreweryPAC interface on board
no. 1... 8 Controllers mod. M81 pre-programmed with BreweryPAC applicative
no. 1... 32 Controllers mod. K31

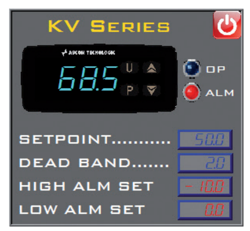
COMPONENTS

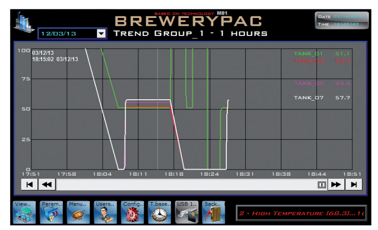
M81



SCREENSHOTS







INDUSTRIAL AUTOMATION






PLC AND OPERATOR PANELS

Solutions for every demand of space!

PLC and operator panels with bright TFT display widescreen high resolutionre back lighted LED and up to 256 MB of memory.

For every application where power and control have to be separate from the HMI, we offer operator panels, both for front panel mounting and with custom dimensions.

PLC AND OPERATOR PANELS

FEATURES		P04	OPMT 8050I	OPMT 6050IV		OPMT 8070IH	OPMT 3070	OPMT 8100I	OPMT 3105/N	OPMT 3120	OPMT 3150/N
Dimensions (inches)	4.3"	•	•	•							
	7"					•	•				
	10"							•			
	10.4"								•		
	12.1"									•	
	15"										•
Flash MB memory		128	128	128		128	256	128	128	256	256
RAM MB memory		128	64	64		64	256	64	64	256	256
Colours		262 K	65 K	66 K		67 K	16.7 M	68 K	68 K	16.2 M	262 K
Slot SD/SDHC card		•				•	•	•	•	•	•
USB Host		•				•	•	•	•	•	•
USB Client				•		•	•	•	•	•	•
Ethernet		•	•			•	•	•	•	•	•
Power supply	24 Vac/Vdc	•	•	•		•	•	•	•	•	•
Audio						•	•	•	•	•	•
Video										•	•
COM1 RS232/485 2 4 wires			•	•		•	•	•	•	•	•
COM2 RS232			•	•		•		•	•		
COM3 RS232/485 2 wires			•	•		•	•	•	•	•	•
COM1 RS485 2 wires		•									
CAN bus							•			•	•
Programming Software (optional)		•	•	•		•	•	•	•	•	•
CE certification + UL approval			•	•		•	•	•	•	•	•

FEATURES		P01		P30	P32
Dimensions (mm)	78 x 35			•	•
	on request	•			
Single display		•			
Double display				•	•
Power supply (from the controller)	12 Vdc	•			
	9 Vdc			•	•
TTL Modubus not isolated		•		•	•
CE certification + UL approval		•		•	•

P04

- PLC WITH TOUCH SCREEN MONITOR
- TFT WIDESCREEN HIGH RESOLUTION BACKLIGHTED LED DISPLAY
- 4.3"

FEATURES

DISPLAY	P04
Display	4.3" TFT
Resolution (pixel)	480 x 272
Brightness (cd/m²)	280
Back Light type	LED
Colours	262 K
Touch panel	4 wire Resistive Type
MEMORY	
Flash (MB)	128
RAM (MB)	128
FUNCTIONAL	
CPU	ARM9 26 32 Bits 4545 MHz processor
PLC	programmable with standard languages IEC61131-3, simulator and application monitor for debugger
Slot SD card	4 GB Micro SD
USB Host	2.0 X 1
Ethernet	10/100 base-T
COM port	COM1 RS485 2W
Fieldbuses	Modbus RTU, ASCII, TPC, CANOpen
RTC	Available
POWER SUPPLY	
Power supply	24 Vdc/Vac ±20%
Power consumption (mA @24V)	250
MECHANICAL	
Case	UL V04 Autoextinguishing plastic
Dimensions	83 x 159 x 28 mm
Weight	200 g
Protection degree	IP65
Operating temperature / Storage	0… +50°C (32°… +122°F) / -20… +60°C (-4… +140°F)
Operating humidity	10…90% RH without condensation
SOFTWARE	
Graphic interface	QT programming tool

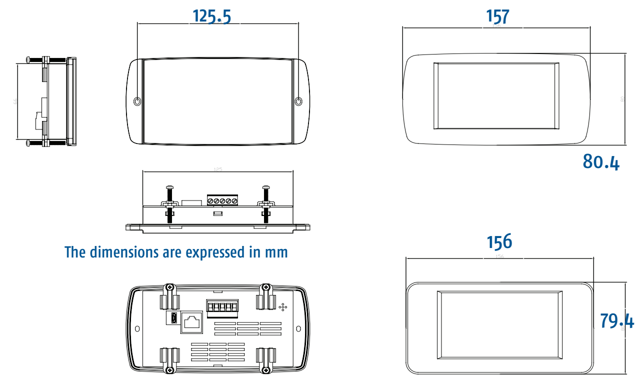
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

P04	CODE
MODEL	
Touch screen 4.3" operator panel	-
Touch screen 4.3" operator panel with PLC function on board	P
APPLICATIVE ON BOARD	
Code that defines the applicative	XX
ETHERNET PORT	
Not available	-
Ethernet	E
USB PORT	
Not available	-
USB	U
COM PORT	
Not available	-
RS485	S
AT LIN	L
CAN	C
SD CARD	
Not available	-
SD card memory	M
CLOCK	
Not available	-
Real Time Clock	C
CONNECTIONS	
Plug-in screw type with connectors included	E
No connectors	N
CASE - COLOUR AND SHAPE	
Black, rectangular	B
Black, rounded	R
White, rectangular	S
White, rounded	W

DIMENSIONS

P04



The dimensions are expressed in mm

OPMT

- TOUCH SCREEN OPERATOR PANELS
- TFT WIDESCREEN HIGH RESOLUTION BACKLIGHTED LED DISPLAY
- 4.3" E 7"

FEATURES

DISPLAY	OPMT 8050 IE	8071 IE	8073 IE
Display	4.3" TFT	7" TFT	
Resolution (pixel)	480 x 272	800 x 480	
Brightness (cd/m²)	400		
Contrast ratio	500:1		800:1
Back Light type	LED		
Colours	16.7 M		
Touch panel	4 wire Resistive Type		
MEMORY			
Flash (MB)	128 MB		
RAM (MB)	128 MB		
I/O PORTS			
USB Host	2.0 X 1		
Ethernet	10/100 base-T x 1		10/100/1000 base-T x 2
COM port	COM1 (RS232/485 2 e 4W) COM3 (RS485 2W)	COM1 (RS232) COM2 (RS485 2 e 4W) COM3 (RS485 2W)	COM1 (RS232) COM2 (RS485 2 e 4W) COM3 (RS232/RS485 2W)
RTC (on board)	Available		
POWER SUPPLY			
Power supply	24 VDC ±20%		
Power supply isolation	Built-in		
Power consumption (mA@24V)	300	450	600
MECHANICAL			
Case	Plastic		
Dimensions WxHxD	128 x 102 x 32 mm	200.3 x 143.3 x 34 mm	
Panel cut-out	119 x 93 mm	192 x 138 mm	
Weight	250 g	600 g	
Protection degree	NEMA4/IP65		
Mounting	On panel		
Storage temperature	-20°... 60°C (-4°...140°F)		
Operating temperature	0°... 50°C (32°...122°F)		
Operating humidity	10...90% RH without condensation		
SOFTWARE			
Software (optional)	Programmable with EasyBuilderPro		
COMPLIANCE			
Compliance	CE, UL type 4X (indoor use)	CE, ATEX Zone 2/22 Cat. 3 G/D	CE, ATEX Zone 2/22 Cat. 3 G/D, UL listed

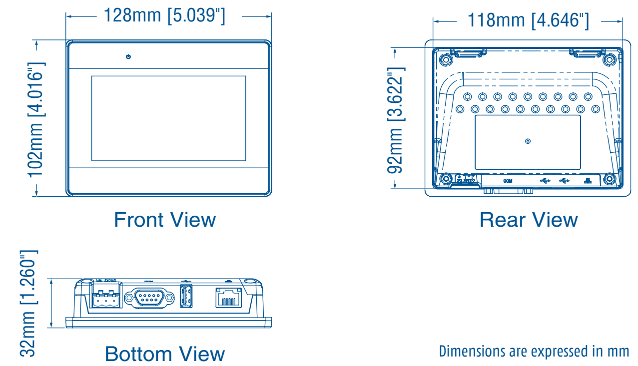
CE c UL us

HOW TO ORDER

OPMT	
8050 iE	4.3" TFT, 16.7M colours, 480x272 p., 2 COM
8071 iE	7"TFT, 16.7M colours, 800x480 p., 3 COM
8073 iE	7"TFT, 16.7M colours, 800x480 p., 3 COM

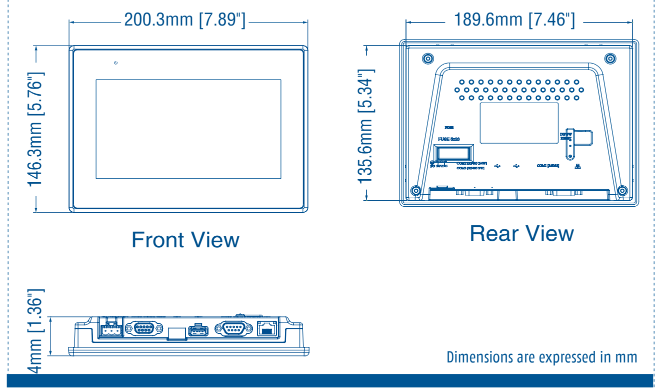
DIMENSIONS

OPMT 8050 IE



Dimensions are expressed in mm

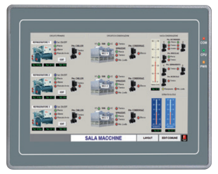
OPMT 8071 IE/ OPMT 8073 IE



Dimensions are expressed in mm

OPMT

- TOUCH SCREEN OPERATOR PANELS
- TFT WIDESCREEN HIGH RESOLUTION BACKLIGHTED LED DISPLAY
- 9.7", 12.1" E 15"



FEATURES

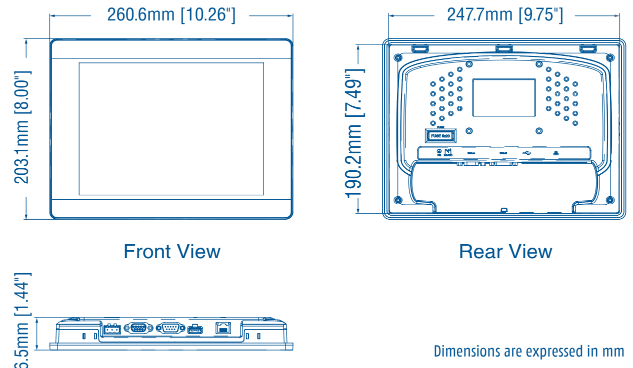
DISPLAY	OPMT			
	8092 XE	8090 XE	8121 XE	8150 XE/N
Display	9.7" TFT		12.1" TFT	15" IPS
Resolution (pixel)	1024 x 768			
Brightness (cd/m²)	350		500	400
Contrast ratio	500:1		700:1	1000:1
Back Light type	LED			
Colours	262K		16.2 M	
Touch panel	4 wire Resistive Type			
MEMORY				
Flash (MB)	512		256	
RAM (MB)	256			
I/O PORTS				
Slot SD card	Not available		SD/SDHC	
USB Host	2.0 x 1			
USB Client	Not available		2.0 x 1	
Ethernet	10/100/1000 Base-T x 2	10/100 Base-T x 1	10/100 Base-T x 1	
CAN bus	Available	Not available		
COM port	COM1 RS232 COM2 RS485 2W/4W COM3 RS232 or RS485 2W	COM1 RS232 COM2 RS485 2W/4W COM3 RS485 2W/RS232	COM1 RS232/RS485 2W/4W COM3 RS485 2W	
RS485 dual isolation	Not available		Available	
RTC	Available			
POWER SUPPLY				
Power supply	24 VDC ±20%			
Power consumption (mA @24V)	650	500	800	1.2A
MECHANICAL				
Case	Plastic		Aluminium	
Dimensions WxHxD	260.6 x 203.1 x 36.5 mm		317 x 244 x 46 mm	366 x 293 x 57 mm
Panel cut-out	250 x 192 mm		305 x 231 mm	352 x 279 mm
Weight	850 g		2.100 g	2.750 g
Protection degree	NEMA4/IP65		IP66/NEMA4	NEMA4/IP65
Mounting	On panel			
Storage temperature	-20°... 60°C (-4°...140°F)			
Operating temperature	0°... 50°C (32°...122°F)			
Operating humidity	10...90% RH without condensation			
SOFTWARE				
Software (optional)	Programmable with EasyBuilderPro			
COMPLIANCE				
Compliance	CE, ATEX Zone 2/22 Cat. 3 G/D, UL listed UL type 4X (indoor use)	CE, ATEX Zone 2/22 Cat. 3 G/D	CE, UL listed UL type 4X (indoor use)	CE, ATEX Zone 2/22 Cat. 3 G/D, UL listed UL type 4X (indoor use)

HOW TO ORDER

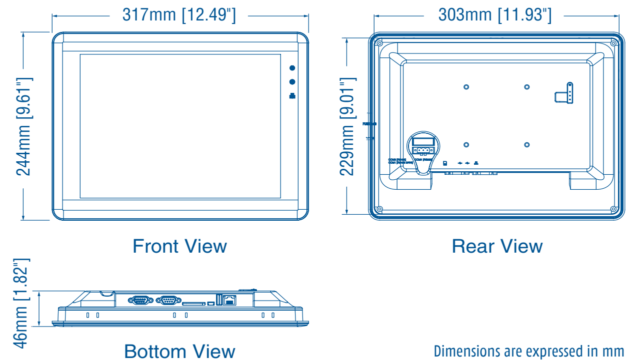
OPMT	
8092 XE	9.7" TFT, 262k colours, 1024 x 768 p., 3 COM
8090 XE	9.7" TFT, 262k colours, 1024 x 768 p., 3 COM
8121 XE	12.1"TFT, 16.2M colours, 1024 x 768 p., 2 COM
8150 XE/N	15"IPS, 16.2M colours, 1024 x 768 p., 2 COM

DIMENSIONS

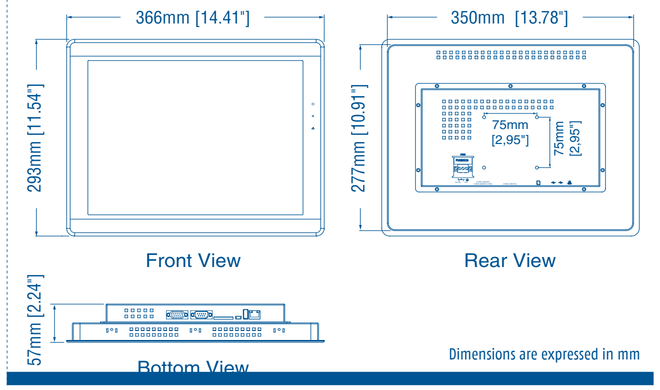
OPMT 8090 XE/ OPMT 8092 XE



OPMT 8121 XE



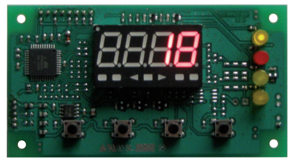
OPMT 8150 XE/N



THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

P 01/30/32

- REMOTE OPERATOR PANELS
- EXTERNAL POWER SUPPLY (BY A SEPARATED CONTROL UNIT)
- 78 X 35 MM OR ON REQUEST



FEATURES

DISPLAY	P01	P30	P32
Display	Single: 4 red digit, h 15.5 mm + Bargraph 3 LED	Single: 4 red digit, h 12 mm + Bargraph 3 LED	Dual: Main: 4 red digit, h 7 mm Secondary: 4 red digit, h 7 mm
FUNCTIONAL			
Sampling rate	500 ms		
Acoustic alarm	--	Internal buzzer (optional)	
Serial communication	TTL Modubus not isolated		
Protocol	ModBus-RTU (JBUS)		
Baud rate	38400 baud		
GENERAL			
Power supply	12 Vdc supplied by the controller	9 Vdc supplied by the controller	
Power consumption	50 mA		
Dimensions / Weight	On request / 115 g approx.	78 x 35 mm - depth 64 mm / 120 g approx.	
Mounting	Behind layout	Flush in panel in 71 x 29 mm hole	
Front protection degree	--	IP65, mounted in panel with gasket	
Connections	Screw terminals	Screw terminal block 2.5 mm²	
Operating / storage temperature	0... 50°C (32... 122°F) / -20... 70°C (-4... 158°F)		
Operating humidity	20... 95 RH% without condensation		
Conformity	Directive EMC 2004/108/CE (EN 61326) - Directive LV 2006/95/CE (EN 61010-1)		

HOW TO ORDER

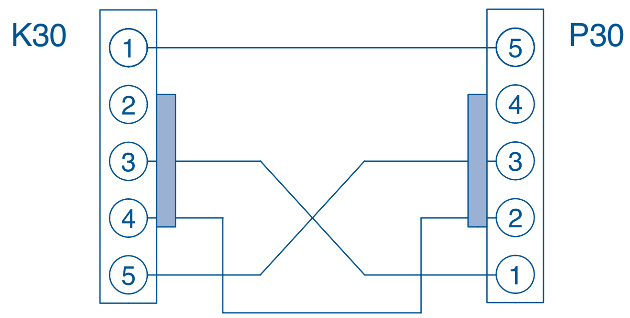
To compose the part number, pls. choose one of the option for each variable

P01	CODE
DISPLAY	
Red	-
Amber	A
Blue	U
INPUT	
From the connected controller	-
OUTPUT	
Out 8 Vdc	W
Not available	-

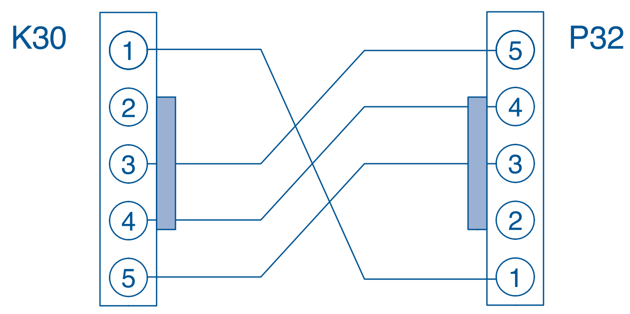
P30 / P32	CODE
DISPLAY	
Red	-
Blue	U
BUZZER (INTERNAL)	
Available	B
Not available	-

CONNECTIONS

P30

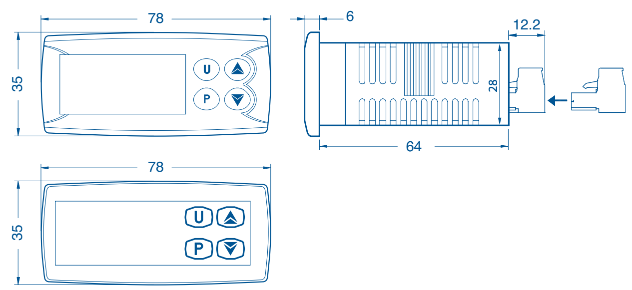


P32



DIMENSIONS

P30 / P32



The dimensions are expressed in mm

ACQUISITION AND DATA RECORDING

Nothing is so
EASY

I/O MODULES

Data acquisition modules in Modbus RTU and CANOpen

Many typologies of digital and analogue inputs and outputs.

I/O MODULES

FEATURES		AI			AI		AO	
		02UI	04RT	08TC	08HL	08DP	08HL	08DP
Dimensions (mm)	Single module (76 x 110 mm)	•	•	•	•	•	•	•
Input channels		2	4	8	8	8		
Output channels							8	8
Type of inputs	Thermocouples J,K,N,S,R,T	•	•	•				
	RTD Pt100 and Pt1000	•	•					
	Current (mA)	•			•	•	•	
	Voltage (mV)	•	•	•				
	Voltage (V)	•			•	•	•	•
	Potentiometer	•						
	Dual polarity	•				•		•
Resolution 16 bit		•	•	•	•	•	•	•
Accuracy 0.1%		•	•	•	•	•	•	•
Power supply 24 Vdc		•	•	•	•	•	•	•
Fast aquisition		•			•	•	•	•
CANOpen protocol		•	•	•	•	•	•	•
Modbus RTU protocol			•	•	•		•	•
CE certification + UL approval (listed)		•	•	•	•	•	•	•

FEATURES		DI			DM			DO						
		16LV	16HV	32LV	08TS	16TS	32TS	16TS	16TP	32TR	32TS	04RL	04TX	08RL
Dimensions (mm)	Single module (76 x 110 mm)	•	•		•	•		•	•	•		•	•	
	Dual module (152 x 110 mm)			•			•				•			•
Input channels		16	16	32	8	8	16							
Output channels						8	16	16	16	32	32	4	4	8
Inputs	24 Vdc	•		•	•	•	•	•	•		•			
	120 Vac		•											
Outputs	24 Vdc				•	•	•	•	•		•		•	
	250 Vac											•		•
	Relay									•		•		•
Outputs 2A									•			•		•
Outputs 6A													•	
Power supply 24 Vdc		•	•	•	•	•	•	•	•	•	•	•	•	•
CANOpen protocol		•	•	•	•	•	•	•	•	•	•	•	•	•
Modbus RTU protocol		•			•			•						
CE certification + UL approval (listed)		•	•	•	•	•	•	•	•	•	•	•	•	•

FEATURES		TDA	
		04	08
Dimensions (mm)	4 Din modules (70 x 85 mm)	•	•
Input channels		4	8
Inputs	PTC, NTC or Pt1000		•
	4...20 mA	•	
	0... 10 V	•	
	Digitals	•	•
Power supply 24, 110, 230 Vac		•	•
CE certification		•	•

D7/D8/D9

- ANALOGUE AND DIGITAL ACQUISITION MODULES
- ANALOGUE UNIVERSAL TRANSMITTER WITH ALARMS
- RS485



FEATURES

INPUTS	D7	D9	D8
Number of inputs	1	2	--
Input configuration	Thermocouples: L/J/E (0... +600°C / 32... +1112°F), T (-200...+400°C / -328...+752°F), K/N (0...+1200°C / 32...+2192°F), S/R (0... +1600°C / 32...2912°F), B (0... 1800°C / 32... 3272°F), Ni-NiMo (0... 1100°C / 32... 2012°F), W3, W5 (0... 2000°C / 32... 3632°F)) Thermoresistances: PT100 (-99.9... 300.0°C / -99.9... 572.0°F and -200... 600°C / -328... 1112°F) Linear signals: 0/10...50 mV; 0/4...20 mA (shunt) Infrared sensors or programmable on special ranges (custom)		--
Accuracy	0.25% ±1 digit (thermoelements); 0.1% ±1 digit (mA and mV)		--
Digital inputs	1 voltage digital input	1 voltage digital input (+ 2 configurables)	6 digital inputs in voltage or for free voltage contacts, in 2 groups optoisolated (1 and 2 in Hz)
OUTPUTS			
Outputs OUT1-OUT2	OUT1 and OUT2: Relay NO, 2A res./250Vac (4A res./120Vac) / SSR, 1A res./250Vac	OUT1 and OUT2: Relay NO, 2A res./250Vac (4A res./120Vac)/SSR, 1A res./250Vac, logic 0/5 Vdc, not insulated	
Outputs OUT3-OUT4	--	OUT3 and OUT4: logic 0/5 Vdc, not insulated	--
Output OUT5	OUT5: 0/4... 20 mA, 15V max.	--	
Outputs functions	--	NOT	NOT, PWM, Hold
Auxiliary supply	+24dc, ±20%, 30 mA max. - to supply an external transmitter	--	
Outputs configuration	Up to 3 alarms	Up to 4 alarms	--
Alarm functions	Sensor break, Latching/Blocking, Loop break, Heater break associated to the timer (if available)		--
FUNCTIONAL			
Setpoint	Reference value	Reference value	--
Special functions (optionals)	--		NOT, Toggle, Flip-Flop
Front indication LEDs	3 red (DO) + 1 green (PWR/COM)	4 red (DO) +1 green (PWR/COM)	6 yellow (DI), 2 red (DO), 1 green (PWR/COM)
Unit of measurement	°C/°F or engineering units (-999... 9999)		--
Signal retransmission	Measure or setpoint retransmission (reference value)	--	
Serial communication	Isolated RS485 with Modbus RTU protocol		
Baud rate	RS 485 (MASTER or SLAVE) 1200, 2400, 4800, 9600 bit/s 3 wires		
Parameters access	Through serial line and supervision software		
GENERAL			
Power supply	24Vac (-25...+12%), 24Vdc (-15...+25%) (50/60Hz)		
Power consumption	4 VA max.	5 VA max.	4 VA max.
Dimensions	22.5 x 99, depth 114.5 mm		
Weight	155 g approx.	156 g approx.	152 g approx.
Connections	PWS and COM: 0.08... 1.5 mm² (AWG28-AWG16) Inputs/Outputs: 0.2... 2.5 mm² (AWG24 - AWG12)		
Mounting	On OMEGA DIN A rail		
Protection degree	IP20 (terminal block)		
Operating / storage temperature	0... 50°C (32... 122°F)/-30... 70°C (-22... 158°F)		
Operating humidity	5... 95 RH% without condensation		
Conformity	EN61010-1 (IEC1010-1)		

Note: these modules can be inserted into Profibus DP and DeviceNet nets, together with a DX module, with the possibility of automatic reconfiguration.

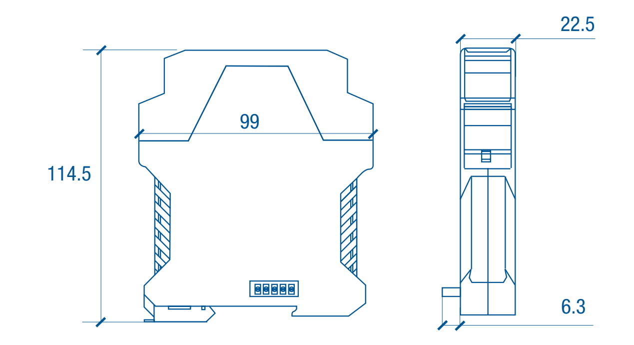
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

D7/D8/D9	CODE
POWER SUPPLY	
24 Vac/Vdc	5
OUT 1 AND OUT 2	
Relay (D7 only)	0
Relay-Relay	1
Relay-Logic (D8 and D9 only)	2
Logic-Logic (D8 and D9 only)	3
Triac-triac (D8 and D9 only)	4
Triac-Logic (D8 and D9 only)	5
SERIAL COMMUNICATION	
RS485	5
OPTION 1	
Not available	0
Continuous output (D7 only)	5
SPECIAL FUNCTIONS	
Not available	0
INSTRUCTION MANUAL	
Italian / English	0
Not available	9
OPTION 2	
Shunt 1% (D7 and D9 only)	0
Shunt 0.1% (D7 and D9 only)	2
OPTION 3	
Not available	0
Conformal coating	3

DIMENSIONS

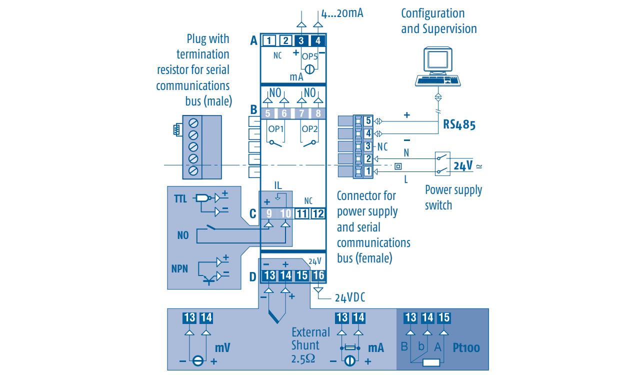
D7 / D8 / D9



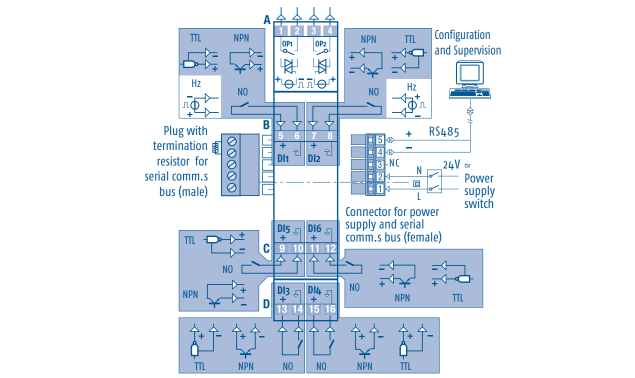
The dimensions are expressed in mm

CONNECTIONS

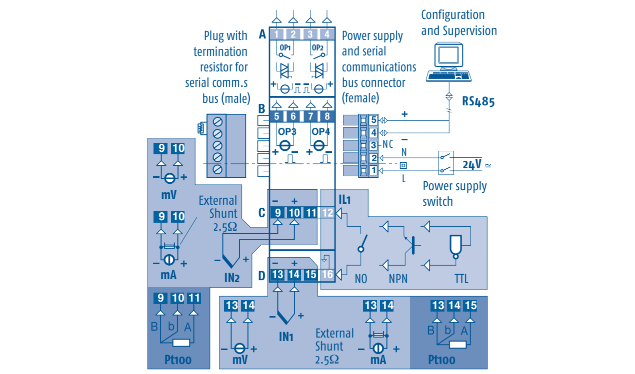
D7



D8



D9



THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

ANALOGUE I/O

- ANALOGUE ACQUISITION MODULES
- UP TO 8 INPUTS AND 8 OUTPUTS

FEATURES

INPUTS	AI-02UI	AI-08TC	AI-04RT	AI-08HL	AI-08DP	AO-08HL	AO-08DP
Number of inputs	2	8	4	8			
Type of inputs (see table on next page for input ranges)	Universal: RTD, TC, mA, mV, V, potentiometer	TC, mV	RTD, TC, mV	mA, V	mA, V dual polarity	--	
Accuracy	0.1%						
OUTPUTS							
Number of outputs	--					8	
Type of outputs						mA, V	V dual polarity
FUNCTIONAL							
Modbus protocol	--	Available			--	Available	--
CANOpen protocol	Available						
Serial communication	RS 485, with dual connector RJ45						
Resolution	16 bit						
Isolation class	2500 V	800V					
Aquisition time	20 ms	60 ms	120 ms	10 ms		20 ms	
GENERAL							
Power supply	24Vdc (-15...+25%) (50/60Hz)						
Power consumption	4 VA max.						
Dimensions / Weight	110 x 66 mm, depth 76 mm / 220 g approx.						
Mounting	On OMEGA DIN A rail						
Connections	2 terminal blocks with 11 poles 5.0mm, with screws or CLAMP terminals						
Protection degree	IP20 (terminal block)						
Operating / storage temperature	0... 55°C/ -20... 85°C (32... 131°F / -4... 185°F)						
Operating humidity	5... 95% RH% without condensation						
Conformity	EN 50081-2, EN 50082-2, EN 61010						

CE cULus

HOW TO ORDER

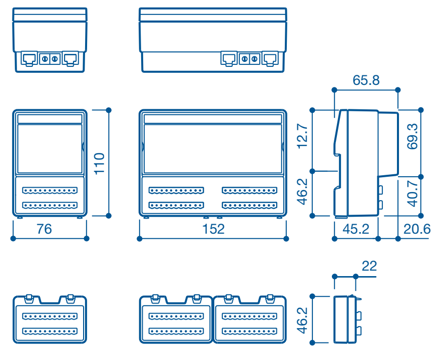
CODE	PROTOCOL	DESCRIPTION	CHANNELS I	CHANNELS O
ANALOGUE INPUTS				
IO-CBAI02UI	CANOpen	RTD, Tc, mA, mV, V, potentiometer	2	
IO-CBAI04RT	CANOpen	RTD, Tc, mV	4	
IO-MBAI04RT	Modbus	RTD, Tc, mV	4	
IO-CBAI08TC	CANOpen	TC, mV	8	
IO-MBAI08TC	Modbus	TC, mV	8	
IO-CBAI08HL	CANOpen	mA,V unipolar	8	
IO-MBAI08HL	Modbus	mA,V unipolar	8	
IO-CBAI08DP	CANOpen	V dual polarity	8	
IO-MBAI08HLTo-	Modbus	mA,V unipolar, Conformal coating	8	
ANALOGUE OUTPUTS				
IO-CBAO08HL	CANOpen	mA,V unipolar		8
IO-MBAO08HL	Modbus	mA,V unipolar		8
IO-CBAO08DP	CANOpen	V dual polarity		8

INPUT RANGE

RANGE	
Thermocouples	L/J (-200... +600°C/-328... +1112°F), T (-200...+400°C/-328...+752°F), K (-200...+1370°C/328...+2498°F), N (0... +1300°C/32... 2372°F), S (0... +1760°C/ 32... +3200°F), R (0... +1600°C/32...2912°F)
Thermoresistances	PT100/PT1000 (-200... +600°C/-328...+1112°F)
Linear signals	0...100 mV, 0...1000 mV, ±100mV, ±1000mV
	±50 mV, ±300, ±1.0 V
	mA, (0,4... 20 mA), V (0...10V)
Potentiometer	100...10K Ω

DIMENSIONS

ANALOGUE I/O



The dimensions are expressed in mm

ACCESSORIES

CABLES	
APS2 LOCALBUS76	CABLE WITH CONNECTOR RJ45 L=14 CM FOR RS485
APS2 LOCALBUS152	CABLE WITH CONNECTOR RJ45 L=22 CM FOR RS485
APS2 LOCALBUS500	CABLE WITH CONNECTOR RJ45 L=50 CM FOR RS485
POWER ADAPTORS	
APS2 ALDR75-24	POWER ADAPTOR 3.2 A
APS2 ALDR12024	POWER ADAPTOR 5 A
PLUGS	
APS2 SPINAM11	PLUG WITH 11 POLE CLAMP TERMINALS
APS2 SPINAV11	PLUG WITH 11 POLE SCREW TERMINALS
TERMINALS AND CONNECTORS	
APS2 TB2111	TERMINAL BLOCK
APS2 TERMCAN	CONNECTOR RJ45 WITH CAN TERMINAL

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

DIGITAL I/O

- DIGITAL ACQUISITION MODULES
- UP TO 32 INPUTS AND 32 OUTPUTS
- RS485

FEATURES	DI-16LV	DI-16HV	DI-32LV	DO-16TS	DO-16TP	DO-32TS
INPUTS						
Number of inputs	16		32	--		
Type of inputs	24 Vdc	115 Vac	24 Vdc			
OUTPUTS						
Number of outputs	--			16		32
Voltage				24 Vdc		
Current				500 mA	2 A	500 mA
FUNCTIONAL						
Modbus protocol	Available	--		Available	--	
CANOpen protocol	Available					
Serial communication	RS 485, with dual connector RJ45					
Isolation class	800 V	2500 V	800 V			
GENERAL						
Power supply	24Vdc (-15...+25%) (50/60Hz)					
Power consumption	4 VA max.					
Dimensions	76 x 110 mm, depth 66 mm		152 x 110 mm, depth 66 mm	76 x 110 mm, depth 66 mm		152 x 110 mm, depth 66 mm
Weight	220 g		360 g	220 g		360 g
Mounting	On OMEGA DIN A rail					
Connections	2 terminal blocks with 11 poles 5.0mm, with screws or CLAMP terminals		4 terminal blocks with 11 poles 5.0mm, with screws or CLAMP terminals	2 terminal blocks with 11 poles 5.0mm, with screws or CLAMP terminals		4 terminal blocks with 11 poles 5.0mm, with screws or CLAMP terminals
Protection degree	IP20					
Operating / storage temperature	0... 55°C / -20... 85°C (32... 131°F / -4... 185°F)					
Operating humidity	5... 95% RH% without condensation					
Conformity	EN 50081-2, EN 50082-2, EN 61010					

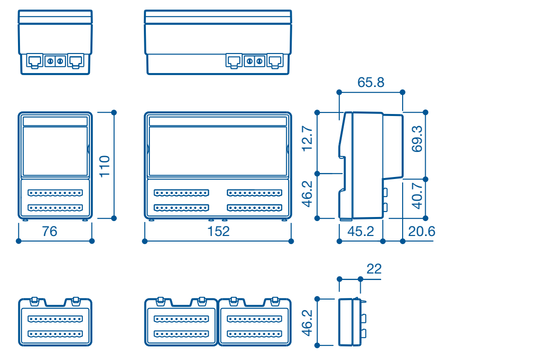
Note: through modules DX and DY, these instruments can be interfaced on Profibus, CANOpen and DeviceNet nets.

HOW TO ORDER

CODE	PROTOCOL	DESCRIPTION	CHANNELS I	CHANNELS O
DIGITAL INPUTS				
IO-CBDI16LV	CANOpen	24 Vdc PNP	16	
IO-MBDI16LV	Modbus	24 Vdc PNP	16	
IO-CBDI16HV	CANOpen	24 Vdc PNP	16	
IO-CBDI32LV	CANOpen	24 Vdc PNP	32	
DIGITAL OUTPUTS				
IO-CBDO16TS	CANOpen	24 Vdc 0.5 A		16
IO-MBDO16TS	Modbus	24 Vdc 0.5 A		16
IO-CBDO16TP	CANOpen	24 Vdc 2 A		16
IO-CBDO32TS	CANOpen	24 Vdc 0.5 A		32

DIMENSIONS

DIGITAL I/O



The dimensions are expressed in mm

ACCESSORIES

CABLES	
APS2 LOCALBUS76	CABLE WITH CONNECTOR RJ45 L=14 CM FOR RS485
APS2 LOCALBUS152	CABLE WITH CONNECTOR RJ45 L=22 CM FOR RS485
APS2 LOCALBUS500	CABLE WITH CONNECTOR RJ45 L=50 CM FOR RS485
POWER ADAPTORS	
APS2 ALDR75-24	POWER ADAPTOR 3.2 A
APS2 ALDR12024	POWER ADAPTOR 5 A
PLUGS	
APS2 SPINAM11	PLUG WITH 11 POLE CLAMP TERMINALS
APS2 SPINAV11	PLUG WITH 11 POLE SCREW TERMINALS
TERMINALS AND CONNECTORS	
APS2 TB2111	TERMINAL BLOCK
APS2 TERMCAN	CONNECTOR RJ45 WITH CAN TERMINAL

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

DIGITAL I/O

- DIGITAL ACQUISITION MODULES
- UP TO 16 INPUTS AND 16 OUTPUTS
- RS485

FEATURES

INPUTS	DO-04RL	DO-04TX	DO-08RL	DM-08TS	DM-16TS	DM-32TS
Number of inputs	--			8		16
Type of inputs				24 Vdc		
OUTPUTS						
Number of outputs	4		8			16
Relay	250 Vdc Relay	24 Vdc Relay	250 Vac Relay	--		
Voltage	--	--	--	24 Vdc		
Current	2 A (SPST) 1 A (SSR)	6 A	2 A (SPST) 1 A (SSR)	500 mA		
FUNCTIONAL						
Modbus protocol	--			Available	--	
CANOpen protocol	Available					
Serial communication	RS 485, with dual connector RJ45					
Isolation class	4000 V	800 V	4000 V	800 V		
GENERAL						
Power supply	24 Vdc (-15...+25%) (50/60 Hz)					
Power consumption	4 VA max.					
Dimensions	76 x 110 mm, depth 66 mm		152 x 110 mm, depth 66 mm	110 x 76 mm, depth 76 mm		152 x 110 mm, depth 66 mm
Weight	220 g		360 g	220 g		360 g
Mounting						
Connections	2 terminal blocks with 11 poles 5.0mm, with screws or CLAMP terminals		4 terminal blocks with 11 poles 5.0mm, with screws or CLAMP terminals	2 terminal blocks with 11 poles 5.0mm, with screws or CLAMP terminals		4 terminal blocks with 11 poles 5.0mm, with screws or CLAMP terminals
Protection degree	IP20					
Operating / storage temperature	0... 55°C/ -20... 85°C (32... 131°F / -4... 185°F)					
Operating humidity	5... 95% RH% without condensation					
Conformity	EN 50081-2, EN 50082-2, EN 61010					

Note: through modules DX and DY, these instruments can be interfaced on Profibus, CANOpen and DeviceNet nets.

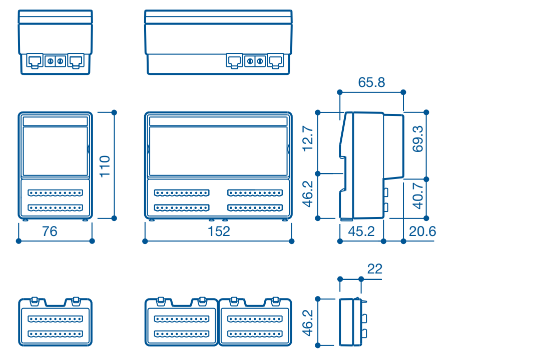
CE c UL us

HOW TO ORDER

CODE	PROTOCOL	DESCRIPTION	CHANNELS I	CHANNELS O
RELAY OUTPUTS				
IO-CBDO04RL	CANOpen	SPST-NO 2 A		4
IO-CBDO04TX	CANOpen	SPST-NO 6 A		4
IO-CBDO08RL	CANOpen	4 SPST-NO 2 A + 4 SPDT 2 A		8
DIGITAL I/O				
IO-CBDM08TS	CANOpen	24 Vdc PNP - 24 Vdc 0.5 A	8	
IO-MBDM08TS	Modbus	24 Vdc PNP - 24 Vdc 0.5 A	8	
IO-CBDM16TS	CANOpen	25 Vdc PNP - 24 Vdc 0.5 A	8	8
IO-CBDM32TS	CANOpen	26 Vdc PNP - 24 Vdc 0.5 A	16	16

DIMENSIONS

DIGITAL I/O

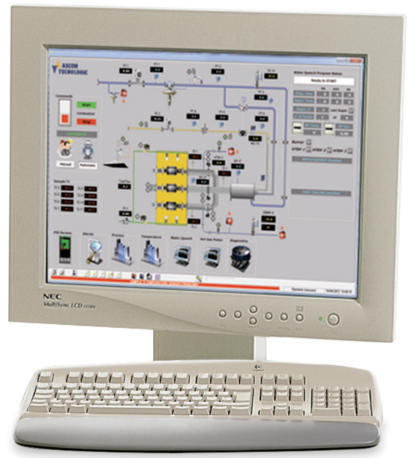


The dimensions are expressed in mm

ACCESSORIES

CABLES	
APS2 LOCALBUS76	CABLE WITH CONNECTOR RJ45 L=14 CM FOR RS485
APS2 LOCALBUS152	CABLE WITH CONNECTOR RJ45 L=22 CM FOR RS485
APS2 LOCALBUS500	CABLE WITH CONNECTOR RJ45 L=50 CM FOR RS485
POWER ADAPTORS	
APS2 ALDR75-24	POWER ADAPTOR 3.2 A
APS2 ALDR12024	POWER ADAPTOR 5 A
PLUGS	
APS2 SPINAM11	PLUG WITH 11 POLE CLAMP TERMINALS
APS2 SPINAV11	PLUG WITH 11 POLE SCREW TERMINALS
TERMINALS AND CONNECTORS	
APS2 TB2111	TERMINAL BLOCK
APS2 TERMCAN	CONNECTOR RJ45 WITH CAN TERMINAL

SUPERVISION



AutoLink, DX and DY Gateways

SCADA Software for the centralized management and the supervision of plants.
Protocol converters for the integration of the Modbus RTU instrumentation with other field bus.

SUPERVISION

		DX	DY	DY5121
Dimensions (mm)	Deltadue module (22.5 x 99 mm)	•	•	
	4 DIN rail module (70 x 85 mm)			•
Protocol	Modbus RTU	•		
	CANOpen		•	
	Profibus DP slave	•		
	DeviceNet	•		
	Modbus TCP		•	•
Functions	Multi master	2	8	4
	Backup instruments (max.32)	•		
	Data transfer (binding)	•		•
	E-mail and SMS			•
	Webserver			•
Power supply 24 Vac/Vdc		•	•	•
CE certification + UL approval (listed)		•		•

AUTOLINK

• SUPERVISION AND DATA ACQUISITION SOFTWARE

FEATURES

HARDWARE AND SOFWARE	
Hardware	Pentium II, 512 MB RAM, CD rom, resolution 800x600
Supported OS	Windows 95, 98, 2000, NT, XP, Vista, 7
COMMUNICATIONS	
Interfaces	Serial lines, USB (with adapters), Ethernet
Drivers	Modbus RTU/ASCII, Modbus TCP, RTU Remote /ASCII Remote - Allen-Bradley Df1 Full Duplex Protocol For (Plc 3 and Plc 5), Slc 500 - AVEBus - Data Stream - Decom Contrex - Eurotherm Bisynch ASCII - Gefran - Cencal - Idec Izumi - Klockner Moeller Sucom - (A and A for Ps4) - Mitsubishi Fr-Cu03 - ODBC Client - Omron (Fins, Fins in Host Link, Sysmac) - OPC Client - Red Lion PAX-1/8 DIN Counter/Rate Meter - Saia (P800 and S-Bus) - Siemens MPI, Prodave MPI Mini, Plc Simatic S5 - S7EV2001, Profibus Mater DP - (Tecnint HTE), Profibus MPI and S7 (Applicom), Profibus PPI S7 200 (Applicom), PPI S7 200 (Adapter) - Interconnections TCP/IP (Master/Slave) - Raw ASCII Output - Other available drivers
UNIQUE FUNCTIONALITIES	
Gammadue, Deltadue, Sigmadue	Device autorecognition and project automatic creation (Autolink QuickDIN)
TLK, K, R, Z, Y, X, KM, W	Device autorecognition and project automatic creation (W-Tec)
DATABASE AND FUNCTIONALITIES	
Number of variables	128, 256, 2048, 62536
Type of variables	Numerics, digitals, strings, composites
Alarms	Unlimited
Trend	Binary, DBF and CSV file types
Access levels	32
Synoptic pages	Unlimited
Alarm pages	Unlimited
Trend pages	Unlimited, max 10 traces per window
Recipes	Unlimited and customizables
Report	Up to 999
Auxiliary functions	Events schedulings, remote control, macros, multilanguages, SMS

CE

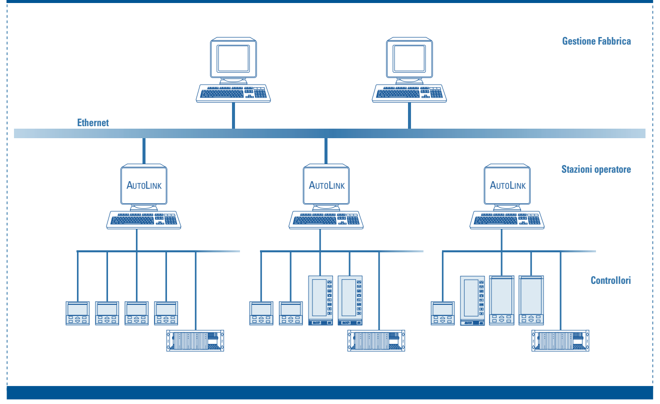
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

DEVELOPMENT AND RUNTIME SOFTWARE	
FOR DELTADUE, GAMMADUE AND SIGMADUE I/O MODBUS INSTRUMENTS ONLY MAX 32 INSTRUMENTS	
LSALINKDIN/USB	DEVELOPMENT/RUNTIME KEY MAX. 32 INSTRUMENTS DIN W-L
DEVELOPMENT AND RUNTIME SOFTWARE MAX. 128 VARIABLES	
LSALINKDVS/USB	DEVELOPMENT/RUNTIME KEY MAX. 128 VARIABLES DVS-W-ES
DEVELOPMENT AND RUNTIME SOFTWARE MAX. 2048 VARIABLES	
LSALINKDVM/USB	DEVELOPMENT/RUNTIME KEY MAX. 2048 VARIABLES DVM-W-EM
DEVELOPMENT AND RUNTIME SOFTWARE MAX. 65536 VARIABLES	
LSALINKDVX/USB	DEVELOPMENT/RUNTIME KEY MAX. 65536 VARIABLES DVX W-EX
RUNTIME SOFTWARE	
LSALINKRNT/USB	RUNTIME KEY MAX. 65536 VARIABLES RNT W-R

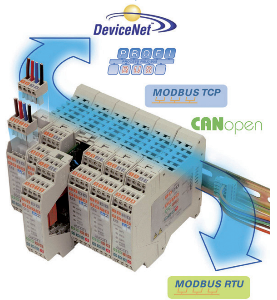
CONNECTIONS

AUTOLINK



DX/DY

• PROTOCOL GATEWAYS



FEATURES

FUNCTIONAL	DX	DY
Manager functions	Connected modules (max. 32) configuration and parameters data backup Hot swapping, automatic configuration and setup of the replaced modules.	--
Gateway functions	RS232/485 converter Protocol converter between Profibus DP SPC3, DeviceNet and Modbus RTU	Binding (data transfer) Protocol converter between CANOpen or Modbus TCP to Modbus RTU
WebSCADA functions	--	Instruments template 30 pages of 20 variables 64 alarms (e-mail and SMS with external modem, GSM or GPRS). A 64 variables log file (CSV), can be periodically send by e-mail Trend graphics (if JAVA is installed)
Communications ports	RS485 Modbus RTU master protocol (max.19200 baud) RS485, RS232 Modbus RTU slave protocol, insulated (max.38400 baud) RS485 Modbus RTU slave protocol, insulated (max. 57600 baud) RS485 Profibus DP slave (max. 12 Mb/s)	RS232 standard (for instrument configuration only) Ethernet 10/100 Mbaud, RJ45 female connector RS485 Modubus RTU (max. 115 K baud) RS485 CANOpen (max. 1 Mb/s)

GENERAL		
Power supply	24Vac (-25...+12%), 24Vdc (-15...+25%) (50/60Hz)	
Power consumption	4VA max.	
Dimensions / Weight	22.5 x 99 mm, depth 114.5 mm / 200 g approx.	
Mounting	On OMEGA DIN A rail	
Connections	PWS and COM: 0.08... 1.5 mm² (AWG28-AWG16) Inputs/Outputs: 0.2... 2.5 mm² (AWG24 - AWG12)	
Protection degree	IP20 (terminal block)	
Operating / storage temperature	0... 50°C (32... 122°F) / -20... 70°C (-4... 158°F)	
Operating humidity	5... 95% RH% without condensation	
Conformity	CE, UL, CSA, EN61010-1 (IEC1010-1)	CE, EN61010-1 (IEC1010-1)

CE cULus

HOW TO ORDER

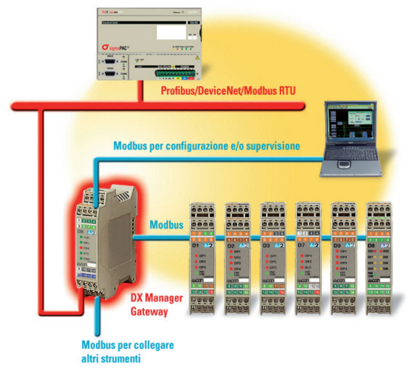
To compose the part number, pls. choose one of the option for each variable

DX	CODE
Gateway/Manager for Delta2/Gamma2 series	
POWER SUPPLY	
24 Vac/Vdc	5
NUMBER OF INSTRUMENTS IN BACKUP	
0 Instruments	0
4 Instruments	1
8 Instruments	2
16 Instruments	3
32 Instruments	4
FIELDBUS COMMUNICATION	
No fieldbus	0
DeviceNet	1
ModBus	5
ProfiBus DP	7
OPTION 1	
Not available	0
SPECIAL FUNCTIONS	
Not available	0
INSTRUCTION MANUAL	
Italian / English	0
Not available	9
OPTION 2	
Not available	0
OPTION 3	
Not available	0
Conformal coating	3

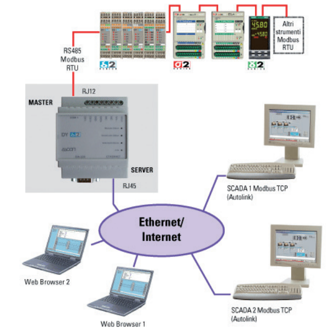
DY	CODE
PROTOCOL CONVERTER	
CAN Open/Modbus RTU - Delta2 Case	DY5030
WEB+Modbus TCP/RTU - 4 DIN Case	DY5121
TCP/RTU Modbus multiple connection - Delta2 Case	DY5220
INSTRUCTION MANUAL	
Italian / English	0
English	8

CONNECTIONS

DX

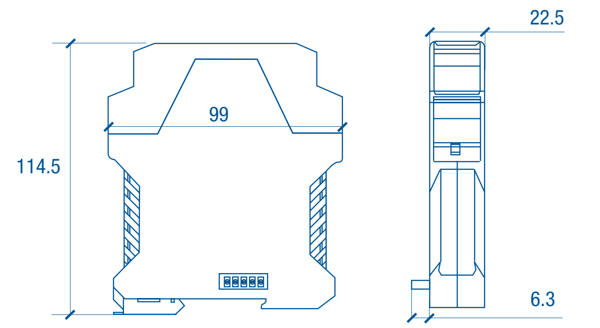


DY



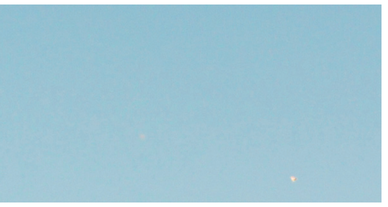
DIMENSIONS

DX / DY



The dimensions are expressed in mm

ACCESSORIES






ACCESSORIES

To complete the range...

Together with our products we can also supply all the accessories of your applications: probes, sockets, gaskets, hole covers, programming keys, signal and protocol converters, front frame protections, external and current transformers, adapters and more...

A01

• UNIVERSAL PROGRAMMING KEY FOR ASCON TECNOLOGIC INSTRUMENTS

FEATURES

FUNCTIONAL	A01
Functions	The key is able to "dialogue" with: * An instrument and to copy parameters to the key and vice versa * A second key and to integrally copy its parameters * A Personal computer * A Personal computer and an instrument A01 is able to recovery data even from failed instruments and permits unlimited copies of configuration, error free.
Serial communication	Interface RS485, not insulated Interface TTL Modubus, not insulated
GENERAL	
Connections	TTL male connector: JST S 5B-PH-KL TTL female connector : SAMTEC SQT-105-02-L-S RS485 connector: Phoenix MC 1,5/3-G-3.5 PWS connector : Dc power Jack 1.3mm USB connector type: Mini-USB Dip switch: 4 ways
Operating / storage temperature	0... 50°C (32... 122°F) / -20...+70°C (-4... 158°F)
Operating humidity	20... 95 RH% without condensation

CE

EVERYTHING UNDER CONTROL

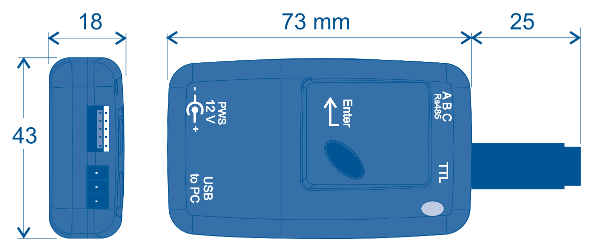
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

A01	CODE
CONNECTOR	
5 pole for 78x35, DIN rail, 72x72 series	5
3 pole for 48x48 series	3
POWER ADAPTOR	
Available	E
Not available	-
KIT FOR PC CONFIGURATION	
USB cable and SW on Cdrom support	S
Without cable and SW	-

DIMENSIONS

A01



The dimensions are expressed in mm

THERMOSTATS AND CONTROLLERS
INDICATORS
SPECIAL CONTROLLERS AND "CUSTOM"
PAC SYSTEMS
PRE-PROGRAMMED SYSTEMS
PLC AND OPERATOR PANELS
I/O MODULES
SUPERVISION
ACCESSORIES

A30

• SIGNAL CONVERTER FROM USB/RS232/RS485 TO RS485/TTL

FEATURES

FUNCTIONAL	A30U	A30-
Interface type	From USB to RS485 auto powered From USB to TTL auto powered	From USB to RS485 From USB to TTL From RS232 to RS485 From RS232 to TTL From RS485 to RS485 From RS485 to TTL
TX/RX commutation	Automatic	
Baud rate	38400, automatic selection	
GENERAL		
Power supply	24 Vac/Vdc ±10% or 100... 240Vac (-15... +10%) (50/60 Hz)	
Power consumption	5 VA max.	
Dimensions / Weight	78x35 mm, depth 77,31 mm / 180 g	
Connections	PWS: screw terminal block (M3 screws, for cables φ 0.25 to φ 2.5 mm² or AWG 23 to AWG 14) RS232/RS485: screw terminal block (M2 screws, for cables φ 0.25 to φ 1.5 mm² or AWG 23 to AWG 16)	
Protection degree	IP20 (terminal block)	
Mounting	On OMEGA DIN A rail	
Operating / storage temperature	0... 50°C (32... 122°F)/-30...+70°C (-22... 158°F)	
Operating humidity	20... 85 RH% without condensation	
Conformity	EN61326-1, EN61010-1	

CE

EVERYTHING UNDER CONTROL

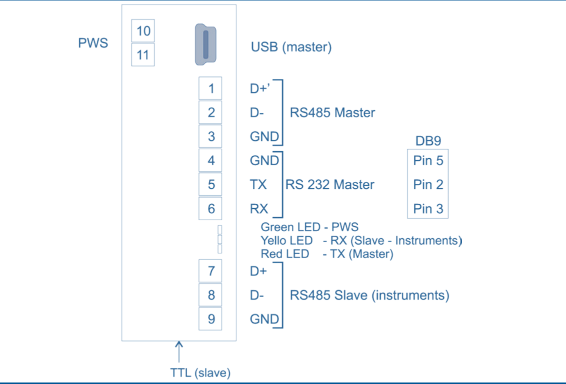
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

A30	CODE
MODEL	
From USB to RS485 or TTL Modubus	U
From USB/RS232/RS485 to RS485 or TTL Modubus	-
POWER SUPPLY	
24 Vac/Vdc (A30 only)	L
100... 240 Vac (A30 only)	H
5V supplied by the USB port (A30U only)	-
CONNECTIONS	
Plug-in screw type	E
Plug-in screw type, fix part only	N

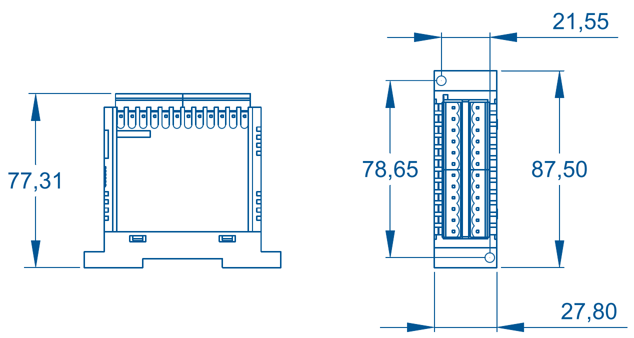
CONNECTIONS

A30



DIMENSIONS

A30



The dimensions are expressed in mm

APS2 ALDR

POWER SUPPLY FOR SIGMADUE SERIES

Power supply for instruments of sigmadue series.

CODE	DESCRIPTION
APS2 ALDR75-24	Power supply 75W - 24Vdc - 3.2 A
APS2 ALEDR12024	Power supply 120W - 24Vdc - 5 A

APS2 ATOPEH

INDUSTRIAL SWITCHES

Industrial Ethernet switches.

CODE	DESCRIPTION
APS2 ATOPEH2006	6 port Ethernet Switch - Plastic case
APS2 ATOPEH2306	6 port Ethernet Switch - Metallic case
APS2 ATOPEH2308	8 port Ethernet Switch - Metallic case

APS2 MODEM

MODEM GSM/GPRS

Modem GSM/GPRS in metallic case.

CODE	DESCRIPTION
APS2 MODEMG100	Modem for OMEGA DIN A rail mounting Dimensions 73 x 54 mm, depth 25 mm Pws: 230 Vac - 12 Vdc E-GSM Quad-band 850/900/1800/1900 MHz ETSI GSM Phase 2+ Class 4 (2W@ 850/900 MHz) Class 1 (1W@ 1800/1900 MHz) Antenna GSM: SMA-F connector PWS: 5.5 - 32 Vdc (micro-FIT connector) RS232 + Audio conn. female 15-pin Sub-D

BOX-AR

ADAPTERS

Accessories used to adapt an instrument to an already existing hole, but with different mechanical measures.

CODE	DESCRIPTION
BOX 04175	Adapter for hole from 75 x 32 to 58 x 26 mm
BOX 1002	Adapter for hole from 64,4 x 32,4 to 34,3 x 15 mm
ARFQ96D	Adapter for hole from 96 x 96 to 48 x 96 mm
ARFQ96M	Adapter for hole from 96 x 96 to 48 x 48 mm

CAL

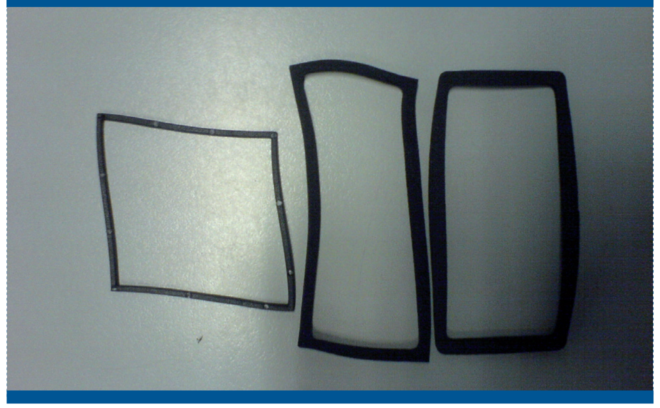
PROTECTION COVERS

Protection covers made of transparent plastic or soft rubber to protect the front of the instruments. Some models assure the IP65 protection degree.

CODE	DESCRIPTION
CAL48x48-M	48 x 48 mm (soft rubber)
CAL48x48-IP65	48 x 48 mm (Plastic - IP65)
CAL48x96-I	48 x 96 mm (Plastic)
CAL48x96-IP65	48 x 96 mm (Plastic - IP65)
CAL72x72-I	72 x 72 mm (Plastic)
CAL96x96-I	96 x 96 mm (Plastic)
CAL96x96-IP65	96 x 96 mm (Plastic)

GUAR

EXTERNAL GASKETS FOR IP65 PROTECTION DEGREE



External gaskets in neoprene mousse able to increase the instrument front protection degree.

CODE	DESCRIPTION
GUAR 6993	IP65 gasket for 65 x 33 mm front
GUAR 6927	IP65 gasket for 75 x 33 mm (old style) front
GUAR 6925	IP65 gasket for 78 x 35 mm (new style) front
GUAR 6923	IP65 gasket for 48 x 48 mm front
GUAR 6973	IP65 gasket for 48 x 96 mm front
GUAR 6974	IP65 gasket for 72 x 72 mm front
GUAR 6926	IP65 gasket for 181 x 36 mm front

TAPPO

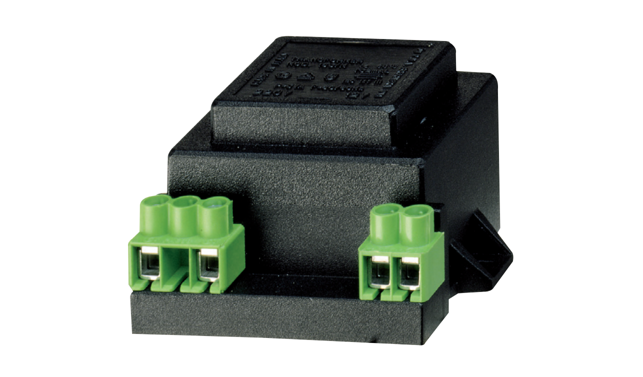
HOLE COVER

Accessories used to cover an existing hole that it's not possible to leave empty for
aesthetic reasons or protection.

CODE	DESCRIPTION
TAPPO 33x75AT	Cover and box for 75 x 33 mm hole
TAPPO 48x48-AT	Cover for 48 x 48 mm hole
TAPPO 48x96	Cover for 48 x 96 mm hole
TAPPO 96x96	Cover for 96 x 96 mm hole

TCTR

EXTERNAL POWER TRANSFORMERS



Accessories available with different ratio of transformation for different instrumentation demands.

CODE	DESCRIPTION
	PRIMARY/SECONDARY POWER
A	24/12 V
C	115/12V
D	230/12V
	POWER
3	3 VA
5	5 VA
10	10 VA

Other models available on request.

TLCOV

EXTENDED FRONT PLATE

Accessories that make it possible to extend the front plate of instruments 78 x 35 mm to 185 x 38 mm. Available also hole plugs and switches to cover the side holes.

CODE	DESCRIPTION
TLCOV	INSTRUMENT TO BE EXTENDED
XX	Part.no to define the instrument to be extended
	POSITION OF THE INSTRUMENT
D	Instrument mounted on the right side
S	Instrument mounted on the left side
	HOLES DIMENSIONS
--	Holes with Ø 20 mm
-1	Left hole with Ø 20 mm - Right hole with Ø 22 mm
1-	Left hole with Ø 22 mm - Right hole with Ø 20 mm
11	Holes with Ø 22 mm

TR-AMP

CURRENT TRANSFORMERS

Accessories available with different ratio of current for different instrumentation demands.

CODE	DESCRIPTION
TR-AMP-100/02	Ratio 100/0.2
TR-AMP-25/005	Ratio 25/0.05
TR-AMP-200/04	Ratio 200/0.4
TR-AMP-50/005	Ratio 50/0.05
TR-AMP-100/005	Ratio 100/0.05

ZOC

SOCKETS

Accessories available in different executions: to be soldered, with screws.

CODE	DESCRIPTION
ZOC 02203	Octal (IP20)
ZOC 02805	Octal
ZOC 02204	Undecal (IP20)
ZOC 02976	Octal with terminals to be soldered
ZOC 03110	Octal with screws

THERMOELEMENTS

- THERMOCOUPLES
- THERMORESISTANCES
- THERMISTORS
- CABLES AND ACCESSORIES

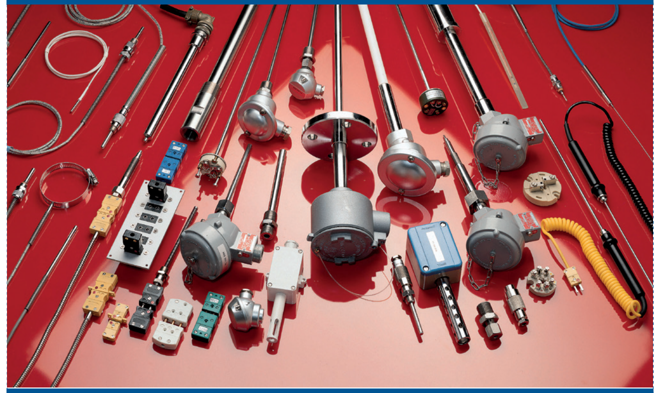
PROBES AND ACCESSORIES

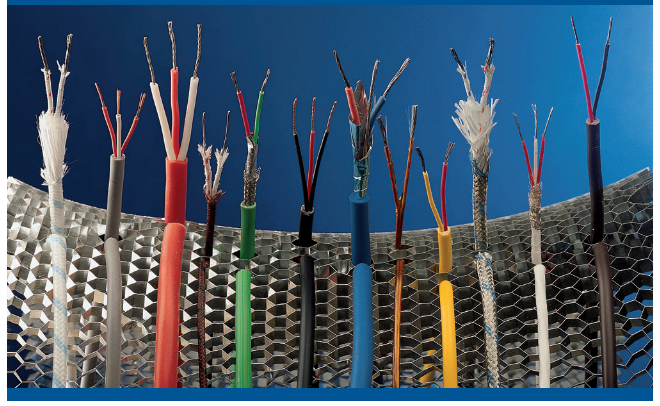
The correct choice of probe is often decisive for the good result of the process control.
We, at Ascon Tecnologic puts at your disposition our experience and technical competence with the purpose to find the correct solution to every application problem...

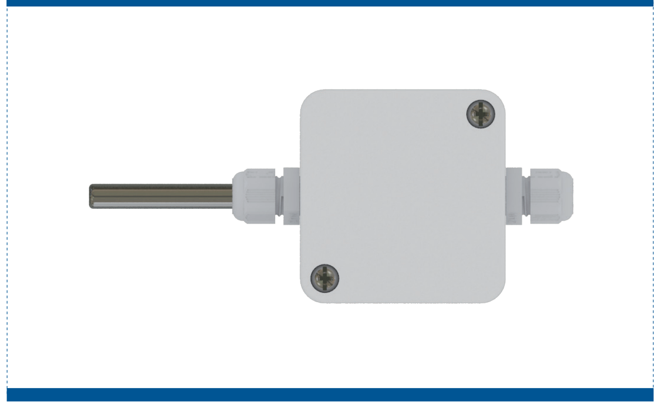
Examples of possible execution of our thermoelements:

- Probes for machines and small plants
- Flexible probes with MgO insulation
- High pressure probes with replaceable insertion
- High temperature probes with ceramic or metallic sleeve
- Accessories: nipple, thermowell, flanges and so on
- Compensated cables

Our technical team is available to discuss your requirements for custom made products. Get in touch with us.







NOTES

NOTES

NOTES

THE GROUP

Ascon Tecnologic s.r.l.
viale Indipendenza, 56 • 27029 Vigevano (PV) Italy
tel +39 0381 69 871 • fax +39 0381 69 87 30

info@ascontecnologic.com
www.ascontecnologic.com

Ascon Tecnologic France
BP 76 • 77202 • Marne La vallee Cedex 1
tel +33 1 64 30 62 62 • fax +33 1 64 30 84 98
info@ascontecnologic.fr
www.ascontecnologic.com/fr

Ascon Polska sp. z.o.o.
Kochcice ul. Kochanowicka 43
42-713 Kochanowice
tel +48 34 35 33 619 • fax +48 34 35 33 884
info@ascon.pl
www.ascon.pl

Ascon Tecnologic North America
1111 Brook Park Road
Cleveland • OH 44109
tel +1 216 485 83 50 • Fax +1 216 398 85 53
info@ascontec-na.com
www.ascontecnologic.com/en

Coelmatic ltda
Rua Clélia 1810 - Lapa
Sao Paulo • SP - CEP 05042-001- Brazil
tel +55 11 2066-3211 • fax +55 11 3046-8601
info@coel.com.br
www.coelmatic.com.br

Coelmatic Sapi Sa de Cv
Calle Praga No. 4489
Colonia Las Torres, Monterrey CP 64103
Nuevo León - Mexico
tel. +52 81 8104 1012
info@coelmatic.com.mx
www.coelmatic.com.mx

Printed in January 2021

Printed by:
Tipolitografia Vaccarone - Vigevano (PV)