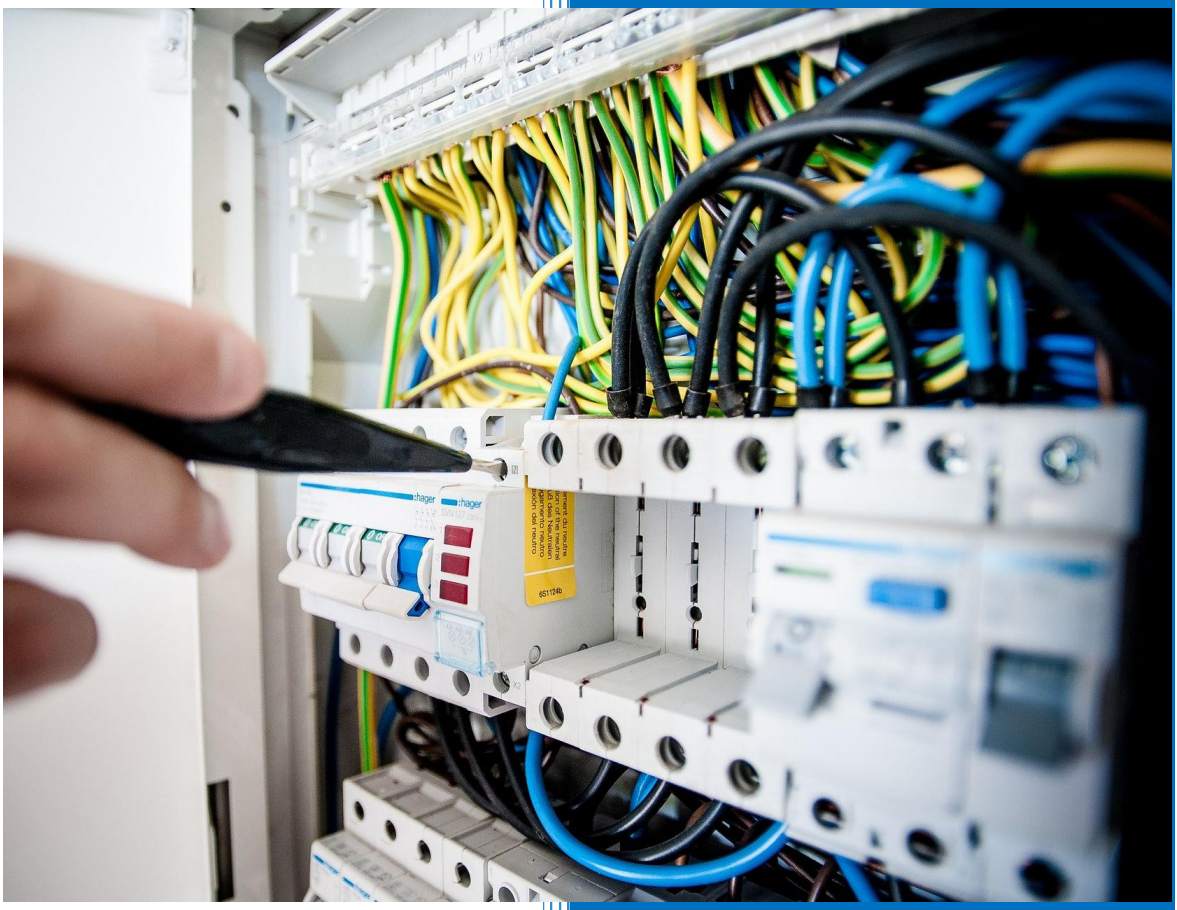
Irritecnica

Control panels catalogue



2023

Control panels catalogue

Product Technical Notes.

The data and technical characteristics reported in this Catalogue are not binding. Irritecnica S.a.s. reserves the right to make any changes without notice. Consequently, weights, measurements, performances and anything else indicated are not binding but only indicative. In any case, for any technical details contact Irritecnica by email or telephone to obtain updated product information.

Jurisdiction.

For any disputes, the jurisdiction will be that of Santa Maria Capua Vetere (CE), Italy.

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COMPANY

Company profile

Irritecnica was founded in 1946 by Antonio Zannone in Nocelleto di Carinola (CE), Italy, and over the years it has become a reliable point of reference in the sector of irrigation products and more generally for the lifting and distribution of water.

With over 50 years of experience in the sector, we are able to follow up the customer in every need, from the design of the system and supply of components, up to on-site installation, after-sales assistance and repairs, thanks to our staff technician and our machinery.

Our services

Flanged pipes production

We produce flanged pipes for electric pumps and vertical axis pumps

Control panels design and production

We design and produce control panels for electric pumps up to 150 kW

Pumps distribution center

We are one of the major retailers of vertical pumps and electric pumps in Campania

Spare parts warehouse

In our warehouse you can find a vast selection of materials for irrigation

Technical assistance and repairs

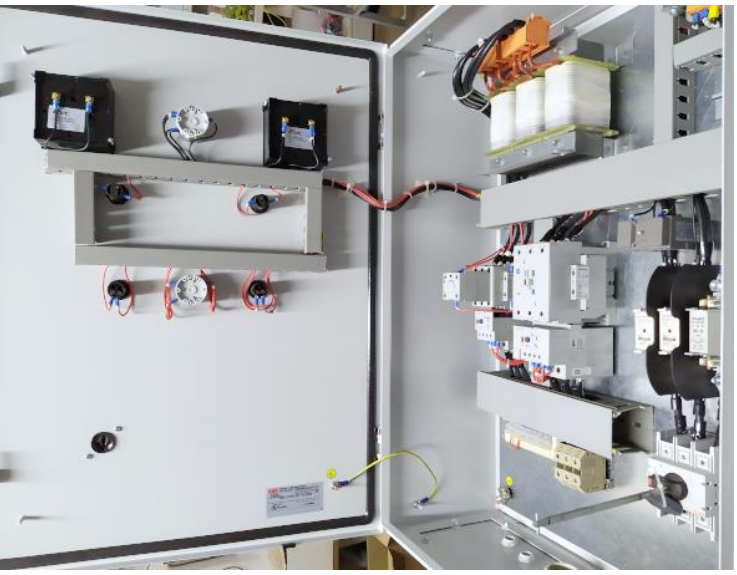
We carry out pre- and post-sales assistance and repairs on site or in our workshop

CONTROL PANELS

Design and construction

Over the years, Irritecnica has increasingly specialized in the design and construction of control panels for electric pumps, with powers ranging from 0.55 kW to 150 kW.

High quality components



In our panels we only use quality material, coming from the main suppliers of electrical and electronic components.

Main models

- Single-phase direct-on-line starters from 0.55 kW to 2.2 kW;
- Simplified single-phase direct-on-line starters from 0.55 kW to 2.2 kW;
- Three-phase direct-on-line starters from 0.75 kW to 15 kW;
- Simplified three-phase direct-on-line starters from 0.75 kW to 7.5 kW;
- Stator impedance starters from 11 kW to 150 kW.

➤ ADM – SINGLE-PHASE DOL STARTER

➤ Description

The ADM series electrical panels are direct-on-line starters for single-phase electric pumps from 0.75 HP to 3 HP characterized by high reliability and capable of operating even in the harshest environments. Built accordingly to high quality standards, they use largely oversized electromechanical components of the most reliable brands (Allen-Bradley, Schneider Electric, Siemens, Lovato).

The motor is started via a direct connection to the power supply, which means short acceleration times and a high initial torque. This type of starter is ideal for small submersible pumps and pressurization systems with surface pumps.

The ADM series panels are assembled in IP56 thermoplastic cases, with low voltage input controls, analogue voltmeter and ammeter, a switch for manual starting or automatic, i.e. controlled by a pressure switch or float, motor running and overload indicators, a terminal block for connections to users and external controls.

➤ Models

Model	Voltage	Max power		Current range	Capacitor	Case dimensions [mm]				Weight
	[V~]	[kW]	[HP]	[A]	[µF]	H	L	W	Material	[Kg]
ADM/0.75HP	1~230	0.55	0.5	4... 6.5	30	300	220	120	ABS	3
ADM/1.0HP	1~230	0.75	1	6.3... 10	35	300	220	120	ABS	3
ADM/1.5HP	1~230	1.1	1.5	9... 14	40	300	220	120	ABS	3
ADM/2.0HP	1~230	1.5	2	9... 14	50	300	220	120	ABS	3.5
ADM/3.0HP	1~230	2.2	3	13... 18	80	300	220	120	ABS	4.5

➤ Detailed characteristics:

- 230Vac ± 10% 50Hz single-phase power supply
- Front panel analogue voltmeter and ammeter

- Automatic – 0 – Manual switch:
  - In manual mode the operation is direct, without controls
  - In automatic mode the operation is controlled by the command input
- Green motor running light (Run)
- Red motor overload light (Thermal)
- 24Vac transformer for the auxiliary circuit
- Command input for pressure switch, float, etc.
- AC3 line contactor
- Internally resettable thermal overload relay
- Motor starting capacitor
- Bipolar fuse holder with motor protection fuses
- Bipolar fuse holder with control circuit protection fuses
- Cable connection terminal block
- Power and control wires appropriately marked
- External case in thermoplastic material (ABS) IP56
- Cable glands at cable entry and exit
- Operating temperature: -5/+40°C

NOTE:

The characteristics of the products are shown for indicative purposes and are subject to change at any time without notice.

➤ AMR – SIMPLIFIED SINGLE-PHASE DOL STARTER

➤ Description

The AMR series electrical panels represent the most economical series of direct-on-line starters for single-phase electric pumps from 0.75 HP to 3 HP, without however sacrifice durability thanks to the use of first choice components.

The motor is started via a direct connection to the power supply, which means short acceleration times and a high initial torque. This type of starter is ideal for small submersible pumps and pressurization systems with surface pumps.

The AMR series panels are assembled in IP56 thermoplastic cases, with low voltage input controls, a switch for manual starting or automatic, i.e. controlled by a pressure switch or float, motor running and overload indicators, a terminal block for connections to users and external controls.

➤ Models

Model	Voltage	Max power		Current range	Capacitor	Case dimensions [mm]				Weight
	[V~]	[kW]	[HP]	[A]	[µF]	H	L	W	Material	[Kg]
AMR/0.75HP	1~230	0.55	0.75	4…6.5	30	240	190	90	ABS	2.5
AMR/1.0HP	1~230	0.75	1	6.3…10	35	240	190	90	ABS	2.5
AMR/1.5HP	1~230	1.1	1.5	9…14	40	240	190	90	ABS	2.5
AMR/2.0HP	1~230	1.5	2	9…14	50	240	190	90	ABS	3
AMR/3.0HP	1~230	2.2	3	13…18	80	300	220	120	ABS	4

➤ Detailed characteristics:

- 230Vac ± 10% 50Hz single-phase power supply
- Automatic – 0 – Manual switch:
  - In manual mode the operation is direct, without controls
  - In automatic mode the operation is controlled by the command input
- Green motor running light (Run)

- Red motor overload light (Thermal)
- 24Vac transformer for the auxiliary circuit
- Command input for pressure switch, float, etc.
- AC3 line contactor
- Internally resettable thermal overload relay
- Motor starting capacitor
- Bipolar fuse holder with motor protection fuses
- Bipolar fuse holder with control circuit protection fuses
- Cable connection terminal block
- Power and control wires appropriately marked
- External case in thermoplastic material (ABS) IP56
- Cable glands at cable entry and exit
- Operating temperature: -5/+40°C

NOTE:

The characteristics of the products are shown for indicative purposes and are subject to change at any time without notice.

➤ ADT – THREE-PHASE DOL STARTER

➤ Description

The ADT series electrical panels are direct-on-line starters for three-phase electric pumps from 1 HP to 20 HP characterized by high reliability and capable of operating even in the harshest environments. Built accordingly to high quality standards, they use largely oversized electromechanical components of the most reliable brands (Allen-Bradley, Schneider Electric, Siemens, Lovato).

The motor is started via a direct connection to the power supply, which means short acceleration times and a high initial torque. This type of starter is ideal for small submersible pumps and pressurization systems with surface pumps.

The ADT series panels are assembled in IP56 thermoplastic cases, with low voltage input controls, switch disconnector with door-lock knob, analogue voltmeter and ammeter, a switch for manual starting or automatic, i.e. controlled by a pressure switch or float, motor running and overload indicators, a terminal block for connections to users and external controls.

➤ Models

Model	Voltage	Max power		Current range	Case dimensions [mm]				Weight
	[V~]	[kW]	[HP]	[A]	H	L	W	Material	[Kg]
ADT/1.0HP	3~400	0.75	1	1.6…2.5	380	300	120	ABS	3.5
ADT/1.5HP	3~400	1.1	1.5	2.5…4	380	300	120	ABS	3.5
ADT/2.0HP	3~400	1.5	2	4…6.5	380	300	120	ABS	4
ADT/3.0HP	3~400	2.2	3	6.3…10	380	300	120	ABS	4
ADT/4.0HP	3~400	3	4	6.3…10	380	300	120	ABS	5
ADT/5.5HP	3~400	4	5.5	9…14	380	300	120	ABS	5
ADT/7.5HP	3~400	5.5	7.5	13…18	380	300	120	ABS	6
ADT/10HP	3~400	7.5	10	17…23	380	300	180	ABS	6
ADT/12.5HP	3~400	9.2	12.5	20…25	380	300	180	ABS	6
ADT/15HP	3~400	11	15	24…32	380	300	180	ABS	6.5
ADT/17.5HP	3~400	13	17.5	28…42	380	300	180	ABS	7
ADT/20HP	3~400	15	20	28…42	380	300	180	ABS	8

➤ Detailed characteristics:

- 400Vac ± 10% 50Hz three-phase power supply
- Switch disconnector with door-lock knob
- Front panel analogue voltmeter and ammeter
- Phase/phase voltmetric switch
- Automatic – 0 – Manual switch:
    - In manual mode the operation is direct, without controls
    - In automatic mode the operation is controlled by the command input
- Green motor running light (Run)
- Red motor overload light (Thermal)
- 24Vac transformer for the auxiliary circuit
- Command input for pressure switch, float, etc.
- AC3 line contactor
- Internally resettable thermal overload relay
- Bipolar fuse holder with motor protection fuses
- Bipolar fuse holder with control circuit protection fuses
- Cable connection terminal block
- Power and control wires appropriately marked
- External case in thermoplastic material (ABS) IP56
- Cable glands at cable entry and exit
- Operating temperature: -5/+40°C

NOTE:

The characteristics of the products are shown for indicative purposes and are subject to change at any time without notice.

➤ ATR – SIMPLIFIED THREE-PHASE DOL STARTER

➤ Description

The ATR series is the least expensive version of the ADT series, still maintaining the same quality and reliability standards as the larger series, for the direct-on-line starting of three-phase electric pumps ranging from 1 HP to 10 HP.

The motor is started via a direct connection to the power supply, which means short acceleration times and a high initial torque. This type of starter is ideal for small submersible pumps and pressurization systems with surface pumps.

The ATR series panels are assembled in IP56 thermoplastic cases, with low voltage input controls, a switch for manual starting or automatic, i.e. controlled by a pressure switch or float, motor running and overload indicators, a terminal block for connections to users and external controls.

➤ Models

Model	Voltage	Max power		Current range	Case dimensions [mm]				Weight
	[V~]	[kW]	[HP]	[A]	H	L	W	Material	[Kg]
ATR/1.0HP	3~400	0.75	1	1.6…2.5	300	220	120	ABS	2.5
ATR/1.5HP	3~400	1.1	1.5	2.5…4	300	220	120	ABS	2.5
ATR/2.0HP	3~400	1.5	2	4…6.5	300	220	120	ABS	3
ATR/3.0HP	3~400	2.2	3	6.3…10	300	220	120	ABS	3
ATR/4.0HP	3~400	3	4	6.3…10	300	220	120	ABS	4
ATR/5.5HP	3~400	4	5.5	9…14	300	220	120	ABS	4
ATR/7.5HP	3~400	5.5	7.5	13…18	300	220	120	ABS	5
ATR/10HP	3~400	7.5	10	17…23	300	220	120	ABS	5

➤ Detailed characteristics:

- 400Vac ± 10% 50Hz three-phase power supply

- Automatic – 0 – Manual switch:
  - In manual mode the operation is direct, without controls
  - In automatic mode the operation is controlled by the command input
- Green motor running light (Run)
- Red motor overload light (Thermal)
- 24Vac transformer for the auxiliary circuit
- Command input for pressure switch, float, etc.
- AC3 line contactor
- Internally resettable thermal overload relay
- Bipolar fuse holder with motor protection fuses
- Bipolar fuse holder with control circuit protection fuses
- Cable connection terminal block
- Power and control wires appropriately marked
- External case in thermoplastic material (ABS) IP56
- Cable glands at cable entry and exit
- Operating temperature: -5/+40°C

NOTE:

The characteristics of the products are shown for indicative purposes and are subject to change at any time without notice.

➤ AIS – STATOR IMPEDANCE STARTER

➤ Description

The AIS series electrical panels are three-phase starters suitable for use with high-power electric pumps, ranging from 15 HP up to 200 HP, ideal for irrigation systems with withdrawal from wells of considerable depth. The choice of robust components, tested to work in the most severe conditions possible, makes this series of panels the most requested for the pump starting in the agricultural and industrial sectors.

The pump is started by means of stator reactors placed between the power supply and the motor in the initial phase, which allows to reduce the starting current and the voltage drop on the power line, therefore starting the pump more gradually. A timer excludes the reactors once the startup is complete.

The AIS series panels are assembled in IP65 metal cases or cabinets, with low voltage input controls, switch disconnector with door-lock knob, analogue voltmeter and ammeter, a switch for manual starting or automatic, i.e. controlled by a pressure switch or float, motor running and overload indicators, a terminal block for connections to users and external controls.

➤ Models

Model	Voltage	Max power		Current range	Case dimensions [mm]				Weight
	[V~]	[kW]	[HP]	[A]	H	L	W	Material	[Kg]
AIS/15HP	3~400	11	15	24…32	600	400	200	Metal	30
AIS/17.5HP	3~400	13	17.5	28…42	600	400	200	Metal	35
AIS/20HP	3~400	15	20	28…42	600	400	200	Metal	40
AIS/25HP	3~400	18.5	25	35…50	800	600	250	Metal	50
AIS/30HP	3~400	22	30	46…65	800	600	250	Metal	55
AIS/35HP	3~400	26	35	46…65	800	600	250	Metal	60
AIS/40HP	3~400	30	40	60…82	800	600	250	Metal	65
AIS/50HP	3~400	37	50	70…95	1000	600	300	Metal	80
AIS/60HP	3~400	45	60	75…125	1000	600	300	Metal	90
AIS/70HP	3~400	52	70	75…125	1200	600	300	Metal	120

AIS/80HP	3~400	60	80	90…150	1200	600	300	Metal	120
AIS/90HP	3~400	66	90	90…150	1400	800	400	Metal	150
AIS/100HP	3~400	75	100	120…200	1400	800	400	Metal	150
AIS/125HP	3~400	92	125	120…200	1400	800	400	Metal	160
AIS/150HP	3~400	110	150	150…250	1600	800	500	Metal	180
AIS/180HP	3~400	132	180	180…300	1600	800	500	Metal	235
AIS/200HP	3~400	150	200	250…420	1600	800	500	Metal	235

➤ Detailed characteristics:

- 400Vac ± 10% 50Hz three-phase power supply
- Switch disconnector with door-lock knob
- Front panel analogue voltmeter and ammeter
- Phase/phase voltmetric switch
- Automatic – 0 – Manual switch:
  - In manual mode the operation is direct, without controls
  - In automatic mode the operation is controlled by the command input
- Green motor running light (Run)
- Red motor overload light (Thermal)
- Start and stop buttons
- 24Vac transformer for the auxiliary circuit
- Command input for pressure switch, float, etc.
- AC3 line and impedance contactors
- Internally resettable thermal overload relays
- Three-phase reactor for motor starting
- Bipolar fuse holder with motor protection fuses
- Bipolar fuse holder with control circuit protection fuses
- Adjustable reactance timer
- Cable connection terminal block
- Power and control wires appropriately marked
- Metal case or cabinet (depending on the model) IP65
- Cable glands at cable entry and exit
- Operating temperature: -5/+40°C

NOTE:

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➤ ACCESSORIES AND OPTIONAL

➤ Pre-wired optional

Code	Description	Applicable to
CNT-O	Front panel analogue hour meter	ADM, ADT, ATR, AIS
OR-G	Front panel daily clock with charge reserve	ADM, ADT, ATR, AIS
OR-GS	Front panel daily/weekly clock with charge reserve	ADM, ADT, ATR, AIS
RL-LVL	Fluid level control relay (filling or emptying to be specified at time of order)	All series
RL-VOLT	Voltmetric relay for checking incorrect sequence and missing line phases	ADT, ATR, AIS
RL-TERM	Thermal trip signaling relay	All series
RL-MOT	Motor status signaling relay (start/stop)	All series
RL-AUS	Relay signaling the presence of mains or auxiliary voltage	All series
TMR-RIT	Timer for delayed motor start-up when the mains return	All series
TMR-PL	Break/work timer	All series
TMR-MUL	Multifunction timer	All series
PMA	Start/stop buttons	ADM, ADT, ATR
SC-TRI	40 kA three-pole surge arrester	ADT, ATR, AIS
SC-BI	20 kA two-pole surge arrester	ADM, AMR

The addition of some options or combinations of them may require changing the case with a larger one.

For other options or customized solutions please contact our technical sales office.

➤ Other accessories

	Code	Description
	**SND-LVL**	Unipolar probe (electrode) for fluid level control
	**GLC-PVC5**	Electric float for clear waters with 5 meter PVC cable + counterweight
	GLC-PVC10	Electric float for clear waters with 10 meter PVC cable + counterweight
	**GLS-PVC5**	Electric float for turbid waters with 5 meter PVC cable
	GLS-PVC10	Electric float for turbid waters with 10 meter PVC cable
	**FSG-2**	Pressure switch with adjustment range of 1.4 - 4.6 bar
	FYG-22	Pressure switch with adjustment range of 2.8 - 7.0 bar
	FYG-32	Pressure switch with adjustment range of 5.6 - 10.5 bar
	**RIF-5KVAR**	5 kVar 400V passive three phase power factor corrector
	RIF-10KVAR	10 kVar 400V passive three phase power factor corrector

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NOTES

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