





Self-powered RMU Protection

Voltage & Frequency Protection

Traction Protection

Numerical Protection Relays

Ashida takes pride in designing, supplying & manufacturing world class multifunction protection & management IEDs. These IEDs are available in different rack sizes depending on actual input output requirement of the client. These relays are tested as per Indian as well as International - IEC standards. The simple & compact construction of ADI1YA series relays provides integrated Protection, Monitoring & Control functions to the users.

Protection Relays Different Versions	Dai D		U.S. J.	Market 400 May 2
	Basic - Bx	Enhance - Ex	Modular -14" - M14	Modular 19" - M19
Directional Feeder Protection				
Transformer Protection				
Motor Protection				
Distance Protection				

Relays with varied applications:

Relays are designed with fast and selective tripping function which ensures the stability and availability of electrical power system. Wide range of Relay options enables the customer to choose appropriate and economical solution. As per customer's requirements and specifications we can provide different communication protocols like IEC60870-104, IEC60870-103, IEC 61850, MODBUS, DNP3, etc. with different communication ports like RS485, RS422, RJ45, Ethernet Port, USB port, Fiber Optic Port etc.

FEEDER PROTECTION RELAYS

Designed for Transmission Line Protection, Underground Cables & Feeder Protection, Machine Protection and Shunt Capacitor Bank Protection applications.

TRANSFORMER DIFFERENTIAL PROTECTION RELAYS

Designed for Transformer protection-2 winding / 3 Windings, Motor differential protection.

MOTOR PROTECTION RELAYS

Designed for electric motor protection applications.

LINE DISTANCE PROTECTION RELAYS

Designed for Line, Feeder & Machine protection applications.

RING MAIN UNIT PROTECTION RELAYS

Designed for Ring Main Unit protection applications. It is a Self Powered Relay.

n Protection relay		<u> </u>		38	4R	5 R	6R	7R
Functions	Model	A2	A2	A2	A2	A2	A2	A27R
Distance Protection		4	4					
Delta I Protection			4					
Zone Extension		4						
Differential protection				4				
Directional Power Protection								
Wrong Phase Coupling		4						
Switch oN to Fault		4						
Fuse Monitoring		4						
Fault Location		4						
Thermal Overload		4						
Instantaneous/Definite Time Phase Over Current Protection		4			4	4		
Trip Circuit Supervison		4	4		4	4		
Auto Reclose		4						
Under Voltage protection			4				4	
Over voltage protection							4	
Breaker Failure		4	4	4	4	4		
DC supervision								4
Independent Protection Setting Groups			2	2	2	2	2	2
Disturbance Recording		4	4	4	4	4	4	4
Event Recording		4	4	4	4	4	4	4
Fault Recording		4	4	4	4	4	4	4
	Functions Distance Protection Delta I Protection Zone Extension Differential protection Directional Power Protection Wrong Phase Coupling Switch oN to Fault Fuse Monitoring Fault Location Thermal Overload Instantaneous/Definite Time Phase Over Current Protection Trip Circuit Supervison Auto Reclose Under Voltage protection Over voltage protection Breaker Failure DC supervision Independent Protection Setting Groups Disturbance Recording Event Recording	Functions Distance Protection Delta I Protection Zone Extension Differential protection Directional Power Protection Wrong Phase Coupling Switch oN to Fault Fuse Monitoring Fault Location Thermal Overload Instantaneous/Definite Time Phase Over Current Protection Trip Circuit Supervison Auto Reclose Under Voltage protection Breaker Failure DC supervision Independent Protection Setting Groups Disturbance Recording Event Recording	Functions Distance Protection Delta I Protection Zone Extension Differential protection Directional Power Protection Wrong Phase Coupling Switch oN to Fault Fuse Monitoring Fault Location Thermal Overload Instantaneous/Definite Time Phase Over Current Protection Fing Circuit Supervison Auto Reclose Under Voltage protection Breaker Failure DC supervision Independent Protection Setting Groups Disturbance Recording Event Recording	Functions Distance Protection Delta I Protection Zone Extension Differential protection Directional Power Protection Wrong Phase Coupling Switch oN to Fault Fuse Monitoring Fault Location Thermal Overload Instantaneous/Definite Time Phase Over Current Protection Trip Circuit Supervison Auto Reclose Under Voltage protection Breaker Failure DC supervision Independent Protection Setting Groups Event Recording Fy Event Recording	Functions Model Distance Protection Delta I Protection Zone Extension Differential protection Wrong Phase Coupling Switch oN to Fault Fuse Monitoring Fault Location Thermal Overload Instantaneous/Definite Time Phase Over Current Protection Trip Circuit Supervison Auto Reclose Under Voltage protection Breaker Failure DC supervision Independent Protection Setting Groups Event Recording Fy K K K K K K K K K K K K K	Functions Model	Functions Model Model	Functions Model Z <



Self Powered RMU **Protection Relays**

AM 760 (ver.) ADR 241S AM 511 (Hor.) ADR 241S AM 521 ANSI **Functions** 37 **Under Current Protection** Negative Phase Protection 46 4 **Broken Conductor Detection** 4 46BC Thermal Overload Protection 49 Instantaneous/Definite Time Phase Over 50 **Current Protection** Instantaneous/Definite Time Ground Over 50N Current Protection Inverse Time Phase Over Current Protection 51 51N Inverse Time Ground Over Current Protection 4 68 Inrush Blocking 79 Auto Reclosing Lockout (Trip Command) 86 4 4

Transformer Differential
Protection Relay

	ction Relay		–	sic	Enhanced	Enchanced	odular
	M	odel	A21	Basic	_ E	_	Ĕ
ANSI	Functions			BX	Ä	Ex(Do)	××
24	Over Excitation Protection			4	4	4	4
27	Under Voltage Protection			4	4	4	4
46	Negative Phase Sequence Protection		4	4	4	4	4
49 BC	Broken Conductor Detection		4	4	4	4	4
49	Thermal Overload Protection		4	4	4	4	4
50	Instantaneous/Definite Time Phase Over Current Protection		4	4	4	4	4
50N	Instantaneous/Definite Time Ground Over Current Protection		4	4	4	4	4
50BF	Breaker Failure		4	4	4	4	4
51	Inverse Time Phase Over Current Protection		4	4	4	4	4
51N	Inverse Time Ground Over Current Protection	on	4	4	4	4	4
59	Over Voltage Protection			4	4	4	4
REF-64R	High/Low Impedance Ground Differential Protection		4	4	4	4	4
86	Lockout (Trip Command)		4	4	4	4	4
87T	Two Winding Transformer Phase Differential Protection		4	4	4	4	4
	Three Winding Transformer Phase Differential Protection				4	4	4
	Cabinet Type Drawout					4	
	Trip Circuit Supervision		4	4	4	4	4
	Independent Protection Setting Groups		2	2	4	4	4
	Disturbance Recording		5	10	10	10	10
	Event Recording		4	4	4	4	4
	Fault Recording		5	10	10	10	10
	Digital Input		6	12	11/16	16	16/32
	Digital Output		6	11	10	10	16/32
	Communication Protocols	IEC103		C10			103

MODBUS IEC61850

/PRP/HSR

MODBUS

MODBUS

Cold Load Pick Up

DI/DO

Disturbance Recording **Event Recording Fault Recording** Self Supervision 3 Mechanical Flags

Communication Protocols

CLP

44

4/4 4/3 4/4 4/5

IEC103/M0DBUS

Feede Relay	er Protection Model	A22F ADR 141C ADR 241A ADR 241B	Basic Enhanced DA Enchanced(Do) Modular	Motor Relay
ANSI	Functions		E X B B W W W W W W W W W W W W W W W W W	ANSI
25	Sync Check		4, 4, 4,	27
27	Under Voltage Protection		4444	32P
32P	Directional Power Protection		4 4 4	32R
37	Under Current Protection	4 4	444	37
46	Negative Phase Sequence Protection	4 44	4 4 4 4	40
46BC	Broken Conductor Detection	4 44	* * * * * *	40
47	Negative Phase Sequence Over Voltage Protection		* * * *	46 BC
49	Thermal Overload Protection	4 4	+ + + + +	.,
50	Instantaneous/ Definite Time Phase Over Current Protection	4 4 4 4	* * * * * *	48
50N	Instantaneous/ Definite Time Ground Over Current Protection	4 4 4 4	* * * * * *	50
50BC	Broken Conductor		4 4 4 4	50 N
50BF	Breaker Failure	4444	* * * * * *	30 IV
50SEF	Sensitive Ground Over Current Protection	4	4 4 4	50 BC 50 BF
51	Inverse Time Phase Over Current Protection	4 4 4 4	4 4 4 4	50 LR
51N	Inverse Time Ground Over Current Protection	4 4 4 4	4 4 4 4	50 SEF
51V	Voltage Dependant Over Current		4 4 4	51
55	Power Factor Protection		4 4 4	51 N
59	Over Voltage Protection		4444	
59N	Residual Over Voltage Protection		4444	51 V
64R	High Impedance Restricted Earth Fault Protection	4 44	4 4 4 4	55 59
67P	Directional Phase Over Current Protection		4 4 4 4	59 N
67N	Directional Ground Over Current Protection		4 4 4 4	64 R
74	Alarm Output		4 4 4 4	66
79	Auto Reclosing	44	4 4 4 4 4	68 74
81O/U	Frequency Protection		444	81 O/U
81R	Rate of Change of Frequency		444	81 R
86	Lockout (Trip Command)	4 4 4		86
CLP	Cold Load Pick Up	7 7 7	, , , , , , , , , , , , , , , , , , , 	VTS/60
VTS/60 CTS	VT Supervision Detection		4444	CTS
Eload	CT Supervision Detection Load Encroachment		444	SOTF
SOTF	Switch On To Fault		4 4 4 4	CLP
3011	Cabinet Type Drawout	4, 4	444	
	Trip Circuit Supervision	4 44	4 4 4 4	
	Digital Inputs	4 2 4 8	3 12 10 16 16/32	
	Digital Outputs	4 8 8 8		
	Independent Protection Setting Groups	2 2 4		
	Disturbance Recording	5 10 10	0 10 10 10 10	
	Event Recording	4 4 4		
	Fault Recording	5 5 10 10	0 10 10 10 10	
	Communication IEC 103 Protocols MODBUS	NON LUMMOD MON MODBUS	IEC 103 IEC 103/ MODBUS MODBUS/ IEC61850 IEC61850 PRP DNP3/PRP/HSR	

Motor	Protection				_	2	AD 244	
Relay	S	Mod	lel	A21M	ADR 244A	Fuhanced		_
ANSI	Functions				00	À	3	ž
27	Under Voltage Protection			4		4	4	4
32P	Directional Power Protection			4		4	4	4
32R	Reverse Power Protection			4		4	4	4
37	UnderCurrent Protection			4	4	4	4	4
40	Loss of Excitation			4	4	4	4	4
46	Negative Phase Sequence Protection					4	4	4
46 BC	Broken Conductor Detection				4	4	4	4
47	Negative Phase Sequence Over Voltage Protection					4	4	4
48	Motor Prolong Start Protection			4	4	4	4	4
49	Thermal Overload Protection			4	4	4	4	4
50	Instantaneous/Definite Time Phase Over Current Protection			4	4	4	4	4
50 N	Instantaneous/Definite Time Ground Over Current Protection			4	4	4	4	4
50 BC	Broken Conductor					4	4	4
50 BF	Breaker Failure			4	4	4	4	4
50 LR	Locked Rotor / Motor Stall Protection			4	4	4	4	4
50 SEF	Sensitive Earth Fault			4	4	4	4	4
51	Inverse Time Phase Over Current Protection			4	4	4	4	4
51 N	Inverse Time Ground Over Current Protection			4	4	4	4	4
51 V	Voltage Dependent Over Current							
55	Power Factor Protection					4	4	4
59	Over Voltage Protection					4	4	4
59 N	Residual Over Voltage Protection					4	4	4
64 R	High Impedance Restricted Earth Fault Protection			4	4	4	4	4
66	Prolonged Start Protection			4	4	4	4	4
68	Out of Step					4	4	4
74	Alarm Output					4	4	4
81 O/U	Frequency Protection					4	4	4
81 R	Rate of Change of Frequency					4	4	4
86	Lockout (Trip Command)			4	4	4	4	<u> 4</u>
VTS/60	VT Supervision Detection					4	4	<u>4</u>
CTS	CT Supervision Detection				1	4	4	4
SOTF	Switch On To Fault				4	4	7	47
CLP	Cold Load Pick Up				4	4	4	7
	Cabinet Type Drawout			1	4	4	4	<u></u>
	Trip Circuit Supervision			4	4	7	7	4//00
	Digital Inuputs			6	4	10		16/32
	Digital Outputs Independent Protection Setting Groups			6	7	11/16	4	16/32
	Setting Groups Disturbance Recording			5	10	10	10	10
	Event Recording			5	4	10	10	4
	Fault Recording			7 /5	10	10	10	10
	Communication					Щ,		
	Duete cale	IEC 103 Modbus	MODBL	JS	MODE MODE IEC618 /PR	3US 350	MO	103 DBUS 51850 PRP



Distance Protection Relay

ANSI	Functions Mo	odel	ADR 239B			
21	Phase Impedance Protecion		4			
21N	Ground Voltage Protection		4			
27	Under Voltage Protection	4 4 4				
46	Negative Phase Sequence Pr	otection	4			
46BC	Broken Conductor Detection		4			
47	Negative Phase Sequence O Protection	ver Voltage	4,			
50	Instantaneous/Definite Time F Current Protection	Phase Over	4			
51	Inverse Time Phase Over Cu	rrent Protection	4			
50N	Instantaneous/Definite Time (Current Protection	us/Definite Time Ground Over ection				
51N	Inverse Time Ground Over C	Current Protection	n 4/2			
59	Over Voltage Protection		4			
59N	Residual Over Voltage Prote	ction	4			
FLC	Fault Locator		4			
67P	Directional Phase Over Curre	tional Phase Over Current Protection				
67N	Directional Groud Over Cur	rent Protection	4			
68	Out of Step Protection		4			
50BF	Breaker Failure		4			
VTS	VT Supervision Detection		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$			
CTS	CT Supervision Detection		4			
79	Auto reclosing		4			
86	Lockout(Trip command)		4			
	Cabinet Type Drawout		49			
	Trip Circuit Supervision		4			
	Digital Inputs		32			
	Digital Outputs		32			
	Independent Protection Settin	ng Groups	4			
	Disturbance Recording		10			
	Event Recording		4			
	Fault Recording		10			
	Communication Protocols		IEC6070-5-103, MODBUS & IEC 61850, PRP/HSR			

Voltage Protection Relay

ANSI	Functions	Model	ADR 242B Drawout
25	Sync Check		4
27	Under Voltage Protect	ion	4
47	Negative/ Positive Pho Voltage Protection	se Sequence Over	49
59	Over Voltage Protection	on	4
59N	Residual Over Voltage	Protection	4
74	Alarm Output		4
81 O/U	Frequency Protection		4
81 R	Rate of Change of Fre	equency	4
86	Lockout (Trip Comman	d)	4
VTS/60	VT Supervision Detect	ion	4
	Cabinet Type Drawou	t	47
	Trip Circuit Supervision	1	4
	Digital Inputs		8
	Digital Outputs		8
	Independent Protectio	n Setting Group	4
	Disturbance Recording	J	10
	Event Recording		4
	Fault Recording		10
	Communication Protoc	cols	IEC6070-5-103, MODBUS & IEC 61850, PRP/HSR









Flag Relay

Auxiliary Relay in CSB Cabinet

Auxiliary Relay in CSC Cabinet

Auxiliary Relays

ASHIDA electro-mechanical type auxiliary relays. Full range of auxiliary relays for applications of control & monitoring, tripping circuit breakers, supervising, signaling and interlocking. Simple, compact and robust design. All relays conform to IS:3231 requirements.

Electro - Mechanical Relays	AVAJH13	AVAJS13	AVAJH23	AVAJS23	AVAJC11	AVA1X	AVA2X	AVA3X	AVA4X	AVA21D	AVA21A	ATSR31A	AFLGR
Type of Relay													
Non Draw Out Type	4	4	4	4	4	4	4	4	4	4	4	4	4
Application													
High Speed Master Trip Relay	4	4	4	4									
Supervision Relay (AC, DC & Trip Coil)						4	4	4	4			4	
DC Failure Relay										4			
AC Failure Relay											4		
Auxiliary Relay						4	4	4	4				
Contact multiplication Relay					4								
Type of Contact Reset													
Self Reset Type		4		4		4	4	4	4	4	4	4	
Hand Reset Type	4		4			4	4	4	4				
Hand Reset Type + Self Reset Type				4		4	4	4	4				
Electrical Reset					4								
Type of Flag													
Hand Reset Flag	4	4	4	4		4	4	4	4	4	4	4	
Without Flag						4	4	4	4	4	4		
Reverse Flag						4	4	4	4	4	4		
Operational Flag					4								
No of Element													
Single Element	4	4				4							
Two Element			4	4	4		4			4	4	4	
Three Element								4					
Four Element									4				
No.of Contact													
2 Contacts													
3 Contacts												4	
4 Contacts			4	4		4	4	4	4	4	4		
6 Contacts													
7 Contact	4	4											
8 Contact					4								
Cabinet Size													
CSB (92mm x 92mm)	4	4	4	4	4	4	4			4	4	4	
CSC -V (186 X 92mm)					4								
CSC - H (92 X 186 mm)								4	4				



ASHIDA Draw Out Electro-Mechanical Relays- OJAS Series

Ashida takes pride in designing, supplying & manufacturing world class multifunction protection & management IEDs. These IEDs are available in different rack sizes depending on actual input output requirement of the client. These relays are tested as per Indian as well as International - IEC standards. The simple & compact construction of ADI1YA series relays provides integrated Protection, Monitoring & Control functions to the users.



ASHIDA RELAY TEST BLOCK

ART-B



ASHIDA RELAY TEST PLUG ART-P

provides facilities for monitoring & secondary injection testing of any power system protection scheme. Available in Horizontal & vertical type.

The models are available in Case Size 2 & Case Size 4 with panel cut out size 159mm (H) \times 48mm (W) and 159mm (H) \times 100mm (W) respectively.

Electro - Mechanical Relays

Type of Relay	
Draw Out Type	4 4 4 4
Application	
High Speed Master Trip Relay	4
Supervision Relay (AC, DC & Trip Coil)	4
Auxiliary Relay	4
Contact multiplication Relay	4
Type of Contact Reset	
Self Reset Type	4 4 4
Hand Reset Type	4 4 4
Electrical Reset	4 4
Hand Reset Type + Electrical Reset Type	4
Type of Flag	,
Standard Flag	4 44
Following Flag	4,
Reverse Flag	4 4
No Flag	4 4
No of Element	
Single Element	4 4 4
Two Element	4 4 4 4
No.of Contact	, , , , ,
2 Contacts	4 4
3 Contacts	4
4 Contacts	4 4
6 Contacts	4 4
8 Contact	4
10 Contacts (Single Element)	4
20 Contacts (Two Element in series)	4
Case Size	
Case 2	4 4 4
Case 4	4 4 4 4













