



Engineering Reliable
Connections for
Industrial Automation

PRODUCT PORTFOLIO

Engineered for reliability.
Built for demanding industries.

www.duneandtides.com

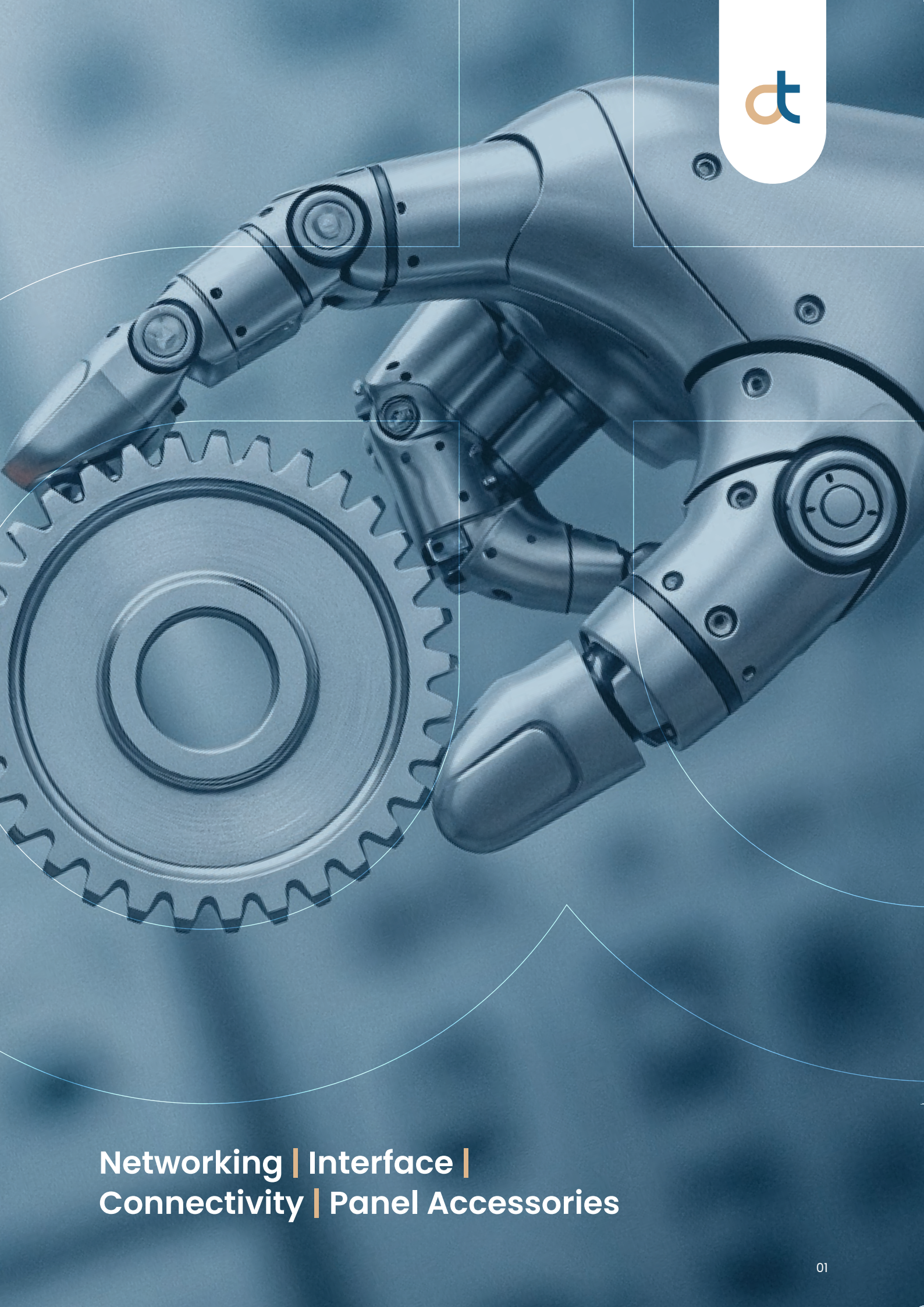
ABOUT US

Dune & Tides has established comprehensive engineering, manufacturing, testing, and project-execution capabilities for the design, development, and supply of modular interface technologies, industrial networking and fiber-optic connectivity solutions, and signal-conditioning and process-measurement products. Our solutions enable reliable signal interfacing, termination, isolation, relay switching, and system connectivity across a wide range of PLC, DCS, RTU, and safety-system applications.

Our leadership team brings more than 30+ years of extensive experience in industrial automation product development, project engineering, and execution, enabling us to deliver reliable, cost-effective, and application specific solutions tailored to customer requirements.

We serve critical sectors, including oil and gas, refining, power generation, water and wastewater, process automation, factory automation, generator-set applications, and data centers delivering high-quality, reliable, and scalable solutions engineered for demanding industrial environments.





**Networking | Interface |
Connectivity | Panel Accessories**

Dune and Tides

LIST OF PRODUCTS

Sr.	Product Category	Products & Solutions
1.	Ethernet Connectivity Solutions	Ethernet Patch Cords CAT5e, CAT6, CAT6A STP/UTP, RJ45 Patch Panels & Accessories.
2.	Fiber Optic Connectivity Solutions	Fiber Optic Patch Panels/LIU- 6 Ports to 24 Ports Din Mount and 12 to 96 Ports Rack Mount in 1U, 2U, 4U Fiber Optic Patch Cords LC, SC, ST SM/MM.
3.	Industrial Ethernet networking products & solutions	Industrial Ethernet Switches, Media Converters, IoT Gateways, Modbus Gateways, Industrial Routers.
4.	Active & Passive Interface Modules / field termination assemblies.	Relay Interface Modules, Passive field termination assembly, Solid State Relay Modules, Slim Relay Modules, High Current Genset ON/OFF Relay Modules.
5.	Electronics Interface Modules for Digital & Analog IO's of PLC/DCS Systems	Digital Input & Output field Termination Assemblies, Analog Input & Output Field Termination Assemblies. Corresponding Prefab Cable assemblies using D-Sub, FRC, ELCO/EDAC.
6.	Custom build Prefab Cables solutions for all automation control systems platform	For Control Systems- ABB, Emerson, Fuji Electric, HIMA, Honeywell, Rockwell, Schneider, Siemens, Yokogawa.
7.	Signal Conditioning, Isolation & Interface Solutions	Slim Relays with base, Signal Isolators, Transducers, Splitters, Loop Powered Isolators, Head mount temp. transducers (RTD/Thermocouple)
8.	Digital Process Indicators & Controller	Digital Process Indicators & Controllers- Panel Mount & field mount, Loop Power Indicators, Temp. & Humidity Indicators with 4-20mA output.
9.	Power Management, redundancy & temperature control	Automatic Transfer Switch, SMPS Diode ORing Modules, Power Distribution module with ON-OFF switch, fuse protection & common fuse fail alarm contact.
10.	Intelligent Fan Fail Detection Unit for 2 or 4 fans inside Cabinet	Monitors cooling-fan operation and cabinet temperature with a built-in sensor and display. Provides fan-failure and high temperature alarms via relay contacts, Modbus RS485 and 4-20 mA output.
11.	Panel Utilities & Accessories Products	Panel LED Lights, Thermostat NO, NC & NO+NC, Din Rail Mount space heaters, country wise Power Sockets, 19" Power distribution unit with 5 Sockets + On-Off Switch.

Copper & Fiber Structured Cabling solutions for reliable high-speed data transmission infrastructure used in industrial networking and communication systems. These solutions ensure organized cabling, high signal integrity, and robust connectivity for automation, IT networks, data centers, and industrial Ethernet & fiber optic applications.



Ethernet Connectivity



- CAT5e to CAT7 industrial Ethernet cables, RJ45 connectors and accessories
- Ethernet patch cords in Cat6 / Cat6A, S/FTP and U/UTP constructions, with a choice of cable and boot colours
- RJ45 field-termination connectors for industrial and control-panel applications
- 24-port RJ45 UTP patch panels
- Industrial Ethernet couplers and adapters
- Shielded keystone jacks and cable accessories
- Custom-length Ethernet patch cord assemblies built to project requirements

CAT5e – CAT7

S/FTP & U/UTP

Custom lengths



Fiber Optic Connectivity

- Fibre optic patch panels – 2 to 12 duplex LC/SC ports, SM/MM, in DIN-rail mount
- 19" rackmount FOFP – 12, 24, 48 and up to 96 ports in 1U, 2U and 4U configurations
- Fibre optic cables – 6 to 24 cores, SM and MM, standard and armoured construction
- Fibre optic patch cords, adapters and pigtails
- Customised fibre optic patch panel and LIU solutions
- Pre-terminated fibre optic solutions for faster, more reliable installation

LC, SC, ST

SM / MM

Up to 96 ports



Industrial Ethernet Networking



- Compact DIN-mount unmanaged and managed industrial Ethernet switches
- Copper ports support 10/100M, full and half duplex, auto MDI/MDI-X, plug and play
- PoE and PoE+ industrial Ethernet switches
- High-strength metal casing, IP40 protection, fanless heat dissipation
- IoT gateways, Modbus gateways and industrial routers
- 5, 8 and 16-port Layer-2 Fast Ethernet and Gigabit Ethernet switches
- Dual DC 9–60 V or AC 24 V power input with dual power redundancy, non-polarity
- Industrial Ethernet fibre optic media converters
- Operating range -40 °C to +75 °C

IP40

-40 °C to +75 °C

PoE / PoE+

Dual power redundancy

Active & Passive Interface Modules



Dune & Tides Interface modules and FTAs solutions provide reliable connectivity between field devices and PLC, DCS, RTU, and safety systems. They simplify wiring, provide signal isolation, conditioning, conversion, and protection, while reducing panel space, installation time, and maintenance.

Relay Interface Module



- Channel density 1 to 32 channels, compact and DIN-rail mount
- Relay coil voltage 24 VDC, 110 VAC and 230 VAC
- Back-EMF protection by freewheeling diode, with short-circuit protection in each channel
- Coil-side wiring negative looping or interchangeable looping by jumper selection
- Contact configuration 1 C/O, 2 C/O and 4 C/O
- PCB designed to applicable IPC standards; double-sided PTH with 70-micron copper track thickness
- Finish green solder mask both sides, glass-epoxy FR4 material
- Conformal coating for environmental protection
- **CE Certified & RoHS compliant

1-32 channels

1 / 2 / 4 C/O

70 µm copper

CE, RoHS

Passive Field Termination Assembly (FTA)

- Compact passive FTAs using D-Sub, FRC, EDAC / ELCO connectors to screw terminals
- Screw terminals take field wiring up to 2.5 sq mm stranded and 4 sq mm solid wire
- One-to-one connections, or a customised interface design following the PLC / DCS I/O wiring philosophy
- Multi-channel signal routing in 8, 16 and 32-channel configurations
- Matching prefabricated cable assemblies in custom lengths to suit the project
- DIN-rail mounting for easy, compact panel installation
- Industrial-grade PCB construction engineered for reliable performance in control and automation applications
- **CE Certified & RoHS compliant

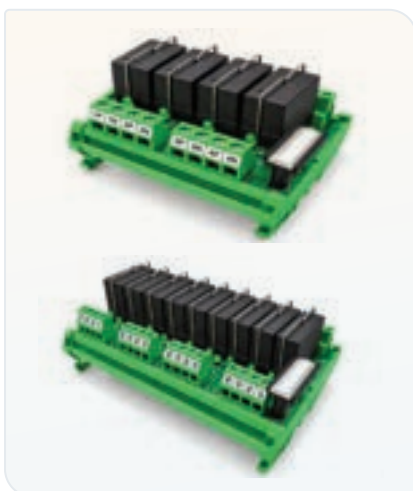
8 / 16 / 32 channel

D-Sub, FRC, ELCO

CE, RoHS



Solid-State Relay Module for Digital I/O



- Optically isolated solid-state relay modules for digital input and output signals, in 4, 8 and 16-channel configurations
- Compact footprint for space-saving panel installation, with plug-in type relays for easy maintenance and replacement
- Field-side protection available with or without individual fuse protection in each field signal path
- SSR digital output module has source / sink selectable configuration on the system input side, and a normally open open-collector transistorised output on the field side for 24 VDC and 230 VAC loads
- SSR digital input module uses 2-wire interrogation at the field input side with a single-ended source output at the system side
- Industrial-grade PCB construction for reliable performance in control and automation applications
- **CE Certified & RoHS compliant

4 / 8 / 16 channel

Optical isolation

Source / sink selectable

CE, RoHS

Slim Relay Interface Module



- Compact multichannel slim relay module, available in 4, 8, 16 and 32 channels
- Plug-in type relay for easy maintenance and replacement
- Coil voltage 24 VDC. Contact 1 C/O potential-free, rated 6 A at 230 VAC / 24 VDC
- Back-EMF protection by freewheeling diode
- Fuse protection in each contact of each channel available on request
- Coil-side wiring by screw terminals or prefabricated cable assembly
- Contact-side double-decker screw terminals suit wires up to 2.5 sq mm
- PCB designed to applicable IPC standards, with conformal coating for environmental protection
- **CE Certified & RoHS compliant

4 / 8 / 16 / 32 channel

6 A @ 230 VAC

CE, RoHS

High-Current Genset ON/OFF Relay Module

- Compact relay module for switching high-current 12 / 24 VDC genset loads
- Coil 12 VDC or 24 VDC, contact configuration 1 NO
- Heavy-duty PCB designed to applicable IPC requirements
- Reverse-polarity and coil-suppression protection
- Electrical isolation between controller input and load-switching circuit
- Interfaces with genset controllers from Mahindra Powerol, KOEL, Cummins, Volvo Penta, Caterpillar and others
- DIN-rail mounting for easy control-panel installation
- Contact rating up to 70 A at 12 VDC or 35 A at 24 VDC
- LED indication of individual relay operating status
- Heavy-duty input and output terminals for reliable field wiring
- Suits starter solenoids, fuel solenoids, pre-heaters, fans, pumps, actuators and auxiliary contactors
- Configurations 1HCR, 2HCR, 3HCR, 2HCR+1CR, 2HCR+2CR and 3HCR+1CR (HCR = high-current relay, CR = control 2 C/O relay)
- **CE Certified & RoHS compliant

70 A @ 12 VDC

35 A @ 24 VDC

CE, RoHS



Custom-Built Prefab Cable Solutions



- Available for 8, 16 and 32 signals, interconnecting PLC/DCS I/O cards and interface modules
- Flexible stranded copper conductors to DIN VDE 0295, IEC 60228 Class 5 and BS 6360
- Shielded and unshielded configurations
- Core identification colours to DIN 47100
- Rated up to 300 V RMS, for signal and control applications
- Custom lengths, ferrule identification, connector orientation, back shell, strain relief and shield termination options
- Compatible with D-Sub, IDC/FRC, ELCO and other industrial connectors
- Conductor size 0.14–0.34 mm²
- Tinned-copper braided shield with optional drain wire for effective EMI protection
- FRLS/LSZH or PVC outer sheath in grey, similar to RAL 7001
- Flame retardancy to IEC 60332-1, operating temperature 0 °C to +70 °C
- 100% continuity, short-circuit, wiring and insulation testing
- **CE Certified & RoHS compliant

UL, CE, RoHS, REACH

DIN 47100

100% tested

Electronic Interface Modules along with corresponding Prefabricated Cable assemblies provide Signal Isolation, Switching, redundancy, and protection between field devices and PLC/DCS I/O systems. These Integrated Interface modules simplify the system to marshalling panel wiring, protect control system I/O cards, and ensure reliable signal transmission in industrial automation applications.

Discrete Input & Output Field Termination Assemblies



- Discrete input FTA with fuse protection interfaces 24 VDC, 110 VAC and 230 VAC potential-free field inputs to 24 VDC PLC/DCS digital input cards
- Discrete output FTA interfaces 24 VDC PLC/DCS digital outputs to 24 VDC, 110 VAC and 230 VAC field loads
- Channel options 4, 8, 16 and 32 channels, in redundant or non-redundant configurations
- Protection optional fuse protection against field short circuits
- Isolation electromechanical relay or solid-state relay isolation for DI/DO modules
- DI applications proximity sensors, limit switches and potential-free contacts
- DO applications solenoid valves, lamps and actuators; relay output available with wetted or potential-free contacts
- Compatibility suits digital I/O cards from leading PLC/DCS manufacturers
- Matching prefabricated cable 22 or 24 AWG with FRLS / LSZH outer sheath, compatible with the respective PLC/DCS I/O card
- PCB designed to applicable IPC standards, with conformal coating for environmental protection
- **CE Certified & RoHS compliant

4 / 8 / 16 / 32 channel

Redundant or non-redundant

EMR or SSR isolation

CE, RoHS

Analog Input & Output Field Termination Assemblies

- Analog input FTA interfaces field signals such as 4–20 mA from 2-wire or 4-wire transmitters to PLC/DCS analog input cards, with reliable signal routing and protection
- Analog output FTA interfaces PLC/DCS analog output signals (4–20 mA) to field control devices such as control valves, I/P converters and actuators
- Available in 4, 8 and 16 channels, redundant or non-redundant
- Optional fuse protection in each channel for field loop protection
- Signal protection and isolation — fuse protection for non-isolated FTAs, channel-to-channel galvanic isolation for isolated FTAs
- Suits pressure, flow, level and temperature transmitters, control valves and analysers
- Compatible with analog I/O cards from all leading PLC/DCS manufacturers
- Matching prefabricated cable 22 or 24 AWG with FRLS / LSZH outer sheath
- PCB designed to applicable IPC standards, with conformal coating for environmental protection
- **CE Certified & RoHS compliant

4–20 mA

4 / 8 / 16 channel

Galvanic isolation

CE, RoHS



Corresponding Prefabricated cable assemblies for interconnection between FTA & DCS/PLC IO Modules



Signal-conditioning and interface solutions includes slim interposing relays with din rail socket for PLC/DCS digital I/O interfacing and isolation; signal isolators, splitters, transducers and loop-powered isolators for analog I/O; and temperature transmitters for RTD and thermocouple sensors.



Slim relay 6.2 mm with DIN-rail socket

- Input 24 VAC / 24 VDC / 110 VAC / 230 VAC, rated current 11 mA
- Response time ≤ 8 ms at rated voltage, release time ≤ 4 ms.
- Contact rating 6 A at 250 VAC / 30 VDC; max switching 400 VAC / 125 VDC
- Bridge rectifier and surge protection, green LED indication
- Size 6.2 × 90 × 81 mm; Shorting Jumpers can be ordered separately.



Signal isolators, transducers & splitters

- Compact 6.2 mm DIN-rail housing
- Analog signal isolator, 4–20 mA to 4–20 mA, single in single out
- Analog signal splitter, single input and dual output 4–20 mA
- Signal transducer RTD/TC to 4–20 mA
- DC voltage to DC current, AC voltage to DC current isolating transducers
- Three-port optical and galvanic isolation, high load-driving capacity
- AC or DC power supply options



Head-mount temperature transducers

- RTD Pt-100 (3-wire) or thermocouple sensor input
- Direct sensor head mounting
- Non-isolated 4 to 20 mA DC two-wire analog current output
- Front accessible Zero and Span calibration.



Digital process indicators & controllers — panel mount

- Input options DC/AC current, DC/AC voltage, temperature sensor (RTD Pt-100 or thermocouple)
- 4-digit LED seven-segment display
- Up to 4 relay contacts
- Analog re-transmission output option



Digital process indicators — field mount

- Available in flameproof and weatherproof construction
- 4–20 mA DC current, DC voltage, RTD (Pt-100) or thermocouple input
- Up to 2 control relay outputs
- IP66 PESO certified flameproof enclosure
- AC or DC power supply option; suitable for gas groups IIA/IIB



Loop-powered indicators

- HART-enabled digital loop-power indicators, no external supply needed
- Intrinsically safe and flameproof certified; can be used as secondary master
- 5-digit seven-segment LCD display
- Rugged aluminium alloy LM6 enclosure, Ex-d certified with safety glass
- Hazardous-area installation for IIA/IIB in IP66 execution



Temperature & Humidity Monitoring



- Built-in high-precision temperature sensor with digital display
- Dual alarm relay contact for temperature set point
- Built-in precision RH and temperature sensors
- Temperature scanner in 4, 8 and 16 channels
- RTD Pt-100 (3-wire) and thermocouple types J, K, R, S input options
- Lower and upper temperature level monitoring
- 4–20 mA retransmission analog output
- DIN-rail mountable
- Freely assignable 4 or 16 relay outputs
- Two analog retransmissions, with an extension board for relay connections

4 / 8 / 16 channel scanner

J, K, R, S & Pt-100

CE, RoHS

A complete range covering SMPS diode-redundancy modules, automatic transfer switches, power-distribution modules and temperature-control devices plus the lighting, heating, cooling and monitoring accessories that keep control panels safe, serviceable and reliable.

Power Management & Redundancy



SMPS diode ORing modules

- 24 / 48 / 110 / 220 VDC, 5–63 A
- Load current ratings up to 10 A, 20 A and 40 A
- Potential-free output contacts provided for each input
- MOSFET ORing module 24 VDC, 20 A



Automatic transfer switch (AC static switch)

- Automatic transfer static switch 11 A to 100 A; compact DIN mount in 21 A and 31 A
- Microcontroller-based thyristorised design, load ratings up to 65–100 A
- Ultra high-speed switching for seamless transfer, under 15 ms
- AC input options 230 VAC / 110 VAC, configurable load current and voltage



Intelligent fan-failure monitoring with temperature control

- Fan-fail detection with temperature display for 2 and 4 fans, with alarm contact
- Ambient temperature monitoring on a three-digit seven-segment display
- Potential-free relay contacts for fault alarm
- Redundant power supply keeps operation uninterrupted during power failure



Panel Utilities & Accessories



Panel lighting

- Panel LED light 3 W to 15 W with on-off switch and motion sensor
- Slim LED light for the electrical panel industry, diffused cool white for strain-free working
- Powder-coated aluminium body, sleek and compact, integrated power unit
- Long life of 50,000 hours, quick and easy to install



Heating — PTC panel heater

- PTC heaters 30 W to 150 W, self-regulating heating systems
- Aluminum profile, anodized black
- Operating Voltage 110–250VAC/DC
- Pressure clamp connector
- Energy saving
- Quick installation with Din rail clamp
- Operating Temp. –30 To +70°C



Cooling — panel fan & filter

- Air volume 24–700 m³/h with exhaust filter installed in the cabinet
- Wide operating voltage: 12 V DC, 24 V DC, 48 V DC, 115 V AC, 230 V AC
- Filter mat G4 to DIN EN779, protection category IP54
- Power Supply working Indication option
- Operating Temp. –30 To +70°C



Monitoring — thermostat & hygostat

- Thermostat normally open, normally closed, and dual NO + NC
- Thermostatic bimetal sensor element, service life over 100,000 cycles
- Maximum switching capacity 250 VAC
- Certificates include CE, VDE, UKCA, NF, BS and RoHS



Power distribution unit

- 19" rack-mount PDU, AC 250 V, max 3680 W, max 16 A, IP20
- Universal Socket with ON/OFF Rocker switch
- Certified material: V-0 plastic housing with H62 copper inside
- Certification as BS546/CE



Din Rail Utility Socket

- DIN-rail utility socket, country-wise sockets available
- Supply Voltage 250VAC 50–60Hz,
- Current Rating 10–16 Amp.
- Material ABS+PC
- Operating Voltage –20 To +70°C



Manufacturing for a Connected Future.

Our solutions support the ambitions of Make in India initiative and Saudi Vision 2030 by enabling reliable industrial connectivity, automation and infrastructure across critical sectors. With strong engineering capabilities & manufacturing expertise, we deliver globally relevant products designed for demanding applications in oil & gas, energy, water, process industries and data centers.





INDIA

Address

Plot No 98/A/16, Hadapsar Industrial Estate,
Hadapsar, Pune-411013, Maharashtra, India
GST No: 27AAMCD1154F1ZS



+91 95611 74262



sales@duneandtides.co.in

KSA

Address

Facility No. 81, EIDA7499, 7499
Dammam 1266, 3935, Dammam 34324
Kingdom of Saudi Arabia



+966 59 010 8990



info@duneandtides.com



www.duneandtides.com