**Oil & Gas - Cable Solutions**

**Refineries & Petrochemical - Onshore**

**Instrumentation Cables**

**EN 50288-7**

**Cu/XLPE/IS or OS or IS+OS/LSZH/LS/LSZH/SWA/LSZH**

**300 V and 500 V**


**APPLICATION**

Instrumentation cables are used to transmit digital or analogue signals for measurement or process control applications in fixed installation on onshore platforms. Prysmian offers a wide range of Instrumentation cables with diverse design options depending on the reference standards and customer requirements. On demand Prysmian can offer also instrumentation thermocouples cables.

**STANDARDS & APPROVALS**

- **EN 50288-7** Design guidelines
- **EN 50290-2 Series** Insulation and sheathing materials
- **IEC 60332-1-2** Flame retardant
- **IEC 60332-3-24 or 22** Fire retardant
- **IEC 60754-1 ...-2** Halogen free properties
- **IEC 61034-1 / 2** Smoke emission properties
- **CSA 22.2 n. 38/95 or IEC 60811**

**DESIGN & CONSTRUCTION**

1. **CONDUCTOR**
   - Cu
   - Annealed copper wires according to cl. 2. Solid cl. 1 conductors (U) or Flexible cl. 5 conductors (F) available on demand.
   - Tinned copper conductors (available on demand) from 0.5 to 2.5 mm² up to 50 pairs, up to 24 triples

2. **INSULATION**
   - XLPE
   - PE/PVC/HFFR available on demand

3. **SCREEN**
   - IS/OS/IS+OS
   - Individual (IS)/Overall (OS)/Individual+Overall (IS+OS)
   - Aluminium/polyester tape in electrical contact with tinned annealed drain wire

4. **INNER COVERING**
   - PVC or LSZH

5. **CHEMICAL BARRIER**
   - LS
   - Lead alloy E
   - DRYLAM® (multilayer sheath) instead of Lead sheath available on demand

6. **SEPARATION SHEATH**
   - PVC or LSZH

7. **ARMOURING**
   - SWA
   - Galvanized steel wire (SWA)
   - Galvanized steel braid (GSWB) or double steel tape (DSTA) available on demand

8. **OUTER SHEATH**
   - PVC or LSZH
   - Hydrocarbon resistant option available on demand
PERFORMANCES/RATINGS

**FIRE BEHAVIOUR**

IEC 60332-1-2

IEC 60332-3-22 or IEC 60332-3-24

**CHEMICAL RESISTANCE**

EXCELLENT

**IMPACTS**

GOOD

EXCELLENT (armoured only)

**SMOKE DENSITY, CORROSIVITY AND TOXICITY**

low

LOW EMISSION

(only LSZH version)

**MIN. INSTALLATION TEMPERATURE**

-5 °C (PVC)

-15 °C (LSZH)

(-40°C for Arctic Grade)

**MAX OPERATING TEMPERATURE**

+90 °C (XLPE)

+70 °C (PE/PVC/HFFR)

**SHORT CIRCUIT TEMPERATURE**

250 °C

+250 °C (XLPE)

+160 °C (PE/PVC)

**LEAD**

Lead Free

(only Drylam™ option)

QUALITY & TESTING

Prysmian has a built-in multi-step quality assurance program, covering the production process from cable design and raw material purchases to final inspection and testing documentation.

The ISO 9001 quality system of Prysmian Group (together with ISO 14001 and OHSAS 18001) has been assessed, approved and is currently audited by SGS.